



FuelCell
Energy

2022 Annual Report
and Form 10-K

Our purpose

Enable a world empowered by clean energy

Our values

 <p>Safety: Physical & Psychological</p> <p>Foster a healthy and safe environment.</p>	 <p>Integrity</p> <p>In everything we do.</p>	 <p>Innovate</p> <p>Deliver impactful products to our customers.</p>	 <p>Accountability</p> <p>To ourselves, our shareholders, and our community.</p>
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Our technology

Decarbonizes power:

Produce low-to-zero carbon power from a flexible array of inputs including biogas, natural gas, and hydrogen.

Capture carbon dioxide (for use or sequestration) while making power.

Produces hydrogen:

Supply hydrogen from power and water through electrolysis, or co-produce hydrogen, power, and water from fuel.

Store energy from intermittent renewables by converting excess power to hydrogen—then converting hydrogen back into power when it's needed.

A global leader in fuel cell technology innovation ^{1,2}



Company highlights ²

HQ Danbury, Connecticut	>500 Employees	95 Platforms in Commercial Operation ³	3 Continents
FCEL Listing: NASDAQ	>220 MW Capacity in field	>13 Million MWhs generated with patented technology	

¹ Patents are for FuelCell Energy, Inc., and our subsidiary Versa Power Systems, Inc.

² As of the year ended October 31, 2022.

³ Note that certain sites have multiple platforms. As an example, our 14.9 MW Bridgeport project site has five SureSource 3000 platforms. As of 10/31/22, there were 33 sites with the Company's carbonate fuel cell platforms.



Jason Few
President, Chief Executive Officer

Dear Shareholders,

We have completed another year in our journey to solve some of the planet's most complex energy and environmental challenges. I'm proud of our advances in 2022 as we continue to focus on our core objectives to grow, scale, and innovate, which we believe will help us capitalize on accelerating global support for, and investments being made in, the energy transition. Driving the transformation of a 54-year-old clean tech energy company amid the energy transition will not always be a smooth or straight road; however, I am confident that our technology is well-suited to help customers decarbonize power and produce hydrogen. On behalf of our Board of Directors and the passionate, committed FuelCell Energy team, thank you for your investment in and support of our purpose to enable a world empowered by clean energy.

2022 Performance

We ended fiscal year 2022 with a strong balance sheet, positioning us well to fund projects already in development and to advance our growth strategy through commercialization and capital investment activities. Our total revenue of \$130.5 million for fiscal year 2022 represented an 88% increase from our total revenue for fiscal year 2021. We ended the fiscal year with a backlog of \$1.09 billion and a robust unrestricted cash balance of \$458.1 million as of October 31, 2022. Given this substantial progress, we will continue to take a rigorous and thoughtful approach to allocating capital as we look to enter our next phase of growth. We will also continue to focus on fortifying our balance sheet with the goal of maintaining the capacity to invest in growth.

\$130.5 M

\$130.5 million in total revenue for fiscal year 2022, an 88% increase from fiscal year 2021

\$458.1 M

\$458.1 million of unrestricted cash as of October 31, 2022, compared to \$432.2 million as of October 31, 2021

Our Operational and Strategic Milestones

Over approximately the past year, we completed two commercial installations and advanced several key projects in our two strategic areas of priority: decarbonizing power and producing hydrogen. We achieved commercial operations on two new power platforms, one in Long Island, New York in December 2021 and one at the U.S. Navy Submarine Base in Groton, Connecticut in December 2022, bringing our on-balance sheet generation operating portfolio to over 40 megawatts. Our generation operating portfolio delivered over \$36 million of revenue during fiscal year 2022, a 51% increase from fiscal year 2021. Although we are pleased with the revenue growth coming from our generation operating portfolio, we were not satisfied with the delays and challenges we experienced: for example, in reaching commercial operations in Groton. Despite such challenges, we are committed to improving our processes and meeting our customer commitments and we continue to deploy resources to that end.

\$36 M

Over \$36 million in generation revenue in fiscal year 2022,
a 51% increase from fiscal year 2021

Concurrently, we've made significant progress in permitting and civil construction for our 2.3 megawatt Tri-generation platform for Toyota at the Port of Long Beach. This project is expected to be the first fuel cell project in the world to produce electricity, hydrogen, and water from directed renewable biogas. To our knowledge, this will also be the only distributed hydrogen platform in the world with a 20-year offtake agreement with an investment-grade counterparty. We anticipate that the remaining construction and commissioning activity for this project will be completed in the third fiscal quarter of 2023.

In addition, we made a number of advancements on our solid oxide technology, which is a modular platform optimized for the low-cost production of clean hydrogen and power. For example, we:

- Demonstrated solid oxide hydrogen production in a small-scale test at the Department of Energy's (DOE) Idaho National Laboratory, the country's leading center for nuclear energy research and development and a key research base for the DOE's strategic goals.
- Announced our intent to participate in a collaboration sponsored by the U.S. Department of State to develop a carbon-free hydrogen project in Ukraine. The goal of this project is to use our solid oxide electrolyzer platform along with a small modular nuclear reactor to create green hydrogen and ammonia, with the goal of helping to bring energy security to a country where it is sorely needed.

Keeping in line with our objective to create a world in which everyone can produce low- to zero-carbon power, we made progress toward commercializing our advanced carbon capture technologies, which are unique in that they are the only known platform that can capture carbon dioxide while producing power at the same time.

1st

1st: FuelCell Energy has the first and only known platform that can capture carbon dioxide while producing power at the same time

In 2022, we extended the term of our Joint Development Agreement with ExxonMobil Technology and Engineering Company (“ExxonMobil”) through August 2023, a continuation of a productive long-term research and development collaboration between our companies. Together, we have completed studies to define application and commercialization strategies and explored our manufacturing scale-up plan to deliver large scale next generation carbon capture platforms. Jointly, we continue to make progress on reducing the cost of capturing carbon directly at the source of emissions, which we believe represents a significant opportunity for capturing carbon and delivering the largest carbon capture emission reduction across industrial applications. We believe that our platform’s unique capabilities to simultaneously capture carbon and produce electricity on a large scale will provide a low-cost solution for carbon capture and the platform ingredients needed to produce sustainable fuels utilizing the captured carbon and platform-produced hydrogen.

In February 2022, we published our first sustainability report. We are proud that our platforms are designed to have operating lives of 25 to 30 years, and that, at end of life, approximately 93%, by weight, of the entire plant can be reused or recycled. As a corporate and global citizen, we have pledged to achieve net-zero emissions across our value chain by 2050.

93%

Approximately 93% of our entire plant, by weight, can be reused or recycled at end of life

Looking Forward

Global energy markets and the overall global economy remain volatile, driven by tightening monetary policy, the lingering effects of COVID supply chain disruptions, inflation, recession risk, global conflict led by the war in Ukraine, and uncertain energy policy in certain parts of the world. However, we believe that the war in Ukraine has brought energy security and reliability back into focus for governments worldwide and strengthened the resolve to achieve energy independence by leveraging low - to no-carbon distributed technologies like those offered by our platform solutions.

We believe that the Bipartisan Infrastructure Law and the Inflation Reduction Act (IRA) in the United States, Canada’s proposed 40% hydrogen tax credit, the European Union’s proposed \$270 billion response to the IRA, the Korean Hydrogen Economy Roadmap, which aims to produce 6.2 million fuel cell electric vehicles and deploy at least 1,200 hydrogen refueling stations by 2040, the creation of a carbon tax in Canada and the European Union, and an incentive of \$85 per ton established under the IRA for sequestering carbon in the U.S., all create significant tailwinds for FuelCell Energy.

Our technology is focused on delivering solutions across four significant energy transition opportunities:

1. Distributed generation,
2. Distributed hydrogen,
3. Carbon capture, and
4. Long duration hydrogen energy storage.

Victor Hugo, the French poet and novelist, stated: “Nothing is more powerful than an idea whose time has come.” We believe our future is bright, and we are committed to meeting the challenges ahead of us.

FuelCell Energy is in a period of transition as we look to capitalize on expanding global market opportunities and invest across our business in anticipation of increased production volume. As we move into fiscal year 2023, we plan to accelerate the growth investments we made in fiscal year 2022 by:

- Advancing the commercialization of our solid oxide and carbon capture platforms;
- Continuing our human capital investments as we expand our engineering and sales capacities to capture both existing and emerging markets;
- Continuing to execute on our generation portfolio by completing projects and, therefore, increasing annual recurring generation revenue; and
- Increasing our total manufacturing-capacity across our platforms by investing in plants, equipment, and talent, including expanding our solid oxide platform manufacturing-capacity in Calgary, Canada, expanding our Connecticut-based manufacturing activities and evaluating additional U.S. locations.

We are investing in manufacturing-capacity expansion because we believe that climate initiatives and consumer demand are driving a global push to reduce emissions. We further believe that our platforms will give more organizations the option to implement a flexible energy strategy by starting their energy transition today with the expectation that they can shift to 100% zero-carbon hydrogen in the future. Given our proprietary technology, our history of leading-edge technical expertise, and global policies supporting clean energy initiatives, we expect to see our opportunities expand as society transitions to a more sustainable future. Additionally, we expect that scaled manufacturing will drive down the cost of low- to zero-carbon hydrogen and direct carbon capture. As industries and governments alike make investments in energy infrastructure to improve energy reliability and resilience and to achieve greater energy security and independence, we believe FuelCell Energy will be well positioned for the future.

As noted above, we have seen the continued expansion of supportive governmental policies for clean power, hydrogen and carbon capture and utilization, including the passage of the IRA in the United States. Focusing for a moment on the IRA, we believe that as a result of this important legislation, FuelCell Energy will actively seek to utilize investment tax credits, advanced manufacturing credits, production tax credits for clean power and hydrogen, and carbon capture utilization and sequestration credits. We believe these credits are vital incentives needed to accelerate the manufacturing, construction and deployment of large-scale clean energy assets across the country. We further believe that the IRA will provide support for companies like FuelCell Energy that have made

and continue to make significant investments in manufacturing capacity in the U.S. and employ talented U.S. workers who are advancing differentiated energy solutions to decarbonize power and produce hydrogen.

Accelerating Technology Commercialization

In the first quarter of fiscal year 2023, we announced that we are accepting orders for our solid oxide electrolysis and fuel cell platform. We believe FuelCell Energy's solid oxide platform is among the most efficient available electrolysis technologies for the production of distributed hydrogen. This is expected to translate to a 20% to 30% lower cost of hydrogen compared to lower efficiency and low-temperature electrolysis. We believe our solid oxide platform offers one of the best chances of achieving the \$1 USD per kg levelized cost of hydrogen targeted by the DOE by 2050. The solid oxide fuel cell introduces a highly efficient, fuel flexible and hydrogen-ready platform to our commercial offerings.

20% to 30%

Expected 20% to 30% lower cost of hydrogen for our solid oxide electrolyzer, compared to lower efficiency, low temperature electrolyzers

We also announced our first sub-megawatt power purchase agreement with Trinity College in Hartford, Connecticut for a solid oxide fuel cell power generation system. We believe that re-entering the sub-megawatt market outside of the European Union and the United Kingdom significantly increases the number of commercial opportunities FuelCell Energy can pursue.



Our Growth Priorities

The global community is at the heart of what we do. FuelCell Energy remains committed to recruiting, deploying, and developing the best talent to work on solving some of the planet's most pressing environmental challenges and assisting our customers in achieving their commitments to reducing their scope emissions while continuing to deliver valuable products and services to their customers. We believe that to achieve the Paris Agreement objectives of slowing global warming to, ideally, not more than 1.5°C (2.7°F), carbon capture sequestration and utilization as well as hydrogen long-duration energy storage must be part of the solution. We believe that recruiting passionate talent is essential to our mission. In fiscal year 2022, we added 131 new team members, growing our total team to more than 500, and we expect to continue to expand our headcount during the upcoming year.

As a company committed to clean technology, we pride ourselves on aligning our business goals and corporate culture. Our values of safety, integrity, innovation and accountability guide our team as the energy transition accelerates. I believe FuelCell Energy's continuous pursuit of our purpose to enable a world empowered by clean energy will, with your continued support, serve as a stimulus for this transition.

A handwritten signature in black ink, appearing to read "Jason Few". The signature is fluid and cursive, with a large initial "J" and "F".

Jason Few

President, Chief Executive Officer

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended October 31, 2022

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number: 1-14204



FUELCELL ENERGY, INC.
(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

06-0853042

(I.R.S. Employer
Identification No.)

**3 Great Pasture Road
Danbury, Connecticut**

(Address of principal executive offices)

06810

(Zip Code)

Registrant's telephone number, including area code: (203) 825-6000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol (s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	FCEL	The Nasdaq Stock Market LLC (Nasdaq Global Market)

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of April 30, 2022, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$1,576,676,910 based on the closing sale price of \$4.08 as reported on the NASDAQ Global Market.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class	Outstanding at December 14, 2022
Common Stock, \$0.0001 par value per share	405,723,084

DOCUMENT INCORPORATED BY REFERENCE

Document	Parts Into Which Incorporated
Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders	Part III

FUELCELL ENERGY, INC.
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PART I

Item 1. BUSINESS

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Forward-Looking Statement Disclaimer

This Annual Report on Form 10-K contains statements that the Company believes to be “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 (the “PSLRA”). All statements other than statements of historical fact included in this Form 10-K, including statements regarding the Company’s future financial condition, results of operations, plans, objectives, expectations, future performance, business operations and business prospects, are forward-looking statements. Words such as “expects,” “anticipates,” “estimates,” “goals,” “projects,” “intends,” “plans,” “believes,” “predicts,” “should,” “seeks,” “will,” “could,” “would,” “may,” “forecast,” and similar expressions and variations of such words are intended to identify forward-looking statements and are included, along with this statement, for purposes of complying with the safe harbor provisions of the PSLRA. Forward-looking statements are neither historical facts, nor assurances of future performance. Instead, such statements are based only on our beliefs, expectations, and assumptions regarding the future. As such, the realization of matters expressed in forward-looking statements involves inherent risks and uncertainties. Such statements relate to, among other things, the following:

- the development and commercialization by FuelCell Energy, Inc. and its subsidiaries (“FuelCell Energy,” “Company,” “we,” “us” and “our”) of fuel cell technology and products and the market for such products,
- the expected timing of completion of our ongoing projects,
- our business plans and strategies,
- the markets in which we expect to operate,
- the size and scope of our total addressable market opportunity,
- expected operating results such as revenue growth and earnings,
- our belief that we have sufficient liquidity to fund our business operations for the next 12 months,
- future funding under Advanced Technologies contracts,
- future financing for projects, including equity and debt investments by investors and commercial bank financing, as well as overall financial market conditions,
- the expected cost competitiveness of our technology, and
- our ability to achieve our sales plans, market access and market expansion goals, and cost reduction targets.

The forward-looking statements contained in this report are subject to risks and uncertainties, known and unknown, that could cause actual results and future events to differ materially from those set forth in or contemplated by the forward-looking statements, including, without limitation, the risks described under Item 1A - Risk Factors of this report and the following factors:

- general risks associated with product development and manufacturing,
- general economic conditions,
- changes in interest rates, which may impact project financing,
- supply chain disruptions,
- changes in the utility regulatory environment,
- changes in the utility industry and the markets for distributed generation, distributed hydrogen, and fuel cell power plants configured for carbon capture or carbon separation,
- potential volatility of commodity prices that may adversely affect our projects,
- availability of government subsidies and economic incentives for alternative energy technologies,
- our ability to remain in compliance with U.S. federal and state and foreign government laws and regulations and the listing rules of The Nasdaq Stock Market (“Nasdaq”),
- rapid technological change,
- competition,

- the risk that our bid awards will not convert to contracts or that our contracts will not convert to revenue,
- market acceptance of our products,
- changes in accounting policies or practices adopted voluntarily or as required by accounting principles generally accepted in the United States (“U.S. GAAP”),
- factors affecting our liquidity position and financial condition,
- government appropriations,
- the ability of the government and third-parties to terminate their development contracts at any time,
- the ability of the government to exercise “march-in” rights with respect to certain of our patents,
- our ability to successfully market and sell our products internationally,
- our ability to develop new products to achieve our long-term revenue targets,
- our ability to implement our strategy,
- our ability to reduce our levelized cost of energy and deliver on our cost reduction strategy generally,
- our ability to protect our intellectual property,
- litigation and other proceedings,
- the risk that commercialization of our new products will not occur when anticipated or, if it does, that we will not have adequate capacity to satisfy demand,
- our need for and the availability of additional financing,
- our ability to generate positive cash flow from operations,
- our ability to service our long-term debt,
- our ability to increase the output and longevity of our platforms and to meet the performance requirements of our contracts,
- our ability to expand our customer base and maintain relationships with our largest customers and strategic business allies, and
- concerns with, threats of, or the consequences of, pandemics, contagious diseases or health epidemics, including the 2019 novel coronavirus (“COVID-19”), and resulting supply chain disruptions, shifts in clean energy demand, impacts to our customers’ capital budgets and investment plans, impacts to our project schedules, impacts to our ability to service existing projects, and impacts on the demand for our products.

We cannot assure you that:

- we will be able to meet any of our development or commercialization schedules,
- any of our new products or technologies, once developed, will be commercially successful,
- our SureSource power plants will be commercially successful,
- we will be able to obtain financing or raise capital to achieve our business plans,
- the government will appropriate the funds anticipated by us under our government contracts,
- the government will not exercise its right to terminate any or all of our government contracts, or
- we will be able to achieve any other result anticipated in any other forward-looking statement contained herein.

The forward-looking statements contained herein speak only as of the date of this report and readers are cautioned not to place undue reliance on these forward-looking statements. Except for ongoing obligations to disclose material information under the federal securities laws, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any such statement to reflect any change in our expectations or any change in events, conditions or circumstances on which any such statement is based.

Risk Factor Summary

Our business is subject to numerous risks and uncertainties, including those described in Item 1A “*Risk Factors*”. These risks include, but are not limited to the following:

- We have incurred losses and anticipate continued losses and negative cash flows.
- Our cost reduction strategy for manufacturing may not succeed or may be significantly delayed, which may result in our inability to deliver improved margins.
- We have debt and finance obligations outstanding and may incur additional debt in the future, which may adversely affect our financial condition and future financial results.
- We rely on project financing for our generation operating portfolio, which includes debt and tax equity financing arrangements, to realize the benefits provided by investment tax credits and accelerated tax depreciation. In the event that interest rates continue to rise or there are changes in tax policy, our financial results could be harmed.
- Unanticipated increases or decreases in business growth may result in adverse financial consequences for us.
- We are subject to risks in international operations, including risks relating to our ongoing relationship with POSCO Energy Co., Ltd. (“POSCO Energy”) and Korea Fuel Cell Co., Ltd. (“KFC”).
- If our goodwill and other indefinite-lived intangible assets and long-lived assets (including project assets) become impaired, we may be required to record a significant charge to operations.
- Our Advanced Technologies contracts are subject to the risk of termination by the contracting party and we may not realize the full amounts allocated under some contracts due to the lack of Congressional appropriations or early termination.
- Utility companies may resist the adoption of distributed generation and could impose customer fees or interconnection requirements on our customers that could make our products less desirable.
- We depend on third party suppliers for the development and timely supply of key raw materials and components for our products.
- An increase in energy costs, including as a result of the ongoing conflict between Russia and Ukraine, may materially adversely affect our business, financial condition, and results of operations.
- Failure to meet Environmental, Social, and Governance (“ESG”) expectations or standards or to achieve our ESG goals could adversely affect our business, results of operations, financial condition, and stock price.
- We derive significant revenue from contracts awarded through competitive bidding processes involving substantial costs and risks. Our contracted projects may not convert to revenue, and our project awards and sales pipeline may not convert to contracts, which may have a material adverse effect on our revenue and cash flows.
- We have signed product sales contracts, engineering, procurement and construction contracts (“EPCs”), power purchase agreements (“PPAs”) and long-term service agreements with customers subject to contractual, technology, operating, commodity (i.e., natural gas) and fuel pricing risks, as well as market conditions that may affect our operating results.
- We extend product warranties for our products, which products are complex and could contain defects and may not operate at expected performance levels, which could impact sales and market adoption of our products, affect our operating results or result in claims against us.
- We currently face and will continue to face significant competition, including from products using other energy sources that may be lower priced or have preferred environmental characteristics. Our plans are dependent on market acceptance of our products and we must complete development of our new products and develop additional commercially viable products in order to achieve our long-term revenue targets.
- Our products use inherently dangerous, flammable fuels, operate at high temperatures and use corrosive carbonate material, each of which could subject our business to product liability claims.

- We are increasingly dependent on information technology, and disruptions, failures or security breaches of our information technology infrastructure could have a material adverse effect on our operations and the operations of our power plant platforms. In addition, increased information technology security threats and more sophisticated computer crime pose a risk to our systems, networks, products and services.
- We are required to maintain effective internal control over financial reporting. In a prior fiscal year, our management identified a material weakness in our internal control over financial reporting. If other control deficiencies are identified in the future, we may not be able to report our financial results accurately, prevent fraud or file our periodic reports in a timely manner, which may adversely affect investor confidence in our Company and, as a result, the value of our common stock.
- Our results of operations could vary as a result of changes to our accounting policies or the methods, estimates and judgments we use in applying our accounting policies.
- We may be affected by environmental and other governmental regulation.
- A negative government audit could result in an adverse adjustment of our revenue and costs and could result in civil and criminal penalties.
- Exports of certain of our products are subject to various export control regulations and may require a license or permission from the U.S. Department of State, the U.S. Department of Energy or other agencies.
- The Paycheck Protection Program loan received by us in 2020 and subsequently repaid by us in 2021 has resulted in an informal SEC inquiry into our financial disclosures and may subject us to challenges regarding qualification for the loan, enforcement actions, fines and penalties.
- We will need to raise additional capital, and such capital may not be available on acceptable terms, if at all. If we do raise additional capital utilizing equity, existing stockholders will suffer dilution. If we do not raise additional capital, our business could fail or be materially and adversely affected.
- We depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our future growth and success. Additionally, the U.S. government has certain rights relating to our intellectual property, including the right to restrict or take title to certain patents.
- Our stock price has been and could remain volatile. Financial markets worldwide have experienced heightened volatility and instability which may have a material adverse impact on our Company, our customers and our suppliers.
- Provisions of Delaware and Connecticut law and of our certificate of incorporation and by-laws may make a takeover more difficult. Our by-laws provide that the Court of Chancery of the State of Delaware is the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a judicial forum deemed favorable by the stockholder for disputes with us or our directors, officers or employees.
- The rights of our 5% Series B Cumulative Convertible Perpetual Preferred Stock ("Series B Preferred Stock") could negatively impact our cash flows and dilute the ownership interest of our common stockholders. The Series B Preferred Stock ranks senior to our common stock with respect to payments upon liquidation, dividends, and distributions.
- Litigation could expose us to significant costs and adversely affect our business, financial condition, and results of operations.
- Weakness in the economy and other conditions affecting the financial stability of our customers could negatively impact future sales of our products and our results of operations.
- Our results of operations could be adversely affected by economic and political conditions globally and the effects of these conditions on our customers' businesses and levels of business activity.
- Our future success will depend on our ability to attract and retain qualified management, technical and other personnel.

General Information

Information contained in this report concerning the electric power supply industry and the distributed generation market, the distributed hydrogen market, the energy storage market and the carbon capture market, our general expectations concerning these industries and markets, and our position within these industries and markets are based on market research, industry publications, other publicly available information and assumptions made by us based on this information and our knowledge of these industries and markets, which we believe to be reasonable. Although we believe that the market research, industry publications and other publicly available information, including the sources that we cite in this report, are reliable, they have not been independently verified by us and, accordingly, we cannot assure you that such information is accurate in all material respects. Our estimates, particularly as they relate to our general expectations concerning the electric power supply industry and the distributed generation market, the distributed hydrogen market, the energy storage market and the carbon capture market, involve risks and uncertainties and are subject to change based on various factors, including those discussed under the section of this report entitled “Item 1A - Risk Factors.”

Unless otherwise specifically noted herein, all degrees refer to Fahrenheit (“F”); kilowatt (“kW”) and megawatt (“MW”) numbers used in this report designate nominal or rated capacity of the referenced power plant which is the design rated output of the referenced power plant as of the date of initiation of commercial operations; “efficiency” or “electrical efficiency” means the ratio of the electrical energy generated in the conversion of a fuel to the total energy contained in the fuel (lower heating value, the standard for power plant generation, assumes the water in the product is in vapor form; as opposed to higher heating value, which assumes the water in the product is in liquid form, net of parasitic load); kW means 1,000 watts; MW means 1,000,000 watts; “kilowatt hour” (“kWh”) is equal to 1kW of power supplied to or taken from an electric circuit steadily for one hour; and one British Thermal Unit (“Btu”) is equal to the amount of heat necessary to raise one pound of pure water from 59°F to 60°F at a specified constant pressure.

All dollar amounts are in U.S. dollars unless otherwise noted.

Business Overview

Headquartered in Danbury, Connecticut, FuelCell Energy has leveraged five decades of research and development to become a global leader in delivering environmentally responsible distributed baseload energy platform solutions through our proprietary fuel cell technology. Our current commercial technology produces electricity, heat, hydrogen, and water while separating carbon for utilization and/or sequestration. We continue to invest in developing and commercializing future technologies expected to add new capabilities to our platforms’ abilities to deliver hydrogen and long duration hydrogen-based energy storage through our solid oxide technologies, as well as further enhance our existing platforms’ carbon capture solutions.

FuelCell Energy is a global leader in sustainable clean energy technologies that address some of the world’s most critical challenges around energy access, security, safety and environmental stewardship. As a leading global manufacturer of proprietary fuel cell technology platforms, FuelCell Energy is uniquely positioned to serve customers worldwide with sustainable products and solutions for industrial and commercial businesses, utilities, governments, and municipalities.

Our History

FuelCell Energy was founded in 1969 by Bernard Baker and Martin Klein, who had a powerful vision for the future of energy. The Company, which is now based in Connecticut, was founded as a New York corporation to provide applied research and development services on a contract basis. The Company completed its initial public offering in 1992 and reincorporated in Delaware in 1999. The Company sold its first commercial fuel cell power platform in 2003 to the Kirin Ichiban Brewery Company in Tokyo, Japan, which utilized biofuels to produce carbon neutral electricity and steam. From the development and commercialization of a new type of battery to the deployment of the initial SureSource platform, FuelCell Energy has been a pioneer in developing technologies focused on solving some of the world’s most critical challenges around safe, reliable clean energy. This history of technological leadership, the diversity of our team, and our team members’ ideas drive our culture of innovation and sense of purpose.

Today, FuelCell Energy is a global clean technology manufacturer of stationary fuel cell energy platforms that decarbonize power and produce hydrogen.

Our purpose is to enable a world empowered by clean energy.

Product Platforms and Applications Overview

Our product portfolio is based on two electrochemical platforms, carbonate and solid oxide. The platforms are similar in many ways, but they also have unique capabilities. Both platforms can support power generation and combined heat and power applications using a variety of fuels, including natural gas, renewable biogas, and hydrogen. The fuel cells utilized in these platforms react fuel electrochemically, without combusting the fuel, which avoids emissions produced by combustion such as nitrogen oxides (“NOx”), sulfur oxides (“SOx”) and particulates. In the electrochemical process, fuel and air are reacted in separate chambers in the fuel cell stack. The reactions producing CO₂ happen before the fuel is mixed with air, and the CO₂ is concentrated and therefore easy to capture. Both our carbonate and solid oxide platforms are enabled to capture their own CO₂ for use or sequestration before it is emitted into the air. However, our carbonate platforms are unique in their ability to also capture CO₂ from an external source, utilizing the flue stream of a power plant or an industrial boiler as a replacement for traditional air intake.

Our solid oxide platform can operate on pure hydrogen fuel. We believe this feature will gain importance in the future as hydrogen becomes more widespread as a fuel, and in the more near term as we work to deploy our technology for hydrogen-based energy storage.

Both platforms can be used in electrolysis, which is the reverse of fuel cell operation – producing hydrogen from power. Carbonate platforms use a mixture of reforming and electrolysis, while solid oxide platforms can be used for pure hydrogen electrolysis.

Our multi-featured platforms can be configured to provide a number of value streams, including electricity, hydrogen, high grade heat (including steam), water and CO₂ upgradable to food and beverage grade and/or usable in cement or other industrial products, and to concentrate and separate CO₂ from fossil-fueled industrial applications allowing the sequestration and/or utilization of the CO₂. We are focused on using our proprietary technology to pursue the following four significant industry applications, each of which we believe is important to the global energy transition and to limiting global warming:

- Distributed generation (commercially available);
- Distributed hydrogen (commercially available);
- Solid Oxide Electrolysis Cell (“SOEC”) based hydrogen production leveraging electrolysis, long-duration hydrogen energy storage and Reversible Solid Oxide Fuel Cells (“RSOFC”) for the low to zero carbon production of electricity utilizing pure hydrogen as the feedstock (under development and available for order); and
- Carbon capture from external sources (under development) and carbon separation and utilization enabling carbon capture utilization and sequestration (“CCUS”) (commercially available).

See the section below entitled “Our Product Platforms and Applications” for more information.

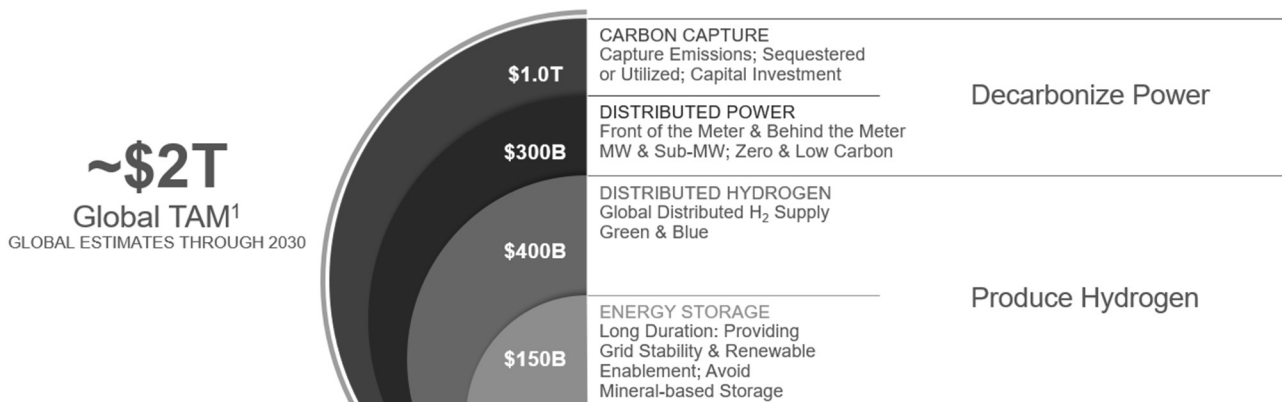
Our Market Opportunity

Climate initiatives are driving the global push to reduce greenhouse gases, including CO₂, NO_x and SO_x. We believe a large and increasing combined total addressable market (“TAM”) opportunity exists for solutions we currently have commercially available today and those solutions that we are actively developing for commercialization. Through the capabilities of our platforms, we provide clean, reliable baseload power generation (baseload power generation is power generated over a period of time at a steady rate), hydrogen production, high grade heat, isolation and removal of CO₂ from exhaust streams, and the ability to use biofuels, renewable natural gas (“RNG”), and a hydrogen-hydrocarbon fuel blend for power generation feedstock. In addition, we are focused on advancing the commercialization of our platform technology to utilize pure hydrogen for baseload power generation and to perform electrolysis to convert water and electricity into hydrogen and to isolate and remove CO₂ from external exhaust streams.

Hydrogen enables zero emissions transportation by utilizing a zero-carbon feedstock as the fuel to power cars, trucks, buses, ships, trains, and, in the future, aircraft and other aerospace applications. Hydrogen is also capable of providing the fuel needed to produce high grade heat for industrial applications such as steel and glass production, in addition to its traditional uses for the refining process, in making ammonia, cement, and chemicals, in building heat, for combustion power generation, and even for residential heating.

Hydrogen is also an effective medium for the storage of energy, and we are in the process of commercializing a highly efficient and environmentally favorable hydrogen-based long-duration energy storage solution. We believe hydrogen-based storage is environmentally superior to a mineral-based storage solution such as lithium-ion batteries. Additionally, through the deployment of our megawatt and sub-megawatt power generation platform solutions, we can deliver the benefits of clean, distributed power generation, including the desirable value stream of thermal energy, and avoid the need for massive, long distance transmission infrastructure and the risks that the traditional transmission grid creates.

CO₂ is also a valuable input ingredient in many products and processes. We believe that, by using more CO₂ (carbon capture utilization) and emitting less CO₂ through the efficiencies of our platforms and by capturing CO₂ at the source point, the use of our platforms can positively impact climate change. Our platforms are capable of delivering CO₂ for food and beverage use, pH balancing of water supply, extending the shelf life of food vital to global food supply and food security, as a binder in a number of materials from concrete to sustainable building materials and the production of synthetic fuels, polymers and other minerals.



¹ See the section entitled “Critical Assumptions and Additional Information Regarding Calculation of our Total Addressable Market Opportunity” on page 39 for important information regarding the sources and assumptions used in estimating the value of these market opportunities

We view TAM as the overall revenue opportunity that is available for a product or solution if 100% market share is achieved. We believe that the combined value of the TAM opportunity for the markets that may be served by our solutions which are commercially available and solutions which are actively under development by the Company is approximately \$2 trillion cumulatively from the date hereof through the end of calendar year 2030 (the “Measuring Period”). Our estimate of the combined, cumulative value of our TAM opportunity is based on review and analysis of third-party sources and application of management’s current assumptions and business judgment as to our market opportunities within the markets

that may be served by the four technology solutions described below. The cumulative TAM number represents the combined estimated total market size over the Measuring Period for the markets which such solutions may serve and is not a projection or estimate of the actual market share that we could achieve or the amount of revenue that could be generated by us in these markets in the Measuring Period. The market opportunities which we believe comprise our combined, cumulative approximately \$2 trillion TAM opportunity are described below:

- (i) Global carbon capture, carbon separation and utilization market of approximately \$1 trillion – Carbon capture technology is currently under development by the Company to serve this market, while the Company currently has commercially available carbon separation and utilization solutions;
- (ii) Global distributed hydrogen market of approximately \$400 billion – The Company currently has commercially available a distributed hydrogen solution to serve this market;
- (iii) Global megawatt and sub-megawatt in front of the meter (“FTM”) and behind the meter (“BTM”) distributed power market of approximately \$300 billion – The Company currently has commercially available megawatt and sub-megawatt FTM and BTM distributed power solutions to serve this market; and
- (iv) Global solid oxide based long-duration hydrogen energy storage and electrolysis market of approximately \$150 billion – Solid oxide based long-duration hydrogen energy storage and electrolysis is currently under development by the Company to serve this market and is available for order.

See the section entitled “Critical Assumptions and Additional Information Regarding Calculation of our Total Addressable Market Opportunity” on page 39 for important information regarding the sources and assumptions used in estimating the value of these market opportunities.

See the section below entitled “Our Markets” for information regarding our existing and target markets.

Our Durable Competitive Advantages

Given the long history of investment in and deployment of our solutions, we believe we have the following competitive advantages:

- **Intellectual property** that we believe makes new entry to the market challenging and a **product portfolio** that consists of several proprietary technologies that we believe are attractive based on market economics, rather than government mandates alone.
- **Technical expertise** through a tenured, highly skilled workforce, operating complex processes to deliver our platform solutions.
- **Operational excellence** programs and resource management aim to maximize cost-reduction opportunities while improving safety and product quality, and lean management deployment intended to drive manufacturing speed to market, increase cost competitiveness, and decrease the environmental impact of our operations.
- **Strategic innovation and development relationships** with the U.S. Department of Energy (“DOE”), ExxonMobil Technology and Engineering Company, formerly known as ExxonMobil Research and Engineering Company (“EMTEC”), Canadian Natural Resources Limited (“CNRL”) and Drax Group provide funding for and encourage technology development.
- **Products characterized by sustainability over their full lifecycle** compared to other “clean” technologies such as wind turbines, solar panels and mineral-based batteries for which recycling is neither economical nor practical. In addition, mineral-based batteries often rely on minerals plagued by supply challenges, disruptive mining practices, and geopolitical risk that impacts energy security, and contribute to landfills following their useful life.

Our Commitment to Sustainability

We have developed and begun implementing a plan to reduce our carbon emissions to net zero by 2050. As part of this plan, during fiscal year 2022, we:

- Calculated our organizational carbon footprint baseline;
- Conducted product life cycle assessments (“LCAs”) to understand emissions throughout the value chain;
- Set short term goals (2030) and long-term goals (2050) aligned with science-based targets;
- Worked to develop milestones to net zero emissions to guide our Scope 1, 2 and 3 (as described in the Green House Gas Protocol Corporate Accounting and Reporting Standard) emissions reduction goals and track our year over year progress; and
- Engaged team members on our net zero journey and realigned our board committee charters to more formally establish oversight of the Company’s ESG efforts.

Our platforms have a direct impact on reducing our customers’ Scope 1 and Scope 2 emissions thus lowering the global environmental footprint of baseload power generation. However, our platforms are designed to go beyond power generation, delivering hydrogen, carbon separation, water, and thermal energy in various applications. As a result of our platforms’ ability to deliver multiple value streams, we help our customers reduce their Scope 1 and Scope 2 emissions on-site without buying off-site carbon/environmental offsets, which do not positively impact the local communities’ air quality or emissions. In the future, we plan to commercialize our hydrogen, long-duration energy storage, and carbon capture technologies intended to drive next generation solutions to help customers attain their decarbonization goals.

Our patented products offer a sustainable alternative to traditional internal combustion-based power generation and reliable baseload power compared to intermittent sources such as wind, solar, and run of river hydro power. Traditional power plants create harmful emissions, such as NO_x, SO_x and particulate matter, that are a serious public health concern and have a direct impact on the communities in which these plants operate. Intermittent sources, generally, avoid fewer emissions than our fuel cell platforms. Alternatively, our energy platforms use a combustion-free power generation process that is virtually free of pollutants. When a fuel is combusted (as in traditional power generation), carbon is emitted in addition to SO_x, NO_x, and other particulates. When intermittent power sources go offline because the sun is not shining, the wind is not blowing, or water is not flowing, they rely on traditional fossil-fueled power resources such as coal and natural gas to provide electricity. Our platforms are highly efficient and environmentally friendly products that support the “Triple Bottom Line” concept of sustainability, consisting of environmental, social, and economic considerations.

As an enterprise, we are proud that, in October 2018, we were certified ISO 14001:2015 compliant, having demonstrated the establishment of and adherence to an environmental management system standard. We believe that we are the only fuel cell manufacturer to have received this certification.

Our commitment to sustainability is also evident in the design, manufacturing, installation and on-going servicing of our fuel cell energy platforms, which are engineered for the circular economy. For example, when our platforms reach the end of their useful lives, we have the capability to refurbish and re-use certain parts and also recycle more than 90% by weight of what we cannot re-use. This is a departure from combustion-based, wind, and solar power generation methods that typically produce a significant amount of unrecyclable waste which increases landfill use. The balance of plant (“BOP”) is designed to have an operating life of 25-to-30 years, at which time metals such as steel and copper are reclaimed for scrap value. For context, by weight, approximately 93% of the entire energy platform can be re-used or recycled at the end of its useful life.

Our Business Strategy

In 2019, we launched our “Powerhouse” strategy to strengthen our business, maximize operational efficiencies and position us for future growth. Having made substantial progress in achieving key initiatives under the original three pillars of our strategy, last year we updated the three key pillars of our strategy to “Grow, Scale and Innovate.” Under these three pillars, we will focus on:

Grow — Penetrate Significant Market Opportunities

- *Optimize the core business:* Capitalizing on our core technological strengths in key product markets, including the use of biofuels, microgrids, distributed hydrogen, and carbon separation and utilization.
- *Drive commercial excellence:* Strengthening customer relationships and building a customer-centric reputation; building our sales pipeline by increasing focus on targeted differentiated applications, product sales and geographic market and customer segment expansion; and building a broader network of channel and go-to-market relationships.
- *Expand geographically and by market:* Targeting growth opportunities in South Korea and across Asia, Europe, North America, the Middle East, Africa and South America. We will continue to monitor other global markets for expansion as those opportunities develop.

Scale — Scale Our Existing Platform to Support Growth

- *Invest:* Investing in our current manufacturing capabilities and building new capacity as we advance commercialization of our Advanced Technologies, enhancing our commercial organization, and investing in marketing to ensure the various audiences of our message have a clear understanding of the potential value propositions and benefits of our platforms and solutions, including customers, regulatory and legislative bodies in each of our target markets, and investors.
- *Extend process leadership:* Building on our legacy of process excellence, so that we scale with the same degree of quality as our current footprint.
- *Broaden and deepen our human capital:* Implementing the next phase of our plan for human capital development to support our growth and enable our future.

Innovate — Innovate for the Future

- *Continue product innovations:* Investing in continuous product improvement, advancing hydrogen-based energy solutions, including storage and electrolysis solutions using a differentiated high-efficiency electrode supported cell capable of reverse (fuel cell/electrolysis) operation, and continuing development of carbon capture and carbon separation technologies extending our platform applications.
- *Deepen participation in the developing hydrogen economy:* Building on our carbonate distributed hydrogen Trigen platform for the delivery of hydrogen to advance our solid oxide technology to support growing applications for distributed hydrogen electrolysis and energy storage applications, leveraging the high efficiency of the platform in electrolysis mode and the ability to operate reversibly between electrolysis and fuel cell mode. These features allow high efficiency hydrogen and power production using 100% hydrogen fuel for electricity production, and economic and efficient hydrogen-based energy storage.
- *Diversify our revenue streams by delivering products and services that support the global energy transition:* Through the innovations described above, focusing on developing a suite of platforms which we believe will be in demand throughout the energy transition allowing us to increase, broaden and diversify our revenue streams.

Our Value Proposition

We are working to deploy our unique and differentiated energy solutions to help customers decarbonize power and produce hydrogen, improving access, cost, resiliency, and sustainability of the energy that powers their lives and businesses. Our commitment to delivering our value proposition drives our strategic focus that advances our work and delivers value to our customers.

This is how we measure value to our customers:

- Clean energy supporting decarbonization objectives – both in terms of platform capability and delivered output streams. Our platforms assist our customers in reducing emissions;
- Achievement of business objectives - aided by the value our platforms delivered;
- Low-cost hydrogen availability - through multiple platform solutions that take into account the cost of electricity, the availability of renewable fuels, and the scarcity of water to create hydrogen at or near the point of use;
- Reliability – Local solution that can produce power at the point of use, not reliant on long-distance transmission lines and reducing other above ground risks associated with local distribution networks;
- Competitive cost of energy – our efficient platform can deliver electricity cost competitively, while also producing other value streams, including thermal energy, hydrogen, CO₂ and water. Public policy that incentivizes the production of clean energy can allow us to produce electricity for less than grid price;
- Resiliency – 24/7 power availability providing continuity of customer operations, reliable delivery of power to homes and businesses, and the ability to provide grid independent power; and
- Multiple value streams – electricity, hydrogen, thermal, water, and carbon separation.

Our Current Products

Our core fuel cell products offer clean, highly efficient and affordable power generation and thermal value streams, while our enhanced products offer additional value streams such as hydrogen, water, thermal energy, and carbon separation for customers. The platforms are scalable for smaller sub-megawatt applications to multi-megawatt utility applications, microgrid applications, distributed hydrogen, or use of the platform’s thermal attributes for on-site heat and chilling applications for a broad range of applications.

Our commercial platforms include:

- SureSource 1500™, our 1.4 MW platform,
- SureSource 3000™, our 2.8 MW platform,
- SureSource 4000™, our 3.7 MW high efficiency platform,
- SureSource 250™ (Europe only), our 250 kW platform,
- SureSource 400™ (Europe only), our 400 kW platform, and
- SureSource Hydrogen™, or Trigen™, our 2.3 MW platform that is designed to produce up to 1,200 kg of hydrogen per day.

The applications supported by these platforms include:

- Combined heat and power (“CHP”),
- Microgrid,
- Distributed hydrogen, electricity, and water (also referred to as Trigen),
- Carbon separation and, under development, carbon capture from external sources, and
- Multi-fuel power generation – Biofuels, renewable natural gas, hydrogen and natural gas blend (up to 50% hydrogen), natural gas, and, in development, 100% pure hydrogen power generation leveraging reversible solid oxide fuel cells and long-duration hydrogen energy storage.

Our global SureSource product line is uniformly based on the same carbonate fuel cell technology, and offers the following advantages:

- **Sustainable:** With the commercialization of our solid oxide platform, we will be able to offer two highly differentiated high temperature platforms. Our solutions produce electricity electrochemically – without combustion – and operate at a low decibel level, which enables siting of the power plants within dense, urban

areas while meeting clean air permitting regulations. We believe that our solutions represent an important local public health benefit and they often generate tax revenues for the local community. Fuel cells also reduce carbon emissions compared to less efficient combustion-based power generation and avoid greater emissions than intermittent renewable energy resources.

- **Flexible:** Our solutions can operate on renewable natural gas, on-site renewable biogas, directed biogas, natural gas, flare gas and propane to offer combined heat and power (“CHP”) and are scalable to add power incrementally as demand grows. Our solid oxide platform is also capable of operating on hydrogen. For our carbonate platform, the unique chemistry of our fuel cells allows them to directly use low Btu on-site biogas utilizing our proprietary gas cleanup skid (SureSource Treatment™), with no reduction in output or efficiency compared to operation on natural gas. We developed our proprietary biogas cleanup and contaminant monitoring equipment which, combined with the inherent suitability of the carbonate fuel cell chemistry, gives us an advantage in on-site biogas applications. In addition, we have demonstrated operation of our carbonate fuel cell technology with other fuel sources including coal syngas, propane, and hydrogen-natural gas blend. We believe traditional oil and gas companies as well as new market entrants will continue to develop and increase the supply of renewable natural gas which would benefit our customers given the fuel flexibility of our platforms.
- **Reliable:** Our solutions improve power reliability and energy security by lessening reliance on the transmission and distribution infrastructure of the electric grid. Unlike solar, wind, and run of river hydro power, fuel cells are able to operate continuously regardless of weather, time of day, water levels, or geographic location.
- **Standardized:** Our solutions use a standard cell design globally, enabling supply chain volume-based cost reduction, optimal resource utilization and long-life product enhancements.
- **Attractive Thermal Attributes:** In addition to electricity, our standard fuel cell configuration produces high quality thermal energy (approximately 700° F), suitable for heating facilities or water, or steam for industrial processes or for absorption cooling. The high thermal value may allow customers to reduce or eliminate their burning of fuel in carbon intensive boilers, which should reduce emissions that contribute to their Scope 1 emissions. When configured for CHP, our system efficiencies can potentially reach up to 90%, depending on the application. When configured for distributed hydrogen, our plants produce hydrogen in addition to power and water, with a potential effective efficiency (counting the fuel that would have been used to produce hydrogen conventionally) of up to 80% before considering waste heat utilization, which can raise the total efficiency even higher.
- **Use of Readily Available Catalyst Material:** As our fuel cells are designed to operate at approximately 1,100° F, our platform solution has a key advantage afforded high temperature fuel cells, specifically that they do not require the use of geographically limited precious metal electrodes required by lower temperature fuel cells, such as proton exchange membrane (“PEM”), phosphoric acid (“PAFC”), and alkaline (“AFC”) fuel cells. As a result, we are able to use less expensive and more readily available industrial metals, primarily nickel and stainless steel, as catalysts for our fuel cell components.
- **Easy to Site:** Our fuel cell energy platforms are easily sited with a relatively small footprint and low decibel operating level given the amount of power produced, allowing our platforms to be located at the point of demand. They require significantly less land than solar and wind projects. There is minimal noise produced by the mechanical BOP and our fuel cell platforms have a clean emissions profile, making our fuel cell energy platforms ideally suited for urban locations and in suburban applications at or near the point of energy consumption. Locating our platforms on-site also contributes directly to reducing our customers’ Scope 1 and Scope 2 emissions.
- **Scalable:** Our platforms are scalable, providing a cost-effective solution to adding power incrementally as demand grows, such as multi-megawatt fuel cell parks supporting the electric grid and large scale commercial and industrial operations.
- **Forward Compatibility:** Our fuel cells are multi-fuel capable, allowing a customer to deploy our platforms today utilizing natural gas and to migrate in the future to biofuels, renewable natural gas, and/or a hydrogen

and natural gas blend as those fuels become more abundant. In addition, upon commercialization of our solid oxide platform, we expect that customers will be able to utilize 100% hydrogen for power production.

Product Efficiency and Effectiveness

The electrical efficiency of our carbonate fuel cell solutions ranges from approximately 47% to 60% upon initial operations of our platforms depending on the configuration. When configured for CHP, our system efficiencies can potentially reach up to 90%, depending on the application. Our solutions are designed to deliver high electrical efficiency where the power is used, avoiding transmission. Transmission line losses average about 5% for the U.S. grid, which represents inefficiency, resulting in additional emissions and a hidden cost to utility customers. In addition, overhead transmission lines have been shown to contribute to the ignition of wildfires in certain geographies, causing significant damage and loss of homes and life.

We are targeting very high efficiencies for our solid oxide platforms, which are currently under development. In fuel cell mode, we are targeting efficiencies in the low to high 60% range depending on the fuel type. In electrolysis mode, we are targeting electrical efficiency of about 90%, increasing to approximately 100% when augmented by externally supplied waste heat. In reversible mode, we expect round trip efficiencies in the high 60% range.

We have demonstrated up to 95% carbon capture from simulated coal power plant sources while simultaneously producing baseload power. For harder to capture streams, such as natural gas power generation or industrial boiler capture, we can achieve similarly high capture levels but with reduced power output. Our development work with EMTEC is focused on maximizing power output capabilities at high capture levels. We believe we will be able to operate at capture levels of 90% or better at economically acceptable power output levels with industrial boiler sources, and, with continued development, we expect to be able to cost-effectively capture high percentages of carbon from lower concentration streams in the future.

Our Product Platforms and Applications – Current and Future

We are focused on using our proprietary technology to pursue the following four significant industry applications to decarbonize power and produce hydrogen:

- Distributed generation (commercially available);
- Distributed hydrogen (commercially available);
- SOEC based hydrogen production leveraging electrolysis, long-duration hydrogen energy storage and RSOFCS for the low to zero carbon production of electricity utilizing pure hydrogen as the feedstock (under development and available for order); and
- Carbon capture from external sources (under development) and carbon separation and utilization enabling CCUS (commercially available).

Distributed Generation

Our proprietary, patented SureSource platforms generate electricity directly from a hydrogen-rich fuel, such as biogas, renewable natural gas, natural gas or an up to 50% blend of hydrogen and natural gas. This multi-fuel capability enables the SureSource platform to leverage the established natural gas infrastructure that is readily available in our existing and target markets, compared to some types of fuel cells that can only operate on high purity hydrogen. Our proprietary technology also allows us to utilize on-site biogas, renewable natural gas or a hydrogen and natural gas blend, the application of which is rapidly expanding around the world, to fuel our platforms.

We market different configurations and applications of our SureSource platform to meet specific market needs, including:

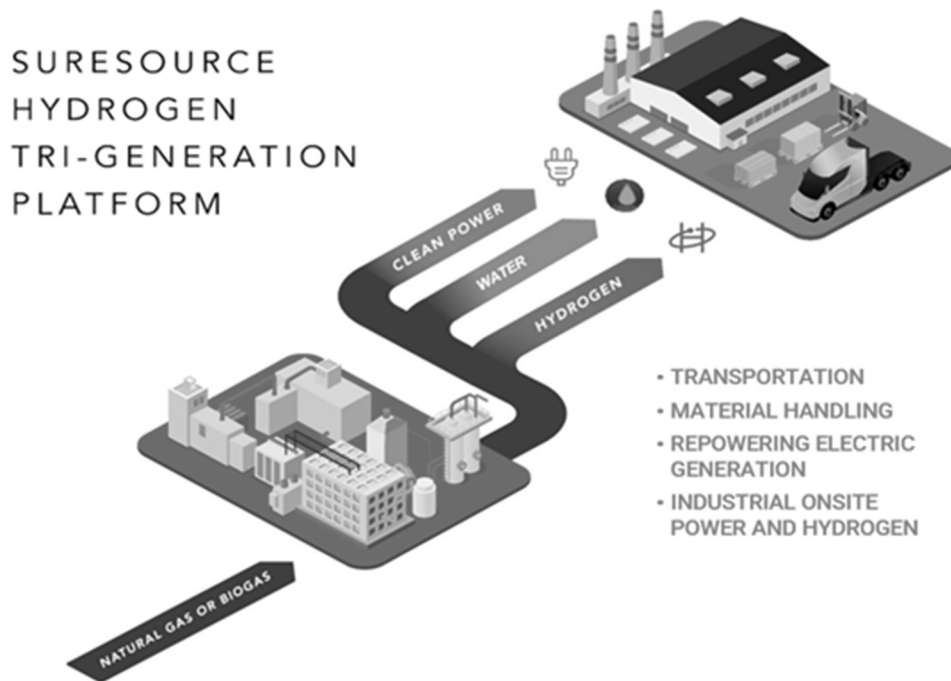
- ***On-Site Power (also known as “Behind the Meter”)***: Customers benefit from improved power resilience, energy security from on-site power that reduces reliance on the electric grid in an environmentally responsible manner, and long-term electric and other value stream price certainty. Additionally, thermal energy produced

by our fuel cells can be used to produce hot water or steam or to drive high efficiency absorption chillers for cooling applications for commercial and industrial customers. The SureSource platform can also deliver hydrogen and carbon dioxide for beverage and food production in addition to other industrial uses. Carbon separated can also be sequestered depending upon the use case.

- **Utility Grid Support:** Our SureSource energy platforms are scalable, enabling multiple fuel cell platforms to be located together on a very small footprint per MW generated. This capability enables utilities to add multi-megawatt power generation to enhance electric grid resiliency where needed, without the associated cost, inefficiencies of a transmission system, and other associated above-ground transmission risks. Our fuel cells can solidify the total utility power generation solution when combined with intermittent sources, such as solar or wind, or less efficient combustion-based equipment that provides peaking or load following power.
- **Microgrid Applications:** SureSource platforms can also be configured as a microgrid, either independently or with other forms of power generation, with the goal of providing continuous power and a seamless transition during times of grid outages. We have deployed multiple microgrids leveraging our platform solutions, some individually and some integrated with other forms of power generation.

Distributed Hydrogen

SureSource platforms are configurable to deliver on-site hydrogen for transportation, industrial applications, natural gas blending, repowering combustion-based equipment with zero carbon hydrogen, and other uses. The SureSource Hydrogen platform utilizes proprietary fuel cells configured to simultaneously generate three value streams — power generation, hydrogen, and water. When operated on biogas or renewable natural gas, SureSource Hydrogen systems produce renewable hydrogen, also known as Green Hydrogen, but, even when fueled with natural gas, our platforms produce hydrogen with a lower carbon and criteria pollutant impact when compared to conventional steam methane reforming (“SMR”) applications because of the use of internal heat compared to burning fuel in the case of SMRs. Heat and steam are byproducts of fuel cell operation, allowing Trigen platforms to produce hydrogen without water consumption (in fact with net water production, making our Trigen platform a unique platform for hydrogen production) and with a low carbon footprint. Adding carbon separation or carbon capture to the SureSource Hydrogen platform when fueled with natural gas will deliver Blue Hydrogen (i.e., hydrogen produced with carbon capture). The following figure illustrates the concept of the SureSource Hydrogen platform and identifies typical applications for our distributed hydrogen application.



Trigen Distributed Hydrogen Platform

Solid Oxide Technology - Long Duration Hydrogen-Based Energy Storage and Electrolysis

We are in the process of commercializing a solution for long duration energy storage using our proprietary solid oxide electrolysis technology which is expected to enable production of hydrogen with high electrical efficiency. We believe that our platform will deliver higher efficiency than our competitors and competing technologies with or without the addition of waste heat.

Our solid oxide stacks are designed to alternate between electrolysis and power generation mode, with one of our design goals being improved integration of intermittent wind and solar power generation sources into the modern electrical grid via long duration storage of energy. Hydrogen-based long duration energy storage has the ability to transform the way intermittent resources are supported today as an alternative to combustion energy sources for continuous power. Instead of producing power from fuel and air, a solid oxide fuel cell stack in electrolysis mode splits water into hydrogen and oxygen using supplied carbon-free electricity. The hydrogen can be stored as compressed gas, creating the ability to produce a virtually limitless supply. When the grid needs to discharge power, the stored hydrogen will be sent back to the same solid oxide stacks, which react it with air to produce power and to regenerate the water, which will be stored for the next cycle.

Long duration hydrogen-based energy storage can be achieved without the need to add excessive amounts of conventional battery capacity, a capacity that is reliant on rare earth minerals such as lithium and cobalt, both of which have supply constraints for broad adoption, require extensive mining, present long-term disposal challenges post-use, and are impacted by geopolitical risks associated with supply and mineral processing. The Democratic Republic of the Congo and People’s Republic of China (“China”) were collectively responsible for approximately 70% and 60% of global production of cobalt and rare earth elements, respectively, in 2019. High levels of production concentration, compounded by complex supply chains, increase the risks that could arise from physical disruption, trade restrictions or other developments in major producing countries, jeopardizing energy security.

Long duration hydrogen-based energy storage is expected to be required at large scale in order to manage the forecasted high penetration of intermittent renewable resources globally, and we believe the water/hydrogen-based approach of our

solid oxide fuel cell/solid oxide electrolysis cell/reversible solid oxide fuel cell technology has the potential to be a key enabler of long duration hydrogen-based energy storage. Hydrogen can be produced locally, is less reliant on energy transition minerals and is regenerative. We believe hydrogen as an energy storage medium is superior to mineral-based storage platforms.

We are also developing advanced electrolysis systems based on our solid oxide electrolysis platform, which can operate at higher electrical efficiency than currently available electrolysis technologies. The largest factor in the cost of electrolysis-produced hydrogen is the cost of electricity. Consequently, efficiency is one of the most effective ways to lower cost. We believe our solid oxide platform is among the most efficient available electrolysis technologies. This is expected to translate to a 20% to 30% lower cost of hydrogen compared to lower efficiency and low-temperature electrolysis. We believe our solid oxide platform offers one of the best chances of achieving the \$1 USD per kg levelized cost of hydrogen targeted by the U.S. Department of Energy by 2050. Applications for this technology include centralized large scale hydrogen production from grid-scale renewables or nuclear power, and decentralized hydrogen production for industrial, transportation, repowered combustion generation assets, and synthetic or sustainable fuels for use in aviation and other applications.

During fiscal year 2022, we operated a sub scale demonstration project of our solid oxide electrolysis technology in our Danbury test facility. We have been awarded a pilot program to provide a packaged 150 kg/day system for demonstration at Idaho National Laboratory. Idaho National Laboratory is currently conducting stack tests to evaluate performance and durability and we expect our solid oxide electrolysis technology to be placed in service during fiscal year 2023.

We have recently completed conversion of the Danbury electrolysis demonstration system to a reversible system, adding equipment for supply of hydrogen to the stack to make power. We have begun testing the system in RSOFC mode, alternating the test stack between production of hydrogen in electrolysis mode and consumption of hydrogen in fuel cell mode. This is an extension of previous tests with single cells or smaller stacks which demonstrated stable operation in RSOFC mode.

During fiscal year 2022, we entered into an agreement with Trinity College in Hartford, Connecticut, for the purchase of our first 250 kW solid oxide fuel cell power generation system. Power and heat produced from the platform will be used at Trinity's campus in Hartford, Connecticut, to lower energy cost and enhance energy reliability and security. This solid oxide fuel cell power generation system is expected to be installed late in fiscal year 2023. Our solid oxide platform is manufactured at our manufacturing and research and development facility in Calgary, Alberta, Canada. While we are currently accepting orders for our solid oxide platform, the timing of delivery of future orders will depend on our ability to increase production capacity to meet anticipated demand.

Carbon Capture, Separation and Utilization

- ***Carbon Capture*** – Power generation and industrial applications are the source of two-thirds of the world's carbon emissions. Cost effective and efficient carbon capture from these two applications globally represents a large market because it could enable clean use of all available fuels. The SureSource Capture™ system is being designed to separate and concentrate CO₂ from the flue gases of natural gas, biomass or coal-fired power plants or other industrial facilities as a side reaction that extracts and purifies the CO₂ in the flue gas during the power generation process and destroys approximately 70% of NO_x emissions during the power generation process.

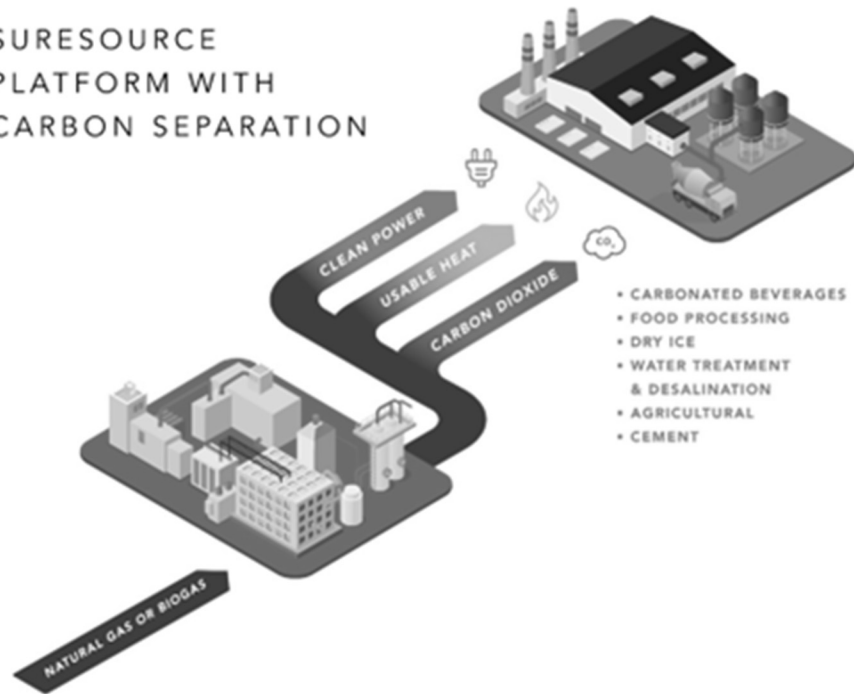
The production of additional baseload power during the carbon capture process, as opposed to consuming power, differentiates the SureSource Capture system from other forms of carbon capture offerings. This added revenue attribute could make the SureSource Capture system more cost effective than other systems which are being considered, or are currently in use, for carbon capture. SureSource Capture systems can be implemented incrementally, managing capital outlay to match decarbonization objectives and regulatory requirements. Since our solution generates a return on capital resulting from the fuel cell's production of electricity compared to an increase in operating expense incurred by other carbon capture technologies, it can extend the life of existing power plants and industrial facilities.

We have a Joint Development Agreement with EMTEC, which first became effective on October 31, 2019 and was executed in fiscal year 2020 (as amended from time to time, the "EMTEC Joint Development Agreement"). Under this agreement, we have engaged in exclusive research and development efforts with

EMTEC to evaluate and develop new and/or improved carbonate fuel cells to reduce carbon dioxide emissions from industrial and power sources. Since April 30, 2022, we have been operating under the second extension to the EMTEC Joint Development Agreement, which was to run through December 31, 2022 and allowed for the continuation of research intended to enable us and EMTEC to: (i) gain an improved understanding of the fuel cell operating envelope for various carbon capture applications; and (ii) complete data collection to support the project gate decision to use the developed technology in a Company fuel cell module demonstration for capturing carbon at ExxonMobil's Rotterdam facility. In addition, under this second extension, we and EMTEC agreed to conduct a joint market study to (a) define application opportunities, commercialization strategies, and development requirements, (b) identify partners for potential pilot/demonstration projects, and (c) assess fuel cell/stack/module manufacturing scale-up and cost reduction. As of October 31, 2022, we were still collaborating with EMTEC on the joint market study, which was completed in early fiscal year 2023. On December 19, 2022, we and EMTEC entered into a third amendment to and extension of the EMTEC Joint Development Agreement, effective December 1, 2022, which extends the term through August 31, 2023 (unless terminated earlier) and is intended to (I) allow for continuation of research that would enable us and EMTEC to finalize data collection in support of the project gate decision to use the developed technology in a Company fuel cell module demonstration for capturing carbon at ExxonMobil's Rotterdam facility, (II) allow for the continuation of the development, engineering and mechanical derisking of the Generation 2 Technology fuel cell module prototype, and (III) allow for studying the manufacturing scale-up and cost reduction of a commercial Generation 2 Technology fuel cell carbon capture facility.

- ***Carbon Separation and Utilization*** – In addition to the ability to capture carbon dioxide from an external source, we are adding the capability to our platforms to extract and purify carbon dioxide produced by the fuel cell power generation process. Our carbon separation technology allows carbon dioxide to be easily extracted and purified to the appropriate level for utilization or sequestration, significantly reducing the carbon footprint of the generated power from our fuel cell platforms. This requires a simple modification to the fuel cell module that can be incorporated into new platforms as well as retrofitted for existing systems during stack replacements. Over time, as we replace fuel cell stacks in our deployed modules, we intend to integrate our carbon separation technology, making every platform receiving a module upgrade carbon separation ready. One attractive application for this technology is the on-site production of carbon dioxide for use in beverage and food production, in addition to other uses such as pH balancing of water, the production of dry ice, as a binder in cement and concrete production, utilization in grow houses, the production of ethanol and synthetic fuels, and numerous other industrial applications and building materials. The ability to provide clean power, heat, and useable carbon dioxide is a unique feature profile that we believe is only available with our SureSource platform. Our systems are modular and scalable, so they can be deployed in a wide variety of applications where on-site carbon dioxide is consumed as a product solution, or carbon dioxide is delivered to multiple nearby consumers. An illustration of the carbon separation application is shown in the following figure, which also shows potential applications for locally produced carbon dioxide.

SURESOURCE PLATFORM WITH CARBON SEPARATION



Carbon separated from our platforms can also be sequestered in instances where the project does not include a use for carbon.

Our Markets

We target distinct markets and applications, including:

- Utilities and independent power producers;
- Industrial process applications;
- Education and health care;
- Data centers and communication;
- Wastewater treatment;
- Government;
- Commercial and hospitality;
- Microgrids;
- Continuous manufacturing;
- Hydrogen transportation; and
- Food and beverage.

The utilities and independent power producer market has historically been our largest market with customers that include utilities on the East and West coasts of the United States, such as UIL Holdings Corporation, Inc. (owned by Avangrid,

Inc., a wholly owned subsidiary of Iberdrola), the Long Island Power Authority (“LIPA”) and Southern California Edison. In Europe, utility customers include E.ON Connecting Energies, one of the largest utilities in the world. In South Korea, we are contracted to operate and maintain a 20 MW power plant project (comprised of five SureSource 3000 plants) for Korea Southern Power Company (“KOSPO”). In addition, as of October 31, 2022, our platform technology is deployed across South Korea at another 7 sites totaling more than 144 MW through our previous relationship with POSCO Energy Co., Ltd. (“POSCO Energy”). Upgrading each of those sites over time with new stacks would require us to produce more than 116 MW of stack replacements at our manufacturing facility in Torrington, which does not include the 28 MW of stack replacements which were delivered to KFC in fiscal year 2022.

Our SureSource power platforms are producing power for a variety of industrial, commercial, municipal and government customers, including manufacturing facilities, pharmaceutical processing facilities, universities, healthcare facilities and wastewater treatment facilities. These institutions expect efficient, clean and continuous power to reduce operating expenses, reduce greenhouse gas emissions and avoid pollutant emissions to meet their sustainability goals, while boosting resiliency and limiting dependence on the distribution grid. CHP applications further support economic and sustainability initiatives by minimizing or avoiding the use of combustion-based boilers for heat. Our SureSource power platforms are unique in their ability to run on biogas.

We market our products primarily in the United States, Europe and South Korea, and we are also pursuing expanding opportunities in other countries around the world.

We target for expansion and development markets and geographic regions that:

- Benefit from and value clean distributed generation;
- Are located where there are high energy costs, poor grid reliability, and/or challenged transmission and distribution lines;
- Have a need for distributed hydrogen for transportation or industry;
- Can leverage the multiple value streams delivered by our SureSource platforms (electricity, hydrogen, thermal, water, and carbon separation);
- Are aligned with regulatory frameworks that harmonize energy, economic and environmental policies; and
- Are committed to reducing their Scope 1 and Scope 2 emissions.

Our business model focuses on providing these markets and geographic regions with highly efficient and affordable distributed generation that delivers de-centralized power in a low-carbon, virtually pollutant-free manner. Geographic markets that meet these criteria and where we are already well established include the Northeastern United States and California. We have also installed and are operating plants in Europe and Asia, mainly South Korea, in addition to North America.

We have made significant progress in reducing costs and creating markets since the commercialization of our products in 2003, with more than 220 MW of our SureSource technology installed and operating as of October 31, 2022.

We believe that we can accelerate and expand the adoption of our distributed power generation solutions through:

- further reductions in the total cost of ownership;
- increasing understanding of total avoided emissions and continued education regarding the multiple value streams that our solutions provide;
- continued improvements in product quality, power efficiency, and stack life;
- increasing brand recognition and understanding of our differentiated platform portfolio;
- expanding our sub megawatt platform to include solid oxide for both hydrogen power production and utilization of hydrogen rich fuels;

- geographic and segment expansion;
- working to increase demand for on-site generation and microgrid expansion; and
- product expansion across carbon separation and utilization, carbon capture and distributed hydrogen.

Increasing Biogas Application Market Demand

With the growing market for anaerobic digestion (the production of biogas from the breakdown of biodegradable materials in the absence of oxygen) and increasingly stringent regulations regarding air quality, we see a growing market opportunity that we believe is perfectly suited for our fuel cell design. SureSource power platforms operating on biogas are an especially compelling value proposition as they convert a waste product into clean electricity and heat, while reducing or eliminating flaring, which addresses certain economic, environmental, and sustainability challenges faced by our customers and the communities in which they operate.

Biogas is generated by the decay of organic material (i.e., biomass). This decaying organic material releases methane, or biogas. As a harmful greenhouse gas, biogas cannot be released directly into the atmosphere. Flaring of biogas creates pollutants and wastes this potential fuel source. Capturing and using biogas as a fuel addresses these challenges and provides a carbon-neutral renewable fuel source. Our patented, proprietary clean-up skid, SureSource Treatment™, provides an economical and reliable system for treating biogas for use on-site at the biogas production facility. Examples of producers of biogas as part of their operations include wastewater treatment facilities, food and beverage processors and agricultural operations.

Our SureSource power platforms convert this biogas into electricity and heat efficiently and economically. Wastewater treatment facilities with anaerobic digesters are an attractive market for our SureSource solution including the power platform as well as treatment of the biogas. Many wastewater treatment plants currently flare biogas produced in the anaerobic digestion process, emitting NOx, SOx and particulate matter into the atmosphere, which does not meet many air quality regulations. Since our fuel cells operate on the biogas produced by the wastewater treatment process and the heat is used to support daily operations at the wastewater treatment facility, the overall thermal efficiency of these installations is high, supporting economics and sustainability. In addition, the fuel cell does not emit the harmful NOx, SOx and particulate matter that come out of a flare or that would result from the use of traditional combustion-based power generation. The unique chemistry of carbonate fuel cells allows them to use low Btu on-site biogas with no reduction in output or efficiency compared to operation on natural gas. We have developed proprietary biogas cleanup and contaminant monitoring equipment which, combined with the inherent suitability of the carbonate fuel cell chemistry, gives us an advantage in on-site biogas applications. Our SureSource 1500 and SureSource 3000 power platforms were the first systems certified to California Air Resource Board emissions standards under the Distributed Generation Certification Program for operation with on-site biogas within the state of California.

Microgrid and resiliency applications

Our fuel cell solutions are also well suited for microgrid applications, either as the sole source of power generation or integrated with other forms of power generation. We have fuel cells operating as microgrids at universities and municipalities, including one university microgrid owned by Clearway Energy and a municipal-based microgrid owned by UIL Holdings Corporation, in addition to the microgrid at a municipal location in Santa Rita, California. For the municipal-based system in Woodbridge, Connecticut owned by UIL Holdings Corporation, under normal operation, the fuel cell supplies power to the grid. If the grid is disrupted, the fuel cell plant will automatically disconnect from the grid and power a number of critical municipal buildings. Heat from this municipal-based fuel cell platform is used by the local high school. Our fuel cell based microgrids have also continued to operate during public safety power shutoffs events in California.

Levelized Cost of Energy

Our fuel cell projects deliver power at a rate comparable to pricing from the grid in our targeted markets. Policy programs that help to support adoption of clean distributed power generation often lead to below-grid pricing. We measure power costs by calculating the Levelized Cost of Energy (“LCOE”) over the life of the project.

There are several primary elements to LCOE for our fuel cell projects, including:

- Capital cost;
- Operations and maintenance cost; and
- Fuel expense.

Given the level of integration in our business model of manufacturing, installing and operating fuel cell power platforms, there are multiple areas and opportunities for cost reductions. We are actively managing and reducing costs in all three LCOE areas, including cost reduction initiatives with respect to system components and raw materials, advanced lean manufacturing principles, improvements in lifetime product costs through continued system and platform engineering, and improvements in output and efficiency. We are also investing in platform design to reduce overall EPC cost associated with the installation of our platforms.

Our Business Model

Our business model is based on multiple revenue streams, targeting both recurring revenue and non-recurring revenue. Recurring revenue is delivered through recurring electricity, capacity, and renewable energy credit sales under power purchase agreements (“PPAs”) and tariffs for projects we retain in our generation operating portfolio, as well as service revenue, mainly through long-term service agreements. Non-recurring revenue is generated through power platform and component sales, as well as from public and private industry research contracts related to the development of our Advanced Technologies (which are discussed in more detail below).

We are a complete solutions provider for our platform solutions, controlling the design, sales, manufacturing, installation, operations, and maintenance of our patented fuel cell technology under long-term power purchase and service agreements. When utilizing long-term PPAs, the end-user of the power or utility hosts the installation and only pays for power as it is delivered, avoiding up-front capital investment. We also develop projects and sell equipment directly to customers, providing a complete solution of engineering, installing, and servicing the fuel cell power plant under an engineering, procurement, and construction agreement (“EPC”) and a long-term maintenance and service agreement. (See the sections below entitled “Engineering, Procurement and Construction” and “Service and Warranty Agreements” for more information.) We maintain the long-term recurring service obligation and associated revenues running conterminous with the life of such projects.

Historically, in the United States, customers or developers typically purchased our fuel cell power plants outright. As the size of our fuel cell projects has grown and the availability of project capital has improved, project structures in the U.S. have transitioned predominantly to PPAs. Customers and developers generally have the option to either purchase our fuel cell platforms outright or enter into a PPA under which the customer or developer (i.e. the end-user of the power) commits to purchase power as it is produced for an extended period of time, typically 10 to 20 years. We may elect to retain ownership of a project or we may elect to sell all or some of the project to a third party. If a project or project asset is sold, revenue from the sale is recognized and reflected in the Product revenues line item of our Consolidated Statements of Operations and Comprehensive Loss, and we recognize revenue separately for the long-term maintenance and service agreement with respect to the project over the term of that agreement. If a project is retained, we recognize electricity, capacity and/or renewable energy credits monthly over the term of the PPA. We report the financial performance of retained projects as Generation revenues and Cost of generation revenues in our Consolidated Statements of Operations and Comprehensive Loss.

Our decision to retain certain projects is based in part on the recurring, predictable cash flows these projects can offer us, the proliferation of PPAs in the industry and the potential access to capital. Retaining PPAs affords us the full benefit of future cash flows under the PPAs, which are expected to be higher than if we sell the projects, although it requires more upfront capital investment and financing. As of October 31, 2022, our operating portfolio of retained projects totaled 36.3 MW with an additional 26.8 MW under development or construction. We plan to continue to grow this portfolio prudently and in a balanced manner, while also selling projects to customers or project investors when selling presents the best value and opportunity for our capital needs or meets the customer’s desired ownership structure.

We operate and maintain our project platforms for the life of the project regardless of the ownership structure. For all operating fuel cell platforms not operating under a PPA, customers enter into long-term service agreements with us, some of which have terms of up to 20 years. We report the revenue earned under long-term maintenance and service agreements as Service agreements revenues in our Consolidated Statements of Operations and Comprehensive Loss.

Internationally, South Korea and Europe have historically been product sale markets for the Company; however, prior to fiscal year 2022, we had not recognized meaningful product sales revenues in these geographies since 2018. Our activities in South Korea were impacted by our prior dispute with POSCO Energy and, until fiscal year 2021, we moderated our investment in business development in Europe due to limited resources. During fiscal year 2022, our commercial team renewed its sales efforts in both markets. Increasing product sales is a focus area for fiscal year 2023 and beyond. As a result of entering into a settlement agreement with POSCO Energy and its subsidiary, Korea Fuel Cell Co., Ltd. (“KFC”), on December 20, 2021 (the “Settlement Agreement”), we have confirmed our full access to the South Korean and broader Asian markets for sales of our products and we are aggressively pursuing sales in these markets, which we see as key to our future growth. (See the section below entitled “License Agreements— License Agreements and Settlement Agreement with POSCO Energy” for more information related to the terms of the Settlement Agreement.)

Advanced Technologies Programs

Our Advanced Technologies programs include research and development and demonstration programs funded by third parties. We undertake both privately funded and publicly funded research and development to develop and grow these opportunities, reduce product and output costs, and expand our technology portfolio. Our Advanced Technologies programs are currently focused on developing and commercializing solutions that advance solid oxide fuel cells, distributed hydrogen, and carbon capture. We report the revenue earned under these programs as Advanced Technologies contract revenues in our Consolidated Statements of Operations and Comprehensive Loss.

We have historically worked on technology development with various U.S. government departments and agencies, including the DOE, the Department of Defense (“DOD”), the Environmental Protection Agency (“EPA”), the Defense Advanced Research Projects Agency (“DARPA”), the Office of Naval Research (“ONR”), and the National Aeronautics and Space Administration (“NASA”). Government funding, principally from the DOE, provided 6%, 9% and 6% of our revenue for the fiscal years ended October 31, 2022, 2021, and 2020, respectively.

We have been working with EMTEC since 2013 to develop and commercialize our carbon capture solution which is an application of our core carbonate technology.

Beyond the DOE and EMTEC funding, we intend to prudently invest capital to accelerate commercialization of solid oxide fuel cells, carbon capture and separation, and long-duration energy storage solutions, as discussed below in more detail in the section entitled “Company Funded Research and Development”.

Company Funded Research and Development

In addition to research and development performed under research contracts, including, as described under the heading “Advanced Technologies Programs” above, we also fund our own research and development activities to support the commercial fleet with product enhancements and improvements. We work to continuously improve and mature our products and implement lessons learned into our product designs and manufacturing process subsequent to introduction. We also continue to invest in improvement initiatives with respect to our core molten carbonate technology. For example, we have identified improvement opportunities ranging from improved thermal management by reducing internal temperature to improving the performance of our electrical balance of plant and implemented design changes to our commercial platforms which are expected to improve overall product performance.

As it relates to our fuel cell modules, these improvements center around delivering more uniform temperature distribution within the stack modules with the intent of improving output over the life of the modules to achieve the product’s expected design life. Continued extension of design life and output of our modules over time is a core research and development focus. In addition, we are also investing in commercializing technologies such as carbon capture and separation, solid oxide fuel cells, and solid oxide electrolysis cells for hydrogen production and energy storage as we believe these technologies represent significant future market opportunities. To further accelerate commercialization activity for our solid oxide platform, we commenced the design and construction of two advanced prototypes targeted for fiscal year 2023 completion: (i) a 250 kW power generation platform, and (ii) a 1 MW high-efficiency electrolysis platform.

Company funded research and development is included in Research and development expenses (operating expenses) in our consolidated financial statements. The total research and development expenditures in the Consolidated Statements of Operations and Comprehensive Loss, including third party and Company-funded expenditures, are as follows:

(dollars in thousands)	Years Ended October 31,		
	2022	2021	2020
Cost of Advanced Technologies contract revenues	\$ 15,184	\$ 16,496	\$ 16,254
Research and development expenses	34,529	11,315	4,797
Total research and development	<u>\$ 49,713</u>	<u>\$ 27,811</u>	<u>\$ 21,051</u>

Manufacturing and Service Facilities

We operate a 167,000 square-foot manufacturing facility in Torrington, Connecticut where we produce the individual cell packages and assemble fuel cell modules for our carbonate fuel cell products. This facility also houses our global service center. Our completed modules are conditioned in Torrington and shipped directly to customer sites. We continue to make investments in various manufacturing areas to improve production throughput and annualized production rate. As of October 31, 2022, the Torrington facility was operating at a 45 MW per year annualized production rate on a single production shift. Maximum annualized capacity (module manufacturing, final assembly, testing and conditioning) is 100 MW per year under the Torrington facility’s current configuration when being fully utilized. The Torrington facility is sized to accommodate the eventual annualized production capacity of up to 200 MW per year with additional capital investment in machinery, equipment, tooling and inventory. We continue to invest in manufacturing capability, including through the installation of new fuel cell conditioning equipment. Additionally, we expect to complete the construction of an on-site fuel cell demonstration and test unit in fiscal year 2023. This platform will allow for component testing, with the goal of accelerating the integration of alternate suppliers, and will allow prospective customers to observe demonstrated capabilities of the fuel cell platform, such as carbon separation.

We design and manufacture the core SureSource fuel cell components that are stacked on top of each other to build a fuel cell stack. For megawatt-scale power plants, four fuel cell stacks are combined to build a 1.4 MW fuel cell module. To complete the power platform, the fuel cell module or modules are combined with the balance of plant (“BOP”). The mechanical BOP processes the incoming fuel such as natural gas or biogas and includes various fuel handling and processing equipment such as pipes and blowers. The electrical BOP processes the power generated for use by the customer and includes electrical interface equipment such as an inverter. The BOP components are either purchased directly from suppliers or the manufacturing is outsourced based on our designs and specifications. This strategy allows us to leverage our manufacturing capacity, focusing on the critical aspects of the power plant where we have specialized knowledge and expertise and possess extensive intellectual property. BOP components are shipped directly to a project site and are then assembled with the fuel cell module into a complete power plant.

The Torrington production and service facility and the Danbury corporate headquarters and research and development facility are ISO 9001:2015 and ISO 14001:2015 certified and our Field Service operation (which maintains the installed fleet of our platforms) is ISO 9001:2015 certified, reinforcing the tenets of our quality management system and our core values of safety, continuous improvement, and commitment to quality, environmental stewardship, and customer satisfaction. Sustainability is promoted throughout our organization. We manufacture SureSource products and manage them through end-of-life using environmentally friendly business processes and practices, certified to ISO 14001:2015. We continually strive to improve how we plan and execute across the entire product life cycle. We maintain a chain of custody and responsibility of our SureSource products throughout the product life cycle and strive for “cradle-to-cradle” sustainable business practices, incorporating sustainability in our corporate culture. We utilize “Design for Environment” principles in the design, manufacture, installation and servicing of our power platforms. Design for Environment principles aim to reduce the overall human health and environmental impact of a product, process or service, when such impacts are considered across the product’s lifecycle. When our platforms reach the end of their useful lives, we can refurbish and re-use certain parts and then recycle most of what we cannot re-use. By weight, approximately 93% of the entire power plant can be re-used or recycled at the end of its useful life.

Our manufacturing and research and development facility in Calgary, Alberta, Canada is focused on the engineering and development of our solid oxide fuel cell (“SOFC”) and SOEC technologies. This facility also houses our SOFC and SOEC stack research and development effort and includes equipment for the manufacturing of solid oxide cells and stacks, including advanced manufacturing capabilities. We are making additional investment in the Calgary facility to establish a

center of competence and excellence for solid oxide cell and stack research and manufacturing. This facility includes equipment for the manufacturing of solid oxide cells and stacks, including an advanced automated stack manufacturing line which has been developed to ensure that the labor and overhead which are required to produce these technologies are optimized for efficiency and complement the low direct material cost of the stack. As of October 31, 2022, this facility is capable of producing 1 MW per year of SOFC or approximately 4 MW per year of SOEC. We are investing in expanding this facility with the goal of increasing its production capacity to 10 MW per year of SOFC or 40 MW per year of SOEC, and we expect this expansion to be complete by the middle of fiscal year 2024. In parallel, we are also expanding our Connecticut manufacturing activities and evaluating additional U.S. locations in anticipation of increased production volume.

We have a manufacturing and service facility in Taufkirchen, Germany that has the capability to perform final module assembly for up to 20 MW per year of sub-megawatt fuel cell power platforms to service the European market. Our European service activities are also operated out of this location. Our operations in Europe are certified under both ISO 9001:2015 and ISO 14001:2015.

As we continue our focus on business growth in Europe, we plan to expand our existing manufacturing and assembly capabilities to match demand for our existing platforms and to support and fulfill the demand we expect to be associated with the future commercialization of our solid oxide and carbon capture offerings. We will continue to focus our manufacturing strategy on core strengths and competencies while further leveraging strategic outsourcing and supply partnering in support of increasing scale and speed to market.

In Asia, we previously relied on our relationship with POSCO Energy to serve the Asian market. Through that relationship, POSCO Energy manufactured the fuel cells to be used by customers in Asia, as well as operated and maintained fuel cell installations in the South Korean market. Now that we have entered into a settlement agreement with POSCO Energy, we plan to explore manufacturing and assembly opportunities across Asia to achieve more efficient product manufacturing and supply chain operations, as well as meet the increasing government requirements for the inclusion of locally sourced content and components in order to benefit from enhanced clean energy investment incentives.

Raw Material Sourcing and Supplier Relationships

We use various commercially available raw materials and components to construct a fuel cell module, including nickel and stainless steel, which are key inputs in our manufacturing process. Our fuel cell stack raw materials are sourced from multiple vendors and are not considered precious metals. We have a global integrated supply chain with qualified sources of supply, many of which are located locally in the regions in which we have established manufacturing and service operations including Europe and Asia. We have not sourced or procured, and do not source or procure, directly or indirectly, any materials from Russia.

Despite a somewhat volatile nickel market and increased pricing pressure on stainless steel direct materials, we have employed strategic inventory purchases, negotiated fixed-price supply contracts, and employed financial hedges to help mitigate the impact to our product cost and improve financial planning. We have implemented several initiatives to mitigate the effect of impacts associated with extended lead times for materials and components by optimizing domestic supplier shipping volumes, leveraging competition across multiple qualified freight forwarders, establishing selective direct relationships with steamship lines, and aggregating shipments with qualified suppliers.

From time to time, we may enter into over-the-counter financial hedges to mitigate market price volatility associated with our underlying physical commodity exposure (and other asset classes) consistent with our Financial Risk Management Policy. These hedges are non-speculative in nature, are entered into with investment grade-rated multinational financial institutions and are governed under the terms of the International Swaps and Derivative Association.

While we manufacture the fuel cells in our Torrington facility, the electrical and mechanical BOPs are assembled by and procured from several suppliers. All of our suppliers must undergo a stringent and rigorous qualification process. We continually evaluate and qualify new suppliers as we diversify our supplier base in our pursuit of lower costs, security of supply, and consistent quality. We purchase mechanical and electrical BOP components from third party vendors, based on our own proprietary designs.

Assuring the absence of conflict minerals in our power platforms is a continuing initiative. Our fuel cells, including the fuel cell components and completed fuel cell module, do not utilize any 3TG minerals (i.e., tin, tungsten, tantalum and gold) that are classified as conflict minerals. We utilize componentry in the BOP such as computer circuit boards that

utilize trace amounts of 3TG minerals. For perspective, total shipments in fiscal year 2021 weighed approximately 4.6 million pounds, of which only 30.0 pounds, or 0.000667%, represented 3TG minerals, so the presence of these minerals is negligible. Our conflict mineral disclosure filed with the Securities and Exchange Commission (“SEC”) on Form SD contains specific information on the actions we are taking to avoid the use of conflict minerals.

Overall, as we continue to grow our business, we remain focused on improving quality, increasing the competitive supply landscape, maintaining existing supplier relationships, as well as building strong new key supplier relationships to expand our supply chain options.

Engineering, Procurement and Construction

We provide customers with complete turn-key solutions, including development, engineering, procurement, construction, interconnection and operations for our fuel cell projects. We have developed relationships with many design firms and licensed general contractors and have a repeatable, safe, and efficient execution philosophy that has been successfully demonstrated in numerous jurisdictions, both domestically and abroad, all with an exemplary safety record. The ability to rapidly and safely execute installations minimizes high-cost construction period financing and can assist customers in certain situations when the commercial operations date for a project is time sensitive.

Services and Warranty Agreements

We offer a comprehensive portfolio of services, including engineering, project management and installation, and long-term operating and maintenance programs, including trained technicians that remotely monitor and operate our platforms around the world, 24 hours a day and 365 days a year. We directly employ field technicians to service the power platforms and maintain service centers near our customers to support the high availability of our platforms.

For all operating fuel cell platforms not under a PPA, customers purchase long-term service agreements (“LTSAs”), some of which have terms of up to 20 years. Pricing for LTSAs is based upon the value of service assurance and the markets in which we compete and includes all future maintenance and fuel cell module exchanges. Each model of our SureSource power platform has a target design life of 25-to-30 years. The fuel cell modules, with legacy modules having a 5-year target cell design life and current production modules having a 7-year target cell design life, go through periodic replacement, while the BOP systems, which consist of conventional mechanical and electrical equipment, are maintained over the life of the project.

Under the typical provisions of both our LTSAs and PPAs, we provide services to monitor, operate and maintain power platforms to meet specified performance levels. Operations and maintenance are key drivers for power platforms to deliver their projected revenue and cash flows. The service aspects of our business model provide a recurring and predictable revenue stream for the Company. We have committed future production for scheduled fuel cell module exchanges under LTSAs and PPAs through the year which have expiration dates through 2042. The pricing structure of the LTSAs incorporates these scheduled fuel cell module exchanges and the committed nature of this production facilitates our production planning. Many of our PPAs and LTSAs include guarantees for system performance, including electrical output and heat rate. Should the power platform not meet the minimum performance levels, we may be required to replace the fuel cell module with a new or used replacement module and/or pay performance penalties. Our goal is to optimize the power platforms to meet expected operating parameters throughout their contracted service terms.

In addition to our service agreements, we provide a warranty for our products against manufacturing or performance defects for a specific period of time. The warranty term in the U.S. is typically 15 months after shipment or 12 months after acceptance of our products. We accrue for estimated future warranty costs based on historical experience.

Competition

The market for clean energy is highly competitive. Many factors, including government incentives and specific market dynamics, affect how clean energy can deliver outcomes for customers in a given region. While clean energy often competes against the electric grid, which is readily available to prospective customers and supplied by traditional centralized power plants, including coal, gas, hydro, and nuclear plants, clean energy is increasingly able to compete with the grid and long-distance transmission of electricity in terms of levelized cost of electricity. Clean energy sources that

customers may consider beyond our solutions include products such as wind turbines, solar arrays, and hydro facilities, as well as a range of hydrogen and fuel cell solutions from both incumbent and developing competitors.

Our platforms are based on a range of technologies and target a variety of applications, each of which have incumbent and developing competitors. Several companies in the U.S. are engaged in fuel cell development, although, to our knowledge, we are the only domestic company engaged in manufacturing and deployment of stationary natural gas or biogas fueled carbonate fuel cells. In addition to different types of stationary fuel cells, some other technologies that compete in the distributed generation marketplace include micro-turbines, turbines, and reciprocating gas engines.

Our stationary fuel cell platforms also compete against large scale solar and wind technologies, although we complement the unreliable intermittent nature of solar and wind power with the continuous, reliable power output of our fuel cells. Utility scale solar and wind power require specific geographies and weather profiles, transmission for utility-scale applications, and a source of back up capacity for when the sun or wind is not available. They also require a significant amount of land compared to our fuel cell power plants, making it difficult to site megawatt-class solar and wind projects in urban areas. While fuel cells emit negligible amounts of NOx, SOx and particulate matter, fuel cells do emit some carbon dioxide when fueled with natural gas or carbon-neutral biogas (although, while operating on biogas, the platform's emissions would be considered carbon neutral), but in both cases less per kWh than other less-efficient systems. In many markets, baseload fuel cells avoid more emissions than wind or solar systems of similar capacity because they operate for many more hours of the day compared to these intermittent resources.

Product development cycles are long and product quality and efficiency are critical to success. Research and development investments are crucial in this business, as are focused intellectual property strategies and protection of such, as new technologies and solutions could make our solutions less competitive.

We continue to invest in exploring new ways of further improving the efficiency and effectiveness of our platforms. Our objective is to continue to improve our competitive position, including innovating in areas such as offering multiple platform solutions, and methods for producing clean hydrogen, solid oxide, and carbon separation and carbon capture in order to add value for customers looking for clean and renewable energy and to aid in their decarbonization goals.

Backlog

Backlog represents definitive agreements executed by the Company and our customers. Project awards are not included in our backlog.

Backlog as of October 31, 2022 and 2021 consisted of the following (in thousands):

	<u>2022</u>	<u>2021</u>
Commercial:		
Product	\$ 9,065	\$ —
Service	114,040	125,918
Generation	944,041	1,099,006
License	—	22,182
Total Commercial	<u>\$ 1,067,146</u>	<u>\$ 1,247,106</u>
Advanced Technologies		
Non-U.S. Government	\$ 7,598	\$ 17,611
U.S. Government - Funded	14,065	22,932
U.S. Government - Unfunded	1,190	220
Total Advanced Technologies	<u>\$ 22,853</u>	<u>\$ 40,763</u>
Total Backlog	<u>\$ 1,089,999</u>	<u>\$ 1,287,869</u>

Service and generation backlog as of October 31, 2022 had a weighted average term of approximately 17 years, with weighting based on dollar backlog and utility service contracts of up to 20 years in duration at inception. Generally, our government funded and privately funded research and development contracts are subject to the risk of termination at the convenience of the contract counterparty.

Generation backlog is the largest component of our total commercial backlog, reflecting revenues from projects with PPAs in place and of which we have retained ownership. Under a PPA, the utility or end-user of the power (and other attributes such as capacity and renewable energy credits) commits to purchase power as it is produced for an extended period of time, typically 10-to-20 years. With the project being retained, electricity, capacity and/or renewable energy credits are recognized monthly over the term of the PPA. We report the financial performance of retained project assets as generation revenue and cost of generation revenues.

Our outstanding backlog is not indicative of amounts to be earned in the upcoming fiscal year. The specific elements of backlog may vary in terms of timing and revenue recognition from less than one year to up to 20 years.

We may choose to sell or retain operating project assets on the balance sheet, thus creating variability in timing of revenue recognition. Accordingly, the timing and the nature of our business makes it difficult to predict what portion of our backlog will be filled in the next fiscal year.

License Agreements

License Agreement with EMTEC

EMTEC and FuelCell Energy began working together in 2016 under an initial joint development agreement with a focus on better understanding the fundamental science behind carbonate fuel cells for use in advanced applications and specifically how to increase efficiency in separating and concentrating carbon dioxide from the exhaust of natural gas-fueled power generation.

In June 2019, we entered into a license agreement with EMTEC to facilitate the further development of our SureSource Capture™ product (the “EMTEC License Agreement”). Pursuant to the EMTEC License Agreement, we granted EMTEC and its affiliates a non-exclusive, worldwide, fully-paid, perpetual, irrevocable, non-transferable license and right to use our patents, data, know-how, improvements, equipment designs, methods, processes and the like to the extent it is useful to research, develop and commercially exploit carbonate fuel cells in applications in which the fuel cells concentrate carbon dioxide from external industrial and power sources and for any other purpose attendant thereto or associated therewith, in exchange for a \$10 million payment. Such right and license is sublicensable to third parties performing work for or with EMTEC or its affiliates but shall not otherwise be sublicensable.

The EMTEC License Agreement facilitated the execution of the EMTEC Joint Development Agreement, pursuant to which we have engaged in exclusive research and development efforts with EMTEC to evaluate and develop new and/or improved carbonate fuel cells to reduce carbon dioxide emissions from industrial and power sources, in exchange for (a) payment of (i) an exclusivity and technology access fee of \$5.0 million, (ii) up to \$45.0 million for research and development efforts, and (iii) milestone-based payments of up to \$10.0 million to be paid only if certain technological milestones are met (which had not been met as of October 31, 2021), and (b) certain licenses.

Effective as of October 31, 2021, we and EMTEC agreed, among other things, to extend the term of the EMTEC Joint Development Agreement for an additional six months, ending on April 30, 2022. This extension allowed for the continuation of research intended to enable incorporation of design improvements to our fuel cell design in order to support a decision to use the improvements in a future demonstration of the technology for capturing carbon at ExxonMobil’s Rotterdam refinery in the Netherlands and provided additional time to achieve the first milestone under the EMTEC Joint Development Agreement.

Effective as of April 30, 2022, we and EMTEC agreed, among other things, to further extend the term of the EMTEC Joint Development Agreement for an additional eight months, ending on December 31, 2022 and to increase the maximum amount of research costs to be reimbursed by EMTEC from \$45.0 million to \$50.0 million. This extension to the EMTEC Joint Development Agreement allowed for the continuation of research intended to enable us and EMTEC to: (i) gain an improved understanding of the fuel cell operating envelope for various carbon capture applications; and (ii) complete data collection to support the project gate decision to use the developed technology in a Company fuel cell module

demonstration for capturing carbon at ExxonMobil's Rotterdam facility. In addition, under this second extension, we and EMTEC agreed to conduct a joint market study, with a target completion date on or before October 31, 2022, to (a) define application opportunities, commercialization strategies, and development requirements, (b) identify partners for potential pilot/demonstration projects, and (c) assess fuel cell/stack/module manufacturing scale-up and cost reduction. As of October 31, 2022, we were still collaborating with EMTEC on the joint market study, which was completed in early fiscal year 2023.

On December 19, 2022, we and EMTEC agreed, effective as of December 1, 2022, to further extend the term of the EMTEC Joint Development Agreement such that it will end on August 31, 2023 (unless terminated earlier) and to further increase the maximum amount of research costs to be reimbursed by EMTEC from \$50.0 million to \$60.0 million. This extension to the EMTEC Joint Development Agreement is intended to (I) allow for continuation of research that would enable us and EMTEC to finalize data collection in support of the project gate decision to use the developed technology in a Company fuel cell module demonstration for capturing carbon at ExxonMobil's Rotterdam facility, (II) allow for the continuation of the development, engineering and mechanical derisking of the Generation 2 Technology fuel cell module prototype, and (III) allow for studying the manufacturing scale-up and cost reduction of a commercial Generation 2 Technology fuel cell carbon capture facility.

License Agreements and Settlement Agreement with POSCO Energy

From approximately 2007 through 2015, we relied on POSCO Energy to develop and grow the South Korean and Asian markets for our products and services.

Through June of 2020, we recorded license fees and were entitled to receive royalty income from POSCO Energy pursuant to manufacturing and technology transfer agreements entered into with POSCO Energy, including the Alliance Agreement dated February 7, 2007 (and amendments thereto), the Technology Transfer, License and Distribution Agreement dated February 7, 2007 (and amendments thereto), the Stack Technology Transfer and License Agreement dated October 27, 2009 (and amendments thereto), and the Cell Technology Transfer and License Agreement dated October 31, 2012 (and amendments thereto) (collectively, the "License Agreements"). The Cell Technology Transfer and License Agreement ("CTTA") provided POSCO Energy with the exclusive technology rights to manufacture, sell, distribute and service our SureSource 300, SureSource 1500 and SureSource 3000 fuel cell technology in the South Korean and broader Asian markets. POSCO Energy built a cell manufacturing facility in Pohang, South Korea which became operational in late 2015, but is no longer operating.

In October 2016, the Company and POSCO Energy extended the terms of certain of the License Agreements to be consistent with the term of the CTTA, which was to expire on October 31, 2027. The CTTA required POSCO Energy to pay us a 3.0% royalty on POSCO Energy net product sales, as well as a royalty on scheduled fuel cell module replacements under service agreements for modules that were built by POSCO Energy and installed at plants in Asia under the terms of long-term service agreements ("LTSAs") between POSCO Energy and its customers. Due to certain actions and inactions of POSCO Energy, we did not realize any new material revenues, royalties or new projects developed by POSCO Energy between late 2015 and January 2022, at which time we began to recognize revenues in connection with sales of replacement modules to a subsidiary of POSCO Energy.

In November 2019, POSCO Energy spun-off its fuel cell business into a new entity, Korea Fuel Cell Co., Ltd. ("KFC"), without our consent. As part of the spin-off, POSCO Energy transferred manufacturing and service rights under the License Agreements to KFC, but retained distribution rights and severed its own liability under the License Agreements. We formally objected to POSCO Energy's spin-off.

In February 2020 and March 2020, we notified POSCO Energy of its material breaches of the License Agreements and indicated that the License Agreements would be terminated if such breaches were not cured in a timely manner.

Between April 2020 and October 2020, POSCO Energy initiated a series of proceedings against us, including a series of three arbitration demands against us at the International Court of Arbitration of the International Chamber of Commerce seated in Singapore in which it alleged certain warranty defects in a sub-megawatt conditioning facility at its facility in Pohang, South Korea.

In June 2020, we terminated the License Agreements and filed a demand for arbitration against POSCO Energy and KFC in the International Court of Arbitration of the International Chamber of Commerce. In October 2020, POSCO Energy filed a counterclaim in the arbitration.

We discontinued revenue recognition of the deferred license revenue related to the License Agreements in July 2020 given the then-pending arbitrations.

In order to resolve our disputes with POSCO Energy and KFC, on December 20, 2021, we entered into a Settlement Agreement (the “Settlement Agreement”) with POSCO Energy and KFC (POSCO Energy and KFC may be collectively referred to herein as “PE Group”). The Settlement Agreement provides, among other things, that the parties will cooperate in good faith to effect a market transition to us of the molten carbonate fuel cell business in Korea in accordance with the terms and conditions of the Settlement Agreement. To that end, the Settlement Agreement provides that any and all past, current, or potential disputes and claims between us, on the one hand, and POSCO Energy and KFC, on the other, of any nature whatsoever, whether known or unknown, asserted or not asserted, based on actions or omissions of any party on or before the date of Settlement Agreement are fully and finally settled, including such disputes and claims, directly or indirectly, in connection with the legal disputes and License Agreements described above, with the exception of (i) an unfiled claim by us in the amount of approximately \$1.8 million with respect to certain royalties we believe are owed by POSCO Energy with respect to replacement modules deployed by POSCO Energy at Gyeonnggi Green Energy and other sites for which POSCO Energy has not paid royalties, and (ii) an unfiled claim by POSCO Energy in an unknown amount with respect to a series of purchase orders for materials and components which began in 2014 under a supply chain contract, both of which claims remain unsettled. We do not believe the claim by POSCO Energy with respect to purchase orders for materials and components under the supply chain contract has merit and we retain the right to file a counterclaim for damages we believe we have incurred with respect to such supply chain contract.

Under the Settlement Agreement, the parties also agreed that, within five days of the date thereof, we would withdraw our objection to the spin-off of KFC from POSCO Energy, and that the License Agreements are not terminated, but instead are deemed to be amended such that POSCO Energy and KFC only have the right (i) to provide maintenance and repair services to PE Group’s existing customers on existing molten carbonate power generation and thermal projects under LTSAs currently in force as well as LTSAs that have expired and are pending renewal as of the settlement date (collectively, “Existing LTSAs”), (ii) to supply replacement modules purchased from us only for their existing customers for existing molten carbonate power generation and thermal projects under Existing LTSAs and (iii) to own, operate and maintain all facilities and factories solely for the purposes set forth in (i) and (ii) above (collectively, the “Right to Service License”). POSCO Energy and KFC further agreed that, as of the date of the Settlement Agreement, the License Agreements were deemed to be amended such that we exclusively enjoy all rights as to our technology in Korea and Asia, other than the Right to Service License. The Settlement Agreement further provides that the License Agreements will terminate automatically upon sixty days prior written notice to PE Group if (i) we enter into a business collaboration agreement with a Korean company to construct, assemble, manufacture, market, sell, distribute, import, export, install, commission, service, maintain, or repair products incorporating our technology, or otherwise conduct our business, in the Korean market; or (ii) we expand the capacity of our existing Korean entity such as to perform such activities ourselves. In the event of the termination of the License Agreements, the license granted to PE Group under the Right to Service License will continue notwithstanding the termination of the License Agreements, except that PE Group’s right to own, operate, and maintain all facilities and factories for the purpose of servicing any orders or requests made by us will terminate. For the avoidance of doubt, pursuant to the terms of the Settlement Agreement, PE Group has no right to manufacture modules or any other product incorporating our technology under the License Agreements as amended, the Right to Service License or otherwise unless requested and authorized by us to do so.

The Settlement Agreement further provides that, in order to service its existing customers under the Existing LTSAs, KFC would place a firm, non-cancelable order for twelve SureSource 3000 modules within two weeks after the date of the Settlement Agreement and an additional firm, non-cancelable order for eight SureSource 3000 modules on or before June 30, 2022, all at a price of \$3.0 million per module. We received firm, non-cancelable orders from KFC for a total of twenty SureSource 3000 modules in fiscal year 2022. All of these modules were delivered Ex Works from our facility in Torrington, CT in fiscal year 2022.

In addition, KFC agreed to use commercially reasonable efforts to order fourteen additional SureSource 3000 modules by December 31, 2022, at a price of \$3.0 million per module if ordered by such date. KFC has indicated that it does not intend to order additional modules by December 31, 2022.

Pursuant to the Settlement Agreement, with respect to new modules supplied by us and deployed by PE Group to its existing customers, we will provide our standard warranty against module defects until the earlier of eighteen months from the date of shipment or twelve months from the date of installation. As part of the global settlement of the disputes among the parties and subject to the qualifications set forth in the Settlement Agreement, we will reimburse PE Group for any annual output penalty amount paid by PE Group to its customers pursuant to Existing LTSAs (whether such Existing LTSA is extended or renewed), caused by a shortfall or defect in the new modules for a period of up to seven years. The

maximum annual reimbursement obligation with regard to any PE Group customer for any new module provided by us will not exceed an amount equal to 7.5% per year of the module purchase price. We will not be required to reimburse PE Group for any penalty paid by PE Group under the Existing LTSA that is not caused by a shortfall or defect in the modules to be supplied by us including, without limitation, any shortfall or defect caused by a site-related problem, a problem with the balance of plant, or other components of the project.

Although we have the exclusive and unrestricted right under the Settlement Agreement to perform, pursue, and otherwise conduct our business in relation to new fuel cell projects (including new projects with PE Group's existing customers) in Korea and Asia, the parties have agreed that, except as further provided in the Settlement Agreement with respect to PE Group's existing customers Noeul Green Energy and Godeok Green Energy, we will not engage in discussions with PE Group's existing customers regarding Existing LTSA without PE Group's consent. The parties have further agreed that if PE Group cannot enter into an agreement with its existing customers to extend or renew Existing LTSA by December 31, 2022, PE Group will cooperate with us so that we may discuss and, at our sole discretion, enter into an extension of an Existing LTSA, a new LTSA to replace an Existing LTSA, or a module sales agreement with PE Group's existing customers; provided that (i) should we enter into such an arrangement with a PE Group existing customer, and (ii) we are required to provide replacement modules to such existing customer under such arrangement, and (iii) PE Group has not already deployed all or some of the modules that PE Group ordered under the Settlement Agreement, we will purchase the number of required replacement modules from PE Group at a price of \$3.0 million per module (to the extent such modules are available and have not yet been deployed). The purchase of such replacement modules by us is contingent upon the modules being in proper condition as determined by inspection process to be agreed to by the parties. Any modules purchased by us from PE Group under these terms will be included as part of the firm orders KFC is required to make pursuant to the Settlement Agreement.

With respect to operations and maintenance agreements, the Settlement Agreement provides that KFC will have the right of first refusal on providing operation and maintenance services on commercially reasonable terms for new LTSA entered into by us in Korea for a period of the first to occur of either twenty-four months after the date of the Settlement Agreement or until such time as we engage a third party capable of providing such services in Korea. If we and KFC agree that KFC should provide operation and maintenance services pursuant to the right of first refusal, we and KFC will enter into one or more operation and maintenance agreements that reflect commercially reasonable terms and conditions as agreed by us and KFC at that time.

With respect to BOP, KFC currently has eight units of BOP available, and the Settlement Agreement provides that we have the option to purchase such units of BOP for any new molten carbonate fuel cell projects within Korea at a price of KRW 2,550,000,000 per unit (or USD \$1,787,550 per unit as of October 31, 2022). We will also have a non-exclusive, non-transferrable, non-sublicensable license to use the intellectual property imbedded in the BOP units in Korea in consideration for a reasonable license fee to be separately agreed by the parties. Detailed terms and conditions of BOP and related software and firmware supply will be discussed and agreed to in good faith in separate BOP supply agreements in the event we exercise our option to purchase any of such BOP.

Regulatory and Legislative Environment

Distributed generation differs from central generation. As such, it is subject to a separate set of legal standards as well as legislative and regulatory policies. The policies that affect our products are not always the same as those imposed on other companies, or the products of other companies, that produce power, and while some policies may make our products less competitive, others may provide an advantage. Certain utility policies may also pose barriers to our installation or interconnection with the utility grid, such as backup, standby or departing load charges that make installation of our products less economically attractive for our customers. Regulatory and legislative support can take the form of policy, incentive programs, and defined sustainability initiatives such as Renewable Portfolio Standards ("RPS").

United States

Various states and municipalities in the U.S. have adopted programs for which our products qualify, including programs supporting self-generation, clean air power generation, combined heat and power applications, carbon reduction, grid resiliency/microgrids, energy storage and utility ownership of fuel cell projects.

Many states in the U.S. have enacted legislation adopting Clean Energy Standards ("CES") or RPS mechanisms. Under these standards, regulated utilities and other load serving entities are required to procure a specified percentage of their total electricity sales to end-user customers from eligible resources according to a set schedule. CES and RPS, and their

implementing regulations, vary significantly from state to state, particularly with respect to the percentage of renewable energy required to achieve the state's mandate, the definition of eligible clean and renewable energy resources, and the extent to which renewable energy credits (certificates representing the generation of renewable energy) qualify for CES or RPS compliance. Fuel cells using biogas qualify as renewable power generation technology in all of the CES and RPS states in the U.S., and some states specify that fuel cells operating on natural gas are also eligible for these initiatives in recognition of the high efficiency and low pollutants of fuel cells. Most states are introducing legislation or regulations that seek to reduce the consumption of electricity generated using fossil fuels in favor of zero carbon resources. Additionally, utility regulators are looking for non-wire alternatives to build reliability and resiliency to the grid, which also presents a potential opportunity.

In February 2018, the U.S. Congress reinstated the 30% Investment Tax Credit ("ITC") for fuel cells and extended and significantly expanded the existing Carbon Oxide Sequestration Credit. The ITC phased down to 26% in 2020 and was scheduled to phase down to 22% by 2022 and expire in 2023. The reinstatement of the ITC for fuel cells provided equal access to tax incentives for U.S. fuel cell manufacturers when compared to other clean energy solutions. The ITC phase down was extended by two years pursuant to the Consolidated Appropriations Act, 2021 passed by Congress in December 2020 and signed by the President on December 27, 2020, thus extending the 26% ITC until 2022 and the expiration to 2025.

Since that time, two pieces of federal legislation have been passed by the U.S. Congress that are expected to have a significant impact on our business model. First, the Bipartisan Infrastructure Law, passed and signed into law during the fall of 2021, allocated over \$8 billion for hydrogen-related activity and research, including a hubs initiative to be administered by the DOE. These hydrogen hubs have spurred unprecedented activity across the U.S. to organize networks of hydrogen production, distribution, and consumption in an effort to attract federal matching funds available under the Bipartisan Infrastructure Law. We believe that state-level activity to attract hydrogen hub dollars has created new forums in which we can demonstrate how our existing and future hydrogen-producing solutions can be a part of future hydrogen hubs and economies.

Secondly and more recently, the Inflation Reduction Act of 2022 ("IRA"), signed into law on August 16, 2022, marked a major investment by the U.S. federal government into a broad spectrum of renewable energy technologies by recasting existing investment and production tax credits and creating new credits for zero-emission technology. The IRA extends the existing Internal Revenue Code ("IRC") Section 48 investment tax credit, which includes fuel cell technology, through 2024 and introduces new prevailing wage conditions required to be eligible for the full credit value. Beyond this change, we could benefit from changes to the production credit pursuant to IRC Section 45Q related to carbon capture and sequestration, the new investment tax credit pursuant to IRC Section 48E for zero emission energy property which will succeed the existing Section 48 ITC, and the IRC Section 45V production tax credit for hydrogen. This new production credit offers up to \$3.00 per kilogram of hydrogen produced if the hydrogen is considered zero carbon and if the hydrogen generation project conforms with prevailing wage and apprenticeship requirements. Such an incentive for zero carbon could result in increased demand for commercial solutions to hydrogen production technology, such as our solid oxide electrolyzer which is currently under development and available for order. Many of the modified or new tax credits also include additional credits for using domestically sourced content and for siting projects in specified "energy communities" where fossil fuel production previously has been a significant economic driver. We expect to be well positioned to take advantage of the credit adder for domestic content.

Overall, we believe that the IRA's passage signals a significant effort by the U.S. federal government to accelerate low- and no-carbon energy production and manufacturing. We believe that the programs and credits included in the IRA align well with our business model and could provide significant benefits with respect to incentivizing the purchase of our current product offerings and technologies under commercial development.

South Korea

Internationally, South Korea has an RPS to promote clean energy, reduce carbon emissions, and develop local manufacturing of clean energy generation products to accelerate economic growth. The RPS is designed to increase new and renewable power generation to 10% of total power generation by 2023 from 2% when the RPS began in 2012. Twenty-two of the largest power generators are obligated to achieve the RPS requirements in their generation or purchase offsetting renewable energy certificates. Financial penalties are levied by the government for non-compliance.

European Union

European governments are supportive of hydrogen-based generation and efficient CHP applications. Italy adopted a system to promote energy efficiency with Italian "White Certificates" (Energy Efficiency Certificates) that are tradable

certificates, for which fuel cells qualify, to promote energy savings expressed in tons of oil equivalent saved. Germany, the United Kingdom and the Netherlands provide tax incentives, grants and waivers of regulatory fees for clean energy installations. Additionally, large energy-intensive industry sectors and the aviation sector in European Union countries above a certain size qualify for the ETS (Emissions Trading Scheme) and are subject to a cap-and-trade requirement for carbon emissions.

In the European Union (“EU”), the Emissions Trading System (“ETS”) has created carbon capture sequestration allowances to be applied to ETS calculations for carbon not released into the atmosphere, and instead placed into a storage location for future use. Similar credits are allowed for entities that capture CO₂ emissions to produce precipitated calcium carbonate, in which the used CO₂ is chemically bound. The European Union is anticipated to develop a standard to be able to classify when CO₂ has been “stored” by the end of 2022. We believe that these developments, along with legislation recently passed by the EU Parliament leading to the creation of the European Hydrogen Bank funded with 3 billion euros, will provide market support for carbon capture technologies.

In response to the hardships and global energy market disruption caused by Russia's invasion of Ukraine, the European Commission presented the REPowerEU Plan.

REPowerEU is a plan for:

- saving energy,
- producing clean energy, and
- diversifying the EU’s energy supplies.

The REPowerEU Plan is backed by financial and legal measures to build the new energy infrastructure and system that Europe needs. In addition to the construction of a hydrogen backbone by 2030, REPowerEU calls for 6 gigawatts (“GW”) of electrolysis by 2024 and 30 GW by 2030.

South Africa

South African legislation requires the transition from 90% coal-generated electricity to a system that is transparent, equitable, and incorporative of renewable energy and alternative sources. The governments of South Africa, France, Germany, the United Kingdom and the U.S., along with the European Union, have announced an ambitious, long-term Just Energy Transition Partnership (the “Partnership”) to support South Africa’s decarbonization efforts. The Partnership aims to accelerate the decarbonization of South Africa’s economy, with a focus on the electricity system, to help it achieve the ambitious goals set out in its updated Nationally Determined Contribution emissions goals. This Partnership mobilizes an initial commitment of \$8.5 billion for the first phase of financing, through various mechanisms including grants, concessional loans and investments and risk sharing instruments, including to mobilize the private sector.

Government Regulation

Our Company and our products are subject to various federal, provincial, state and local laws and regulations relating to, among other things, land use, safe working conditions, handling and disposal of hazardous and potentially hazardous substances and emissions of pollutants into the atmosphere. Emissions of SO_x and NO_x from our power plants are substantially lower than conventional combustion-based generating stations and are far below existing and proposed regulatory limits. The primary emissions from our power plants, assuming no cogeneration application, are humid flue gas that is discharged at temperatures of 700-800° F, water that is discharged at temperatures of 10-20° F above ambient air temperatures, and CO₂ in per-kW hour amounts that are, due to the high efficiency of fuel cells, significantly less than conventional fossil fuel central generation power plants. Depending on the jurisdiction, whether our plants require water discharge permits is dependent upon whether the discharge is directed to a storm drain or wastewater system.

We are also subject to federal, state, provincial and/or local regulation with respect to, among other things, siting. Furthermore, utility companies and several states in the U.S. have created and adopted, or are in the process of creating and adopting, interconnection regulations covering both technical and financial requirements for the interconnection of fuel cell power plants to utility grids. Our power plants are designed to meet all applicable laws, regulations and industry standards for use in the international markets in which we operate. Our SureSource solutions are California Air Resources Board (“CARB”) 2007 certified, and our SureSource 1500 and SureSource 3000, when operating on biogas, are certified for the CARB 2013 Biogas standard.

Proprietary Rights and Licensed Technology

Our intellectual property consists of patents, trade secrets, institutional knowledge and know-how that we believe is a competitive advantage and represents a barrier to entry for potential competitors. We have extensive experience in designing, manufacturing, operating and maintaining fuel cell power plants. This experience cannot be easily or quickly replicated and, combined with our trade secrets, proprietary processes and patents, safeguards our intellectual property rights.

As of October 31, 2022, we (excluding our subsidiaries) had 129 U.S. patents and 251 patents in other jurisdictions covering our fuel cell technology (in certain cases covering the same technology in multiple jurisdictions), with patents directed to various aspects of our SureSource technology, SOFC technology, PEM fuel cell technology and applications thereof. As of October 31, 2022, we also had 40 patent applications pending in the U.S. and 107 patent applications pending in other jurisdictions.

As of October 31, 2022, our subsidiary, Versa Power Systems, Ltd. (“Versa”), had 29 U.S. patents and 87 international patents covering SOFC technology (in certain cases covering the same technology in multiple jurisdictions). As of October 31, 2022, Versa also had 7 pending U.S. patent applications and 21 patent applications pending in other jurisdictions. In addition, as of October 31, 2022, our subsidiary, FuelCell Energy Solutions, GmbH, had license rights to 2 U.S. patents and 7 patents outside the U.S. (in certain cases covering the same technology in multiple jurisdictions) for carbonate fuel cell technology licensed from Fraunhofer IKTS.

We continue to innovate, and no patent expiration, either individually or in the aggregate, is expected to have any material impact on our current or anticipated operations.

Certain of our U.S. patents are the result of government-funded research and development programs, including our DOE programs. U.S. patents we own that resulted from government-funded research are subject to the government potentially exercising “march-in” rights. We believe that the likelihood of the U.S. government exercising these rights is remote and would only occur if we ceased our commercialization efforts and there was a compelling national need to use the patents.

Significant Customers and Information about Geographic Areas

We contract with a concentrated number of customers for the sale of our products and for research and development. For the years ended October 31, 2022, 2021 and 2020, our top customers, KFC, Connecticut Light and Power, EMTEC, KOSPO, the DOE, LIPA, Pfizer, Inc., and UIL Holdings Corporation accounted for an aggregate of 87%, 79% and 80%, respectively, of our total annual consolidated revenue. Revenue percentage by major customer for the last three fiscal years is as follows:

	Years Ended October 31,		
	2022	2021	2020
Korea Fuel Cell Co., Ltd (KFC)	46 %	— %	— %
Connecticut Light and Power	14 %	20 %	17 %
ExxonMobil Technology and Engineering Company (f/k/a ExxonMobil Research and Engineering Company) (EMTEC)	8 %	29 %	32 %
Korea Southern Power Company (KOSPO)	6 %	12 %	— %
U.S. Department of Energy (DOE)	6 %	8 %	9 %
Long Island Power Authority (LIPA)	5 %	— %	— %
Pfizer, Inc.	2 %	5 %	4 %
UIL Holdings Corporation	— %	5 %	18 %
Total	<u>87 %</u>	<u>79 %</u>	<u>80 %</u>

See Item 7 – “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and Item 8 – “Financial Statements and Supplementary Data” for further information regarding our revenue and revenue recognition policies.

We have marketing and manufacturing operations both within and outside the United States. We source raw materials and BOP components from a diverse global supply chain. In fiscal year 2022, the foreign country with the greatest concentration risk was South Korea, accounting for 52% of our consolidated net revenues. While we plan to aggressively pursue sales of our products in South Korea as a result of the Settlement Agreement with POSCO Energy and KFC, we

are also in the process of diversifying our sales mix from both a customer specific and geographic perspective as part of our overall strategic plan.

The international nature of our operations subjects us to a number of risks, including fluctuations in exchange rates, adverse changes in foreign laws or regulatory requirements and tariffs, taxes, and other trade restrictions. See Item 1A “Risk Factors” – “*We are subject to risks inherent in international operations.*” See also Note 13. “Segment Information,” to the consolidated financial statements in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K for information about our net sales by geographic region for the years ended October 31, 2022, 2021, and 2020. See also Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” for other information about our operations and activities in various geographic regions.

Human Capital Resources

We are committed to our continued efforts to increase diversity and foster an inclusive work environment that supports the global workforce and the communities we serve. We recruit the best qualified employees regardless of gender, ethnicity or other protected traits and it is our policy to fully comply with all laws (domestic and foreign) applicable to discrimination in the workplace. Our diversity, equity and inclusion principles are also reflected in our employee training and policies.

As of October 31, 2022, we had 513 full-time employees, of which 456 were located in the United States, 41 were located in Canada, 10 were located in Germany, and 6 were located in South Korea.

We increased our diverse team member population by 5% in fiscal year 2022 compared to fiscal year 2021.

Compensation and Benefits

As part of our compensation philosophy, we believe that we must offer and maintain market competitive compensation and benefit programs for all of our team members in order to attract and retain superior and diverse talent. In addition to competitive base wages, additional programs include an annual Management Incentive Plan, Long-Term Equity Incentive Plans, and a Company matched 401(k) Plan.

For plan year 2023, we have joined a captive health insurance group to keep healthcare costs neutral. We have also implemented a wellness program for employees that includes health savings and flexible spending accounts, paid time off, family leave, team member assistance programs and a flexible hybrid work environment.

Workforce Environmental Health and Safety

We take workplace jobsite safety and environmental compliance very seriously. Under our robust environmental, health and safety (EH&S) program, we strongly encourage the reporting of near misses to identify opportunities for improvement and we are constantly evaluating our EH&S protocols in an effort to keep our facilities and workspaces environmentally friendly and safe for our team members, stakeholders, customers, and visitors.

We are committed to EH&S excellence. Our Environmental Management System is certified to ISO 14001:2015, and our Occupational Health & Safety Management System is certified to ISO 45001:2018. Health and safety is both a bottom-up and top-down priority as the Company’s Board of Directors is actively engaged in ongoing review of our polices, protocols and performance.

Our EH&S core principles are:

- Zero injuries / incidents;
- Compliance with all legal obligations;
- Pollution prevention;
- Waste reduction; and
- Continual improvement.

We are also in the process of performing life cycle analyses on our products, as well as our production and office locations, and developing a roadmap to net zero carbon emissions.

Our safety performance is excellent and is demonstrated by experience modification rates (EMR) below the industry average of 1.0 for the last 7 fiscal years: 2016: 0.81, 2017: 0.65, 2018: 0.62, 2019: 0.65, 2020: 0.59, 2021: 0.68 and 2022: 0.088. We have maintained an “A” rating since 2016 providing “Safety Tier 1” performance with ISNetworld, a database for online contractor safety management designed to streamline companies' and contractors' compliance pre-qualification processes. Because EH&S compliance is a priority for us, we also leverage ISNetworld to qualify contractors that work on our projects.

Critical Assumptions and Additional Information Regarding Calculation of our Total Addressable Market Opportunity

The following information should be read in conjunction with the information under the heading “Our Market Opportunity” above.

Total Addressable Market Assumptions:

Our estimate for the combined, cumulative TAM in the Measuring Period with respect to the global markets that may be served by our carbon capture solution (which is under development) and carbon separation and carbon utilization solutions (which are currently available) is based, in part, on review and analysis of the International Energy Agency CCUS in Clean Energy Transitions Report (September 2020), Morgan Stanley Carbon Capture Report (April 2021) and the Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5°C (October 2018), and is further based on third party estimates of global market demand for purchased CO₂ for the food and beverage, enhanced oil recovery and other industrial gas usage markets and global markets for avoided CO₂ as it relates to carbon taxation. Our ability to participate in the carbon capture market assumes that we can commercialize our carbon capture technologies within the internal time frames assumed by our management. Our ability to participate in the carbon capture market, which represents a significant portion of the estimated \$1 trillion TAM for carbon capture, carbon separation and utilization, also assumes that EMTEC, which funds some of our research into carbon capture and which owns certain intellectual property rights related to the carbon capture technology under development by us, will provide us with the necessary licenses or will otherwise allow us to commercially exploit carbon capture technology outside of capturing CO₂ generated by our own platforms (for which we do not require a license from EMTEC). There can be no assurance that we will be successful in commercializing carbon capture technology or, in the event we are successful in developing carbon capture technology to the point of commercial availability, that EMTEC would provide us with necessary licenses or otherwise allow us to exploit carbon capture intellectual property owned by EMTEC which would be necessary for us to sell carbon capture technology for applications not involving carbon capture from our own platforms. Reference to a global market for carbon capture, carbon separation and utilization also assumes that we can create the necessary business infrastructure to manufacture, market, sell, install and service such solutions globally, and there can be no assurance that we will be successful in creating such business infrastructure.

Our estimate for the combined, cumulative TAM in the Measuring Period with respect to the global markets that may be served by our distributed hydrogen solutions is based, in part, on review and analysis of the BloombergNEF, Hydrogen Economy Outlook (March 2020) and Hydrogen Council, Hydrogen Insights (July 2021). Our estimate of the total cumulative TAM for distributed hydrogen includes the markets for grey hydrogen (hydrogen derived from natural gas), blue hydrogen (hydrogen derived from natural gas but with the management of CO₂ through carbon capture and storage) and green hydrogen (hydrogen created from renewable sources such as wind and solar power). Reference to a global market for distributed hydrogen also assumes that we can create the necessary business infrastructure to manufacture, market, sell, install and service such solutions globally, and there can be no assurance that we will be successful in creating such business infrastructure.

Our estimate for the combined, cumulative TAM in the Measuring Period with respect to the markets that may be served by our megawatt and sub-megawatt FTM and BTM distributed power solutions is based, in part, on review and analysis of Morgan Stanley equity research (July 2020), MarketLine data research (Q1 2019) and Wells Fargo equity research (April 2021). Our estimate is based on markets in the United States, South Korea and Western Europe, which represent our largest current markets for FTM and BTM distributed power solutions and are markets in which we have an installed base of distributed power solutions.

Our estimate for the combined, cumulative TAM with respect to the global markets that may be served by the solid oxide based long-duration hydrogen energy storage and electrolysis solutions under development by the Company is based, in part, on review and analysis of BloombergNEF, Long-Term Storage Outlook 2020, Wood Mackenzie, Power &

Renewables (April 2021) and Guidehouse Insights, Market Data: Utility-Scale Energy Storage Market Update (Q1 2022). Reference to a global market for solid oxide based long-duration hydrogen energy storage and electrolysis solutions assumes that we can successfully commercialize this technology within the internal time frame assumed by our management and create the necessary business infrastructure to manufacture, market, sell, install and service such solutions globally. There can be no assurance that we will be successful in commercializing solid oxide based long-duration hydrogen energy storage and electrolysis solutions or, in the event we are successful in commercializing such solutions, that we will be successful in creating the necessary business infrastructure described above.

Total Addressable Market Sources:

Sources for the estimated market opportunities described on page 11 under the heading “Our Market Opportunity” are as follows (the information included in these sources are not incorporated by reference in this report):

Carbon Capture TAM sources:

1) *International Energy Agency*, CCUS in Clean Energy Transitions Report (2020), available at <https://www.iea.org/reports/ccus-in-clean-energy-transitions>

2) *Morgan Stanley*, *Carbon Capture Report* (April 2021) (not publicly available, on file with the Company)

3) *Intergovernmental Panel on Climate Change*, Special Report on Global Warming of 1.5°C (October 2018), available at <https://www.ipcc.ch/sr15/>

Distributed H2 TAM sources:

1) *BloombergNEF*, H2 Economy Outlook (2020), available at <https://data.bloomberglp.com/professional/sites/24/BNEF-Hydrogen-Economy-Outlook-Key-Messages-30-Mar-2020.pdf>

2) *Hydrogen Council*, Hydrogen Insights 2021, available at <https://hydrogencouncil.com/en/hydrogen-insights-2021/>

Distributed Power Generation TAM sources:

1) *Morgan Stanley*, Equity Research (July 2020) (not publicly available, on file with the Company)

2) *MarketLine* data, (not publicly available, on file with the Company)

3) *Wells Fargo*, Equity Research (April 2021) (not publicly available, on file with the Company)

Energy Storage TAM sources:

1) *BloombergNEF*, Long-Term Storage Outlook (2020), available at <https://about.bnef.com/new-energy-outlook-2020/>

2) *Wood Mackenzie*, Power & Renewables (April 2021), available at <https://www.woodmac.com/store/industry-sector/power-and-renewables/>

3) *Guidehouse Insights*, Market Data: Utility-Scale Energy Storage Market Update (1Q 2022), (not publicly available, on file with the Company)

Available Information

We file annual, quarterly and current reports, proxy statements and other information electronically with the SEC. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports are made available free of charge through the “Investors” section of the Company’s website (<http://www.fuelcellenergy.com>) as soon as practicable after such material is electronically filed with, or furnished to, the

SEC. Material contained on our website is not incorporated by reference in this report. Our executive offices are located at 3 Great Pasture Road, Danbury, CT 06810. The SEC also maintains an Internet website that contains reports and other information regarding issuers that file electronically with the SEC located at <http://www.sec.gov>.

Information about our Executive Officers

<u>NAME</u>	<u>AGE</u>	<u>PRINCIPAL OCCUPATION</u>
Jason B. Few President, Chief Executive Officer	56	<p>Mr. Few was appointed President and Chief Executive Officer in August 2019 and has served as a director since 2018. Mr. Few chairs the Executive Committee of the Board of Directors (the “Board”). Mr. Few previously served as the Company’s Chief Commercial Officer from September 2019 to March 2022. Prior to joining FuelCell Energy, Mr. Few served as President of Sustayn Analytics LLC, a cloud-based software waste and recycling optimization company, since 2018, and as the Founder and Senior Managing Partner of BJB Partners LLC, a privately held strategic consulting firm, since 2016. Mr. Few has over 30 years of experience increasing enterprise value for Global Fortune 500 and privately-held technology, telecommunications, technology and energy firms. He has overseen transformational opportunities across the technology and industrial energy sectors, in roles including Founder and Senior Managing Partner of BJB Partners, LLC; President and Chief Executive Officer of Continuum Energy, an energy products and services company, from 2013-2016; various roles including Executive Vice President and Chief Customer Officer of NRG Energy, Inc., an integrated energy company, from 2011 to 2012; President of Reliant Energy, from 2009 to 2012 and Vice President, Smart Energy, a retail electricity provider, from 2008 to 2009. Mr. Few also has served as a Senior Advisor to Verve Industrial Protection, an industrial cybersecurity software company, since 2016.</p> <p>Mr. Few was elected to the board of directors of Enbridge Inc. (NYSE: ENB) effective May 4, 2022, and serves on the Safety & Reliability and Sustainability Committees. Mr. Few also served on the board of directors of Marathon Oil (NYSE: MRO) from April 2019 to May 2022.</p> <p>Mr. Few received his Bachelor’s Degree in Computer Systems in Business from Ohio University, and a MBA from Northwestern University’s J.L. Kellogg Graduate School of Management.</p>
Michael S. Bishop Executive Vice President, Chief Financial Officer	54	<p>Mr. Bishop was appointed Executive Vice President in June 2019 and has served as the Company’s Chief Financial Officer since June 2011. Mr. Bishop previously served as the Company’s Treasurer from June 2011 to June 2022 and as Senior Vice President of the Company from June 2011 to June 2019. He has more than 25 years of experience in financial operations and management with public high growth technology companies with a focus on capital raising, project finance, debt/treasury management, investor relations, strategic planning, internal controls, and organizational development. Since joining the Company in 2003, Mr. Bishop has held a succession of financial leadership roles, including Assistant Controller, Corporate Controller and Vice President and Controller. Prior to joining the Company, Mr. Bishop held finance and accounting positions at TranSwitch Corporation, Cyberian Outpost, Inc. and United Technologies, Inc. He is a certified public accountant and began his professional career at McGladrey and Pullen, LLP (now RSM US LLP). Mr. Bishop also served four years in the United States Marine Corps.</p> <p>Mr. Bishop received a Bachelor of Science in Accounting from Boston University and a MBA from the University of Connecticut.</p>

NAME	AGE	PRINCIPAL OCCUPATION
Michael Lisowski Executive Vice President, Chief Operating Officer	53	<p>Mr. Lisowski was appointed Executive Vice President and Chief Operating Officer in June 2019. Mr. Lisowski has served as the Company's Vice President of Global Operations since 2018, and, from 2001 to 2018, held various other positions within the Company, including Vice President of Supply Chain from 2010 to 2018. Mr. Lisowski is a senior global operations leader with 27 years of progressive operations experience in technology-driven businesses. In his position as the Company's Chief Operating Officer (and in his prior position as the Company's Vice President of Global Operations), Mr. Lisowski is (and was) responsible for the Supply Chain, Manufacturing, Quality, Project Management, Environmental Health and Safety, and Plant Engineering functions of the Company. Additionally, Mr. Lisowski and his team are responsible for the development and qualification of strategic suppliers for critical direct materials, as well as procurement of capital equipment in support of operations.</p> <p>Mr. Lisowski received his Bachelor's Degree in Communications and Business Administration at Western New England University and a Master's Degree in Management, Global Supply Chain Integrations from Rensselaer Polytechnic Institute.</p>
Anthony Leo Executive Vice President, Chief Technology Officer	65	<p>Mr. Leo was appointed Executive Vice President and Chief Technology Officer in June 2019 and, prior to that, served as Vice President of Applications and Advanced Technologies since 2014. From 1978 to 2014, Mr. Leo has held various other positions with the Company, including Vice President of Application Engineering and Advanced Technology Development, Vice President of Applications and OEM Engineering, and Vice President of Product Engineering. Mr. Leo has held key leadership roles in the Company's research, development, and commercialization of stationary fuel cell power plants for more than 30 years. In his current position and in his position as the Company's Vice President of Applications and Advanced Technologies, Mr. Leo is and has been responsible for Applications and Advanced Technology Development. In Mr. Leo's other positions with the Company, he has been responsible for managing advanced research and development of rechargeable batteries and fuel cells, managing the first large-scale demonstration stationary fuel cell project, and establishing the Product Engineering Group.</p> <p>Mr. Leo received his Bachelor of Science Degree in Chemical Engineering from Rensselaer Polytechnic Institute and is currently serving on the U.S. Department of Energy Hydrogen and Fuel Cell Technical Advisory Committee.</p>
Joshua Dolger Executive Vice President, General Counsel and Corporate Secretary	48	<p>Mr. Dolger was appointed Executive Vice President and General Counsel on December 10, 2021 and Corporate Secretary on June 25, 2021. Mr. Dolger previously served as Interim General Counsel from June 25, 2021 to December 10, 2021 and as Senior Counsel from May 17, 2021 to June 25, 2021. In his current positions, Mr. Dolger oversees all the Company's legal and governmental affairs, as well as provides leadership in all aspects of the Company's business, including commercial matters, compliance, corporate governance and board activities. Prior to joining the Company, Mr. Dolger held a variety of legal positions of increasing responsibility at the headquarters of Terex Corporation, a public company and a global manufacturer of aerial work platforms and materials</p>

may never become profitable. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future. For the reasons discussed in more detail below, there are uncertainties associated with our achieving and sustaining profitability. We have, from time to time, sought financing in the public markets in order to fund operations and will continue to do so. Our future ability to obtain such financing could be impaired by a variety of factors, including, but not limited to, the price of our common stock, our lack of available shares and general market conditions.

Our cost reduction strategy for manufacturing may not succeed or may be significantly delayed, which may result in our inability to deliver improved margins.

Our cost reduction strategy for manufacturing is based on the assumption that increases in production will result in economies of scale. In addition, our cost reduction strategy relies on advancements in our manufacturing process, global competitive sourcing, engineering design, reducing the cost of capital and technology improvements (including stack life and projected power output). Failure to achieve our cost reduction targets could have a material adverse effect on our results of operations and financial condition.

We have debt and finance obligations outstanding and may incur additional debt in the future, which may adversely affect our financial condition and future financial results.

As of October 31, 2022, our total consolidated debt and finance obligations outstanding (“indebtedness”) was \$83.5 million (\$82.4 million, net of deferred finance costs).

Our ability to make scheduled payments of principal and interest and other required repayments depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flows from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flows, we may be required to adopt one or more alternatives, such as selling assets, restructuring operations, restructuring debt or obtaining additional equity capital on terms that may be onerous or dilutive.

We may incur additional indebtedness in the future in the ordinary course of business, which could include onerous restrictions on us. If new debt is added to current debt levels, the risks described above could intensify. Our debt agreements contain representations and warranties, affirmative and negative covenants, and events of default that entitle the lenders to cause our indebtedness under such debt agreements to become immediately due and payable.

We rely on project financing for our generation operating portfolio, which includes debt and tax equity financing arrangements, to realize the benefits provided by investment tax credits and accelerated tax depreciation. In the event that interest rates continue to rise or there are changes in tax policy, our financial results could be harmed.

Rising interest rates may increase our cost of capital. Part of our business strategy is to generate positive cash flows after debt service from our generation operating portfolio. Rising interest rates may have an adverse impact on the cost of debt and thus result in lower cash flows after debt service than we realize today. We also expect that projects we retain in our generation operating portfolio will receive capital from tax equity investors who derive a significant portion of their economic returns through tax benefits. Tax equity investors are generally entitled to substantially all of the project’s tax benefits, such as those provided by the U.S. investment tax credit (“ITC”) and Modified Accelerated Cost Recovery System or bonus depreciation. Our ability to obtain additional financing in the future depends on the continued confidence of financing sources in our business model and the continued availability of tax benefits applicable to our products. If we are unable to enter into tax equity financing agreements with attractive pricing terms, or at all, we may not be able to obtain the capital needed to finance the build out of our generation assets which would impact our overall liquidity and our business, financial condition and results of operations.

Unanticipated increases or decreases in business growth may result in adverse financial consequences for us.

We operate a 167,000 square-foot manufacturing facility in Torrington, Connecticut where we produce the individual cell packages and assemble the fuel cell modules for our carbonate fuel cell products. The maximum annualized capacity (module manufacturing, final assembly, testing and conditioning) is 100 MW per year under the Torrington facility’s current configuration when being fully utilized. The Torrington facility is sized to accommodate the eventual annualized production capacity of up to 200 MW per year with additional capital investment in machinery, equipment, tooling and inventory.

We have a manufacturing and service facility in Taufkirchen, Germany that has the capability to perform final module assembly for up to 20 MW per year of carbonate sub-megawatt fuel cell power platforms to service the European market. Our European service activities are also operated out of this location.

Our manufacturing and research and development facility in Calgary, Alberta, Canada is focused on the engineering and development of the Company's solid oxide fuel cell ("SOFC") and SOEC technologies. This facility also houses our SOFC and SOEC stack research and development effort and includes equipment for the manufacturing of solid oxide cells and stacks, including advanced manufacturing capabilities. This facility includes equipment for the manufacturing of solid oxide cells and stacks, including an advanced automated stack manufacturing line which has been developed to ensure that the labor and overhead which are required to produce these technologies are optimized for efficiency and complement the low direct material cost of the stack. As of October 31, 2022, this facility is capable of producing 1 MW per year of SOFC or approximately 4 MW per year of SOEC. We are investing in expanding this facility with the goal of increasing its production capacity to 10 MW per year of SOFC or 40 MW per year of SOEC, and we expect this expansion to be complete by the middle of fiscal year 2024. If this expansion is delayed, our ability to timely fulfill future orders to meet anticipated demand and our future revenues and ability to achieve profitability will be negatively impacted.

If our business grows more quickly than we anticipate, our existing and planned manufacturing facilities may become inadequate and we may need to seek out new or additional space, or retrofit or further equip our existing facilities, at considerable cost to us. If our business does not grow as quickly as we expect, our existing and planned manufacturing facilities would, in part, represent excess capacity for which we may not recover the cost. In that circumstance, our revenues may be inadequate to support our committed costs and our planned growth, and our gross margins and business strategy would be adversely affected.

We are subject to risks in international operations, including risks relating to our ongoing relationship with POSCO Energy Co., Ltd. ("POSCO Energy") and Korea Fuel Cell Co., Ltd. ("KFC").

Since we market our products both inside and outside the U.S., our success depends in part on our ability to secure international customers and our ability to manufacture products that meet foreign regulatory and commercial requirements in target markets, as well as the ability to provide service to our international customers. With the settlement of our litigation with POSCO Energy and KFC, we expect to make significant product sales into South Korea and, with our renewed emphasis on marketing our products in European markets, we expect to make future product sales there as well. We have limited experience developing and manufacturing our products to comply with the commercial and legal requirements of international markets. In addition, we are subject to tariff regulations and requirements for export licenses, particularly with respect to the export of some of our technologies. We face numerous challenges in our international expansion, including the strain any future growth may place on management, service and operations teams and financial infrastructure. We will face risk from complex and changing regulatory requirements, fluctuations in currency exchange rates, accounts receivable requirements and collections, difficulties in managing international operations, potentially adverse tax consequences, restrictions on repatriation of any earnings and the burdens of complying with a wide variety of international laws. In addition, with respect to South Korea, pursuant to the terms of the Settlement Agreement, we may have to rely on POSCO Energy and KFC for some period to provide certain services, such as operations and maintenance services to any new customers, and we will need their cooperation to transition long term service agreements from their existing customers to us in the future. Given the historical relationship among the parties with respect to certain actions and inactions by POSCO Energy and KFC and the prolonged litigation among the parties, there can be no guarantee that the parties will be able to successfully work together. Any of these factors could adversely affect our results of operations and financial condition.

If our goodwill and other indefinite-lived intangible assets and long-lived assets (including project assets) become impaired, we may be required to record a significant charge to operations.

We have recorded significant impairment charges, and may in the future be required to record significant impairment charges, to operations in our financial statements should we determine that our goodwill, other indefinite-lived intangible assets (i.e., in process research and development ("IPR&D")) and other long-lived assets (i.e., project assets, property, plant and equipment and amortizing intangible assets) are impaired. Such charges might have a significant impact on our reported financial condition and results of operations. Project assets and property, plant and equipment impairment charges totaled approximately \$1.8 million, \$5.0 million and \$2.4 million for the fiscal years ended October 31, 2022, 2021 and 2020, respectively.

As required by accounting rules, we review our goodwill for impairment at least annually as of July 31 or more frequently if facts and circumstances indicate that it is more likely than not that the fair value of a reporting unit that has goodwill is less than its carrying value. Factors that may be considered a change in circumstances indicating that the carrying value of our goodwill might not be recoverable include a significant decline in projections of future cash flows and lower future growth rates in our industry. We review IPR&D for impairment on an annual basis as of July 31 or more frequently if facts and circumstances indicate the fair value is less than the carrying value. If the technology has been determined to be abandoned or not recoverable, we would be required to record a charge reflecting impairment of the asset. We review long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. We consider a project asset commercially viable and recoverable if such project asset is anticipated to be sellable for a profit, or generates positive cash flows, in excess of the cost of the project asset once it is either fully developed or fully constructed. If any of our project assets are not considered commercially viable or costs are not deemed to be recoverable, we would be required to record a charge reflecting the impairment of such project assets.

Our Advanced Technologies contracts are subject to the risk of termination by the contracting party and we may not realize the full amounts allocated under some contracts due to the lack of Congressional appropriations or early termination.

A portion of our revenues has been derived from long-term cooperative agreements and other contracts with the DOE and other U.S. government agencies. These agreements are important to the continued development of our technology and our products. We also contract with private sector companies under certain Advanced Technologies contracts to develop strategically important and complementary offerings.

Generally, our privately funded Advanced Technologies contracts, including our EMTEC Joint Development Agreement, and our government research and development contracts are subject to the risk of termination at the convenience of the contracting party and may contain certain milestones and deliverables which we may not be able to meet if actual results differ materially from our original estimates. Furthermore, with respect to government-funded contracts, irrespective of the amounts allocated by the contracting agency, such contracts are subject to annual Congressional appropriations and the results of government or agency sponsored reviews and audits of our cost reduction projections and efforts. We can only receive funds under government-funded contracts ultimately made available to us annually by Congress as a result of the appropriations process. Accordingly, we cannot be sure whether we will receive the full amounts awarded under our privately funded, government research and development or other contracts. Termination of the contracts or failure to receive the full amounts under any of our Advanced Technologies contracts could materially and adversely affect our business prospects, results of operations and financial condition.

Utility companies may resist the adoption of distributed generation and could impose customer fees or interconnection requirements on our customers that could make our products less desirable.

Investor-owned utilities may resist adoption of distributed generation fuel cell plants as such plants are disruptive to the utility business model that primarily utilizes large central generation power plants and associated transmission and distribution. On-site distributed generation that is on the customer-side of the electric meter competes with the utility. Distributed generation on the utility-side of the meter generally has power output that is significantly less than central generation power plants and may be perceived by the utility as too small to materially impact its business, limiting its interest. Additionally, perceived technology risk may limit utility interest in stationary fuel cell power plants.

Utility companies commonly charge fees to larger, industrial customers for disconnecting from the electric grid or for having the capacity to use power from the electric grid for back up purposes. These fees could increase the cost to our customers of using our SureSource products and could make our products less desirable, thereby harming our business prospects, results of operations and financial condition.

We depend on third party suppliers for the development and timely supply of key raw materials and components for our products.

We use various raw materials and components to construct a fuel cell module, including nickel and stainless steel that are critical to our manufacturing process. We also rely on third-party suppliers for the BOP components in our products. Suppliers must undergo a qualification process, which takes four to twelve months. We continually evaluate new suppliers, and we are currently qualifying several new suppliers. There are a limited number of suppliers for some of the key components of our products. In addition, to the extent the processes that our suppliers use to manufacture components are

proprietary, we may be unable to obtain comparable components from alternative suppliers, all of which could harm our business prospects, results of operations and financial condition. We do not know whether we will be able to maintain long-term supply relationships with our critical suppliers, or secure new long-term supply relationships on terms that will allow us to achieve our objectives, if at all. A supplier's failure to develop and supply components in a timely manner or to supply components that meet our quality, quantity or cost requirements or our technical specifications, or our inability to obtain alternative sources of these components on a timely basis or on terms acceptable to us, could each harm our ability to manufacture our SureSource products. In addition, our supply chain has been, and may continue to be, adversely affected by the COVID-19 pandemic, which has created global shipping and logistics challenges. These challenges include extended shipping lead times and pricing pressures on transportation and logistics that have adversely impacted, and may continue to adversely impact, our ability to meet our production schedules and project deadlines, may result in additional and increased costs, or may otherwise adversely impact our business, results of operations and financial condition. If we are unable to pass these costs on to our customers or timely complete projects, we may experience reduced revenue and other adverse impacts on our business, results of operations and financial condition. Given that our customers and suppliers are facing similar global supply chain challenges, we expect continued difficulty in forecasting demand and supply needs for the foreseeable future. While we have implemented several initiatives to mitigate the effects of the COVID-19 pandemic on our business, our business, results of operations and financial condition may still be adversely impacted.

Our business and operations may be adversely affected by the COVID-19 outbreak or other similar outbreaks.

Any outbreaks of contagious diseases, including COVID-19, and other adverse public health developments in countries where we and our suppliers operate, could have a material and adverse effect on our business, financial condition and results of operations. These effects could include disruptions to or restrictions on our employees' ability to travel, as well as temporary or prolonged closures of our facilities or the facilities of our customers, suppliers, or other vendors in our supply chain. In addition, COVID-19 has resulted in a widespread health crisis that has adversely affected, and may continue to adversely affect, the economies and financial markets of many countries, resulting in economic downturns that could affect demand for our products or our ability to obtain financing for our business or projects. COVID-19 may impact the health of our team members, directors or customers, reduce the availability of our workforce or those of companies with which we do business, or otherwise cause human impacts that may negatively impact our business. Any of these events, which may result in disruptions to our supply chain or customer demand, could materially and adversely affect our business and our financial results. The extent to which COVID-19 will impact our business and our financial results will depend on future developments, which are highly uncertain and cannot be predicted. Such developments may include new mutations of the virus, the continued efficacy of vaccines and the actions that may be taken by various governmental authorities in response to the outbreak, such as periodic quarantine or "shelter-in-place" orders and business closures imposed by various states within the United States, and the impact on the U.S. or global economy. For example, on March 18, 2020, in response to the escalating global COVID-19 outbreak, we temporarily suspended operations at our Torrington, Connecticut manufacturing facility, and also ordered those employees that could work from home to do so. We resumed operations in the manufacturing facility on June 22, 2020, and we established a phased-in return to work schedule commencing March 15, 2021 for those employees working from home that was completed April 19, 2021. However, we continue to evaluate our ability to operate in the event of resurgences of COVID-19 and the advisability of continuing operations, based on federal, state and local guidance, evolving data concerning the pandemic and the best interests of our employees, customers and stockholders. Accordingly, there can be no assurance that any of our facilities will remain open (in full or in part) or that our other operations will continue at full or limited capacity. If we again have to shut down production either due to a resurgence of the COVID-19 pandemic or due to an outbreak in one of our facilities, our project schedules and associated financing could be adversely affected. Further, we have experienced, and may continue to experience, increased costs and expenses, including as a result of (i) conducting daily "fitness-for-duty" assessments for employees, including symptom checks and providing personal protective equipment, (ii) the expansion of benefits to our employees, including the provision of additional time off for employees who have contracted COVID-19 or are required to be quarantined or who are unable to obtain childcare to return to work, and the reimbursement of expenses incurred while working from home, (iii) implementing increased health and safety protocols at all of our facilities, including increased cleaning/sanitization of workspaces, restricting visitor access, mandating social distancing guidelines and increasing the availability of sanitization products, and (iv) the increased cost of personal protective equipment. Although we believe the Company is currently considered an "essential" business in its operating markets, if any of the applicable exceptions or exemptions are curtailed or revoked in the future, or any of these exemptions or exceptions do not extend to any of our key suppliers, our business, operating results and financial condition could be adversely impacted. As a result, at this time, it is impossible to predict the future impact of COVID-19 on our business, liquidity, capital resources, supply chain and financial results or its effect on clean energy demand, capital budgets of our customers, or demand for our products. Additionally, while we have continued to prioritize the health and safety of our team members

and customers as we continue to operate during the pandemic, we face an increased risk of litigation related to our operating environments. Even after the COVID-19 pandemic has subsided, we may continue to experience adverse impacts to our business as a result of any economic recession that has occurred or may occur in the future because of the pandemic, or because the pandemic worsens again. Additional public health crises could also emerge in the future, including other pandemics or epidemics. Any such public health crisis could pose further risks to us and could also have a material adverse effect on our business, results of operations and financial position.

An increase in energy costs, including as a result of the ongoing conflict between Russia and Ukraine, may materially adversely affect our business, financial condition, and results of operations.

Our results of operations can be directly affected by volatility in the cost and availability of energy, which is subject to global supply and demand and other factors beyond our control. The ongoing conflict between Russia and Ukraine has impacted global energy markets, particularly in Europe, leading to high volatility and increasing prices for crude oil, natural gas and other energy supplies. Higher energy costs result in increases in operating expenses at our manufacturing facilities, in the expense of shipping materials to our facilities, and in the expense of operating our projects for which we procure natural gas, all of which may in turn adversely affect our business, financial condition, and results of operations.

Failure to meet Environmental, Social, and Governance (“ESG”) expectations or standards or to achieve our ESG goals could adversely affect our business, results of operations, financial condition, and stock price.

In recent years, there has been an increased focus from stakeholders on ESG matters, including greenhouse gas emissions and climate-related risks, renewable energy, water stewardship, waste management, diversity, equality and inclusion, responsible sourcing and supply chain, human rights, and social responsibility. Given our commitment to ESG, we actively manage these issues and have established and publicly announced certain goals, commitments, and targets which we may refine or even expand further in the future. These goals, commitments, and targets reflect our current plans and aspirations and are not guarantees that we will be able to achieve them. Evolving stakeholder expectations and our efforts to manage these issues, report on them, and accomplish our goals present numerous operational, regulatory, reputational, financial, legal, and other risks, any of which could have a material adverse impact, including on our reputation and stock price.

Such risks and uncertainties include:

- reputational harm, including damage to our relationships with customers, suppliers, investors, governments, or other stakeholders;
- adverse impacts on our ability to sell and manufacture products;
- the success of our collaborations with third parties;
- increased risk of litigation, investigations, or regulatory enforcement action;
- unfavorable ESG ratings or investor sentiment;
- diversion of resources and increased costs to control, assess, and report on ESG metrics;
- our ability to achieve our goals, commitments, and targets within the timeframes announced;
- access to and increased cost of capital; and
- adverse impacts on our stock price.

Any failure, or perceived failure, to meet evolving stakeholder expectations and industry standards or achieve our ESG goals, commitments, and targets could have an adverse effect on our business, results of operations, financial condition, and stock price.

Risks Related to Sales of our Products

We derive significant revenue from contracts awarded through competitive bidding processes involving substantial costs and risks. Our contracted projects may not convert to revenue, and our project awards and sales pipeline may not convert to contracts, which may have a material adverse effect on our revenue and cash flows.

We expect a significant portion of the business that we will seek in the foreseeable future will be awarded through competitive bidding against other fuel cell technologies and other forms of power generation. The competitive bidding process involves substantial costs and a number of risks, including the significant cost and managerial time to prepare bids and proposals for contracts that may not be awarded to us and our failure to accurately estimate the resources and costs

that will be required to fulfill any contract we win. In addition, following a contract award, we may encounter significant expense, delay or contract modifications or award revocation as a result of our competitors protesting or challenging contracts awarded to us in competitive bidding. Our failure to compete effectively in this procurement environment could adversely affect our revenue and/or profitability.

Some of the project awards we receive and orders we accept from customers require certain conditions or contingencies (such as permitting, interconnection, financing or regulatory approval) to be satisfied, some of which are outside of our control. Certain awards are cancelable or revocable at any time prior to contract execution. The time periods from receipt of an award to execution of a contract, or receipt of a contract to installation may vary widely and are determined by a number of factors, including the terms of the award, governmental policies or regulations that go into effect after the award, the terms of the customer contract and the customer's site requirements. These same or similar conditions and contingencies may be required by financiers in order to draw on financing to complete a project. If these conditions or contingencies are not satisfied, or changes in laws affecting project awards occur, or awards are revoked or cancelled, project awards may not convert to contracts, and installations may be delayed or canceled. This could have an adverse impact on our revenue and cash flow and our ability to complete construction of a project.

We have signed product sales contracts, EPCs, PPAs and long-term service agreements with customers subject to contractual, technology, operating, commodity (i.e. natural gas) and fuel pricing risks as well as market conditions that may affect our operating results.

We apply the transfer of control over time revenue recognition method under Accounting Standards Codification Topic 606: Revenue from Contracts with Customers to certain service contracts which are subject to estimates. On a quarterly basis, we perform a review process to help ensure that total estimated contract costs include estimates of costs to complete that are based on the most recent available information. The amount of costs incurred on a cumulative to date basis as a function of estimated costs at completion is applied to contract consideration to determine the cumulative revenue that should be recognized to date.

We have contracted under long-term service agreements with certain customers to provide service on our products over terms up to 20 years. Under the provisions of these contracts, we provide services to maintain, monitor, and repair customer power plants to meet minimum operating levels. Pricing for service contracts is based upon estimates of future costs including future module exchanges. While we have conducted tests to determine the overall life of our products, we have not run certain of our products over their projected useful life or in all potential conditions prior to large scale commercialization. As a result, we cannot be sure that these products will last to their expected useful life or perform as anticipated in all conditions, which could result in warranty claims, performance penalties, maintenance and module replacement costs in excess of our estimates, losses on service contracts and/or a negative perception of our products. As a result of our products' lack of maturity, we have incurred and may continue to incur charges for warranty claims, performance penalties, maintenance and module replacement costs in excess of our estimates and losses on service contracts. Each of these risks could be material under these contracts and, as a result, we may experience diminished returns or be required to write off all or a portion of our capitalized costs in these project assets.

In certain instances, we have executed PPAs with the utility, end-user of the power or site host of the fuel cell power plant. We may then sell the PPA and power plant to a project investor or retain the project and collect revenue from the sale of power over the term of the PPA, recognizing electricity revenue as power is generated and sold. Our growing portfolio of project assets used to generate and sell power under PPAs and utility tariff programs exposes us to operational risks and uncertainties, including, among other things, lost revenues due to prolonged outages, replacement equipment costs, risks associated with facility start-up operations, failures in the availability or acquisition of fuel (including natural gas and renewable natural gas), the impact of severe adverse weather conditions, natural disasters, terrorist attacks, cybersecurity attacks, risks of property damage or injury from energized equipment, availability of adequate water resources and ability to intake and discharge water, use of new or unproven technology, fuel commodity price risk and fluctuating market prices, and lack of alternative available fuel sources.

Our ability to proceed with projects under development and complete construction of projects on schedule and within budget may be adversely affected by escalating costs for materials and fuel (including natural gas and renewable natural gas), supply chain and logistics challenges, tariffs, labor and regulatory compliance, inability to obtain necessary permits, interconnections or other approvals on acceptable terms or on schedule and by other factors. If any development project or construction is not completed, is delayed or is subject to cost overruns, we could become obligated to make delay or termination payments or become obligated for other damages under contracts, experience diminished returns or be required

to write off all or a portion of our capitalized costs in the project. Each of these events could have an adverse effect on our business, financial condition, results of operations and prospects.

We extend product warranties for our products, which products are complex and could contain defects and may not operate at expected performance levels, which could impact sales and market adoption of our products, affect our operating results or result in claims against us.

We develop complex and evolving products and we continue to advance the capabilities of our fuel cell stacks. We now produce stacks in the United States with a net rated power output of 350 kilowatts when new and a 7-year cell design life. We provide for a warranty of our products for a specific period of time against manufacturing or performance defects. We accrue for warranty costs based on historical warranty claim experience; however, actual future warranty expenses may be greater than we have assumed in our estimates. We are still gaining field operating experience with respect to our products, and despite experience gained from our growing installed base and testing performed by us, our customers and our suppliers, issues have been and may continue to be found in existing or new products including, but not limited to, module decay rates which have exceeded and may continue to exceed design expectations. This has resulted and may continue to result in a delay in recognition or loss of revenues and may result in loss of market share or failure to achieve broad market acceptance. The occurrence of defects has also caused and may continue to cause us to incur significant warranty, support and repair costs in excess of our estimates, could divert the attention of our engineering personnel from our product development efforts, and could harm our relationships with our customers. Although we seek to limit our liability, a product liability claim brought against us, even if unsuccessful, would likely be time consuming, could be costly to defend, and may hurt our reputation in the marketplace. Our customers could also seek and obtain damages from us for their losses.

We currently face and will continue to face significant competition, including from products using other energy sources that may be lower priced or have preferred environmental characteristics.

We compete on the basis of our products' reliability, efficiency, environmental considerations and cost. Technological advances in alternative energy products, improvements in the electric grid or other sources of power generation that use lower priced fuel or no fuel, or other fuel cell technologies may negatively affect the development or sale of some or all of our products or make our products less economically attractive, non-competitive or obsolete prior to or after commercialization. Significant decreases in the price of alternative technologies or grid delivered electricity, or significant increases in the price of our fuels could have a material adverse effect on our business because other generation sources could be more economically attractive to consumers than our products. Additionally, in certain markets, consumers and regulators have expressed a preference for zero-carbon generating resources over fueled resources, which could adversely affect sales of our products in such markets.

Other companies, some of which have substantially greater resources than ours, are currently engaged in the development of products and technologies that are similar to, or may be competitive with, our products and technologies. Several companies in the U.S. are engaged in fuel cell development, although we are the only domestic company engaged in manufacturing and deployment of stationary carbonate fuel cells. Other emerging fuel cell technologies include small or portable PEM fuel cells, stationary phosphoric acid fuel cells, stationary solid oxide fuel cells, and small residential solid oxide fuel cells. Any of these technologies and any of our competitors has the potential to capture market share in our target markets. There are also other potential fuel cell competitors internationally that could capture market share.

Other than fuel cell developers, we must also compete with companies that manufacture combustion-based distributed power equipment, including various engines and turbines, and have well-established manufacturing, distribution, operating and cost features. Electrical efficiency of these products can be competitive with our SureSource power plants in certain applications. Significant competition may also come from gas turbine companies and large scale solar and wind technologies.

Our plans are dependent on market acceptance of our products.

Our plans are dependent upon market acceptance of, as well as enhancements to, our products. Fuel cell systems represent an emerging market, and we cannot be sure that potential customers will accept fuel cells as a replacement for traditional power sources or non-fuel based power sources, hydrogen generation sources or storage. As is typical in a rapidly evolving industry, demand and market acceptance for recently introduced products and services are subject to a high level of

uncertainty and risk. Since the distributed generation, hydrogen, carbon capture and storage markets are still evolving, it is difficult to predict with certainty the size of these markets and their growth rates. The development of a market for our products may be affected by many factors that are out of our control, including:

- the cost competitiveness of our fuel cell products including availability and output expectations and total cost of ownership;
- the future costs of natural gas, renewable natural gas (biofuels), and other fuels used by our fuel cell products;
- customer reluctance to try a new product;
- the market for distributed generation, hydrogen, carbon capture and storage and government policies that affect those markets;
- government incentives, mandates or other programs favoring zero carbon energy sources;
- local permitting and environmental requirements;
- customer preference for non-fuel based technologies; and
- the emergence of newer, more competitive technologies and products.

If a sufficient market fails to develop or develops more slowly than we anticipate, we may be unable to recover the losses we will have incurred in the development of our products, and we may never achieve profitability.

We must complete development of our new products and develop additional commercially viable products in order to achieve our long-term revenue targets.

In fiscal year 2022, we established new target revenues to be met by the end of fiscal year 2025 and the end of fiscal year 2030. In developing these revenue targets, we assumed the successful commercialization of our SOEC, SOFC and carbon capture products. If we experience delays in meeting our development goals for these products, these products exhibit technical defects, or we are unable to meet cost or performance goals with respect to these products, including goals for power output, hydrogen production, rates of carbon capture, useful life and reliability, then our ability to generate revenue and achieve profitability from sales of these new products will be delayed or may not occur at all. In addition, if we are unable to develop additional commercially viable products in the future, we may not be able to generate sufficient revenue to become profitable. The profitable commercialization of our products depends on our ability to reduce the costs of our products, and we cannot assure you that we will be able to sufficiently reduce these costs to achieve profitability.

Our products use inherently dangerous, flammable fuels, operate at high temperatures and use corrosive carbonate material, each of which could subject our business to product liability claims.

Our business exposes us to potential product liability claims that are inherent in products that use hydrogen. Our products utilize fuels such as natural gas and convert these fuels internally to hydrogen that is used by our products to generate electricity. Although our platforms do not combust fuels for the generation of electricity, the fuels we use are combustible and may be toxic. In addition, our SureSource products operate at high temperatures and use corrosive carbonate material, which could expose us to potential liability claims. Although we have incorporated a robust design and redundant safety features in our power plants, have established comprehensive safety, maintenance, and training programs, follow third-party certification protocols, codes and standards, and do not store natural gas or hydrogen at our power plants, we cannot guarantee that there will not be accidents. Any accidents involving our products or other hydrogen-using products could materially impede widespread market acceptance and demand for our products. In addition, we might be held responsible for damages beyond the scope of our insurance coverage. We also cannot predict whether we will be able to maintain adequate insurance coverage on acceptable terms.

Risks Related to Privacy, Data Protection and Cybersecurity

We are increasingly dependent on information technology, and disruptions, failures or security breaches of our information technology infrastructure could have a material adverse effect on our operations and the operations of our power plant platforms. In addition, increased information technology security threats and more sophisticated computer crime pose a risk to our systems, networks, products and services.

We rely on information technology networks and systems, including the Internet, to process, transmit and store electronic and financial information and to manage a variety of business processes and activities, including communication with power plants owned by us or our customers and production, manufacturing, financial, logistics, sales, marketing and administrative functions. Additionally, we collect and store data that is sensitive to us and to third parties. Operating these information technology networks and systems and processing and maintaining this data, in a secure manner, are critical to our business operations and strategy. We depend on our information technology infrastructure to communicate internally and externally with employees, customers, suppliers and others. We also use information technology networks and systems to comply with regulatory, legal and tax requirements and to operate our fuel cell power plants. These information technology systems, many of which are managed by third parties or used in connection with shared service centers, may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components thereof, power outages, hardware failures, computer viruses, attacks by computer hackers or other cybersecurity risks, telecommunication failures, user errors, natural disasters, terrorist attacks or other catastrophic events. If any of our significant information technology systems suffer severe damage, disruption or shutdown, and our disaster recovery and business continuity plans do not effectively resolve the issues in a timely manner, our product sales, financial condition and results of operations may be materially and adversely affected, and we could experience delays in reporting our financial results, or our fuel cell power plant operations may be disrupted, exposing us to performance penalties under our contracts with customers.

In addition, information technology security threats — from user error to cybersecurity attacks designed to gain unauthorized access to our systems, networks and data — are increasing in frequency and sophistication. Cybersecurity attacks may range from random attempts to coordinated and targeted attacks, including sophisticated computer crime and advanced persistent threats. These threats pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data.

Cybersecurity attacks could also include attacks targeting customer data or the security, integrity and/or reliability of the hardware and software installed in our products. We have experienced, and may continue to experience in the future, cybersecurity attacks that have resulted in unauthorized parties gaining access to our information technology systems and networks and, in one instance, gaining control of the information technology system at one of our power plants. However, to date, no cybersecurity attack has resulted in any material loss of data, interrupted our day-to-day operations or had a material impact on our financial condition, results of operations or liquidity. While we actively manage information technology security risks within our control, there can be no assurance that such actions will be sufficient to mitigate all potential risks to our systems, networks and data. In addition to the direct potential financial risk as we continue to build, own and operate generation assets, other potential consequences of a material cybersecurity attack include reputational damage, litigation with third parties, disruption to systems, unauthorized release of confidential or otherwise protected information, corruption of data, diminution in the value of our investment in research, development and engineering, and increased cybersecurity protection and remediation costs, which in turn could adversely affect our competitiveness, results of operations and financial condition. The amount of insurance coverage we maintain may be inadequate to cover claims or liabilities relating to a cybersecurity attack.

Additionally, the legal and regulatory environment surrounding information security and privacy in the U.S. and international jurisdictions is constantly evolving. Violation or non-compliance with any of these laws or regulations, contractual requirements relating to data security and privacy, or our own privacy and security policies, either intentionally or unintentionally, or through the acts of intermediaries could have a material adverse effect on our brand, reputation, business, financial condition and results of operations, as well as subject us to significant fines, litigation losses, third-party damages and other liabilities.

Tax, Accounting, Compliance and Regulatory Risks

We are required to maintain effective internal control over financial reporting. In a prior fiscal year, our management identified a material weakness in our internal control over financial reporting. If other control deficiencies are identified in the future, we may not be able to report our financial results accurately, prevent fraud or file our periodic reports in a timely manner, which may adversely affect investor confidence in our Company and, as a result, the value of our common stock.

We are required, pursuant to Section 404 of the Sarbanes-Oxley Act (“Section 404”), to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. Complying with Section 404 requires a rigorous compliance program as well as adequate time and resources. We may not be able to complete our internal control evaluation, testing and any required remediation in a timely fashion. Additionally, if we identify one or more material weaknesses in our internal control over financial reporting, we will not be able to assert that our internal controls are effective. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

In a prior fiscal year, our management identified a material weakness in our internal control over financial reporting, which has been remediated. We cannot be certain that other material weaknesses and control deficiencies will not occur in the future. If material weaknesses are identified in the future, or if we are not able to comply with the requirements of Section 404 in a timely manner, our reported financial results could be materially misstated and we could be subject to investigations or sanctions by regulatory authorities, which would require additional financial and management resources, and the value of our common stock could decline.

To the extent we identify future weaknesses or deficiencies, there could be material misstatements in our consolidated financial statements and we could fail to meet our financial reporting obligations. As a result, our ability to obtain additional financing on favorable terms or at all could be materially and adversely affected which, in turn, could materially and adversely affect our business, our financial condition and the value of our common stock. If we are unable to assert that our internal control over financial reporting is effective in the future, investor confidence in the accuracy and completeness of our financial reports could be further eroded, which would have a material adverse effect on the price of our common stock.

Our results of operations could vary as a result of changes to our accounting policies or the methods, estimates and judgments we use in applying our accounting policies.

The methods, estimates and judgments we use in applying our accounting policies have a significant impact on our results of operations. Such methods, estimates and judgments are, by their nature, subject to substantial risks, uncertainties and assumptions, and factors may arise over time that could lead us to reevaluate our methods, estimates and judgments.

In future periods, management will continue to reevaluate its estimates for contract margins, service agreements, loss accruals, warranty, performance guarantees, liquidated damages, inventory valuation allowances and allowance for doubtful accounts. Changes in those estimates and judgments could significantly affect our results of operations and financial condition. We will also adopt changes required by the Financial Accounting Standards Board and the SEC.

We may be affected by environmental and other governmental regulation.

We are subject to various federal, state and local laws and regulations relating to, among other things, land use, safe working conditions, handling and disposal of hazardous and potentially hazardous substances and emissions of carbon dioxide and pollutants into the atmosphere. Our business exposes us to the risk of harmful substances escaping into the environment, resulting in personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in some instances, we may not be reimbursed at all. In addition, it is possible that industry-specific laws and regulations will be adopted covering matters such as transmission scheduling, distribution, emissions, and the characteristics and quality of our products, including installation and servicing. These regulations could limit the growth in the use of carbonate fuel cell products, decrease the acceptance of fuel cells as a commercial product and increase our costs and, therefore, the price of our products. We believe that our businesses are operating in compliance in all material respects with applicable environmental laws; however, these laws and regulations have changed frequently

in the past and it is reasonable to expect additional and more stringent changes in the future. Accordingly, compliance with existing or future laws and regulations could have a material adverse effect on our business prospects, results of operations and financial condition. If we fail to comply with applicable environmental laws and regulations, governmental authorities may seek to impose fines and penalties on us or to revoke or deny the issuance or renewal of operating permits and private parties may seek damages from us. Under those circumstances, we might be required to curtail or cease operations, conduct site remediation or other corrective action, or pay substantial damage claims.

Given that some of our product configurations run on fossil fuels, we may be negatively impacted by CO₂-related changes in applicable laws, regulations, ordinances, rules or the requirements of the incentive programs on which we and our customers currently rely. Changes in any of the laws, regulations, ordinances or rules that apply to our installations and new technology could make it illegal or more costly for us or our customers to install and operate our products at particular sites. Additionally, our customers and potential customers' energy procurement policies may prohibit or limit their willingness to procure our products. Our business prospects may be negatively impacted if we are prevented from completing new installations or our installations become more costly as a result of laws, regulations, ordinances, or rules applicable to our products, or by our customers' and potential customers' energy procurement policies.

In addition, certain of our products benefit from federal, state and local governmental incentives, mandates or other programs promoting clean energy generation. Any changes to or termination of these programs could reduce demand for our products, impair sales financing, and adversely impact our business, financial condition and results of operations.

A negative government audit could result in an adverse adjustment of our revenue and costs and could result in civil and criminal penalties.

Government agencies, such as the Defense Contract Audit Agency, routinely audit and investigate government contractors. These agencies review a contractor's performance under its contracts, cost structure, and compliance with applicable laws, regulations, and standards. If the agencies determine through these audits or reviews that we improperly allocated costs to specific contracts, they will not reimburse us for these costs. Therefore, an audit could result in adjustments to our revenue and costs.

Further, although we have internal controls in place to oversee our government contracts, no assurance can be given that these controls are sufficient to prevent isolated violations of applicable laws, regulations and standards. If the agencies determine that we or one of our subcontractors engaged in improper conduct, we may be subject to civil or criminal penalties and administrative sanctions, payments, fines, and suspension or prohibition from doing business with the government, any of which could materially affect our results of operations and financial condition.

Exports of certain of our products are subject to various export control regulations and may require a license or permission from the U.S. Department of State, the U.S. Department of Energy or other agencies.

As an exporter, we must comply with various laws and regulations relating to the export of products, services and technology from the U.S. and other countries having jurisdiction over our operations. We are subject to export control laws and regulations, including the International Traffic in Arms Regulation, the Export Administration Regulation, and the Specially Designated Nationals and Blocked Persons List, which generally prohibit U.S. companies and their intermediaries from exporting certain products, importing materials or supplies, or otherwise doing business with restricted countries, businesses or individuals, and require companies to maintain certain policies and procedures to ensure compliance. We are also subject to the Foreign Corrupt Practices Act, which prohibits improper payments to foreign governments and their officials by U.S. and other business entities. Under these laws and regulations, U.S. companies may be held liable for their actions and actions taken by their strategic or local partners or representatives. If we, or our intermediaries, fail to comply with the requirements of these laws and regulations, or similar laws of other countries, governmental authorities in the United States or elsewhere, as applicable, could seek to impose civil and/or criminal penalties, which could damage our reputation and have a material adverse effect on our business, financial condition and results of operations.

The Paycheck Protection Program loan received by us in 2020 and subsequently repaid by us in 2021 has resulted in an informal SEC inquiry into our financial disclosures and may subject us to challenges regarding qualification for the loan, enforcement actions, fines and penalties.

On April 20, 2020, we entered into a Paycheck Protection Program Promissory Note, dated April 16, 2020 (the “PPP Note”), evidencing a loan to the Company from Liberty Bank under the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”). Pursuant to the PPP Note, we received total proceeds of approximately \$6.5 million on April 24, 2020 (the “PPP Loan”). In accordance with the requirements of the CARES Act, as amended by the Paycheck Protection Program Flexibility Act of 2020 (the “PPP Flexibility Act”), the PPP Loan may have been fully forgiven if (i) proceeds were used to pay eligible payroll costs, rent, mortgage interest and utilities and (ii) full-time employee headcount and salaries were either maintained during the 24-week period following disbursement of the PPP Loan or restored by December 31, 2020. If not so maintained or restored, forgiveness of the PPP Loan would have been reduced in accordance with regulations issued by the U.S. Small Business Administration. On October 29, 2020, we applied for forgiveness of the PPP Loan. While we believe we met all of the requirements of the CARES Act, as amended by the PPP Flexibility Act, for forgiveness, on February 11, 2021, we withdrew our application for forgiveness and repaid all amounts outstanding under the PPP Note, together with all accrued interest, in part because our financial circumstances had changed substantially since the time of the application for forgiveness, such that we were no longer in need of forgiveness of the PPP Loan. As a result of this repayment, the PPP Loan is not reported on our Consolidated Balance Sheets as of October 31, 2022 and 2021.

Our receipt of the PPP Loan, our submission of a forgiveness application, and our withdrawal of our forgiveness application may result in adverse publicity and damage to our reputation, governmental investigations, inquiries, reviews and audits, such as the SEC inquiry described below, which could consume significant financial and management resources. Any of these events could harm our business, results of operations and financial condition.

On or about May 11, 2020, the Division of Enforcement of the SEC sent us an inquiry requesting that we voluntarily provide information to the SEC pertaining to our application and resulting PPP Loan and how the need for the PPP Loan compares with our filings, disclosures and financial condition. While this request for information was voluntary and we were not obligated to respond, we cooperated with the request for information and voluntarily provided information to the SEC. The SEC did not communicate with us in fiscal year 2021 or fiscal year 2022 about its inquiry.

Risks Related to Our Need for Additional Capital

We will need to raise additional capital, and such capital may not be available on acceptable terms, if at all. If we do raise additional capital utilizing equity, existing stockholders will suffer dilution. If we do not raise additional capital, our business could fail or be materially and adversely affected.

The implementation of our business plan and strategy requires additional capital to fund operations as well as investment by us in project assets. If we are unable to raise additional capital in the amounts required, on terms acceptable to us, or at all, we will not be able to successfully implement our business plan and strategy. Our capital-intensive business model increases the risk that we will not be able to successfully implement our plans if we do not raise additional capital in the amounts required.

In addition, if we raise additional funds through further issuances of our common stock, or securities convertible into or exchangeable for shares of our common stock, into the public market, including shares of our common stock issued upon exercise of options or warrants, holders of our common stock could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of our then-existing capital stock. Any debt financing secured by us in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities. If we cannot raise additional funds when we need them, our business and prospects could fail or be materially and adversely affected. In addition, if additional funds are not secured in the future, we will have to modify, reduce, defer or eliminate parts of our present and anticipated future projects, or sell some or all of our assets.

Risks Related to our Intellectual Property and Technology Licenses

We depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our future growth and success.

Failure to protect our existing intellectual property rights may result in the loss of our exclusivity or the right to use our technologies. If we do not adequately ensure our freedom to use certain technology, we may have to pay others for rights to use their intellectual property, pay damages for infringement, misappropriation, or other violation, or be enjoined from using such intellectual property. We rely on patent, trade secret, trademark and copyright law to protect our intellectual property.

We previously licensed certain of our carbonate fuel cell manufacturing intellectual property to POSCO Energy on an exclusive basis in the South Korean and broader Asian markets, and pursuant to the terms of the Settlement Agreement with POSCO Energy, we have done so again, but this time on a limited, non-exclusive basis to enable module replacement to POSCO Energy's existing LTSA customers only. (See the section above entitled "Business – License Agreements—License Agreements and Settlement Agreement with POSCO Energy" for more information with respect to the limited license granted to POSCO Energy and KFC.) In addition, effective as of June 11, 2019, we entered into the EMTEC License Agreement, pursuant to which we agreed, subject to the terms of the EMTEC License Agreement, to grant EMTEC and its affiliates a non-exclusive, worldwide, fully paid, perpetual, irrevocable, non-transferrable license and right to use our patents, data, know-how, improvements, equipment designs, methods, processes and the like to the extent it is useful to research, develop, and commercially exploit carbonate fuel cells in applications in which the fuel cells concentrate carbon dioxide from industrial and power sources and for any other purpose attendant thereto or associated therewith. Such right and license is sublicensable to third parties performing work for or with EMTEC or its affiliates, but shall not otherwise be sublicensable. Furthermore, on November 5, 2019, we entered into the EMTEC Joint Development Agreement, pursuant to which we agreed to grant EMTEC and its affiliates a worldwide, non-exclusive, royalty-free, irrevocable, perpetual, sub-licensable, non-transferable (subject to certain exceptions) right and license to practice certain Company background intellectual property (to the extent not already licensed pursuant to the EMTEC License Agreement) for new carbonate fuel cell technology in carbon capture applications and hydrogen applications. We depend on POSCO Energy and EMTEC to also protect our intellectual property rights, but we cannot assure you that POSCO Energy or EMTEC will do so.

As of October 31, 2022, we (excluding our subsidiaries) had 129 U.S. patents and 251 patents in other jurisdictions covering our fuel cell technology (in certain cases covering the same technology in multiple jurisdictions), with patents directed to various aspects of our SureSource technology, SOFC technology, PEM fuel cell technology and applications thereof. As of October 31, 2022, we also had 40 patent applications pending in the U.S. and 107 patent applications pending in other jurisdictions. As of October 31, 2022, our subsidiary, Versa Power Systems, Ltd. ("Versa"), had 29 U.S. patents and 87 international patents covering SOFC technology (in certain cases covering the same technology in multiple jurisdictions). As of October 31, 2022, Versa also had 7 pending U.S. patent applications and 21 patent applications pending in other jurisdictions. In addition, as of October 31, 2022, our subsidiary, FuelCell Energy Solutions, GmbH, had license rights to 2 U.S. patents and 7 patents outside the U.S. (in certain cases covering the same technology in multiple jurisdictions) for carbonate fuel cell technology licensed from Fraunhofer IKTS.

Some of our intellectual property is not covered by any patent or patent application and includes trade secrets and other know-how that is not able to be patented, particularly as it relates to our manufacturing processes and engineering design. In addition, some of our intellectual property includes technologies and processes that may be similar to the patented technologies and processes of third parties. If we are found to be infringing, misappropriating or otherwise violating third-party intellectual property, we do not know whether we will be able to obtain licenses to use such intellectual property on acceptable terms, if at all. Our patent position is subject to complex factual and legal issues that may give rise to uncertainty as to the validity, scope, and enforceability of a particular patent.

We cannot assure you that any of the U.S. or international patents owned by us (including our subsidiaries) or other patents that third parties license to us will not be invalidated, circumvented, challenged, rendered unenforceable or licensed to others, or that any of our owned or licensed pending or future patent applications will be issued with the breadth of claim coverage sought by us or our licensors, if issued at all. In addition, effective patent, trademark, copyright and trade secret protection may be unavailable, limited or not applied for in certain foreign countries.

We also seek to protect our proprietary intellectual property, including intellectual property that may not be patented or able to be patented, in part by confidentiality agreements and, if applicable, inventors' rights agreements with our subcontractors, vendors, suppliers, consultants, strategic business associates and employees. We cannot assure you that these agreements will not be breached, that we will have adequate remedies for any breach or that such persons or institutions will not assert rights to intellectual property arising out of these relationships. Certain of our intellectual property has been licensed to us on a non-exclusive basis from third parties that may also license such intellectual property to others, including our competitors. If our licensors are found to be infringing, misappropriating or otherwise violating third-party intellectual property, we do not know whether we will be able to obtain licenses to use the intellectual property licensed to us on acceptable terms, if at all.

If necessary or desirable, we may seek extensions of existing licenses or further licenses under the patents or other intellectual property rights of others. However, we can give no assurances that we will obtain such extensions or further licenses or that the terms of any offered licenses will be acceptable to us. The failure to obtain a license from a third party for intellectual property that we use at present could cause us to incur substantial liabilities, and to suspend the manufacture or shipment of products or our use of processes requiring the use of that intellectual property.

While we are not currently engaged in any intellectual property litigation, we could become subject to lawsuits in which it is alleged that we have infringed, misappropriated or otherwise violated the intellectual property rights of others or commence lawsuits against others who we believe are infringing, misappropriating or otherwise violating our rights or violating their agreements to protect our intellectual property. Our involvement in intellectual property litigation could result in significant expense to us, adversely affecting the development of sales of the challenged product or intellectual property and diverting the efforts of our technical and management personnel, whether or not that litigation is resolved in our favor.

The U.S. government has certain rights relating to our intellectual property, including the right to restrict or take title to certain patents.

Multiple U.S. patents that we own have resulted from government-funded research and are subject to the risk of exercise of "march-in" rights by the government. March-in rights refer to the right of the U.S. government or a government agency to exercise its non-exclusive, royalty-free, irrevocable worldwide license to any technology developed under contracts funded by the government if the contractor fails to continue to develop the technology. These "march-in" rights permit the U.S. government to take title to these patents and license the patented technology to third parties if the contractor fails to utilize the patents.

Risks Related to Our Common and Preferred Stock

Our stock price has been and could remain volatile.

The market price for our common stock has been and may continue to be volatile and subject to extreme price and volume fluctuations in response to market and other factors, including the following, some of which are beyond our control:

- failure to meet commercialization milestones;
- failure to win contracts through competitive bidding processes, or the loss of project awards previously announced or anticipated prior to entering into definitive contracts;
- the loss of a major customer or a contract;
- variations in our quarterly operating results from the expectations of securities analysts or investors;
- downward revisions in securities analysts' estimates or changes in general market conditions;
- changes in the securities analysts that cover us or failure to regularly publish reports;
- announcements of technological innovations or new products or services by us or our competitors;

- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- additions or departures of key personnel;
- investor perception of our industry or our prospects;
- insider selling or buying;
- demand for our common stock;
- dilution from issuances of our common stock;
- general market trends or preferences for non-fueled resources;
- the COVID-19 pandemic, including any worsening of the pandemic;
- general technological or economic trends; and
- changes in United States or foreign political environment and the passage of laws, including, tax, environmental or other laws, affecting the product development business.

The closing price of our common stock on December 14, 2022 was \$3.72. There can be no assurance that the current stock price will be maintained, and it is possible that our stock price could drop significantly. In the past, following periods of volatility in the market price of their stock, companies have been the subject of securities class action litigation. If we become involved in securities class action litigation in the future, it could result in substantial costs and diversion of management’s attention and resources and could harm our stock price, business prospects, results of operations and financial condition.

Future sales of substantial amounts of our common stock could affect the market price of our common stock.

Future sales of substantial amounts of our common stock, or securities convertible into or exchangeable for shares of our common stock, into the public market, including shares of our common stock issued upon exercise of options or warrants, or perceptions that those sales could occur, could adversely affect the prevailing market price of our common stock and our ability to raise capital in the future.

Provisions of Delaware and Connecticut law and of our certificate of incorporation and by-laws may make a takeover more difficult.

Provisions in our Certificate of Incorporation, as amended (“Certificate of Incorporation”), and Amended and Restated By-Laws (“By-laws”) and in Delaware and Connecticut corporate law may make it difficult and expensive for a third-party to pursue a tender offer, change in control or takeover attempt that is opposed by our management and board of directors. These anti-takeover provisions could substantially impede the ability of public stockholders to benefit from a change in control or change in our management and board of directors.

Our By-laws provide that the Court of Chancery of the State of Delaware is the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders’ ability to obtain a judicial forum deemed favorable by the stockholder for disputes with us or our directors, officers or employees.

Our By-laws provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our Certificate of Incorporation or our By-laws, any action to interpret, apply, enforce, or determine the validity of our Certificate of Incorporation or By-laws, or any action asserting a claim against us that is governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder’s ability to bring a claim in a judicial forum that the stockholder finds favorable for disputes against us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other

employees. Alternatively, if a court were to find the choice of forum provision contained in our By-laws to be inapplicable or unenforceable in such an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

The rights of our Series B Preferred Stock could negatively impact our cash flows and dilute the ownership interest of our stockholders.

The terms of our Series B Preferred Stock also provide rights to their holders that could negatively impact us. Holders of the Series B Preferred Stock are entitled to receive cumulative dividends at the rate of \$50 per share per year, payable either in cash or in shares of our common stock. To the extent the dividend is paid in shares of our common stock, additional issuances could be dilutive to our existing stockholders and the sale of those shares could have a negative impact on the price of our common stock. A share of our Series B Preferred Stock may be converted at any time, at the option of the holder, into 0.5910 shares of our common stock (which is equivalent to an initial conversion price of \$1,692 per share), plus cash in lieu of fractional shares. Furthermore, the conversion rate applicable to the Series B Preferred Stock is subject to additional adjustment upon the occurrence of certain events.

The Series B Preferred Stock ranks senior to our common stock with respect to payments upon liquidation, dividends, and distributions.

The rights of the holders of our Series B Preferred Stock rank senior to our obligations to our common stockholders. Upon our liquidation, the holders of Series B Preferred Stock are entitled to receive \$1,000.00 per share plus all accumulated and unpaid dividends (the "Liquidation Preference"). Until the holders of Series B Preferred Stock receive the Liquidation Preference with respect to their shares of Series B Preferred Stock in full, no payment will be made on any junior shares, including shares of our common stock. The existence of senior securities such as the Series B Preferred Stock could have an adverse effect on the value of our common stock.

General Risk Factors

Litigation could expose us to significant costs and adversely affect our business, financial condition, and results of operations.

We are, or may become, party to various lawsuits, arbitrations, mediations, regulatory proceedings and claims, which may include lawsuits, arbitrations, mediations, regulatory proceedings or claims relating to commercial liability, product recalls, product liability, product claims, employment matters, environmental matters, breach of contract, intellectual property, indemnification, stockholder suits, derivative actions or other aspects of our business. Litigation (including the other types of proceedings identified above) is inherently unpredictable, and although we may believe we have meaningful defenses in these matters, we may incur judgments or enter into settlements of claims that could have a material adverse effect on our business, financial condition, and results of operations. The costs of responding to or defending litigation may be significant and may divert the attention of management away from our strategic objectives. There may also be adverse publicity associated with litigation that may decrease customer confidence in our business or our management, regardless of whether the allegations are valid or whether we are ultimately found liable.

Financial markets worldwide have experienced heightened volatility and instability which may have a material adverse impact on our Company, our customers and our suppliers.

Financial market volatility can affect the debt, equity and project finance markets. This may impact the amount of financing available to all companies, including companies with substantially greater resources, better credit ratings and more successful operating histories than ours. It is impossible to predict future financial market volatility and instability and the impact on our Company, and it may have a materially adverse effect on us for a number of reasons, such as:

- The long-term nature of our sales cycle can require long lead times between application design, order booking and product fulfillment. For such sales, we often require substantial cash down payments in advance of delivery. For our generation business, we must invest substantial amounts in application design, manufacture, installation, commissioning and operation, which amounts are returned through energy sales over long periods of time. Our growth strategy assumes that financing will be available for us to finance working capital or for our customers to provide down payments and to pay for our products. Financial market issues may delay,

cancel or restrict the construction budgets and funds available to us or our customers for the deployment of our products and services.

- Projects using our products are, in part, financed by equity investors interested in tax benefits, as well as by the commercial and governmental debt markets. The significant volatility in the U.S. and international stock markets causes significant uncertainty and may result in an increase in the return required by investors in relation to the risk of such projects.
- If we, our customers or our suppliers cannot obtain financing under favorable terms, our business may be negatively impacted.

Weakness in the economy and other conditions affecting the financial stability of our customers could negatively impact future sales of our products and our results of operations.

Our products require a long-term investment from our customers. Global inflationary pressures, particularly in the United States, have increased recently to levels not seen in recent years. Should our customers be impacted by these pressures, it could result in delays in purchasing decisions which could impact future sales of our products and our results of operations. In addition, downturns in the worldwide economy, due to inflation, geopolitics, major central bank policy actions including interest rate increases, public health crises, or other factors could also adversely affect our business.

Our results of operations could be adversely affected by economic and political conditions globally and the effects of these conditions on our customers' businesses and levels of business activity.

Economic and political events in 2022 have altered the landscape in which we and other U.S. companies operate in a variety of ways. In response to inflationary pressures, the U.S. Federal Reserve has raised interest rates, resulting in an increase in the cost of borrowing for us, our customers, our suppliers, and other companies relying on debt financing. World events, such as the Russian invasion of Ukraine and the resulting economic sanctions, have impacted the global economy, including by exacerbating inflationary and other pressures linked to COVID-related supply chain disruptions. Prolonged inflationary conditions, high and/or increased interest rates, and additional sanctions or retaliatory measures related to the Russia-Ukraine crisis, or other situations, could further negatively affect U.S. and international commerce and exacerbate or prolong the period of high energy prices and supply chain constraints. At this time, the extent and duration of these economic and political events and their effects on the economy and the Company are impossible to predict.

Our future success will depend on our ability to attract and retain qualified management, technical, and other personnel.

Our future success is substantially dependent on the services and performance of our executive officers and other key management, engineering, scientific, manufacturing and operating personnel. The loss of the services of any such personnel could materially adversely affect our business. Our ability to achieve our commercialization plans and to increase production at our manufacturing facility in the future will also depend on our ability to attract and retain additional qualified personnel, and we cannot assure you that we will be able to do so. Recruiting personnel for the fuel cell industry is competitive. Our inability to attract and retain additional qualified personnel, or the departure of key employees, could materially and adversely affect our development, commercialization and manufacturing plans and, therefore, our business prospects, results of operations and financial condition. In addition, our inability to attract and retain sufficient personnel to quickly increase production at our manufacturing facility when and if needed to meet increased demand may adversely impact our ability to respond rapidly to any new product, growth or revenue opportunities. Our inability to attract and retain sufficient qualified personnel to staff our government or third party funded research contracts may result in our inability to complete such contracts or terminations of such contracts, which may adversely impact financial conditions and results of operations.

We are subject to risks inherent in international operations.

Since we market our products both inside and outside the U.S., our success depends in part on our ability to secure international customers and our ability to manufacture products that meet foreign regulatory and commercial requirements in target markets. We have limited experience developing and manufacturing our products to comply with the commercial and legal requirements of international markets. In addition, we are subject to tariff regulations and requirements for export

licenses, particularly with respect to the export of some of our technologies. We face numerous challenges in our international expansion, including unexpected changes in regulatory requirements and other geopolitical risks, fluctuations in currency exchange rates, longer accounts receivable requirements and collections, greater bonding and security requirements, difficulties in managing international operations, potentially adverse tax consequences, restrictions on repatriation of earnings and the burdens of complying with a wide variety of international laws. Any of these factors could adversely affect our results of operations and financial condition.

We source raw materials and parts for our products on a global basis, which subjects us to a number of potential risks, including the impact of export duties and quotas, trade protection measures imposed by the U.S. and other countries including tariffs, potential for labor unrest, changing global and regional economic conditions and current and changing regulatory environments. Changes to these factors may have an adverse effect on our ability to source raw materials and parts in line with our current cost structure.

Although our reporting currency is the U.S. dollar, we conduct our business and incur costs in the local currency of most countries in which we operate. As a result, we are subject to currency translation and transaction risk. Changes in exchange rates between foreign currencies and the U.S. dollar could affect our net sales and cost of sales and could result in exchange gains or losses. We cannot accurately predict the impact of future exchange rate fluctuations on our results of operations.

We could also expand our business into new and emerging markets, many of which have an uncertain regulatory environment relating to currency policy. Conducting business in such markets could cause our exposure to changes in exchange rates to increase, due to the relatively high volatility associated with emerging market currencies and potentially longer payment terms for our proceeds. Our ability to hedge foreign currency exposure is dependent on our credit profile with financial institutions that are willing and able to do business with us. Deterioration in our credit position or a significant tightening of the credit market conditions could limit our ability to hedge our foreign currency exposure and, therefore, result in exchange gains or losses.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

The following is a summary of our offices and locations:

<u>Location</u>	<u>Business Use</u>	<u>Square Footage</u>	<u>Lease Expiration Dates</u>
Danbury, Connecticut	Corporate Headquarters, Research and Development, Sales, Marketing, Service, Purchasing and Administration	72,000	Company owned
Torrington, Connecticut	Manufacturing and Administrative	167,000	December 2030 ⁽¹⁾
Taufkirchen, Germany	Manufacturing and Administrative	20,000	June 2023
Calgary, Alberta, Canada	Manufacturing, Research and Development	32,220	January 2023 ⁽²⁾

- (1) In November 2015, this lease was extended until December 2030, with the option to extend for three additional five-year periods thereafter.
- (2) As of the date of this report, the Company is in negotiations with the lessor to extend this lease through May 2028. The Company is also negotiating a new lease at an adjacent property, which property would provide an additional 48,000 square feet of manufacturing space and which lease would also expire in May 2028.

Item 3. LEGAL PROCEEDINGS

From time to time, the Company is involved in legal proceedings, including, but not limited to, regulatory proceedings, claims, mediations, arbitrations and litigation, arising out of the ordinary course of its business (“Legal Proceedings”). Although the Company cannot assure the outcome of such Legal Proceedings, management presently believes that the result of such Legal Proceedings, either individually, or in the aggregate, will not have a material adverse effect on the Company’s consolidated financial statements, and no material amounts have been accrued in the Company’s consolidated financial statements with respect to these matters.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

FuelCell Common Stock

Our common stock has been publicly traded since June 25, 1992. Our common stock trades under the symbol "FCEL" on the Nasdaq Global Market.

On December 14, 2022, the closing price of our common stock on the Nasdaq Global Market was \$3.72 per share. As of December 14, 2022, there were 123 holders of record of our common stock. This does not include the number of persons whose stock is in nominee or "street" name accounts through brokers.

We have never paid a cash dividend on our common stock and do not anticipate paying any cash dividends on our common stock in the foreseeable future. In addition, the terms of our Series B Preferred Stock prohibit the payment of dividends on our common stock unless all dividends on the Series B Preferred Stock have been paid in full.

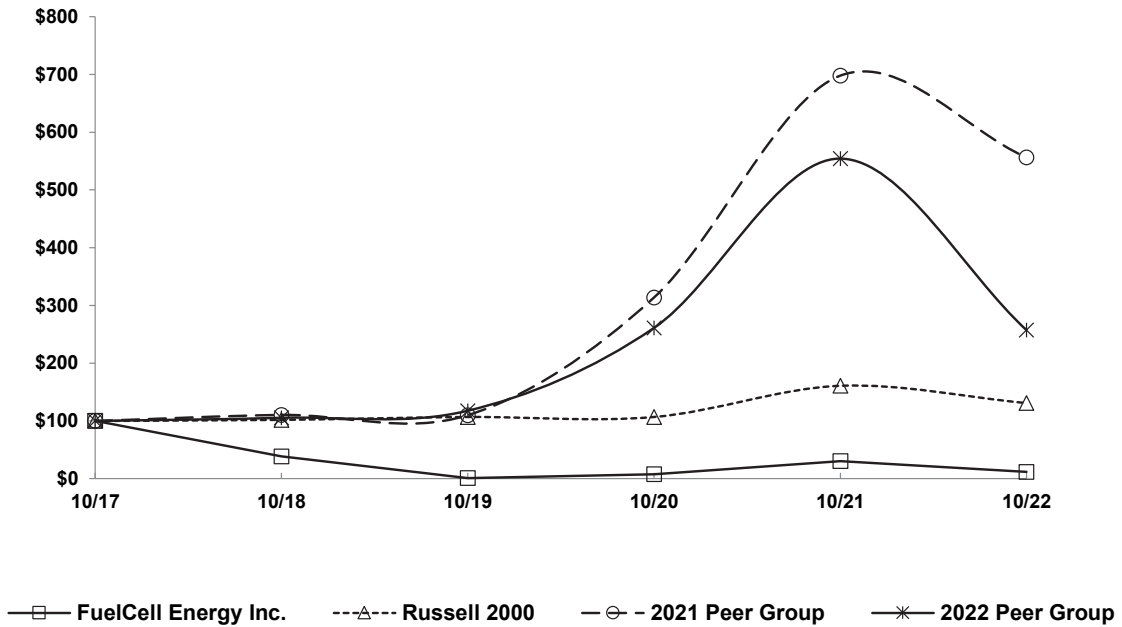
FuelCell Preferred Stock

Information concerning the Company's Series B Preferred Stock is incorporated herein by reference to Note 12. "Redeemable Preferred Stock" of the Notes to the Consolidated Financial Statements.

Performance Graph

The following graph compares the annual change in the Company’s cumulative total stockholder return on its common stock for the five fiscal years ended October 31, 2022 with the cumulative stockholder total return on the Russell 2000 Index, a peer group consisting of Standard Industry Classification Group Code 3690 companies listed on the Nasdaq Global Market and New York Stock Exchange and a customized 14 company peer group. It assumes \$100.00 invested on October 31, 2017 with dividends reinvested.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
 Among FuelCell Energy Inc., the Russell 2000 Index,
 2021 Peer Group and 2022 Peer Group



*\$100 invested on 10/31/17 in stock or index, including reinvestment of dividends.
 Fiscal year ending October 31.

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Equity Compensation Plan Information

See Part III, Item 12 for information regarding securities authorized for issuance under our equity compensation plans.

Stock Repurchases

The following table sets forth information with respect to purchases made by us or on our behalf of our common stock during the periods indicated:

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs
August 1, 2022 - August 31, 2022	378,933	\$ 4.21	—	—
September 1, 2022 - September 30, 2022	793	3.97	—	—
October 1, 2022 - October 31, 2022.	—	—	—	—
Total	379,726	\$ 4.21	—	—

(1) Includes only shares that were surrendered by employees to satisfy statutory tax withholding obligations in connection with the vesting of stock-based compensation awards.

Item 6. RESERVED

Item 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the information included in Item 8 of this Annual Report on Form 10-K. Unless otherwise indicated, the terms “Company”, “FuelCell Energy”, “we”, “us”, and “our” refer to FuelCell Energy, Inc. and its subsidiaries. All tabular dollar amounts are in thousands. In certain instances, the capitalized terms used in this section are defined elsewhere in this Annual Report on Form 10-K, including in the Notes to the Consolidated Financial Statements.

In addition to historical information, this discussion and analysis contains forward-looking statements. All forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. Please see the section of this Annual Report entitled “Forward-Looking Statement Disclaimer” for a discussion of the uncertainties, risks and assumptions associated with these statements, as well as the other risks set forth in our filings with the SEC including those set forth under the section entitled “Item 1A — Risk Factors” in this Annual Report.

Overview

Headquartered in Danbury, Connecticut, FuelCell Energy has leveraged five decades of research and development to become a global leader in delivering environmentally responsible distributed baseload energy platform solutions through our proprietary fuel cell technology. Our current commercial technology produces electricity, heat, hydrogen, and water while separating carbon for utilization and/or sequestration. We continue to invest in developing and commercializing future technologies expected to add new capabilities to our platforms’ abilities to deliver hydrogen and long duration hydrogen-based energy storage through our solid oxide technologies, as well as further enhance our existing platforms’ carbon capture solutions.

FuelCell Energy is a global leader in sustainable clean energy technologies that address some of the world’s most critical challenges around energy access, security, safety and environmental stewardship. As a leading global manufacturer of proprietary fuel cell technology platforms, FuelCell Energy is uniquely positioned to serve customers worldwide with sustainable products and solutions for industrial and commercial businesses, utilities, governments, and municipalities.

FuelCell Energy, based in Connecticut, was founded in 1969 as a New York corporation to provide applied research and development services on a contract basis. We completed our initial public offering in 1992 and reincorporated in Delaware in 1999. We began selling stationary fuel cell power plants commercially in 2003.

Recent Developments

The events described in this “Recent Developments” section relate, in part, to matters discussed in more detail below in this “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section and/or in the Notes to the Consolidated Financial Statements. In certain instances, the capitalized terms used in this “Recent Developments” section are defined elsewhere in this Annual Report on Form 10-K, including in the Notes to the Consolidated Financial Statements.

Groton Project – Commercial Operations Achieved at 6 MW

On December 16, 2022, the Company declared and, per the terms of the Amended and Restated Power Purchase Agreement between the Company and Connecticut Municipal Electric Energy Cooperative (“CMEEC”) entered into on that date (the “Amended and Restated PPA”), CMEEC agreed that the platform at the U.S. Navy Submarine Base in Groton, CT (the “Groton Project”) is commercially operational at 6 MW. As of December 16, 2022, the Groton Project will be reported as a part of the Company’s operating generation portfolio. The Amended and Restated PPA allows the Company to operate the plant at a reduced output of approximately 6 MW while a Technical Improvement Plan (“TIP”) is implemented over the next year with the goal of bringing the platform to its rated capacity of 7.4 MW by December 31, 2023. In conjunction with entering into the Amended and Restated PPA, the Navy also provided its authorization to proceed with commercial operations at 6 MW. The Company paid CMEEC an amendment fee of \$1.225 million and will incur performance guarantee fees under the Amended and Restated PPA as a result of operating at an output below 7.4 MW during implementation of the TIP. Although the Company believes it will successfully implement the TIP within approximately one year and bring the plant up to its nominal output of 7.4 MW, no assurance can be provided that such work will be successful. In the event that the plant does not reach an output of 7.4 MW by December 31, 2023, the

Amended and Restated PPA will continue in effect, and the Company will be subject to ongoing performance guarantee fees as set forth in the Amended and Restated PPA.

In addition, as previously disclosed, in August 2021, the Company closed on a tax equity financing transaction with East West Bancorp, Inc. (“East West Bank”) for the Groton Project. East West Bank’s tax equity commitment totals \$15 million. In connection with the initial closing, the Company drew down \$3.0 million. Under subsequent amendments, the terms of East West Bank’s remaining investment commitment of \$12.0 million were modified such that East West Bank will contribute \$4.0 million on each of the first, second and third anniversaries of the Groton Project achieving commercial operations, rather than contributing the full \$12.0 million when the Groton Project achieves commercial operations. In conjunction with the amendments, the Company agreed to pay aggregate fees of \$0.5 million, which were paid upon the Company declaring commencement of commercial operations of the plant on December 16, 2022.

With the declaration of commercial operations, East West Bank’s investment in the project has been reclassified as a non-redeemable noncontrolling interest as of December 16, 2022.

For additional information regarding the Groton Project, see “Liquidity and Capital Resources—Generation Operating Portfolio, Projects Assets and Backlog” below.

Amendment No. 3 to Joint Development Agreement with ExxonMobil Technology and Engineering Company

On December 19, 2022, the Company and ExxonMobil Technology and Engineering Company (f/k/a ExxonMobil Research and Engineering Company) (“EMTEC”) entered into Amendment No. 3 to the Joint Development Agreement between the Company and EMTEC, effective as of December 1, 2022 (such amendment, “Amendment No. 3” and such agreement, as amended, the “EMTEC Joint Development Agreement”). In Amendment No. 3, the Company and EMTEC agreed to further extend the term of the EMTEC Joint Development Agreement such that it will end on August 31, 2023 (unless terminated earlier) and to further increase the maximum amount of research costs to be reimbursed by EMTEC from \$50.0 million to \$60.0 million. Amendment No. 3 is intended to (i) allow for continuation of research that would enable the parties to finalize data collection in support of the project gate decision to use the developed technology in a Company fuel cell module demonstration for capturing carbon at ExxonMobil’s Rotterdam facility, (ii) allow for the continuation of the development, engineering and mechanical derisking of the Generation 2 Technology fuel cell module prototype, and (iii) allow for studying the manufacturing scale-up and cost reduction of a commercial Generation 2 Technology fuel cell carbon capture facility.

Results of Operations

Management evaluates our results of operations and cash flows using a variety of key performance indicators, including revenues compared to prior periods and internal forecasts, costs of our products and results of our cost reduction initiatives, and operating cash use. These are discussed throughout the “Results of Operations” and “Liquidity and Capital Resources” sections. Results of Operations are presented in accordance with U.S. GAAP.

The following discussion and analysis of our Results of Operations and Liquidity and Capital Resources includes a comparison of the fiscal year ended October 31, 2022 (“fiscal year 2022”) to the fiscal year ended October 31, 2021 (“fiscal year 2021”). A similar discussion and analysis that compares fiscal year 2021 to the fiscal year ended October 31, 2020 (“fiscal year 2020”) may be found in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” of our Form 10-K for the fiscal year ended October 31, 2021, which is incorporated herein by reference.

Comparison of the Years Ended October 31, 2022 and 2021

Revenues and Costs of revenues

Revenues and costs of revenues for the years ended October 31, 2022 and 2021 were as follows:

(dollars in thousands)	Year Ended October 31,		Change	
	2022	2021	\$	%
Total revenues	\$ 130,484	\$ 69,585	\$ 60,899	88%
Total costs of revenues	160,059	85,224	74,835	88%
Gross loss	<u>\$ (29,575)</u>	<u>\$ (15,639)</u>	<u>\$ (13,936)</u>	89%
Gross margin	(22.7)%	(22.5)%		

Total revenues for the year ended October 31, 2022 increased \$60.9 million, or 88%, to \$130.5 million from \$69.6 million for the year ended October 31, 2021. Total costs of revenues for the year ended October 31, 2022 increased by \$74.8 million, or 88%, to \$160.1 million from \$85.2 million for the year ended October 31, 2021. The Company's gross margin was (22.7)% in fiscal year 2022, as compared to a gross margin of (22.5)% in fiscal year 2021. A discussion of the changes in product revenues, service agreements revenues, generation revenues and Advanced Technologies contract revenues follows.

Product revenues

Product revenues, cost of product revenues and gross loss from product revenues for the years ended October 31, 2022 and 2021 were as follows:

(dollars in thousands)	Year Ended October 31,		Change	
	2022	2021	\$	%
Product revenues	\$ 60,000	\$ —	\$ 60,000	N/A
Cost of product revenues	64,495	7,976	56,519	709%
Gross loss from product revenues	<u>\$ (4,495)</u>	<u>\$ (7,976)</u>	<u>\$ 3,481</u>	(44)%
Product revenues gross loss	(7.5)%	N/A		

Product revenues for the year ended October 31, 2022 were \$60.0 million compared to \$0 for the year ended October 31, 2021. The increase in product revenues is a result of module sales to Korea Fuel Cell Co., Ltd. ("KFC") (a subsidiary of POSCO Energy Co., Ltd. ("POSCO Energy")) for which the Company recognized \$60.0 million on the Ex Works delivery of twenty modules from the Company's facility in Torrington, CT during the year ended October 31, 2022. Of these twenty modules, eight were delivered during the three months ended October 31, 2022.

Cost of product revenues increased \$56.5 million for the year ended October 31, 2022 to \$64.5 million, compared to \$8.0 million in the year ended October 31, 2021. The increase is primarily due to the module sales to KFC. The increase also relates to a fixed asset impairment charge of approximately \$1.0 million incurred during the year ended October 31, 2022 (related to the cessation of operations at a conditioning facility in Danbury, CT, which is being replaced by a new conditioning facility located at our Torrington, CT manufacturing facility as a part of our fiscal year 2022 and 2023 capital investments) and accrued warranty costs of approximately \$0.5 million associated with the module sales to KFC discussed above. Manufacturing variances, primarily related to increased material, logistics, utilities and other overhead costs, totaled approximately \$13.5 million for the year ended October 31, 2022 compared to approximately \$6.9 million for the year ended October 31, 2021.

For the year ended October 31, 2022, we operated at an annualized production rate of approximately 39.3 MW, which is an increase from the annualized production rate of 32.4 MW for the year ended October 31, 2021.

As of October 31, 2022 and 2021, there was \$9.1 million and \$0, respectively, of product revenues backlog.

Service agreements revenues

Service agreements revenues and associated cost of revenues for the years ended October 31, 2022 and 2021 were as follows:

(dollars in thousands)	Year Ended October 31,		Change	
	2022	2021	\$	%
Service agreements revenues	\$ 12,786	\$ 19,791	\$ (7,005)	(35)%
Cost of service agreements revenues	17,233	24,735	(7,502)	(30)%
Gross profit (loss) from service agreements revenues	\$ (4,447)	\$ (4,944)	\$ 497	(10)%
Service agreements revenues gross margin	(34.8)%	(25.0)%		

Revenues for the year ended October 31, 2022 from service agreements decreased \$7.0 million to \$12.8 million from \$19.8 million for the year ended October 31, 2021. The decrease in service agreements revenues for the year ended October 31, 2022 is primarily due to fewer module exchanges during the year ended October 31, 2022 than during the year ended October 31, 2021. In addition, the decrease in service agreements revenues is also a result of the fact that we recorded a \$3.8 million and a \$1.0 million reduction in service revenues in the fourth fiscal quarters of 2022 and 2021, respectively, in each case as a result of higher future cost estimates related to future module exchanges compared to our prior estimates. Because we recognize revenue on service contracts over time using a cost input method in accordance with Accounting Standards Codification Topic 606 (“ASC 606”), we evaluate the cost estimates associated with each service contract periodically and adjust revenue accordingly. In fiscal years 2022 and 2021, we reviewed our cost estimates relating to our service contracts and identified higher estimated costs than those that were previously identified. These higher estimated costs are due to our expectation that supply chain costs will remain high relative to prior years and that our production volumes will remain low, resulting in an increase in expected module costs. Because our estimated costs relating to the service contracts increased, we applied a reduction in revenue of \$3.8 million and \$1.0 million in the years ended October 31, 2022 and 2021, respectively, in accordance with ASC 606.

For the year ended October 31, 2022, accrued performance penalties under our service agreements totaled approximately \$0.7 million compared to approximately \$1.6 million for the year ended October 31, 2021. The decrease is the result of payments made to customers during fiscal year 2022. Accrued performance guarantees represent variable consideration for service contracts and accordingly are recorded as an offset to service agreements revenues.

Cost of service agreements revenues decreased \$7.5 million to \$17.2 million for the year ended October 31, 2022 from \$24.7 million for the year ended October 31, 2021. Cost of service agreements revenues were lower for the year ended October 31, 2022 than for the year ended October 31, 2021 primarily due to the fact that there were fewer planned module exchanges in the service fleet that occurred during year ended October 31, 2022 than during the year ended October 31, 2021.

We record loss accruals for service agreements when the estimated cost of future module exchanges and maintenance and monitoring activities exceeds the remaining unrecognized consideration. Estimates for future costs on service agreements are determined by a number of factors including the estimated remaining life of the module(s), used replacement modules available, and future operating plans for the power platform. The net increase of approximately \$0.8 million to the loss accrual in fiscal year 2022 was a result of adjustments to future cost estimates related to future module exchanges, as further described above.

We work to continuously improve and mature our products and implement lessons learned into our product designs and manufacturing process subsequent to introduction. In 2021, we examined data related to module field performance, identified improvement opportunities and invested in improvement initiatives with respect to our core molten carbonate technology. We continue to invest in such improvement initiatives. We have identified improvement opportunities ranging from improved thermal management by reducing internal temperature to improving the performance of our electrical balance of plant and implemented design changes to our commercial platforms which are expected to improve overall product performance. As it relates to our fuel cell modules, these improvements center around delivering more uniform temperature distribution within the stack modules with the intent of improving output over the life of the modules to achieve the product’s expected design life.

Cost of service agreements revenues for both years includes planned maintenance activities, module exchanges and continued investment in the service fleet in order to improve performance. Cost of service agreements includes maintenance and operating costs and module exchanges.

Overall gross loss from service agreements revenues was \$4.4 million for the year ended October 31, 2022, which represents a decrease of \$0.5 million from a gross loss of \$4.9 million for the year ended October 31, 2021. The overall gross margin was (34.8%) for the year ended October 31, 2022, compared to a gross margin of (25.0%) for the year ended October 31, 2021. Gross margin decreased during the year ended October 31, 2022 due to the fact that there were fewer module exchanges during the year ended October 31, 2022 and the module exchanges that were performed during the year ended October 31, 2022 were under service agreements with lower margins, compared to the year ended October 31, 2021.

As of October 31, 2022, service agreements backlog totaled \$114.0 million compared to \$125.9 million as of October 31, 2021. This backlog is for service agreements of up to 20 years at inception and is expected to generate positive margins and cash flows based on current estimates. Service agreements and license backlog as of October 31, 2021 also included \$22.2 million of future license revenue which was reclassified to “Product” backlog as a result of the Settlement Agreement with POSCO Energy and KFC during the year ended October 31, 2022.

Generation revenues

Generation revenues and related costs for the years ended October 31, 2022 and 2021 were as follows:

(dollars in thousands)	<u>Year Ended October 31,</u>		<u>Change</u>	
	<u>2022</u>	<u>2021</u>	<u>\$</u>	<u>%</u>
Generation revenues	\$ 36,186	\$ 24,027	\$ 12,159	51%
Cost of generation revenues	63,147	36,017	27,130	75%
Gross loss from generation revenues	<u>\$ (26,961)</u>	<u>\$ (11,990)</u>	<u>\$ (14,971)</u>	125%
Generation revenues gross margin	(74.5)%	(49.9)%		

Revenues from generation for the year ended October 31, 2022 totaled \$36.2 million, which represents an increase of \$12.2 million from revenue recognized of \$24.0 million for the year ended October 31, 2021 due to a larger operating portfolio, improved operating output of the generation fleet and sales of renewable energy credits. Generation revenues for the years ended October 31, 2022 and 2021 reflect revenue from electricity generated under our power purchase agreements (“PPAs”) and the sale of renewable energy credits.

Cost of generation revenues totaled \$63.1 million in the year ended October 31, 2022, which represents an increase of \$27.1 million from the year ended October 31, 2021. Cost of generation revenues included depreciation and amortization of approximately \$15.5 million and \$15.0 million for the fiscal years ended October 31, 2022 and 2021, respectively. The increase from the year ended October 31, 2021 was primarily due to expensed construction costs of approximately \$22.1 million related to the Toyota project and costs of approximately \$6.6 million related to the increased size of the installed fleet with the Long Island Power Authority (“LIPA”) Yaphank project achieving commercial operation, offset by lower operating costs for existing plants due to efficiencies from plant maintenance activities and module exchanges.

As further background on the costs related to the Toyota project, it was determined in the fourth quarter of fiscal year 2021 that a potential source of RNG at favorable pricing was no longer sufficiently probable for the Toyota project resulting in impairment of the asset. Thus, as the Toyota project is being constructed, only amounts associated with inventory components that can be redeployed for alternative use are being capitalized. The balance of costs incurred (i.e., the approximately \$22.1 million associated with the construction costs mentioned above) are being expensed as cost of generation revenues. The Company recorded a \$2.8 million impairment charge in the fourth quarter of fiscal year 2021, which represented the carrying value of the project asset less the carrying value of inventory components that could be redeployed for alternative use. The Company may continue to incur such charges in future periods.

In the fourth quarter of fiscal year 2022, the Company made the decision not to proceed with development of the 7.4 MW and 1.0 MW Hartford projects given the then current economic profile of these projects and as a result incurred an impairment charge of \$0.8 million. The Company recorded an impairment charge in the fourth quarter of fiscal year 2021 for the two LIPA project awards for which there were no executed PPAs (which are referred to as the LIPA Brookhaven and Clare Rose Projects), which totaled approximately \$1.8 million, representing the full value of the project assets. The impairment charge for the LIPA Brookhaven and Clare Rose Projects was recorded because we made a decision to no

longer pursue development of the two projects. The Company also incurred an impairment charge of \$0.4 million in fiscal year 2021 for the Triangle Street Project. In fiscal year 2022, we ceased using the Triangle Street Project as a development platform and returned the useable assets to inventory for future deployment as service replacements.

Refer to Note 5. “Project Assets” to the Consolidated Financial Statements for more information on the impairment charges for the fiscal year ended October 31, 2022.

We currently have three projects in development with fuel sourcing risk, which are the Toyota project, which requires procurement of RNG, and our Derby, CT 14.0 MW and 2.8 MW projects, which require natural gas. Fuel sourcing and risk mitigation strategies for all three projects are being assessed and will be implemented as project operational dates become firm. Such strategies may require cash collateral or reserves to secure fuel or related contracts for these three projects. If the Company is unable to secure fuel on favorable economic terms, it may result in impairment charges to the Derby project assets and further charges for the Toyota project asset.

The overall gross loss from generation revenues was \$27.0 million for the year ended October 31, 2022, which represents an increase of \$15.0 million from a gross loss of \$12.0 million for the year ended October 31, 2021. The increase in gross loss from generation revenues is primarily related to the \$22.1 million of construction costs being expensed related to the Toyota project, partially offset by higher margins from the operating fleet (due in part to the higher operating output of the generation fleet portfolio) during the year ended October 31, 2022 compared to the year ended October 31, 2021.

As of October 31, 2022 and 2021, generation backlog totaled \$0.9 billion and \$1.1 billion, respectively.

Advanced Technologies contracts

Advanced Technologies contract revenues and related costs for the years ended October 31, 2022 and 2021 were as follows:

(dollars in thousands)	Year Ended October 31,		Change	
	2022	2021	\$	%
Advanced Technologies contract revenues	\$ 21,512	\$ 25,767	\$ (4,255)	(17)%
Cost of Advanced Technologies contract revenues	15,184	16,496	(1,312)	(8)%
Gross profit from Advanced Technologies contracts	\$ 6,328	\$ 9,271	\$ (2,943)	(32)%
Advanced Technologies contract gross margin	29.4%	36.0%		

Advanced Technologies contract revenues decreased to \$21.5 million for the year ended October 31, 2022 compared to \$25.8 million for the year ended October 31, 2021. Compared to the year ended October 31, 2021, Advanced Technologies contract revenues recognized under the Joint Development Agreement between the Company and ExxonMobil Technology and Engineering Company, f/k/a ExxonMobil Research and Engineering Company (“EMTEC”) (which was originally effective as of October 31, 2019) (as amended, the “EMTEC Joint Development Agreement”) were approximately \$9.5 million lower during the year ended October 31, 2022 and Advanced Technologies contract revenues recognized under government contracts and other contracts were approximately \$5.2 million higher for the year ended October 31, 2022.

Cost of Advanced Technologies contract revenues decreased \$1.3 million to \$15.2 million for the year ended October 31, 2022, compared to \$16.5 million for the year ended October 31, 2021. This decrease is a result of the level of activity and the scope of work performed under the EMTEC Joint Development Agreement during the year ended October 31, 2022, compared to the year ended October 31, 2021.

As of October 31, 2022, Advanced Technologies contract backlog totaled \$22.9 million compared to \$40.8 million at October 31, 2021.

Administrative and selling expenses

Administrative and selling expenses were \$79.6 million and \$37.9 million for the years ended October 31, 2022 and 2021, respectively. The year ended October 31, 2022 included higher legal expenses associated with the settlement of the Company’s disputes with POSCO Energy and KFC (as described in additional detail in Note 18. “Commitments and Contingencies” to our Consolidated Financial Statements for the year ended October 31, 2022 included in this Annual Report on Form 10-K). The Company retained outside counsel on a contingency basis to pursue its claims against POSCO Energy and KFC, and outside counsel entered into an agreement with a litigation finance provider to fund the legal fees and expenses of the arbitration proceedings brought by the Company against POSCO Energy and KFC. In conjunction with the Settlement Agreement, dated December 20, 2021, among the Company, POSCO Energy and KFC (the “Settlement Agreement”), the Company was required to remit fees to its counsel, Wiley Rein, LLP (“Wiley”), subject to the terms of its engagement letter with Wiley. On December 23, 2021, the Company agreed that it would pay Wiley a total of \$24.0 million to satisfy all obligations to Wiley under the Company’s engagement letter, which was paid during the year ended October 31, 2022. The increase is also related to higher sales, marketing and consulting costs, as the Company is investing in rebranding and accelerating its sales and commercialization efforts, including increasing the size of its sales and marketing teams which resulted in an increase in compensation expense resulting from an increase in headcount.

Research and development expenses

Research and development expenses increased to \$34.5 million for the year ended October 31, 2022 compared to \$11.3 million for the year ended October 31, 2021. The increase is due to an increase in spending on the Company’s ongoing commercial development efforts related to our solid oxide platform and carbon capture solutions compared to the year ended October 31, 2021.

Loss from operations

Loss from operations for the year ended October 31, 2022 was \$143.7 million compared to \$64.9 million for the year ended October 31, 2021. This increase was primarily driven by a \$64.9 million increase in operating expenses for the year

ended October 31, 2022 as a result of (a) higher administrative and selling expenses for the year ended October 31, 2022, which included higher legal expenses associated with the settlement of the Company's disputes with POSCO Energy and KFC as well as higher sales, marketing and consulting costs and an increase in compensation expense resulting from an increase in headcount and (b) higher research and development expenses, which were higher due to an increase in spending on the Company's ongoing commercial development efforts related to our solid oxide platform and carbon capture solutions compared to the year ended October 31, 2021. The increase was also due to higher gross loss of \$13.9 million during the year ended October 31, 2022. Impacting gross loss for the year ended October 31, 2022 were higher manufacturing variances and non-capitalizable costs related to construction of the Toyota project which were partially offset by lower product gross loss primarily due to module sales to KFC.

Interest expense

Interest expense for the years ended October 31, 2022 and 2021 was \$6.4 million and \$7.4 million, respectively. Interest expense for both periods presented includes interest related to finance obligations for failed sale-leaseback transactions and interest on the outstanding loans associated with the Bridgeport Fuel Cell Project.

Change in fair value of common stock warrant liability

The \$16.0 million expense for the year ended October 31, 2021 represents an adjustment to the estimated fair value of the then-outstanding unexercised warrants to purchase common stock held by the lenders under the Orion Credit Agreement (as defined below), which were exercised, in full, during the year ended October 31, 2021. The expense was primarily a result of an increase in the price of the Company's common stock during the year ended October 31, 2021.

Loss on extinguishment of Series 1 preferred share obligation

A charge of \$0.9 million was recorded in the year ended October 31, 2021 for the extinguishment of preferred stock obligation of subsidiary to recognize the difference between the amount of the payoff of the obligation under the terms of the Series 1 Preferred Shares (as defined elsewhere herein) issued by the Company's subsidiary, FCE FuelCell Energy Ltd., and the carrying amount of the Series 1 Preferred Share obligation.

Loss on extinguishment of debt

The loss on extinguishment of debt for the year ended October 31, 2021 represents costs associated with the repayment of the \$80.0 million principal balance outstanding under the Credit Agreement among the Company, certain of its affiliates as guarantors, Orion Energy Partners Investment Agent, LLC, and certain lenders affiliated therewith (as amended, the "Orion Credit Agreement"). The amount includes an early prepayment penalty of \$4.0 million and the write-off of debt discounts and deferred finance costs of \$7.2 million.

Other income (expense), net

Other income (expense), net was \$3.7 million and \$(0.7) million for the years ended October 31, 2022 and 2021, respectively. Other income, net for the year ended October 31, 2022 primarily represents \$3.5 million of interest earned on money market investments, a gain on derivative contract of \$0.8 million, and \$0.3 million of research and development tax credits, offset by foreign exchange losses of \$0.9 million. Other expense, net for the year ended October 31, 2021 primarily relates to foreign exchange losses of \$0.9 million related to the remeasurement of the Canadian Dollar denominated preferred stock obligation (the Series 1 Preferred Share obligation) of our U.S. Dollar functional currency Canadian subsidiary (FCE FuelCell Energy Ltd.) prior to the payoff of the preferred share obligation in December 2020.

Provision for income taxes

We have not paid federal or state income taxes in several years due to our history of net operating losses, although we have paid foreign income and withholding taxes in Korea. Provision for income tax recorded for the years ended October 31, 2022 and 2021 was \$0.8 million and \$2 thousand, respectively. The provision for income tax recorded for the year ended October 31, 2022 reflects the realization of withholding taxes on customer deposits which pertain to the sale of modules to KFC.

Net loss attributable to noncontrolling interest

For the year ended October 31, 2022, net loss attributable to noncontrolling interest totaled \$4.5 million for the LIPA Yaphank tax equity financing transaction with Renewable Energy Investors, LLC (“REI”). There was no comparable net loss for the year ended October 31, 2021 as the LIPA Yaphank tax equity transaction closed and the LIPA Yaphank Project began operating in the first quarter of fiscal year 2022. The loss for the years ended October 31, 2022 is primarily driven by the Investment Tax Credit (“ITC”) attributable to the noncontrolling interest for the 2021 tax year (which is consistent with the calendar year). The ITC reduces the noncontrolling interest’s hypothetical liquidation proceeds. This reduction in hypothetical liquidation proceeds drove the net loss attributable to the noncontrolling interest for the year ended October 31, 2022.

Series B preferred stock dividends

Dividends recorded on our 5% Series B Cumulative Convertible Perpetual Preferred Stock (“Series B Preferred Stock”) were \$3.2 million for each of the years ended October 31, 2022 and 2021.

Net loss attributable to common stockholders and loss per common share

Net loss attributable to common stockholders represents the net loss for the period less the preferred stock dividends on the Series B Preferred Stock. For the years ended October 31, 2022 and 2021, net loss attributable to common stockholders was \$145.9 million and \$104.3 million, respectively, and loss per common share was \$0.38 and \$0.31, respectively. The increase in the net loss attributable to common stockholders for the year ended October 31, 2022 is primarily due to higher gross loss and higher operating expenses for the year ended October 31, 2022 compared to the year ended October 31, 2021, partially offset by (i) lower interest expense during the year ended October 31, 2022, (ii) the fact that there was no loss on extinguishment of debt in the year ended October 31, 2022, no loss on extinguishment of preferred stock obligation during the year ended October 31, 2022, and no charge for the change in fair value of common stock warrant liability during the year ended October 31, 2022 and (iii) a net loss attributable to noncontrolling interest totaling \$4.5 million (or approximately \$0.01 per share) for the LIPA Yaphank tax equity financing transaction. The higher net loss per common share for the year ended October 31, 2022 as compared to the year ended October 31, 2021 is primarily due to the higher net loss attributable to common stockholders for the year ended October 31, 2022, partially offset by the higher number of weighted average shares outstanding as of October 31, 2022 due to share issuances since October 31, 2021.

LIQUIDITY AND CAPITAL RESOURCES

Overview, Cash Position, Sources and Uses

Our principal sources of cash have been sales of our common stock through public equity offerings, proceeds from debt, project financing and tax monetization transactions, proceeds from the sale of our products and projects, as well as research and development and service agreements with third parties. We have utilized this cash to develop and construct project assets, invest in capital improvements and expansion of our operations, perform research and development on Advanced Technologies, pay down existing outstanding indebtedness, and meet our other cash and liquidity needs.

As of October 31, 2022, unrestricted cash and cash equivalents totaled \$458.1 million compared to \$432.2 million as of October 31, 2021.

On July 12, 2022, the Company entered into an Open Market Sale Agreement with Jefferies LLC, B. Riley Securities, Inc., Barclays Capital Inc., BMO Capital Markets Corp., BofA Securities, Inc., Canaccord Genuity LLC, Citigroup Global Markets Inc., J.P. Morgan Securities LLC and Loop Capital Markets LLC (the “Open Market Sale Agreement”) with respect to an at the market offering program under which the Company may, from time to time, offer and sell up to 95.0 million shares of the Company’s common stock. From the date of the Open Market Sale Agreement through October 31, 2022, the Company sold approximately 18.5 million shares under the Open Market Sale Agreement at an average sale price of \$3.63 per share, resulting in gross proceeds of approximately \$67.2 million before deducting sales commissions and fees, and net proceeds to the Company of approximately \$65.4 million after deducting commissions and fees totaling approximately \$1.8 million. There were no sales during the fourth quarter of fiscal year 2022, but there were sales in the third quarter of fiscal year 2022 that settled in the fourth quarter of fiscal year 2022 (as described in our Quarterly Report

on Form 10-Q for the quarter ended July 31, 2022). As of October 31, 2022, approximately 76.5 million shares were available for issuance under the Open Market Sale Agreement. The Company currently intends to use the net proceeds from this offering to accelerate the development and commercialization of its product platforms (including, but not limited to, its solid oxide and carbon capture platforms), for project development, market development, and internal research and development, to invest in capacity expansion for solid oxide and carbonate fuel cell manufacturing, and for project financing, working capital support, and general corporate purposes. The Company may also use the net proceeds from this offering to invest in joint ventures, acquisitions, and strategic growth investments and to acquire, license or invest in products, technologies or businesses that complement its business.

On June 11, 2021, the Company entered into an Open Market Sale Agreement with Jefferies LLC and Barclays Capital Inc. (the “2021 Sales Agreement”) with respect to an at the market offering program under which the Company could, from time to time, offer and sell shares of the Company’s common stock having an aggregate offering price of up to \$500 million. From the date of the 2021 Sales Agreement through April 30, 2022, approximately 64.0 million shares of the Company’s common stock were sold under the 2021 Sales Agreement, resulting in aggregate gross proceeds of approximately \$498.1 million before deducting sales commissions. Commissions of approximately \$10.0 million in the aggregate were paid to Jefferies LLC and Barclays Capital Inc. in connection with these sales, resulting in aggregate net proceeds to the Company of approximately \$488.1 million. No sales of common stock were made under the 2021 Sales Agreement after April 30, 2022, and no additional sales of common stock can or will be made under the 2021 Sales Agreement, as the Company, Jefferies LLC and Barclays Capital Inc. mutually agreed to terminate the 2021 Sales Agreement as of July 12, 2022.

We believe that our unrestricted cash and cash equivalents, expected receipts from our contracted backlog, and release of short-term restricted cash less expected disbursements over the next twelve months will be sufficient to allow the Company to meet its obligations for at least one year from the date of issuance of the financial statements included in this Annual Report on Form 10-K.

To date, we have not achieved profitable operations or sustained positive cash flow from operations. The Company’s future liquidity, for fiscal year 2023 and in the long-term, will depend on its ability to (i) timely complete current projects in process within budget, (ii) increase cash flows from its generation operating portfolio, including by meeting conditions required to timely commence operation of new projects, operating its generation operating portfolio in compliance with minimum performance guarantees and operating its generation operating portfolio in accordance with revenue expectations, (iii) obtain financing for project construction and manufacturing expansion, (iv) obtain permanent financing for its projects once constructed, (v) increase order and contract volumes, which would lead to additional product sales, service agreements and generation revenues, (vi) obtain funding for and receive payment for research and development under current and future Advanced Technologies contracts, (vii) successfully commercialize its Advanced Technologies platforms, including its solid oxide, hydrogen and carbon capture platforms, (viii) implement capacity expansion for solid oxide product manufacturing, (ix) implement the product cost reductions necessary to achieve profitable operations, (x) manage working capital and the Company’s unrestricted cash balance and (xi) access the capital markets to raise funds through the sale of debt and equity securities, convertible notes, and other equity-linked instruments.

We are continually assessing different means by which to accelerate the Company’s growth, enter new markets, commercialize new products, and enable capacity expansion. Therefore, from time to time, the Company may consider and enter into agreements for one or more of the following: negotiated financial transactions, minority investments, collaborative ventures, technology sharing, transfer or other technology license arrangements, joint ventures, partnerships, acquisitions or other business transactions for the purpose(s) of geographic or manufacturing expansion and/or new product or technology development and commercialization, including hydrogen production and storage and carbon capture, sequestration and utilization technologies.

Our business model requires substantial outside financing arrangements and satisfaction of the conditions of such arrangements to construct and deploy our projects to facilitate the growth of our business. The Company has invested capital raised from sales of its common stock to build out its project portfolio. The Company has also utilized and expects to continue to utilize a combination of long-term debt and tax equity financing (e.g., sale-leaseback and partnership transactions) to finance its project asset portfolio as these projects commence commercial operations. The Company may also seek to undertake private placements of debt securities of a portfolio of assets to finance its project asset portfolio. The proceeds of any such financing, if obtained, may allow the Company to reinvest capital back into the business and to fund other projects. We may also seek to obtain additional financing in both the debt and equity markets in the future. If financing is not available to us on acceptable terms if and when needed, or on terms acceptable to us or our lenders, if we

do not satisfy the conditions of our financing arrangements, if we spend more than the financing approved for projects, if project costs exceed an amount that the Company can finance, or if we do not generate sufficient revenues or obtain capital sufficient for our corporate needs, we may be required to reduce or slow planned spending, reduce staffing, sell assets, seek alternative financing and take other measures, any of which could have a material adverse effect on our financial condition and operations.

Generation Operating Portfolio, Projects Assets and Backlog

To grow our generation operating portfolio, the Company will invest in developing and building turn-key fuel cell projects, which will be owned by the Company and classified as project assets on the balance sheet. This strategy requires liquidity and the Company expects to continue to have increasing liquidity requirements as project sizes increase and more projects are added to backlog. We may commence building project assets upon the award of a project or execution of a multi-year PPA with an end-user that has a strong credit profile. Project development and construction cycles, which span the time between securing a PPA and commercial operation of the platform, vary substantially and can take years. As a result of these project cycles and strategic decisions to finance the construction of certain projects, we may need to make significant up-front investments of resources in advance of the receipt of any cash from the sale or long-term financing of such projects. To make these up-front investments, we may use our working capital, seek to raise funds through the sale of equity or debt securities, or seek other financing arrangements. Delays in construction progress and completing current projects in process within budget, or in completing financing or the sale of our projects may impact our liquidity in a material way.

Our generation operating portfolio (36.3 MW as of October 31, 2022) contributes higher long-term cash flows to the Company than if these projects had been sold. We expect generation revenue to continue to grow as additional projects achieve commercial operation, but this revenue amount may also fluctuate from year to year depending on platform output, operational performance and management and site conditions. The Company plans to continue to grow this portfolio while also selling projects to investors. As of October 31, 2022, the Company had projects representing an additional 26.8 MW in various stages of development and construction, which projects are expected to generate operating cash flows in future periods, if completed. Retaining long-term cash flow positive projects, combined with our service fleet, is expected to result in reduced reliance on new project sales to achieve cash flow positive operations, however, operations and performance issues could impact results. We have worked with and are continuing to work with lenders and financial institutions to secure construction financing, long-term debt, tax equity and sale-leasebacks for our project asset portfolio, but there can be no assurance that such financing can be attained, or that, if attained, it will be retained and sufficient.

As of October 31, 2022, net debt outstanding related to project assets was \$69.8 million. Future required principal payments totaled \$32.3 million as of October 31, 2022. The outstanding finance obligations under our sale-leaseback transactions, which totaled \$56.6 million as of October 31, 2022, include an embedded gain of \$37.5 million representing the current carrying value of finance obligations less future required principal payments, which will be recognized at the end of the applicable lease terms.

Our generation operating portfolio provides us with the full benefit of future cash flows, net of any debt service requirements.

The following table summarizes our generation operating portfolio as of October 31, 2022:

<u>Project Name</u>	<u>Location</u>	<u>Power Off-Taker</u>	<u>Rated Capacity (MW) ⁽¹⁾</u>	<u>Actual Commercial Operation Date (FuelCell Energy Fiscal Quarter)</u>	<u>PPA Term (Years)</u>
Central CT State University (“CCSU”)	New Britain, CT	CCSU (CT University)	1.4	Q2 ‘12	15
Riverside Regional Water Quality Control Plant	Riverside, CA	City of Riverside (CA Municipality)	1.4	Q4 '16	20
Pfizer, Inc.	Groton, CT	Pfizer, Inc.	5.6	Q4 '16	20
Santa Rita Jail	Dublin, CA	Alameda County, California	1.4	Q1 '17	20
Bridgeport Fuel Cell Project	Bridgeport, CT	Connecticut Light and Power Company (CT Utility)	14.9	Q1 '13	15
Tulare BioMAT	Tulare, CA	Southern California Edison (CA Utility)	2.8	Q1 '20	20
San Bernardino	San Bernardino, CA	City of San Bernardino Municipal Water Department	1.4	Q3'21	20
LIPA Yaphank Project	Long Island, NY	PSEG / LIPA, LI NY (Utility)	7.4	Q1'22	18
Total MW Operating:			<u>36.3</u>		

(1) Rated capacity is the platform’s design rated output as of the date of initiation of commercial operations.

The following table summarizes projects in process, all of which are in backlog, as of October 31, 2022:

<u>Project Name</u>	<u>Location</u>	<u>Power Off-Taker</u>	<u>Rated Capacity (MW) ⁽¹⁾</u>	<u>PPA Term (Years)</u>
Groton Sub Base	Groton, CT	CMEEC (CT Electric Co-op)	7.4	20
Toyota	Los Angeles, CA	Southern California Edison; Toyota	2.3	20
CT RFP-2	Derby, CT	Eversource/United Illuminating (CT Utilities)	14.0	20
SCEF - Derby	Derby, CT	Eversource/United Illuminating (CT Utilities)	2.8	20
Trinity College	Hartford, CT	Trinity College	0.3	15
Total MW in Process:			<u>26.8</u>	

(1) Rated capacity is the platform’s design rated output as of the date of initiation of commercial operations, except with respect to the Groton Sub Base project. With respect to the Groton Sub Base project, the initial operating output is approximately 6.0 MW until the Technical Improvement Plan described below is fully implemented. Full implementation of the Technical Improvement Plan is expected to bring this platform to its design rated output of 7.4 MW. Accordingly, rated capacity with respect to the Groton Sub Base project is the platform’s expected design rated output at the time of the full implementation of the Technical Improvement Plan.

The projects listed in the above table are in various stages of development or on-site construction and installation. Current project updates are as follows:

- **Groton Sub Base – The Groton Project.** In July 2021, the Company achieved mechanical completion, executed the interconnect agreement, and commenced the process of commissioning the 7.4 MW platform at the U.S. Navy Submarine Base in Groton, CT (the “Groton Project”). On September 14, 2021, the Company disclosed that the process of commissioning the Groton Project was temporarily suspended due to a needed repair. Following the completion of that repair, the Company resumed commissioning of the Groton Project. During the resumed commissioning process, the Company observed operating parameter data from one of the

two fuel cell platforms installed at the project site that indicated a mechanical component was not performing according to engineered specifications. The Company subsequently determined that component should be removed from the project site to facilitate the necessary repair and upgrade. On April 7, 2022, the Company announced that it had completed the necessary repairs and upgrades to the mechanical component, reinstalled the mechanical component at the project site, and restarted the process of commissioning. During the restarted commissioning process, the Company encountered performance anomalies primarily in the mixer eductor oxidizer (“MEO”), which is a sophisticated piece of equipment specific to the Groton Project designed to optimize fuel and air flows within the platform. In order to expedite the achievement of commercial operations of the Groton Project, the Company proposed operating the project at a reduced output of 3 MW per platform at the start of commercial operations in order to optimize performance of each of the two MEO units. Then, over a period of approximately one year, the Company would implement upgrades to each of the two MEO units in order to bring the platform to its rated capacity of 7.4 MW. On December 16, 2022, the Company entered into an amended and restated power purchase agreement (“Amended and Restated PPA”) which modified and replaced the existing power purchase agreement with Connecticut Municipal Electric Energy Cooperative (“CMEEC”) to allow the plant to operate at a reduced output of approximately 6 MW while a Technical Improvement Plan (“TIP”) is implemented over the next year with the goal of bringing the platform to its rated capacity of 7.4 MW by December 31, 2023. In conjunction with entering into the Amended and Restated PPA, on December 16, 2022, the Company and CMEEC declared that the plant is commercially operational at 6 MW and CMEEC and the Company agreed that, for all purposes, the commercial operations date has been achieved. The Navy also provided its authorization to proceed with commercial operations at 6 MW. The Company paid CMEEC an amendment fee of \$1.225 million and will incur performance guarantee fees under the Amended and Restated PPA as a result of operating at an output below 7.4 MW during implementation of the TIP. Although the Company believes it will successfully implement the TIP within approximately one year and bring the plant up to its nominal output of 7.4 MW, no assurance can be provided that such work will be successful. In the event that the plant does not reach an output of 7.4 MW by December 31, 2023, the Amended and Restated PPA will continue in effect, and the Company will be subject to ongoing performance guarantee fees as set forth in the Amended and Restated PPA.

In addition, as previously disclosed, in August 2021, the Company closed on a tax equity financing transaction with East West Bancorp, Inc. (“East West Bank”) for the Groton Project. East West Bank’s tax equity commitment totals \$15 million. In connection with the initial closing, the Company drew down \$3.0 million. Under the original terms of the Company’s agreement with East West Bank, the Company would have been eligible to draw the remaining amount of the commitment, approximately \$12 million, once the Groton Project achieves commercial operations. In addition, under the original terms of the Company’s agreement with East West Bank, the Groton Project had a required commercial operations deadline of October 18, 2021. The significance of the commercial operations deadline is that, if commercial operations were not achieved by such deadline, East West Bank would have the option to require an amount equal to 101% of its investment to be returned.

East West Bank granted several extensions of the commercial operations deadline, which collectively extended the deadline to May 15, 2022, in exchange for the Company’s agreement to pay fees of \$0.4 million in the aggregate.

On July 7, 2022, the Company and East West Bank amended their tax equity financing agreement and extended the commercial operations deadline to September 30, 2022. In addition, in the July 7, 2022 amendment to the tax equity financing agreement, the terms of East West Bank’s remaining investment commitment of \$12.0 million were modified such that East West Bank will contribute \$4.0 million on each of the first, second and third anniversaries of the Groton Project achieving commercial operations, rather than contributing the full \$12.0 million when the Groton Project achieves commercial operations. Such contributions are subject to certain customer conditions precedent, including a third-party certification by an independent engineer that the plant is operating in conformance with the Amended and Restated PPA. In conjunction with this amendment, the Company agreed to pay aggregate fees of \$0.5 million (which are inclusive of the fees from the previous extensions described above).

On October 4, 2022, the Company and East West Bank further amended their tax equity financing agreement to extend the deadline by which commercial operations were to be achieved at the Groton Project from September 30, 2022 to November 30, 2022. The Company and East West Bank further amended their tax

equity financing agreement on November 30, 2022 to extend the deadline by which commercial operations were to be achieved at the Groton Project to December 31, 2022. In addition, modifications to the Groton Project documents between CMEEC and the Company as a result of the agreement between those parties to commence commercial operations at less than 7.4 MW were approved by East West Bank as part of East West Bank's rights under the agreement between East West Bank and the Company.

With the achievement of commercial operations on December 16, 2022, the applicable commercial operations completion deadline in the agreement with East West Bank has been satisfied, East West Bank no longer has the right to require a return of its investment and East West Bank's investment in the project has been reclassified as a non-redeemable noncontrolling interest as of December 16, 2022. In addition, on December 16, 2022, the Company paid the aggregate fees of \$0.5 million described above to East West Bank.

- **Toyota - Port of Long Beach, CA – The Toyota Project.** This 2.3 MW Trigen platform will produce electricity, hydrogen and water. Fuel cell platform equipment has been built and delivered to the site, civil construction work has materially advanced, and significant portions of the platform have advanced to the commissioning phase of project deployment. We anticipate that the remaining construction and commissioning activity will be completed in the third fiscal quarter of 2023. Due to remaining construction and commissioning activity to be completed, commencement of commercial operations has been delayed beyond the initial contractual deadline for commencing commercial operations under the Company's Hydrogen Power Purchase Agreement with Toyota (as amended from time to time, the "Toyota HPPA"). The Company has previously entered into amendments to the Toyota HPPA to extend the commercial operations date and, effective as of December 16, 2022, the Company and Toyota entered into the Fourth Amendment of the Toyota HPPA. This amendment extends the required commercial operations date to July 8, 2023. In the event that we do not achieve commercial operations on or before the new deadline of July 8, 2023, Toyota will have the right to terminate the Toyota HPPA.
- **Derby, CT.** On-site civil construction of this 14.0 MW project continues to advance, the Company has largely completed the foundational construction, and balance of plant components have been delivered and installed on site. This utility scale fuel cell platform will contain five SureSource 3000 fuel cell systems that will be installed on engineered platforms alongside the Housatonic River. To date, the Company has invested approximately \$29.3 million into the project, with the majority of site work complete and the electrical and mechanical balance of plant installed. The Company continues to work with the utility customer, United Illuminating, on the interconnection process, the timing of which will drive the continued development of the site, including the delivery of the ten fuel cell modules required to complete the project. Our current expectation is that this project will commence commercial operations in the fourth calendar quarter of 2023.

Backlog by revenue category is as follows:

- Service agreements backlog totaled \$114.0 million as of October 31, 2022, compared to \$125.9 million as of October 31, 2021. Service agreements backlog includes future contracted revenue from maintenance and scheduled module exchanges for power plants under service agreements. In the first quarter of fiscal year 2022, approximately \$22.2 million of backlog which was previously classified as "Service and license" backlog was reclassified to "Product" backlog as a result of the settlement agreement with POSCO Energy and KFC.
- Generation backlog totaled \$944.0 million and \$1.1 billion as of October 31, 2022 and October 31, 2021, respectively. Generation backlog represents future contracted energy sales under contracted PPAs or approved utility tariffs. In the fourth quarter of fiscal year 2022, the Company made the decision not to proceed with development of the 7.4 MW and 1.0 MW Hartford projects given the then-current economic profile of these projects. As a result, they have been removed from backlog. The Company intends to seek modifications to the PPAs relating to these projects, however, there can be no assurance that such modifications will be acceptable to the counterparties (Eversource and United Illuminating) or approved by Connecticut regulators.
- Product sales backlog totaled \$9.1 million as of October 31, 2022. There was no product sales backlog as of October 31, 2021.

- Advanced Technologies contract backlog totaled \$22.9 million as of October 31, 2022 compared to \$40.8 million as of October 31, 2021. Advanced Technologies contract backlog represents remaining revenue expected to be recognized under the EMTEC Joint Development Agreement and government projects.

Backlog decreased by approximately 15.4% to \$1.09 billion as of October 31, 2022, compared to \$1.29 billion as of October 31, 2021, primarily as a result of a reduction in generation backlog due to the decision to not move forward with certain generation projects noted above, a reduction in service agreements backlog for fiscal year 2022 revenue recognition and Advanced Technologies contract backlog relating to fiscal year 2022 revenue recognition, offset by the addition of product sales backlog (specifically, the addition of product sales backlog from the module order received from KFC in January 2022).

Backlog represents definitive agreements executed by the Company and our customers. Projects for which we have an executed PPA are included in generation backlog, which represents future revenue under long-term PPAs. Future revenue under PPAs is subject to the Company building out the projects contracted by the PPAs. Should the Company not complete a project covered by a PPA, it will forgo future revenues with respect to the project and may incur penalties and/or impairment charges related to the project. Projects sold to customers (and not retained by the Company) are included in product sales and service agreements backlog, and the related generation backlog is removed upon sale. Together, the service and generation portion of backlog had a weighted average term of approximately 17 years, with weighting based on the dollar amount of backlog and utility service contracts of up to 20 years in duration at inception.

Factors that may impact our liquidity

Factors that may impact our liquidity in fiscal year 2023 and beyond include:

- The Company’s cash on hand and access to additional liquidity. As of October 31, 2022, unrestricted cash and cash equivalents totaled \$458.1 million.
- We bid on large projects in diverse markets that can have long decision cycles and uncertain outcomes.
- We manage production rate based on expected demand and project schedules. Changes to production rate take time to implement. During fiscal year 2021, we achieved an annualized production rate of 32.4 MW as of October 31, 2021. During the fourth quarter of fiscal year 2022, we operated at an annualized production rate of approximately 41.5 MW, and for the full fiscal year ended October 31, 2022, we operated at an annualized production rate of 39.3 MW. For fiscal year 2023, we are planning to operate at a 45 MW annualized production rate in support of project backlog and service requirements.
- As project sizes and the number of projects evolve, project cycle times may increase. We may need to make significant up-front investments of resources in advance of the receipt of any cash from the financing or sale of our projects. These amounts include development costs, interconnection costs, costs associated with posting of letters of credit, bonding or other forms of security, and engineering, permitting, legal, and other expenses.
- The amount of accounts receivable and unbilled receivables as of October 31, 2022 and 2021 was \$25.6 million (\$9.7 million of which is classified as “Other assets”) and \$35.2 million (\$11.6 million of which is classified as “Other assets”), respectively. Unbilled accounts receivable represent revenue that has been recognized in advance of billing the customer under the terms of the underlying contracts. Such costs have been funded with working capital and the unbilled amounts are expected to be billed and collected from customers once we meet the billing criteria under the contracts. Our accounts receivable balances may fluctuate as of any balance sheet date depending on the timing of individual contract milestones and progress on completion of our projects.
- The amount of total inventory as of October 31, 2022 and 2021 was \$98.5 million (\$7.5 million is classified as long-term inventory) and \$71.7 million (\$4.6 million is classified as long-term inventory), respectively, which includes work in process inventory totaling \$67.8 million and \$45.7 million, respectively. Work in process inventory can generally be deployed rapidly while the balance of our inventory requires further manufacturing prior to deployment. To execute on our business plan, we must produce fuel cell modules and procure balance of plant (“BOP”) components in required volumes to support our planned construction

schedules and potential customer contractual requirements. As a result, we may manufacture modules or acquire BOP components in advance of receiving payment for such activities. This may result in fluctuations in inventory and in use of cash as of any given balance sheet date.

- The amount of total project assets as of October 31, 2022 and 2021 was \$232.9 million and \$223.3 million, respectively. Project assets consist of capitalized costs for fuel cell projects that are operating and producing revenue or are under construction. Project assets as of October 31, 2022 consisted of \$125.2 million of completed, operating installations and \$107.7 million of projects in development. As of October 31, 2022, we had 36.3 MW of operating project assets that generated \$34.5 million of revenue in the year ended October 31, 2022.
- As of October 31, 2022, the Company had 26.8 MW of projects under development and construction. To build out this portfolio, as of October 31, 2022, we estimate the remaining investment in project assets to be made during fiscal year 2023 to be in the range of approximately \$45.0 million to \$65.0 million. To fund such expenditures, the Company expects to use unrestricted cash on hand and to seek sources of construction financing. In addition, once the projects under development become operational, the Company will seek to obtain permanent financing (tax equity and debt) which would be expected to return cash to the business. For fiscal year 2022, capitalized project asset expenditures were \$25.6 million. In addition, the Company expensed costs related to the Toyota project which totaled \$22.1 million for the year ended October 31, 2022.
- Certain of our PPAs for project assets in our generation operating portfolio and project assets under construction expose us to fluctuating fuel price risks as well as the risk of being unable to procure the required amounts of fuel and the lack of alternative available fuel sources. We seek to mitigate our fuel risk using strategies including: (i) fuel cost reimbursement mechanisms in our PPAs to allow for pass through of fuel costs (full or partial) where possible, which we have done with our 14.9 MW operating project in Bridgeport, CT; (ii) procuring fuel under fixed price physical contracts with investment grade counterparties, which we have done for twenty years for our Tulare BioMAT project and the initial seven years of the eighteen year PPA for our LIPA Yaphank, NY project; and (iii) potentially entering into future financial hedges with investment grade counterparties to offset potential negative market fluctuations.

We currently have three projects in development with fuel sourcing risk, which are the Toyota project, which requires procurement of renewable natural gas (“RNG”), and our Derby, CT 14.0 MW and 2.8 MW projects, both of which require natural gas for which there is no pass through mechanism in the related PPAs. Fuel sourcing and risk mitigation strategies for all three projects are being assessed and will be implemented as project operational dates become firm. Such strategies may require cash collateral or reserves to secure fuel or related contracts for these three projects.

- Capital expenditures are expected to range between \$60.0 million to \$90.0 million for fiscal year 2023, which includes expected investments in our manufacturing facilities for molten carbonate and solid oxide production capacity expansion, the addition of test facilities for new products and components, the expansion of our laboratories and upgrades to and expansion of our business systems. Included in projected expenditures associated with the capacity expansion for molten carbonate is equipment to launch the carbon capture platform manufacturing required for the assembly of the jointly developed technology with EMTEC. The solid oxide production capacity expansion is underway in our Calgary Canada facility and is expected to increase the capacity of the facility from 1 MW to 10 MW per year of SOFC production or from 4 MW to 40 MW per year of SOEC production by the middle of fiscal year 2024.
- Company-funded research and development expenditures are expected to be in the range between \$50.0 million and \$70.0 million for fiscal year 2023. During fiscal year 2022, we incurred a total of \$34.5 million of Company-funded research and development expenditures as we continued to accelerate commercialization of our Advanced Technologies solutions including distributed hydrogen, hydrogen based long duration energy storage and hydrogen power generation. The Company continues to advance its solid oxide platform research, including increasing production of solid oxide fuel cell modules and expanding manufacturing capacity. The Company continues to work with Idaho National Laboratories on a demonstration high-efficiency electrolysis platform. This project, done in conjunction with the U.S. Department of Energy, is intended to demonstrate that the Company’s platform can operate at higher electrical efficiency than currently available electrolysis

technologies through the inclusion of an external heat source. To further accelerate the commercialization activity for the solid oxide platform, the Company recently commenced the design and construction of two advanced prototypes targeted for fiscal year 2023 completion: (i) a 250 kW power generation platform, and (ii) a 1 MW high-efficiency electrolysis platform.

- Under the terms of certain contracts, the Company will provide performance security for future contractual obligations. As of October 31, 2022, we had pledged approximately \$23.0 million of our cash and cash equivalents as collateral for performance security and for letters of credit for certain banking requirements and contracts. This balance may increase with a growing backlog and installed fleet.
- On August 16, 2022, the U.S. Inflation Reduction Act (“IRA” or the “Act”) was signed into law. The provisions of the IRA are intended to, among other things, incentivize domestic clean energy investment, manufacturing and production. The IRA includes provisions that provide incentives for clean energy through enhancement of the Investment Tax Credit (“ITC”) program, Production Tax Credits for clean energy component sourcing and production in the United States, enhancements to Section 45Q of the Internal Revenue Code which provides credits for carbon oxide sequestration intended to incentivize investment in carbon capture and sequestration, and certain incentives for clean energy projects that use environmental brownfield sites and/or are located in economically challenged areas. In addition, the Act would provide a 10-year Production Tax Credit (“PTC”) for the production of clean hydrogen at a qualified facility that begins construction prior to January 1, 2033, with the option to elect the ITC in lieu of the PTC. The Company views the enactment of the IRA as favorable for the overall business climate for fuel cell manufacturers, however, the Company is continuing to evaluate the overall impact and applicability of the IRA to the Company’s current and planned products and the markets in which the Company seeks to sell its products.

Depreciation and Amortization

As the Company builds project assets and makes capital expenditures, depreciation and amortization expenses are expected to increase. For the years ended October 31, 2022 and 2021, depreciation and amortization totaled \$21.3 million and \$19.9 million, respectively (of these totals, approximately \$15.5 million and \$15.0 million for the years ended October 31, 2022 and 2021, respectively, relate to depreciation of project assets in our generation operating portfolio and amortization of a generation intangible asset).

Cash Flows

Cash and cash equivalents and restricted cash and cash equivalents totaled \$481.0 million as of October 31, 2022 compared to \$460.2 million as of October 31, 2021. As of October 31, 2022, unrestricted cash and cash equivalents was \$458.1 million compared to \$432.2 million of unrestricted cash and cash equivalents as of October 31, 2021. As of October 31, 2022, restricted cash and cash equivalents was \$23.0 million, of which \$4.4 million was classified as current and \$18.6 million was classified as non-current, compared to \$28.0 million of restricted cash and cash equivalents as of October 31, 2021, of which \$11.3 million was classified as current and \$16.7 million was classified as non-current.

The following table summarizes our consolidated cash flows:

	Year Ended October 31,		
	2022	2021	2020
(dollars in thousands)			
Consolidated Cash Flow Data:			
Net cash used in operating activities.....	\$ (112,167)	\$ (70,438)	\$ (36,781)
Net cash used in investing activities.....	(46,651)	(73,230)	(32,520)
Net cash provided by financing activities.....	180,583	411,908	221,667
Effects on cash from changes in foreign currency rates.....	(933)	(80)	(92)
Net increase in cash, cash equivalents and restricted cash.....	<u>\$ 20,832</u>	<u>\$ 268,160</u>	<u>\$ 152,274</u>

The key components of our cash inflows and outflows were as follows:

Operating Activities – Net cash used in operating activities was \$112.2 million during fiscal year 2022 compared to net cash used in operating activities of \$70.4 million in fiscal year 2021 and net cash used in operating activities of \$36.8 million in fiscal year 2020.

Net cash used in operating activities during fiscal year 2022 was primarily a result of the net loss of \$147.2 million, increases in inventories of \$28.1 million, other assets of \$2.1 million and unbilled receivables of \$0.2 million and a decrease in deferred revenue of \$11.3 million partially offset by decreases in accounts receivable of \$9.2 million, increases in accrued liabilities of \$24.6 million and accounts payable of \$6.3 million and non-cash adjustments of \$35.0 million and cash adjustments of \$1.6 million.

Net cash used in operating activities during fiscal year 2021 was primarily the result of the net loss of \$101.1 million, increases in accounts receivable of \$5.2 million, unbilled receivables of \$3.6 million and inventory of \$18.8 million and decreases in deferred revenue of \$5.2 million. These amounts were partially offset by increases in accounts payable of \$2.0 million and accrued liabilities of \$0.3 million and net non-cash adjustments of \$59.8 million.

Net cash used in operating activities during fiscal year 2020 was primarily the result of the net loss of \$89.1 million, increases in accounts receivable of \$6.3 million, unbilled receivables of \$5.6 million and inventory of \$2.1 million and a decrease in accounts payable of \$7.1 million. These amounts were partially offset by increases in accrued liabilities of \$5.5 million and deferred revenue of \$1.7 million and net non-cash adjustments of \$68.5 million.

Investing Activities – Net cash used in investing activities was \$46.7 million during fiscal year 2022 compared to \$73.2 million in fiscal year 2021 and \$32.5 million in fiscal year 2020.

Net cash used in investing activities during fiscal year 2022 included \$25.6 million of project asset expenditures and \$21.1 million of capital expenditures.

Net cash used in investing activities during fiscal year 2021 included \$66.9 million of project asset expenditures and \$6.4 million of capital expenditures.

Net cash used in investing activities during fiscal year 2020 included \$31.5 million of project asset expenditures and a \$0.6 million payment for a working capital adjustment for the May 2019 acquisition of the Bridgeport Fuel Cell Project.

Financing Activities – Net cash provided by financing activities was \$180.6 million during fiscal year 2022 compared to \$411.9 million in fiscal year 2021 and \$221.7 million in fiscal year 2020.

Net cash provided by financing activities during fiscal year 2022 resulted from \$183.6 million of net proceeds from sales of common stock and \$11.9 million of net contributions received from the sale of a noncontrolling interest in the LIPA Yaphank Project, partially offset by debt repayments of \$9.5 million, payment for taxes related to net share settlement of equity awards of \$1.9 million, payment of \$3.2 million of preferred dividends to the holders of our Series B Preferred Stock and distribution to noncontrolling interest of \$0.3 million.

Net cash provided by financing activities during fiscal year 2021 resulted from \$525.9 million of proceeds from common stock sales, net of fees and expenses, \$10.2 million of proceeds from the sale-leaseback transaction with Crestmark Equipment Finance, \$3.0 million contribution received from a noncontrolling interest, and \$0.9 million of proceeds received from warrant exercises, offset by debt repayments of \$98.6 million primarily relating to the payoff of amounts owed under the Orion Credit Agreement and the PPP Note, a prepayment penalty of \$4.0 million for the early payoff of the debt outstanding under the Orion Credit Agreement, payment of preferred dividends of \$3.2 million under the terms of the Series B Preferred Stock, payment of \$21.5 million to repay all remaining obligations under the terms of the Series 1 Preferred Shares and the payment of deferred financing costs of \$0.4 million.

Net cash provided by financing activities during fiscal year 2020 resulted from the receipt of \$63.9 million of debt proceeds under the Orion Facility, which was net of a loan discount of \$1.6 million, \$14.4 million of proceeds from the sale-leaseback transaction with Crestmark Equipment Finance, \$6.5 million of debt proceeds from Liberty Bank under the PPP Note, \$3.0 million of debt proceeds from Connecticut Green Bank, \$98.3 million of net proceeds from an underwritten equity offering that closed in October 2020, \$73.6 million of net proceeds from at-the-market sales of common stock (after deducting commissions), and \$1.3 million of net proceeds from warrant conversions, offset by debt repayments of \$30.1 million, the payment of preferred dividends and return of capital of \$6.5 million, and the payment of deferred financing costs of \$2.7 million.

Commitments and Significant Contractual Obligations

A summary of our significant future commitments and contractual obligations as of October 31, 2022 and the related payments by fiscal year is summarized as follows:

(dollars in thousands)	Payments Due by Period				
	Total	Less than 1 Year	1 – 3 Years	3 – 5 Years	More than 5 Years
Purchase commitments ⁽¹⁾	\$ 67,089	\$ 65,659	\$ 1,312	\$ 118	\$ —
Term loans (principal and interest)	28,966	7,930	13,212	4,446	3,378
Capital and operating lease commitments ⁽²⁾	17,871	1,171	1,677	1,549	13,474
Sale-leaseback finance obligations ⁽³⁾	18,047	3,252	6,517	4,234	4,044
Natural gas supply contract ⁽⁴⁾	11,650	1,969	3,938	3,938	1,805
Series B Preferred dividends payable ⁽⁵⁾	—	—	—	—	—
Totals	<u>\$ 143,623</u>	<u>\$ 79,981</u>	<u>\$ 26,656</u>	<u>\$ 14,285</u>	<u>\$ 22,701</u>

- (1) Purchase commitments with suppliers for materials, supplies and services incurred in the normal course of business.
- (2) Future minimum lease payments on finance and operating leases.
- (3) Represents payments due under sale-leaseback transactions and related financing agreements between certain of our wholly-owned subsidiaries and PNC Energy Capital, LLC (“PNC”) and/or Crestmark Equipment Finance (“Crestmark”) (as applicable). Lease payments for each lease under these financing agreements are generally payable in fixed quarterly installments over a 10-year period.
- (4) During fiscal year 2020, the Company entered into a 7-year natural gas contract with an estimated annual cost per year of \$2.0 million which was set to begin on November 1, 2021. Actual service began under the contract on December 7, 2021 to coincide with our commissioning schedule. This gas contract is for the Company’s Yaphank project and the costs are expected to be offset by generation revenues on the project.
- (5) We pay \$3.2 million in annual dividends on our Series B Preferred Stock, if and when declared. The \$3.2 million annual dividend payment, if dividends are declared, has not been included in this table as we cannot reasonably determine when or if we will be able to convert the Series B Preferred Stock into shares of our common stock. We may, at our option, convert these shares into the number of shares of our common stock that are issuable at the then prevailing conversion rate if the closing price of our common stock exceeds 150% of the then prevailing conversion price (\$1,692 per share at October 31, 2022) for 20 trading days during any consecutive 30 trading day period.

Term and Construction Loans

A discussion of the key terms and conditions of the loans outstanding as of October 31, 2022 is included in Note 10. “Debt” to the consolidated financial statements and is incorporated by reference herein. The information included under the headings “Connecticut Green Bank Loans,” “Bridgeport Fuel Cell Project Loans,” “State of Connecticut Loan,” and “Finance obligations for sale-leaseback agreements” in Note 10. “Debt” to the consolidated financial statements is incorporated herein by reference.

Restricted Cash

We have pledged approximately \$23.0 million of our cash and cash equivalents as performance security and for letters of credit for certain banking requirements and contracts. As of October 31, 2022, outstanding letters of credit totaled \$5.0 million. These expire on various dates through December 2028. Under the terms of certain contracts, we will provide performance security for future contractual obligations. The restricted cash balance as of October 31, 2022 also included \$7.9 million primarily to support obligations under the power purchase and service agreements related to the PNC and Crestmark sale-leaseback transactions and \$8.7 million relating to future obligations associated with the Bridgeport Fuel Cell Project. Refer to Note 17. “Restricted Cash” to the Consolidated Financial Statements for a detailed discussion of the Company’s restricted cash balance.

Power purchase agreements

Under the terms of our PPAs, customers agree to purchase power from our fuel cell power plants at negotiated rates. Electricity rates are generally a function of the customers’ current and estimated future electricity pricing available from the grid. We are responsible for all operating costs necessary to maintain, monitor and repair our fuel cell power platforms.

Under certain agreements, we are also responsible for procuring fuel, generally natural gas or biogas, to run our fuel cell power platforms. In addition, under certain agreements, we are required to produce minimum amounts of power under our PPAs and we have the right to terminate PPAs by giving written notice to the customer, subject to certain exit costs. As of October 31, 2022, our generation operating portfolio was 36.3 MW.

Service and warranty agreements

We warranty our products for a specific period of time against manufacturing or performance defects. Our standard U.S. warranty period is generally 15 months after shipment or 12 months after acceptance of the product. In addition to the standard product warranty, we have contracted with certain customers to provide services to ensure the power plants meet minimum operating levels for terms of up to 20 years. Pricing for service contracts is based upon estimates of future costs, which could be materially different from actual expenses. Refer to “Critical Accounting Policies and Estimates” for additional details.

Advanced Technologies contracts

We have contracted with various government agencies and certain companies from private industry to conduct research and development as either a prime contractor or sub-contractor under multi-year, cost-reimbursement and/or cost-share type contracts or cooperative agreements. Cost-share terms require that participating contractors share the total cost of the project based on an agreed upon ratio. In many cases, we are reimbursed only a portion of the costs incurred or to be incurred on the contract. While government research and development contracts may extend for many years, funding is often provided incrementally on a year-by-year basis if contract terms are met and Congress authorizes the funds. As of October 31, 2022, Advanced Technologies contract backlog totaled \$22.9 million, of which \$8.1 million is non-U.S. Government-funded, \$13.6 million is U.S. Government-funded and \$1.2 million is U.S. Government-unfunded.

Off-Balance Sheet Arrangements

We have no off-balance sheet debt or similar obligations which are not classified as debt. We do not guarantee any third-party debt. See Note 18. “Commitments and Contingencies” to our consolidated financial statements for the year ended October 31, 2022 included in this Annual Report on Form 10-K for further information.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Estimates are used in accounting for, among other things, revenue recognition, contract loss accruals, excess, slow-moving and obsolete inventories, product warranty accruals, loss accruals on service agreements, share-based compensation expense, allowance for doubtful accounts, depreciation and amortization, impairment of goodwill and in-process research and development intangible assets, impairment of long-lived assets (including project assets), lease liabilities and right-of-use (“ROU”) assets, and contingencies. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected in the consolidated financial statements in the period they are determined to be necessary. Due to the inherent uncertainty involved in making estimates, actual results in future periods may differ from those estimates.

Our critical accounting policies are those that are both most important to our financial condition and results of operations and require the most difficult, subjective or complex judgments on the part of management in their application, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. Our accounting policies are set forth below.

Goodwill and Indefinite-Lived Intangibles

Goodwill represents the excess of the aggregate purchase price over the fair value of the net assets acquired in a business combination and is reviewed for impairment at least annually. The intangible asset represents indefinite-lived in-process research and development for cumulative research and development efforts associated with the development of solid oxide fuel cell stationary power generation and is also reviewed at least annually for impairment.

Accounting Standards Codification Topic 350, "Intangibles - Goodwill and Other" ("ASC 350") permits the assessment of qualitative factors to determine whether events and circumstances lead to the conclusion that it is necessary to perform the goodwill impairment test required under ASC 350.

The Company completed its annual impairment analysis of goodwill and in-process research and development assets as of July 31, 2022. The Company performed a qualitative assessment for fiscal year 2022 and determined that it was more likely than not that there was no impairment of goodwill or the indefinite-lived intangible asset.

Impairment of Long-Lived Assets (including Project Assets)

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group which pertain to specific projects may not be recoverable. If events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable, we compare the carrying amount of an asset group to future undiscounted net cash flows, excluding debt service costs, expected to be generated by the asset group and their ultimate disposition. If the sum of the undiscounted cash flows is less than the carrying value, the impairment to be recognized is measured by the amount by which the carrying amount of the asset group exceeds the fair value of the asset group. During the years ended October 31, 2022 and 2021, the Company recorded certain project asset impairment charges.

Revenue Recognition

The Company recognized revenue in accordance with the guidance in Accounting Standards Codification ("ASC") Topic 606: *Revenue from Contracts with Customers* ("Topic 606"). Under Topic 606: *Revenue from Contracts with Customers*, the amount of revenue recognized for any goods or services reflects the consideration that the Company expects to be entitled to receive in exchange for those goods and services. To achieve this core principle, the Company applies the following five-step approach: (1) identify the contract with the customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to performance obligations in the contract; and (5) recognize revenue when or as a performance obligation is satisfied.

A contract is accounted for when there has been approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Performance obligations under a contract are identified based on the goods or services that will be transferred to the customer that are both capable of being distinct and are distinct in the context of the contract. In certain instances, the Company has concluded distinct goods or services should be accounted for as a single performance obligation that is a series of distinct goods or services that have the same pattern of transfer to the customer. To the extent a contract includes multiple promised goods or services, the Company must apply judgment to determine whether the customer can benefit from the goods or services either on their own or together with other resources that are readily available to the customer (the goods or services are distinct) and if the promise to transfer the goods or services to the customer is separately identifiable from other promises in the contract (the goods or services are distinct in the context of the contract). If these criteria are not met, the promised services are accounted for as a single performance obligation. The transaction price is determined based on the consideration that the Company will be entitled to in exchange for transferring goods or services to the customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price, generally utilizing the expected value method. Determining the transaction price requires judgment. If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation based on a relative standalone selling price basis. Standalone selling price is determined by the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, the Company estimates the standalone selling price by taking into account available information such as market conditions and internally approved pricing guidelines related to the performance obligations. Performance obligations are satisfied either over time or at a point in time as discussed in further detail below. In addition, the Company's contracts with customers generally do not include significant financing components or non-cash consideration. The Company has elected practical expedients in the accounting guidance that allow for revenue to be recorded in the amount that the Company has a right to invoice, if that amount corresponds directly with the value to the customer of the Company's performance to date, and that allow the Company not to disclose related unsatisfied performance obligations. The Company records any amounts that are billed to customers in excess of revenue recognized as deferred revenue and revenue recognized in excess of amounts billed to customers as unbilled receivables.

Revenue streams are classified as follows:

Product. Includes the sale of completed project assets, sale and installation of fuel cell power platforms including site engineering and construction services, and the sale of modules, BOP components and spare parts to customers.

Service. Includes performance under long-term service agreements for power platforms owned by third parties.

License and royalty. Includes license fees and royalty income from the licensure of intellectual property.

Generation. Includes the sale of electricity under PPAs and utility tariffs from project assets retained by the Company. This also includes revenue received from the sale of other value streams from these assets including the sale of heat, steam, capacity and renewable energy credits.

Advanced Technologies. Includes revenue from customer-sponsored and government-sponsored Advanced Technologies projects.

See below for a discussion of revenue recognition under Topic 606 by disaggregated revenue stream.

Completed project assets

Contracts for the sale of completed project assets include the sale of the project asset, the assignment of the service agreement, and the assignment of the PPA. The relative stand-alone selling price is estimated and is used as the basis for allocation of the contract consideration. Revenue is recognized upon the satisfaction of the performance obligations, which includes the transfer of control of the project asset to the customer, which is when the contract is signed and the PPA is assigned to the customer. See below for further discussion regarding revenue recognition for service agreements.

Contractual payments related to the sale of the project asset and assignment of the PPA are generally received up-front. Payment terms for service agreements are generally ratable over the term of the agreement.

Module Sales

Contracts for module sales represent the sale of a completed fuel cell module at a contracted selling price. These contracts are on a per unit basis and revenue is recognized as each unit is completed and ready to ship and the performance obligation is satisfied. Payment terms for module sales are generally based on milestones achieved through the manufacturing timeline of the module.

Service agreements

Service agreements represent a single performance obligation whereby the Company performs all required maintenance and monitoring functions, including replacement of modules, to ensure the power platform(s) under the service agreement generate a minimum power output. To the extent the power platform(s) under service agreements do not achieve the minimum power output, certain service agreements include a performance guarantee penalty. Performance guarantee penalties represent variable consideration, which is estimated for each service agreement based on past experience, using the expected value method. The consideration for each service agreement is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress.

The Company reviews its cost estimates on service agreements on a quarterly basis and records any changes in estimates on a cumulative catch-up basis.

Loss accruals for service agreements are recognized to the extent that the estimated remaining costs to satisfy the performance obligation exceed the estimated remaining unrecognized consideration. Estimated losses are recognized in the period in which losses are identified.

Payment terms for service agreements are generally ratable over the term of the agreement.

Advanced Technologies contracts

Advanced Technologies contracts include the promise to perform research and development services and, as such, this represents one performance obligation. Revenue from most government sponsored Advanced Technologies projects is recognized as direct costs are incurred plus allowable overhead less cost share requirements, if any. Revenue is only recognized to the extent the contracts are funded. Revenue from previous fixed price Advanced Technologies projects is recognized using the cost-to-cost input method. Revenue recognition for research performed under the EMTEC Joint Development Agreement (as defined elsewhere herein) also falls into the practical expedient category where revenue is recorded consistent with the amounts that are to be invoiced.

Payments are based on costs incurred for government sponsored Advanced Technologies projects and upon completion of milestones for previous fixed-price Advanced Technologies projects. Payments under the EMTEC Joint Development Agreement are based on time spent and material costs incurred.

License agreements

The Company entered into the License Agreements (as defined elsewhere herein) with POSCO Energy Co., Ltd. (“POSCO Energy”) in 2007, 2009 and 2012. In December 2021, the License Agreements were deemed amended pursuant to the terms of the Settlement Agreement among the Company, POSCO Energy, and KFC (for more information, refer to Note 18. “Commitments and Contingencies” to the Consolidated Financial Statements).

Prior to the date of the Settlement Agreement, in connection with the adoption of Topic 606, several performance obligations were identified under the License Agreements, including previously satisfied performance obligations for the transfer of licensed intellectual property, two performance obligations for specified upgrades of the previously licensed intellectual property, a performance obligation to deliver unspecified upgrades to the previously licensed intellectual property on a when-and-if-available basis, and a performance obligation to provide technical support for previously delivered intellectual property.

- The performance obligations related to the specified upgrades would have been satisfied and the related consideration recognized as revenue upon the delivery of the specified upgrades. The Company did not recognize any revenue in fiscal years 2022, 2021 and 2020 related to specified upgrades.
- The performance obligations for unspecified upgrades and technical support were being recognized on a straight-line basis over the license term on the basis that this represented the method that best depicted the progress towards completion of the related performance obligations. The Company recognized revenue totaling \$0.8 million for the year ended October 31, 2020 related to unspecified upgrades and technical support.

All fixed consideration for the License Agreements was previously collected. The Company discontinued revenue recognition of the deferred license revenue related to the License Agreements in July 2020 given the then pending arbitrations.

The Company entered into the EMTEC Joint Development Agreement on November 5, 2019. The Company recorded license revenue of \$4.0 million in association with this agreement for the fiscal year ended October 31, 2020 which revenue was considered at a point-in-time upon the signing of the contract as the license is considered functional intellectual property because it has standalone functionality. The customer can use this intellectual property as it exists at a point in time and no further services are required from the Company.

Generation revenue

For certain project assets where customers purchase electricity from the Company under PPAs, the Company has determined that these agreements should be accounted for as operating leases pursuant to ASC 842, *Leases*. Revenue is recognized when electricity has been delivered based on the amount of electricity delivered at rates specified under the contracts, assuming all other revenue recognition criteria are met. Generation sales, to the extent the related PPAs are within the scope of Topic 606, are recognized as revenue in the period in which the Company provides the electricity and completes the performance obligation, which is the same as the monthly amount billed to customers.

Variable Interest Entity and Noncontrolling Interests

The Company closed on a tax equity financing transaction in August 2021 for the 7.4 MW fuel cell project (the “Groton Project”) located on the U.S. Navy Submarine Base in Groton, CT, which has been structured as a “partnership flip.” A partnership (the “Groton Partnership”) was organized with East West Bancorp, Inc. (“East West Bank”) to acquire from FuelCell Energy Finance II, LLC, a wholly owned subsidiary of the Company, all of the outstanding equity interests in Groton Station Fuel Cell, LLC (“Groton Project Company”). East West Bank has a conditional withdrawal right which they can exercise and which would require the Company to pay 101% of the amount contributed by East West Bank to date. In addition, under this partnership flip structure, the Company has an option to acquire all of the equity interests that East West Bank holds in the Groton Partnership starting approximately five and a half years after the Groton Project is operational. If the Company exercises this option, the exercise price to be paid by the Company will be the greater of (1) the fair market value of East West Bank’s equity interest at the time the option is exercised, (2) five percent of the \$15 million tax equity commitment and (3) East West Bank’s claim in liquidation determined using the hypothetical liquidation at book value method.

The Groton Partnership is a Variable Interest Entity (“VIE”) under U.S. GAAP. The Company has determined that it is the primary beneficiary in the Groton Partnership for accounting purposes. The Company has considered the provisions within the financing-related agreements (including the limited liability company agreement for the Groton Partnership) which grant the Company power to manage and make decisions affecting the operations of the Groton Partnership. The Company considers the rights granted to East West Bank under the agreements to be more protective in nature than participatory. Therefore, the Company has determined under the power and benefits criterion of Accounting Standards Codification 810, *Consolidations* that it is the primary beneficiary of the Groton Partnership. As the primary beneficiary, the Company consolidates in its consolidated financial statements the financial position, results of operations and cash flows of the Groton Partnership, and all intercompany balances and transactions between the Company and the Groton Partnership are eliminated in the consolidated financial statements. The Company recognized East West Bank’s share of the net assets of the Groton Partnership, which is \$3.0 million as of October 31, 2022 and 2021, as a noncontrolling interest in mezzanine equity on its Consolidated Balance Sheets and will continue to do so until the conditional withdrawal period lapses at the commencement of operations. Upon commencement of operations of the related project asset, the Company expects to allocate profits and losses to the noncontrolling interest under the hypothetical liquidation at book value (“HLBV”) method. HLBV is a balance sheet-oriented approach for allocating net income or loss to the noncontrolling interest when there is a complex structure, such as the partnership flip structure.

The Company closed on a tax equity financing transaction in November 2021 with Renewable Energy Investors, LLC (“REI”), a subsidiary of Franklin Park Infrastructure, LLC, for the 7.4 MW fuel cell project (the “LIPA Yaphank Project”) located in Yaphank Long Island. REI’s tax equity commitment totaled \$12.4 million. This transaction was structured as a “partnership flip,” which is a structure commonly used by tax equity investors in the financing of renewable energy projects. Under this partnership flip structure, a partnership, in this case YTBFC Holdco, LLC (the “Yaphank Partnership”), was organized to acquire from FuelCell Energy Finance II, LLC, a wholly-owned subsidiary of the Company, all outstanding equity interests in Yaphank Fuel Cell Park, LLC which in turn owns the LIPA Yaphank Project and is the party to the power purchase agreement and all project agreements. REI holds Class A Units in the Yaphank Partnership and a subsidiary of the Company holds the Class B Units.

Under a partnership flip structure, tax equity investors agree to receive a minimum target rate of return, typically on an after-tax basis. Prior to receiving a contractual rate of return or a date specified in the contractual arrangements, REI will receive substantially all of the non-cash value attributable to the LIPA Yaphank Project, which includes accelerated depreciation and Section 48(a) investment tax credits; however, the Company will receive a majority of the cash distributions (based on the operating income of the LIPA Yaphank Project), which are paid quarterly. After REI receives its contractual rate of return, the Company will receive approximately 95% of the cash and tax allocations. The Company may enter into a back leverage debt financing transaction and use the cash distributions from the Yaphank Partnership to service the debt.

The Yaphank Partnership is a VIE under U.S. GAAP. The Company has considered the provisions within the financing-related agreements (including the limited liability company agreement for the Yaphank Partnership) which grant us power to manage and make decisions affecting the operations of the Yaphank Partnership. We consider the rights granted to REI under the agreements to be more protective in nature than participatory. Therefore, we have determined under the power and benefits criterion of ASC 810, *Consolidations* that we are the primary beneficiary of the Yaphank Partnership. As the primary beneficiary, we consolidate the financial position, results of operations and cash flows of the Yaphank Partnership

in our consolidated financial statements, and all intercompany balances and transactions between us and the Yaphank Partnership are eliminated. The Company recognized REI's share of the net assets of the Yaphank Partnership as noncontrolling interests in its Consolidated Balance Sheets. The income or loss allocations reflected in our Consolidated Statements of Operations and Comprehensive Loss may create volatility in our reported results of operations, including potentially changing net loss attributable to stockholders to net income attributable to stockholders, or vice versa, from quarter to quarter. The Company allocates profits and losses to REI's noncontrolling interest under the HLBV method.

See Note. 3 "Tax Equity Financing" for additional information regarding the tax equity financing transactions with East West Bank and REI.

Sale-Leaseback Accounting

The Company, through certain wholly-owned subsidiaries, has entered into sale-leaseback transactions for commissioned project assets where we have entered into a PPA with a customer who is both the site host and end user of the power. Due to the Company not meeting criteria to account for the transfer of the project assets as a sale, sale accounting is precluded. Accordingly, the Company uses the financing method to account for these transactions.

Under the financing method of accounting for a sale-leaseback, the Company does not derecognize the project assets and does not recognize as revenue any of the sale proceeds received from the lessor that contractually constitutes payment to acquire the assets subject to these arrangements. Instead, the sale proceeds received are accounted for as finance obligations and leaseback payments made by the Company are allocated between interest expense and a reduction to the finance obligation. Interest on the finance obligation is calculated using the Company's incremental borrowing rate at the inception of the arrangement on the outstanding finance obligation. While we receive financing for the related project asset, we have not recognized revenue on the sale-leaseback transactions. Instead, revenue is recognized with respect to the related PPAs in accordance with the Company's accounting policies for recognizing generation revenues.

Inventories

Inventories consist principally of raw materials and work-in-process. Cost is determined using the first-in, first-out cost method. Included in our inventory balance are used modules that are brought back into inventory upon installation of new modules. When a new module is installed, a determination is made as to whether the module has remaining useful life or should be scrapped and materials recycled. Modules that are deemed to have remaining useful life are put into inventory at an estimated value based on the expected remaining life of the module and its projected output. Inventories are reviewed to determine if valuation allowances are required for excess, obsolete, and slow-moving inventory. This review includes analyzing inventory levels of individual parts considering the current design of our products and production requirements as well as the expected inventory requirements for maintenance on installed power platforms and inventory will be recorded at a new cost basis if a valuation allowance is required.

Service Expense Recognition

We have entered into service agreements with certain customers to provide monitoring, maintenance and repair services for fuel cell power platforms. Under the terms of these service agreements, the power platform must meet a minimum operating output during the term. If the minimum output falls below the contract requirement, we may be subject to performance penalties or may be required to repair and/or replace the customer's fuel cell module(s).

The Company records loss accruals for service agreements when the estimated cost of future module exchanges and maintenance and monitoring activities exceeds the remaining unrecognized contract value. Estimates for future costs on service agreements are determined by a number of factors including the estimated remaining life of the module(s), used replacement modules available, and future operating plans for the power platform. Our estimates are performed on a contract by contract basis and include cost assumptions based on what we anticipate the service requirements will be to fulfill obligations for each contract. As of October 31, 2022 and 2021, our loss accruals on service agreements totaled \$7.3 million and \$6.5 million, respectively.

ACCOUNTING GUIDANCE UPDATE

Recently Adopted Accounting Guidance

There is no recently adopted accounting guidance applicable to the Company's financial statements.

Recent Accounting Guidance Not Yet Effective

There is no recent accounting guidance not yet effective that is expected to have a material impact on the Company's financial statements when adopted.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Exposure Risk

Cash is invested overnight with high credit quality financial institutions and therefore we are not exposed to market risk on our cash holdings from changing interest rates. Based on our overall interest rate exposure as of October 31, 2022, including all interest rate sensitive instruments, a change in interest rates of 1% would not have a material impact on our results of operations.

Foreign Currency Exchange Risk

As of October 31, 2022, approximately 0.3% of our total cash and cash equivalents were in currencies other than U.S. dollars (primarily the Euro, Canadian dollars and Korean Won) and we have no plans of repatriation. We make purchases from certain vendors in currencies other than U.S. dollars. Although we have not experienced significant foreign exchange rate losses to date, we may in the future, especially to the extent that we do not engage in currency hedging activities. The economic impact of currency exchange rate movements on our operating results is complex because such changes are often linked to variability in real growth, inflation, interest rates, governmental actions and other factors. These changes, if material, may cause us to adjust our financing and operating strategies.

Derivative Fair Value Exposure Risk

Interest Rate Swap

On May 16, 2019, an interest rate swap agreement was entered into with Fifth Third Bank in connection with the BFC Credit Agreement for the term of the loan. The net interest rate across the BFC Credit Agreement and the swap transaction results in a fixed rate of 5.09%. The interest rate swap is adjusted to fair value on a quarterly basis. The estimated fair value is based on Level 2 inputs including primarily the forward LIBOR curve available to swap dealers. The valuation methodology involves comparison of (i) the sum of the present value of all monthly variable rate payments based on a reset rate using the forward LIBOR curve and (ii) the sum of the present value of all monthly fixed rate payments on the notional amount, which is equivalent to the outstanding principal amount of the loan. On August 1, 2022, the Company entered into an amendment to its interest rate swap agreement that replaced LIBOR with Term Secured Overnight Financing Rate (“SOFR”) effective as of June 2023. The fair value adjustment for the years ended October 31, 2022 and October 31, 2021 resulted in a \$0.9 million gain and a \$0.5 million gain, respectively.

Project Fuel Price Exposure Risk

Certain of our PPAs for project assets in our generation operating portfolio and project assets under construction expose us to fluctuating fuel price risks as well as the risk of being unable to procure the required amounts of fuel and the lack of alternative available fuel sources. We seek to mitigate our fuel risk using strategies including: (i) fuel cost reimbursement mechanisms in our PPAs to allow for pass through of fuel costs (full or partial) where possible, which we have done with our 14.9 MW operating project in Bridgeport, CT; (ii) procuring fuel under fixed price physical contracts with investment grade counterparties, which we have done for twenty years for our Tulare BioMAT project and the initial seven years of the 18 year PPA for our LIPA Yaphank, NY project; and (iii) potentially entering into future financial hedges with investment grade counterparties to offset potential negative market fluctuations.

We currently have three projects in development with fuel sourcing risk, namely, the Toyota project, which requires procurement of renewable natural gas (“RNG”), and our Derby, CT 14.0 MW and 2.8 MW projects, both of which require natural gas for which there is no pass through mechanism in the related PPAs. Fuel sourcing and risk mitigation strategies for all three projects are being assessed and will be implemented as project operational dates become firm.

Historically, this risk has not been material to our financial statements as our operating projects prior to October 31, 2022 either did not have fuel price risk exposure, had fuel cost reimbursement mechanisms in our related PPAs to allow for pass through of fuel costs (full or partial), or had established long term fixed price fuel physical contracts. To provide a meaningful assessment of the fuel price risk arising from price movements of natural gas, the Company performed a sensitivity analysis to determine the impact a change in natural gas commodity pricing would have on our Consolidated Statements of Operations and Comprehensive Loss (assuming that all projects with fuel price risk were operating). A \$1/Metric Million British Thermal Unit (“MMBTu”) increase in market pricing compared to our underlying project models

would result in a cost impact of approximately \$1.4 million to our Consolidated Statements of Operations and Comprehensive Loss on an annual basis. We have also conducted a sensitivity analysis on the impact of RNG pricing and a \$10/MMBTu increase in market pricing compared to our underlying project models would result in an impact of approximately \$2.0 million to our Consolidated Statements of Operations and Comprehensive Loss on an annual basis.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
FuelCell Energy, Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of FuelCell Energy, Inc. and subsidiaries (the Company) as of October 31, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, changes in equity, and cash flows for each of the years in the three-year period ended October 31, 2022, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of October 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of October 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended October 31, 2022, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of October 31, 2022 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management

and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Estimated costs at completion for certain service agreements

As discussed in Note 1 to the consolidated financial statements, the Company's service agreements represent a single performance obligation whereby the Company performs all required maintenance and monitoring functions, including replacement of modules, to ensure the power platforms under the service agreement generate a minimum power output. The consideration for each service agreement is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress. The Company had service revenue of \$12.9 million for the year ended October 31, 2022.

We identified the evaluation of total estimated costs at completion for certain service agreements as a critical audit matter. Specifically, evaluating the Company's total estimated costs at completion required complex auditor judgement to assess the estimated number of fuel cell modules to be replaced during the term of the agreements and their associated costs. These areas involved the application of significant estimation by management and contained significant measurement uncertainty.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's process to develop total estimated costs at completion for service agreements. This included a control related to the estimated number of fuel cell modules to be replaced during the term of the agreement and their associated costs. For certain service agreements, we evaluated the estimated number of fuel cell modules to be replaced and their associated costs by:

- comparing the estimated number of fuel cell modules to be replaced to the replacement plan developed and maintained by the Company's service department
- comparing the total estimated costs to manufacture fuel cell modules to historical actual costs
- comparing current period total estimated costs at completion to previous total estimated costs at completion and assessing the cause of certain revisions
- assessing the number of fuel cell module replacements that are expected to occur during the contract term using the useful life of fuel cell modules.

/s/ KPMG LLP

We have served as the Company's auditor since 1995.

Hartford, Connecticut
December 20, 2022

FUELCELL ENERGY, INC.
Consolidated Balance Sheets
October 31, 2022 and 2021
(Amounts in thousands, except share and per share amounts)

	October 31, 2022	October 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents, unrestricted	\$ 458,055	\$ 432,213
Restricted cash and cash equivalents - short-term	4,423	11,268
Accounts receivable, net	4,885	14,730
Unbilled receivables	11,019	8,924
Inventories	90,909	67,074
Other current assets	10,989	9,177
Total current assets	580,280	543,386
Restricted cash and cash equivalents - long-term	18,566	16,731
Inventories - long-term	7,549	4,586
Project assets, net	232,886	223,277
Property, plant and equipment, net	58,137	39,416
Operating lease right-of-use assets, net	7,189	8,109
Goodwill	4,075	4,075
Intangible assets, net	17,373	18,670
Other assets	13,662	16,998
Total assets ⁽¹⁾	\$ 939,717	\$ 875,248
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	\$ 13,198	\$ 10,085
Current portion of operating lease liabilities	650	1,032
Accounts payable	28,196	19,267
Accrued liabilities	27,415	16,099
Deferred revenue	16,341	6,287
Total current liabilities	85,800	52,770
Long-term deferred revenue and customer deposits	9,095	30,427
Long-term operating lease liabilities	7,575	8,093
Long-term debt and other liabilities	82,863	78,633
Total liabilities ⁽¹⁾	185,333	169,923
Redeemable Series B preferred stock (liquidation preference of \$64,020 as of October 31, 2022 and October 31, 2021)	59,857	59,857
Redeemable noncontrolling interest	3,030	3,030
Total equity:		
Stockholders' equity:		
Common stock (\$0.0001 par value); 500,000,000 shares authorized as of October 31, 2022 and October 31, 2021; 405,562,988 and 366,618,693 shares issued and outstanding as of October 31, 2022 and October 31, 2021, respectively	41	37
Additional paid-in capital	2,094,076	1,908,471
Accumulated deficit	(1,407,973)	(1,265,251)
Accumulated other comprehensive loss	(1,752)	(819)
Treasury stock, Common, at cost (142,837 and 73,430 shares as of October 31, 2022 and October 31, 2021, respectively)	(855)	(586)
Deferred compensation	855	586
Total stockholder's equity	684,392	642,438
Noncontrolling interest	7,105	—
Total equity	691,497	642,438
Total liabilities, redeemable noncontrolling interests and stockholders' equity	\$ 939,717	\$ 875,248

⁽¹⁾ As of October 31, 2022 and October 31, 2021, the consolidated assets of the variable interest entity ("VIE") were \$119,223 and \$54,375, respectively, that can only be used to settle obligations of the VIE. These assets include cash of \$2,149, unbilled accounts receivable of \$1,070, other current assets of \$14,373, operating lease right of use assets of \$1,184 and project assets of \$100,448 as of October 31, 2022, and cash of \$1,364 and project assets of \$53,012 as of October 31, 2021, respectively. The consolidated liabilities of the VIE as of October 31, 2022 were short-term operating lease liabilities of \$157, accounts payable of \$76,050, accrued liabilities of \$824 and long-term operating lease liability of \$1,478. The consolidated liabilities of the VIE as of October 31, 2021 were \$0.

See accompanying notes to consolidated financial statements.

FUELCELL ENERGY, INC.
Consolidated Statements of Operations and Comprehensive Loss
For the Years Ended October 31, 2022, 2021, and 2020
(Amounts in thousands, except share and per share amounts)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Revenues:			
Product	\$ 60,000	\$ —	\$ —
Service and license	12,786	19,791	25,133
Generation	36,186	24,027	19,943
Advanced Technologies	21,512	25,767	25,795
Total revenues	<u>130,484</u>	<u>69,585</u>	<u>70,871</u>
Costs of revenues:			
Product	64,495	7,976	9,924
Service and license	17,233	24,735	24,545
Generation	63,147	36,017	27,873
Advanced Technologies	15,184	16,496	16,254
Total costs of revenues	<u>160,059</u>	<u>85,224</u>	<u>78,596</u>
Gross loss	<u>(29,575)</u>	<u>(15,639)</u>	<u>(7,725)</u>
Operating expenses:			
Administrative and selling expenses	79,620	37,948	26,644
Research and development expenses	34,529	11,315	4,797
Total costs and expenses	<u>114,149</u>	<u>49,263</u>	<u>31,441</u>
Loss from operations	<u>(143,724)</u>	<u>(64,902)</u>	<u>(39,166)</u>
Interest expense	(6,394)	(7,363)	(15,294)
Change in fair value of common stock warrant liability	—	(15,974)	(37,086)
Extinguishment of Series 1 preferred share obligation	—	(934)	—
(Loss) gain on extinguishment of debt and finance obligations	—	(11,156)	1,801
Other income (expense), net	3,705	(694)	684
Loss before provision for income taxes	<u>(146,413)</u>	<u>(101,023)</u>	<u>(89,061)</u>
Provision for income taxes	(819)	(2)	(46)
Net loss	<u>(147,232)</u>	<u>(101,025)</u>	<u>(89,107)</u>
Net (loss) income attributable to noncontrolling interest	(4,510)	30	—
Net loss attributable to FuelCell Energy, Inc.	<u>(142,722)</u>	<u>(101,055)</u>	<u>(89,107)</u>
Series B preferred stock dividends	(3,200)	(3,200)	(3,331)
Net loss attributable to common stockholders	<u>\$ (145,922)</u>	<u>\$ (104,255)</u>	<u>\$ (92,438)</u>
Loss per share basic and diluted:			
Net loss per share attributable to common stockholders	\$ (0.38)	\$ (0.31)	\$ (0.42)
Basic and diluted weighted average shares outstanding	383,139,140	334,742,346	221,960,288
	<u>2022</u>	<u>2021</u>	<u>2020</u>
Net loss	\$ (147,232)	\$ (101,025)	\$ (89,107)
Other comprehensive loss:			
Foreign currency translation adjustments	(933)	(80)	(92)
Total comprehensive loss	<u>\$ (148,165)</u>	<u>\$ (101,105)</u>	<u>\$ (89,199)</u>
Comprehensive (loss) income attributable to noncontrolling interest	(4,510)	30	—
Comprehensive loss attributable to FuelCell Energy, Inc.	<u>\$ (143,655)</u>	<u>\$ (101,135)</u>	<u>\$ (89,199)</u>

See accompanying notes to consolidated financial statements

FUELCELL ENERGY, INC.
Consolidated Statements of Changes in Equity
For the Years Ended October 31, 2022, 2021, and 2020
(Amounts in thousands, except share amounts)

	Common Stock		Accumulated Deficit	Accumulated Other Comprehensive Loss	Treasury Stock	Deferred Compensation	Total Stockholders' Equity	Noncontrolling Interests	Total Stockholders' Equity
	Shares	Additional Paid-in Capital							
Balance, October 31, 2019	193,608,684	\$ 19 \$ 1,151,454	\$ (1,075,089)	\$ (647)	\$ (466)	\$ 466	\$ 75,737	\$ —	\$ 75,737
Sale of common stock, net of fees	86,307,932	9 171,902	—	—	—	—	171,911	—	171,911
Orion warrant exercises	14,696,320	1 37,059	—	—	—	—	37,060	—	37,060
Common stock issued, non- employee compensation	58,303	— 104	—	—	—	—	104	—	104
Taxes paid upon vesting of restricted stock awards, net of stock issued under benefit plans	49,434	— (3)	—	—	—	—	(3)	—	(3)
Reclassification of value of share based compensation upon approval of authorized shares for grant	—	— 401	—	—	—	—	401	—	401
Share based compensation	—	— 1,868	—	—	—	—	1,868	—	1,868
Preferred dividends — Series B	—	— (3,331)	—	—	—	—	(3,331)	—	(3,331)
Effect of foreign currency translation	—	— —	—	(92)	—	—	(92)	—	(92)
Adjustment for deferred compensation	(13,915)	— —	—	—	34	(34)	—	—	—
Net loss attributable to FuelCell Energy, Inc.	—	— —	(89,107)	—	—	—	(89,107)	—	(89,107)
Balance, October 31, 2020	<u>294,706,758</u>	<u>\$ 29 \$ 1,359,454</u>	<u>\$ (1,164,196)</u>	<u>\$ (739)</u>	<u>\$ (432)</u>	<u>\$ 432</u>	<u>\$ 194,548</u>	<u>\$ —</u>	<u>\$ 194,548</u>
Sale of common stock, net of fees	69,074,573	8 525,887	—	—	—	—	525,895	—	525,895
Orion warrant exercises and other warrant exercises	2,714,026	— 22,093	—	—	—	—	22,093	—	22,093
Common stock issued, non- employee compensation	31,889	— 275	—	—	—	—	275	—	275
Share based compensation	—	— 4,293	—	—	—	—	4,293	—	4,293
Stock issued under benefit plans, net of taxes paid upon vesting of restricted stock awards	108,511	— (331)	—	—	—	—	(331)	—	(331)
Preferred dividends — Series B	—	— (3,200)	—	—	—	—	(3,200)	—	(3,200)
Effect of foreign currency translation	—	— —	—	(80)	—	—	(80)	—	(80)
Adjustment for deferred compensation	(17,019)	— —	—	—	(154)	154	—	—	—
Release of a share reserve	(45)	— —	—	—	—	—	—	—	—
Net loss attributable to FuelCell Energy, Inc.	—	— —	(101,055)	—	—	—	(101,055)	—	(101,055)
Balance, October 31, 2021	<u>366,618,693</u>	<u>\$ 37 \$ 1,908,471</u>	<u>\$ (1,265,251)</u>	<u>\$ (819)</u>	<u>\$ (586)</u>	<u>\$ 586</u>	<u>\$ 642,438</u>	<u>\$ —</u>	<u>\$ 642,438</u>
Sale of common stock, net of fees	38,396,904	4 183,548	—	—	—	—	183,552	—	183,552
Common stock issued, non- employee compensation	76,848	— 305	—	—	—	—	305	—	305
Stock issued under benefit plans, net of taxes paid upon vesting of restricted stock awards	539,950	— (1,840)	—	—	—	—	(1,840)	—	(1,840)
Share based compensation	—	— 6,792	—	—	—	—	6,792	—	6,792
Preferred dividends — Series B	—	— (3,200)	—	—	—	—	(3,200)	—	(3,200)
Effect of foreign currency translation	—	— —	—	(933)	—	—	(933)	—	(933)
Adjustment for deferred compensation	(69,407)	— —	—	—	(269)	269	—	—	—
Reclassification of noncontrolling interest	—	— —	—	—	—	—	—	12,419	12,419
Return of capital to noncontrolling interest	—	— —	—	—	—	—	—	(496)	(496)
Distribution to noncontrolling interest	—	— —	—	—	—	—	—	(308)	(308)
Net loss attributable to noncontrolling interest	—	— —	4,510	—	—	—	4,510	(4,510)	—
Net Loss	—	— —	(147,232)	—	—	—	(147,232)	—	(147,232)
Balance, October 31, 2022	<u>405,562,988</u>	<u>\$ 41 \$ 2,094,076</u>	<u>\$ (1,407,973)</u>	<u>\$ (1,752)</u>	<u>\$ (855)</u>	<u>\$ 855</u>	<u>\$ 684,392</u>	<u>\$ 7,105</u>	<u>\$ 691,497</u>

See accompanying notes to consolidated financial statement

FUELCELL ENERGY, INC.
Consolidated Statements of Cash Flows
For the Years Ended October 31, 2022, 2021 and 2020
(Amounts in thousands)

	Year Ended October 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net loss	\$ (147,232)	\$ (101,025)	\$ (89,107)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	6,792	4,293	1,868
Depreciation and amortization	21,274	19,872	19,377
Change in fair value of common stock warrant liability	—	15,974	37,086
Loss (gain) on Series 1 preferred stock extinguishment	—	934	(475)
Non-cash interest expense on preferred stock and debt and finance obligations	4,210	4,438	7,570
Loss (gain) on extinguishment of debt and finance obligations	—	11,156	(1,801)
Unrealized (gain) loss on derivative contract	(779)	(478)	314
Operating lease costs	1,521	1,545	1,451
Operating lease payments	(1,438)	(1,226)	(1,016)
Impairment of property, plant and equipment and project assets	1,782	5,024	2,417
Unrealized foreign currency losses	583	—	—
Other, net	2,632	996	674
Decrease (increase) in operating assets:			
Accounts receivable	9,199	(5,167)	(6,271)
Unbilled receivables	(231)	(3,609)	(5,590)
Inventories	(28,058)	(18,755)	(2,111)
Other assets	(2,092)	(1,529)	(1,297)
Increase (decrease) in operating liabilities:			
Accounts payable	6,332	1,988	(7,059)
Accrued liabilities	24,616	317	5,465
Deferred revenue	(11,278)	(5,186)	1,724
Net cash used in operating activities	(112,167)	(70,438)	(36,781)
Cash flows from investing activities:			
Capital expenditures	(21,078)	(6,353)	(382)
Project asset expenditures	(25,573)	(66,877)	(31,527)
Asset acquisition	—	—	(611)
Net cash used in investing activities	(46,651)	(73,230)	(32,520)
Cash flows from financing activities:			
Repayment of debt	(9,544)	(98,642)	(30,117)
Proceeds from debt, net of debt discount	—	10,175	87,757
Common stock issued for stock plans and related expenses	47	18	5
Contributions received from sale of noncontrolling interest, net of return of capital	11,923	3,000	—
Distribution to noncontrolling interest	(308)	—	—
Payments for taxes related to net share settlement of equity awards	(1,887)	(339)	—
Payment for early extinguishment of debt	—	(4,000)	—
Payment of deferred financing costs	—	(363)	(2,697)
Repayment of Series 1 Preferred Share Obligation	—	(21,541)	—
Proceeds from sale of common stock and warrant exercises, net of fees	183,552	526,800	173,194
Payment of preferred dividends	(3,200)	(3,200)	(6,475)
Net cash provided by financing activities	180,583	411,908	221,667
Effects on cash from changes in foreign currency rates	(933)	(80)	(92)
Net increase in cash, cash equivalents and restricted cash	20,832	268,160	152,274
Cash, cash equivalents and restricted cash—beginning of period	460,212	192,052	39,778
Cash, cash equivalents and restricted cash—end of period	\$ 481,044	\$ 460,212	\$ 192,052

See accompanying notes to the consolidated financial statements.

Note 1. Nature of Business, Basis of Presentation and Significant Accounting Policies

Nature of Business and Basis of Presentation

Headquartered in Danbury, Connecticut, FuelCell Energy, Inc. (together with its subsidiaries, the “Company,” “FuelCell Energy,” “we,” “us,” or “our”) has leveraged five decades of research and development to become a global leader in delivering environmentally responsible distributed baseload power platform solutions through our proprietary fuel cell technology. Our current commercial technology produces electricity, heat, hydrogen, and water while separating carbon for utilization and/or sequestration. We continue to invest in developing and commercializing future technologies expected to add new capabilities to our platforms’ abilities to deliver hydrogen and long duration hydrogen-based energy storage through our solid oxide technologies, as well as further enhance our existing platforms’ carbon capture solutions.

FuelCell Energy is a global leader in sustainable clean energy technologies that address some of the world’s most critical challenges around energy access, security, safety and environmental stewardship. As a leading global manufacturer of proprietary fuel cell technology platforms, FuelCell Energy is uniquely positioned to serve customers worldwide with sustainable products and solutions for industrial and commercial businesses, utilities, governments, and municipalities.

The consolidated financial statements include our accounts, those of our wholly-owned subsidiaries, and those of our consolidated variable interest entities. All intercompany accounts and transactions have been eliminated.

Liquidity

Our principal sources of cash have been sales of our common stock through public equity offerings, proceeds from debt, project financing and tax monetization transactions, proceeds from the sale of our products and projects, as well as research and development and service agreements with third parties. We have utilized this cash to develop and construct project assets, invest in capital improvements and expansion of our operations, perform research and development on Advanced Technologies, pay down existing outstanding indebtedness, and meet our other cash and liquidity needs.

As of October 31, 2022, unrestricted cash and cash equivalents totaled \$458.1 million compared to \$432.2 million as of October 31, 2021.

In February 2021, the Company further reduced its debt by repaying the outstanding \$6.5 million Paycheck Protection Program Promissory Note from Liberty Bank under the Coronavirus Aid, Relief, and Economic Security Act.

On July 12, 2022, the Company entered into an Open Market Sale Agreement with Jefferies LLC, B. Riley Securities, Inc., Barclays Capital Inc., BMO Capital Markets Corp., BofA Securities, Inc., Canaccord Genuity LLC, Citigroup Global Markets Inc., J.P. Morgan Securities LLC and Loop Capital Markets LLC (the “Open Market Sale Agreement”) with respect to an at the market offering program under which the Company may, from time to time, offer and sell up to 95.0 million shares of the Company’s common stock. From the date of the Open Market Sale Agreement through October 31, 2022, the Company sold approximately 18.5 million shares under the Open Market Sale Agreement at an average sale price of \$3.63 per share, resulting in gross proceeds of approximately \$67.2 million before deducting sales commissions and fees. There were no sales during the fourth quarter of fiscal year 2022, but there were sales in the third quarter of fiscal year 2022 that settled in the fourth quarter of fiscal year 2022 (as described in our Quarterly Report on Form 10-Q for the quarter ended July 31, 2022). The Company currently intends to use the net proceeds from this offering to accelerate the development and commercialization of its product platforms (including, but not limited to, its solid oxide and carbon capture platforms), for project development, market development, and internal research and development, to invest in capacity expansion for solid oxide and carbonate fuel cell manufacturing, and for project financing, working capital support, and general corporate purposes. The Company may also use the net proceeds from this offering to invest in joint ventures, acquisitions, and strategic growth investments and to acquire, license or invest in products, technologies or businesses that complement its business. See Note 11. “Stockholders’ Equity and Warrant Liabilities” for additional information regarding the Open Market Sale Agreement.

On June 11, 2021, the Company entered into an Open Market Sale Agreement with Jefferies LLC and Barclays Capital Inc. (the “2021 Sales Agreement”) with respect to an at the market offering program under which the Company could, from time to time, offer and sell shares of the Company’s common stock having an aggregate offering price of up to \$500 million. From the date of the 2021 Sales Agreement through April 30, 2022, approximately 64.0 million shares of the Company’s common stock were sold under the 2021 Sales Agreement, resulting in aggregate gross proceeds of

approximately \$498.1 million before deducting sales commissions. Commissions of approximately \$10.0 million in the aggregate were paid to Jefferies LLC and Barclays Capital Inc. in connection with these sales, resulting in aggregate net proceeds to the Company of approximately \$488.1 million. No sales of common stock were made under the 2021 Sales Agreement after April 30, 2022, and no additional sales of common stock can or will be made under the 2021 Sales Agreement, as the Company, Jefferies LLC and Barclays Capital Inc. mutually agreed to terminate the 2021 Sales Agreement as of July 12, 2022.

We believe that our unrestricted cash and cash equivalents, expected receipts from our contracted backlog, and release of short-term restricted cash less expected disbursements over the next twelve months will be sufficient to allow the Company to meet its obligations for at least one year from the date of issuance of these financial statements.

To date, we have not achieved profitable operations or sustained positive cash flow from operations. The Company's future liquidity, for fiscal year 2023 and in the long-term, will depend on its ability to (i) timely complete current projects in process within budget, (ii) increase cash flows from its generation operating portfolio, including by meeting conditions required to timely commence operation of new projects, operating its generation operating portfolio in compliance with minimum performance guarantees and operating its generation operating portfolio in accordance with revenue expectations, (iii) obtain financing for project construction and manufacturing expansion, (iv) obtain permanent financing for its projects once constructed, (v) increase order and contract volumes, which would lead to additional product sales, service agreements and generation revenues, (vi) obtain funding for and receive payment for research and development under current and future Advanced Technologies contracts, (vii) successfully commercialize its Advanced Technologies platforms, including its solid oxide, hydrogen and carbon capture platforms, (viii) implement capacity expansion for solid oxide product manufacturing, (ix) implement the product cost reductions necessary to achieve profitable operations, (x) manage working capital and the Company's unrestricted cash balance and (xi) access the capital markets to raise funds through the sale of debt and equity securities, convertible notes, and other equity-linked instruments.

We are continually assessing different means by which to accelerate the Company's growth, enter new markets, commercialize new products, and enable capacity expansion. Therefore, from time to time, the Company may consider and enter into agreements for one or more of the following: negotiated financial transactions, minority investments, collaborative ventures, technology sharing, transfer or other technology license arrangements, joint ventures, partnerships, acquisitions or other business transactions for the purpose(s) of geographic or manufacturing expansion and/or new product or technology development and commercialization, including hydrogen production and storage and carbon capture, sequestration and utilization technologies.

Our business model requires substantial outside financing arrangements and satisfaction of the conditions of such arrangements to construct and deploy our projects to facilitate the growth of our business. The Company has invested capital raised from sales of its common stock to build out its project portfolio. The Company has also utilized and expects to continue to utilize a combination of long-term debt and tax equity financing (e.g., sale-leaseback and partnership transactions) to finance its project asset portfolio as these projects commence commercial operations. The Company may also seek to undertake private placements of debt securities of a portfolio of assets to finance its project asset portfolio. The proceeds of any such financing, if obtained, may allow the Company to reinvest capital back into the business and to fund other projects. We may also seek to obtain additional financing in both the debt and equity markets in the future. If financing is not available to us on acceptable terms if and when needed, or on terms acceptable to us or our lenders, if we do not satisfy the conditions of our financing arrangements, if we spend more than the financing approved for projects, if project costs exceed an amount that the Company can finance, or if we do not generate sufficient revenues or obtain capital sufficient for our corporate needs, we may be required to reduce or slow planned spending, reduce staffing, sell assets, seek alternative financing and take other measures, any of which could have a material adverse effect on our financial condition and operations.

Significant Accounting Policies

Cash and Cash Equivalents

All cash equivalents consist of investments in money market funds with original maturities of three months or less at the date of acquisition. We place our temporary cash investments with high credit quality financial institutions.

Inventories and Advance Payments to Vendors

Inventories consist principally of raw materials and work-in-process. Cost is determined using the first-in, first-out cost method. Included in our inventory balance are used modules that are brought back into inventory upon installation of new modules. When a new module is installed, a determination is made as to whether the used module has remaining useful life or should be scrapped and materials recycled. Modules that are deemed to have remaining useful life are put into inventory at an estimated value based on the expected remaining life of the module and its projected output. In certain circumstances, we will make advance payments to vendors for future inventory deliveries. These advance payments are recorded as Other current assets on the Consolidated Balance Sheets.

Inventories are reviewed to determine net realizable value. This review includes analyzing inventory levels of individual parts considering the current design of our products and production requirements as well as the expected inventory requirements for maintenance on installed power platforms.

Allowance for Doubtful Accounts and Credit Losses

The Company had no allowance for doubtful accounts or credit losses as of October 31, 2022 and 2021. Uncollectible accounts receivable are charged against the allowance for doubtful accounts when all collection efforts have failed and it is deemed unlikely that the amount will be recovered. The Company would record a specific reserve for individual accounts when the Company becomes aware of specific customer circumstances such as in the case of a bankruptcy filing or the deterioration in the customer's operating results or financial position.

Project Assets

Project assets consist of capitalized costs for fuel cell projects in various stages of development, including those projects with respect to which we have entered into power purchase agreements ("PPAs"), those projects with respect to which we expect to secure long-term contracts and those projects retained by the Company under a merchant model. Such development costs are generally incurred prior to entering into a definitive sales or long-term financing agreement for the project. Project assets also include capitalized costs for fuel cell projects which are the subject of a sale-leaseback transaction with PNC Energy Capital, LLC ("PNC") or Crestmark Equipment Finance, a division of MetaBank ("Crestmark"). Project asset costs include costs for developing and constructing a complete turn-key fuel cell project. Development costs can include legal, consulting, permitting, interconnect, and other similar costs. To the extent we enter into a definitive sales agreement, we expense project assets to cost of sales after the respective project asset is sold to a customer and all revenue recognition criteria have been met.

Property, Plant and Equipment

Property, plant and equipment are stated at cost, less accumulated depreciation which is recorded based on the straight-line method over the estimated useful lives of the respective assets. Leasehold improvements are amortized on the straight-line method over the shorter of the estimated useful lives of the assets or the term of the lease. When property is sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in operations for the period.

Goodwill and Indefinite-Lived Intangibles

Goodwill represents the excess of the aggregate purchase price over the fair value of the net assets acquired in a business combination and is reviewed for impairment at least annually. The intangible asset represents indefinite-lived in-process research and development for cumulative research and development efforts associated with the development of solid oxide fuel cell stationary power generation and is also reviewed at least annually for impairment.

Accounting Standards Codification Topic 350, "Intangibles - Goodwill and Other" ("ASC 350") permits the assessment of qualitative factors to determine whether events and circumstances lead to the conclusion that it is necessary to perform the goodwill impairment test required under ASC 350.

The Company completed its annual impairment analysis of goodwill and the in-process research & development asset ("IPR&D") as of July 31, 2022. The goodwill and IPR&D asset are both held by the Company's Versa Power Systems, Inc. ("Versa") reporting unit. Goodwill and the IPR&D asset are also reviewed for possible impairment whenever changes in

conditions indicate that the fair value of a reporting unit or IPR&D asset is more likely than not below its carrying value. No impairment charges were recorded with respect to goodwill or the IPR&D asset during the fiscal years ended October 31, 2022, 2021 and 2020.

Impairment of Long-Lived Assets (including Project Assets)

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group which pertains to specific projects may not be recoverable. If events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable, we compare the carrying amount of an asset group to future undiscounted net cash flows, excluding debt service costs, expected to be generated by the asset group and their ultimate disposition. If the sum of the undiscounted cash flows is less than the carrying value, the impairment to be recognized is measured by the amount by which the carrying amount of the asset group exceeds the fair value of the asset group.

Revenue Recognition

The Company recognizes revenue in accordance with Accounting Standards Codification (“ASC”) Topic 606: *Revenue from Contracts with Customers* (“Topic 606”). Under Topic 606: *Revenue from Contracts with Customers*, the amount of revenue recognized for any goods or services reflects the consideration that the Company expects to be entitled to receive in exchange for those goods and services. To achieve this core principle, the Company applies the following five-step approach: (1) identify the contract with the customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to performance obligations in the contract; and (5) recognize revenue when or as a performance obligation is satisfied.

A contract is accounted for when there has been approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Performance obligations under a contract are identified based on the goods or services that will be transferred to the customer that are both capable of being distinct and are distinct in the context of the contract. In certain instances, the Company has concluded distinct goods or services should be accounted for as a single performance obligation that is a series of distinct goods or services that have the same pattern of transfer to the customer. To the extent a contract includes multiple promised goods or services, the Company must apply judgment to determine whether the customer can benefit from the goods or services either on their own or together with other resources that are readily available to the customer (the goods or services are distinct) and if the promise to transfer the goods or services to the customer is separately identifiable from other promises in the contract (the goods or services are distinct in the context of the contract). If these criteria are not met, the promised services are accounted for as a single performance obligation. The transaction price is determined based on the consideration that the Company will be entitled to in exchange for transferring goods or services to the customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price, generally utilizing the expected value method. Determining the transaction price requires judgment. If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation based on a relative standalone selling price basis. Standalone selling price is determined by the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, the Company estimates the standalone selling price by taking into account available information such as market conditions and internally approved pricing guidelines related to the performance obligations. Performance obligations are satisfied either over time or at a point in time as discussed in further detail below. In addition, the Company’s contracts with customers generally do not include significant financing components or non-cash consideration. The Company has elected practical expedients in the accounting guidance that allow for revenue to be recorded in the amount that the Company has a right to invoice, if that amount corresponds directly with the value to the customer of the Company’s performance to date, and that allow the Company not to disclose related unsatisfied performance obligations. The Company records any amounts that are billed to customers in excess of revenue recognized as deferred revenue and revenue recognized in excess of amounts billed to customers as unbilled receivables.

Revenue streams are classified as follows:

Product. Includes the sale of completed project assets, sale and installation of fuel cell power platforms including site engineering and construction services, and the sale of modules, balance of plant (“BOP”) components and spare parts to customers.

Service. Includes performance under long-term service agreements for power platforms owned by third parties.

License and royalty. Includes license fees and royalty income from the licensure of intellectual property.

Generation. Includes the sale of electricity under PPAs and utility tariffs from project assets retained by the Company. This also includes revenue received from the sale of other value streams from these assets including the sale of heat, steam, capacity and renewable energy credits.

Advanced Technologies. Includes revenue from customer-sponsored and government-sponsored Advanced Technologies projects.

See below for a discussion of revenue recognition under Topic 606 by disaggregated revenue stream.

Completed project assets

Contracts for the sale of completed project assets include the sale of the project asset, the assignment of the service agreement, and the assignment of the PPA. The relative stand-alone selling price is estimated and is used as the basis for allocation of the contract consideration. Revenue is recognized upon the satisfaction of the performance obligations, which includes the transfer of control of the project asset to the customer, which is when the contract is signed and the PPA is assigned to the customer. See below for further discussion regarding revenue recognition for service agreements.

Contractual payments related to the sale of the project asset and assignment of the PPA are generally received up-front. Payment terms for service agreements are generally ratable over the term of the agreement.

Module Sales

Contracts for module sales represent the sale of a completed fuel cell module at a contracted selling price. These contracts are on a per unit basis and revenue is recognized as each unit is completed and ready to ship and the performance obligation is satisfied. Payment terms for the module sale are based on milestones achieved through the manufacturing timeline of the module.

Service agreements

Service agreements represent a single performance obligation whereby the Company performs all required maintenance and monitoring functions, including replacement of modules, to ensure the power platform(s) under the service agreement generate a minimum power output. To the extent the power platform(s) under service agreements do not achieve the minimum power output, certain service agreements include a performance guarantee penalty. Performance guarantee penalties represent variable consideration, which is estimated for each service agreement based on past experience, using the expected value method. The consideration for each service agreement is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress.

The Company reviews its cost estimates on service agreements on a quarterly basis and records any changes in estimates on a cumulative catch-up basis.

Loss accruals for service agreements are recognized to the extent that the estimated remaining costs to satisfy the performance obligation exceed the estimated remaining unrecognized consideration. Estimated losses are recognized in the period in which losses are identified.

Payment terms for service agreements are generally ratable over the term of the agreement.

Advanced Technologies contracts

Advanced Technologies contracts include the promise to perform research and development services and, as such, this represents one performance obligation. Revenue from most government sponsored Advanced Technologies projects is recognized as direct costs are incurred plus allowable overhead less cost share requirements, if any. Revenue is only recognized to the extent the contracts are funded. Revenue from previous fixed price Advanced Technologies projects is recognized using the cost-to-cost input method. Revenue recognition for research performed under the EMTEC Joint

Development Agreement (as defined elsewhere herein) also falls into the practical expedient category where revenue is recorded consistent with the amounts that are to be invoiced.

Payments are based on costs incurred for government sponsored Advanced Technologies projects and upon completion of milestones for previous fixed-price Advanced Technologies projects. Payments under the EMTEC Joint Development Agreement are based on time spent and material costs incurred.

License agreements

The Company entered into the License Agreements (as defined elsewhere herein) with POSCO Energy Co., Ltd. (“POSCO Energy”) in 2007, 2009 and 2012. In June 2020, the Company notified POSCO Energy that it was terminating the License Agreements and POSCO Energy disputed such termination (for more information, refer to Note 18. “Commitments and Contingencies”).

Prior to the date of the Company’s notice of termination, in connection with the adoption of Topic 606, several performance obligations were identified under the License Agreements, including previously satisfied performance obligations for the transfer of licensed intellectual property, two performance obligations for specified upgrades of the previously licensed intellectual property, a performance obligation to deliver unspecified upgrades to the previously licensed intellectual property on a when-and-if-available basis, and a performance obligation to provide technical support for previously delivered intellectual property.

- The performance obligations related to the specified upgrades would have been satisfied and the related consideration recognized as revenue upon the delivery of the specified upgrades. The Company did not recognize any revenue in fiscal years 2021 and 2020 related to specified upgrades.
- The performance obligations for unspecified upgrades and technical support were being recognized on a straight-line basis over the license term on the basis that this represented the method that best depicted the progress towards completion of the related performance obligations. The Company recognized revenue totaling \$0.8 million for the year ended October 31, 2020 related to unspecified upgrades and technical support.

All fixed consideration for the License Agreements was previously collected. The Company discontinued revenue recognition of the deferred license revenue related to the License Agreements in July 2020 given the then pending arbitrations.

The Company entered into the EMTEC Joint Development Agreement on November 5, 2019. The Company recorded license revenue of \$4.0 million in association with this agreement for the fiscal year ended October 31, 2020 which revenue was considered at a point-in-time upon the signing of the contract as the license is considered functional intellectual property because it has standalone functionality. The customer can use this intellectual property as it exists at a point in time and no further services are required from the Company.

Generation revenue

For certain project assets where customers purchase electricity from the Company under PPAs, the Company has determined that these agreements should be accounted for as operating leases pursuant to ASC 842, *Leases*. Revenue is recognized when electricity has been delivered based on the amount of electricity delivered at rates specified under the contracts, assuming all other revenue recognition criteria are met. Generation sales, to the extent the related PPAs are within the scope of Topic 606, are recognized as revenue in the period in which the Company provides the electricity and completes the performance obligation, which is the same as the monthly amount billed to customers.

Variable Interest Entities and Noncontrolling Interests

The Company closed on a tax equity financing transaction in August 2021 for the 7.4 MW fuel cell project (the “Groton Project”) located on the U.S. Navy Submarine Base in Groton, CT, which has been structured as a “partnership flip.” A partnership (the “Groton Partnership”) was organized with East West Bancorp, Inc. (“East West Bank”) to acquire from FuelCell Energy Finance II, LLC, a wholly-owned subsidiary of the Company, all of the outstanding equity interests in Groton Station Fuel Cell, LLC (the “Groton Project Company”). East West Bank has a conditional withdrawal right which

they can exercise and which would require the Company to pay 101% of the amount contributed by East West Bank to date. In addition, under this partnership flip structure, the Company has an option to acquire all of the equity interests that East West Bank holds in the Groton Partnership starting approximately five and a half years after the Groton Project is operational. If the Company exercises this option, the exercise price to be paid by the Company will be the greater of (1) the fair market value of East West Bank's equity interest at the time the option is exercised, (2) five percent of the \$15 million tax equity commitment and (3) East West Bank's claim in liquidation determined using the hypothetical liquidation at book value method.

The Groton Partnership is a Variable Interest Entity ("VIE") under U.S. GAAP. The Company has determined that it is the primary beneficiary in the Groton Partnership for accounting purposes. The Company has considered the provisions within the financing-related agreements (including the limited liability company agreement for the Groton Partnership) which grant the Company power to manage and make decisions affecting the operations of the Groton Partnership. The Company considers the rights granted to East West Bank under the agreements to be more protective in nature than participatory. Therefore, the Company has determined under the power and benefits criterion of Accounting Standards Codification 810, *Consolidations* ("ASC 810") that it is the primary beneficiary of the Groton Partnership. As the primary beneficiary, the Company consolidates in its consolidated financial statements the financial position, results of operations and cash flows of the Groton Partnership, and all intercompany balances and transactions between the Company and the Groton Partnership are eliminated in the consolidated financial statements. The Company recognized East West Bank's share of the net assets of the Groton Partnership, which was \$3.0 million as of each of October 31, 2022 and 2021, as a noncontrolling interest in mezzanine equity on its Consolidated Balance Sheets and will continue to do so until the conditional withdrawal period lapses upon commencement of operations. Upon commencement of operations of the related project asset, the Company expects to allocate profits and losses to the noncontrolling interest under the hypothetical liquidation at book value ("HLBV") method. HLBV is a balance sheet-oriented approach for allocating net income or loss to the noncontrolling interest when there is a complex structure, such as the partnership flip structure.

The Company closed on a tax equity financing transaction in November 2021 with Renewable Energy Investors, LLC ("REI"), a subsidiary of Franklin Park Infrastructure, LLC, for the 7.4 MW fuel cell project (the "LIPA Yaphank Project") located in Yaphank Long Island. REI's tax equity commitment totaled \$12.4 million. This transaction was structured as a "partnership flip," which is a structure commonly used by tax equity investors in the financing of renewable energy projects. Under this partnership flip structure, a partnership, in this case YTBFC Holdco, LLC (the "Yaphank Partnership"), was organized to acquire from FuelCell Energy Finance II, LLC, a wholly-owned subsidiary of the Company, all outstanding equity interests in Yaphank Fuel Cell Park, LLC, which in turn owns the LIPA Yaphank Project and is the party to the power purchase agreement and all project agreements. REI holds Class A Units in the Yaphank Partnership and a subsidiary of the Company holds the Class B Units. Under a partnership flip structure, tax equity investors agree to receive a minimum target rate of return, typically on an after-tax basis. Prior to receiving a contractual rate of return or a date specified in the contractual arrangements, REI will receive substantially all of the non-cash value attributable to the LIPA Yaphank Project, which includes accelerated depreciation and Section 48(a) investment tax credits; however, the Company will receive a majority of the cash distributions (based on the operating income of the LIPA Yaphank Project), which are paid quarterly. After REI receives its contractual rate of return, the Company will receive approximately 95% of the cash and tax allocations. The Company may enter into a back leverage debt financing transaction and use the cash distributions from the Yaphank Partnership to service the debt.

The Yaphank Partnership is a VIE under U.S. GAAP. The Company has considered the provisions within the financing-related agreements (including the limited liability company agreement for the Yaphank Partnership) which grant us power to manage and make decisions affecting the operations of the Yaphank Partnership. We consider the rights granted to REI under the agreements to be more protective in nature than participatory. Therefore, we have determined under the power and benefits criterion of ASC 810 that we are the primary beneficiary of the Yaphank Partnership. As the primary beneficiary, we consolidate the financial position, results of operations and cash flows of the Yaphank Partnership in our consolidated financial statements, and all intercompany balances and transactions between us and the Yaphank Partnership are eliminated. The Company recognized REI's share of the net assets of the Yaphank Partnership as noncontrolling interests in its Consolidated Balance Sheets. The income or loss allocations reflected in our Consolidated Statements of Operations and Comprehensive Loss may create volatility in our reported results of operations, including potentially changing net loss attributable to stockholders to net income attributable to stockholders, or vice versa, from quarter to quarter. The Company allocates profits and losses to REI's noncontrolling interest under the HLBV method.

Sale-Leaseback Accounting

The Company, through certain wholly-owned subsidiaries, has entered into sale-leaseback transactions for commissioned project assets where we have entered into a PPA with a customer who is both the site host and end user of the power. Due to the Company not meeting criteria to account for the transfer of the project assets as a sale, sale accounting is precluded. Accordingly, the Company uses the financing method to account for these transactions.

Under the financing method of accounting for a sale-leaseback, the Company does not derecognize the project assets and does not recognize as revenue any of the sale proceeds received from the lessor that contractually constitutes payment to acquire the assets subject to these arrangements. Instead, the sale proceeds received are accounted for as finance obligations and leaseback payments made by the Company are allocated between interest expense and a reduction to the finance obligation. Interest on the finance obligation is calculated using the Company's incremental borrowing rate at the inception of the arrangement on the outstanding finance obligation.

Lease Accounting

Right-of-use ("ROU") assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the present value of the Company's obligation to make lease payments arising from the lease over the lease term at the commencement date of the lease. As most of the Company's leases do not provide an implicit rate, the Company estimated the incremental borrowing rate based on the information available at the date of adoption in determining the present value of lease payments and used the implicit rate when readily determinable. The Company determined incremental borrowing rates through market sources for secured borrowings including relevant industry rates. The Company's operating lease ROU assets also include any lease pre-payments and exclude lease incentives. Certain of the Company's leases include variable payments, which may vary based upon changes in facts or circumstances after the start of the lease. The Company excludes variable payments from lease ROU assets and lease liabilities to the extent not considered in-substance fixed, and instead, expenses variable payments as incurred. Variable lease expense and lease expense for short term contracts are not material components of lease expense. The Company's leases generally have remaining lease terms of 1 to 26 years, some of which include options to extend leases. The exercise of lease renewal options is at the Company's sole discretion and the Company's lease ROU assets and liabilities reflect only the options the Company is reasonably certain that it will exercise. We do not have leases with residual value guarantees or similar covenants.

Service Expense Recognition

We warranty our products for a specific period of time against manufacturing or performance defects. Our U.S. warranty is generally limited to a term of 15 months after shipment or 12 months after acceptance of our products. We accrue for estimated future warranty costs based on historical experience. We also provide for a specific accrual if there is a known issue requiring repair during the warranty period. Estimates used to record warranty accruals are updated as we gain further operating experience.

In addition to the standard product warranty, we have entered into service agreements with certain customers to provide monitoring, maintenance and repair services for fuel cell power platforms. Under the terms of these service agreements, the power platform must meet a minimum operating output during the term. If the minimum output falls below the contract requirement, we may be subject to performance penalties or may be required to repair and/or replace the customer's fuel cell module(s).

The Company records loss accruals for service agreements when the estimated cost of future module exchanges and maintenance and monitoring activities exceeds the remaining unrecognized contract value. Estimates for future costs on service agreements are determined by a number of factors including the estimated remaining life of the module(s), used replacement modules available and future operating plans for the power platform. Our estimates are performed on a contract by contract basis and include cost assumptions based on what we anticipate the service requirements will be to fulfill obligations for each contract.

At the end of our service agreements, customers are expected to either renew the service agreement or, based on the Company's rights to title of the module, the module will be returned to the Company as the platform is no longer being maintained.

Research and Development Costs

We perform both customer-sponsored research and development projects based on contractual agreements with customers and company-sponsored research and development projects.

Costs incurred for customer-sponsored projects include manufacturing and engineering labor, applicable overhead expenses, materials to build and test prototype units and other costs associated with customer-sponsored research and development contracts. Costs incurred for customer-sponsored projects are recorded as cost of Advanced Technologies contract revenues in the Consolidated Statements of Operations and Comprehensive Loss.

Costs incurred for company-sponsored research and development projects consist primarily of labor, overhead, materials to build and test prototype units and consulting fees. These costs are recorded as research and development expenses in the Consolidated Statements of Operations and Comprehensive Loss.

Concentrations

We contract with a concentrated number of customers for the sale of our products, for service agreement contracts and for Advanced Technologies contracts. For the years ended October 31, 2022, 2021 and 2020, our top customers accounted for 87%, 79% and 80%, respectively, of our total annual consolidated revenue.

The percent of consolidated revenues from each customer for the years ended October 31, 2022, 2021 and 2020, respectively, are presented below.

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Korea Fuel Cell Co., Ltd (KFC)	46 %	— %	— %
Connecticut Light and Power	14 %	20 %	17 %
ExxonMobil Technology and Engineering Company (f/k/a ExxonMobil Research and Engineering Company) (EMTEC)	8 %	29 %	32 %
Korea Southern Power Company (KOSPO)	6 %	12 %	— %
U.S. Department of Energy (DOE)	6 %	8 %	9 %
Long Island Power Authority (LIPA)	5 %	— %	— %
Pfizer, Inc.	2 %	5 %	4 %
UIL Holdings Corporation	— %	5 %	18 %
Total	<u>87 %</u>	<u>79 %</u>	<u>80 %</u>

Derivatives

We do not use derivatives for speculative or trading purposes. The Company has an interest rate swap that is adjusted to fair value on a quarterly basis. The fair value adjustment is based on Level 2 inputs including primarily the forward LIBOR curve available to swap dealers. The fair value methodology involves comparison of (i) the sum of the present value of all monthly variable rate payments based on a reset rate using the forward LIBOR curve and (ii) the sum of the present value of all monthly fixed rate payments on the notional amount which is equivalent to the outstanding principal amount of the loan. On August 1, 2022, the Company entered into an amendment to its interest rate swap agreement that replaced LIBOR with Term Secured Overnight Financing Rate (“SOFR”) effective as of June 2023. Refer to Note 10. “Debt” for further details.

Use of Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the U.S. (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Estimates are used in accounting for, among other things, revenue recognition, lease right-of-use assets and liabilities, contract loss accruals, excess, slow-moving and obsolete inventories, product warranty accruals, loss accruals on service agreements, share-based compensation expense, allowance for doubtful accounts, depreciation and amortization, impairment of goodwill and in-process research and development intangible assets, impairment of long-lived assets (including project assets), and contingencies. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected in the

consolidated financial statements in the period they are determined to be necessary. Due to the inherent uncertainty involved in making estimates, actual results in future periods may differ from those estimates.

Foreign Currency Translation

The translation of the financial statements of FCE Korea Ltd., FCES GmbH and Versa Power Systems Ltd. results in translation gains or losses, which are recorded in accumulated other comprehensive loss within stockholders' equity.

Our Canadian subsidiary, FCE FuelCell Energy Ltd., is financially and operationally integrated and the functional currency is the U.S. dollar. We are also subject to foreign currency transaction gains and losses as certain transactions are denominated in foreign currencies. We recognized net foreign currency transaction (losses) gains of \$(0.9) million, \$(0.9) million and \$0.2 million for the years ended October 31, 2022, 2021 and 2020, respectively. These amounts have been included in Other income (expense), net in the Consolidated Statements of Operations and Comprehensive Loss.

Recently Adopted Accounting Guidance

There is no recently adopted accounting guidance applicable to the Company's financial statements.

Recent Accounting Guidance Not Yet Effective

There is no recent accounting guidance not yet effective that is expected to have a material impact on the Company's financial statements when adopted.

Note 2. Revenue Recognition

Contract Balances

Contract assets as of October 31, 2022 and 2021 were \$20.7 million (\$9.7 million long-term) and \$20.5 million (\$11.6 million long-term), respectively. The contract assets relate to the Company's rights to consideration for work completed but not billed. These amounts are included on a separate line item as Unbilled receivables, and balances expected to be billed later than one year from the balance sheet date are included within Other assets on the accompanying Consolidated Balance Sheets. We bill customers for power platform and power platform component sales based on certain contractual milestones being reached. We bill service agreements based on the contract price and billing terms of the contracts. Generally, our Advanced Technologies contracts are billed based on actual revenues recorded, typically in the subsequent month. Some Advanced Technologies contracts are billed based on contractual milestones or costs incurred. The net change in contract assets represents amounts recognized as revenue offset by customer billings. For the years ended October 31, 2022 and 2021, a total of \$5.3 million and \$5.2 million, respectively, was transferred to accounts receivable from contract assets recognized at the beginning of the period.

Contract liabilities as of October 31, 2022 and 2021 were \$25.4 million and \$36.7 million, respectively. The contract liabilities relate to the advance billings to customers for services that will be recognized over time and in some instances for deferred revenue relating to license performance obligations that will be recognized at a future point in time. The Company discontinued revenue recognition of the deferred license revenue related to the License Agreements in July 2020 given the then pending arbitrations. As of October 31, 2021, \$22.2 million related to the License Agreements is included within Long-term deferred revenue on the accompanying Consolidated Balance Sheets. During the first quarter of fiscal year 2022, \$22.2 million related to the POSCO Energy License Agreements was reclassified from deferred revenue to customer deposits within Long-term deferred revenue and customer deposits on the accompanying Consolidated Balance Sheets.

The net change in contract liabilities represents customer billings offset by revenue recognized.

Contract modification

As a result of the settlement reached with POSCO Energy Co., Ltd. ("POSCO Energy") (see Note 18. "Commitments and Contingencies" for further background), the Company evaluated the License Agreements with POSCO Energy as well as all of the terms of the settlement agreement with POSCO Energy, which was effective December 20, 2021 (the "Settlement

Agreement”). As part of this analysis, the Company considered the accounting surrounding the execution of the Settlement Agreement, reviewed all elements related to the License Agreements with POSCO Energy and the Settlement Agreement and considered any potential contingencies in the License Agreements and whether any proceeds were related to the litigation settlement.

Under the terms of the Settlement Agreement, the Company agreed that the License Agreements are not terminated, but instead are deemed to be amended such that POSCO Energy and its subsidiary, Korea Fuel Cell Co., Ltd. (“KFC”, and with POSCO Energy, collectively, “PE Group”), only have the right (i) to provide maintenance and repair services to PE Group’s existing customers on existing molten carbonate power generation and thermal projects under long-term service agreements currently in force as well as long-term service agreements that have expired and are pending renewal as of the settlement date (collectively, “Existing LTSAs”), (ii) to supply replacement modules purchased from the Company only for their existing customers for existing molten carbonate power generation and thermal projects under Existing LTSAs and (iii) to own, operate and maintain all facilities and factories solely for the purposes set forth in (i) and (ii) above (collectively, the “Right to Service License”) and further agreed to sell modules with a service warranty pursuant to a module sales agreement to be negotiated by the parties after execution of the Settlement Agreement. As such, the Company has considered the execution of the Settlement Agreement to be a contract modification as it results in a change in both the scope and price of a contract with a customer. Therefore, the Company accounted for such modification under the contract modification guidance included within ASC 606 (Revenue from Contracts with Customers). Further, the Company noted that none of the parties to the Settlement Agreement specifically acknowledged any payment of damages or reimbursement of any costs related to the matters settled under the Settlement Agreement, which supports the conclusion that the overall settlement is a form of contract modification. Additionally, the transaction price allocated to the modified contract did not exceed the stand-alone selling prices (“SSP”) of the performance obligations under the modified contract (i.e., there is no indication of a premium that would indicate that a portion of the transaction price relates to something other than the promised goods or services).

The Company has identified two performance obligations in the Settlement Agreement which includes the sale of 20 modules and an option to purchase an additional 14 modules. The Company assessed the SSP of the modules utilizing a cost-plus margin approach to arrive at \$3.0 million per module which will be recognized upon transfer of control of such modules to KFC via title transfer consistent with the Company’s established revenue recognition policies. The Company is also providing a performance guarantee for up to seven years with each module to cover any annual output penalty that would need to be paid by PE Group to a customer. The Company determined that this performance guarantee represents variable consideration and estimated a value of \$0.65 million per module, which resulted in accrual of \$13.1 million for the year ended October 31, 2022 upon the sale of twenty modules during the year ended October 31, 2022. This variable consideration will be recognized as revenue if and when it is determined that there are no amounts due under the performance guarantee. In its analysis at the time of execution of the Settlement Agreement, the Company determined that it was probable that KFC would exercise its option to purchase an additional 14 modules (with a performance guarantee) beyond the firm order of 20 modules, to which it is contractually committed. Given that the license rights for which the Company was previously recognizing revenue are no longer in place and the Company now has a new revenue stream from the sale of modules, the \$22.2 million of deferred license revenue was recharacterized as a customer deposit, of which \$13.1 million was recorded as variable consideration within Long-term debt and other liabilities on the accompanying Consolidated Balance Sheets. The Company will monitor the variable consideration based on the performance of the modules and revise our estimates as necessary. Should KFC’s right to purchase the additional 14 modules expire without being exercised on December 31, 2022, it could result in the Company recognizing revenue for the amount equal to the value of the material right.

EMTEC Joint Development Agreement

Effective as of October 31, 2019, the Company entered into a Joint Development Agreement (as amended, the “EMTEC Joint Development Agreement”) with ExxonMobil Technology and Engineering Company (formerly known as ExxonMobil Research and Engineering Company) (“EMTEC”), pursuant to which the Company has engaged in exclusive research and development efforts with EMTEC to evaluate and develop new and/or improved carbonate fuel cells to reduce carbon dioxide emissions from industrial and power sources, in exchange for (i) payment by EMTEC of certain fees and costs (including research costs of up to \$45.0 million) as well as certain milestone-based payments, and (ii) certain licenses.

In Amendment No. 1 to the EMTEC Joint Development Agreement (“Amendment No. 1”), which was executed on October 29, 2021 and effective as of October 31, 2021, the Company and EMTEC agreed, among other things, to extend the term of the EMTEC Joint Development Agreement for an additional six months ending on April 30, 2022. Amendment No. 1 allowed for the continuation of research intended to enable incorporation of design improvements to Company fuel cell design in order to support a decision to use the improvements in a potential future demonstration of the technology for capturing carbon at ExxonMobil’s Rotterdam refinery in The Netherlands (such demonstration, the “Rotterdam Project”) and provided additional time to achieve the first milestone under the EMTEC Joint Development Agreement.

In a related letter agreement between the Company and EMTEC dated as of October 28, 2021 and executed on October 29, 2021 (the “Letter Agreement”), the Company agreed to invest with EMTEC in the Rotterdam Project, should EMTEC move forward with the Rotterdam Project. In the Letter Agreement, the Company agreed that, if (i) the Company achieves the first milestone under the EMTEC Joint Development Agreement (which the Company achieved in the first quarter of fiscal year 2022, resulting in a \$5.0 million payment to the Company which the Company received in the second quarter of fiscal year 2022) and (ii) EMTEC and the Company execute a contractual agreement to proceed with the Rotterdam Project (which has not occurred), then at EMTEC’s option, the Company will either make an investment in the amount of \$5.0 million in the Rotterdam Project or discount EMTEC’s purchase of the Company’s fuel cell module and detailed engineering design, as agreed to by the parties, required for the Rotterdam Project by said amount.

On April 29, 2022, the Company and EMTEC entered into Amendment No. 2 (“Amendment No. 2”) to the EMTEC Joint Development Agreement which was effective as of April 30, 2022 and which increased the maximum amount of research costs to be reimbursed by EMTEC from \$45.0 million to \$50.0 million and extended the term an additional eight months, ending December 31, 2022 (unless terminated earlier). In Amendment No. 2, the Company and EMTEC also agreed to conduct a joint market study, with a target completion date on or before October 31, 2022, to (a) define application opportunities, commercialization strategies, and development requirements, (b) identify partners for potential pilot/demonstration projects and (c) assess fuel cell/stack/module manufacturing scale-up and cost reduction. As of October 31, 2022, the Company and EMTEC were still collaborating on the joint market study, which was completed in early fiscal year 2023.

During the fiscal year ended October 31, 2022, the Company achieved the first technical milestone under the EMTEC Joint Development Agreement and received payment of \$5.0 million. The Company has not recognized revenue in connection with this milestone achievement as a result of its agreement, in the Letter Agreement described above, to either make a \$5.0 million investment in the Rotterdam Project or discount EMTEC’s purchase of the Company’s fuel cell module and detailed engineering design for the Rotterdam Project by \$5.0 million, should the Company enter into a contract with EMTEC to proceed with the Rotterdam Project. The Company will continue to evaluate revenue recognition of this milestone achievement as project negotiations with ExxonMobil (or a subsidiary thereof) evolve.

Remaining Performance Obligations

Remaining performance obligations are the aggregate amount of total contract transaction price that is unsatisfied or partially unsatisfied. As of October 31, 2022, the Company’s total remaining performance obligations for service agreements was \$114.0 million, for Advanced Technologies contracts was \$22.9 million and for product revenues was \$9.1 million. Service revenue in periods in which there are no module exchanges is expected to be relatively consistent from period to period, whereas module exchanges will result in an increase in revenue when replacements occur.

Note 3. Tax Equity Financing

Groton Tax Equity Financing Transaction

The Company closed on a tax equity financing transaction in August 2021 with East West Bank for the 7.4 MW Groton Project located on the U.S. Navy Submarine Base in Groton, CT (the “Groton Project”). East West Bank’s tax equity commitment totals \$15 million.

This transaction was structured as a “partnership flip”, which is a structure commonly used by tax equity investors in the financing of renewable energy projects. Under this partnership flip structure, a partnership, in this case Groton Station Fuel Cell Holdco, LLC (the “Groton Partnership”), was organized to acquire from FuelCell Energy Finance II, LLC, a wholly-owned subsidiary of the Company, all outstanding equity interests in Groton Station Fuel Cell, LLC (the “Groton Project Company”) which in turn owns the Groton Project and is the party to the power purchase agreement and all project agreements. At the closing of the transaction, the Groton Partnership is owned by East West Bank, holding Class A Units, and Fuel Cell Energy Finance Holdco, LLC, a subsidiary of FuelCell Energy Finance, LLC, holding Class B Units. The acquisition of the Groton Project Company by the Groton Partnership was funded in part by an initial draw from East West Bank and funds contributed downstream to the Groton Partnership by the Company. The initial closing occurred on August 4, 2021, upon the satisfaction of certain conditions precedent (including the receipt of an appraisal and confirmation that the Groton Project would be eligible for the investment tax credit under Section 48 of the Internal Revenue Code of 1986, as amended). In connection with the initial closing, the Company drew down \$3.0 million, of which approximately \$0.8 million was used to pay closing costs including appraisal fees, title insurance expenses and legal and consulting fees. Under the original terms of the Company’s agreement with East West Bank, the Company would have been eligible to draw the remaining amount of the commitment, approximately \$12 million, once the Groton Project achieves commercial operations. In addition, under the original terms of the Company’s agreement with East West Bank, the Groton Project had a required commercial operations deadline of October 18, 2021. The significance of the commercial operations deadline is that, if commercial operations were not achieved by such deadline, East West Bank would have the option to require an amount equal to 101% of its investment to be returned. East West Bank granted several extensions of the commercial operations deadline, which collectively extended the deadline to May 15, 2022, in exchange for the Company’s agreement to pay fees of \$0.4 million in the aggregate. The Company recognized a loss of \$30 thousand for the fiscal year ended October 31, 2021 which is attributable to the noncontrolling interest reflecting the 1% conditional withdrawal.

On July 7, 2022, the Company and East West Bank amended their tax equity financing agreement and extended the commercial operations deadline to September 30, 2022. In addition, in the July 7, 2022 amendment to the tax equity financing agreement, the terms of East West Bank’s remaining investment commitment of \$12.0 million were modified such that East West Bank will contribute \$4.0 million on each of the first, second and third anniversaries of the Groton Project achieving commercial operations, rather than contributing the full \$12.0 million when the Groton Project achieves commercial operations. Such contributions are subject to certain customer conditions precedent, including a third-party certification by an independent engineer that the plant is operating in conformance with the amended and restated power purchase agreement. When such contributions are made by East West Bank, the funds will be distributed upstream to the Company, as a reimbursement of prior construction costs incurred by the Company. In conjunction with this amendment, the Company agreed to pay aggregate fees of \$0.5 million (which are inclusive of the fees from the previous extensions described above), which were payable by the Company upon commencement of commercial operations of the plant.

On October 4, 2022, the Company and East West Bank further amended their tax equity financing agreement to extend the deadline by which commercial operations were to be achieved at the Groton Project from September 30, 2022 to November 30, 2022. In addition, modifications to the Groton Project documents between Connecticut Municipal Electric Energy Cooperative (“CMEEC”) and the Company as a result of the agreement between those parties to commence operations at less than 7.4 MW required the approval of East West Bank as part of East West Bank’s rights under the agreement between East West Bank and the Company. On December 16, 2022, the Company and CMEEC agreed that, for all purposes, the commercial operations date has occurred, and, accordingly, East West Bank no longer has a right to have its investment returned and this investment became a non-redeemable noncontrolling interest as of December 16, 2022. In addition, on December 16, 2022, the Company paid the aggregate fees of \$0.5 million described above to East West Bank. Refer to Note 20. “Subsequent Events” for additional details.

Under most partnership flip structures, tax equity investors agree to receive a minimum target rate of return, typically on an after-tax basis. Prior to receiving a contractual rate of return or a date specified in the contractual arrangements, East

West Bank will receive substantially all of the non-cash value attributable to the Groton Project, which includes accelerated depreciation and Section 48(a) investment tax credits; however, the Company will receive a majority of the cash distributions (based on the operating income of the Groton Project), which are paid quarterly. After East West Bank receives its contractual rate of return, the Company will receive approximately 95% of the cash and tax allocations. The Company (through a separate wholly owned entity) may enter into a back leverage debt financing transaction and use the cash distributions from the Groton Partnership to service the debt.

Yaphank Tax Equity Financing Transaction

The Company closed on a tax equity financing transaction in November 2021 with Renewable Energy Investors, LLC (“REI”), a subsidiary of Franklin Park Infrastructure, LLC, for the 7.4 MW fuel cell project (the “LIPA Yaphank Project”) located in Yaphank Long Island. REI’s tax equity commitment totaled \$12.4 million.

This transaction was structured as a “partnership flip,” which is a structure commonly used by tax equity investors in the financing of renewable energy projects. Under this partnership flip structure, a partnership, in this case YTBFC Holdco, LLC (the “Yaphank Partnership”), was organized to acquire from FuelCell Energy Finance II, LLC, a wholly-owned subsidiary of the Company, all outstanding equity interests in Yaphank Fuel Cell Park, LLC, which in turn owns the LIPA Yaphank Project and is the party to the power purchase agreement and all project agreements. REI holds Class A Units in the Yaphank Partnership and a subsidiary of the Company holds the Class B Units. The initial funding occurred on December 13, 2021, upon the satisfaction of certain conditions precedent (including the receipt of an appraisal and confirmation that the LIPA Yaphank Project would be eligible for the investment tax credit (“ITC”) under Section 48 of the Internal Revenue Code of 1986, as amended). In connection with the initial closing, the Company was able to draw down approximately \$3.2 million, of which approximately \$0.4 million was used to pay closing costs, including title insurance expenses and legal and consulting fees. The Company drew down the remaining amount of the commitment, approximately \$9.2 million, in December 2021 and January 2022, after the LIPA Yaphank Project achieved commercial operation. These proceeds were partially offset by legal and advisory fees of approximately \$0.4 million.

The Company determined during the second quarter of fiscal year 2022 that there was an overpayment by REI of the Class A Member Capital Contribution of \$0.5 million and as such the Company refunded this amount back to REI, reducing the REI tax equity commitment to \$11.9 million. During the year ended October 31, 2022, the Company made priority return distributions to REI of \$0.3 million, which was calculated at a 2.73% annual interest rate on invested tax equity capital.

Under a partnership flip structure, tax equity investors agree to receive a minimum target rate of return, typically on an after-tax basis. Prior to receiving a contractual rate of return or a date specified in the contractual arrangements, REI will receive substantially all of the non-cash value attributable to the LIPA Yaphank Project, which includes accelerated depreciation and Section 48(a) investment tax credits; however, the Company will receive a majority of the cash distributions (based on the operating income of the LIPA Yaphank Project), which are paid quarterly. After REI receives its contractual rate of return, the Company will receive approximately 95% of the cash and tax allocations. The Company may enter into a back leverage debt financing transaction and use the cash distributions from the Yaphank Partnership to service the debt.

Under this partnership flip structure, after the fifth anniversary following achievement of commercial operations, we have an option to acquire all of the equity interests that REI holds in the Yaphank Partnership starting after REI receives its contractual rate of return (the anticipated “flip” date) after the LIPA Yaphank Project is operational. If we exercise this option, we will be required to pay the greater of the following: (i) the fair market value of REI’s equity interest at the time the option is exercised or (ii) an amount equal to 10.3% of REI’s capital contributions. This option payment is to be grossed up for federal taxes if it exceeds the tax basis of the Yaphank Partnership Class A Units.

Note 4. Inventories

Inventories (short and long-term) as of October 31, 2022 and 2021 consisted of the following (in thousands):

	October 31, 2022	October 31, 2021
Raw materials	\$ 30,624	\$ 25,968
Work-in-process ⁽¹⁾	67,834	45,692
Inventories	98,458	71,660
Inventories – current	(90,909)	(67,074)
Inventories – long-term ⁽²⁾	\$ 7,549	\$ 4,586

- (1) Work-in-process includes the standard components of inventory used to build the typical modules or module components that are intended to be used in future project asset construction or power platform orders or for use under the Company's service agreements. Included in work-in-process as of October 31, 2022 and 2021 was \$54.0 million and \$39.7 million, respectively, of completed standard components and modules.
- (2) Long-term inventory includes modules that are contractually required to be segregated for use as replacement modules for a specific project asset.

Raw materials consist mainly of various nickel powders and steels, various other components used in producing cell stacks and purchased components for BOP. Work-in-process inventory is comprised of material, labor, and overhead costs incurred to build fuel cell stacks and modules, which are subcomponents of a power platform.

Note 5. Project Assets

Project assets as of October 31, 2022 and 2021 consisted of the following (in thousands):

	October 31, 2022	October 31, 2021	Estimated Useful Life
Project Assets – Operating	\$ 154,736	\$ 116,286	4-20 years
Accumulated depreciation	(29,546)	(19,844)	
Project Assets – Operating, net	125,190	96,442	
Project Assets – Construction in progress	107,696	126,835	7-20 years
Project Assets, net	\$ 232,886	\$ 223,277	

The estimated useful lives of these project assets are 20 years for BOP and site construction, and four to seven years for modules. Project assets as of October 31, 2022 and 2021 included eight completed, commissioned installations generating power with respect to which the Company has a PPA with the end-user of power and site host with a net aggregate value of \$125.2 million and \$96.4 million as of October 31, 2022 and 2021, respectively. Certain of these assets are the subject of sale-leaseback arrangements with PNC and Crestmark.

Project assets as of October 31, 2022 and 2021 also include installations with carrying values of \$107.7 million and \$126.8 million, respectively, which are being developed and constructed by the Company in connection with projects for which we have entered into PPAs or projects for which we expect to secure PPAs or otherwise recover the asset value and which have not yet been placed in service.

Fiscal Year 2022 Charges, Including Impairment Charges

Included in "Construction in progress" is the 2.3 MW Toyota project. It was determined in the fourth quarter of fiscal year 2021 that a potential source of renewable natural gas ("RNG") at favorable pricing was no longer sufficiently probable and that market pricing for RNG had significantly increased, resulting in the determination that the carrying value of the project asset was no longer recoverable. Refer to Note 18. "Commitments and Contingencies" for more information regarding fuel risk exposure. Charges for the year ended October 31, 2022 were \$22.1 million, which represents the carrying value of the project asset less the carrying value of inventory components that could be redeployed for alternative use. As this project is being constructed, only inventory components that can be redeployed for alternative use are being capitalized. The balance of costs incurred are being expensed as generation cost of revenues.

In the fourth quarter of fiscal year 2022, the Company made the decision not to proceed with development of the 7.4 MW and 1.0 MW Hartford projects given the then current economic profile of these projects. As a result, the Company recorded a \$0.8 million impairment charge. The Company intends to seek modifications to the PPAs relating to these projects, however, there can be no assurance that such modifications will be acceptable to the counterparties (Eversource and United Illuminating) or approved by Connecticut regulators.

Fiscal Year 2021 Impairment Charges

In the fourth quarter of fiscal year 2021, the Company recorded project asset impairment charges for (i) the Triangle Street Project, (ii) the LIPA Brookhaven and Clare Rose Projects, and (iii) the Toyota Project, which are further described as follows:

- i. *Impairment charge for the Triangle Street Project:* In the fourth quarter of fiscal year 2021, based upon the carrying value of the components that can be removed and utilized to service similar project assets and due to the uncertainty as to whether the project asset will generate further cash flows, the Company recorded an impairment charge of \$0.4 million. The remaining carrying value was \$5.6 million as of October 31, 2021.
- ii. *Impairment charge for the LIPA Brookhaven and Clare Rose Projects:* As previously reported, in July 2017, the Company was awarded three projects on Long Island, New York totaling 39.8 MW by the Long Island Power Authority (“LIPA”). In December 2018, the Company executed a power purchase agreement for one of the three awards (a 7.4 MW project in Yaphank, Long Island). The other two awards, for which there are no executed power purchase agreements (and which are referred to herein as the LIPA Brookhaven and Clare Rose Projects), had been progressing through the required interconnect process while the Company worked to find a commercial resolution and enter into such agreements with LIPA. Given the passage of time without a resolution, the Company made a decision to no longer pursue the interconnection process and will no longer pursue development of the LIPA Brookhaven and Clare Rose Projects. As a result of this decision, in the fourth quarter of fiscal year 2021, the Company recorded a charge of \$1.8 million to impair the carrying value of the development costs for these two projects.
- iii. *Impairment charge for the Toyota Project:* A \$2.8 million charge was recorded in the fourth quarter of fiscal year 2021, which represents the carrying value of the project asset less the carrying value of inventory components that could be redeployed for alternative use.

Fiscal Year 2020 Impairment Charges

In the fourth quarter of fiscal year 2020, the Company reviewed the Triangle Street Project and, as a result of output and revenue projections given then-current development plans, recorded an additional impairment charge of \$2.4 million. The Triangle Street Project is used by the Company as a development platform for the Company’s advanced applications. Because we use the platform for development activities, generation revenue has been negatively impacted.

Impairment charges are recorded as cost of generation revenues in the Consolidated Statements of Operations and Comprehensive Loss.

Depreciation expense for project assets was \$14.2 million, \$13.7 million and \$12.9 million for the years ended October 31, 2022, 2021 and 2020, respectively.

Project construction costs incurred for long-term project assets are reported as investing activities in the Consolidated Statements of Cash Flows. The proceeds received from the sale and subsequent leaseback of project assets are classified as “Cash flows from financing activities” within the Consolidated Statements of Cash Flows and are classified as a finance obligation within “Current portion of long-term debt” and “Long-term debt and other liabilities” on the Consolidated Balance Sheets (refer to Note 10. “Debt” for more information).

Note 6. Property, Plant and Equipment

Property, plant and equipment as of October 31, 2022 and 2021 consisted of the following (in thousands):

	October 31, 2022	October 31, 2021	Estimated Useful Life
Land	\$ 524	\$ 524	—
Building and improvements	21,216	20,865	10-26 years
Machinery, equipment and software	108,656	109,449	3-8 years
Furniture and fixtures	4,354	4,325	10 years
Construction in progress	26,484	6,424	—
	<u>161,234</u>	<u>141,587</u>	
Accumulated depreciation	(103,097)	(102,171)	
Property, plant and equipment, net	<u>\$ 58,137</u>	<u>\$ 39,416</u>	

The Company recorded an impairment charge of approximately \$1.0 million during the year ended October 31, 2022 (related to the cessation of operations at a conditioning facility in Danbury, CT, which is being replaced by a new conditioning facility located at our Torrington, CT manufacturing facility as a part of our fiscal year 2022 and 2023 capital investments). There were no impairments of property, plant and equipment for the years ended October 31, 2021 and 2020.

Depreciation expense for property, plant and equipment was \$5.8 million, \$4.9 million and \$5.1 million for the years ended October 31, 2022, 2021 and 2020, respectively.

Note 7. Goodwill and Intangible Assets

As of October 31, 2022 and 2021, the Company had goodwill of \$4.1 million and intangible assets of \$17.4 million and \$18.7 million, respectively, that were recorded in connection with the Company's 2012 acquisition of Versa Power Systems Inc. ("Versa") and the 2019 Bridgeport Fuel Cell Project acquisition.

The Versa acquisition intangible asset represents indefinite-lived IPR&D for cumulative research and development efforts associated with the development of solid oxide fuel cell stationary power generation. The Company completed its annual impairment analysis of goodwill and IPR&D assets as of July 31, 2022. The Company performed a qualitative analysis for fiscal year 2022 and determined that there was no impairment of goodwill or the indefinite-lived intangible asset. Additionally, there were no impairments of goodwill or the indefinite-lived intangible asset during fiscal year 2021 and 2020.

Amortization expense for the Bridgeport Fuel Cell Project-related intangible asset was \$1.3 million for each of the years ended October 31, 2022, 2021 and 2020.

The following tables summarize the Company's intangible assets as of October 31, 2022 and 2021 (in thousands):

As of October 31, 2022	<u>Gross Amount</u>	<u>Accumulated Amortization</u>	<u>Net Amount</u>
In-Process Research and Development	\$ 9,592	\$ —	\$ 9,592
Bridgeport PPA	12,320	(4,539)	7,781
Total	<u>\$ 21,912</u>	<u>\$ (4,539)</u>	<u>\$ 17,373</u>
As of October 31, 2021	<u>Gross Amount</u>	<u>Accumulated Amortization</u>	<u>Net Amount</u>
In-Process Research and Development	\$ 9,592	\$ —	\$ 9,592
Bridgeport PPA	12,320	(3,242)	9,078
Total	<u>\$ 21,912</u>	<u>\$ (3,242)</u>	<u>\$ 18,670</u>

Amortization expense is recorded on a straight-line basis and future amortization expense will be \$1.3 million per year until the Bridgeport PPA is fully amortized.

Note 8. Accrued Liabilities

Accrued liabilities as of October 31, 2022 and 2021 consisted of the following (in thousands):

	October 31, 2022	October 31, 2021
Accrued payroll and employee benefits ⁽¹⁾	\$ 8,534	\$ 2,544
Accrued product warranty cost ⁽²⁾	537	72
Accrued service agreement and PPA costs ⁽³⁾	11,340	9,112
Accrued legal, taxes, professional and other	7,004	4,371
Accrued liabilities	<u>\$ 27,415</u>	<u>\$ 16,099</u>

- (1) The balance in this account represents accrued payroll, payroll taxes and accrued bonus for both periods. The increase in the account relates to an increase in accrued bonus as of October 31, 2022.
- (2) The increase in accrued product warranty cost reflects the costs associated with the warranties provided under the Settlement Agreement with POSCO Energy and KFC. Product warranty expense for the year ended October 31, 2022 and 2021 was \$0.5 million and \$0.03 million, respectively.
- (3) Accrued service agreement costs include loss accruals on service contracts of \$7.3 million as of October 31, 2022, which increased from \$6.5 million as of October 31, 2021. The increase is the result of a change in estimates regarding timing of future module exchanges and future module replacement costs. The accruals for performance guarantees on service agreements and PPAs increased from \$2.5 million as of October 31, 2021 to \$4.1 million as of October 31, 2022.

Note 9. Leases

The Company enters into operating and finance lease agreements for the use of real estate, vehicles, information technology equipment, and certain other equipment. We determine if an arrangement contains a lease at inception, which is the date on which the terms of the contract are agreed to and the agreement creates enforceable rights and obligations. The impacts of accounting for operating leases are included in Operating lease right-of-use assets, Operating lease liabilities, and Long-term operating lease liabilities in the Company's Consolidated Balance Sheets. Finance leases are not considered significant to the Company's Consolidated Balance Sheets or Consolidated Statements of Operations and Comprehensive Loss. Finance lease right-of-use ("ROU") assets of \$0.1 million at each of October 31, 2022 and 2021 are included in Property, plant and equipment, net in the Company's Consolidated Balance Sheets. Finance lease liabilities of \$0.1 million at each of October 31, 2022 and 2021 are included in Current portion of long-term debt and Long-term debt and other liabilities in the Company's Consolidated Balance Sheets.

Operating lease expense for each of the years ended October 31, 2022, 2021 and 2020 was \$1.5 million. As of October 31, 2022, the weighted average remaining lease term (in years) was approximately 19 years and the weighted average discount rate was 8.2%. Lease payments made during the years ended October 31, 2022, 2021 and 2020 totaled \$1.4 million, \$1.2 million, and \$1.0 million, respectively.

As of October 31, 2022, undiscounted maturities of operating lease and finance lease liabilities are as follows (in thousands):

	Operating Leases	Finance Leases
Due Year 1	\$ 1,122	\$ 49
Due Year 2	866	16
Due Year 3	795	—
Due Year 4	767	—
Due Year 5	782	—
Thereafter	13,474	—
Total undiscounted lease payments	17,806	65
Less imputed interest	(9,581)	(8)
Total discounted lease payments	<u>\$ 8,225</u>	<u>\$ 57</u>

San Bernardino Fuel Cell, LLC Sale-Leaseback Transaction

On August 25, 2021, an indirect wholly-owned subsidiary of the Company, San Bernardino Fuel Cell, LLC (“SBFC”), entered into a Purchase and Sale Agreement (the “San Bernardino Purchase Agreement”) and an Equipment Lease Agreement (the “San Bernardino Lease”) with Crestmark Equipment Finance (“Crestmark”). Under these agreements, SBFC sold the 1.4 MW biogas fueled fuel cell power plant (the “San Bernardino Plant”) located at the San Bernardino wastewater treatment plant in San Bernardino, California to Crestmark for a purchase price of \$10.2 million and then leased the San Bernardino Plant back from Crestmark. SBFC sells the power produced by the San Bernardino Plant to a third party under a twenty-year PPA (the “San Bernardino PPA”).

The San Bernardino Lease has an initial term of ten years but may be extended at the option of SBFC. An initial rental down payment and one quarter’s rent totaling \$2.2 million was paid using the proceeds from the sale of the San Bernardino Plant. Lease payments are expected to be funded with proceeds from the sale of power under the San Bernardino PPA on a quarterly basis. As a result of the sale-leaseback transaction, the remaining lease payments due over the term of the San Bernardino Lease were approximately \$4.5 million as of October 31, 2022.

Reserves covering debt service and future module replacement totaling \$2.5 million were also deducted from the proceeds from the sale of the San Bernardino Plant and will be classified as restricted cash of the Company until such time as it meets its performance obligations (such as servicing the San Bernardino Plant and providing module exchanges) under the Long-Term Service Agreement for the San Bernardino Plant. The Company’s net unrestricted cash proceeds from the transaction totaled approximately \$5.3 million, which is the purchase price less the initial rent payments, debt and module reserves, and taxes and transaction fees.

In addition, SBFC and Crestmark entered into an Assignment Agreement on August 25, 2021 (the “San Bernardino Assignment Agreement”) and FuelCell Finance (a wholly-owned subsidiary of the Company and the direct parent of SBFC) and Crestmark entered into a Pledge Agreement on August 25, 2021 (the “San Bernardino Pledge Agreement”) pursuant to which agreements collateral was provided to Crestmark to secure SBFC’s obligations under the San Bernardino Lease which includes a security interest in (i) certain agreements relating to the sale-leaseback transaction, (ii) the revenues with respect to the San Bernardino Plant, (iii) a cash module replacement reserve for the San Bernardino Plant, and (iv) FuelCell Finance’s equity interest in SBFC. SBFC and the Company also entered into a Technology License and Access Agreement with Crestmark on August 25, 2021, which provides Crestmark with certain intellectual property license rights to have access to the Company’s proprietary fuel cell technology, but only for the purpose of maintaining and servicing the San Bernardino Plant in certain circumstances in which the Company is not satisfying its obligations under its service agreement with regard to the maintenance and servicing of the San Bernardino Plant.

Pursuant to the San Bernardino Lease, SBFC has an obligation to indemnify Crestmark for the amount of any actual reduction in the U.S. investment tax credit (“ITC”) anticipated to be realized by Crestmark in connection with this sale-leaseback transaction. Such obligation would arise as a result of reductions to the value of the underlying fuel cell project as assessed by the U.S. Internal Revenue Service (“IRS”). The Company does not believe that any such obligation is probable based on the facts known as of October 31, 2022. The maximum potential future payments that SBFC could be required to make as a result of this obligation would depend on the difference between the fair value of the fuel cell project sold or financed and the value the IRS would determine as the fair value of the project for purposes of claiming the ITC. The value of the ITC in the sale-leaseback agreements is based on guidelines provided by regulations from the IRS. The Company and Crestmark used a fair value determined with the assistance of an independent third-party appraisal.

The San Bernardino Purchase Agreement and the San Bernardino Lease contain representations and warranties, affirmative and negative covenants, and events of default that entitle Crestmark to cause SBFC’s indebtedness under the San Bernardino Lease to become immediately due and payable.

Pursuant to a Guaranty Agreement executed on August 25, 2021 by the Company for the benefit of Crestmark (the “San Bernardino Guaranty”), the Company has guaranteed the payment and performance of SBFC’s obligations under the San Bernardino Lease.

Note 10. Debt

Debt as of October 31, 2022 and 2021 consisted of the following (in thousands):

	October 31, 2022	October 31, 2021
Connecticut Green Bank Loan	\$ 4,800	\$ 4,800
Connecticut Green Bank Loan (Bridgeport Fuel Cell Project)	3,507	4,318
Liberty Bank Term Loan Agreement (Bridgeport Fuel Cell Project)	5,382	7,465
Fifth Third Bank Term Loan Agreement (Bridgeport Fuel Cell Project)	5,382	7,465
Finance obligation for sale-leaseback transactions	56,625	56,492
State of Connecticut Loan	7,774	8,622
Finance lease obligations	57	102
Deferred finance costs	(1,152)	(1,556)
Total debt and finance obligations	<u>82,375</u>	<u>87,708</u>
Current portion of long-term debt and finance obligations	(13,198)	(10,085)
Long-term debt and finance obligations	<u>\$ 69,177</u>	<u>\$ 77,623</u>

Aggregate annual principal payments under our loan agreements, finance obligation, and finance lease obligations for the years subsequent to October 31, 2022 are as follows (in thousands):

Year 1	\$ 13,526
Year 2	10,348
Year 3	8,678
Year 4	5,432
Year 5	2,990
Thereafter ⁽¹⁾	4,044
	<u>\$ 45,018</u>

(1) The annual principal payments included above only include sale-leaseback payments whereas the difference between debt outstanding as of October 31, 2022 and the annual principal payments represent accreted interest and amounts included in the finance obligation that exceed required principal payments.

Orion Energy Partners Investment Agent, LLC Credit Agreement

On October 31, 2019, the Company and certain of its affiliates as guarantors entered into a Credit Agreement (as amended, the “Orion Credit Agreement”) with Orion Energy Partners Investment Agent, LLC, as Administrative Agent and Collateral Agent (the “Orion Agent”), and certain lenders affiliated with the Orion Agent for a \$200.0 million senior secured credit facility (the “Orion Facility”), structured as a delayed draw term loan to be provided by the lenders primarily to fund certain of the Company’s construction and related costs for fuel cell projects meeting the requirements of the Orion Facility. Under the Orion Credit Agreement, each lender funded its commitments less 2.50% of the aggregate principal amount of the loans funded by such lender (the “Loan Discount”).

On October 31, 2019, the Company drew down \$14.5 million (the “Initial Funding”) and received \$14.1 million, after taking into account a Loan Discount of \$0.4 million. On October 31, 2019, in connection with the Initial Funding, the Company issued warrants to the lenders under the Orion Credit Agreement to purchase up to a total of 6.0 million shares of the Company’s common stock, at an exercise price of \$0.310 per share (the “Initial Funding Warrants”).

On November 22, 2019, a second draw (the “Second Funding”) of \$65.5 million, funded by Orion Energy Credit Opportunities Fund II, L.P., Orion Energy Credit Opportunities Fund II GPFA, L.P., Orion Energy Credit Opportunities Fund II PV, L.P., and Orion Energy Credit Opportunities FuelCell Co-Invest, L.P. (as the lenders under the Orion Credit Agreement), was made to fully repay certain outstanding third party debt of the Company and to fund construction costs and capital expenditures relating to certain projects. The Company received \$63.9 million in the Second Funding after taking into account a Loan Discount of \$1.6 million as described above. Also in conjunction with the Second Funding, the Company issued to the lenders warrants to purchase up to a total of 14.0 million shares of the Company’s common stock, with an initial exercise price with respect to 8.0 million of such shares of \$0.242 per share and with an initial exercise price with respect to 6.0 million of such shares of \$0.620 per share (the “Second Funding Warrants”).

The issuance of the Initial Funding Warrants and recognition of the Second Funding Warrants resulted in \$3.9 million being recorded as a liability as of October 31, 2019 with the offset recorded as a debt discount. Refer to Note 11. “Stockholders’ Equity and Warrant Liabilities” for additional information regarding the Initial Funding Warrants and Second Funding Warrants, including the accounting, terms and conversions during the years ended October 31, 2021 and 2020.

On November 30, 2020, the Company, its subsidiary guarantors, and the Orion Agent entered into a payoff letter with respect to the Orion Credit Agreement (the “Orion Payoff Letter”). Pursuant to the Orion Payoff Letter, on December 7, 2020, the Company paid a total of \$87.3 million to the Orion Agent, representing the outstanding principal, accrued but unpaid interest, prepayment premium, fees, costs and other expenses due and owing under the Orion Facility and the Orion Credit Agreement and related loan documents, in full repayment of the Company’s outstanding indebtedness under the Orion Facility and the Orion Credit Agreement and related loan documents. In accordance with the Orion Payoff Letter, the aggregate prepayment premium set forth in the Orion Credit Agreement was reduced from approximately \$14.9 million to \$4.0 million and the Orion Agent, on behalf of itself and the lenders, agreed that any portion of the prepayment premium that would otherwise be required to be paid pursuant to the Orion Credit Agreement in excess of \$4.0 million was waived by the Orion Agent and the lenders. The Company expensed the remaining deferred finance costs and debt discount of \$7.1 million. The Company has classified the \$4.0 million prepayment premium and the deferred finance costs and debt discount expense as Loss on extinguishment of debt and finance obligations on the Consolidated Statements of Operations and Comprehensive Loss.

Concurrently with the Orion Agent’s receipt of full payment pursuant to the Orion Payoff Letter, the Orion Agent released all of the collateral from the liens granted under the security documents associated with the Orion Facility (which included the release of \$11.2 million of restricted cash to the Company, which became unrestricted cash), and the Company and its subsidiaries were unconditionally released from their respective obligations under the Orion Credit Agreement (and related loan documents) and the Orion Facility without further action. With the termination of the Orion Facility and the Orion Credit Agreement and related loan documents, the lenders no longer have the right to appoint representatives to attend the Company’s Board of Director meetings as observers.

Connecticut Green Bank Loans

As of October 31, 2019, the Company had a long-term loan agreement with the Connecticut Green Bank, providing the Company with a loan of \$1.8 million (the “Green Bank Loan Agreement”). On and effective as of December 19, 2019, the Company and Connecticut Green Bank entered into an amendment to the Green Bank Loan Agreement (the “Green Bank Amendment”). Upon the execution of the Green Bank Amendment on December 19, 2019, Connecticut Green Bank made an additional loan to the Company in the aggregate principal amount of \$3.0 million (the “December 2019 Loan”), which was to be used (i) first, to pay closing fees related to the May 9, 2019 acquisition of the Bridgeport Fuel Cell Project and the Subordinated Credit Agreement (as defined below), other fees and interest, and (ii) thereafter, for general corporate purposes.

The Green Bank Amendment provides that, until such time as the loan (which includes both the outstanding principal balance of the original loan under the Green Bank Loan Agreement and the outstanding principal amount of the December 2019 Loan) has been repaid in its entirety, interest on the outstanding balance of the loan shall accrue at a rate of 8% per annum, payable by the Company on a monthly basis in arrears. Interest payments made by the Company after the date of the Green Bank Amendment are to be applied first to interest that has accrued on the outstanding principal balance of the original loan under the Green Bank Loan Agreement and then to interest that has accrued on the December 2019 Loan.

The Green Bank Amendment also modifies the repayment and mandatory prepayment terms and extends the maturity date set forth in the original Green Bank Loan Agreement. Under the Green Bank Amendment, to the extent that excess cash flow reserve funds under the BFC Credit Agreement (as defined below) are eligible for disbursement to Bridgeport Fuel Cell, LLC pursuant to Section 6.23(c) of the BFC Credit Agreement, such funds are to be paid to Connecticut Green Bank until the loans are repaid in full. The Green Bank Amendment further provides that any unpaid balance of the loan and all other obligations due under the Green Bank Loan Agreement will be due and payable on May 9, 2026. Finally, with respect to mandatory prepayments, the Green Bank Amendment provides that, when the Company has closed on the subordinated project term loan pursuant to the Commitment Letter, dated February 6, 2019, issued by Connecticut Green Bank to Groton Station Fuel Cell, LLC (“Groton Fuel Cell”) to provide a subordinated project term loan to Groton Fuel Cell in the amount of \$5.0 million, the Company will be required to prepay to Connecticut Green Bank the lesser of any then outstanding

amount of the December 2019 Loan and the amount of the subordinated project term loan actually advanced by Connecticut Green Bank. The balance under the original Green Bank Loan Agreement and the December 2019 Loan as of October 31, 2022 was \$4.8 million.

Bridgeport Fuel Cell Project Loans

On May 9, 2019, in connection with the closing of the purchase of the membership interests of Bridgeport Fuel Cell, LLC (“BFC”) (and the 14.9 MW Bridgeport Fuel Cell Project), BFC (a subsidiary of the Company following the closing) entered into a subordinated credit agreement with the Connecticut Green Bank whereby Connecticut Green Bank provided financing in the amount of \$6.0 million (the “Subordinated Credit Agreement”). This \$6.0 million consisted of \$1.8 million in incremental funding that was received by BFC and \$4.2 million of funding previously received by FuelCell Energy, Inc. with respect to which BFC became the primary obligor. As security for the Subordinated Credit Agreement, Connecticut Green Bank received a perfected lien, subordinated and second in priority to the liens securing the \$25.0 million loaned under the BFC Credit Agreement (as defined below), in all of the same collateral securing the BFC Credit Agreement. The interest rate under the Subordinated Credit Agreement is 8% per annum. Principal and interest are due monthly in amounts sufficient to fully amortize the loan over an 84-month period ending in May 2026. The Subordinated Credit Agreement contains a debt coverage ratio which is required to be maintained and may not be less than 1.10 as of the end of each fiscal quarter, beginning with the quarter ended July 31, 2020. The balance under the Subordinated Credit Agreement as of October 31, 2022 was \$3.5 million.

On May 9, 2019, in connection with the closing of the purchase of the Bridgeport Fuel Cell Project, BFC entered into a Credit Agreement with Liberty Bank, as administrative agent and co-lead arranger, and Fifth Third Bank as co-lead arranger and interest rate swap hedger (the “BFC Credit Agreement”), whereby (i) Fifth Third Bank provided financing in the amount of \$12.5 million towards the purchase price for the BFC acquisition; and (ii) Liberty Bank provided financing in the amount of \$12.5 million towards the purchase price for the BFC acquisition. As security for the BFC Credit Agreement, Liberty Bank and Fifth Third Bank were granted a first priority lien in (i) all assets of BFC, including BFC’s cash accounts, fuel cells, and all other personal property, as well as third party contracts including the Energy Purchase Agreement between BFC and Connecticut Light and Power Company dated July 10, 2009, as amended; (ii) certain fuel cell modules that are intended to be used to replace the Bridgeport Fuel Cell Project’s fuel cell modules as part of routine operation and maintenance; and (iii) FuelCell Energy Finance, LLC’s (a wholly-owned subsidiary of the Company and the direct parent of BFC) ownership interest in BFC. The maturity date under the BFC Credit Agreement is May 9, 2025. Monthly principal and interest are to be paid in arrears in an amount sufficient to fully amortize the term loan over a 72-month period. BFC has the right to make additional principal payments or pay the balance due under the BFC Credit Agreement in full, provided that it pays any associated breakage fees with regard to the interest rate swap agreements fixing the interest rate. The interest rate under the BFC Credit Agreement fluctuates monthly at the 30-day LIBOR rate plus 275 basis points.

An interest rate swap agreement was required to be entered into with Fifth Third Bank in connection with the BFC Credit Agreement to protect against movements in the floating LIBOR index. Accordingly, on May 16, 2019, an interest rate swap agreement (the “Swap Agreement”) was entered into with Fifth Third Bank in connection with the BFC Credit Agreement for the term of the loan. The net interest rate across the BFC Credit Agreement and the swap transaction results in a fixed rate of 5.09%. The interest rate swap is adjusted to fair value on a quarterly basis. The estimated fair value is based on Level 2 inputs including primarily the forward LIBOR curve available to swap dealers. The valuation methodology involves comparison of (i) the sum of the present value of all monthly variable rate payments based on a reset rate using the forward LIBOR curve and (ii) the sum of the present value of all monthly fixed rate payments on the notional amount, which is equivalent to the outstanding principal amount of the loans. The fair value adjustments for the years ended October 31, 2022, 2021 and 2020 resulted in a \$0.8 million gain, a \$0.5 million gain and a \$0.3 million loss, respectively. The fair value of the interest rate swap asset (liability) as of October 31, 2022 and 2021 was \$0.3 million and \$(0.5) million, respectively. On August 1, 2022, the Company entered into an amendment to its interest rate swap agreement that replaced LIBOR with Term Secured Overnight Financing Rate (“SOFR”) effective as of June 2023.

The BFC Credit Agreement requires BFC to maintain a debt service reserve. Each of Liberty Bank and Fifth Third Bank also has an operation and module replacement reserve (“O&M Reserve”) under the BFC Credit Agreement. BFC is required to deposit \$0.1 million per month into each O&M Reserve for the first five years of the BFC Credit Agreement, with such funds to be released at the sole discretion of Liberty Bank and Fifth Third Bank, as applicable. BFC is also required to maintain excess cash flow reserve accounts at each of Liberty Bank and Fifth Third Bank. Excess cash flow consists of cash generated by BFC from the Bridgeport Fuel Cell Project after payment of all expenses (including after

payment of intercompany service fees to the Company), debt service to Liberty Bank and Fifth Third Bank, the funding of all required reserves, and payments to Connecticut Green Bank for the subordinated facility. BFC is also required to maintain a debt service coverage ratio of not less than 1.20, measured for the trailing year based on fiscal quarters beginning with the quarter ended July 31, 2020. The Company was in compliance with the debt service coverage ratio as of October 31, 2022. The Company has certain quarterly and annual financial reporting requirements under the BFC Credit Agreement. The annual financial statements to be provided pursuant to such requirements are to be audited and accompanied by a report of an independent certified public accountant, which report shall not include a “going concern” matter of emphasis or any qualification as to the scope of such audit.

Finance obligations for sale leaseback agreements

Several of the Company’s project subsidiaries previously entered into sale-leaseback agreements with PNC for commissioned projects where the Company had entered into a PPA with the site host/end-user of produced power, and CCFC2 and SBFC entered into sale-leaseback transactions with Crestmark on February 11, 2020 and August 25, 2021, respectively (refer to Note. 9. “Leases” for additional information). The Company did not recognize as revenue any of the proceeds received from the lessor that contractually constitute payments to acquire the assets subject to these arrangements. Instead, the sale proceeds received were accounted for as finance obligations. The outstanding finance obligation balance as of October 31, 2022 was \$56.6 million as compared to \$56.5 million as of October 31, 2021. The outstanding finance obligation for the remaining leases includes \$38.6 million in excess of future required payments which represents imputed interest, not including amounts for the potential repurchase price of the project assets which is based on fair value. The sale-leaseback arrangements with PNC allow the Company to repurchase the project assets at fair market value and the sale-leaseback arrangements with Crestmark include a purchase right for the greater of fair market value or 31% of the purchase price.

State of Connecticut Loan

In October 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut (the “Assistance Agreement”) and received a disbursement of \$10.0 million, which was used for the first phase of the expansion of the Company’s Torrington, Connecticut manufacturing facility. In conjunction with this financing, the Company entered into a \$10.0 million promissory note and related security agreements securing the loan with equipment liens and a mortgage on its Danbury, Connecticut location. Interest accrues at a fixed interest rate of 2.0%, and the loan is repayable over 15 years from the date of the first advance, which occurred in October of 2015. Principal payments were deferred for four years from disbursement and began on December 1, 2019. Under the Assistance Agreement, the Company was eligible for up to \$5.0 million in loan forgiveness if the Company created 165 full-time positions and retained 538 full-time positions for two consecutive years (the “Employment Obligation”) as measured on October 28, 2017 (the “Target Date”). The Assistance Agreement was subsequently amended in April 2017 to extend the Target Date by two years to October 28, 2019.

In January 2019, the Company and the State of Connecticut entered into a Second Amendment to the Assistance Agreement (the “Second Amendment”). The Second Amendment extended the Target Date to October 31, 2022 and amended the Employment Obligation to require the Company to continuously maintain a minimum of 538 full-time positions for 24 consecutive months. If the Company met the Employment Obligation, as modified by the Second Amendment, and created an additional 91 full-time positions, the Company would have received a credit in the amount of \$2.0 million to be applied against the outstanding balance of the loan. However, based on the Company’s headcount as of October 31, 2022, it did not meet this requirement and will not receive this credit. A job audit will be performed within 90 days of the Target Date. Because the Company did not meet the Employment Obligation, an accelerated payment penalty will be assessed at a rate of \$18,587.36 multiplied by the number of employees below the number of employees required by the Employment Obligation. Such penalty is immediately payable and will be applied first to accelerate the payment of any outstanding fees or interest due and then to accelerate the payment of outstanding principal. The Company did not meet the Employment Obligation as of October 31, 2022 and estimates that it had an average of 359 employees over the 24 consecutive month period. As a result, \$3.3 million of the loan has been reclassified to current, which represents the accelerated payment penalty amount. The Company has not been formally assessed a penalty but since there are no fees or interest due, any penalty assessed would be applied to the outstanding principal and not result in any charges to the Statement of Operations.

In April of 2020, as a result of the COVID-19 pandemic, the State of Connecticut agreed to defer three months of principal and interest payments under the Assistance Agreement, beginning with the May 2020 payment. These deferred payments will be added at the end of the loan, thus extending out the maturity date by three months.

Deferred Finance Costs

As of October 31, 2022, deferred finance costs relate primarily to sale-leaseback transactions entered into with PNC and Crestmark, which are being amortized over the 10-year terms of the lease agreements and payments under the loans obtained to purchase the membership interests in BFC, which are being amortized over the 8-year term of the loans.

Note 11. Stockholders' Equity and Warrant Liabilities

Increase in Authorized Shares

The Company obtained stockholder approval on April 8, 2021 at the Annual Meeting of Stockholders to increase the number of shares of common stock the Company is authorized to issue under the Company's Certificate of Incorporation, as amended. The Company's stockholders approved a 162.5 million increase in the number of authorized shares of common stock. Accordingly, on April 8, 2021, the Company filed a Certificate of Amendment of the Certificate of Incorporation of the Company with the Delaware Secretary of State increasing the total number of authorized shares of common stock from 337.5 million shares to 500.0 million shares.

The Company obtained stockholder approval on May 8, 2020 at the reconvened 2020 Annual Meeting of Stockholders to increase the number of shares of common stock we are authorized to issue under our Certificate of Incorporation, as amended. Our stockholders approved a 112.5 million increase in the number of authorized shares of common stock. Accordingly, on May 11, 2020, the Company filed a Certificate of Amendment of the Certificate of Incorporation of the Company with the Delaware Secretary of State increasing the total number of authorized shares of common stock from 225.0 million shares to 337.5 million shares.

Open Market Sale Agreements and At Market Issuance Sales Agreement

2022 Open Market Sale Agreement

On July 12, 2022, the Company entered into an Open Market Sale Agreement with Jefferies LLC, B. Riley Securities, Inc., Barclays Capital Inc., BMO Capital Markets Corp., BofA Securities, Inc., Canaccord Genuity LLC, Citigroup Global Markets Inc., J.P. Morgan Securities LLC and Loop Capital Markets LLC (the "Open Market Sale Agreement") with respect to an at the market offering program under which the Company may, from time to time, offer and sell up to 95.0 million shares of the Company's common stock. Pursuant to the Open Market Sale Agreement, the Company pays each agent a commission equal to 2.0% of the gross proceeds from each sale of shares made by such agent under the Open Market Sale Agreement. From the date of the Open Market Sale Agreement through October 31, 2022, the Company sold approximately 18.5 million shares under the Open Market Sale Agreement at an average sale price of \$3.63 per share, resulting in gross proceeds of \$67.2 million, before deducting sales commissions and fees, and net proceeds to the Company of approximately \$65.4 million after deducting commissions and fees totaling approximately \$1.8 million.

While there were no sales under the Open Market Sale Agreement during the fourth quarter of fiscal year 2022, there were sales made during the third quarter of fiscal year 2022 that were not settled until the fourth quarter (which are included in the aggregate figures in the paragraph above). More specifically, 10.7 million shares were settled in the fourth quarter of 2022, resulting in gross proceeds (before deducting sales commissions) of approximately \$39.2 million and net proceeds to the Company (received in August 2022) of approximately \$38.4 million after deducting commissions totaling approximately \$0.8 million. These share and dollar amounts are included in the aggregate sale amounts set forth in the paragraph above.

As of October 31, 2022, approximately 76.5 million shares were available for issuance under the Open Market Sale Agreement.

2021 Open Market Sale Agreement

On June 11, 2021, the Company entered into an Open Market Sale Agreement with Jefferies LLC and Barclays Capital Inc. (the "2021 Sales Agreement") with respect to an at the market offering program under which the Company could,

from time to time, offer and sell shares of the Company's common stock having an aggregate offering price of up to \$500 million. Pursuant to the 2021 Sales Agreement, the Company paid the agent making each sale a commission equal to 2.0% of the aggregate gross proceeds it received from such sale by such agent of shares under the 2021 Sales Agreement. From the date of the 2021 Sales Agreement through April 30, 2022, approximately 64.0 million shares of the Company's common stock were sold under the 2021 Sales Agreement at an average sales price of \$7.79 per share, resulting in aggregate gross proceeds of approximately \$498.1 million, before deducting sales commissions. Commissions of approximately \$10.0 million in the aggregate were paid to Jefferies LLC and Barclays Capital Inc. in connection with these sales, resulting in aggregate net proceeds to the Company of approximately \$488.1 million. Of these sales, approximately 19.9 million shares were sold under the 2021 Sales Agreement during the fiscal year ended October 31, 2022 at an average sales price of \$6.07 per share, resulting in gross proceeds during the fiscal year ended October 31, 2022 of \$120.8 million, before deducting expenses and sales commissions, and net proceeds to the Company during the fiscal year ended October 31, 2022 of approximately \$118.3 million after deducting commissions and offering expenses totaling approximately \$2.4 million.

No sales of common stock were made under the 2021 Sales Agreement after April 30, 2022, and no additional sales of common stock can or will be made under the 2021 Sales Agreement, as the Company, Jefferies LLC and Barclays Capital Inc. mutually agreed to terminate the 2021 Sales Agreement as of July 12, 2022.

2020 Open Market Sale Agreement

On June 16, 2020, the Company entered into an Open Market Sale Agreement (the "2020 Sales Agreement") with Jefferies LLC ("Jefferies"), with respect to an at the market offering program under which the Company could offer and sell up to \$75 million of shares of its common stock from time to time. Pursuant to the 2020 Sales Agreement, the Company paid Jefferies a commission equal to 3.0% of the aggregate gross proceeds it received from each sale of shares under the 2020 Sales Agreement. From the date of the 2020 Sales Agreement through October 31, 2020, 28.3 million shares were sold under the 2020 Sales Agreement at an average sales price of \$2.55 per share, resulting in gross proceeds of \$72.3 million, before deducting expenses and sales commissions. Commissions of \$2.2 million were paid to Jefferies in connection with these sales, resulting in net proceeds to the Company of approximately \$70.1 million. No sales of common stock have been made under the 2020 Sales Agreement since October 31, 2020, and, as the parties mutually agreed to terminate the 2020 Sales Agreement as of June 11, 2021, no additional sales of common stock will be made under the 2020 Sales Agreement in the future.

2019 At Market Issuance Sales Agreement

On October 4, 2019, the Company entered into an At Market Issuance Sales Agreement (the "2019 Sales Agreement") with B. Riley FBR, Inc. ("B. Riley FBR") to create an at-the-market equity program under which the Company could offer and sell up to 38.0 million shares of its common stock through B. Riley FBR. However, to ensure that the Company had sufficient shares available for reservation and issuance upon exercise of all of the warrants to be issued to the lenders under the Orion Facility (as discussed in further detail below), the Company, effective as of October 31, 2019, reduced the number of shares reserved for future issuance and sale under the 2019 Sales Agreement from 27.9 million shares to 7.9 million shares (thus allowing for total aggregate issuances of up to 18.0 million shares under the 2019 Sales Agreement) and reserved 20.0 million shares for issuance upon exercise of the warrants by the lenders under the Orion Facility. Under the 2019 Sales Agreement, B. Riley FBR was entitled to a commission in an amount equal to 3.0% of the gross proceeds from each sale of shares under the 2019 Sales Agreement.

During the year ended October 31, 2020, the Company issued and sold a total of 7.9 million shares of its common stock under the 2019 Sales Agreement at prevailing market prices, with an average sale price of \$0.46 per share, and raised aggregate gross proceeds of approximately \$3.6 million, before deducting expenses and commissions. Commissions of \$0.1 million were paid to B. Riley FBR in connection with these sales, resulting in net proceeds to the Company of approximately \$3.5 million.

The Company terminated the 2019 Sales Agreement in June 2020. As a result of the termination of the 2019 Sales Agreement, there have been and will be no further sales of the Company's common stock thereunder.

Public Offerings and Outstanding Warrants

December 2020 Common Stock Offering

In December of 2020, the Company and Orion Energy Credit Opportunities Fund II, L.P., Orion Energy Credit Opportunities Fund II GPFA, L.P., Orion Energy Credit Opportunities Fund II PV, L.P., and Orion Energy Credit Opportunities FuelCell Co-Invest, L.P. (the lenders under the Orion Credit Agreement) (the “Selling Stockholders”) completed a public offering of the Company’s common stock. In connection with this public offering, the Company and the Selling Stockholders entered into an underwriting agreement pursuant to which (i) the Company agreed to issue and sell to the underwriters 19,822,219 shares of the Company’s common stock, plus up to 5,177,781 shares of common stock pursuant to an option to purchase additional shares, and (ii) the Selling Stockholders agreed to sell to the underwriters 14,696,320 shares of common stock, in each case at a price to the public of \$6.50 per share. The underwriters exercised their option to purchase additional shares, resulting in the issuance and sale by the Company at the closing of the offering of a total of 25,000,000 shares of common stock. The offering closed on December 4, 2020.

Gross proceeds from the sale of common stock by the Company in the offering were \$162.5 million. The Company did not receive any proceeds from the sale of common stock in the offering by the Selling Stockholders.

The Company and the Selling Stockholders paid underwriting discounts and commissions of \$0.2275 per share, and net proceeds to the Company were approximately \$156.4 million after deducting such underwriting discounts and commissions and other offering expenses.

September 2020 Public Offering

In September 2020, the Company entered into an underwriting agreement with respect to an offering of its common stock. The offering closed in October 2020, with the Company’s sale of approximately 50.0 million shares of its common stock for gross and net proceeds of \$105.1 million and \$98.3 million, respectively.

The offering resulted in a Section 382 ownership change. Refer to Note 15. “Income Taxes” for more information regarding the impact of the Section 382 ownership change on net operating losses and carryforwards.

May 2017 Public Offering and Related Warrants

On May 3, 2017, the Company completed an underwritten public offering that included the offering and sale of Series C warrants to purchase 1,000,000 shares of its common stock.

The Series C warrants had an exercise price of \$19.20 per share and a term of five years. During the year ended October 31, 2021, Series C warrants were exercised to purchase a total of 14,026 shares of the Company’s common stock, resulting in cash proceeds to the Company of \$0.3 million during fiscal year 2021. No Series C warrants were exercised during the fiscal year ended October 31, 2020. The Series C warrants contained provisions regarding adjustments to their exercise price and the number of shares of common stock issuable upon exercise. No Series C warrants were exercised in fiscal year 2022 and they expired in May 2022.

Orion Warrants

In connection with the closing of the Orion Credit Agreement and the Initial Funding, on October 31, 2019, the Company issued warrants to the lenders under the Orion Credit Agreement to purchase up to a total of 6,000,000 shares of the Company’s common stock, at an exercise price of \$0.310 per share (the “Initial Funding Warrants”). In addition, under the Orion Credit Agreement, on the date of the Second Funding (November 22, 2019), the Company issued warrants to the lenders under the Orion Credit Agreement to purchase up to a total of 14,000,000 shares of the Company’s common stock, with an exercise price with respect to 8,000,000 of such shares of \$0.242 per share and with an exercise price with respect to 6,000,000 of such shares of \$0.620 per share (the “Second Funding Warrants”, and together with the Initial Funding Warrants, the “Orion Warrants”).

The Company accounted for the Initial Funding Warrants as a liability since there was a change of control provision in the Initial Funding Warrants regarding the composition of the board of directors and, as such, the Company could have been required to repurchase the Initial Funding Warrants upon such change in control and therefore equity classification was precluded. The Company accounted for the Second Funding Warrants under ASC 815, *Derivatives and Hedging* (“ASC

815”) since the Second Funding Warrants were considered contingent vesting warrants and therefore were considered to be an outstanding liability. Since the probability of vesting for the Second Funding Warrants was deemed to be 100% as there was no vesting period in the warrants, there was no impact on the valuation. The Second Funding Warrants were accounted for as a liability since the Company might have been required to pay the holder under the same change of control provision as the Initial Funding Warrants and such event was outside the Company’s control and therefore equity classification was precluded.

During the three months ended January 31, 2020, the lenders exercised, on a cashless basis, Orion Warrants representing the right to purchase 12,000,000 shares of the Company’s common stock. Because these Orion Warrants were exercised on a cashless basis, the Company issued in the aggregate 9,396,320 shares of the Company’s common stock. The Orion Warrants that were converted were remeasured to fair value immediately preceding the conversion based upon volatility of 103.7%, a risk free rate of 1.81% and the Company’s common stock price of \$2.29 on January 8, 2020, which resulted in a \$23.7 million charge for the three months ended January 31, 2020. The revised estimated fair value of the converted Orion Warrants as of the date of conversion of \$26.0 million was reclassified to Additional paid in capital. The remaining Orion Warrants as of January 31, 2020 were remeasured to estimated fair value based upon a volatility of 104.9%, a risk free rate of 1.45% and the Company’s common stock price at January 31, 2020 of \$1.59 per share, which resulted in a charge for the three months ended January 31, 2020 of \$10.5 million. The Company remeasured the remaining Orion Warrants at October 31, 2020 based upon a volatility of 114.15%, a risk free rate of 0.64% and the Company’s common stock price of \$2.00 per share, which resulted in a charge of \$0.2 million.

On December 7, 2020, all then remaining Orion Warrants were exercised to purchase a total of 2,700,000 shares of the Company’s common stock for an aggregate exercise price of approximately \$0.6 million (or \$0.242 per share). The Orion Warrants that were converted on December 7, 2020 were remeasured to fair value immediately preceding the conversion based upon volatility of 117.02%, a risk free rate of 0.70% and the Company’s common stock price of \$7.95 on December 4, 2020, which resulted in a \$16.0 million charge for the three months ended January 31, 2021. The estimated fair value of the converted Orion Warrants as of the December 7, 2020 date of conversion of \$21.2 million was reclassified to Additional paid-in capital.

Outstanding Warrants

The following table outlines the warrant activity during the fiscal years ended October 31, 2022 and October 31, 2021:

	<u>Series C Warrants</u>	<u>Orion Warrants</u>
Balance as of October 31, 2020	964,128	2,700,000
Warrants issued.	—	—
Warrants exchanged	<u>(14,026)</u>	<u>(2,700,000)</u>
Balance as of October 31, 2021	950,102	—
Warrants issued.	—	—
Warrants exercised	—	—
Warrants expired	<u>(950,102)</u>	—
Balance as of October 31, 2022	<u>—</u>	<u>—</u>

Note 12. Redeemable Preferred Stock

The Company is authorized to issue up to 250,000 shares of preferred stock, par value \$0.01 per share, in one or more series, of which 105,875 shares were designated as 5% Series B Cumulative Convertible Perpetual Preferred Stock (referred to herein as Series B Preferred Stock) in March 2005. In addition, a subsidiary of the Company had authorized and issued preferred stock as of October 31, 2021, as described below.

Redeemable Series B Preferred Stock

The Company has designated 105,875 shares of its authorized preferred stock as Series B Preferred Stock (liquidation preference \$1,000.00 per share). As of October 31, 2022 and 2021, there were 64,020 shares of Series B Preferred Stock issued and outstanding, with a carrying value of \$59.9 million. The following is a summary of certain terms of the Series B Preferred Stock.

Ranking. Shares of the Company's Series B Preferred Stock rank with respect to dividend rights and rights upon the Company's liquidation, winding up or dissolution:

- senior to shares of the Company's common stock;
- junior to the Company's debt obligations; and
- effectively junior to the Company's subsidiaries' (i) existing and future liabilities and (ii) capital stock held by others.

Dividends. The Series B Preferred Stock pays cumulative annual dividends of \$50.00 per share, which are payable quarterly in arrears on February 15, May 15, August 15, and November 15. Dividends accumulate and are cumulative from the date of original issuance. Unpaid accumulated dividends do not bear interest.

The dividend rate is subject to upward adjustment as set forth in the Amended Certificate of Designation for the Series B Preferred Stock (the "Series B Certificate of Designation") if the Company fails to pay, or to set apart funds to pay, any quarterly dividend on the Series B Preferred Stock.

No dividends or other distributions may be paid or set apart for payment on the Company's common stock (other than a dividend payable solely in shares of a like or junior ranking), nor may any stock junior to or on parity with the Series B Preferred Stock be redeemed, purchased or otherwise acquired for any consideration (or any money paid to or made available for a sinking fund for such stock) by the Company or on its behalf (except by conversion into or exchange for shares of a like or junior ranking), unless all accumulated and unpaid dividends on the Series B Preferred Stock have been paid or funds or shares of common stock have been set aside for payment of such accumulated and unpaid dividends.

The dividends on the Series B Preferred Stock will be paid in cash, unless a registered holder elects (pursuant to the procedures set forth in the Series B Certificate of Designation) to receive such dividends in shares of the Company's common stock. Any such shares of common stock paid in lieu of cash dividends will be treated as restricted securities and will not be transferable by the recipient thereof except pursuant to an effective registration statement or pursuant to an exemption from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"). Dividends of \$3.2 million were paid in cash during each of the fiscal years ended October 31, 2022 and 2021, and dividends of \$4.8 million were paid in cash during the fiscal year ended October 31, 2020. Cumulative declared and unpaid dividends as of October 31, 2022 and 2021 were \$0.8 million.

No dividends were declared or paid by the Company on the Series B Preferred Stock in connection with the May 15, 2019 and August 15, 2019 dividend payment dates. Based on the dividend rate in effect on May 15, 2019 and August 15, 2019, the aggregate amount of such dividend payments would have been \$1.6 million. Because such dividends were not paid on May 15 or August 15, under the terms of the Series B Certificate of Designation, the holders of shares of Series B Preferred Stock were entitled to receive, when, as and if, declared by the Board of Directors, dividends at a dividend rate per annum equal to the normal dividend rate of 5% plus an amount equal to the number of dividend periods for which the Company failed to pay or set apart funds to pay dividends multiplied by 0.0625%, for each subsequent dividend period until the Company paid or provided for the payment of all dividends on the shares of Series B Preferred Stock for all prior dividend periods. On October 30, 2019, dividends were declared by the Board of Directors with respect to the May 15, 2019 and August 15, 2019 dividend payment dates as well as the November 15, 2019 dividend payment date. A payment of \$2.4 million made in the fiscal quarter ended January 31, 2020 represented the dividends payable with respect to the May 15, 2019 and August 15, 2019 dividend dates and the dividends payable with respect to the November 15, 2019 dividend date that were declared on October 30, 2019.

Liquidation. The holders of Series B Preferred Stock are entitled to receive, in the event that the Company is liquidated, dissolved or wound up, whether voluntarily or involuntarily, \$1,000.00 per share plus all accumulated and unpaid dividends up to but excluding the date of such liquidation, dissolution, or winding up (the "Liquidation Preference"). Until the holders of Series B Preferred Stock receive the Liquidation Preference with respect to their shares of Series B Preferred Stock in full, no payment will be made on any junior shares, including shares of the Company's common stock. After the Liquidation Preference is paid in full, holders of the Series B Preferred Stock will not be entitled to receive any further distribution of the Company's assets. (For the avoidance of doubt, neither the voluntary sale of all or substantially all of the Company's assets, nor a merger involving the Company, shall be deemed to be a voluntary or involuntary liquidation,

dissolution or winding up of the Company.) As of October 31, 2022 and 2021, the issued and outstanding shares of Series B Preferred Stock had an aggregate Liquidation Preference of \$64.0 million.

Conversion Rights. Each share of Series B Preferred Stock may be converted at any time, at the option of the holder, into 0.591 shares of the Company's common stock (which is equivalent to an initial conversion price of \$1,692.00 per share) plus cash in lieu of fractional shares. The conversion rate is subject to adjustment upon the occurrence of certain events, as described in the Series B Certificate of Designation. The conversion rate is not adjusted for accumulated and unpaid dividends. If converted, holders of Series B Preferred Stock do not receive a cash payment for all accumulated and unpaid dividends; rather, all accumulated and unpaid dividends are canceled.

The Company may, at its option, cause shares of Series B Preferred Stock to be automatically converted into that number of shares of its common stock that are issuable at the then-prevailing conversion rate. The Company may exercise its conversion right only if the closing price of its common stock exceeds 150% of the then-prevailing conversion price (\$1,692.00 per share as of October 31, 2022) for 20 trading days during any consecutive 30 trading day period, as described in the Series B Certificate of Designation.

If the holders of Series B Preferred Stock elect to convert their shares in connection with certain "fundamental changes" (as defined in the Series B Certificate of Designation and described below), the Company will in certain circumstances increase the conversion rate by a number of additional shares of common stock upon conversion or, in lieu thereof, the Company may in certain circumstances elect to adjust the conversion rate and related conversion obligation so that shares of Series B Preferred Stock are converted into shares of the acquiring or surviving company, in each case as described in the Series B Certificate of Designation.

The adjustment of the conversion price is to prevent dilution of the interests of the holders of the Series B Preferred Stock from certain dilutive transactions with holders of the Company's common stock.

Redemption. The Company does not have the option to redeem the Series B Preferred Stock. However, holders of the Series B Preferred Stock can require the Company to redeem all or a portion of their shares of Series B Preferred Stock at a redemption price equal to the Liquidation Preference of the shares to be redeemed in the case of a "fundamental change" (as further described in the Series B Certificate of Designation). A fundamental change will be deemed to have occurred if any of the following occurs:

- any "person" or "group" is or becomes the beneficial owner, directly or indirectly, of 50% or more of the total voting power of all classes of the Company's capital stock then outstanding and normally entitled to vote in the election of directors;
- during any period of two consecutive years, individuals who at the beginning of such period constituted the board of directors of the Company (together with any new directors whose election to the Company's board of directors or whose nomination for election by the stockholders was approved by a vote of 66 2/3% of the Company's directors then still in office who were either directors at the beginning of such period or whose election or nomination for election was previously so approved) cease for any reason to constitute a majority of the directors of the Company then in office;
- the termination of trading of the Company's common stock on The Nasdaq Stock Market and the common stock is not approved for trading or quoted on any other U.S. securities exchange or established over-the-counter trading market in the U.S.; or
- the Company (i) consolidates with or merges with or into another person or another person merges with or into the Company or (ii) sells, assigns, transfers, leases, conveys or otherwise disposes of all or substantially all of the assets of the Company and certain of its subsidiaries, taken as a whole, to another person and, in the case of any such merger or consolidation described in clause (i), the securities that are outstanding immediately prior to such transaction (and which represent 100% of the aggregate voting power of the Company's voting stock) are changed into or exchanged for cash, securities or property, unless pursuant to the transaction such securities are changed into or exchanged for securities of the surviving person that represent, immediately after such transaction, at least a majority of the aggregate voting power of the voting stock of the surviving person.

Notwithstanding the foregoing, holders of shares of the Series B Preferred Stock will not have the right to require the Company to redeem their shares if:

- the last reported sale price of shares of the Company's common stock for any five trading days within the 10 consecutive trading days ending immediately before the later of the fundamental change or its announcement equaled or exceeded 105% of the conversion price of the Series B Preferred Stock immediately before the fundamental change or announcement;
- at least 90% of the consideration (excluding cash payments for fractional shares and in respect of dissenters' appraisal rights) in the transaction or transactions constituting the fundamental change consists of shares of capital stock traded on a U.S. national securities exchange or quoted on The Nasdaq Stock Market, or which will be so traded or quoted when issued or exchanged in connection with a fundamental change, and as a result of the transaction or transactions, shares of Series B Preferred Stock become convertible into such publicly traded securities; or
- in the case of a merger or consolidation constituting a fundamental change (as described in the fourth bullet above), the transaction is affected solely to change the Company's jurisdiction of incorporation.

Moreover, the Company will not be required to redeem any Series B Preferred Stock upon the occurrence of a fundamental change if a third party makes an offer to purchase the Series B Preferred Stock in the manner, at the price, at the times and otherwise in compliance with the requirements set forth above and such third party purchases all shares of Series B Preferred Stock validly tendered and not withdrawn.

The Company may, at its option, elect to pay the redemption price in cash, in shares of the Company's common stock valued at a discount of 5% from the market price of shares of the Company's common stock, or in any combination thereof. Notwithstanding the foregoing, the Company may only pay such redemption price in shares of the Company's common stock that are registered under the Securities Act and eligible for immediate sale in the public market by non-affiliates of the Company.

Voting Rights. Holders of Series B Preferred Stock currently have no voting rights; however, holders may receive certain voting rights, as described in the Series B Certificate of Designation, if (a) dividends on any shares of Series B Preferred Stock, or any other class or series of stock ranking on parity with the Series B Preferred Stock with respect to the payment of dividends, shall be in arrears for dividend periods, whether or not consecutive, containing in the aggregate a number of days equivalent to six calendar quarters or (b) the Company fails to pay the redemption price, plus accrued and unpaid dividends, if any, on the redemption date for shares of Series B Preferred Stock following a fundamental change. In each such event, the holders of Series B Preferred Stock (voting separately as a class with all other classes or series of stock ranking on parity with the Series B Preferred Stock with respect to the payment of dividends and upon which like voting rights have been conferred and are exercisable) will be entitled to elect two directors to the Company's board of directors in addition to those directors already serving on the Company's board of directors at such time (the "Series B Directors"), at the next annual meeting of the Company's stockholders (or at a special meeting of the Company's stockholders called for such purpose, whichever is earlier). The right to elect the Series B Directors will continue for each subsequent annual meeting of the Company's stockholders until all dividends accumulated on the shares of Series B Preferred Stock have been fully paid or set aside for payment or the Company pays in full or sets aside for payment such redemption price, plus accrued but unpaid dividends, if any, on the redemption date for the shares of Series B Preferred Stock following a fundamental change. The term of office of any Series B Directors will terminate immediately upon the termination of the right of holders of Series B Preferred Stock to elect such Series B Directors, as described in this paragraph. Each holder of Series B Preferred Stock will have one vote for each share of Series B Preferred Stock held in the election of Series B Directors. The Company previously failed to make timely payment of the accrued dividends on the Series B Preferred Stock with respect to the May 15, 2019 and August 15, 2019 dividend payment dates. Such amounts were fully paid on or about November 15, 2019.

So long as any shares of Series B Preferred Stock remain outstanding, the Company will not, without the consent of the holders of at least two-thirds of the shares of Series B Preferred Stock outstanding at the time (voting separately as a class with all other series of preferred stock, if any, on parity with the Series B Preferred Stock upon which like voting rights have been conferred and are exercisable) issue or increase the authorized amount of any class or series of shares ranking senior to the outstanding shares of the Series B Preferred Stock as to dividends or upon liquidation. In addition, the Company will not, subject to certain conditions, amend, alter or repeal provisions of the Company's certificate of

incorporation, including the Series B Certificate of Designation, whether by merger, consolidation or otherwise, so as to adversely amend, alter or affect any power, preference or special right of the outstanding shares of Series B Preferred Stock or the holders thereof without the affirmative vote of not less than two-thirds of the issued and outstanding shares of Series B Preferred Stock.

Class A Preferred Shares (the “Series 1 Preferred Shares”) of FCE FuelCell Energy Ltd.

As of October 31, 2020, FCE FuelCell Energy Ltd. (“FCE Ltd.”), one of the Company’s indirect subsidiaries, had 1,000,000 Series 1 Preferred Shares issued and outstanding, which were held solely by Enbridge. The Company guaranteed the return of principal and dividend obligations of FCE Ltd. to Enbridge, as the holder of the Series 1 Preferred Shares, pursuant to the Guarantee, dated May 27, 2004, made by the Company in favor of Enbridge, as amended by the Guarantee Amending Agreement dated April 1, 2011 and effective as of January 1, 2011 between the Company and Enbridge (the “Guarantee”). Subsequent to the end of fiscal year 2020, the Company paid off these obligations to Enbridge.

On January 20, 2020, the Company, FCE Ltd. and Enbridge entered into a letter agreement (the “January 2020 Letter Agreement”), pursuant to which they agreed to amend the articles of FCE Ltd. relating to and setting forth the terms of the Series 1 Preferred Shares to: (i) remove the provisions of the articles permitting or requiring the issuance of shares of the Company’s common stock in exchange for the Series 1 Preferred Shares or as payment of amounts due to the holders of the Series 1 Preferred Shares, (ii) remove certain provisions of the articles relating to the redemption of the Series 1 Preferred Shares, (iii) increase the annual dividend rate, commencing on January 1, 2020, to 15%, (iv) extend the final payment date for all accrued and unpaid dividends and all return of capital payments (i.e., payments of the principal redemption price) from December 31, 2020 to December 31, 2021, (v) clarify when dividend and return of capital payments were to be made in the future and extend the quarterly dividend and return of capital payments through December 31, 2021 (which were previously to be paid each quarter through December 31, 2020), (vi) remove certain terms and provisions of the articles that are no longer applicable, and (vii) make other conforming changes to the articles. The articles of FCE Ltd. were amended and filed in accordance with the provisions of the January 2020 Letter Agreement on March 26, 2020. Under the amended articles, FCE Ltd. continued to be required to make (a) annual dividend payments of Cdn. \$500,000 and (b) annual return of capital payments of Cdn. \$750,000.

The amendment to the Series 1 Preferred Shares resulted in an extinguishment of the prior Series 1 Preferred Shares for accounting purposes. A revised fair value was estimated using a discounted cash flow model resulting in a revised carrying value being recorded for the amended Series 1 Preferred Shares of Cdn. \$23.4 million (U.S. \$17.7 million) as of January 20, 2020, which resulted in a loss of Cdn. \$0.2 million (U.S. \$0.2 million) recorded in Other income, net on the Consolidated Statements of Operations and Comprehensive Loss during the year ended October 31, 2020. On an undiscounted basis, the Company’s actual aggregate amount of all accrued and unpaid dividends to be paid on the Series 1 Preferred Shares as of October 31, 2020 totaled approximately Cdn. \$23.2 million (U.S. \$17.4 million) and the balance of the principal redemption price as of October 31, 2020 with respect to all of the Series 1 Preferred Shares totaled approximately Cdn. \$4.3 million (U.S. \$3.2 million).

Prior to the amendment, the Company bifurcated embedded derivatives related to the conversion feature and a variable dividend feature. As a result of the January 2020 Letter Agreement, both features were removed from the Series 1 Preferred Shares which resulted in the Company recognizing a gain of \$0.6 million related to the extinguishment of the embedded derivatives.

The following summary of the terms of the Series 1 Preferred Shares describes such terms as they existed on October 31, 2019 (prior to any modification covered by the January 2020 Letter Agreement and the resulting amendment of the articles of FCE Ltd.). The terms of the Series 1 Preferred Shares required (i) annual dividend payments of Cdn. \$500,000 and (ii) annual return of capital payments of Cdn. \$750,000. Dividends accrued at a 1.25% quarterly rate on the unpaid principal balance, and additional dividends accrued on the cumulative unpaid dividends (inclusive of the Cdn. \$12.5 million unpaid dividend balance as of the modification date) at a rate of 1.25% compounded quarterly. FCE Ltd. had the option, subject to the Company having sufficient authorized and unissued shares, of making dividend payments in the form of cash or shares of the Company’s common stock under the terms of the Series 1 Preferred Shares.

Because the Series 1 Preferred Shares represented a mandatorily redeemable financial instrument, they were presented as a liability on the Consolidated Balance Sheets.

The Company made payments of Cdn. \$1.9 million (or USD \$1.6 million) during fiscal year 2020. The Company's return of capital and dividend payments were not made for the calendar quarters ended on March 31, 2019, June 30, 2019 and September 30, 2019. During fiscal year 2020, the Company made the return of capital and dividend payments for the obligations due as of March 31, 2019, June 30, 2019 and September 30, 2019. The Company recorded interest expense, which reflects the amortization of the fair value discount of approximately Cdn. \$4.0 million (or USD \$2.9 million) in the fiscal year ended October 31, 2020. As of October 31, 2020, the carrying value of the Series 1 Preferred Shares was Cdn. \$25.6 million (\$19.2 million) and was classified as preferred stock obligation of subsidiary on the Consolidated Balance Sheets.

In December 2020, the Company, FCE Ltd., and Enbridge entered into a payoff letter, pursuant to which the Company paid all amounts owed to Enbridge under the terms of the Series 1 Preferred Shares. As of the date of the payoff letter, the amount owed to Enbridge under the Series 1 Preferred Shares totaled Cdn. \$27.4 million, which included Cdn. \$4.3 million of principal and Cdn. \$23.1 million of accrued dividends.

On December 18, 2020, the Company remitted payment totaling Cdn. \$27.4 million, or approximately U.S. \$21.5 million, to Enbridge. Upon making the payment, the Company recorded a loss on extinguishment for the Series 1 Preferred Shares of \$0.9 million. Concurrent with receipt of the payment from the Company, Enbridge surrendered its Series 1 Preferred Shares in FCE Ltd., and the Guarantee and the January 2020 Letter Agreement were terminated. All obligations related to the Series 1 Preferred Shares were extinguished upon payment.

Note 13. Segment Information

We are engaged in the development, design, production, construction, and servicing of high temperature fuel cells for clean electric power generation. Critical to the success of our business is, among other things, our research and development efforts, both through customer-sponsored projects and Company-sponsored projects. The research and development activities are viewed as another product line that contributes to the development, design, production and sale of fuel cell products, however, it is not considered a separate operating segment. The chief operating decision maker does not review and assess financial information at a discrete enough level to be able to assess performance of research and development activities as if they operated as a standalone business segment, therefore, the Company has identified one business segment: fuel cell power plant production and research.

Revenues, by geographic location (based on the customer's ordering location) for the years ended October 31, 2022, 2021 and 2020 were as follows (in thousands):

	<u>2022</u>	<u>2021</u>	<u>2020</u>
United States	\$ 60,290	\$ 58,393	\$ 67,750
South Korea	68,341	8,161	2,059
England	740	143	25
Germany	1,113	2,658	414
Switzerland	—	230	623
Total	<u>\$ 130,484</u>	<u>\$ 69,585</u>	<u>\$ 70,871</u>

Service agreement and license revenue which is included within Service agreements revenues on the Consolidated Statement of Operations was \$12.8 million, \$19.8 million and \$20.4 million for the years ended October 31, 2022, 2021 and 2020, respectively.

Long-lived assets located outside of the United States as of October 31, 2022 and 2021 are not significant individually or in the aggregate.

Note 14. Benefit Plans

We have stockholder approved equity incentive plans, a stockholder approved Employee Stock Purchase Plan and an employee tax-deferred savings plan, which are described in more detail below.

2018 Omnibus Incentive Plan

The Company's 2018 Omnibus Incentive Plan (as amended and restated from time to time, the "2018 Incentive Plan") authorizes grants of stock options, stock appreciation rights ("SARs"), restricted stock awards ("RSAs"), restricted stock units ("RSUs"), performance shares, performance units and incentive awards to key employees, directors, consultants and advisors. Stock options, RSAs and SARs have restrictions as to transferability. Stock option exercise prices are fixed by the Company's Board of Directors but shall not be less than the fair market value of our common stock on the date of the grant. SARs may be granted in conjunction with stock options.

At the May 8, 2020 reconvened 2020 Annual Meeting of Stockholders, the Company's stockholders approved the amendment and restatement of the original 2018 Incentive Plan, which authorizes the Company to issue up to 4,000,000 additional shares of the Company's common stock pursuant to awards granted under the 2018 Incentive Plan and provides for an increase in the annual limit on the grant-date fair value of awards to any non-employee director of the Company from \$200,000 to \$250,000. Following the approval of the amended and restated 2018 Incentive Plan by the Company's stockholders in May of 2020, the 2018 Incentive Plan provided the Company with the authority to issue a total of 4,333,333 shares of the Company's common stock, 1,000,000 shares of which were reserved for settlement of RSUs granted pursuant to an employment agreement, effective as of August 26, 2019, between the Company and Jason Few, our President and Chief Executive Officer (the "Sign-On Award"). The Sign-On Award was contingent upon obtaining stockholder approval of a sufficient number of additional shares under the 2018 Incentive Plan. The Company previously recorded the grants as a liability and, after obtaining such stockholder approval, reclassified the liability to additional paid-in capital.

On April 8, 2021, the Company's stockholders approved another amendment and restatement of the 2018 Incentive Plan to authorize the Company to issue up to 8,000,000 additional shares of the Company's common stock pursuant to awards under the 2018 Incentive Plan. Following the approval of the amendment and restatement, the Company has the authority to issue a total of 12,333,333 shares of the Company's common stock under the 2018 Incentive Plan. Of the 12,333,333 shares of the Company's common stock authorized to be issued under the 2018 Incentive Plan, 7,535,088 remained available for grant as of October 31, 2022.

Long-Term Incentive Plans

The Company's Board of Directors periodically approves Long Term Incentive Plans which include performance-based awards tied to the Company's common stock price as well as time-vesting awards. None of the awards granted as part of Long-Term Incentive Plans include any dividend equivalent or other stockholder rights. To the extent the awards are earned, they may be settled in shares or cash of an equivalent value at the Company's option. These plans are further described below.

Fiscal Year 2020 Long Term Incentive Plan:

On August 24, 2020, the Company's Board of Directors approved a Long-Term Incentive Plan for fiscal year 2020 (the "FY 2020 LTI Plan") as a sub-plan consisting of awards made under the 2018 Incentive Plan. The participants in the FY 2020 LTI Plan are members of senior management. The performance shares granted in fiscal year 2020 will be earned over the performance period ending on October 31, 2022 but will remain subject to a continued service-based vesting requirement until the third anniversary of the date of grant. The FY 2020 LTI Plan consists of three award components:

- 1) Relative total shareholder return ("TSR") performance share unit ("PSU") awards. The performance goal for the relative TSR PSUs is the TSR of the Company relative to the TSR of the Russell 2000 from May 8, 2020 through October 31, 2022. The Compensation Committee established the performance assessment criteria for the relative TSR PSUs as the TSR of the Company relative to the TSR of the Russell 2000, with the award calibration being 100% plus or minus 0.5x the difference between the Company's TSR and the Russell 2000 Index composite TSR. The award is capped at 200% of the target number of PSUs, and award is further capped at 100% of the target number of PSUs if the Company's absolute TSR over the performance period is negative. The Company's TSR is calculated by subtracting the Company's beginning stock price (defined as the average closing price of the Company's common stock over the 20 consecutive trading days ending on the last trading day immediately prior to May 8, 2020) from the ending stock price (defined as the average closing price of the Company's common stock over the 20 consecutive trading days ending on October 31, 2022), adding any dividends during the period, and then dividing the result by the Company's beginning stock price. The Company calculated the performance payout percentage of 112.9% and accordingly has reserved shares equal to this percentage of the target number

of PSUs, subject to vesting based on continued service until August 24, 2023 (the third anniversary of the grant date).

- 2) Absolute TSR PSU awards. The performance goal for the absolute TSR PSUs is an increase in the Company's stock price from May 8, 2020 through October 31, 2022, with award calibration being based on a specified percentage increase in the price of the Company's common stock over the average closing price of the Company's common stock over the 20 consecutive trading days ending on the last trading day immediately prior to May 8, 2020, which was \$1.8765. Specifically, a 50% increase earned 50% of the target award, a 100% increase earned 100% of the target award and a 150% increase earned 200% of the target award. Each price hurdle was required to be met and was met for 20 consecutive trading days during the performance period. The Compensation Committee certified achievement of a 150% increase during fiscal year 2021, resulting in an award percentage of 200%. As a result, the Company has reserved shares equal to 200% of the target number of PSUs, subject to vesting based on continued service until August 24, 2023 (the third anniversary of the grant date).
- 3) Time-vesting restricted stock units. The time-vesting RSUs granted in fiscal year 2020 vest at a rate of one-third of the total number of RSUs on each of the first three anniversaries of the date of grant.

Fiscal Year 2021 Long Term Incentive Plan:

On November 24, 2020, the Company's Board of Directors approved a Long-Term Incentive Plan for fiscal year 2021 (the "FY 2021 LTI Plan") as a sub-plan consisting of awards made under the 2018 Incentive Plan. The participants in the FY 2021 LTI Plan are members of senior management. The FY 2021 LTI Plan consists of three award components:

- 1) Relative TSR PSU awards. The PSUs granted during the year ended October 31, 2021 will be earned over the performance period ending on October 31, 2023, but will remain subject to a continued service-based vesting requirement until the third anniversary of the date of grant. The performance measure for the relative TSR PSUs is the TSR of the Company relative to the TSR of the Russell 2000 from November 1, 2020 through October 31, 2023. The Compensation Committee established the performance assessment criteria for the relative TSR PSUs as the TSR of the Company relative to the TSR of the Russell 2000, with the award calibration being 100% plus or minus 0.5x the difference between the Company's TSR and the Russell 2000 Index composite TSR. The award is capped at 200% of the target number of PSUs, and the award is further capped at 100% of the target number of PSUs if the Company's absolute TSR over the performance period is negative. The Company's TSR is calculated by subtracting the Company's beginning stock price (defined as the average closing price of the Company's common stock over the 20 consecutive trading days ending on October 30, 2020) from the ending stock price (defined as the average closing price of the Company's common stock over the 20 consecutive trading days ending on October 31, 2023), adding any dividends during the period, and then dividing the result by the Company's beginning stock price. Any PSUs that are earned based on performance will be earned on the date that the Compensation Committee certifies the achievement of the applicable level of relative TSR. Given that the performance period is still open, the Company has reserved shares equal to 200% of the target number of PSUs, subject to performance during the remaining performance period as well as vesting based on continued service until November 24, 2023 (the third anniversary of the grant date).
- 2) Absolute TSR PSU awards. The performance measure for the absolute TSR PSUs is an increase in the Company's stock price during the performance period of November 1, 2020 through October 31, 2023 with the award calibration being based on a specified percentage increase in the price of the Company's common stock over the average closing price of the Company's common stock over the 20 consecutive trading days ending on October 30, 2020, which was \$2.27. Specifically, a 25% increase earns 50% of the target award, a 50% increase earns 100% of the target award and a 100% increase earns 200% of the target award. Each price hurdle was required to be met and was met for 20 consecutive trading days during the performance period. The Compensation Committee certified achievement of a 150% increase during fiscal year 2021, resulting in an award percentage of 200%. As a result, the Company has reserved shares equal to 200% of the target number of PSUs, subject to vesting based on continued service until November 24, 2023 (the third anniversary of the grant date).
- 3) Time-vesting restricted stock units. The time-vesting RSUs granted during the year ended October 31, 2021 vest at a rate of one-third of the total number of RSUs on each of the first three anniversaries of the date of grant.

Fiscal Year 2022 Long Term Incentive Plan:

On December 10, 2021, the Company’s Board of Directors approved a Long-Term Incentive Plan for fiscal year 2022 (the “FY 2022 LTI Plan”) as a sub-plan consisting of awards made under the 2018 Incentive Plan. The participants in the FY 2022 LTI Plan are members of senior management. The FY 2022 LTI Plan consists of two award components:

- 1) Relative TSR PSU awards. The PSUs granted during the year ended October 31, 2022 will be earned over the performance period ending on October 31, 2024, but will remain subject to a continued service-based vesting requirement until the third anniversary of the date of grant. The performance measure for the relative TSR performance units is the TSR of the Company relative to the TSR of the Russell 2000 from November 1, 2021 through October 31, 2024. The Compensation Committee established the performance assessment criteria for the relative TSR PSUs as the TSR of the Company relative to the TSR of the Russell 2000, with the award calibration being 100% plus or minus 0.5x the difference between the Company’s TSR and the Russell 2000 Index composite TSR. The award is capped at 200% of the target number of PSUs, and the award is further capped at 100% of the target number of PSUs if the Company’s absolute TSR over the performance period is negative. The Company’s TSR is calculated by subtracting the Company’s beginning stock price (defined as the average closing price of the Company’s common stock over the 20 consecutive trading days ending on October 31, 2021) from the ending stock price (defined as the average closing price of the Company’s common stock over the 20 consecutive trading days ending on October 31, 2024), adding any dividends during the period, and then dividing the result by the Company’s beginning stock price. Given that the performance period is still open, the Company has reserved shares equal to 200% of the target number of PSUs, subject to performance during the remaining performance period as well as vesting based on continued service until December 10, 2024 (the third anniversary of the grant date).
- 2) Time-vesting restricted stock units. The time-vesting RSUs granted during the year ended October 31, 2022 will vest at a rate of one-third of the total number of RSUs on each of the first three anniversaries of the date of grant.

Other Equity Incentive Plans

The Company’s 2006 and 2010 Equity Incentive Plans remain in effect only to the extent of awards outstanding under the plans as of October 31, 2022.

Share-based compensation was reflected in the Consolidated Statements of Operations and Comprehensive Loss as follows (in thousands):

	Year Ended October 31,		
	2022	2021	2020
Cost of revenues	\$ 706	\$ 493	\$ 344
Administrative and selling expense	5,418	3,593	1,424
Research and development expense	456	111	54
	<u>\$ 6,580</u>	<u>\$ 4,197</u>	<u>\$ 1,822</u>

Stock Options

We account for stock options awarded to non-employee directors under the fair value method. There were no options granted in fiscal years 2022, 2021 or 2020.

The following table summarizes our stock option activity for the year ended October 31, 2022:

Options	Weighted- Average Option Shares	Price
Outstanding as of October 31, 2021	22,388	\$ 78.21
Cancelled and forfeited	(2,157)	\$ 184.32
Outstanding as of October 31, 2022	<u>20,231</u>	<u>\$ 66.90</u>

There were no options exercised in fiscal years 2022, 2021 or 2020.

The following table summarizes information about stock options outstanding and exercisable as of October 31, 2022:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number exercisable	Weighted Average Exercise Price
\$18.00 - \$77.28	15,217	4.6	\$ 26.89	15,217	\$ 26.89
\$77.29 - \$348.48	5,014	1.5	\$ 188.31	5,014	\$ 188.31
	<u>20,231</u>	4.0	\$ 66.90	<u>20,231</u>	\$

There was no intrinsic value for options outstanding and exercisable at October 31, 2022.

Restricted Stock Units Including Performance Based Awards

The following table summarizes our RSU and PSU activity for the year ended October 31, 2022:

Restricted Stock Units	Shares	Weighted-Average Fair Value
Outstanding as of October 31, 2021	2,543,541	\$ 5.08
Granted - PSUs	188,592	10.98
Granted - time-vesting RSUs	833,512	7.66
Vested	(934,668)	1.97
Forfeited	<u>(110,096)</u>	8.55
Outstanding as of October 31, 2022	<u>2,520,881</u>	\$ 7.93

On December 10, 2021, 338,048 RSUs were awarded to senior management under the FY 2022 LTI Plan, which included 169,026 PSUs and 169,022 time-based vesting RSUs. The PSUs were valued based on a Monte-Carlo Simulation, and the estimated fair value of the 169,026 relative TSR PSUs was \$11.70 per share. The PSUs and time-based vesting RSUs are expensed over the three-year performance period. During fiscal year 2022, an additional 19,566 PSUs and 65,219 time-based vesting RSUs were issued to new hires that joined during the fiscal year.

In addition to senior management, the Board of Directors also approved time-based RSU awards totaling 599,271 RSUs to certain salaried employees during fiscal year 2022 to promote ownership of the Company's equity and retention. The time-based vesting RSUs granted during the fiscal year ended October 31, 2022 will vest at a rate of one-third of the total number of RSUs on each of the first three anniversaries of the date of grant.

Outstanding RSUs as of October 31, 2021 included 1,000,000 RSUs granted as the Sign-On Award to Jason Few, the Company's President and Chief Executive Officer (the "CEO"), pursuant to the August 26, 2019 employment agreement between the Company and the CEO. Pursuant to the terms of such Sign-On Award, 500,000 RSUs vested on August 26, 2022. The remaining 500,000 RSUs ("Additional RSUs") would vest if, during the 30 days prior to the vesting date of August 26, 2022, the weighted average price of the Company's common stock exceeded \$1.00. The number of Additional RSUs issued would range from zero for a weighted average price of \$1.00 to a maximum of 500,000 RSUs for a weighted average price of \$6.00, with linear interpolation for stock prices between \$1.00 and \$6.00. The weighted average price of the Company's common stock was between \$4.00 and \$5.00 on August 26, 2022 and as a result, 278,788 Additional RSUs vested.

PSUs are issued assuming participants achieve 100% target performance. The Company also reserves additional shares assuming the maximum performance targets are met. As of October 31, 2022, the Company had reserved an additional 293,408 shares for potential issuance under the FY 2020 LTI Plan, an additional 429,304 shares for potential issuance under the FY 2021 LTI Plan and an additional 188,592 shares for potential issuance under the FY 2022 LTI Plan.

RSU and PSU expense is based on the fair value of the award at the date of grant and is amortized over the vesting period, which is generally over 3 or 4 years.

As of October 31, 2022, total unrecognized compensation cost related to RSUs and PSUs was \$10.8 million, which is expected to be recognized over approximately the next two years on a weighted-average basis.

Stock Awards

During the years ended October 31, 2022, 2021 and 2020, we awarded 76,848, 31,889 and 58,303 shares, respectively, of fully vested, unrestricted common stock to the independent members of our Board of Directors as a component of Board of Director compensation which resulted in recognizing \$0.2 million, \$0.3 million and \$0.1 million of expense for the years ended October 31, 2022, 2021 and 2020, respectively.

Employee Stock Purchase Plan

The 2018 Employee Stock Purchase Plan (the “ESPP”) was approved by the Company’s stockholders at the 2018 Annual Meeting of Stockholders. The adoption of the ESPP allows the Company to provide eligible employees of FuelCell Energy, Inc. and certain of its designated subsidiaries with the opportunity to voluntarily participate in the ESPP, enabling such participants to purchase shares of the Company’s common stock at a discount to market price at the time of such purchase. The maximum number of the Company’s shares of common stock that may be issued under the ESPP is 30,248 shares.

Under the ESPP, eligible employees have the right to purchase shares of common stock at the lesser of (i) 85% of the last reported sale price of our common stock on the first business day of the offering period, or (ii) 85% of the last reported sale price of the common stock on the last business day of the offering period, in either case rounded up to avoid impermissible trading fractions. Shares issued pursuant to the ESPP contain a legend restricting the transfer or sale of such common stock for a period of 0.5 year after the date of purchase.

The ESPP activity for the years ended October 31, 2022, 2021 and 2020 was de minimis.

Employee Tax-Deferred Savings Plans

We offer a 401(k) plan (the “401(k) Plan”) to all full time employees that provides for tax-deferred salary deductions for eligible employees (beginning the first month following an employee’s hire date). Employees may choose to make voluntary contributions of their annual compensation to the 401(k) Plan, limited to an annual maximum amount as set periodically by the IRS. Employee contributions are fully vested when made. Under the 401(k) Plan, there is no option available to the employee to receive or purchase our common stock. Matching contributions of 2% under the 401(k) Plan aggregated \$0.5 million, \$0.4 million, and \$0.3 million for the years ended October 31, 2022, 2021, and 2020, respectively.

Note 15. Income Taxes

The components of loss before income taxes for the years ended October 31, 2022, 2021, and 2020 were as follows (in thousands):

	<u>2022</u>	<u>2021</u>	<u>2020</u>
U.S.	\$ (145,439)	\$ (96,959)	\$ (85,865)
Foreign	(974)	(4,064)	(3,196)
Loss before income taxes	<u>\$ (146,413)</u>	<u>\$ (101,023)</u>	<u>\$ (89,061)</u>

The Company recorded an income tax provision totaling \$0.8 million, \$0 million and \$0 million for the years ended October 31, 2022, 2021 and 2020, respectively. The income tax expense primarily related to foreign income taxes in South Korea and Canada.

Franchise tax expense, which is included in administrative and selling expenses, was \$1.0 million, \$0.5 million and \$0.3 million for the years ended October 31, 2022, 2021 and 2020, respectively.

The reconciliation of the federal statutory income tax rate to our effective income tax rate for the years ended October 31, 2022, 2021 and 2020 was as follows:

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Statutory federal income tax rate	(21.0)%	(21.0)%	(21.0)%
Increase (decrease) in income taxes resulting from:			
State taxes, net of Federal benefits	(3.6)%	(5.2)%	(1.1)%
Foreign withholding tax	0.6 %	0.2 %	— %
Net operating loss expiration, impairment and true-ups	8.7 %	3.6 %	129.2 %
Nondeductible expenditures	1.4 %	1.9 %	1.4 %
Change in tax rates	0.3 %	(1.3)%	(0.6)%
Fair value adjustment on warrants	— %	3.3 %	8.7 %
Other, net	0.7 %	— %	1.1 %
Deferred only adjustment	(0.1)%	0.8 %	4.4 %
Valuation allowance	<u>13.6 %</u>	<u>17.9 %</u>	<u>(122.1)%</u>
Effective income tax rate	<u>0.6 %</u>	<u>0.2 %</u>	<u>— %</u>

Our deferred tax assets and liabilities consisted of the following as of October 31, 2022 and 2021 (in thousands):

	<u>2022</u>	<u>2021</u>
Deferred tax assets:		
Compensation and benefit accruals	\$ 8,523	\$ 7,891
Bad debt and other allowances	2,453	1,081
Capital loss and tax credit carry-forwards	14,310	15,191
Net operating losses (domestic and foreign)	123,825	113,733
Deferred license revenue	1,548	1,885
Accumulated depreciation	20,229	12,379
Grant revenue	475	609
Excess business interest	10,424	9,695
Operating lease liabilities	<u>2,085</u>	<u>2,211</u>
Gross deferred tax assets:	183,872	164,675
Valuation allowance	<u>(180,048)</u>	<u>(160,530)</u>
Deferred tax assets after valuation allowance	3,824	4,145
Deferred tax liability:		
In process research and development	(2,475)	(2,510)
Right of use assets	<u>(1,809)</u>	<u>(1,964)</u>
Net deferred tax liability	<u>\$ (460)</u>	<u>\$ (329)</u>

We continually evaluate our deferred tax assets as to whether it is “more likely than not” that the deferred tax assets will be realized. In assessing the realizability of our deferred tax assets, management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies. Based on the projections for future taxable income over the periods in which the deferred tax assets are realizable, management believes that significant uncertainty exists surrounding the recoverability of the deferred tax assets. As a result, we recorded a valuation allowance against our net deferred tax assets. As of October 31, 2022, we had \$393.7 million of federal net operating loss (“NOL”) carryforwards that expire in the years 2023 to 2038 and \$556.5 million of state NOL carryforwards that expire in the years 2023 through 2041. Additionally, we had \$11.2 million of state tax credits available that will expire from tax years 2023 to 2040.

During the 2020 tax year, the Company experienced an “ownership change” as defined by Internal Revenue Code Section 382. As a result, the utilization of federal and state NOLs generated prior to October of 2020 is subject to limitation and a reduction was made in fiscal year 2020 to the carrying balance of the federal and state NOLs to reflect the future limitation on utilization. The Company has updated its analysis of potential ownership changes through October 31, 2022 and concluded that no additional ownership changes have occurred subsequent to October 2020. In addition, the acquisition of Versa in fiscal year 2013 triggered a Section 382 ownership change at the level of Versa Power System which will limit the future usage of some of the federal and state NOLs that we acquired in that transaction. Accordingly, a valuation allowance has been recorded against the deferred tax asset associated with these attributes to reflect the future limitation on utilization.

The Company's financial statements reflect expected future tax consequences of uncertain tax positions that the Company has taken or expects to take on a tax return (including a decision whether to file or not file a return in a particular jurisdiction) presuming the taxing authorities' full knowledge of the position and all relevant facts.

The Company did not have any unrecognized tax benefits as of October 31, 2022 and 2021. It is our policy to record interest and penalties on unrecognized tax benefits as income taxes; however, because of our significant NOLs, no provision for interest or penalties has been recorded.

We file income tax returns in the U.S. and certain states, primarily Connecticut and California, as well as income tax returns required internationally for South Korea and Germany. We are open to examination by the IRS and various states in which we file for fiscal year 2002 to the present.

Note 16. Loss Per Share

Basic earnings (loss) per common share ("EPS") are generally calculated as income (loss) available to common stockholders divided by the weighted average number of common shares outstanding. Diluted EPS is generally calculated as income (loss) available to common stockholders divided by the weighted average number of common shares outstanding plus the dilutive effect of common share equivalents.

The calculation of basic and diluted EPS for the years ended October 31, 2022, 2021 and 2020 was as follows (amounts in thousands, except share and per share amounts):

	Year ended October 31,		
	2022	2021	2020
Numerator			
Net loss attributable to FuelCell Energy, Inc.	\$ (142,722)	(101,055)	\$ (89,107)
Series B preferred stock dividends	(3,200)	(3,200)	(3,331)
Net loss attributable to common stockholders	<u>\$ (145,922)</u>	<u>\$ (104,255)</u>	<u>\$ (92,438)</u>
Denominator			
Weighted average common shares outstanding – basic	383,139,140	334,742,346	221,960,288
Effect of dilutive securities ⁽¹⁾	—	—	—
Weighted average common shares outstanding – diluted	<u>383,139,140</u>	<u>334,742,346</u>	<u>221,960,288</u>
Net loss to common stockholders per share – basic	<u>\$ (0.38)</u>	<u>\$ (0.31)</u>	<u>\$ (0.42)</u>
Net loss to common stockholders per share – diluted ⁽¹⁾	<u>\$ (0.38)</u>	<u>\$ (0.31)</u>	<u>\$ (0.42)</u>

(1) Due to the net loss to common stockholders in each of the years presented above, diluted earnings per share was computed without consideration to potentially dilutive instruments as their inclusion would have been antidilutive. As of October 31, 2022, 2021 and 2020, potentially dilutive securities excluded from the diluted loss per share calculation are as follows:

	October 31, 2022	October 31, 2021	October 31, 2020
Orion Warrants	—	—	2,700,000
May 2017 Offering – Series C Warrants	—	950,102	964,114
Outstanding options to purchase common stock	20,231	22,388	23,891
Unvested Restricted Stock Awards	—	—	538
Unvested Restricted Stock Units	2,520,881	2,543,541	2,066,602
5% Series B Cumulative Convertible Perpetual Preferred Stock	37,837	37,837	37,837
Total potentially dilutive securities	<u>2,578,949</u>	<u>3,553,868</u>	<u>5,792,982</u>

Note 17. Restricted Cash

As of October 31, 2022 and 2021, there was \$23.0 million and \$28.0 million, respectively, of restricted cash and cash equivalents pledged as performance security, reserved for future debt service requirements, and reserved for letters of credit for certain banking requirements and contracts. The allocation of restricted cash is as follows (in thousands):

	October 31, 2022	October 31, 2021
Cash Restricted for Outstanding Letters of Credit ⁽¹⁾	\$ 4,993	\$ 6,478
Cash Restricted for PNC Sale-Leaseback Transactions ⁽²⁾	5,010	5,514
Cash Restricted for Crestmark Sale-Leaseback Transactions ⁽³⁾	2,894	2,887
Bridgeport Fuel Cell Park Project Debt Service and Performance Reserves ⁽⁴⁾	8,746	11,937
Other	1,346	1,183
Total Restricted Cash	<u>22,989</u>	<u>27,999</u>
Restricted Cash and Cash Equivalents – Short-Term ⁽⁵⁾	<u>(4,423)</u>	<u>(11,268)</u>
Restricted Cash and Cash Equivalents – Long-Term	<u>\$ 18,566</u>	<u>\$ 16,731</u>

- (1) Letters of credit outstanding as of October 31, 2022 expire on various dates through August 2028.
- (2) Long and short-term reserve that is to be used primarily to fund future module exchanges for operating projects falling under the PNC sale leaseback obligations. The decrease in restricted cash at October 31, 2022 compared to October 31, 2021 is a result of the Company's performance in completing certain module exchanges, which resulted in the cash restriction being released.
- (3) Long and short-term reserve that is to be used primarily to fund future module exchanges and other performance obligations.
- (4) Long and short-term reserves for the Bridgeport Fuel Cell Park Project to fund future module exchanges and other performance requirements.
- (5) Short-term restricted cash and cash equivalents are amounts expected to be released and categorized as unrestricted cash within twelve months of the balance sheet date.

Note 18. Commitments and Contingencies

Service Agreements

Under the provisions of its service agreements, the Company provides services to maintain, monitor, and repair customer power plants to meet minimum operating levels. Under the terms of such service agreements, the particular power plant must meet a minimum operating output during defined periods of the term. If minimum output falls below the contract requirement, the Company may be subject to performance penalties and/or may be required to repair or replace the customer's fuel cell module(s).

Power Purchase Agreements

Under the terms of the Company's PPAs, customers agree to purchase power from the Company's fuel cell power plants at negotiated rates. Electricity rates are generally a function of the customers' current and estimated future electricity pricing available from the grid. As owner or lessee of the power plants, the Company is responsible for all operating costs necessary to maintain, monitor and repair the power plants. Under certain agreements, the Company is also responsible for procuring fuel, generally natural gas or biogas, to run the power plants. In addition, under the terms of some of the PPAs, the Company may be subject to a performance penalty if the Company does not meet certain performance requirements.

Project Fuel Exposure

Certain of our PPAs for project assets in our generation operating portfolio and project assets under construction expose us to fluctuating fuel price risks as well as the risk of being unable to procure the required amounts of fuel and the lack of alternative available fuel sources. We seek to mitigate our fuel risk using strategies including: (i) fuel cost reimbursement mechanisms in our PPAs to allow for pass through of fuel costs (full or partial) where possible, which we have done with our 14.9 MW operating project in Bridgeport, CT; (ii) procuring fuel under fixed price physical contracts with investment grade counterparties, which we have done for twenty years for our Tulare BioMAT project and the initial seven years of

the eighteen year PPA for our LIPA Yaphank Project; and (iii) potentially entering into future financial hedges with investment grade counterparties to offset potential negative market fluctuations.

We currently have three projects in development with fuel sourcing risk, which are the Toyota project, which requires procurement of RNG, and our Derby, CT 14.0 MW and 2.8 MW projects, both of which require natural gas for which there is no pass-through mechanism. Fuel sourcing and risk mitigation strategies for all three projects are being assessed and will be implemented as project operational dates become firm. Such strategies may require cash collateral or reserves to secure fuel or related contracts for these three projects. If the Company is unable to secure fuel on favorable economic terms, it may result in impairment charges to the Derby project assets and further charges for the Toyota project asset.

While the Company is pursuing alternative sources of RNG for the Toyota project, charges are being recorded to cost of generation revenues for any project expenditure which may be unrecoverable. To date, \$24.9 million in charges have been recorded, which includes \$2.8 million in charges for the fiscal year ended October 31, 2021 and \$22.1 million in charges for the year ended October 31, 2022. As of October 31, 2022, the carrying value of the Toyota project on the Consolidated Balance Sheet totaled \$21.9 million which represents the carrying value of inventory components that could be redeployed for alternative use.

Given the rise in natural gas prices through and as of October 31, 2022, the Company performed a recoverability analysis with respect to the Derby 14.0 MW and 2.8 MW projects and concluded that the assets are recoverable and therefore an impairment has not occurred. Should natural gas prices continue to rise, there could be an impairment in future periods. The Company has risk mitigation strategies that it may implement in an effort to mitigate potential impacts including the ability to extend commercial operations dates. As of October 31, 2022, the carrying value of the 14.0 MW project in Derby, CT totaled \$29.3 million and the carrying value of the 2.8 MW project in Derby, CT totaled \$0.3 million.

Other

As of October 31, 2022, the Company had unconditional purchase commitments aggregating \$67.1 million, for materials, supplies and services in the normal course of business.

Legal Proceedings

Settlement Agreement with POSCO Energy

From approximately 2007 through 2015, the Company relied on POSCO Energy Co., Ltd. (“POSCO Energy”) to develop and grow the South Korean and Asian markets for its products and services. The Company received upfront license fees and was entitled to receive royalty income from POSCO Energy pursuant to certain manufacturing and technology transfer agreements, including the Alliance Agreement dated February 7, 2007 (and amendments thereto), the Technology Transfer, License and Distribution Agreement dated February 7, 2007 (and amendments thereto), the Stack Technology Transfer and License Agreement dated October 27, 2009 (and amendments thereto), and the Cell Technology Transfer and License Agreement dated October 31, 2012 (and amendments thereto), which are collectively referred to herein as the “License Agreements.” The License Agreements provided POSCO Energy with the exclusive technology rights to manufacture, sell, distribute and service the Company’s SureSource 300, SureSource 1500, and SureSource 3000 fuel cell technology in the South Korean and broader Asian markets. Due to certain actions and inactions of POSCO Energy, we did not realize any new material revenues, royalties or new projects developed by POSCO Energy between late 2015 and January 2022, at which time we began to recognize revenues in connection with sales of replacement modules to a subsidiary of POSCO Energy.

In November 2019, POSCO Energy spun-off its fuel cell business into a new entity, Korea Fuel Cell Co., Ltd. (“KFC”), without the Company’s consent. As part of the spin-off, POSCO Energy transferred manufacturing and service rights under the License Agreements to KFC, but retained distribution rights and severed its own liability under the License Agreements. The Company formally objected to POSCO Energy’s spin-off.

On April 27, 2020, POSCO Energy initiated a series of three arbitration demands against the Company at the International Court of Arbitration of the International Chamber of Commerce seated in Singapore, in which it alleged certain warranty defects in a sub-megawatt conditioning facility at its facility in Pohang, South Korea and sought combined damages of approximately \$3.3 million. Prior to filing the arbitrations, POSCO Energy obtained provisional attachments from the Seoul Central District Court attaching certain revenues owed to the Company by Korea Southern Power Company

(“KOSPO”) as part of such warranty claims, which delayed receipt of certain payments owed to the Company. POSCO Energy subsequently sought additional provisional attachments on KOSPO revenues from the Seoul Central District Court based on unspecified warranty claims in an additional amount of approximately \$7 million, and additional provisional attachments on KOSPO revenues from the Seoul Central District Court based on its alleged counterclaims in the license termination arbitration described below in an additional amount of approximately \$110 million. As of October 31, 2021, the Company had outstanding accounts receivable due from KOSPO of \$11.2 million, which amount was recovered from the Seoul Central District Court during the second quarter of fiscal year 2022.

In June 2020, the Company terminated the License Agreements and filed a demand for arbitration against POSCO Energy and KFC in the International Court of Arbitration of the International Chamber of Commerce. In October 2020, POSCO Energy filed a counterclaim in the arbitration.

The Company discontinued revenue recognition of the deferred license revenue related to the License Agreements in July 2020 given the then-pending arbitrations.

In order to resolve the Company’s disputes with POSCO Energy and KFC, on December 20, 2021, the Company entered into a Settlement Agreement (the “Settlement Agreement”) with POSCO Energy and KFC (POSCO Energy and KFC may be collectively referred to herein as “PE Group”). The Settlement Agreement provides, among other things, that the parties will cooperate in good faith to effect a market transition to the Company of the molten carbonate fuel cell business in Korea in accordance with the terms and conditions of the Settlement Agreement. To that end, the Settlement Agreement provides that any and all past, current, or potential disputes and claims between the Company, on the one hand, and POSCO Energy and KFC, on the other, of any nature whatsoever, whether known or unknown, asserted or not asserted, based on actions or omissions of any party on or before the date of Settlement Agreement are fully and finally settled, including such disputes and claims, directly or indirectly, in connection with the legal disputes and License Agreements described above, with the exception of (i) an unfiled claim by the Company in the amount of approximately \$1.8 million with respect to certain royalties the Company believes are owed by POSCO Energy with respect to replacement modules deployed by POSCO Energy at Gyeonnggi Green Energy and other sites for which POSCO Energy has not paid royalties, and (ii) an unfiled claim by POSCO Energy in an unknown amount with respect to a series of purchase orders for materials and components which began in 2014 under a supply chain contract, both of which claims remain unsettled. The Company does not believe the claim by POSCO Energy with respect to purchase orders for materials and components under the supply chain contract has merit and the Company retains the right to file a counterclaim for damages it believes it has incurred with respect to such supply chain contract.

Under the Settlement Agreement, the parties also agreed that, within five days of the date thereof, the Company would withdraw its objection to the spin-off of KFC from POSCO Energy, and that the License Agreements are not terminated, but instead are deemed to be amended such that POSCO Energy and KFC only have the right (i) to provide maintenance and repair services to PE Group’s existing customers on existing molten carbonate power generation and thermal projects under LTSAs currently in force as well as LTSAs that have expired and are pending renewal as of the settlement date (collectively, “Existing LTSAs”), (ii) to supply replacement modules purchased from the Company only for their existing customers for existing molten carbonate power generation and thermal projects under Existing LTSAs and (iii) to own, operate and maintain all facilities and factories solely for the purposes set forth in (i) and (ii) above (collectively, the “Right to Service License”). POSCO Energy and KFC further agreed that, as of the date of the Settlement Agreement, the License Agreements were deemed to be amended such that the Company exclusively enjoys all rights as to the Company’s technology in Korea and Asia, other than the Right to Service License. The Settlement Agreement further provides that the License Agreements will terminate automatically upon sixty days prior written notice to PE Group if (i) the Company enters into a business collaboration agreement with a Korean company to construct, assemble, manufacture, market, sell, distribute, import, export, install, commission, service, maintain, or repair products incorporating the Company’s technology, or otherwise conduct the Company’s business, in the Korean market; or (ii) the Company expands the capacity of its existing Korean entity such as to perform such activities itself. In the event of the termination of the License Agreements, the license granted to PE Group under the Right to Service License will continue notwithstanding the termination of the License Agreements, except that PE Group’s right to own, operate, and maintain all facilities and factories for the purpose of servicing any orders or requests made by the Company will terminate. For the avoidance of doubt, pursuant to the terms of the Settlement Agreement, PE Group has no right to manufacture modules or any other product incorporating the Company’s technology under the License Agreements as amended, the Right to Service License or otherwise unless requested and authorized by the Company to do so.

The Settlement Agreement further provides that, in order to service its existing customers under the Existing LTSAs, KFC would place a firm, non-cancelable order for twelve SureSource 3000 modules within two weeks after the date of the Settlement Agreement and an additional firm, non-cancelable order for eight SureSource 3000 modules on or before June 30, 2022, all at a price of \$3.0 million per module. The Company received firm, non-cancelable orders from KFC for a total of twenty SureSource 3000 modules in fiscal year 2022. All of these modules were delivered Ex Works from the Company's facility in Torrington, CT in fiscal year 2022.

In addition, KFC agreed to use commercially reasonable efforts to order fourteen additional SureSource 3000 modules by December 31, 2022, at a price of \$3.0 million per module if ordered by such date. KFC has indicated that it does not intend to order additional modules by December 31, 2022.

Pursuant to the Settlement Agreement, with respect to new modules supplied by the Company and deployed by PE Group to its existing customers, the Company will provide its standard warranty against module defects until the earlier of eighteen months from the date of shipment or twelve months from the date of installation. As part of the global settlement of the disputes among the parties and subject to the qualifications set forth in the Settlement Agreement, the Company will reimburse PE Group for any annual output penalty amount paid by PE Group to its customers pursuant to Existing LTSAs (whether such Existing LTSA is extended or renewed), caused by a shortfall or defect in the new modules for a period of up to seven years. The maximum annual reimbursement obligation with regard to any PE Group customer for any new module provided by the Company will not exceed an amount equal to 7.5% per year of the module purchase price. The Company will not be required to reimburse PE Group for any penalty paid by PE Group under the Existing LTSAs that is not caused by a shortfall or defect in the modules to be supplied by the Company including, without limitation, any shortfall or defect caused by a site-related problem, a problem with the balance of plant, or other components of the project.

Although the Company has the exclusive and unrestricted right under the Settlement Agreement to perform, pursue, and otherwise conduct its business in relation to new fuel cell projects (including new projects with PE Group's existing customers) in Korea and Asia, the parties have agreed that, except as further provided in the Settlement Agreement with respect to PE Group's existing customers Noeul Green Energy and Godeok Green Energy, the Company will not engage in discussions with PE Group's existing customers regarding Existing LTSAs without PE Group's consent. The parties have further agreed that if PE Group cannot enter into an agreement with its existing customers to extend or renew Existing LTSAs by December 31, 2022, PE Group will cooperate with the Company so that the Company may discuss and, at the Company's sole discretion, enter into an extension of an Existing LTSA, a new LTSA to replace an Existing LTSA, or a module sales agreement with PE Group's existing customers; provided that (i) should the Company enter into such an arrangement with a PE Group existing customer, and (ii) the Company is required to provide replacement modules to such existing customer under such arrangement, and (iii) PE Group has not already deployed all or some of the modules that PE Group ordered under the Settlement Agreement, the Company will purchase the number of required replacement modules from PE Group at a price of \$3.0 million per module (to the extent such modules are available and have not yet been deployed). The purchase of such replacement modules by the Company is contingent upon the modules being in proper condition as determined by inspection process to be agreed to by the parties. Any modules purchased by the Company from PE Group under these terms will be included as part of the firm orders KFC is required to make pursuant to the Settlement Agreement.

With respect to operations and maintenance agreements, the Settlement Agreement provides that KFC will have the right of first refusal on providing operation and maintenance services on commercially reasonable terms for new LTSAs entered into by the Company in Korea for a period of the first to occur of either twenty-four months after the date of the Settlement Agreement or until such time as the Company engages a third party capable of providing such services in Korea. If the Company and KFC agree that KFC should provide operation and maintenance services pursuant to the right of first refusal, the Company and KFC will enter into one or more operation and maintenance agreements that reflect commercially reasonable terms and conditions as agreed by the Company and KFC at that time.

With respect to BOP, KFC currently has eight units of BOP available, and the Settlement Agreement provides that the Company has the option to purchase such units of BOP for any new molten carbonate fuel cell projects within Korea at a price of KRW 2,550,000,000 per unit (or USD \$1,787,550 per unit as of October 31, 2022). The Company will also have a non-exclusive, non-transferrable, non-sublicensable license to use the intellectual property imbedded in the BOP units in Korea in consideration for a reasonable license fee to be separately agreed by the parties. Detailed terms and conditions of BOP and related software and firmware supply will be discussed and agreed to in good faith in separate BOP supply agreements in the event the Company exercises its option to purchase any of such BOP.

The Company retained outside counsel on a contingency basis to pursue its claims against POSCO Energy and KFC, and outside counsel entered into an agreement with a litigation finance provider to fund the legal fees and expenses of the arbitration proceedings brought by the Company against POSCO Energy and KFC. Because the Company entered into the Settlement Agreement, it was required to remit fees to its counsel, Wiley Rein, LLP (“Wiley”), subject to the terms of its engagement letter with Wiley. On December 23, 2021, the Company agreed that it would pay Wiley a total of \$24.0 million to satisfy all obligations to Wiley under the Company’s engagement letter (which is included in Administrative and selling expenses on the Consolidated Statements of Operations and Comprehensive Loss for the year ended October 31, 2022). The total amount of \$24.0 million was paid in full during the year ended October 31, 2022.

Other Legal Proceedings

From time to time, the Company is involved in other legal proceedings, including, but not limited to, regulatory proceedings, claims, mediations, arbitrations and litigation, arising out of the ordinary course of its business (“Other Legal Proceedings”). Although the Company cannot assure the outcome of such Other Legal Proceedings, management presently believes that the result of such Other Legal Proceedings, either individually, or in the aggregate, will not have a material adverse effect on the Company’s consolidated financial statements, and no material amounts have been accrued in the Company’s consolidated financial statements with respect to these matters.

Impact of the COVID-19 Pandemic

During fiscal year 2020, the Company launched a proactive response to the escalating COVID-19 outbreak and temporarily suspended operations at its Torrington, Connecticut manufacturing facility in March 2020. The Company also commenced remote work protocol for those employees worldwide that were capable of working from home. The Company took these actions to secure the safety of the Company’s employees, our corporate community as a whole, and the communities in which our team members live, and to adhere to Centers for Disease Control (CDC) recommendations of social distancing and limited public exposure in connection with the COVID-19 pandemic. All employees that were not able to work from home during the manufacturing facility shutdown due to their job function received full wages and benefits during such time. We did not implement any furlough, layoff or shared work program during such time. The Company resumed manufacturing in June 2020 and the Torrington, Connecticut manufacturing facility employees returned to work. We established a phased-in return-to-work schedule commencing March 15, 2021 for those employees working from home which was completed in April 2021. While the Company did not experience any significant disruption to its operations in fiscal year 2022, we continue to evaluate our ability to operate in the event of a resurgence of serious illness related to COVID-19 and the advisability of continuing operations based on federal, state and local guidance, evolving data concerning the pandemic and the best interests of our employees, customers and stockholders.

Note 19. Supplemental Cash Flow Information

The following represents supplemental cash flow information (dollars in thousands):

	Year Ended October 31,		
	2022	2021	2020
Cash interest paid	\$ 1,556	\$ 5,765	\$ 8,376
Income taxes paid	2	6	2
Noncash financing and investing activity:			
Noncash reclassifications between inventory and project assets	1,260	7,052	1,152
Noncash reclassifications from inventory to fixed assets	1,552	—	—
Noncash reclassifications from other assets to project assets	2,375	—	—
Director stock compensation	305	275	104
Reclassification of value of executive share-based compensation	—	—	434
Addition of operating lease liabilities	—	1,459	899
Addition of operating lease right-of-use assets	—	1,459	899
Cashless warrant exercises	—	—	25,994
Reclassification to equity of warrant liability for warrant exercises	—	21,170	9,783
Accrued purchase of fixed assets, cash paid to be paid in subsequent period	4,396	1,537	39
Accrued purchase of project assets, cash to be paid in subsequent period	6,444	6,707	502

Note 20. Subsequent Events

Groton Project – Commercial Operations Achieved at 6 MW

On December 16, 2022, the Company declared and, per the terms of the Amended and Restated Power Purchase Agreement between the Company and CMEEC entered into on that date (the “Amended and Restated PPA”), CMEEC agreed that the Groton Project is commercially operational at 6 MW. As of December 16, 2022, the Groton Project will be reported as a part of the Company’s operating generation portfolio. The Amended and Restated PPA allows the Company to operate the plant at a reduced output of approximately 6 MW while a Technical Improvement Plan (“TIP”) is implemented over the next year with the goal of bringing the platform to its rated capacity of 7.4 MW by December 31, 2023. In conjunction with entering into the Amended and Restated PPA, the Navy also provided its authorization to proceed with commercial operations at 6 MW. The Company paid CMEEC an amendment fee of \$1.225 million and will incur performance guarantee fees under the Amended and Restated PPA as a result of operating at an output below 7.4 MW during implementation of the TIP. Although the Company believes it will successfully implement the TIP within approximately one year and bring the plant up to its nominal output of 7.4 MW, no assurance can be provided that such work will be successful. In the event that the plant does not reach an output of 7.4 MW by December 31, 2023, the Amended and Restated PPA will continue in effect, and the Company will be subject to ongoing performance guarantee fees as set forth in the Amended and Restated PPA.

In addition, as previously disclosed, in August 2021, the Company closed on a tax equity financing transaction with East West Bancorp, Inc. (“East West Bank”) for the Groton Project. East West Bank’s tax equity commitment totals \$15 million. In connection with the initial closing, the Company drew down \$3.0 million. Under subsequent amendments, the terms of East West Bank’s remaining investment commitment of \$12.0 million were modified such that East West Bank will now contribute \$4.0 million on each of the first, second and third anniversaries of the Groton Project achieving commercial operations, rather than contributing the full \$12.0 million when the Groton Project achieves commercial operations. In conjunction with the amendments, the Company agreed to pay aggregate fees of \$0.5 million, which were paid upon the Company declaring commencement of commercial operations of the plant on December 16, 2022.

With the declaration of commercial operations, East West Bank’s investment in the project has been reclassified as a non-redeemable noncontrolling interest as of December 16, 2022.

Amendment No. 3 to Joint Development Agreement with EMTEC

On December 19, 2022, the Company and EMTEC entered into Amendment No. 3 to the Joint Development Agreement between the Company and EMTEC, effective as of December 1, 2022 (such amendment, “Amendment No. 3” and such agreement, as amended, the “EMTEC Joint Development Agreement”). In Amendment No. 3, the Company and EMTEC agreed to further extend the term of the EMTEC Joint Development Agreement such that it will end on August 31, 2023 (unless terminated earlier) and to further increase the maximum amount of research costs to be reimbursed by EMTEC from \$50.0 million to \$60.0 million. Amendment No. 3 is intended to (i) allow for continuation of research that would enable the parties to finalize data collection in support of the project gate decision to use the developed technology in a Company fuel cell module demonstration for capturing carbon at ExxonMobil’s Rotterdam facility, (ii) allow for the continuation of the development, engineering and mechanical derisking of the Generation 2 Technology fuel cell module prototype, and (iii) allow for studying the manufacturing scale-up and cost reduction of a commercial Generation 2 Technology fuel cell carbon capture facility.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures.

The Company maintains disclosure controls and procedures, which are designed to provide reasonable assurance that information required to be disclosed in the Company's periodic SEC reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

We carried out an evaluation, under the supervision and with the participation of our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures were effective as of the end of the period covered by this report.

Management's Annual Report on Internal Control Over Financial Reporting.

Management of FuelCell Energy, Inc. and its subsidiaries (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America. Internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles in the United States of America, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Under the supervision and with the participation of management, including our principal executive and principal financial officers, we evaluated the Company's internal control over financial reporting as of October 31, 2022, based on criteria for effective internal control over financial reporting established in the *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this assessment, we have concluded that the Company maintained effective internal control over financial reporting as of October 31, 2022 based on the specified criteria. The Company's independent registered public accounting firm, KPMG LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control Over Financial Reporting.

There have been no changes in our internal control over financial reporting that occurred during the fourth quarter of fiscal year 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10, with respect to our executive officers, is included in Part I of this Annual Report on Form 10-K under the heading “*Information about our Executive Officers*”. The other information required by this Item 10 is incorporated by reference to the Company’s 2023 Proxy Statement to be filed with the SEC within 120 days after fiscal year end.

Our board of directors has adopted a Code of Ethics (the “Code”), which applies to the board of directors, named executive officers, and all employees. The Code provides a statement of certain fundamental principles and key policies and procedures that govern the conduct of our business. The Code covers all major areas of professional conduct, including employment policies, conflicts of interest, intellectual property and the protection of confidential information, as well as strict adherence to all laws and regulations applicable to the conduct of our business. As required by the Sarbanes-Oxley Act of 2002, our Audit and Finance Committee has procedures to receive, retain, investigate and resolve complaints received regarding our accounting, internal accounting controls or auditing matters and to allow for the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters. The Code can be found in the Corporate Governance sub-section of the section entitled “Investors” on our website at www.fuelcellenergy.com. We intend to disclose any changes in, or waivers from, the Code by posting such information on the same website or by filing a Current Report on Form 8-K, in each case to the extent such disclosure is required by rules of the SEC or Nasdaq.

Item 11. EXECUTIVE COMPENSATION

Information required under this Item is incorporated by reference to the Company’s 2023 Proxy Statement to be filed with the SEC within 120 days after fiscal year end.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required under this Item is incorporated by reference to the Company’s 2023 Proxy Statement to be filed with the SEC within 120 days after fiscal year end.

Equity Compensation Plan Information

The following table sets forth information with respect to the Company’s equity compensation plans as of the end of the fiscal year ended October 31, 2022.

Plan Category	Number of Common Shares to be issued upon exercise of outstanding options and rights	Weighted-average exercise price of outstanding options and rights	Number of securities remaining available for future issuance under equity compensation plans
<i>Equity compensation plans approved by security holders:</i>			
Equity incentive plans ⁽¹⁾	20,231	\$ 66.90	8,451,061
Employee stock purchase plan	—	—	9,000
Total	20,231	\$ 66.90	8,460,061

(1) Includes the Company’s 2018 Omnibus Incentive Plan, as amended and restated.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required under this Item is incorporated by reference to the Company's 2023 Proxy Statement to be filed with the SEC within 120 days after fiscal year end.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required under this Item is incorporated by reference to the Company's 2023 Proxy Statement to be filed with the SEC within 120 days after fiscal year end.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

- 1 Financial Statements — See Index to Consolidated Financial Statements in Item 8 of this Annual Report on Form 10-K.
- 2 Financial Statement Schedules — Supplemental schedules are not provided because of the absence of conditions under which they are required or because the required information is given in the financial statements or notes thereto.
- 3 Exhibits — The following exhibits are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K.

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
3.1	Certificate of Incorporation of the Company, as amended, July 12, 1999 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated September 21, 1999).
3.2	Certificate of Amendment of the Certificate of Incorporation of the Company, dated November 21, 2000 (incorporated by reference to Exhibit 3.3 to the Company's Annual Report on Form 10-K dated January 12, 2017).
3.3	Certificate of Amendment of the Certificate of Incorporation of the Company, dated October 31, 2003 (incorporated by reference to Exhibit 3.1.1 to the Company's Current Report on Form 8-K dated November 3, 2003).
3.4	Certificate of Designation for the Company's 5% Series B Cumulative Convertible Perpetual Preferred Stock (incorporated by reference to Exhibit 3.1 to the Company's Current Report Form 8-K, dated November 22, 2004).
3.5	Amended Certificate of Designation of 5% Series B Cumulative Convertible Perpetual Preferred Stock, dated March 14, 2005 (incorporated by reference to Exhibit 3.4 to the Company's Annual Report on Form 10-K dated January 12, 2017).
3.6	Certificate of Amendment of the Certificate of Incorporation of the Company, dated April 8, 2011 (incorporated by reference to Exhibit 3.5 to the Company's Annual Report on Form 10-K dated January 12, 2017).
3.7	Certificate of Amendment of the Certificate of Incorporation of the Company, dated April 5, 2012 (incorporated by reference to Exhibit 3.6 to the Company's Annual Report on Form 10-K dated January 12, 2017).
3.8	Certificate of Amendment of the Certificate of Incorporation of the Company, dated December 3, 2015 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated December 3, 2015).
3.9	Certificate of Amendment of the Certificate of Incorporation of the Company, dated April 18, 2016 (incorporated by reference to Exhibit 3.9 to the Company's Quarterly Report on Form 10-Q for the period ended April 30, 2016).
3.10	Certificate of Amendment of the Certificate of Incorporation of the Company, dated April 7, 2017 (incorporated by reference to Exhibit 3.10 to the Company's Quarterly Report on Form 10-Q for the period ended April 30, 2017).
3.11	Certificate of Designations for the Company's Series C Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, dated September 5, 2017).

Exhibit No.	Description
3.12	Certificate of Amendment of the Certificate of Incorporation of the Company, dated December 14, 2017 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated December 14, 2017).
3.13	Certificate of Designations, Preferences and Rights for the Company's Series D Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated August 27, 2018).
3.14	Certificate of Amendment of the Certificate of Incorporation of FuelCell Energy, Inc., dated May 8, 2019 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on May 8, 2019).
3.15	Certificate of Amendment of the Certificate of Incorporation of FuelCell Energy, Inc., dated May 11, 2020 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on May 12, 2020).
3.16	Certificate of Amendment of the Certificate of Incorporation of FuelCell Energy, Inc. dated April 8, 2021 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K/A filed on April 14, 2021).
3.17	Amended and Restated By-Laws of the Company, dated December 15, 2016 (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K dated December 15, 2016).
4.1	Specimen of Common Share Certificate (incorporated by reference to Exhibit 4 to the Company's Annual Report on Form 10-K for fiscal year ended October 31, 1999).
4.2	Form of Series C Warrants to purchase common stock (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K dated April 27, 2017).
4.3	Form of Warrant to purchase common stock (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on November 6, 2019).
4.4	Description of Securities Registered Under Section 12 of the Securities Exchange Act of 1934, as amended.
10.1	Purchase and Sale Agreement between Groton Fuel Cell 1, LLC and PNC Energy Capital LLC, dated October 31, 2016 (incorporated by reference to Exhibit 10.1 to the Company's Annual Report on Form 10-K for the period ended October 31, 2016).
10.2	Lease Agreement between Groton Fuel Cell 1, LLC and PNC Energy Capital LLC, dated October 31, 2016 (incorporated by reference to Exhibit 10.2 to the Company's Annual Report on Form 10-K for the period ended October 31, 2016).
10.3	Pledge Agreement between FuelCell Energy Finance, LLC and PNC Energy Capital LLC, dated October 31, 2016 (incorporated by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K for the period ended October 31, 2016).
10.4	**Alliance Agreement between FuelCell Energy, Inc. and POSCO Energy, dated as of February 7, 2007 (incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q/A for the period ended January 31, 2009).
10.5	**Technology Transfer, License and Distribution Agreement between FuelCell Energy, Inc. and POSCO Energy, dated as of February 7, 2007 (incorporated by reference to Exhibit 10.2 to the Company's Form 10-Q/A for the period ended January 31, 2009).
10.6	**Stack Technology Transfer and License Agreement dated as of October 27, 2009, by and between FuelCell Energy, Inc. and POSCO Energy (incorporated by reference to Exhibit 10.1 of the Company's Current Report Form 8-K, dated October 27, 2009).
10.7	Lease agreement, dated March 8, 2000, between the Company and Technology Park Associates, L.L.C. (incorporated by reference to Exhibit 10.55 to the Company's Quarterly Report on Form 10-Q for the period ended April 30, 2000).

Exhibit No.	Description
10.8	*FuelCell Energy, Inc. Amended and Restated 1998 Equity Incentive Plan (incorporated by reference to Exhibit 10.54 to the Company's Annual Report on Form 10-K for the period ended October 31, 2015).
10.9	*FuelCell Energy, Inc. 2006 Equity Incentive Plan (incorporated by reference to Exhibit 10.58 to the Company's Annual Report on Form 10-K for the period ended October 31, 2015).
10.10	*FuelCell Energy, Inc. Amended and Restated 2010 Equity Incentive Plan (incorporated by reference to Exhibit 10.59 to the Company's Annual Report on Form 10-K for the period ended October 31, 2015).
10.11	Letter agreement, dated September 28, 2015, between the Company and Technology Park Associates, L.L.C. exercising the extension option per the terms of the Lease Agreement, dated March 8, 2000, between the Company and Technology Park Associates, L.L.C. (incorporated by reference to Exhibit 10.60 to the Company's Annual Report on Form 10-K for the period ended October 31, 2015).
10.12	*Employment Agreement, dated March 21, 2012 and effective as of January 1, 2012 between the Company and Michael Bishop, Chief Financial Officer (incorporated by reference to the Exhibit 10.68 to the Company's Current Report Form 8-K, dated March 21, 2012).
10.13	Cell Technology Transfer and License Agreement dated October 31, 2012 by and between the Company and POSCO Energy, Co., Ltd. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K/A dated as of October 31, 2012 and filed on January 7, 2013).
10.14	Amendment to Technology Transfer Distribution and Licensing Agreement dated as of February 7, 2007 and the Stack Technology Transfer License Agreement dated as of October 27, 2009, each by and between the Company and POSCO Energy, Co., Ltd. (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated as of October 31, 2012).
10.15	Loan Agreement, dated as of March 5, 2013, between Clean Energy Finance and Investment Authority, as Lender, and the Company, as Borrower (incorporated by reference to Exhibit 10.69 to the Company's Quarterly Report on Form 10-Q for the period ended January 31, 2013).
10.16	Security Agreement, dated March 5, 2013, by the Company in favor of the Clean Energy Finance and Investment Authority (incorporated by reference to Exhibit 10.70 to the Company's Quarterly Report on Form 10-Q for the quarter ended January 31, 2013).
10.17	Assistance Agreement, dated November 19, 2015, by and between the State of Connecticut Acting by the Department of Economic Community and Development and the Company (incorporated by reference to Exhibit 10.84 to the Company's Annual Report on Form 10-K for the period ended October 31, 2015).
10.18	Phase 1 Promissory Note, dated November 19, 2015, between the Company and the State of Connecticut Acting by and through the Department of Economic Community and Development (incorporated by reference to Exhibit 10.85 to the Company's Annual Report on Form 10-K for the period ended October 31, 2015).
10.19	Amendment to Alliance Agreement, dated as of October 10, 2016, by and between the Company and POSCO Energy Co., Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 10, 2016).
10.20	Amendment to Technology Transfer, Distribution and Licensing Agreement, dated as of October 10, 2016, by and between the Company and POSCO Energy Co., Ltd. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated October 10, 2016).
10.21	Amendment to Stack Technology Transfer and License Agreement, dated as of October 10, 2016, by and between the Company and POSCO Energy Co., Ltd. (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated October 10, 2016).
10.22	Memorandum of Understanding for Market Transition dated as of March 17, 2017, by and between the Company and POSCO Energy Co., Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated March 17, 2017).

Exhibit No.	Description
10.23	First Amendment to Assistance Agreement, dated as of April 3, 2017, and approved by the State of Connecticut, Office of the Attorney General on April 17, 2017 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated April 17, 2017).
10.24	*Form of Restricted Stock Award Agreement (U.S. Employees) (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated April 5, 2018).
10.25	*Form of Restricted Stock Unit Award Agreement (U.S. Employees) (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated April 5, 2018).
10.26	*Form of Restricted Stock Unit Award Agreement (Non-Employee Directors) (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated November 8, 2018).
10.27	*Form of Option Award Agreement (Non-Employee Directors) (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K dated April 5, 2018).
10.28	*FuelCell Energy, Inc. 2018 Employee Stock Purchase Plan (incorporated by reference to Annex B to the FuelCell Energy, Inc. Definitive Proxy Statement filed with the Securities and Exchange Commission on Schedule 14A on February 16, 2018).
10.29	Second Amendment to Assistance Agreement, dated as of January 24, 2019, and approved by the State of Connecticut, Office of the Attorney General on January 28, 2019 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 5, 2019).
10.30	Credit Agreement, dated as of May 9, 2019 among Dominion Bridgeport Fuel Cell, LLC, as Borrower, Liberty Bank, as Administrative Agent and Co-Lead Arranger and Fifth Third Bank, as Co-Lead Arranger, the Lenders (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.31	\$12,500,000 Promissory Note from Dominion Bridgeport Fuel Cell, LLC for the benefit of Liberty Bank (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.32	\$12,500,000 Promissory Note from Dominion Bridgeport Fuel Cell, LLC for the benefit of Fifth Third Bank (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.33	Security Agreement dated as of May 9, 2019 by Dominion Bridgeport Fuel Cell, LLC in favor of Liberty Bank, as Administrative Agent (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.34	Pledge and Security Agreement dated as of May 9, 2019 by FuelCell Energy Finance, LLC for the benefit of Liberty Bank, as Administrative Agent (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.35	Credit Agreement, dated as of May 9, 2019 among Dominion Bridgeport Fuel Cell, LLC, as Borrower, and Connecticut Green Bank, as Administrative Agent and Collateral Agent, the Lenders (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.36	\$6,026,165.34 Promissory Note from Dominion Bridgeport Fuel Cell, LLC for the benefit of Connecticut Green Bank (incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.37	Security Agreement dated as of May 9, 2019 by Dominion Bridgeport Fuel Cell, LLC in favor of Connecticut Green Bank, as Administrative Agent (incorporated by reference to Exhibit 10.9 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.38	Pledge and Security Agreement dated as of May 9, 2019 by FuelCell Energy Finance, LLC for the benefit of Connecticut Green Bank, as Administrative Agent (incorporated by reference to Exhibit 10.10 to the Company's Current Report on Form 8-K filed on May 14, 2019).
10.39	International Swap Dealers Association, Inc. Master Agreement dated as of May 16, 2019 between Fifth Third Financial Risk Solutions, a division of Fifth Third Bank, and Bridgeport Fuel Cell, LLC

Exhibit No.	Description
	(incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 22, 2019).
10.40	Schedule to the 1992 Master Agreement dated as of May 16, 2019 between Fifth Third Risk Solutions, a division of Fifth Third Bank, and Bridgeport Fuel Cell, LLC (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on May 22, 2019).
10.41	License Agreement, effective as of June 11, 2019, between ExxonMobil Research and Engineering Company and FuelCell Energy, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 12, 2019).
10.42	*Employment Agreement, dated as of July 30, 2019, by and between FuelCell Energy, Inc. and Michael Lisowski (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 30, 2019).
10.43	*Employment Agreement, dated as of July 30, 2019, by and between FuelCell Energy, Inc. and Anthony Leo (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on July 30, 2019).
10.44	*Employment Agreement, effective as of August 26, 2019, by and between FuelCell Energy, Inc. and Jason B. Few (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on August 20, 2019).
10.45	Joint Development Agreement, effective October 31, 2019, by and between FuelCell Energy, Inc. and ExxonMobil Research and Engineering Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 6, 2019).
10.46	Credit Agreement, dated as of October 31, 2019, by and between FuelCell Energy, Inc., the Guarantors from time to time party thereto, the Lenders and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on November 6, 2019).
10.47	Pledge and Security Agreement, dated as of October 31, 2019, by and between FuelCell Energy, Inc., the Guarantors from time to time party thereto, the Lenders and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on November 6, 2019).
10.48	Loan Discount Letter, dated as of October 31, 2019, by and between FuelCell Energy, Inc. and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on November 6, 2019).
10.49	Agent Reimbursement Letter, dated as of October 31, 2019, by and between FuelCell Energy, Inc. and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on November 6, 2019).
10.50	Observer Right Agreement, dated as of October 31, 2019, by and between FuelCell Energy, Inc., the Guarantors from time to time party thereto, Orion Energy Credit Opportunities Fund II, L.P., Orion Energy Credit Opportunities Fund II PV, L.P. and Orion Energy Credit Opportunities Fund II GPFA, L.P. (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on November 6, 2019).
10.51	First Amendment to Credit Agreement, dated as of November 22, 2019, by and among FuelCell Energy, Inc., each of the Guarantors party to the Credit Agreement, each of the lenders party to the Credit Agreement and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 25, 2019).
10.52	Amendment to Loan Agreement, dated as of December 19, 2019, by and among FuelCell Energy, Inc. and Connecticut Green Bank (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 20, 2019).
10.53	Second Amendment to Credit Agreement, dated as of January 20, 2020, by and among FuelCell Energy, Inc., each of the Guarantors party to the Credit Agreement, each of the lenders party to the Credit

Exhibit No.	Description
	Agreement and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.117 to the Company's Annual Report on Form 10-K for the year ended October 31, 2019, filed on January 22, 2020).
10.54	Purchase and Sale Agreement, dated February 11, 2020, by and between Central CA Fuel Cell 2, LLC and Crestmark Equipment Finance (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.55	Equipment Lease Agreement, dated February 11, 2020, by and between Central CA Fuel Cell 2, LLC and Crestmark Equipment Finance (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.56	Assignment Agreement, dated February 11, 2020, by Central CA Fuel Cell 2, LLC in favor of Crestmark Equipment Finance (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.57	Pledge Agreement, dated February 11, 2020, by and between FuelCell Energy Finance, LLC and Crestmark Equipment Finance (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.58	Guaranty Agreement, dated February 11, 2020, by FuelCell Energy, Inc. in favor of Crestmark Equipment Finance (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.59	Technology License and Access Agreement for Tulare BioMAT Fuel Cell Power Plant, dated February 11, 2020, by and among Crestmark Equipment Finance, Central CA Fuel Cell 2, LLC and FuelCell Energy, Inc. (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.60	Third Amendment to Credit Agreement, dated as of February 11, 2020, by and among FuelCell Energy, Inc., each of the Guarantors party to the Credit Agreement, each of the lenders party to the Credit Agreement and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.61	Consent and Waiver, dated as of February 11, 2020, by and among FuelCell Energy, Inc., each of the Guarantors party to the Credit Agreement, each of the lenders party to the Credit Agreement and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K filed on February 13, 2020).
10.62	Paycheck Protection Program Promissory Note, entered into on April 20, 2020 and dated April 16, 2020, between Liberty Bank and FuelCell Energy, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 24, 2020).
10.63	*First Amendment, dated as of April 23, 2020, to the Employment Agreement, effective as of August 26, 2019, between FuelCell Energy, Inc. and Jason B. Few (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on April 24, 2020).
10.64	Fourth Amendment to Credit Agreement, dated as of April 30, 2020, by and among FuelCell Energy, Inc., each of the Guarantors party to the Credit Agreement, each of the lenders party to the Credit Agreement and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 4, 2020).
10.65	Fifth Amendment to Credit Agreement, dated as of June 8, 2020, by and among FuelCell Energy, Inc., each of the Guarantors party to the Credit Agreement, each of the lenders party to the Credit Agreement and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.13 to the Company's Quarterly Report on Form 10-Q for the period ended April 30, 2020).
10.66	*FuelCell Energy, Inc. Long Term Incentive Plan as approved August 24, 2020 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 24, 2020).

Exhibit No.	Description
10.67	*Form of FuelCell Energy, Inc. 2018 Omnibus Incentive Plan Performance Share Award (Relative TSR) (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on August 24, 2020).
10.68	*Form of FuelCell Energy, Inc. 2018 Omnibus Incentive Plan Performance Share Award (Absolute TSR) (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on August 24, 2020).
10.69	*FuelCell Energy, Inc. Fiscal Year 2021 Long Term Incentive Plan, as approved November 24, 2020 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 27, 2020).
10.70	*Form of FuelCell Energy, Inc. 2018 Omnibus Incentive Plan Relative TSR Performance Share Award Agreement (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on November 27, 2020).
10.71	*Form of FuelCell Energy, Inc. 2018 Omnibus Incentive Plan Absolute TSR Performance Share Award Agreement (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on November 27, 2020).
10.72	Payoff Letter, dated November 30, 2020, among FuelCell Energy, Inc., each of the Guarantors party thereto, and Orion Energy Partners Investment Agent, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 1, 2020).
10.73	Payoff Letter, dated December 16, 2020, between FuelCell Energy, Inc., FCE FuelCell Energy Ltd., and Enbridge Ltd. with respect to the Class A Preferred Shares of FCE FuelCell Energy Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 21, 2020).
10.74	Underwriting Agreement, dated as of December 1, 2020, by and among FuelCell Energy, Inc., the Selling Stockholders named therein, and J.P. Morgan Securities LLC, as representative of the several Underwriters named therein (incorporated by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed on December 4, 2020).
10.75*	Second Amendment, dated as of January 19, 2021, to the Employment Agreement, effective as of August 26, 2019, between FuelCell Energy, Inc. and Jason B. Few (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 20, 2021).
10.76*	FuelCell Energy, Inc. Second Amended and Restated 2018 Omnibus Incentive Plan, effective as of April 8, 2021 (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K/A filed on April 14, 2021).
10.77	Open Market Sale Agreement SM between FuelCell Energy, Inc. and Jefferies LLC and Barclays Capital Inc., dated June 11, 2021 (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on June 11, 2021).
10.78*	Employment Agreement, dated August 2, 2021, between Joshua Dolger and FuelCell Energy, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended July 31, 2021).
10.79	Amendment No. 1 to Joint Development Agreement between FuelCell Energy, Inc. and ExxonMobil Research and Engineering Company, fully executed on October 29, 2021 and effective as of October 31, 2021 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 2, 2021).
10.80	Letter Agreement, dated as of October 28, 2021 and effective as of October 29, 2021, between FuelCell Energy, Inc. and ExxonMobil Research and Engineering Company (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on November 2, 2021).
10.81	Settlement Agreement, dated December 20, 2021, by and between FuelCell Energy, Inc., POSCO Energy Co., Ltd., and Korea Fuel Cell Co., Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 27, 2021).

Exhibit No.	Description
10.82*	Employment Agreement, dated as of March 31, 2022 and effective as of April 18, 2022, by and between FuelCell Energy, Inc. and Mark Feasel (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 5, 2022).
10.83	Amendment No. 2 to Joint Development Agreement between FuelCell Energy, Inc. and ExxonMobil Technology and Engineering Company, effective as of April 30, 2022 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 5, 2022).
10.84	Open Market Sale Agreement SM among FuelCell Energy, Inc., Jefferies LLC, B. Riley Securities, Inc., Barclays Capital Inc., BMO Capital Markets Corp., BofA Securities, Inc., Canaccord Genuity LLC, Citigroup Global Markets Inc., J.P. Morgan Securities LLC and Loop Capital Markets LLC, dated July 12, 2022 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 12, 2022).
10.85	Amendment No. 3 to Joint Development Agreement between FuelCell Energy, Inc. and ExxonMobil Technology and Engineering Company, fully executed on December 19, 2022 and effective as of December 1, 2022 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 19, 2022).
21	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes Oxley Act of 2002
101.INS#	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH#	Inline XBRL Schema Document
101.CAL#	Inline XBRL Calculation Linkbase Document
101.LAB#	Inline XBRL Labels Linkbase Document
101.PRE#	Inline XBRL Presentation Linkbase Document
101.DEF#	Inline XBRL Definition Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

The exhibits marked with the section symbol (#) are interactive data files.

* Management Contract or Compensatory Plan or Arrangement

** Confidential Treatment has been granted for portions of this document

Filed with this Annual Report on Form 10-K are the following documents formatted in iXBRL (Inline Extensible Business Reporting Language): (i) the Consolidated Balance Sheets as of October 31, 2022 and 2021, (ii) the Consolidated Statements of Operations and Comprehensive Loss for the fiscal years ended October 31, 2022, 2021 and 2020, (iii) the Consolidated Statements of Changes in Equity for the fiscal years ended October 31, 2022, 2021 and 2020, (iv) the Consolidated Statements of Cash Flows for the fiscal years ended October 31, 2022, 2021 and 2020, and (v) Notes to the Consolidated Financial Statements.

Item 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

FUELCELL ENERGY, INC.

/s/ Jason B. Few
Jason B. Few
President and Chief Executive Officer

Dated: December 20, 2022

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Capacity</u>	<u>Date</u>
/s/ Jason B. Few Jason B. Few	President, Chief Executive Officer and Director (Principal Executive Officer)	December 20, 2022
/s/ Michael S. Bishop Michael S. Bishop	Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	December 20, 2022
/s/ James H. England James H. England	Director – Chairman of the Board	December 20, 2022
/s/ Betsy Bingham Betsy Bingham	Director	December 20, 2022
/s/ Cynthia Hansen Cynthia Hansen	Director	December 20, 2022
/s/ Matthew Hilzinger Matthew Hilzinger	Director	December 20, 2022
/s/ Donna Sims Wilson Donna Sims Wilson	Director	December 20, 2022
/s/ Natica von Althann Natica von Althann	Director	December 20, 2022

Stockholder Information

Corporate Offices

FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

Form 10-K

A copy of the Annual Report on Form 10-K for the year ended October 31, 2022, which is filed with the U.S. Securities and Exchange Commission, can be accessed from our website at www.fuelcellenergy.com. We will provide, without charge, a copy of the Annual Report on Form 10-K for the year ended October 31, 2022. You may request a copy by writing to Investor Relations at the address below.

Company Contacts

For additional information about FuelCell Energy, Inc. please contact:

FuelCell Energy, Inc. Investor Relations
3 Great Pasture Road, Danbury, CT 06810
IR@fce.com

Corporate Website

www.fuelcellenergy.com

Registrar and Transfer Agent

Stockholders with questions regarding lost certificates, address changes or changes of ownership should contact:

American Stock Transfer & Trust Company, LLC
Operations Center
6201 15th Avenue
Brooklyn, NY 11219
(800) 937.5449
(718) 921.8124
info@amstock.com
www.amstock.com

Independent Registered Public Accounting Firm

KPMG LLP

Legal Counsel

Foley & Lardner LLP

Non-Discrimination Statement

FuelCell Energy, Inc. is an Equal Opportunity/Affirmative Action employer. In order to provide equal employment and advancement opportunities to all individuals, our employment decisions will be based on merit, qualifications and abilities. We do not discriminate in employment opportunities or practices on the basis of race, color, religion, creed, age, sex, marital status, national origin, disability, protected veteran status, sexual orientation, gender identification, genetic information, or any other characteristic protected by federal, state or local law.

Annual Meeting

The Annual Meeting of Stockholders will be held Thursday, April 6, 2023 at 1:00 p.m. Eastern Daylight Time

The Annual Meeting will be a completely “virtual meeting”, conducted via live audio webcast on the Internet. You will be able to attend the Annual Meeting as well as vote and submit your questions during the live audio webcast of the meeting by visiting www.virtualshareholdermeeting.com/FCEL2023 and entering the 16-digit control number included in our notice of internet availability of the proxy materials, on your proxy card, or in the instructions that accompanied your proxy materials.

Directors and Officers

Board of Directors

James H. England ^{1,2,4,5}

Chief Executive Officer of Stahlman-England Irrigation, Inc. (landscape, innovative and artificial turf services company)

Jason Few ²

President, Chief Executive Officer of FuelCell Energy, Inc.

Matthew F. Hilzinger ^{2,3,4}

Former Executive Vice President and Chief Financial Officer of USG Corporation (international building products company)

Natica von Althann ^{2,3,5}

Founding Partner of C&A Advisors (consulting firm for financial services and risk management) and a former Financial Executive at Bank of America and Citigroup

Cynthia Hansen ^{3,5}

Executive Vice President and President, Gas Transmission and Midstream with Enbridge, Inc. (multinational pipeline and energy company)

Donna Sims Wilson ^{3,4,5}

Chief Operating Officer of Kah Capital Management (alternative asset management firm)

Betsy Bingham ^{3,4}

Lean Operations Leader for GE Aviation (aircraft engine supplier)

¹ Chairman of the Board of Directors

² Executive Committee

³ Audit, Finance and Risk Committee

⁴ Compensation Committee

⁵ Environmental, Social, Governance and Nominating Committee

Corporate Leadership Team

Jason Few *

President, Chief Executive Officer

Michael S. Bishop *

Executive Vice President, Chief Financial Officer

Joshua Dolger *

Executive Vice President, General Counsel and Corporate Secretary

Mark Feasel *

Executive Vice President, Chief Commercial Officer

Anthony J. Leo *

Executive Vice President, Chief Technology Officer

Michael J. Lisowski *

Executive Vice President, Chief Operating Officer

Gregory Adams

Senior Vice President, Finance, Risk Management and Treasurer

Jill Crossman

Senior Vice President, Global Controller

Tom Gelston

Senior Vice President, Finance and Investor Relations

Lilyanne McClean

Senior Vice President, Global Public Policy and Government Affairs

Parimal

Chief Strategy and Corporate Development Officer

Betsy Schaefer

Chief Marketing and Sustainability Officer

John Torrance

Senior Vice President, Chief Commercialization and Solid Oxide Manufacturing Officer

* Executive Officer

Statements in this Report, other than statements of historical fact, are forward-looking statements that are not guarantees of future performance and are subject to important factors, risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such forward-looking statements. Such important factors, risks and uncertainties that could cause such a difference are described in our reports, including the Form 10-K for the fiscal year ended October 31, 2022, filed by FuelCell Energy, Inc. with the Securities and Exchange Commission and available at www.fuelcellenergy.com. Shareholders should consider these factors, risks and uncertainties in evaluating the forward-looking statements and should not place undue reliance on such statements.



3 Great Pasture Road
Danbury, CT 06810
203.825.6000

www.FuelCellEnergy.com

