

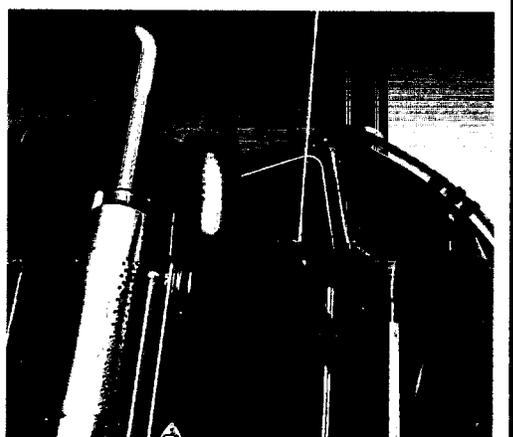
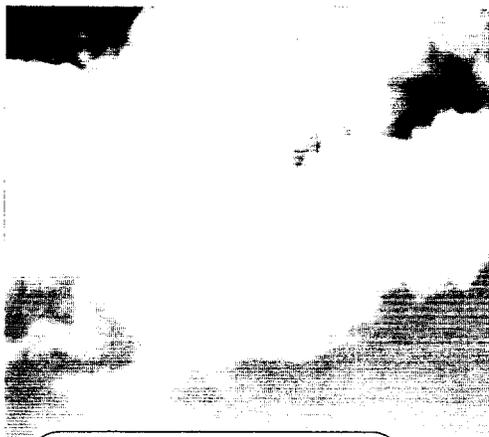
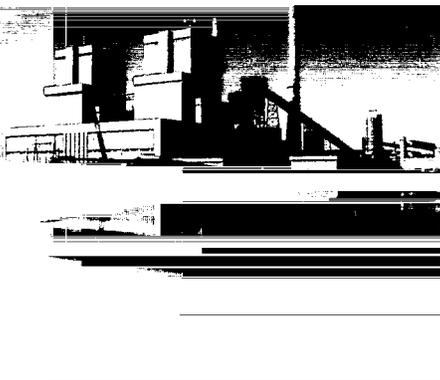
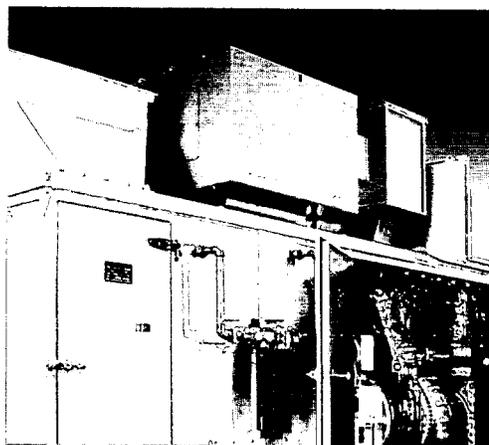
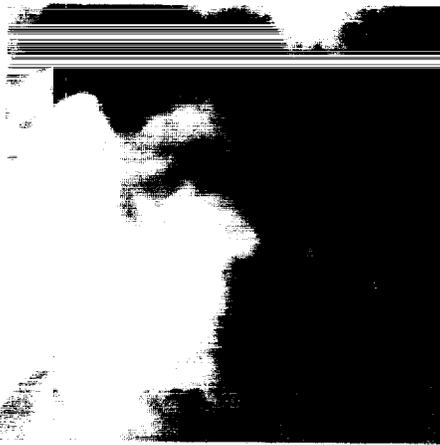


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Opening New Windows of Opportunity



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Catalytica Energy Systems, Inc.

Report

Catalytica Energy Systems, Inc.

Integrating breakthrough science, technological leadership, progressive engineering and sound business practices, Catalytica Energy Systems is developing and offering innovative products and services to meet the rapidly evolving demand for emissions control solutions in the power generation and transportation industries. Our economically compelling, leading edge products and services enable compliance with the most stringent existing and emerging regulatory requirements, mitigating the environmental impact of natural gas-fired and coal-fired power plants, as well as mobile, stationary and off-road diesel engines. Our growing base of customers and partners includes industry-leading original equipment manufacturers (OEMs), utilities and independent power producers (IPPs).

Reduced operating expenses by 21% and net loss by 19%

Reduced total cash consumption by 33%

Completed commercial installations of Xonon Cool Combustion™ in gas turbine applications, consistently demonstrating ultra-low emissions performance well below our 3 ppm NOx guarantee

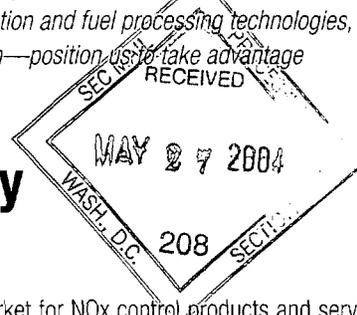
Advanced development of NOx reduction solutions for diesel engines; enhanced technology performance in full-scale diesel engine tests

Strengthened manufacturing infrastructure and product quality assurance (ISO 9001:2000 certified)

Refined strategic direction to incorporate product and market diversification strategies, including synergistic business acquisitions offering near-term commercial revenues and positive cash flow

Completed acquisition of SCR-Tech LLC (acquired in February 2004) to broaden and diversify our commercial product and service offerings to include large power generation units, including coal-fired plants

Increasingly stringent air quality regulations have resulted in tighter emissions restrictions being imposed on a variety of combustion-related applications, notably in the power generation and transportation industries. Nitrogen oxides (NOx) emissions, a precursor to smog formation, have become a primary target of government-imposed emissions regulations, creating a significant opportunity for providers of innovative NOx control solutions. We believe that our core competencies—our sought-after expertise in catalysis; our in-depth understanding of the pollution control industry and of environmental regulations; and our unparalleled Xonon® catalytic combustion and fuel processing technologies, which enable reliable, cost-effective control of combustion-related NOx formation—position us to take advantage of this opportunity.



Opening New Windows of Opportunity

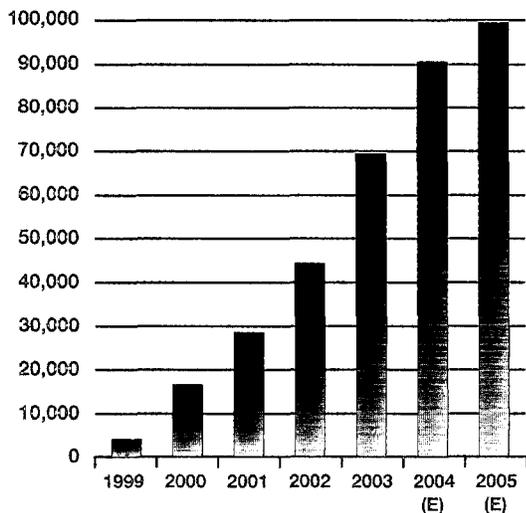
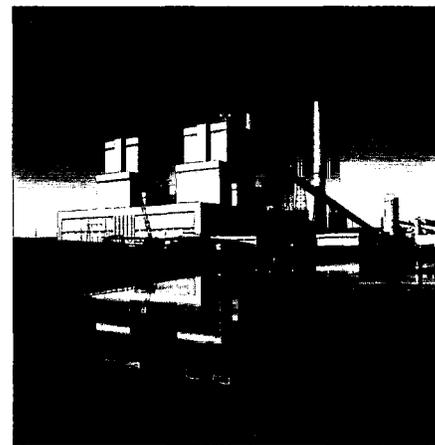
Extending our reach. Strengthening our position.

According to a May 2003 study published by a leading industry analyst, the market for NOx control products and services in the power generation industry is estimated to reach \$25 billion worldwide over the next decade. To capitalize on this opportunity, we have sharpened our focus on the pursuit of new business activity by expanding our portfolio of NOx-related products and services across new and growing markets, through both diversification and acquisition strategies.

* Cleaner air through more cost-effective compliance solutions

The acquisition of SCR-Tech, completed in February 2004, complements our core focus on emissions control solutions and accelerates our penetration of the NOx control marketplace, while expanding our portfolio of commercial product and service offerings. Not only is our new *SCR Catalyst Regeneration and Management Services* line of business expected to generate top-line growth and positive cash flow from SCR-Tech's operations, but it also gives us solid footing and direct customer relationships in a new and growing emissions control market for coal-fired power plants.

Coal-fired plants currently account for more than half of the power generating capacity in the U.S. Recent and pending governmental regulations targeting coal plants continue to drive a significant increase in selective catalytic reduction (SCR) installations to reduce NOx emissions. SCR-Tech's catalyst cleaning and regeneration technologies, along with its SCR system management and consulting services, help power plant operators optimize their SCR system operation while reducing operating and maintenance costs. SCR-Tech's proprietary cleaning and regeneration processes provide an economically compelling alternative to replacing critical NOx-control catalyst. In addition to offering significant cost savings over purchasing replacement catalyst, regeneration essentially eliminates the need to dispose of deactivated catalyst, which is defined as a hazardous waste.



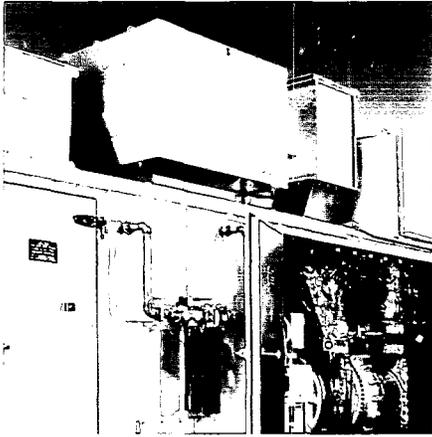
Total generating capacity in North America of coal-fired plants with SCR installations (MW)

ing replacement catalyst, regeneration essentially eliminates the need to dispose of deactivated catalyst, which is defined as a hazardous waste.

SCR-Tech commenced commercial operations in its U.S. regeneration facility in early 2003, and has rapidly become the North American leader in an emerging market for SCR catalyst regeneration technologies and SCR system management services. SCR-Tech's growing customer base includes leading U.S. utilities and IPPs such as AES, Duke Energy, Mirant, National Energy & Gas Transmission and Southern Company's subsidiaries Alabama Power and Georgia Power. With a significant first-mover advantage and solid patent protection for its commercially proven technologies in NAFTA regions, SCR-Tech is poised for growth in a catalyst replacement market that could reach \$100 million overall by 2010.

* Cleaner power... proven reliability

Environmental regulations limiting emissions of harmful pollutants such as NOx present an ongoing challenge to adding new power generation capacity, especially in growing population centers. Recent widespread blackouts, growing transmission and distribution constraints and a continuing need for high quality, reliable power have fostered a growing interest in distributed generation, including the installation of small gas-fired turbines to meet nearby residential, commercial or institutional power demand. Despite the emerging need, federal and local environmental regulations have created barriers to siting new power generating sources in urban areas unless ultra-low emissions can be met.



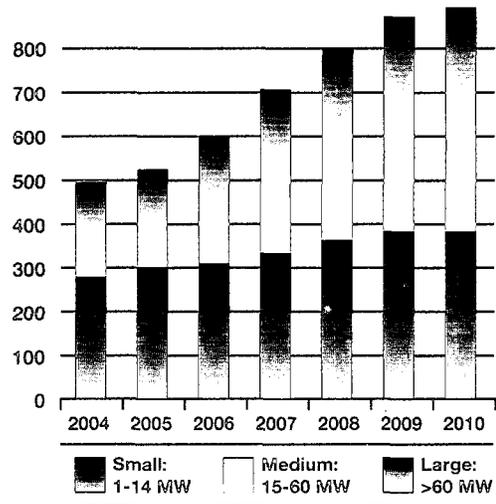
**Xonon-Equipped Kawasaki
GPB15X (1.4 MW)**

Xonon Cool Combustion, our proprietary catalytic combustion technology for gas turbines, offers the most advanced on-engine solution for ultra-low emissions power generation. Xonon is the only commercially available pollution prevention system proven to limit NOx formation to less than 3 ppm during combustion, enabling compliance with the most stringent emissions regulations. Our Xonon system is integrated within the gas turbine, replacing the conventional flame-based combustion system with a proprietary catalytic process that combusts fuel at temperatures below the threshold at which NOx forms. This revolutionary approach to achieving ultra-low NOx emissions is a significant departure from traditional methods of reducing NOx levels, which call for costly, downstream exhaust cleanup systems. Through pollution prevention instead of cleanup, Xonon Cool Combustion offers a more practical and cost-effective means for gas turbine operators to meet tighter NOx regulations. The Xonon solution can create additional value for operators and communities alike by enabling rapid siting and permitting of power generating projects that otherwise may not have been possible.

We continue to extend our reach in our *NOx Control Solutions for Gas Turbines* line of business by demonstrating solid ultra-low emissions performance of our Xonon Cool Combustion system in a growing number of commercial gas turbine installations. In fact, Xonon has routinely achieved NOx emissions of 1.5 ppm or less in commercial operation, well below its 3 ppm guarantee, as part of a Kawasaki 1.4 MW GPB15X cogeneration system. Two successful commercial Xonon-equipped Kawasaki gas turbine installations are currently in service, with more installations planned for 2004.

In addition to our commercial partnership with Kawasaki Gas Turbines-Americas, we are working with both GE Power Systems and Solar Turbines to expand application of Xonon to larger gas turbine models. Together with these partners, we have a variety of test activities scheduled in 2004.

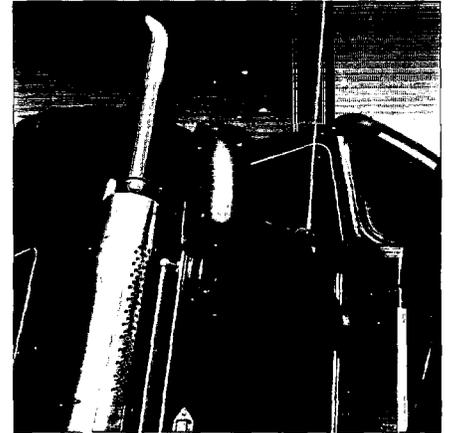
Our development of the Xonon technology historically has been supported by government agencies and research institutions, including the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), the California Energy Commission (CEC) Public Interest Energy Research program, California Air Resources Board (CARB), the Electric Power Research Institute (EPRI) and others who have recognized the significant value of this technology.



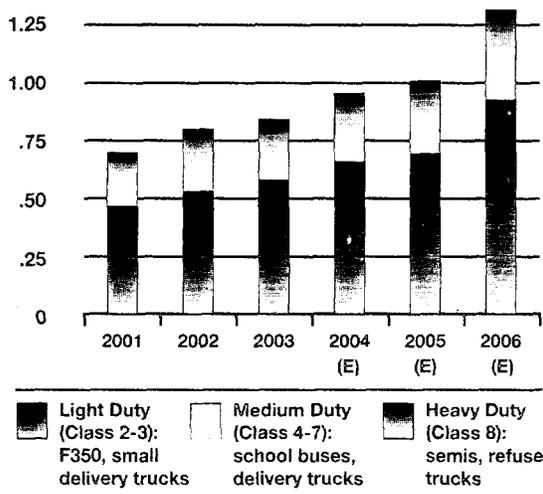
Worldwide gas turbine sales forecast (in units)

* Cleaner transportation on the horizon

Stricter emissions standards for diesel engines are being mandated in the U.S. and around the globe, requiring manufacturers of diesel engines to significantly reduce particulate matter and NOx emissions. At the same time, mobile, stationary and off-road diesel engines in service today are coming under increasingly intense scrutiny by government officials in an attempt to reduce urban smog in emissions-sensitive areas. Environmental mandates and air quality standards are driving development of a variety of technology options for both new and in-use diesel engine applications to meet the growing emissions challenge. Our Xonon Fuel Processing (XFP) solutions are differentiated by addressing some of the key deficiencies of alternative technologies being developed to reduce diesel NOx emissions. With decades of catalyst technology expertise and our proven fuel processing competency, Catalytica Energy Systems is uniquely qualified to address the growing market for cost-effective diesel emissions reduction solutions.



Accordingly, we have intensified our development of NOx control systems for diesel engines, which leverage our core Xonon and fuel processing technologies. Two products are currently in development and testing:



North American diesel engine production (in millions)

customer facilities are providing valuable data to further optimize our technology solutions for commercial application. This test facility will allow us to simulate EPA certification and CARB verification protocols, as well as provide product performance data to prospective customers.

Our product development progress in our *Emissions Reduction Solutions for Diesel Engines* line of business is generating significant interest from diesel engine OEMs, tier-one suppliers, retrofit integrators and government agencies. Negotiations are currently underway with prospective partners in North America and Asia relating to further development, testing and commercialization agreements.

We are also engaged in the development of fuel processing solutions for vehicular fuel cell applications. A cost-effective, on-board system that can convert conventional fuels, such as gasoline, into hydrogen to power fuel cells has the potential to facilitate future commercialization of fuel cell use in automobiles. In 2001, we were awarded an \$11.7 million cost-shared contract by the DOE to address this challenge. The objective of the 48-month program is to deliver a compact, fuel-flexible fuel processor prototype to be used with Proton Exchange Membrane (PEM) fuel cells in an automotive application. Significant progress has been made to date with subscale prototype fabrication and demonstration tests of individual reactor components expected to commence in 2004.

- A highly efficient solution applicable to new engines that is designed to enable a 90% reduction in NOx by improving the performance and durability of NOx trap catalyst systems. The ability of our XFP technology to rapidly regenerate NOx traps enables compliance with the EPA's most stringent impending emissions requirements while also maximizing fuel efficiency compared to other approaches.
- A retrofit solution differentiated from current commercially available retrofit alternatives by its fuel flexibility and targeted NOx reduction of up to 50%. Combining a derivative of our XFP with proprietary catalysts, our retrofit product could offer a scalable NOx reduction solution for most diesel engines currently in service.

In September 2003, we completed construction of a diesel engine test facility to help advance the development of our emissions reduction solutions for diesel engines and accelerate the progress of product development. The full-scale engine tests now underway at both in-house and prospective

2004 target milestones

- **Successfully integrate SCR-Tech business**
- **Complete evaluation of engine test results with GE and define future direction of Xonon-equipped GE10 gas turbine program**
- **Complete initial round of full-scale rig testing with Solar Turbines and define future program for Xonon-equipped Taurus 70 gas turbine**
- **Continue to enhance and refine our Xonon Cool Combustion technology for gas turbines, with an emphasis on catalyst life, size and adaptability**
- **Advance development of our diesel retrofit technology from prototype to CARB verification-ready solution**
- **Complete additional on-engine demonstrations of our diesel fuel processor technology for new engine applications**
- **Secure an agreement with a strategic partner for development and/or commercialization of our emissions reduction technology for diesel engines**

Letter to our stockholders

Ongoing environmental concerns and public support for more rigorous emissions controls means that providing solutions for mitigating air pollution is sound business today and for the foreseeable future. With broader awareness of the opportunity, it is more important than ever for Catalytica Energy Systems to distinguish its solutions as best-of-class: innovative, cost-effective, proven and reliable.

We believe we're in an excellent position. First to market with our innovative NOx solution for gas turbines, Xonon Cool Combustion, we have a significant competitive advantage as a result of our unique pollution prevention approach for ultra-low emissions. In addition to its cost advantage, our Xonon system offers inherent user and community benefits over alternative emissions control technologies that clean up the pollution downstream, typically through the use of a hazardous chemical. Further, we are confident that our considerable investment in the technology, combined with our established customer base, OEM partner relationships and strong intellectual property portfolio, will continue to yield an advantage over new entrants to the market.

But we also believe that's not enough.

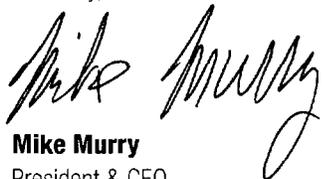
As a result of ongoing challenging conditions in the gas turbine industry, a slow-to-emerge distributed generation market and the pace of OEM commercialization activities, we cannot solely rely on revenues from our gas turbine line of business in the near-term. In 2003, we completed a rigorous exercise to realign our strategic direction and build a stronger business. Accordingly, we are working to uncover new opportunities—to extend our reach and to strengthen our position.

Extending our reach. Until recently, in addition to government grants and other funding related to our research and development activities, our revenue generating efforts relied on a single line of business: *NOx Control Solutions for Gas Turbines*. Over the past year, we stepped up our business development activities, focusing on new and growing market opportunities that align well with our core competencies and NOx control technology base. We are now engaged in two additional lines of business: *SCR Catalyst Regeneration and Management Services for Coal-fired Power Plants* and *Emissions Reduction Solutions for Diesel Engines*. In the coming year, we will continue to advance development and commercialization activities in our current business units. We also plan to continue pursuing other opportunities, including additional business acquisitions, that complement our portfolio of NOx-related products and services and/or build upon our technical capabilities. These ongoing business development initiatives will focus on opportunities offering near-term, profitable products and services to strengthen our cash flow.

Strengthening our position. Our financial position remains strong, with \$52.7 million in cash and short-term investments at the close of 2003. Our financial strength provides the flexibility to expand our commercial activities and accelerate technology development while also pursuing additional strategic business opportunities. At the same time, we intend to balance the pursuit of our long-term business objectives and growth initiatives with a continuing focus on fiscal discipline and conserving capital. In line with this commitment, we made notable progress over the past year in streamlining our operations and reducing costs. In 2003, we reduced operating expenses by 21% and total cash consumption by 33%, demonstrating that *we can do more while spending less*.

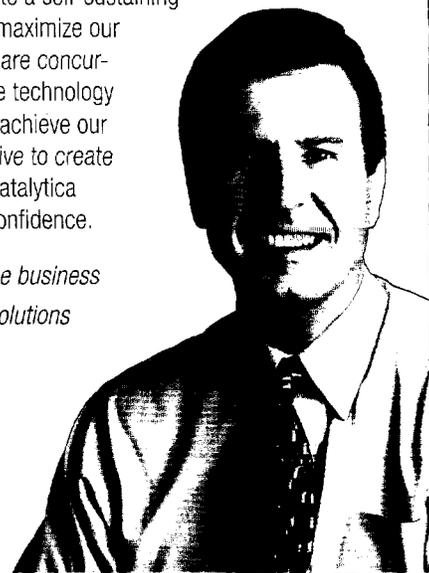
We are proud to be in the business of providing innovative solutions for improving air quality, and are committed to making Catalytica Energy Systems a stronger company. I am confident that the steps we have taken over the past year to open new windows of opportunity have provided the forward momentum to do just that. In summary, our strategy is two-fold: 1) Recognizing that one of our key objectives is to create a self-sustaining business as rapidly as possible, we are focused on providing a platform to maximize our near-term growth prospects by expanding our commercial activities; 2) We are concurrently keeping sight of our long-term opportunities and will continue to drive technology development in these areas. I believe we are better positioned than ever to achieve our objectives, and I look forward to reporting our continued progress as we strive to create additional value for our stockholders. On behalf of all of the employees of Catalytica Energy Systems, I would like to thank you for your continued support and confidence.

Sincerely,



Mike Murry
President & CEO

We are proud to be in the business of providing innovative solutions for improving air quality.



**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 10-K

(Mark One)

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2003

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 No. 000-31953

CATALYTICA ENERGY SYSTEMS, INC.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

77-0410420
(IRS Employer
Identification Number)

**1388 North Tech Boulevard
Gilbert, Arizona 85233**
(Address of principal executive offices)

(480) 556-5555
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: None
Securities registered pursuant to Section 12(g) of the Act: Common Stock, \$0.001 par value
(Title of Class)

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 is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

As of March 19, 2004, there were outstanding 17,827,312 shares of the Registrant's common stock, par value \$0.001, which is the only class of common stock of the Registrant registered under Section 12(g) of the Securities Act of 1933.

As of June 30, 2003, the aggregate market value of the shares of common stock held by non-affiliates of the Registrant (based on the last sale price for the common stock on The NASDAQ Stock Market on such date) was \$25,868,665. For purposes of this computation, all officers, directors and 5% beneficial owners of the Registrant's common stock are deemed to be affiliates. Such determination should not be deemed to be an admission or representation that such officers, directors or 5% beneficial owners are, in fact, affiliates of the Registrant.

Documents Incorporated by Reference

The information called for by Part III is incorporated by reference to the definitive Proxy Statement for the Annual Meeting of Stockholders of the Company, which will be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2003.

CATALYTICA ENERGY SYSTEMS, INC.

**Annual Report on Form 10-K
December 31, 2003**

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FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Words such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan” and similar expressions identify such forward-looking statements.

The forward-looking statements in this report include, but are not limited to:

- statements regarding our market opportunities and the growth of the market for our solutions*
- our competitive advantage in the marketplace*
- the nature and level of competition for our solutions*
- the efficiency of our solutions*
- our commitment to funded research programs*
- the level of research and development by OEMs*
- availability and expense of resources and raw materials necessary for production and manufacturing*
- the timing of our testing activities and commercialization of our products*
- our ability to create an industry standard associated with our solutions*
- the value of our intellectual property and effectiveness of our patent portfolio*
- our relations with employees*
- the cost of ultra-low emissions technology and its effects*
- the uniqueness of Xonon Cool Combustion*
- our ability to design Xonon for different gas turbine models*
- our ability to broaden the range of uses of gas turbines through the use of Xonon*
- the applicability of our solutions to different gas turbine and diesel engine applications*
- statements regarding the successful development and market potential of our diesel and fuel cell products*
- the existing and proposed emissions restrictions on power generating sources and diesel engines used in transportation applications due to environmental concerns*
- statements regarding the uniqueness, potential and market for our SCR catalyst services*
- our investment in research and development*
- sources of our revenues*
- our use of earnings*
- our ability to generate cash and the sufficiency of existing cash and cash equivalents*
- the impact of interest income and expense*
- critical accounting policies and our business strategies and plan of operations*

These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those reflected in these forward-looking statements. Factors that might cause actual results to differ include, but are not limited to, those discussed in the sections entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Risks that Could Affect Our Financial Condition and Results of Operations.”

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. We undertake no responsibility to update any of these forward-looking statements or to conform these statements to actual results.

“Xonon” is a registered trademark and “Cool Combustion,” “Catalytica Energy Systems” and the stylized Catalytica logo are trademarks of Catalytica Energy Systems, Inc.

PART I

Item 1. BUSINESS

Overview

Catalytica Energy Systems, Inc. ("Catalytica Energy," the "Company," "we" or "us") was incorporated in Delaware in 1995 as a subsidiary of Catalytica, Inc. Catalytica Energy operated as part of Catalytica, Inc.'s research and development activities from inception through the date of its incorporation as a separate entity. In December 2000, Catalytica Advanced Technologies, Inc., another subsidiary of Catalytica Inc., was merged into us, and the combined entity was spun out from Catalytica, Inc. as Catalytica Energy Systems, Inc., a separate, stand-alone public company.

We provide innovative emissions solutions to ease the environmental impact of combustion-related applications in the power generation and transportation industries. Since our inception, our business activities have included designing, developing and manufacturing advanced products based on our proprietary catalyst and fuel processing technologies to offer cost-effective solutions for reducing nitrogen oxides ("NOx") emissions. We have commercialized and are marketing Xonon Cool Combustion™, a breakthrough pollution prevention technology that enables natural gas-fired turbines to achieve ultra-low emissions power production through a proprietary catalytic combustion process. We are also pursuing the development of NOx reduction solutions for mobile, stationary and off-road diesel engines. In addition, we continue to conduct development efforts related to fuel processing systems for Proton Exchange Membrane ("PEM") fuel cells used in vehicular applications.

We are focused on growing our business through a product and market diversification strategy in the area of NOx control. Increasingly stringent air quality regulations have resulted in tighter emissions restrictions being imposed on a variety of combustion-related applications. NOx emissions, which are a precursor to smog formation, have become a primary target of government-imposed emissions regulations, creating a significant opportunity for innovative, cost-effective NOx control solutions. According to a May 2003 study published by The McIlvaine Company, the market for NOx control in the power generation industry alone is estimated to reach \$25 billion in worldwide sales over the next decade.

As a result of ongoing challenging conditions in the gas turbine industry, a slow to emerge distributed generation market and the pace of gas turbine original equipment manufacturer ("OEM") commercialization activities, we completed a rigorous exercise in 2003 to realign our strategic direction and build a stronger business. This has been accomplished through broadening our product and service offerings in the area of NOx control beyond our Xonon Cool Combustion product for gas turbines. Accordingly, we have sharpened our focus on the pursuit of new business activity and expanding our portfolio of NOx-related products and services across new and growing markets. We are committed to solving NOx-related problems by providing the most economically compelling and most effective solutions available, whether it is through prevention or through some form of after-treatment. In addition to intensifying our development of NOx control after-treatment systems for diesel engines, which leverage our core Xonon® technology, over the past year we have become more active in identifying strategic opportunities, including business acquisitions that complement our current products, expand the breadth of our markets or build upon our technical capabilities. In particular, we continue to focus on opportunities that offer near-term, profitable product and service offerings.

As part of this strategic initiative, in February 2004 we acquired SCR-Tech, LLC ("SCR-Tech"), the North American leader in catalyst regeneration technologies and management services for selective catalytic reduction ("SCR") systems used by coal-fired power plants and other utility-scale power generating facilities to reduce NOx emissions. The addition of SCR-Tech strategically broadens and diversifies our product and service offerings to the growing emissions control market for coal-fired power plants and accelerates our penetration into the NOx control marketplace. We believe the acquisition of SCR-Tech has created a solid foundation for future growth and has strengthened our ability to continue pursuing development and commercialization efforts in other areas of our business, while also targeting additional business opportunities in the area of NOx control.

NOx Control Solutions for Gas Turbines

Our Xonon Cool Combustion product is the only commercially available pollution prevention technology proven to achieve ultra-low NOx emissions of less than 3 parts per million ("ppm") during combustion. Our Xonon® system is integrated within a gas turbine, replacing the conventional flame-based combustion system with a catalytic process that combusts fuel at temperatures below the threshold at which NOx forms. This revolutionary approach to reducing emissions is a significant departure from traditional methods of achieving ultra-low NOx levels in gas turbine power generation, which involve cleaning up downstream the pollution produced in the combustion process through costly, add-on exhaust cleanup systems. Through pollution prevention instead of cleanup, we believe our Xonon system offers an efficient and cost-effective means for gas turbine operators to meet increasingly stringent Federal and State-imposed NOx regulations.

Industry Background and Market Opportunity

A gas turbine operates by compressing incoming air, combining it with fuel and combusting the mixture. The combustion process releases the fuel's energy, forming hot gases that power the turbine. In conventional combustion systems, a flame is used to combust the fuel. The temperature required to sustain a stable flame is significantly higher than the temperature at which the gas turbine is designed to operate, so most of the incoming air is used to cool the combustion process to the level the turbine requires. The high temperature required for a stable flame causes the nitrogen and oxygen in the air to react, forming NOx, a major contributor to air pollution. Over the past twenty years, advanced flame-based systems have been developed which reduce the temperature at which the fuel is burned by altering the composition of the fuel—most often by using water, steam or air to dilute the concentration of fuel in the combustor before it is mixed with the compressed air and burned. As the fuel-air mixture becomes leaner, the combustion temperature lowers, thus reducing the NOx emissions. These systems are generically called "lean pre-mix" combustion systems. Today, most gas turbines are manufactured with a version of this type of system that uses air to dilute the mixture and are known as "dry low NOx" systems. Other than one gas turbine OEM that offers a 5 ppm NOx guarantee on one of its small gas turbine models, the most advanced flame-based combustion systems today are limited to achieving NOx levels of approximately 9 ppm for certain newer commercial lean pre-mix or dry low NOx systems, which are limited in application, and approximately 25 ppm for less sophisticated systems. Historically, the only alternative for meeting increasingly stringent ultra-low NOx emissions requirements has been to add a downstream exhaust cleanup system.

An ongoing barrier to adding new power generation capacity is the continued public focus on environmental issues. In the United States, the Clean Air Act creates the National Ambient Air Quality Standards, or NAAQS, which are the basis for regulations that limit emissions of certain harmful pollutants such as NOx. Today, U.S. emissions regulations generally require new installations of gas turbines to meet NOx emissions levels of 2.5 to 25 ppm, depending on the location and size of the installation. The general trend is toward the lower end of this range, with all areas of the U.S. today generally requiring ultra-low NOx emissions (less than 5 ppm) for new installations of gas turbines greater than 50 MW in size. In certain areas where air quality is currently unacceptable, smaller turbines (<50 MW) are also being required to achieve ultra-low NOx levels. According to the U.S. Environmental Protection Agency ("EPA"), it has been estimated that approximately 40% of the U.S. population lives in areas where the most stringent emissions requirements are being enforced. New EPA regulations targeted for 2006 are expected to increase to more than 60% the portion of the U.S. population living in areas imposing the most stringent emissions requirements.

We believe the role of environmental protection requirements in the permitting of new power generation capacity highlights the need for a cost-effective, widely-applicable emissions technology, like Xonon, that enables turbines to meet the most stringent existing emissions guidelines. We believe Xonon will not only reduce the operating costs associated with complying with environmental standards, but could also create additional value by enabling rapid siting and permitting of projects that otherwise may not have been possible.

Xonon Cool Combustion

Our Xonon system combusts the fuel in a gas turbine using a different principle than conventional flame-based combustion systems. Instead of heating the fuel-air mixture in a flame until it is hot enough to burn, Xonon passes this mixture over a chemical catalyst that allows the combustion reaction to take place at much lower temperatures. A portion of the fuel is combusted in the catalyst. The remaining fuel is combusted downstream of the catalyst in a homogeneous reaction, also at a temperature low enough to prevent formation of significant amounts of NOx. The resulting concentration of NOx in the gas turbine exhaust will be in the range of 1 to 5 ppm and below 3 ppm in most gas turbines built today. Importantly, our flameless catalytic combustion approach provides the same amount of output energy as flame-based combustion systems while achieving ultra-low NOx emissions without add-on exhaust cleanup systems.

We are focused on bringing the benefits of Xonon Cool Combustion to the power generation market through our strategic relationships with leading gas turbine manufacturers. To gain market share and penetrate new markets, OEMs seek to differentiate their products with technological advances that benefit their customers. The ultra-low emissions capabilities and economic benefits offered by Xonon-equipped gas turbines could greatly enhance an OEM's product line and offer significant competitive advantages.

Development and Commercialization

We have been working actively with gas turbine OEMs to adapt our technology as part of their stationary gas turbine product lines. We currently have collaborative commercialization agreements in place with Kawasaki Heavy Industries, Ltd. and Kawasaki Gas Turbines-Americas, a division of Kawasaki Motors Corp., U.S.A. ("Kawasaki"), and General Electric Power Systems ("GE"). We also have development work underway with Solar Turbines ("Solar"), to incorporate the Xonon system into its gas turbine line. Our development of the Xonon technology has been supported by government agencies and research institutions, including the U.S. Department of Energy ("DOE"), the EPA, the California Energy Commission ("CEC") Public Interest Energy Research program, California Air Resources Board ("CARB") and others.

For each turbine model that an OEM agrees to pursue, we design a catalytic Xonon module, the key component of the Xonon system, to be incorporated into the design of the turbine combustion system. At present, we guarantee our Xonon modules for 8,000 hours (equivalent to approximately one year of continuous operation), and are designed to be replaced during regularly scheduled maintenance over the 15- to 20-year life of the turbine. We expect future revenues to be generated from the sale of both new and replacement Xonon modules.

Since 1999, we have been conducting a field demonstration of our Xonon Cool Combustion system on a 1.4 megawatt ("MW") Kawasaki gas turbine at Silicon Valley Power, a municipally-owned utility site, located in Santa Clara, California. The Company-owned turbine functions as part of the local power grid. Since its installation, the turbine has served as a demonstration of Xonon's performance and reliability during unattended full-load operation and as a development and test engine in support of commercial program initiatives for customers. Since initiating the field demonstration, the Xonon-equipped turbine has run for more than 18,000 hours with NOx emissions consistently well below 3 ppm. The system has satisfied federal EPA guidelines for an emissions control technology that is "achieved in practice" and has demonstrated emissions levels that satisfy California's South Coast Air Quality Management District ("SCAQMD") guidelines for gas turbines. We believe Xonon is the only gas turbine combustion system demonstrated to meet these guidelines without requiring a downstream exhaust cleanup system. Furthermore, we have successfully completed evaluations by the EPA, through its Environmental Technology Verification program, and by CARB through its technology precertification program, both of which confirmed the ultra-low emissions performance of our technology while operating on a gas turbine.

In partnership with Kawasaki, we installed the first commercial Xonon-equipped gas turbine in November 2002, marking the world's first commercial operation of a catalytic combustion system in a gas turbine and a

major milestone in gas turbine innovation. The 1.4 MW Kawasaki gas turbine operating at Sonoma Developmental Center in Eldridge, California is also the first commercial gas turbine to generate ultra-low emissions power without the use of a downstream exhaust cleanup system.

Our initial product offerings target the small gas turbine sector, which includes turbines that generate between one and approximately 15 MW of power. According to Forecast International, the worldwide production of gas turbines in this size class is projected to average 312 units annually over the next 10 years. In North America, orders for gas turbines between one and 15 MW have averaged 40 units annually over the past three years according to Diesel & Gas Turbine Worldwide. Turbines in this sector serve industrial, commercial and institutional loads in both power only and combined heat and power, or cogeneration, applications and can help meet power requirements during periods of peak demand at base-load power facilities. Small gas turbines are also used in the pipeline industry to transport oil and gas.

Distributed generation applications, or power sources located at or near the point of use, can enhance power quality and reliability while avoiding the need to expand transmission and distribution capacity. We believe the distributed generation concept has the potential to address a number of ongoing problems in the power industry, including limitations in the bulk power transmission grids, environmental and community opposition surrounding the construction of new power lines, concerns about the vulnerability of the power infrastructure, and the need for high quality, reliable power. While the distributed generation market has proven slow to emerge, we believe there is a substantial, long-term market opportunity in constrained transmission pockets in certain areas of the U.S., whereby installations of small and medium-sized distributed power units, such as Xonon-equipped gas turbines, can serve to alleviate bottlenecks. The Los Angeles basin and certain areas of New York are examples of regions we believe could benefit from such a solution.

We are currently engaged with leading gas turbine manufacturers in adapting and marketing Xonon for the following gas turbines within the one to 15 MW size range:

Kawasaki M1A-13X (1.4 MW)—In December 2000, we entered into a collaborative commercialization agreement whereby Kawasaki could market and sell our Xonon Cool Combustion system as part of its GPB15X generator package, which features a 1.4 MW M1A-13X Kawasaki gas turbine. Kawasaki is actively marketing and accepting commercial orders for this generator package. The first commercial Xonon-equipped M1A-13X gas turbine entered operation at Sonoma Developmental Center in Eldridge, California in November 2002. This unit continues to operate as part of a cogeneration system, which is providing supplemental heat and power for a 120-building campus. A second commercial Xonon-equipped M1A-13X gas turbine entered service in December 2003 at Plains Exploration and Production Company's oil field in San Luis Obispo, California. Kawasaki has shipped a third commercial Xonon-equipped M1A-13X for installation at the Reader's Digest Association Headquarters in Pleasantville, New York, which is scheduled to enter service in the second quarter of 2004. We and Kawasaki are working on additional projects for the Xonon-equipped M1A-13X which could also enter service in 2004.

As part of our joint marketing and sales activities, we and Kawasaki continue to pursue initiatives to expand the penetration of Xonon-equipped gas turbines in the market. In February 2002, Kawasaki successfully petitioned the California Public Utilities Commission to expand qualification for self-generation financial incentives to include generating technologies up to 1.5 MW. As a result, California power projects considering installation of the Xonon-equipped M1A-13X may now qualify for a subsidy of up to 30 percent of project costs. Additionally, Kawasaki entered into a distribution agreement with Cummins Power Generation in December 2002, whereby Cummins will market, sell and service Kawasaki generator sets and power systems. This agreement creates an additional distribution channel for Xonon-equipped Kawasaki products.

GE10 (~10 MW)—We and GE continue to pursue adaptation of Xonon for the GE10 under a collaborative commercialization agreement signed in May 2000. As part of our ongoing development of a Xonon-equipped GE10, we and GE have performed a series of rig tests followed by the completion of an initial

round of full-scale engine tests in the fourth quarter of 2003. These most recent test activities revealed the need for additional modifications of the catalyst and other combustion system hardware to better match the catalyst to the turbine characteristics and to achieve optimal performance within a commercial GE10 gas turbine environment. This has resulted in a delay in the commercialization prospects for a Xonon-equipped GE10. We and GE have agreed to pursue additional engine tests scheduled to commence in the third quarter of 2004 following our completion of catalyst modifications that are currently underway. The completion of these test activities will provide a basis for determining the future direction of our GE10 program.

Solar Taurus 70 (7.5 MW)—In October 2001, we entered into an agreement with Solar for the development and adaptation of the Xonon Cool Combustion system to Solar's Taurus 70 gas turbine. The scope of our work in this joint development effort, which commenced in the first quarter of 2002, includes the design of supplementary combustor components in addition to the Xonon module for the catalytic combustion system. In January 2004, Solar commenced an initial round of full-scale rig testing associated with our jointly designed catalytic combustion system. We anticipate this testing to be completed by the summer of 2004.

Multi-combustor development (<15 MW)—In September 2001, the CEC granted us an award to help fund application of the Xonon Cool Combustion system to a small, multi-combustor gas turbine. The development effort for this program commenced in the first quarter of 2002. During 2003, we completed the technology development phase and are assessing ongoing plans for the program.

We also believe Xonon combustion systems can be applied to larger gas turbine sizes. Larger gas turbines are used by public utilities and wholesale generating companies in base-load power generating facilities, as well as for meeting power requirements during periods of peak demand and in energy intensive industrial facilities for power generation and cogeneration. OEMs who manufacture gas turbines larger than 15 MW include Alstom Power, GE, Mitsubishi Heavy Industries, Pratt & Whitney Canada and Siemens Westinghouse.

We have performed initial development work and testing of Xonon for large gas turbines. Preliminary tests conducted with GE and another large gas turbine manufacturer have confirmed Xonon's ability to reduce NOx to ultra-low levels in the high temperature and high pressure operating conditions of a large, industrial-type gas turbine.

As a result of the weak economic environment and challenging market conditions in the gas turbine industry, particularly for large gas turbines, our current focus is to complete commercial deployment of Xonon on small gas turbines. We do not expect Xonon modules for large gas turbines to comprise a significant portion of our revenue in the foreseeable future.

Competition

We expect Xonon-equipped gas turbines to compete with turbines outfitted with current emissions reduction technologies, including advanced flame-based combustion systems and downstream exhaust cleanup systems. Advanced flame-based combustion systems, such as lean pre-mix or dry low NOx systems, are manufactured and provided by gas turbine OEMs as part of their turbine product line. These gas turbine OEMs also represent the potential customer base for our Xonon modules, and we expect to rely upon them to distribute Xonon-equipped turbines to end-users. While even the most effective of these systems have been unable to achieve today's required ultra-low emissions levels without add-on exhaust cleanup systems, we expect that OEMs will continue to develop technologies that may compete with ours.

Various companies, including Cormetech, Engelhard, Mitsubishi and Siemens, manufacture conventional exhaust cleanup systems. End-users generally purchase these systems directly from the manufacturers, through packagers, or from vendors of heat recovery steam generation equipment. Gas turbine OEMs generally do not function as intermediaries in these transactions and do not receive any economic value from the sale of exhaust cleanup systems.

The deployment of exhaust cleanup systems involves the combination of a gas turbine equipped with an advanced flame-based combustion system and the addition of downstream cleanup equipment, which is fitted onto the turbine to clean the exhaust. While cleanup systems have been proven to reduce NOx to ultra-low levels in most gas turbine applications, they add considerably to the square footage of the power generating facility, and can be costly to install and operate. For most downstream cleanup systems, other drawbacks may include a negative impact on turbine efficiency and the use of toxic substances, such as ammonia, to clean up the pollution after it has formed.

Through pollution prevention instead of cleanup, we believe our Xonon Cool Combustion system presents a more practical and cost-effective approach to reducing NOx to ultra-low levels in the form of a compact system integrated within the gas turbine itself. The installation of a Xonon-equipped turbine offers power producers an environmentally friendly, one-step approach to reducing NOx that requires no additional labor or space. Xonon can be widely applied and requires no toxic chemicals. As a result, we believe Xonon could ease the challenges associated with siting, permitting, and operating new power sources, enabling broader deployment of gas turbines in densely populated areas.

Over time, the Xonon combustion system may also face competition from new entrants to the market for emissions reduction. New entrants may eventually develop competing technologies, catalytic or otherwise, that also achieve ultra-low emissions on a cost-effective basis. We are aware of other companies pursuing the development of ultra-low NOx technologies with gas turbine OEMs, including Precision Combustion, Inc., ALZETA Corporation and Cheng Power Systems.

We are also aware of companies developing NOx reduction solutions approaching ultra-low NOx emissions. Solar Turbines, a leading gas turbine manufacturer of small gas turbines in the one to 14 MW range, and also one of our development partners, recently announced that it has commercialized a 4.6 MW gas turbine with a 5 ppm NOx guarantee. We expect that other gas turbine OEMs may continue to advance their lean pre-mix or dry low NOx technologies and could eventually develop a system that achieves NOx emissions approaching the levels achieved by our Xonon system. We are also aware of one company, Power Systems Manufacturing ("PSM") that has commercialized a 5 ppm retrofit NOx system for certain large gas turbine models greater than 60 MW in size.

We believe our Xonon system has a competitive advantage over competing emissions control alternatives as a result of our unique pollution prevention approach for achieving ultra-low emissions that has been proven in commercial installations. Further, we believe our significant investment in the technology, combined with our established OEM relationships and substantial intellectual property base will continue to yield an advantage over new entrants to the market.

Emissions Control Solutions for Diesel Engines

We are leveraging our decades of catalyst technology expertise with a proven fuel processing competency to offer innovative new engine and retrofit diesel emissions reduction solutions, targeted at helping diesel OEMs and government agencies meet the growing diesel emissions challenge.

Industry Background and Market Opportunity

In October 1997, the EPA adopted new NOx emissions standards for heavy-duty diesel truck and bus engines to be phased in through 2010. The first phase of these stricter limits took effect in October 2002 when the requirements for NOx were reduced from 4.0 grams per brake horsepower-hr ("g/bhp-hr") to 2.5 g/bhp-hr. Non-compliance with the October 2002 deadline resulted in steep fines imposed by the EPA of as much as \$12,000 per engine. The most stringent of the EPA's new emissions standards requires a phased-in 50% to 90% NOx reduction over the current standards between 2007 and 2010, resulting in a 0.2 g/bhp-hr limit by the end of the decade for all heavy-duty diesel trucks and buses. The significant 90% reduction in NOx required by 2010, in

particular, has created a major technological hurdle for diesel engine OEMs for which a single technology path has yet to be adopted. Lighter-duty diesel passenger cars, trucks and passenger vans in the U.S. are also facing tighter NOx emissions standards to be phased in during 2004 through 2009, dependent on vehicle type, with full compliance expected to be required by 2009.

Increasingly stringent emissions standards are also being imposed on diesel engine markets in the European Union ("EU") and Japan. For example, in 2005 Japan will impose the world's strictest emissions standards for urban heavy-duty trucks and buses, requiring a 41% reduction in NOx emissions from 3.38 grams per kilowatt-hour ("g/kWh") to 2.0 g/kWh (or 1.49 g/bhp-hr). While current U.S., EU and Japanese emissions reduction mandates remain fragmented, there is a growing demand for the harmonization of tighter standards throughout these markets.

At the same time, mobile, stationary and off-road diesel engines in service today are coming under increasingly intense scrutiny by government officials in an attempt to reduce urban smog in emissions-sensitive areas across the country. According to the EPA, existing diesel sources contribute as much as 50% of NOx emitted in many U.S. urban areas, making them a prime target for emissions controls. Accordingly, government agency funding for diesel retrofits continues to develop in an effort to meet air quality objectives, and, in some cases, to avoid severe EPA sanctions or the loss of Federal Highway Administration funds. In addition, a growing number of federal and state programs to fund school bus retrofits have emerged over the past year in an effort to reduce asthma and other pediatric respiratory disorders associated with diesel exhaust.

The new engine market includes more than 1.2 million light, medium and heavy-duty trucks produced annually in the U.S. by diesel OEMs. Diesel OEMs continue to seek enabling solutions to meet increasingly stringent global emissions standards. U.S. heavy duty diesel ("HDD") engine manufacturers have recently decided to pursue in-house engine modifications similar to those used in their 2002 complaint engines to meet the initial 2007 step-down in emissions requirements. However, the most severe NOx reduction requirements, which will be phased into various segments of the U.S. HDD market between 2008 and 2010, remain a difficult challenge that we believe will require some form of advanced NOx after-treatment or significant advances in diesel engine technology. We are also exploring opportunities in markets outside of the U.S., including Japan, which produces approximately 200,000 diesel bus and truck engines annually. Other global markets in Europe and Asia, which are considering more stringent emissions regulations similar to those being imposed in the U.S., could offer promising additional markets for our emissions solutions.

We believe that the retrofit diesel engine market in the U.S. offers a more near-term opportunity for us than the new engine market. The EPA estimated in 2001 that as many as 10 million sources of diesel emissions were in service in the U.S., many operating in emissions-sensitive areas of the country.

Funding sources for diesel retrofits are building on both the state and federal level. As a result of a recent growth in funding sources, the total addressable market for diesel retrofits is expanding. On the federal level, a variety of programs have been proposed to reduce emissions from a variety of diesel sources. The Congestion Mitigation and Air Quality ("CMAQ") Program, sponsored by the Department of Transportation, and administered by the Federal Highway and Federal Transit Administrations, is providing funds totaling more than \$1.75 billion per year for states to invest in air quality improvement projects, with diesel retrofit recently added as an acceptable candidate for appropriations. In 2003, for example, \$13.8 million in CMAQ funding was provided for the retrofit of 1,700 diesel buses in the San Francisco Bay Area. In January 2004, the EPA called for the nation's fleet of 444,000 school buses to install pollution control devices in an effort to combat rising health concerns associated with diesel exhaust fumes.

According to the Diesel Technology Forum's Diesel Retrofit Funding Directory, a growing number of state agencies are now funding retrofit programs. Programs to retrofit diesel engines are in place today in Arizona, California, Georgia, Illinois, Massachusetts, New Jersey, New York, Pennsylvania, Texas and Washington.

Texas alone is offering \$100 to \$150 million per year between 2003 and 2008 to help fund the deployment of retrofit solutions to achieve a significant reduction in air pollution and reach compliance with its State Implementation Plan ("SIP") by 2007. According to industry reports, retrofit programs are also now emerging in Canada, Japan and in the European Union to address approximately five million HDD engines, as estimated by the 2003 Transportation Industry Data Book.

New Engine and Retrofit Applications Development

We are focused on bringing the benefits of our diesel NOx control systems to the growing diesel emissions reduction market by partnering with diesel OEMs, Tier 1 suppliers, system integrators, and other significant players within the diesel industry.

We have developed and are now refining a proprietary diesel fuel processor technology for new engine applications as a means for diesel OEMs to meet the most stringent impending NOx emissions regulations. Our Xonon fuel processor, or XFP, technology is designed to enable a 90% reduction in NOx by improving the performance of NOx traps. NOx trap systems, also referred to as NOx adsorbers, along with diesel SCR systems, Clean Diesel Combustion ("CDC"), and Low-Temperature Combustion ("LTC"), including Homogeneous Charge Compression Ignition ("HCCI") solutions represent the most likely approaches believed to have the greatest potential to meet the EPA's 2010 emissions mandate.

NOx traps adsorb NOx from the exhaust and convert the NOx to non-polluting nitrogen during a regeneration cycle. NOx trap technology today offers considerable NOx reduction capabilities, but performance issues related to durability, operating range and fuel economy have limited their real-world viability. In most cases, diesel fuel injected at the engine or in the exhaust system upstream of the NOx trap is used for the regeneration cycle. This process can give good performance at high exhaust temperatures, but historically has demonstrated poor performance at lower exhaust temperatures. Low exhaust temperatures represent a large portion of vehicle operating time, particularly for medium and light duty diesel engine applications used in urban areas and for automobiles, light trucks and SUVs. Our XFP is designed to deliver rapid, low-temperature NOx trap regeneration with improved fuel utilization and efficient desulfation (elimination of sulfur within the NOx trap associated with the sulfur naturally occurring within diesel fuel) to significantly improve NOx trap performance and durability. We believe the combination of our XFP with a NOx trap can enable diesel OEM implementation of a durable, deployable, reasonably sized NOx reduction solution that enables compliance with the most stringent emissions requirements with minimal fuel penalty.

In July 2003, we announced successful completion of a full-scale test of our prototype XFP on a 7+ liter HDD engine, which demonstrated the rapid regeneration capabilities of our technology and its potential to significantly improve the performance of NOx traps. The tests, which were conducted with a HDD engine manufacturer, focused on verifying the performance of our XFP at low exhaust temperatures. Test results demonstrated highly efficient, rapid NOx trap regeneration, resulting in NOx conversion in line with the EPA's mandated emissions requirements for 2010. Importantly, our XFP demonstrated an ability to minimize the fuel penalty typically associated with regeneration of NOx traps, yielding up to a 50% improvement in fuel economy at critical low load points when compared to similar OEM tests using other regeneration methods.

These tests have provided us with valuable data that we are using to further enhance the operating range and fuel economy of our XFP system. While this first round of full-scale engine tests focused specifically on evaluating temperature and fuel economy performance, future development tests will also explore our XFP's capability to enhance NOx trap durability. According to the EPA, improving the durability of NOx traps, especially as it relates to desulfation, remains a fundamental hurdle to commercial NOx trap deployment in HDD applications. We are committed to addressing these limitations and believe that further refinements to our XFP have the potential to significantly improve the durability, temperature range and desulfation issues associated with NOx traps.

For new engine applications, we are committed to working with diesel OEMs, NOx trap providers and emissions system integrators to jointly develop and commercialize robust NOx control systems to meet the most stringent U.S. and international emissions requirements. To gain market share and penetrate new markets while maintaining compliance with new emissions standards, OEMs and Tier 1 suppliers (direct suppliers to OEMs) seek to differentiate their products with technological advances that benefit their customers. We believe that the combination of our XFP and a third party NOx trap has the potential to offer a cost-effective NOx reduction solution with minimal fuel penalty to enhance an OEM's product line and offer significant competitive advantages.

We are also developing a retrofit solution for mobile, stationary and off-road diesel engine applications as a means for government agencies to address growing urban smog issues in emissions-sensitive areas. Our retrofit solution combines a derivative of our XFP technology with a proprietary lean-NOx catalyst and is being designed to offer a scalable, easily integrated solution for diesel engines currently in service. While still in early-stage development, our after-treatment approach is designed to offer a continuous production of a reactive reductant across a broad operating range to enable a 50% reduction in NOx.

If we are successful in developing this solution, there are three main benefits that could differentiate our technology from current retrofit solutions on the market today:

1. A potential NOx reduction capability of 50%, compared with 25% offered by the only alternate solution,
2. A compatibility with both ultra-low sulfur diesel, or ULSD, and 500 ppm sulfur content fuel, and
3. A potential to operate across a broad temperature range, including low temperature conditions, in which a significant portion of urban vehicles such as buses and refuse trucks operate today.

Subscale, in-house rig tests of our retrofit solution in 2003 demonstrated 50% NOx reduction while operating on standard U.S. highway diesel fuel with 500 ppm sulfur content. We have since completed the assembly of full-scale prototypes, which we are currently undergoing in-house engine tests to further develop the technology. We still have various technical hurdles to address before achieving a full-scale prototype solution that fully meets our design specifications. If we are successful, we then must complete a variety of integration activities before we can advance its development to a CARB verification-ready retrofit solution. We continue to evaluate our progress in developing a commercially viable retrofit solution and our ability to capitalize on the limited near-term diesel retrofit market.

For retrofit applications, we are focused on partnering with system integrators and field service providers to jointly develop and commercialize our product. We believe the scalable, viable integration retrofit solution that we are developing could have the potential to achieve maximum NOx reduction in a cost-effective manner to enhance a partner's product line and offer significant competitive advantages.

In line with our objective to secure partners to further develop and commercialize our diesel NOx control systems for new engine and retrofit applications, we have taken an active role over the past year in establishing several prospective partner relationships within the diesel industry, both in the U.S. and internationally. As a result, we are in active discussions today with a number of OEMs, Tier 1 suppliers and retrofit integrators relating to testing and joint development opportunities in North America and Asia.

In the fall of 2003, we completed the construction of a diesel test facility in an effort to further advance the cost-effective development of our diesel NOx reduction solutions, and we have initiated in-house, full-scale engine tests. These tests are providing us with valuable data that we are using to further optimize our technology solutions for commercial application. This test facility will also enable us to simulate EPA certification and CARB verification protocols as well as advanced durability testing for a broad diesel engine population as we work to accelerate the product development path of our solutions for both new engine and retrofit applications.

Competition

We expect our solutions to compete with current emissions reduction technologies under development by diesel OEMs, Tier 1 suppliers and systems integrators, which also represent the potential customer base for our NOx reduction solutions. While even the most effective of these systems has limitations relating to the amount of NOx reduction that can be achieved, we expect these diesel industry players will continue to develop technologies that may compete with ours.

For new engine applications, leading diesel engine manufacturers such as Cummins, Caterpillar, Detroit Diesel Corporation, Navistar-ITEC and Volvo are currently developing and exploring a variety of NOx control solutions, ranging from advanced fuel systems, cooled exhaust gas recirculation ("EGR"), NOx catalysts, advanced engine controls and SCR systems. Most of these diesel OEMs completed in-house engine modifications to achieve the October 2002 EPA mandate, and are now pursuing refinements to their engine designs to meet the next phase of U.S. emissions requirements that will take effect in 2007. However, diesel OEMs have indicated that further engine modifications will not be able to achieve the 2010 U.S. mandated 90% reduction in NOx without some form of advanced NOx after-treatment or significant advances in CDC or HDDI/LTC solutions.

While a variety of after-treatment technology paths are currently being evaluated in the U.S. to meet the 2010 EPA mandate, the solutions considered to have the greatest potential to meet the 0.2 g/bhp-hr target are NOx traps and SCR systems. With respect to SCR systems there are some significant downsides, associated with their use in mobile diesels, which have created concerns over their widespread use. SCR requires urea or ammonia to neutralize NOx in the exhaust, raising environmental concerns and requiring the creation of an infrastructure to house urea or ammonia tanks at filling stations across the country as well as associated compliance issues when tanks run dry.

NOx traps, on the other hand, use onboard diesel fuel in the NOx reduction process, eliminating both the need for a costly new infrastructure and the risk of noncompliance by truck operators. We believe that through the use of our XFP technology in combination with a NOx trap, we can enable a robust, cost-effective and practical commercial solution to meet the most stringent NOx requirements in the U.S. and select global markets. Accordingly, a growing number of diesel OEMs are inquiring about our ability to support their next phase of emissions control needs as NOx traps continue to be a favored technology path to comply with stringent environmental standards.

Over time, our XFP may also face competition from new entrants to the market for diesel emissions reduction. New entrants may eventually develop competing technologies that achieve a similar level of emissions reduction on a cost-effective and practical basis. We are aware of one other company, HydrogenSource LLC, which is pursuing the development of a diesel fuel reformer technology similar to ours that is designed to work in conjunction with a lean NOx trap to enable emissions reduction in line with the 2010 EPA mandate.

With respect to retrofit applications, we are aware of one company, Cleaire, which is marketing a catalyst-based retrofit solution offering a 25% reduction in NOx for mobile diesel applications. There are other companies currently offering or developing alternate NOx control options that may compete with retrofit solutions. These technologies include EGR, engine "repowers" or replacements, compressed natural gas, or CNG, and others. These alternatives may result in NOx reductions in excess of 50%, but we believe they are also more costly than retrofit solutions. Our retrofit solution may also face competition from new entrants to the market that may eventually develop competing retrofit technologies, catalytic or otherwise, that achieve a similar reduction in NOx as our technology on a cost-effective basis. Cleaire, for example, is currently developing a catalyst-based retrofit solution targeting a 40% reduction in NOx.

We believe that the successful development of our retrofit solution could offer a significant competitive advantage over alternate NOx retrofit solutions on the market today or currently under development. In addition

to a NOx reduction potential of 50%, compared with the 25% NOx reduction currently being offered by another supplier, our solution is designed to be compatible with both ULSD and standard diesel fuels and to operate across a broader temperature range, possibly including low temperatures encountered while idling.

Fuel Processing for Vehicular Fuel Cell Applications

In 2001, we were selected by the DOE for an \$11,658,000 cost-shared contract for the development of a compact fuel processor capable of operating on multiple fuels for use with fuel cells in transportation applications. The objective of the 48-month development program is to deliver a compact fuel-flexible fuel processor prototype to be used with PEM fuel cells in an automotive application. The lack of availability of a cost-effective, compact system that can convert conventional fuels, such as gasoline, to hydrogen to power fuel cells remains one of the barriers to widespread commercialization of fuel cell use in automobiles.

Since initiation of the program in October 2001, significant progress has been made in developing highly active, cost-effective and durable fuel reforming, water-gas-shift and preferential oxidation catalysts. Individual catalytic reactor components of the fuel processing system have been modeled and designed to achieve the targeted 60-second start-up time. Subscale prototype fabrication and demonstration tests of individual reactor components are expected to commence this year.

SCR Catalyst and Management Services

Our SCR-Tech subsidiary, which was acquired in February 2004, is based in Charlotte, North Carolina and offers catalyst cleaning, rejuvenation and regeneration as well as SCR system management and consulting services (collectively "SCR catalyst and management services"), to help power plant operators optimize their SCR system operation while reducing operating and maintenance ("O&M") costs. SCR-Tech's customer base includes some of the largest utilities and independent power producers ("IPPs") in the U.S.

SCR Tech provides catalyst regeneration services by means of two patented processes that can fully restore the activity level of used SCR catalyst for significantly less cost than purchasing new catalyst. SCR-Tech is the only company in North America currently operating a commercial catalyst regeneration facility and offering catalyst regeneration in addition to cleaning and rejuvenation.

SCR-Tech also provides SCR system management and consulting services relating to system design and tuning, efficiency optimization, O&M cost reduction, catalyst specification and performance testing.

History of SCR-Tech

SCR-Tech's roots go back to the mid-90's when one of the founders of SCR-Tech, ENVICA GmbH, created a method for cleaning, rejuvenating and regenerating SCR catalyst in Germany. Meanwhile, EnBW, Germany's third largest energy company and one of SCR-Tech's former owners, was independently developing an innovative "in-situ" cleaning and rejuvenation process.

In 1997, ENVICA, in partnership with one of Germany's largest utilities, Hamburgische Electricitätswerke AG ("HEW"), began developing an off-site regeneration process based on ENVICA's core technology, which not only physically cleaned but also chemically regenerated SCR catalyst. The successful test results achieved with this process led to the decision to jointly market SCR catalyst regeneration services to other SCR plant operators in Germany and the construction of the world's first full-scale commercial SCR catalyst regenerating facility. This process is marketed in Germany by ENVICA under the ENVICA Kat name. Both HEW and EnBW continue to use ENVICA's regeneration processes in their coal-fired plants throughout Germany.

In March 2001, ENVICA and Energy & Environmental Consultants GmbH ("E&EC"), a German consulting company, formed SCR-Tech GmbH in Germany for marketing the regeneration process worldwide. In March

2002, EnBW Energy Solutions GmbH became a shareholder of SCR-Tech GmbH together with the two founders ENVICA and E&EC. EnBW Energy Solutions granted an exclusive license to SCR-Tech for its proprietary and patented in-situ cleaning process that it had independently developed in 1995.

For the past six years, these technologies have been successfully applied commercially throughout Germany by SCR-Tech's founding owners, leading to the creation of SCR-Tech LLC in the U.S. in 2001 to begin marketing the technology in the NAFTA regions. SCR-Tech subsequently initiated commercial operations in its Charlotte regeneration facility in early 2003.

Industry Background and Market Opportunity

SCR systems are used most commonly in large coal-fired and natural gas-fired power plants. SCR technology is based on catalysts that remove NOx from the power plant exhaust by reducing it with ammonia to elemental nitrogen and water vapor. Over time, ash buildup can cause physical clogging or blinding of the catalyst, which can negatively impact the performance of both the SCR system and the power generating asset. In addition, the NOx removal efficiency of SCR systems gradually declines as a result of catalyst deactivation caused by various catalyst poisons present in the flue gas, resulting in the need for some form of catalyst exchange. Historically, the spent catalyst has been replaced with new catalyst, a costly proposition. Because utilities and IPPs have been facing increasing pressure to lower their O&M costs, plant operators are seeking more cost-effective SCR catalyst management solutions.

NOx is considered to be one of the principal contributors to secondary, ground level ozone, or smog, and energy producers and other industries operating large power plants, particularly in the Eastern half of the U.S., have been required to reduce their NOx emissions by at least 85 percent by 2007 as part of the EPA's NOx SIP Call. The NOx SIP Call requires major NOx reductions during the "ozone season" (May 1-September 30) in 19 Midwestern and Eastern states¹ and the District of Columbia to mitigate the regional transport of ozone, which is contributing to the poor air quality of downwind states. As a result, these areas are required to revise their SIPs, outlining measures they intend to make to reduce NOx emissions to a statewide limit determined by the EPA for each affected state. As part of the NOx SIP Call, these areas are required to begin implementing new controls by April 2004 to reduce NOx emissions in an effort to reach compliance with EPA established limits by September 2007. In general, during non-ozone season periods, most operators will not have any requirements to run their SCR systems unless regulations are further tightened.

Coal-fired plants currently account for more than half of the nation's power generating capacity. With NOx removal efficiencies of up to 95 percent, we believe that SCR systems are the most effective and most widely used technology by power plant operators to comply with increasingly stringent U.S. emissions regulations. As a result, the installed base of SCR systems has increased dramatically in recent years. It is projected that by the end of 2005, approximately 100 gigawatts of coal-fired generating capacity will have been retrofitted with SCR systems to comply with the EPA's NOx SIP Call. As a result of the growing base of SCR system installations, the market for SCR catalyst services is expected to more fully develop in the 2006-2007 timeframe. Furthermore, it is projected that the available market for catalyst replacement could reach \$100 million by 2010. We believe that catalyst regeneration has the potential to play a significant role in this market, as it offers a more cost-effective approach than the replacement of deactivated catalysts.

SCR-Tech's Service Offerings

SCR-Tech offers proprietary and patented processes based on highly sophisticated and advanced technologies that can extend the useful life of installed SCR catalyst and offer a compelling economic alternative to catalyst replacement.

¹ Alabama, Connecticut, Delaware, Illinois, Indiana, Kentucky, Massachusetts, Maryland, Michigan, North Carolina, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Virginia and West Virginia.

SCR-Tech's processes are capable of not only physically cleaning and rejuvenating the most severely plugged, blinded or poisoned catalyst, but of also chemically reactivating deactivated catalyst. SCR-Tech's off-site regeneration process restores deactivated SCR catalyst back to its original specifications and catalytic activity with no physical damage to the catalyst. In this process, the customer removes the deactivated catalyst modules from the SCR unit and ships them to SCR-Tech's regeneration facility. Once regenerated, SCR-Tech returns the catalyst modules to the customer for reinstallation in the SCR unit. Upon reinstallation, the regenerated catalyst delivers the same level of performance and deactivation rate as the original catalyst. Catalyst regeneration provides SCR operators a significantly lower cost alternative to catalyst replacement and essentially eliminates the need to dispose of deactivated catalysts, which can be considered hazardous waste.

For lightly plugged or blinded catalyst that has not yet fully deactivated from catalyst poisons, SCR-Tech offers an "in-situ" cleaning process that can be performed on catalyst while the catalyst remains in the SCR unit at the customer's plant site. This process offers the advantage of extending the life of SCR catalyst and significantly improving its NOx removal efficiency without requiring removal of the catalyst from the SCR unit.

SCR-Tech's cleaning, rejuvenation and regeneration services are expected to represent the majority of SCR-Tech's projected future revenues.

SCR-Tech also provides SCR system management services including ammonia injection grid ("AIG") tuning to optimize efficiency and reduce overall O&M costs, and consulting services related to the management and design of SCR systems, including catalyst specification, selection and initial performance testing for guarantee verification.

Customers

Since its founding in May 2001, SCR-Tech has secured contracts with some of the largest utilities and IPPs in the U.S., including AES, Duke Energy, Mirant, National Energy & Gas Transmission, and Southern Company's subsidiaries, Alabama Power and Georgia Power. In March 2003, SCR-Tech greatly expanded its service offerings when it commenced commercial operation in its regeneration facility. SCR-Tech completed orders in 2003 totaling approximately \$3.0 million.

As part of an ongoing commercialization strategy, SCR-Tech is actively targeting SCR operators throughout North America to broaden its established customer base and is in active negotiations today with several potential new customers.

In the fourth quarter of 2003, SCR-Tech signed a service contract with AES relating to its entire installed base of SCR systems after having worked with one of AES' plants for two years under a management and consulting agreement. As part of this agreement, SCR-Tech will now provide SCR system management and catalyst regeneration services to AES' entire installed base of more than 25 fossil fuel-fired units equipped with SCR systems.

Competition

We expect SCR-Tech's cleaning and rejuvenation processes to compete with alternate cleaning and rejuvenation processes currently in the marketplace. We are aware of two companies that offer on-site cleaning and washing of SCR catalyst; however we believe that SCR-Tech's patent-protected cleaning process offers several competitive advantages, including both an off-site process and an "in-situ" process that does not require the removal of the catalyst from the SCR system.

While there is some competition for catalyst cleaning and rejuvenation, we are not aware of any other company in North America offering a regeneration process that can chemically reactivate SCR catalyst back to its original specifications. Accordingly, new catalyst remains the primary competition for SCR-Tech's

regeneration process. The leading SCR catalyst suppliers to the U.S. coal-fired power generation market include Cormetech, Haldor Topsøe and Hitachi America. While we believe that SCR-Tech's regeneration process offers a significant cost advantage over the purchase of replacement catalyst and essentially eliminates hazardous waste disposal issues associated with spent catalyst, it is possible that these companies and others could eventually develop a solution that may compete with ours. Nonetheless, we believe the strength of SCR-Tech's intellectual property and patent protection creates a significant barrier for new entrants to the market. In addition, we believe that our first mover advantage in the regeneration marketplace will help us maintain our leading market position.

Facilities

In the summer of 2002, after having leased 46,000 square feet of industrial processing, warehouse and office space on an existing chemical production site in Charlotte, North Carolina owned by Clariant, Corp., SCR-Tech commenced modification of the production building and installation of the process equipment to build out its regeneration facility.

In March 2003, SCR-Tech completed its modification of and brought on-line the first regeneration facility in North America. The facility's current capacity is expected to be sufficient for the near future. When necessary, the existing facility can be expanded to accommodate a doubling of capacity with minimal incremental costs. Any expansion costs are anticipated to be funded through the growth of the business.

SCR-Tech is fully licensed, permitted and in compliance with all relevant local and federal regulations required for or related to its business operations in its Charlotte facility. The site owner is also fully licensed, permitted and equipped for the removal and treatment of the waste water created by SCR-Tech's cleaning and regeneration processes, which does not generate any hazardous waste.

For a more detailed discussion of the environmental risks that may be associated with the operation of SCR-Tech's business and the nature of its assets, see "Additional Risks Relating to SCR Catalyst and Management Services."

Manufacturing

In October 2002, we brought on-line a commercial manufacturing facility in our Gilbert, Arizona location, which is being used to manufacture both prototype and production Xonon modules for gas turbine applications as well as prototypes of our diesel NOx reduction solutions. In the second quarter of 2003, we implemented an advanced product quality assurance system and installed a new, more robust coating line in our Gilbert facility, enabling us to further enhance our manufacturing operations. We also have manufacturing capability in our Mountain View, California facility, which is used primarily for the manufacture of prototypes as part of our ongoing research, development and test activities.

We have sufficient capacity in our Gilbert facility to build both development and production Xonon modules for gas turbines to satisfy our needs for the near future. We plan to retain all proprietary manufacturing within our facilities and to outsource the manufacturing of non-critical components to third party suppliers. We expect the Xonon modules to be returned to us at the end of their useful life. We plan to reclaim, reuse or recycle most components of the module, particularly the precious metals palladium and platinum, in order to reduce our costs and protect ourselves against the volatility of precious metal prices.

While we are currently manufacturing prototypes of our diesel emissions solutions in both of our facilities, we plan to outsource portions of our future commercial production to leverage the expertise of high-volume manufacturers and achieve our goal of producing cost-effective diesel emissions reduction solutions.

In the fourth quarter of 1999, we earned ISO 9001 Registration from Underwriters Laboratories, Inc. for the design and manufacture of Xonon modules at our Mountain View, California facility. In the fourth quarter of

2002 we also earned ISO 9001 Registration for our Gilbert, Arizona commercial manufacturing operations and subsequently completed the transition to the ISO 9001:2000 standards in October 2003 following an audit of our quality system. In addition to being awarded ISO 9001:2000 certification from Underwriters Laboratories, Inc., we received commendations of excellent system processes for our Integrated Product Development System and Manufacturing Control, further demonstrating our commitment to high quality standards and customer satisfaction.

Intellectual Property

We rely on a combination of patents, trade secrets, trademarks, copyrights and contracts to protect our proprietary technology. Our intellectual property strategy is to identify key intellectual property developed or acquired by us in order to protect it in a timely and effective manner, and to use such intellectual property to our competitive advantage in the NOx control marketplace. An objective of our intellectual property strategy is to enable us to be first to market with proprietary technology and to sustain a long-term technological lead in the market. As of the date of this filing, we either owned (exclusively or jointly), held exclusive license rights from third parties for, or held license rights from affiliates for 28 U.S. patents and 22 pending applications and the international counterparts associated with some of them.

We use patents as the primary means of protecting our technological advances and innovations. We have adopted a proactive approach to identifying patentable inventions and securing patent protection through the timely filing and aggressive prosecution of patent applications. Our employees participate in a comprehensive invention disclosure program involving preparation of written invention memoranda and preservation of supporting laboratory records. Patent applications are filed in various jurisdictions internationally, which are carefully chosen based on the likely value and enforceability of intellectual property rights in those jurisdictions and to strategically reflect our anticipated major markets.

We actively monitor our patent position, technical developments and market activities of our competitors. We believe that our growing patent portfolio, especially when coupled with a strong enforcement program, can provide us with a significant advantage over our competitors. We plan to vigorously defend our intellectual property.

Portions of our know-how are also protected as trade secrets and supported through contractual agreements with our employees, suppliers, partners and customers. We aggressively protect our intellectual property rights in our collaboration agreements with a view to capturing maximum value from our products in our markets and ensuring a competitive advantage.

Human Resources

As of December 31, 2003, we employed 71 persons. We added 11 employees in February 2004 as a result of our acquisition of SCR-Tech. None of our employees are represented by a labor union. We believe our relations with our employees are good.

Available Information

The Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments, will be made available free of charge on or through the Company's website, www.catalyticaenergy.com, as soon as reasonably practicable following the filing of the reports with the Securities and Exchange Commission. The contents of our website are not, and shall not be deemed to be, incorporated into this report.

Item 2. PROPERTIES

Our research and development facility, consisting of portions of two leased buildings covering approximately 32,500 square feet, is located in Mountain View, California. This lease expires on December 31, 2005, with two options to renew for two additional years each. We currently sublease approximately 6,300 square feet at this site.

In the fourth quarter of 2001, we expanded our manufacturing operations and relocated certain administrative functions to a new facility in Gilbert, Arizona under a lease of approximately 43,000 square feet. In March 2002, we purchased this building. We currently lease to tenants approximately 16,000 square feet of this building.

We lease from the City of Santa Clara, California a site which houses the field demonstration module of our Xonon Cool Combustion system. The lease of this space at Silicon Valley Power expires on February 28, 2006 and is cancelable with a 30 day notice.

SCR-Tech leases approximately 46,000 square feet of office, production, laboratory and warehouse space in Charlotte, North Carolina. This lease expires on June 30, 2012, with two options to renew for five years each. SCR-Tech also has an option to lease an additional 20,000 square feet by exercising an option expiring June 30, 2005.

We believe our existing facilities are adequate for our present needs.

Item 3. LEGAL PROCEEDINGS

Although we may be subject to litigation from time to time in the ordinary course of our business, we are not currently a party to any material legal proceeding.

Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

There were no matters submitted to a vote of the stockholders of the Company during the fourth quarter of the fiscal year covered by this report.

PART II

Item 5. MARKET FOR THE REGISTRANT'S COMMON STOCK AND RELATED STOCKHOLDER MATTERS

Common Stock

Catalytica Energy Systems, Inc. common stock is listed on the NASDAQ National Market under the symbol "CESI." The following table sets forth high and low trading prices per share for our common stock as quoted on the NASDAQ National Market during each quarter of 2002 and 2003. Such prices represent inter-dealer prices and do not include retail mark-ups or mark-downs or commissions and may not represent actual transactions.

	<u>Quarter Ended March 31, 2002</u>	<u>Quarter Ended June 30, 2002</u>	<u>Quarter Ended September 30, 2002</u>	<u>Quarter Ended December 31, 2002</u>
Common stock price per share:				
High	\$5.35	\$3.99	\$3.76	\$3.50
Low	3.25	2.90	2.31	2.40
	<u>Quarter Ended March 31, 2003</u>	<u>Quarter Ended June 30, 2003</u>	<u>Quarter Ended September 30, 2003</u>	<u>Quarter Ended December 31, 2003</u>
Common stock price per share:				
High	\$2.95	\$3.00	\$3.54	\$4.40
Low	2.48	2.46	2.70	3.25

As of March 19, 2004, there were 763 holders of record of our common stock, as shown on the records of our transfer agent. The number of record holders does not include shares held in "street name" through brokers.

Dividend Policy

We have never paid cash dividends on our common stock or any other securities. We anticipate we will retain any future earnings for use in the expansion and operation of our business and do not anticipate paying cash dividends in the foreseeable future.

Shareholder Rights Plan

On January 29, 2002, our Board of Directors adopted a Shareholder Rights Plan. Under the plan, we distributed Preferred Stock Purchase Rights ("Rights") as a dividend at the rate of one Right for each share of our common stock held by stockholders of record on February 20, 2002 (the "Record Date"). The Board of Directors also authorized the issuance of Rights for each share of common stock issued after the Record Date, until the occurrence of certain specified events. The Shareholder Rights Plan was adopted to provide protection to stockholders in the event of an unsolicited attempt to acquire us. Each Right will entitle the registered holder to purchase from us one one-thousandth of a share of Series A Participating Preferred Stock at an exercise price of \$45, subject to adjustment. We have authorized 5,000,000 shares of Series A Preferred Stock for issuance pursuant to this plan.

The Rights are not exercisable until triggered by certain conditions including the acquisition of beneficial ownership of 15% of our common stock. However, Morgan Stanley Capital Partners III, L.P., and its affiliates may acquire up to 21.5% of our common stock without triggering the Rights. If the Rights are triggered, each holder of a Right which has not been exercised (other than Rights beneficially owned by the acquiring person triggering the Rights) will have the right to receive, upon exercise, voting Common Shares having a value equal to two times the purchase price.

We are entitled to redeem the Rights, for \$0.001 per Right, at the discretion of our Board of Directors, until certain specified times. We may also require the exchange of Rights, under certain circumstances. We also have the ability to amend the Rights, subject to certain limitations.

Securities Authorized for Issuance under Equity Compensation Plans

	Number of Securities to be Issued upon Exercise of Outstanding Options	Weighted-Average Exercise Price of Outstanding Options	Common Stock Reserved for Future Issuance
Plans approved by stockholders:			
1995 Stock Option Plan	2,487,794	\$5.66	4,394,170
2000 Employee Stock Purchase Plan ...	—		<u>1,293,224</u>
Total	<u>2,487,794</u>		<u>5,687,394</u>

Item 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following table contains selected consolidated financial data as of and for each of the five years ended December 31, 1999, 2000, 2001, 2002 and 2003 that were derived from our consolidated financial statements, which were audited by Ernst & Young LLP, independent auditors. The selected consolidated financial data are qualified by reference to, and should be read in conjunction with, our financial statements and the notes to those consolidated financial statements and Management's Discussion and Analysis of Financial Condition and Results of Operations. No cash dividends were declared in any of the years presented.

	Years Ended December 31,				
	1999	2000	2001	2002	2003
	(in thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenues:					
Research and development contracts	\$ 3,053	\$ 5,487	\$ 5,523	\$ 4,795	\$ 3,498
Expenses:					
Research and development	9,627	11,277	14,622	14,229	11,260
Selling, general and administrative	3,536	5,356	7,017	9,654	7,224
Spin-off and related transaction costs	—	5,304	—	—	—
Legal settlements	1,250	—	3,250	—	—
Total expenses	<u>14,413</u>	<u>21,937</u>	<u>24,889</u>	<u>23,883</u>	<u>18,484</u>
Operating loss	(11,360)	(16,450)	(19,366)	(19,088)	(14,986)
Loss on equity investments	(1,133)	(236)	(707)	—	—
Impairment charge to implied goodwill of an equity investment	—	—	(2,145)	—	—
Interest and other income	1,041	886	2,672	1,405	823
Interest expense	(278)	(110)	(43)	(191)	(236)
Net loss	<u>\$(11,730)</u>	<u>\$(15,910)</u>	<u>\$(19,589)</u>	<u>\$(17,874)</u>	<u>\$(14,399)</u>
Basic and diluted net loss per share ⁽¹⁾		<u>\$ (15.91)</u>	<u>\$ (1.33)</u>	<u>\$ (1.02)</u>	<u>\$ (0.81)</u>
Weighted average shares used in computing basic and diluted net loss per share ⁽¹⁾		<u>1,000</u>	<u>14,747</u>	<u>17,529</u>	<u>17,669</u>
Consolidated Balance Sheet Data:					
Cash, cash equivalents and short-term investments	<u>\$ 16,032</u>	<u>\$ 58,712</u>	<u>\$ 87,647</u>	<u>\$ 66,770</u>	<u>\$ 52,682</u>
Total assets	<u>\$ 19,840</u>	<u>\$ 67,772</u>	<u>\$ 95,140</u>	<u>\$ 77,021</u>	<u>\$ 61,685</u>
Long-term debt and capital lease obligations	<u>\$ —</u>	<u>\$ 244</u>	<u>\$ 123</u>	<u>\$ 3,250</u>	<u>\$ 3,077</u>
Note payable to Catalytica, Inc.	<u>\$ 730</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Total liabilities	<u>\$ 7,288</u>	<u>\$ 10,302</u>	<u>\$ 8,418</u>	<u>\$ 7,842</u>	<u>\$ 6,458</u>
Total stockholders' equity	<u>\$ 12,552</u>	<u>\$ 57,470</u>	<u>\$ 86,722</u>	<u>\$ 69,179</u>	<u>\$ 55,227</u>

(1) Because we did not have a formal capital structure until December 2000, loss per share information prior to that date has not been presented.

The following table contains selected consolidated quarterly statements of operations data that were derived from our unaudited financial statements for each of the eight quarters ended December 31, 2003. We believe these unaudited financial results were prepared on a basis consistent with our audited financial statements and include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of our consolidated results of operations for those periods. The results of operations for any quarter are not necessarily indicative of the results of any future period.

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
	2002	2003	2002	2003	2002	2003	2002	2003
	(in thousands, except per share data)							
Research and development								
revenues	\$ 649	\$ 531	\$ 1,123	\$ 959	\$ 1,497	\$ 1,107	\$ 1,526	\$ 901
Total costs and expenses	6,250	5,256	6,759	4,577	5,673	4,351	5,201	4,300
Operating loss	<u>\$(5,601)</u>	<u>\$(4,725)</u>	<u>\$(5,636)</u>	<u>\$(3,618)</u>	<u>\$(4,176)</u>	<u>\$(3,244)</u>	<u>\$(3,675)</u>	<u>\$(3,399)</u>
Net loss	<u>\$(5,220)</u>	<u>\$(4,555)</u>	<u>\$(5,317)</u>	<u>\$(3,480)</u>	<u>\$(3,896)</u>	<u>\$(3,116)</u>	<u>\$(3,441)</u>	<u>\$(3,248)</u>
Basic and diluted net loss per								
share	<u>\$ (0.30)</u>	<u>\$ (0.26)</u>	<u>\$ (0.30)</u>	<u>\$ (0.20)</u>	<u>\$ (0.22)</u>	<u>\$ (0.18)</u>	<u>\$ (0.20)</u>	<u>\$ (0.18)</u>

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

This Management's Discussion and Analysis of Financial Condition and Results of Operations and other parts of this Annual Report on Form 10-K contain forward-looking statements that involve risks and uncertainties. Words such as "anticipate," "believe," "estimate," "expect," "intend," "plan" and similar expressions identify such forward-looking statements, which are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth in "Risks That Could Affect Our Financial Condition and Results of Operations" and elsewhere in this Form 10-K.

Overview

Catalytica Energy Systems, Inc. ("Catalytica Energy," the "Company," "we" or "us") was incorporated in Delaware as a subsidiary of Catalytica, Inc. in 1995. Catalytica Energy operated as part of Catalytica, Inc.'s research and development activities from inception through the date of its incorporation as a separate entity. In December 2000, Catalytica Advanced Technologies, Inc., another subsidiary of Catalytica Inc., was merged into us, and the combined entity was spun out from Catalytica, Inc. as Catalytica Energy Systems, Inc., a separate, stand-alone public company.

We provide innovative emissions solutions to ease the environmental impact of combustion-related applications in the power generation and transportation industries. Since our inception, our business activities have included designing, developing and manufacturing advanced products based on our proprietary catalyst and fuel processing technologies to offer cost-effective solutions for reducing nitrogen oxides ("NOx") emissions. We have commercialized and are marketing Xonon Cool Combustion™, a breakthrough pollution prevention technology that enables natural gas-fired turbines to achieve ultra-low emissions power production through a proprietary catalytic combustion process. We are also pursuing the development of NOx reduction solutions for mobile, stationary and off-road diesel engines and are conducting development efforts related to fuel processing systems for Proton Exchange Membrane ("PEM") fuel cells used in vehicular applications.

We are focused on growing our business through a product and market diversification strategy in the area of NOx control. Increasingly stringent air quality regulations have resulted in tighter emissions restrictions being

imposed on a variety of combustion-related applications. NOx emissions, which are a precursor to smog formation, have become a primary target of government-imposed emissions regulations, creating a significant opportunity for innovative, cost-effective NOx control solutions.

As a result of ongoing challenging conditions in the gas turbine industry, a slow to emerge distributed generation market and the pace of OEM gas turbine commercialization activities, we completed a rigorous exercise in 2003 to realign our strategic direction and build a stronger business. This has been accomplished through broadening our product and service offerings in the area of NOx control beyond our Xonon Cool Combustion product for gas turbines. Accordingly, we have sharpened our focus on the pursuit of new business activity and expanding our portfolio of NOx-related products and services across new and growing markets. We are committed to solving NOx-related problems by providing the most economically compelling and most effective solutions available, whether it is through prevention or through some form of after-treatment. In addition to intensifying our development of NOx control after-treatment systems for diesel engines, which leverage our core Xonon® technology, over the past year we have become more active in identifying strategic opportunities, including business acquisitions that complement our current products, expand the breadth of our markets or build upon our technical capabilities. In particular, we continue to focus on opportunities that offer near-term, profitable product and service offerings.

In February 2004, we acquired SCR-Tech LLC ("SCR-Tech"), the North American leader in catalyst regeneration technologies and management services for selective catalytic reduction, or SCR, catalyst systems, which are used by coal-fired plants and other utility-scale power generating facilities to reduce NOx emissions. Under the terms of the acquisition, we made an initial cash payment of approximately \$3.5 million. We will be required to make a subsequent cash payment in mid-2004 of approximately \$545,000. We also will be obligated to make deferred payments of approximately \$7.5 million over a 10 to 15-year period beginning in 2005, including contingent payments relating to the acquisition of intellectual property and exclusive NAFTA ownership of patents. In addition, earn-out payments may be due between 2005 and 2009, contingent upon revenue and cash flow generation in excess of established targets.

The addition of SCR-Tech strategically broadens and diversifies our product and service offerings to the growing emissions control market for coal-fired power plants and accelerates our penetration of the NOx control marketplace. We believe the acquisition of SCR-Tech has created a solid foundation for future growth and has strengthened our ability to continue pursuing development and commercialization efforts in other areas of our business, while also targeting additional business opportunities in the area of NOx control. Through our SCR-Tech subsidiary, we are now offering catalyst cleaning, rejuvenation and regeneration, as well as SCR system management and consulting services (collectively, "SCR Catalyst and Management Services"), to help plant operators optimize their SCR system operation while also reducing O&M costs.

As a result of the SCR-Tech acquisition, our revenue mix will materially change in 2004. Prior to the acquisition of SCR-Tech, primarily all of our revenue consisted of revenue from research and development contracts funded by gas turbine manufacturers, government sources or research institutions, as well as contracted and collaborative research. We anticipate SCR-Tech will provide approximately one-half of our revenues in 2004. Despite the acquisition of SCR-Tech, we continue to expect substantial losses during the next few years as we seek to expand commercialization of our Xonon Cool Combustion product, develop NOx control systems for diesel engines, expand our SCR catalyst services and pursue other opportunities that leverage our core technologies or business focus, including additional acquisitions. These activities involve significant potential financial commitments, and there can be no assurance we will have sufficient funds to successfully develop our business or that any of our business operations will be profitable.

Results of Operations

Comparison of the years ended December 31, 2001, 2002 and 2003.

REVENUES

	Years Ended December 31,			Annual % Change	
	2001	2002	2003	2002/2001	2003/2002
	(in thousands)				
Total revenues	\$5,523	\$4,795	\$3,498	-13%	-27%

Revenues in the periods presented primarily consists of research and development contracts funded by gas turbine manufacturers and government sources for fuel processor and gas turbine development, the timing of which may vary from period to period based on the terms agreed upon by us and the funding party. These contracts provide for partial recovery of our direct and indirect costs. The timing of these reimbursements varies from year to year, and from contract to contract, based on the terms agreed upon by us and the funding party.

Most of our research and development contracts are subject to periodic review by our funding partner, which may result in modifications, termination of funding or schedule delays. We cannot ensure we will continue to receive research and development funding. In return for funding development, collaborative partners may receive certain rights in the commercialization of any resulting technology, including royalty payments on future sales (see "Other Commitments"). We expect to continue to pursue funded research programs. However, these may not be a continual source of revenue. Due to the nature of our operating history, period comparisons of revenue are not necessarily meaningful and should not be relied upon as indications of future performance.

Revenue declined \$1,297,000 or 27% during the year ended December 31, 2003 compared to 2002. Revenue recorded from a research program funded by the U.S. Department of Energy to enhance the performance of combustion systems using Xonon technology decreased by \$650,000 due to the completion of the program in August 2002. Funding from one OEM partner decreased by \$504,000 as the combustion system development under the program advanced to a stage requiring less engineering effort than in the previous year.

Revenue declined \$728,000 or 13% during the year ended December 31, 2002 compared to 2001 primarily as a result of a reduction in funding from a gas turbine manufacturer of \$1,950,000. During 2002, revenue from programs to apply Xonon technology to the manufacturer's gas turbine engines was reduced as the engine development stage was completed and final preparations began for prototype testing. Partially offsetting this decline was an increase in funding of \$1,388,000 from the U.S. Department of Energy under a multi-year program to develop fuel processors for use with fuel cells in transportation applications.

We expect total revenues during the year ending December 31, 2004 will be in excess of that during 2003, primarily due to our incorporation of SCR catalyst services as part of our overall NOx solutions strategy. We expect R&D revenues during the year ending December 31, 2004 will be less than during 2003 due to reduced availability of funding from governmental agencies and OEM partners resulting from challenging market conditions in the gas turbine industry. R&D revenues will be provided primarily by government agencies, with the DOE fuel processor program comprising the majority of that revenue.

COSTS AND EXPENSES

Research and Development Expenses ("R&D")

	Years Ended December 31,			Annual % Change	
	2001	2002	2003	2002/2001	2003/2002
	(in thousands)				
Research and development	\$14,622	\$14,229	\$11,260	-3%	-21%

R&D includes compensation, benefits and related costs for engineering and manufacturing staff, fees for contract engineers, materials to build prototype units, amounts paid to outside suppliers for subcontracted components and services, supplies used, and allocated facilities and information technology costs. We expense all R&D costs as incurred.

R&D declined \$2,969,000 or 21% during the year ended December 31, 2003 compared to 2002. Salaries and related benefits decreased by \$701,000 following a February 2003 restructuring in which certain administrative and support positions were eliminated from our engineering and manufacturing departments. Consulting, contracted research and temporary labor were reduced by \$908,000 as a result of a reduction in the work required for funded research programs and as more of these functions were assumed internally. Supplies expense was decreased by \$606,000 due to a decline in the level of funded research programs and the completion of developmental efforts within those programs. R&D facility and information technology costs were reduced \$677,000 due to the streamlining of administrative functions during 2003.

R&D declined \$393,000 or 3% during the year ended December 31, 2002 compared to 2001 due to a reduction in consulting, contracted research and temporary labor as more of these functions were assumed internally.

We expect R&D will remain relatively flat during the year ending December 31, 2004 compared to 2003. Our research efforts are focused on diesel, gas turbine and fuel processor programs.

Selling, General and Administrative Expenses (“SG&A”)

	<u>Years Ended December 31,</u>			<u>Annual % Change</u>	
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2002/2001</u>	<u>2003/2002</u>
	(in thousands)				
Selling, general and administrative	\$7,017	\$9,654	\$7,224	38%	-25%

SG&A includes compensation, benefits and related costs of corporate functions, which include management, business development, marketing, human resources, sales and finance, and un-allocated facilities and information technology costs.

SG&A decreased \$2,430,000 or 25% during the year ended December 31, 2003 compared to 2002. Salaries and related benefits were reduced \$1,347,000 following a February 2003 restructuring in which certain positions were eliminated from our accounting, human resources, marketing and information technology departments. Relocation and recruiting costs were \$359,000 lower in 2003 due to the completion of personnel moves to a new manufacturing and administrative facility in Gilbert, Arizona and the completion of staffing additions in 2002. Included in SG&A for 2002 was a charge of \$450,000 related to the Settlement Agreement with Woodward Governor Company (see “Legal Settlements”) and a charge of \$545,000 related to impairment of certain leasehold improvements. Facility and information costs allocated to R&D were reduced by \$677,000 in 2003 due to the overall reduction of SG&A costs incurred.

SG&A increased \$2,637,000 or 38% during the year ended December 31, 2002 compared to 2001. Included in SG&A during 2002 was a charge of \$450,000 related to an April 2002 settlement agreement with Woodward Governor Company with respect to the GENXON Membership Transfer and Settlement Agreement the parties had originally entered into in December 2001 (see “Legal Settlements”). Salaries increased \$838,000 during 2002 as a result of new positions in marketing, legal, finance and administration.

In September 2001, the Company received refunds of investment banking fees totaling \$875,000 incurred in conjunction with the December 2000 spin-off transaction from Catalytica, Inc. These refunds became payable upon the completion of a follow-on public offering in August 2001. The refunds of \$875,000 were recorded as a

reduction of SG&A during the twelve months ended December 31, 2001. SG&A during 2001 was also reduced by rent payments of \$641,000 from sub-tenant contracts which terminated prior to 2002.

We expect SG&A will remain relatively flat during the year ending December 31, 2004 compared to 2003 primarily due to several assets which became fully depreciated at the end of 2003, offset by incremental SG&A anticipated from the addition of SCR catalyst services to our overall NOx solutions strategy.

Legal Settlements

	<u>Years Ended December 31,</u>		
	<u>2001</u>	<u>2002</u>	<u>2003</u>
	(in thousands)		
Legal settlements	\$3,250	\$—	\$—

On August 14, 2000, the City of Glendale, California filed a complaint against Catalytica Energy, Catalytica, Inc. and GENXON Power Systems, LLC (“GENXON”), then a 50/50 joint venture between Catalytica Energy and Woodward Governor Company (“WGC”), asserting claims for breach of contract, breach of the covenants of good faith and fair dealing, fraud and negligent misrepresentation arising out of defendants’ termination of the September 16, 1996, Technical Services Agreement between the City of Glendale and Catalytica, Inc. On March 22, 2002, the parties entered into a settlement agreement with respect to this litigation. Under the terms of the settlement agreement, Catalytica Energy paid the City of Glendale \$3,000,000 in April 2002, and all parties dismissed and released all claims arising out of the action.

Based on an agreement between WGC and Catalytica Energy entered into effective December 2001 (the “GENXON Membership Transfer and Settlement Agreement”), Catalytica Energy believed WGC would provide reimbursement for 50% of the settlement amount, or \$1,500,000. As of December 31, 2001, a reserve of \$1,500,000 had been established to account for Catalytica Energy’s net settlement payment resulting from a provision of \$1,250,000 recorded in 1999 and an additional provision of \$250,000 recorded in December 2001. In March 2002, WGC disputed the amount owed to Catalytica Energy as reimbursement of the settlement payment.

In April 2002, Catalytica Energy and WGC entered into a settlement and release of claims (the “Settlement Agreement”) with respect to the GENXON Membership Transfer and Settlement Agreement pursuant to which WGC paid Catalytica Energy \$1,500,000 in April 2002 as reimbursement of its portion of the settlement payment to the City of Glendale. In return, Catalytica Energy agreed to the amendment of certain provisions of the Control Patent Assignment and Cross License Agreement (“Patent Assignment Agreement”) entered into between Catalytica Energy and WGC on December 19, 2001 and also agreed to pay certain amounts to WGC. The amendments to the Patent Assignment Agreement increased the royalties owed by Catalytica Energy to WGC by \$250,000 and required \$50,000 of these royalties to be guaranteed and paid in advance. In accordance with the Settlement Agreement, Catalytica Energy paid WGC \$250,000 in April 2002, which was a \$50,000 prepayment of royalties under the Patent Assignment Agreement as well as a prepayment of \$200,000 of nonrefundable control technology license fees for Catalytica Energy’s first four \$50,000 sublicenses of the WGC control technology licensed to the Company. Catalytica Energy paid WGC \$100,000 in January 2003 and an additional \$100,000 in January 2004.

In March 2002, Catalytica Energy recorded a general and administrative expense of \$450,000 for the royalties and license fees payable to WGC pursuant to the Settlement Agreement.

In September 2001, the Company agreed to a \$3,000,000 cash settlement with AGC Manufacturing Services, Inc. and AGC Project Development, Inc. (collectively referred to as “AGC”) in connection with a demand for arbitration filed by AGC with respect to a contract dispute. Terms of the cash settlement required payments by the Company to AGC over a 22-month period commencing September 2001. During the three

months ended September 30, 2001, an expense of \$3,000,000 was recorded for the full amount of the settlement. Through December 31, 2003, the Company had paid the entire \$3,000,000 settlement amount to AGC.

EQUITY INVESTMENTS

	<u>Years Ended December 31,</u>		
	<u>2001</u>	<u>2002</u>	<u>2003</u>
	(in thousands)		
Loss on equity investments	\$ 707	\$—	\$—
Impairment charge to implied goodwill of an equity investment	2,145	—	—

In March 2001, we entered into agreements to invest \$2,258,000 in NovoDynamics, Inc. (“NovoDynamics”), a company engaged in the development of data mining, informatics discovery and high throughput synthesis and testing technologies. This amount consisted of an advance of \$1,800,000 in cash, forgiveness of an advance of \$200,000 made to a company affiliated with NovoDynamics (NonLinear Dynamics, Inc.), and contribution of \$258,000 in assets of a wholly owned subsidiary of Catalytica Energy (Catalytica NovoTec, Inc.). During 2001, we owned shares of Series A voting preferred stock representing approximately 38% of NovoDynamics’ outstanding equity. We recorded the investment in NovoDynamics at our actual cost and, during the period from March 2001 through December 2001, recorded our pro-rata share of losses totaling \$613,000 under the equity method of accounting.

Additionally, in March 2001, we agreed to loan NovoDynamics up to \$1,500,000 if certain milestones were met. On December 31, 2001, we committed to loan \$500,000 of the \$1,500,000 to NovoDynamics, which was funded in January 2002. As of December 31, 2001, we recorded a note payable for the \$500,000 and a note receivable of \$500,000 on our balance sheet. Because repayment of the note was not certain at the time it was made, an allowance of \$500,000 was recorded against the loan and this amount was charged as impairment to implied goodwill of an equity investment on December 31, 2001. As of March 2003, our obligation to loan NovoDynamics additional funds under this agreement terminated, and we did not advance additional funds to NovoDynamics prior to that date.

On December 31, 2001, we determined impairment in the carrying value of the equity investment in NovoDynamics had occurred which was other than temporary based on NovoDynamics’ financial history and projected future losses. At that time, we determined the estimated fair value of the investment in NovoDynamics was zero and wrote off the net investment amount of \$1,645,000 as impairment to implied goodwill of an equity investment. At that time, we discontinued applying the equity method of accounting because the net investment was zero. Therefore, no loss related to the equity investment in NovoDynamics was recorded during the twelve months ended December 31, 2002, and 2003. At December 31, 2003, we owned approximately 31.8% of NovoDynamics’ outstanding equity.

Additionally, during the twelve months ended December 31, 2001, we recorded losses totaling \$94,000, related to an equity investment in Genxon. The financial statements of Catalytica Energy and Genxon were consolidated in December 2001 and, therefore, the results of operations of Genxon are included in our consolidated financial statements in 2002 and 2003.

INTEREST AND OTHER INCOME

	<u>Years Ended December 31,</u>		
	<u>2001</u>	<u>2002</u>	<u>2003</u>
	(in thousands)		
Interest and other income	\$2,672	\$1,405	\$823

Interest and other income consist of interest earned on cash, cash equivalents and short-term investments and rental income. All interest income is generated from money market and short-term investments. Rental income is generated from the leasing of certain portions of our Gilbert, Arizona building. Interest and other income during the twelve months ended December 31, 2003 was lower than the twelve months ended December 31, 2002 due to declining cash and investments balances and a decline in market interest rates. Although our average cash and investments balances during the twelve months ended December 31, 2002 were higher than during 2001, interest income decreased due to a significant decline in market interest rates. We expect interest and other income will decline during the year ending December 31, 2004 compared to that during 2003 as we use cash to fund operations.

INTEREST EXPENSE

	Years Ended December 31,		
	2001	2002	2003
	(in thousands)		
Interest expense	\$43	\$191	\$236

Interest expense during the twelve months ended December 31, 2003 was higher than 2002 as a full twelve months of interest expense was recorded on the Gilbert building loan in 2003 as compared to ten months expense recorded in 2002. Interest expense during the twelve months ended December 31, 2002 was significantly higher than 2001 due primarily to a \$3,010,000 loan received by us in March 2002 to finance the purchase of our manufacturing and administrative facility in Gilbert, Arizona.

INCOME TAXES

No benefit from income taxes was recorded in 2003, 2002 or 2001 due to the uncertainty of future taxable income that would allow us to realize deferred tax assets generated from our losses.

LIQUIDITY AND CAPITAL RESOURCES

	Year Ended December 31,		
	2001	2002	2003
	(in thousands, except for current ratio data)		
Cash, cash equivalents, and short-term investments	\$87,647	\$ 66,770	\$ 52,682
Net increase / (decrease) in cash, cash equivalents and short-term investments	\$28,935	\$(20,877)	\$(14,088)
Working capital	\$81,330	\$ 64,261	\$ 50,720
Current Ratio	10.7	14.4	15.4

Prior to our spin-off in December 2000, Catalytica, Inc. made a \$50,000,000 cash investment in us. Additionally, in August 2001, we received net proceeds of \$47,642,000 from a public offering of our common stock. Through December 31, 2003, a portion of the proceeds from the capital contribution and our public offering have been used to fund our ongoing research and development efforts including the commercialization of the Xonon Cool Combustion technology, to purchase our commercial manufacturing and administrative facility in Gilbert, Arizona and for general corporate purposes. The remaining funds have been invested in commercial and government short-term paper.

Our net change in cash, cash equivalents and short-term investments ("Cash Consumption") represents the total disbursements to fund our Company operations offset by revenue receipts, debt funding and net equity

proceeds. The Cash Consumption for 2003 does not include any debt funding or net equity proceeds except for approximately \$384,000 from the exercise of stock options and purchases of stock under our Employee Stock Purchase Plan. Except for the 2004 payments associated with the SCR-Tech transaction of \$3,518,000 and \$545,000 described below, we do not currently have any commitments or known changes to our business that would significantly change our Cash Consumption for 2004 as compared to 2003.

Our capital requirements depend on numerous factors, including but not limited to product development and commercialization activities, the timing and level of research and development funding, market acceptance of our products and our rate of sales growth. We expect to devote substantial capital resources to further commercialize our technology, hire and train our production staff, develop and expand our manufacturing capacity, begin production activities and expand our research and development activities. We may enter into acquisitions or strategic arrangements which could require the use of cash or additional equity or debt financing. In this regard, we have from time to time and may continue to enter into discussions with third parties regarding potential acquisitions of businesses that could complement our current products, expand the breadth of our markets or enhance our technical capabilities. Any transaction consummated as a result of such discussions could materially and adversely impact our liquidity and capital resources. In addition, a principal repayment of our long-term debt totaling \$2,844,000 is due in April 2007. We believe our available cash, cash equivalents and short-term investments as of December 31, 2003 will provide sufficient capital to fund operations as presently planned for at least the next twelve months. As a result of significant anticipated research and development and similar expenses, we expect we will expend significant amounts of cash beyond 2004. The nature and extent of such cash usage, other than the future payments in connection with the SCR-Tech acquisition, is uncertain at this time.

In February 2004, pursuant to a Membership Interests and Asset Purchase Agreement (the "Purchase Agreement") we acquired 100% of the outstanding member interests of SCR-Tech and acquired certain patents and related intellectual property rights for an initial cash payment of \$3,518,000. Additionally, we are committed to the following payments:

- (1) Upon the completion of certain training and delivery of the remaining assets to be acquired, a payment of \$545,000.
- (2) On August 20, 2005, a payment of \$875,000.
- (3) On February 20, 2006, a payment of \$1,000,000.
- (4) On December 1, 2007 and December 1, 2008, a payment of \$300,000 on each such date, provided that Hans-Ulrich Hartenstein is an employee of SCR-Tech or its affiliates on such dates (the "Contingent Employment Payments").
- (5) For each of the calendar years 2004 through 2008, certain amounts, if any, based upon the SCR-Tech business attaining certain target revenue.
- (6) For each of the calendar years 2004 through 2008, certain amounts, if any, based upon the SCR-Tech business attaining certain target cash flow amounts.
- (7) For each of the calendar years 2004 through 2018, up to an aggregate of \$5,022,220 payable in installments equal to the lesser of (i) 10% of the certain revenues for the applicable calendar year and (ii) \$502, 220 (the "Acquired Assets Payments").

We believe the contingencies associated with the Contingent Employment Payments and the Acquired Asset Payments will be met and the amounts will be paid in their entirety. Given the revenue and cash flow hurdles and limitations associated with our revenue and the cash flow and earnout payments, we believe these payments will not have a negative impact on cash flow or liquidity. Further, except for the \$3,518,000 initial payment made in February 2004 and the \$545,000 to be made upon the completion of certain training and the transfer of certain assets, we anticipate that the remaining payments associated with the SCR-Tech transaction will be funded by the cash flow from SCR catalyst services.

In March 2002, we received a term loan of \$3,010,000 from the Arizona State Compensation Fund. Proceeds of this loan were applied to the purchase of a 43,000 square foot manufacturing and administrative facility in Gilbert, Arizona. This five-year term loan bears interest at a fixed annual rate of 7.4% and matures in April 2007. Payments of principal and interest totaling \$21,000 are due monthly with a final principal payment of \$2,844,000 due at maturity. This loan is secured by a deed of trust in the acquired real property.

Our research and development facility, consisting of portions of two leased buildings covering approximately 32,500 square feet, is located in Mountain View, California. This lease expires on December 31, 2005, with two options to renew for two additional years each.

SCR-Tech leases approximately 46,000 square feet of office, production, laboratory and warehouse space in Charlotte, North Carolina. This lease expires on June 30, 2012, with two options to renew for five years each. SCR-Tech also has options to lease an additional 20,000 square feet by exercising an option expiring June 30, 2005.

We have never paid cash dividends on our common stock or any other securities. We anticipate we will retain any future earnings for use in the expansion and operation of our business and do not anticipate paying cash dividends in the foreseeable future.

We had the following contractual obligations outstanding as of December 31, 2003 (in thousands):

	<u>Total</u>	<u>2004</u>	<u>2005 and 2006</u>	<u>2007 and 2008</u>	<u>After 2008</u>
Long-Term Debt Obligations					
Building term loan	\$2,959	\$ 32	\$ 72	\$2,855	\$—
Legal settlement notes payable	100	100	—	—	—
Capital Lease Obligations	3	3	—	—	—
Operating Lease Obligations					
Building	482	248	234	—	—
Equipment	68	49	19	—	—
Other Long-Term Liabilities					
Security Deposits	16	—	16	—	—
Total Contractual Obligations	<u>\$3,628</u>	<u>\$432</u>	<u>\$341</u>	<u>\$2,855</u>	<u>\$—</u>

The Company had no outstanding purchase obligations as of December 31, 2003.

Other Commitments

We have entered into research collaboration arrangements that may require us to make future royalty payments. These payments would generally be due once specified milestones, such as the commencement of commercial sales of a product incorporating the funded technology, are achieved. Currently we have four such arrangements, with Tanaka Kikinzoku Kogyo K.K. ("Tanaka"), Gas Technology Institute ("GTI") (formally known as Gas Research Institute), the California Energy Commission ("CEC") and WGC.

A significant amount of the development effort related to our catalytic combustion technology was funded by Tanaka under a January 1995 development agreement which divides commercialization rights to the technology between the parties along product market lines. We have exclusive rights to manufacture and market catalytic combustion systems for gas turbines of greater than 25 mega-watt ("MW") power output and non-exclusive rights for gas turbines of 25 MW power output or less. Tanaka has reciprocal exclusive rights to manufacture and market catalytic combustors for use in automobiles and non-exclusive rights for gas turbines of

25 MW power output or less. In each case, the manufacturing and marketing party will pay a royalty of 5% of net sales to the other party. Each party is responsible for its own development expenses, and any invention made after May 1, 1995 is the sole property of the party making the invention, while the other party has a right to obtain a royalty-bearing, non-exclusive license to use the invention in its areas of exclusivity. As commercialized, the Xonon system contains significant technology developed by us after May 1, 1995 and no technology developed by Tanaka after this date. Our development agreement with Tanaka expires in 2005, and we have no further royalty obligations to Tanaka after 2005.

In January 2000, we entered into a funding arrangement with GTI to fund the development of our Xonon combustor and demonstrate its performance. We will be required to make royalty payments to GTI of \$243,000 per year for seven years beginning with the sale, lease or other transfer of the twenty-fifth catalyst module for gas turbines rated greater than 1 MW, up to a maximum of \$1,701,000.

In September 1998, we entered into a funding arrangement with the CEC under which they agreed to fund a portion of our Xonon engine test and demonstration facility located in Santa Clara, California. Under this agreement, we are required to pay a royalty of 1.5% of the sales price on the sale of each product or right developed under this project for fifteen years upon initiation of the first commercial sale of a Xonon-equipped engine greater than 1MW. We have the right to choose an early buyout option for an amount equal to \$2,633,000 provided that the payment occurs within two years from the date upon which royalties are first due to the CEC.

On December 19, 2001, we entered into a Control Patent Assignment and Cross License Agreement ("Patent Assignment Agreement") with WGC pursuant to which WGC assigned a patent to us, and we and WGC cross-licensed certain intellectual property to each other. Under the Patent Assignment Agreement, we must pay WGC between \$5,000 and \$15,000 upon each shipment of a Xonon commercial unit. Additionally, as part of an April 2002 settlement agreement with WGC (the "Settlement Agreement"), we agreed to increase royalties by \$2,500 per unit on our shipment of the first 100 gas turbines greater than 10 MW. These increased royalties are guaranteed, and we must pay them on 100 units even if we do not ship any units of this size. We prepaid \$50,000 of these royalties to WGC in April 2002. We paid WGC \$100,000 in January 2003 and an additional \$100,000 in January 2004. These guaranteed payments totaling \$250,000 were recorded as a component of SG&A expenses during the three months ended March 31, 2002 and are in addition to the \$5,000 we must pay to WGC under the Patent Assignment Agreement upon each shipment of a Xonon commercial unit in a gas turbine of this size.

The Patent Assignment Agreement also provides that each time we sublicense the WGC technology to a gas turbine manufacturer or third party control manufacturer; we will pay WGC a control technology license fee of \$50,000, as well as a \$3,000 additional license fee for each sale of a Xonon control system sold by such manufacturer. As a part of the Settlement Agreement, we paid \$200,000 in April 2002 representing a prepayment of the control technology license fees for our first four \$50,000 sublicenses of the WGC control technology. This payment was recorded as a component of SG&A expenses in March 2002. We are obligated to make the foregoing license payments to WGC through December 31, 2014 or until our cumulative payments and license fees to WGC total \$15,250,000, whichever occurs first.

WGC must pay us a fee of 1% of the sale price of each WGC control system installed in conjunction with Xonon catalytic modules for new and retrofit turbines. WGC is obligated to make these payments through December 31, 2014 or until we have received total payments of \$2,000,000, whichever occurs first:

Critical Accounting Policies and Estimates

Our discussion and analysis of financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent liabilities. On an on-going basis, we evaluate our estimates and judgments, including those related to

contract terms, equity investments, bad debts, inventories, investments, intangible assets, income taxes, financing operations, restructuring, contingencies and litigation. We base our estimates and judgments on historical experience and on various other factors that we believe to be reasonable under the circumstances, the results of which form the basis of our judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results would differ from these estimates under different assumptions or conditions.

Our significant accounting policies are disclosed in Note 1 to our consolidated financial statements. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

We generally recognize revenue from our funded research and development contracts as work is performed and billable hours are incurred by us, in accordance with each contract. Since these programs are subject to government audits, we maintain a revenue cost reserve for our government-funded programs in the event any of these funded costs, including overhead, are disallowed. We estimate this reserve by applying a percentage to the revenue recorded under contracts still subject to audit by those funding agencies. If we underestimate the amount of disallowed funding for a particular program, we will have to reduce our revenue in a subsequent period by the amount by which actual disallowed funding exceeds our estimate.

We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers or funding partners to make required payments. This allowance is based on specific customer account reviews and historical collections experience. If the financial condition of any of our customers or funding partners were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances would be required.

We maintain a reserve for notes receivable in the event repayment of a note is uncertain. If the financial condition of any of our debtors were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances or write-offs would be required.

Based on the market prices of precious metals, we periodically write down our inventory by an amount equal to the difference between the cost of inventory and its estimated realizable value. If actual market conditions become less favorable, additional inventory write-downs will be required.

Financial Accounting Standards Board ("FASB") Statement of Financial Accounting Standards ("SFAS") No. 109, *Accounting for Income Taxes*, requires that a valuation allowance be established when it is more likely than not that all or a portion of a deferred tax asset will not be realized. SFAS No. 109 further states that it is difficult to conclude that a valuation allowance is not needed when there is negative evidence such as cumulative losses in recent years. As a result we have recorded a full valuation allowance against our deferred tax assets and expect to continue to record a full valuation allowance on future tax benefits until we reach profitability.

We record a reserve for contingencies including litigation settlements when a liability becomes probable and estimable. The amount we record for litigation reserves is based upon our best estimate at the time and is subject to change as facts we are aware of change or ultimate determinations or settlements are made.

Impact of Inflation and Foreign Currency Fluctuation

The effect of inflation and changing prices on our operations was not significant during the periods presented. We have operated primarily in the United States and all revenue recognized to date has been made in U.S. dollars. Accordingly, we have not had any material exposure to foreign currency rate fluctuations.

Impact of Recently Issued Accounting Standards

Effective January 1, 2003 the Company adopted SFAS 145, *Recission of FASB Statements No. 4, 44 and 64, amendment of FASB Statement No. 13, and Technical Corrections* ("SFAS 145"), which among other things, restricts the classification of gains and losses from extinguishment of debt as extraordinary to only those transactions that are unusual and infrequent in nature as defined by APB Opinion No. 30. The adoption of SFAS 145 did not have an effect on the Company's consolidated financial statements.

In January 2003, the FASB issued FIN No. 46, *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51*, which addresses consolidation by business enterprises of variable interest entities ("VIEs") either: (1) that do not have sufficient equity investment at risk to permit the entity to finance its activities without additional subordinated financial support, or (2) in which the equity investors lack an essential characteristic of a controlling financial interest. In December 2003, the FASB completed deliberations of proposed modifications to FIN 46 ("Revised Interpretations") resulting in multiple effective dates based on the nature as well as the creation date of the VIE. VIEs created after January 31, 2003, but prior to January 1, 2004, may be accounted for either based on the original interpretation or the Revised Interpretations. For VIEs created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the first interim or annual period ending after December 15, 2003. Certain disclosures are effective immediately. VIEs created after January 1, 2004 must be accounted for under the Revised Interpretations. The Company currently has no contractual relationship or other business relationship with a variable interest entity and therefore the adoption of FIN No. 46 did not have an effect on the Company's consolidated financial position, results of operations or cash flows.

In April 2003, the Financial Accounting Standards Board issued SFAS 149, *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*. This statement amends and clarifies financial accounting and reporting for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities under SFAS 133. SFAS 149 is effective for contracts entered into or modified after June 30, 2003. The Company has no involvement with derivative financial instruments, does not use them for trading purposes and is not party to any leveraged derivatives. The Company's adoption of SFAS 149 did not have an effect on its consolidated financial position, results of operations or cash flows.

In May 2003, the FASB issued SFAS 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity*. This Statement requires that certain instruments that were previously classified as equity on a company's statement of financial position now be classified as liabilities. The Statement is effective for financial instruments entered into or modified after May 31, 2003, and to all other instruments that exist as of the beginning of the first interim financial reporting period beginning after June 15, 2003. The Company currently has no instruments impacted by the adoption of this statement and therefore the adoption did not have an effect on the Company's consolidated financial position, results of operation or cash flows.

RISKS THAT COULD AFFECT OUR FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following risk factors could materially and adversely affect our future operating results, financial condition, the value of our business, and the price of our common stock and also could cause actual events to differ materially from those predicted in the forward-looking statements we make about our business. Investors are encouraged to carefully consider the risks described below before making decisions related to buying, holding or selling our common stock.

GENERAL RISKS RELATING TO OUR FINANCIAL CONDITION AND OPERATING RESULTS

The following risks could negatively impact our operating results, financial condition, the value of our business and the price of our common stock. These risks also apply to and may adversely affect our specific business programs, products and opportunities, as more specifically described below.

We have incurred significant continuing losses since inception, we anticipate continued significant losses and we may never achieve profitability.

We incurred losses of \$14,399,000, \$17,874,000, and \$19,589,000 for the years ended December 31, 2003, 2002, and 2001, respectively. As of December 31, 2003, we had an accumulated deficit of \$111,748,000 and had not yet recorded any significant revenue from commercial sales. We expect to continue to incur net losses for at least the next several years. There can be no assurance we will ever reach profitability. If we fail to achieve profitability, we ultimately will not have sufficient funds to continue our operations. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future.

We are a development stage company and your basis for evaluating us is limited.

Our activity to date has primarily consisted of developing innovative catalytic NOx solutions, including the Xonon Cool Combustion technology, emissions control solutions for diesel engines and pursuing application engineering for specific products in support of commercialization. In February 2004, we completed the acquisition of SCR-Tech, and its cleaning and regeneration operations, which commenced operating in March 2003. Accordingly, there is only a limited historical basis upon which you can evaluate our business and prospects. You should consider the challenges, expenses and difficulties we will face as a development stage company seeking to develop, manufacture and sell new products and services.

We may need significant additional capital and we may be unable to raise additional capital to complete our product development and commercialization plans or achieve profitability.

Our capital requirements depend on numerous factors, including but not limited to product development and commercialization activities, the timing and level of research and development funding, market acceptance of our products and our rate of sales growth. We face substantial uncertainties with our business operations and may not be able to achieve positive cash flows from operations. We expect to devote substantial capital resources to further commercialize our technology, hire and train our production staff, develop and expand our manufacturing capacity, begin production activities and expand our research and development activities. We may enter into acquisitions or strategic arrangements, any of which could require the use of cash or additional equity or debt financing. In this regard, our recent acquisition of SCR-Tech required significant cash outlays and will require significant additional cash outlays over the next few years. While we believe our available cash, cash equivalents and short-term investments in the amount of \$52,682,000 as of December 31, 2003 will provide sufficient capital to fund operations as presently planned for at least the next twelve months, there can be no assurance that such funds will prove to be sufficient for such period or any other period of operations.

We may need to raise additional funds to develop further our diesel emissions reduction solutions, achieve full commercialization of the Xonon Cool Combustion system for additional gas turbine applications, meet our

purchase payment obligations resulting from the SCR-Tech acquisition, develop other potential products such as our fuel processor technology for PEM fuel cells or other programs, and to meet other capital requirements. We may require substantial additional funds to achieve sufficient commercial success to allow for profitable operations. Any such additional funding requirements may be significant, may not be available when required or may be available only on terms unsatisfactory to us. Further, if we issue equity securities, the ownership percentage of our stockholders will be reduced, and the holders of new equity securities may have rights senior to those of our existing holders of common stock.

The recent acquisition of SCR-Tech and any additional acquisitions we may make could disrupt our business and harm our financial condition.

As part of our growth strategy, we intend to review opportunities to acquire other businesses or technologies that would complement our current products, expand the breadth of our markets or enhance our technical capabilities. We have limited experience in making acquisitions. SCR-Tech was our first acquisition, and there can be no assurance this acquisition will prove to be successful or ultimately beneficial to us. See "Additional Risks Relating to SCR Catalyst and Management Services." The SCR-Tech acquisition and any future acquisitions entail a number of risks that could materially and adversely affect our business and operating results, including but not limited to:

- issues associated with integrating the acquired operations, technologies or products with our existing business and products;
- potential disruption of our ongoing business activities and distraction of our management;
- difficulties in retaining business relationships with suppliers and customers of the acquired companies;
- difficulties in coordinating and integrating overall business strategies, sales and marketing, and research and development efforts;
- difficulties associated with the maintenance of corporate cultures, controls, procedures and policies;
- risks associated with entering markets in which we lack prior experience;
- the potential loss of key employees; and
- the potential for write-offs of goodwill and other acquired intangibles.

The market price of our common stock is highly volatile and may decline.

The market price of our common stock is highly volatile and has declined significantly since our stock began trading in December 2000. Factors that could cause fluctuation and further declines in our stock price may include, but are not limited to:

- announcements or cancellations of orders or research and development arrangements;
- changes in financial estimates by securities analysts;
- conditions or trends in our industry;
- changes in the market valuations of other companies in our industry;
- the effectiveness and commercial viability of products offered by us or our competitors;
- the results of our research and development or test activities;
- announcements by us or our competitors of technological innovations, new products, significant acquisitions, strategic partnerships, divestitures, joint ventures or other strategic initiatives;
- changes in environmental regulations; and
- additions or departures of key personnel.

Many of these factors are beyond our control. These factors may cause the market price of our common stock to decline regardless of our operating performance. In addition, stock markets have experienced extreme price volatility in recent years. This volatility has had a substantial effect on the market prices of securities issued by many companies for reasons that may be unrelated to the operating performance of the specific companies. These broad market fluctuations may adversely affect the market price of our common stock.

We may have difficulty managing our current operations or any expansion of our operations.

Currently our management team is responsible for the operations of our recently acquired SCR-Tech business, our Xonon gas turbine program, our diesel program, exploring and evaluating potential acquisitions or other business opportunities, and other programs. In light of employee headcount reductions within the past two years, including management level employees, and the increasing number of federal and NASDAQ securities regulatory requirements, substantial additional burdens have been placed on our management. It may prove difficult for the current management to successfully operate these differing areas and meet the demands and requirements of differing business activities. In addition, we would expect to undergo growth in the number of our employees, the size of our physical plant and the scope of our operations as we commercialize our products and demand for our products increases. Expansion of our manufacturing operations will require significant management attention. This expansion could place a significant strain on our management team and other resources. Our business could be harmed if we encounter difficulties in effectively managing the issues presented by such an expansion.

If we are unable to attract or retain key personnel, our ability to adapt our technology to gas turbines, diesel engines or other products, to continue to develop and commercialize our technology, to effectively market our products and to manage our business could be harmed.

Our business requires a highly skilled management team and specialized workforce, including scientists, engineers, researchers, and manufacturing and marketing professionals who have developed essential proprietary skills. Our future success will therefore depend on attracting and retaining qualified management and technical personnel. We do not know whether we will be successful in hiring or retaining these qualified personnel. Our inability to hire qualified personnel on a timely basis, or the departure of key employees, could harm our expansion and commercialization plans. In this regard, during the past year, we have employed a new CEO, reduced the number of employees, including management level employees, and streamlined our operations. This may adversely affect our ability to retain additional necessary employees if required.

If we are unable to protect our intellectual property, or our intellectual property protection efforts are unsuccessful, others may duplicate our technology.

We rely on a combination of patents, copyrights and trade secret laws and restrictions on disclosure to protect our intellectual property rights. Our ability to compete effectively will depend, in part, on our ability to protect our proprietary technology, systems designs and manufacturing processes. In this regard, we recently entered new pollution control solution markets in which we do not have as broad of intellectual property protection as we do in the NOx control solutions area. Consequently, our ability to compete effectively in such new markets may be adversely affected. The ability of others to use our intellectual property could allow them to duplicate the benefits of our products and reduce our competitive advantage. We do not know whether any of our pending patent applications will issue or, in the case of patents issued or to be issued, that the claims allowed are or will be sufficiently broad to protect our technology or processes. Further, a patent issued covering one use of our technology may not be broad enough to cover uses of that technology in other business areas. Even if all our patent applications are issued and are sufficiently broad, they may be challenged or invalidated. We could incur substantial costs in prosecuting or defending patent infringement suits. While we have attempted to safeguard and maintain our proprietary rights, we do not know whether we have been or will be completely successful in doing so.

Further, our competitors may independently develop or patent technologies or processes that are equivalent or superior to ours. If we are found to be infringing on third party patents, we may be unable to obtain licenses to use those patents on acceptable terms, or at all. Any inability on our part to obtain needed licenses could delay or prevent the development, manufacture and sale of our systems.

We rely, in part, on contractual provisions to protect our trade secrets and proprietary knowledge. These agreements may be breached, and we may not have adequate remedies for any breach. Our trade secrets may also be known without breach of such agreements or may be independently developed by competitors.

Certain of our manufacturing equipment is unique to our business and would be difficult and expensive to repair or replace.

Certain of the capital equipment used in the manufacture of our products has been developed and made specifically for us and would be difficult to repair or replace if it were to become damaged or stop working. In addition, certain of our manufacturing equipment is not readily available from multiple vendors. Consequently, any damage to or break down of our manufacturing equipment at a time we are manufacturing commercial quantities of our products may have a material adverse impact on our business.

We are subject to significant potential environmental and product liability exposure.

Since our business relates to NOx and related emissions controls, solutions and services, we are subject to significant potential environmental and product liability risks. These include risks relating to the chemicals and other materials used to manufacture our products and provide our services; risks relating to hazardous waste and hazardous waste disposal; potential environmental damage caused in the manufacture, sale, distribution or operation of our products and services relating thereto; employee and third party injuries from the manufacture, sale, distribution or operation of our products and services relating thereto, including claims by our customers and their end users, including in certain cases, consumers; the inability of our products to meet environmental or other standards imposed by federal, state or local law or by our customers; and other claims relating to our products and services. Because of our very limited experience and the limited distribution of our products and services, we do not have any experience with the nature or type of claims which may arise from our business. Only limited insurance is available for environmental and product liability claims, and any such claims could have an adverse impact on our business and financial condition. This could be the case even if we ultimately had no liability on any particular claim, since the costs of defending any environmental or product liability claim could be prohibitive.

Many of the risks of our business have only limited insurance coverage and many of our business risks are uninsurable.

Our business operations are subject to potential environmental, product liability, employee and other risks. Although we have insurance to cover some of these risks, the amount of this insurance is limited and includes numerous exceptions and limitations to coverage. Further, no insurance is available to cover certain types of risks, such as acts of god, war, terrorism, major economic and business disruptions and similar events. In the event we were to suffer a significant environmental, product liability, employee or other claim in excess of our insurance or a loss or damages relating to an uninsurable risk, our financial condition could be negatively impacted. In addition, the cost of our insurance has increased substantially in recent years and may prove to become prohibitively expensive, thus making it impractical to obtain insurance. This may result in the need to abandon certain business activities or subject ourselves to the risks of uninsured operations.

Because a small number of stockholders own a significant percentage of our common stock, they may exert significant influence over major corporate decisions, and our other stockholders may not be able to do so.

As of December 31, 2003, our executive officers, directors and greater than 5% stockholders controlled approximately 53% of our outstanding common stock. If these parties were to act together, they could

significantly influence the election of directors and the approval of actions requiring the approval of a majority of our stockholders. The interests of our management or these investors may not always be aligned with the interests of our other stockholders.

Based on shares outstanding as of December 31, 2003, the funds managed by Morgan Stanley Private Equity and their affiliates own approximately 19% of our outstanding common stock. The Morgan Stanley Private Equity funds also have stockholder rights, including rights to appoint directors and registration rights. As a result, Morgan Stanley Private Equity and its affiliates hold a substantial voting position in us and may be able to significantly influence our business.

Liabilities we acquired as a result of our spin-off may have a negative effect on our financial results.

We incurred additional liabilities as a result of our spin-off from Catalytica, Inc. For example, when the business of Catalytica Advanced Technologies, Inc. ("CAT") was combined with ours, we became responsible for the liabilities of CAT. Additionally, we have obligations under the separation agreements we entered into with Catalytica, Inc., Synotex and DSM Catalytica Pharmaceuticals, Inc., the successor corporation to Catalytica, Inc. For example, we agreed to indemnify DSM for liabilities arising out of our business, the business of CAT and other liabilities of DSM not associated with the pharmaceuticals business it purchased from Catalytica, Inc. We are also responsible for specified potential liabilities arising out of the distribution of our common stock by Catalytica, Inc. To date, no claims have been made against us pursuant to these indemnification provisions and, at December 31, 2003, we believe the likelihood of any material claim being made against us is remote. However, if any additional liabilities materialize, our financial results could be harmed.

ADDITIONAL RISKS RELATING TO NO_x CONTROL SOLUTIONS FOR GAS TURBINES

In addition to the risks discussed elsewhere, any of which could adversely impact our Xonon-equipped gas turbine business, the following additional risks particularly relate to our Xonon Cool Combustion technology for gas turbines and could negatively impact our entire company.

The market for small gas turbines has been adversely impacted by current unfavorable conditions in the power generation and energy markets.

The market for Xonon-equipped gas turbines is dependent on various factors, including those relating to the power generation and energy markets, none of which are under our control. There has been a significant decline in the demand for gas turbines in recent years as a result of a substantial surplus in energy production capacity in the United States and Canada, a slow to emerge demand for distributed generation which especially impacts demand for small gas turbines, and uncertain supplies of natural gas and corresponding substantial increases in natural gas prices, which have reduced the demand for gas turbines of all sizes. The number of gas turbines producing between one and 15 MW of power ordered in the United States declined from approximately 53 during the 12-month period from June 1999 to May 2000 to 30 during the 12-month period from June 2002 to May 2003. Regardless of the performance capabilities of Xonon with respect to lowering NO_x emissions in gas turbines, if the market for small gas turbines continues to be weak, there will be very limited opportunity for us to sell Xonon catalyst modules and we may be unable to obtain any return on our prior investment and may never achieve profitability. As of the date of this filing, it does not appear the market for small gas turbines will increase in any significant manner in the near future.

Xonon-equipped gas turbines may never attain market acceptance.

Xonon-equipped gas turbines represent an emerging market. If Xonon technology does not attain widespread market acceptance, end-users may be less inclined to purchase turbines equipped with Xonon Cool Combustion. If a significant commercial market fails to develop, we may be unable to recover the losses incurred

to develop our Xonon product and may be unable to achieve profitability. The development of a commercial market for our systems may be impacted by factors that are not within our control, including:

- the cost competitiveness of the Xonon Cool Combustion system;
- the overall demand for new gas turbines;
- the future costs of natural gas and other fuels;
- the status of the power generation market;
- economic demand for new power generation sources;
- economic factors that could impact capital spending decisions;
- the demand for distributed generation of power;
- changing regulatory requirements;
- the emergence of alternative technologies and products; and
- changes in federal, state or local environmental regulations.

We must successfully complete further development and adaptation work before certain Xonon-equipped gas turbines can be shipped.

Incorporating our technology in a specific gas turbine model requires adaptation work by us and the manufacturer of the gas turbine engine, or original equipment manufacturer ("OEM"), such as additional engineering work and, for some turbines, technology development. Except with respect to the Kawasaki 1.4 MW gas turbine, that work has not yet been completed. We may not be successful in adapting Xonon technology to particular gas turbine models, and even if we are successful, the development work may result in delays in commercial shipments or significant expenses. Delays in completing this work could result in the loss of orders, and the emergence of significant technical issues or resource constraints on the part of OEMs could result in termination by OEMs of their agreements to adapt Xonon to their gas turbines.

We are heavily dependent on our relationships with OEMs and their commitment to adopt and market Xonon technology on their gas turbines, and some of our agreements with OEMs may limit our market opportunities.

We have ongoing programs with three OEMs which are in various stages of commercialization of, incorporating our Xonon technology into, or evaluating our Xonon technology for incorporation into, their gas turbine product lines. These and future OEMs may decide not to continue the development and commercialization of Xonon combustion systems for their gas turbines. In particular, the current state of our development program with GE Power Systems to incorporate our Xonon technology into the GE10 gas turbine is undergoing evaluation by GE following a recent engine test of a demonstration Xonon-equipped GE10 which did not fully meet GE's commercial specifications. While we and GE have agreed to pursue additional engine tests scheduled to commence in the third quarter of 2004, there can be no assurance that we or GE will continue this program. Further, even if the program continues, it may require significant additional funding and may never result in the commercial launch of a Xonon-equipped GE10.

Our agreements with OEMs generally provide the OEM with the right to be the exclusive market channel for distribution of Xonon combustion systems in that OEM's gas turbines. Additionally, some of our agreements provide for exclusivity in a limited turbine size range and for limited periods of time. Our OEM agreements generally provide that either party can terminate the agreement, but not necessarily the exclusivity, if technical issues arise that cannot be resolved. A decision by an OEM to discontinue the commercialization of Xonon combustion systems in its product line could significantly limit or foreclose our access to the market for that

OEM's turbines or prevent us from entering into agreements with other OEMs regarding the application of Xonon to competing turbines.

Our ability to sell Xonon modules for those gas turbines for which Xonon combustion systems become commercially available is heavily dependent upon the OEMs' marketing and sales strategies for Xonon combustion systems and their worldwide sales and distribution networks and service capabilities. Many of these OEMs develop and offer alternative emissions control systems in competition with our Xonon systems. Any decision on their part to limit, constrain or otherwise fail to aggressively market and sell Xonon combustion systems, including limiting their availability or pricing them uncompetitively, could harm our potential earnings by depriving us of full access to their markets.

We will incur significant costs in developing our technology with OEMs; if any OEM does not complete development for any reason, we may not be able to recover costs incurred for the development with that OEM.

We incur significant costs in developing our Xonon technology with OEMs. At times, we recover a portion of these costs through contractual reimbursement from the OEMs. However, we bear the balance of the development costs ourselves. If OEMs do not complete development work for any reason, we will not be able to recover our share of development costs through product sales.

Competition from alternative technologies may adversely affect our Xonon business.

The market for emissions reduction technologies is intensely competitive. There are alternative technologies which, when used in combination, reduce gas turbine emissions to levels comparable to or lower than Xonon-equipped gas turbines. These technologies include lean pre-mix combustion systems, which are used in conjunction with gas turbine exhaust cleanup systems such as selective catalytic reduction. Lean pre-mix systems are offered by several gas turbine OEMs, each of whom may prefer to use their internally developed emissions reduction technology rather than ours. There are also a number of companies, universities, research institutions and governments engaged in the development of emissions reduction technologies that could compete with the Xonon technology.

Xonon combustion systems will be deployed in complex and varied operating environments, and they may have limitations or defects that we find only after full deployment.

Gas turbines equipped with Xonon combustion systems are expected to be subjected to a variety of operating conditions and to be deployed in a number of extremely demanding environments. For example, gas turbines will be deployed in a wide range of temperature conditions, in the presence of atmospheric or other contaminants, under a wide range of operating requirements and with varying maintenance practices. As a result, technical limitations may only become apparent in the field after many Xonon-equipped gas turbines have been deployed. These limitations could require correction, and the corrections could be costly. In addition, any need to develop and implement corrective measures could temporarily delay or permanently prevent the sale of new Xonon-equipped gas turbines.

Any failure of gas turbines incorporating our technology could damage our reputation, reduce our revenues or otherwise harm our business.

The Xonon combustion system includes components that are located in a critical section of the gas turbine. A mechanical failure of a Xonon-equipped gas turbine may be attributed to the Xonon combustion system, even if the immediate cause is not clear. If this occurs, the reputation of the Xonon combustion system and its acceptability in the marketplace could be negatively impacted. This also could result in product or other liability to us for which we may not have insurance or adequate insurance.

We are dependent on third party suppliers for the development and supply of key components for our Xonon products.

We have entered into commercial arrangements with suppliers of the key components of our Xonon system. We do not know, however, when or whether we will secure arrangements with suppliers of other required materials and components for our Xonon modules, or whether these arrangements will be on terms that will allow us to achieve our objectives. If we are unable to obtain suppliers of all the required materials and components for our systems, our business could be harmed. A supplier's failure to supply materials or components in a timely manner, its failure to supply materials or components that meet our quality, quantity or cost requirements, or our inability to obtain substitute sources of these materials and components on a timely basis or on terms acceptable to us, could harm our ability to manufacture our Xonon modules. One of our components is provided by a single supplier and is not currently available from any other supplier. Additionally, some of our suppliers use proprietary processes to manufacture components. Although alternative suppliers are available, a switch in suppliers could be costly and take a significant amount of time to accomplish.

We have limited experience manufacturing Xonon modules on a commercial basis.

To date, we have focused primarily on research and development and have limited experience manufacturing Xonon modules on a commercial basis. We may not be able to develop efficient, low-cost manufacturing capability and processes that will enable us to meet the quality, price, engineering, design and production standards or production volumes required to manufacture Xonon modules on a commercial scale. We may also encounter difficulty purchasing components and materials, particularly those with long lead times. Even if we are successful in developing our manufacturing capability and processes, we do not know whether we will do so in time to meet our product commercialization schedule or to satisfy the requirements of our customers.

Significant price increases in key materials may reduce our gross margins and profitability of our Xonon modules.

The prices of palladium and platinum, which are used in the production of Xonon modules, can be volatile. For example, during 2003, the price of palladium ranged from \$148 to \$269 per troy ounce and the price of platinum ranged from \$603 to \$840 per troy ounce. If the long-term costs of these materials were to increase significantly, we would, in addition to recycling materials from reclaimed modules, attempt to reduce material usage or find substitute materials. If these efforts were not successful or if these cost increases could not be passed onto customers, then our gross margins and profitability would be reduced.

ADDITIONAL RISKS RELATING TO EMISSION CONTROL SOLUTIONS FOR DIESEL ENGINES

In addition to the risks discussed elsewhere, any of which could adversely impact our efforts to develop NOx control solutions for diesel engines, the following additional risks particularly relate to our efforts to develop NOx control solutions for diesel engines and could negative impact our entire company.

We may never complete the research and development of a commercially viable NOx control solution for diesel engines.

We are in the very early development stage of NOx control solutions for diesel engines. We do not know when or whether we will successfully complete research and development of a commercially viable product in either the diesel retrofit or the diesel OEM market. Economic and technical difficulties may prevent us from completing development of products for diesel engines or commercializing those products. Furthermore, a viable market for our product concept may never develop. This is further complicated by the limited time frame we have to develop a diesel retrofit solution to meet immediate market requirements. If a market were to develop in either the diesel retrofit or diesel OEM market using our NOx control solutions, we likely would face intense

competition from various competitors, including large diesel engine OEMs, and we may be unable to compete successfully. In addition, diesel engine OEMs and other competitors may create technology alternatives that could render our systems obsolete prior to commercialization. Moreover, we may conclude that the potential return from our investment in the diesel OEM or the diesel retrofit market does not justify our continued investment in these opportunities. Thus, we may at any time terminate any or all of our diesel programs, even if we do develop a commercially viable solution.

We have only a limited time to take advantage of the retrofit market for diesel engines.

The diesel retrofit market has a limited time frame, since new diesel engines produced in 2007 and beyond likely will not need retrofit products. As older vehicles and other machines using diesel engines are retired from service and replaced with vehicles and other machines using newer diesel engines, the need to retrofit older engines will decline. Thus, in order to take advantage of the diesel retrofit market, we must develop a solution that can quickly come to market and which results in significant NOx reduction with an economically viable fuel penalty and have it verified to comply with federal and state emissions requirements. Our current solution involves combining our proprietary diesel fuel processor with our proprietary lean NOx catalyst. Significant development work remains to fully develop this solution for the diesel retrofit market. It is likely we will not have our solution ready for verification testing until the end of 2004, and there can be no assurance we will be able to meet such testing requirements or find the necessary market for our retrofit product. Thus, we may expend significant sums on developing our diesel retrofit solution with no assurance that we will be successful in developing the solution or that we will develop the solution in sufficient time to take advantage of the potential market. Even if we are successful in developing a diesel engine retrofit solution, our product market window will be limited and decreasing in size as new diesel engines are introduced into the market. Further, a successful diesel retrofit solution does not imply this technology or a derivative of this technology can be employed in the diesel OEM market.

We will be heavily dependent on developing relationships with retrofit integrators in order to enter the diesel retrofit marketplace.

Our diesel retrofit solution does not address a number of significant requirements to enter this market. We will need to develop relationships with integrators who can procure necessary products and services for our solution, including project management, installation of our solution on mobile, stationary or off-road applications with necessary attachments and system controls and other necessary components. Since this will be a retrofit as opposed to an OEM market, we will likely not have the assistance of any of the manufacturers of the original equipment to supply our solution. This may make installation and operation of our diesel retrofit solution more difficult and expensive.

We will be heavily dependent on developing relationships with diesel OEMs and their commitment to adopt and market our diesel fuel processor technology for their diesel engines in order to enter the diesel OEM marketplace; any agreements with these OEMs may limit our market opportunities.

In order to take advantage of the opportunities for NOx control solutions in the diesel OEM market, we must develop a solution that results in significant NOx reduction (approximately 90%) to meet impending United States, European Union or Japanese requirements for diesel engines. This will require us to partner with one or more diesel OEMs. Until we can demonstrate the viability of our diesel fuel processor for the diesel OEM market, it is unlikely we can develop the necessary OEM relationships. In addition, if we are unable to develop a diesel retrofit solution, it is less likely we will develop the necessary credibility with diesel OEMs with respect to our diesel OEM solution.

Even if we are successful in entering into agreements with a diesel OEM, the agreements may provide the OEM with the right to be the exclusive market channel for distribution of our diesel fuel processor and may otherwise limit our ability to enter into other OEM agreements. An agreement may provide for exclusivity for

particular engine sizes and for limited periods of time. The agreements also may provide that either party can terminate the agreement, but not necessarily the exclusivity provision. A decision by an OEM to discontinue the commercialization of our diesel fuel processor in its engines could significantly limit or foreclose our access to the market for that OEM's engines or prevent us from entering into agreements with other OEMs regarding the application of our diesel fuel processor to some of their competing engines.

We may incur significant costs in developing our diesel technology with OEMs; if any OEM does not complete development for any reason, we may not be able to recover costs incurred for the development with that OEM.

We may incur significant costs in developing our diesel technology with OEMs for the diesel OEM market. Further, the technological development required to meet the requirements for this decade may be significant, and the capital required to be invested in such a development is likely to be substantial. Moreover, there can be no assurance that any solution developed by us will be technically feasible, cost-effective or acceptable to OEMs. We are not likely to recover any significant portion of these costs through contractual reimbursement from the OEMs. Thus, we will likely bear the majority of the development costs ourselves. If OEMs do not complete development work for any reason, we will not be able to recover our development costs through product sales.

We will be dependent on third party development of NOx traps for our diesel OEM product.

Even if our diesel fuel processor is accepted in the diesel OEM market, if NOx traps do not evolve to a state of commercial viability, OEMs will not ultimately adopt our technology. Although our diesel fuel processor has the benefit of lessening certain NOx trap limitations, significant technological hurdles, including cost, size, durability, operating range and the level of NOx reduction from NOx traps must be overcome for OEMs to consider commercialization of our diesel fuel processor in combination with a NOx trap. The failure of third parties to develop solutions to current NOx trap limitations in a timely manner will effectively eliminate our diesel fuel processor from market consideration. We may not have any ability to significantly influence the resolution of NOx trap issues.

We will be dependent on third party suppliers for the supply of key components for our diesel products.

We have not entered into commercial arrangements with suppliers of the key components which may be required for our diesel solutions. We do not know when or whether we will secure arrangements with suppliers of required materials and components for our diesel solutions, even if they are successfully developed, or whether these arrangements will be on terms that will allow us to achieve our objectives. Even if we can develop a commercially viable diesel retrofit or diesel OEM solution, if we are unable to obtain suppliers of all the required materials and components for our systems, our business could be harmed. A supplier's failure to supply materials or components in a timely manner, its failure to supply materials or components that meet our quality, quantity or cost requirements, or our inability to obtain substitute sources of these materials and components on a timely basis or on terms acceptable to us, could harm our ability to manufacture our diesel solutions.

We may be subject to significant competition from companies with substantially greater resources and market credibility.

The size of the diesel retrofit and diesel OEM markets has attracted a number of significant participants. In the diesel retrofit market, a number of companies have already developed announced solutions in this market, including Johnson Matthey, Englehard, Cleaire and Lubrizol. These participants have substantially greater resources and credibility than we do in this market. In the diesel OEM market, there are a number of significant competitors, some of which have announced solutions to the initial United States requirements for NOx reduction in 2007, including Eaton Corporation and the major diesel OEMs such as Cummins, Caterpillar, Detroit Diesel, ITEC and Volvo. These competitors also have substantially greater resources and credibility than we do in this

market. There can be no assurance that we can successfully compete in either the diesel retrofit or diesel OEM markets, even if we were to develop a technologically feasible solution to NOx reduction in these markets.

Alternate technologies may provide a more cost effective solution and may provide alternatives to any diesel NOx reduction technology.

Even if we are able to develop and commercialize a NOx reduction solution for diesel engines, there can be no assurance that any such solution will be either practical or cost-effective. Currently, a number of competitors have developed announced NOx solutions in the diesel retrofit market and a number of competitors have developed announced solutions in the diesel OEM market to comply with the United States 2007 regulations. These solutions are based on different technology than the basis for our proposed NOx solution, including Clean Diesel Combustion and Low-Temperature Combustion such as Homogenous Charge Compression Ignition. An additional potential competitive threat may come from power generation proven SCR technology. In Europe today, over 100 heavy duty on-road engines are testing SCR technology. Although we believe our proposed solution, if successful, in either the diesel retrofit or diesel OEM market will constitute a cost-effective and competitive solution, no assurance can be given that alternate technologies will not prove to be more reliable or otherwise more successful in the market.

We may have significant warranty and product liability risks arising from our diesel product solutions.

Even if we are able to successfully develop and commercialize NOx control solutions for the diesel retrofit or diesel OEM market, we will be required to provide product warranties. It is unclear as to the nature of these warranties at this time, but the warranties are likely to include NOx reduction at agreed levels for substantial time and/or mileage requirements. If we are unable to satisfy these warranties, we could incur significant liability to diesel OEMs, retrofit market regulators, and potentially end users, including consumers. In addition, the manufacture, sale and distribution of our diesel fuel processor could expose us to potential product liability to customers and end users, including consumers. Any such liability could be significant and may not be insurable.

We have no experience manufacturing our diesel products on a commercial basis.

To date, we have focused primarily on research and development and have no experience manufacturing diesel products on a commercial scale. We may not be able to develop efficient, low-cost manufacturing capability and processes that will enable us to meet the quality, price, engineering, design and production standards or production volumes required to manufacture our diesel products on a commercial scale. We may also encounter difficulty purchasing components and materials, particularly those with long lead times. Even if we are successful in developing our manufacturing capability and processes, we do not know whether we will do so in time to meet our product commercialization schedule or to satisfy the requirements of our customers.

**ADDITIONAL RISK RELATING TO FUEL PROCESSING FOR
VEHICULAR FUEL CELL APPLICATIONS**

In addition to the risks discussed elsewhere, the following additional risk particularly relate to our efforts in to develop fuel processing solutions for vehicular fuel cell applications. Any of the other risks discussed elsewhere also may impact these business activities.

We may never complete the research and development of a commercially viable fuel processor to be utilized with PEM fuel cells in an automotive application.

We are in the very early development stage of a commercially viable fuel processor to be utilized with PEM fuel cells in an automotive application. We do not know when or whether we will successfully complete research and development of a commercially viable product. Economic and technical difficulties may prevent us from

completing development of products or commercializing these products. Furthermore, a viable market for our product concept may never develop. If a market were to develop, we could face intense competition from large automotive OEMs, as well as companies currently established in the PEM fuel cell business, and may be unable to compete successfully. In addition, automotive OEMs or PEM fuel cell companies may create technology alternatives that could render our systems obsolete prior to commercialization.

ADDITIONAL RISKS RELATING TO SCR CATALYST AND MANAGEMENT SERVICES

In addition to the risks discussed elsewhere, any of which also could adversely impact SCR-Tech and its business, the following additional risks specifically relate to SCR-Tech and could negatively impact SCR-Tech and our entire company.

SCR-Tech is a start-up business and has very limited operating experience in North America. SCR-Tech may not be able to profitably operate its business.

SCR-Tech commenced commercial operations in its U.S. regeneration facility in March 2003 and has completed only a limited number of SCR cleaning and regeneration projects. Thus SCR-Tech does not have a substantial operational history in this facility to determine whether it can successfully operate its business under differing environments and conditions or at any level of profitability.

We recently completed the acquisition of SCR-Tech and we have very limited experience with the operations of SCR-Tech.

We completed the acquisition of SCR-Tech in February 2004. SCR-Tech was a privately held company, which commenced commercial operations in the U.S. in March 2003. At the time we acquired SCR-Tech, we had no experience in the SCR-related business and we have just begun to integrate our management, technology and systems with SCR-Tech. In addition, SCR-Tech did not previously have audited financial statements. Thus, there is a risk of unknown financial or other liabilities which could negatively impact SCR-Tech and us. Although we have limited indemnification from the sellers of SCR-Tech, there can be no assurance that any such indemnification would be adequate to cover any unknown liabilities. Further, we will need to bring SCR-Tech's financial systems into compliance with the rules and requirements of the Securities and Exchange Commission. There could be significant transition and integration issues in connection with the integration of SCR-Tech as part of our business, and a successful integration may require significant time and expense.

SCR-Tech is significantly dependent on Envica.

SCR-Tech has required significant assistance of an affiliate of one of the former owners of SCR-Tech, ENVICA Kat GmbH ("Envica"), to successfully complete certain contracts. In addition, SCR-Tech has been relying to a significant extent on the assistance of Envica on various technical and support matters relating to its business. Although the terms of our acquisition of SCR-Tech provides that Envica will provide continuing intellectual property transfers and training, there can be no assurance that SCR-Tech and its current employees will be ultimately able to successfully operate the business or expand the business. Further, there can be no assurance that SCR-Tech will not incur significant unanticipated technical problems and costs which could adversely affect SCR-Tech's business.

SCR-Tech may be subject to warranty claims from its customers.

SCR-Tech typically must provide warranties to its customers relating to the level of success of its cleaning and regeneration services. In the event SCR-Tech is unable to perform a complete regeneration of an SCR catalyst, SCR-Tech may be required to re-perform a regeneration or repay all or part of the fees earned for the

regeneration efforts. SCR-Tech also may be required to provide warranties with respect to its other SCR catalyst services provided to its customers. Since SCR-Tech has only a limited operating history in North America, it is not possible to determine the amount or extent of any potential warranty claims that SCR-Tech may incur. There is a risk that any such claims could be substantial and could affect the profitability of SCR-Tech and the financial condition of our Company.

The size of the market for SCR-Tech's business is uncertain.

SCR-Tech offers catalyst cleaning, rejuvenation and regeneration, as well as SCR system management and consulting services. The size and growth rate for this market will ultimately be determined by a number of factors, including environmental regulations, the growth in the use of SCR systems to reduce NOx and other pollutants, the length of operation of SCR systems without the need for cleaning, rejuvenation or regeneration, the cost of new SCR catalyst, and other factors, most of which are beyond the control of SCR-Tech. There is limited historical evidence in North America as to the cycle of replacement, cleaning and regeneration of SCR catalyst so as to accurately estimate the potential growth of the business. In addition, the number of times a catalyst can be regenerated is unknown, which also may affect the demand for regeneration in lieu of new catalysts. Any delay in the development of the market could significantly and adversely affect the value of SCR-Tech and the nature of any return on our acquisition of SCR-Tech.

SCR-Tech will be significantly dependent on SCR-Tech's existing management for the success of its business.

Hans Hartenstein, the president of SCR-Tech, is a key employee and one of the founders of SCR-Tech and is principally responsible for the generation of the business opportunities of SCR-Tech. He will receive significant sums from us as a result of the closing of the acquisition and the operation of SCR-Tech. If he fails to perform or otherwise fails to address the challenges faced by SCR-Tech, the business could be materially and adversely affected. Mr. Hartenstein also has other business interests which may adversely affect his performance.

Although we currently have key man insurance on Mr. Hartenstein in the amount of \$1 million, if we were to lose his services, he could be difficult to replace, especially in this early stage of development of SCR-Tech.

SCR-Tech is dependent on third parties to perform certain testing required to confirm the success of its regeneration.

In connection with the regeneration of SCR catalyst by SCR-Tech, SCR-Tech must have an independent company provide testing services to determine the level of success of regeneration. We are not aware of any company currently providing such services in the United States. Thus, SCR-Tech must ship samples to Europe for testing. Without such cost-effective testing, SCR-Tech cannot perform its regeneration services.

SCR-Tech may be subject to vigorous competition with very large competitors that have substantially greater resources and operating histories.

Although there does not appear to be a direct competitor in the business of SCR catalyst regeneration in North America, a number of companies provide SCR catalyst management, rejuvenation and cleaning services. These companies include Enerfab (which uses a process developed by Envirgy/Integral) and BHK (the parent company of Hitachi America). There also are a number of SCR catalyst manufacturers with substantial parent companies that may seek to maintain market share by significantly reducing or even eliminating all profit margins. These companies include Cormetech Inc. (owned by Mitsubishi Heavy Industries and Corning, Inc.), Argillon GmbH (formerly Siemens), Haldor-Topsoe, Inc. and KWH. Further, if the SCR catalyst regeneration market expands, competitors could emerge. If the intellectual property protection acquired by us becomes weakened, competition could more easily develop.

SCR-Tech will be highly dependent upon the strength of its intellectual property to protect its business.

In addition to the intellectual property risks relating to ongoing dealings with Envica, there can be no assurance the intellectual property acquired by us as part of the acquisition of SCR-Tech will prove sufficient or enforceable. The infringement representation and indemnification from SCR-Tech's sellers to us is short and of limited value. Further, much of the intellectual property from Envica is in the form of trade secrets, for which patent protection is not available.

SCR-Tech could be subject to environmental risks as a result of the operation of its business and the location of its facilities.

The operation of the SCR-Tech's business and the nature of its assets create various environmental risks. SCR-Tech leases its site for operations at a property listed on the National Priority List as a Federal Superfund site (under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA")). Five CERCLA Areas (those areas of concern identified under the CERCLA program) are identified on the property, and while SCR-Tech does not lease any property identified as a CERCLA Area, one such Area has resulted in contamination of groundwater flowing underneath one of the buildings leased by SCR-Tech. Although SCR-Tech has indemnification from Clariant Corporation for any environmental liability arising prior to the operation of SCR-Tech's business at the site, there can be no assurance that such indemnification will be sufficient or that SCR-Tech could be protected from an environmental claim from the nature of the site. In addition, the operation of SCR-Tech's business involves removal of hazardous wastes from catalysts and the use of significant chemical materials. As a result, SCR-Tech could be subject to potential liability from such operations.

SCR-Tech does not own its regeneration facilities and it is subject to risks inherent in leasing the site of its operations.

SCR-Tech does not own its regeneration site; instead it leases it from Clariant Corporation, the U.S. subsidiary of a Swiss-based public company. Although we believe the lease terms are favorable, the dependence on Clariant and the site could subject SCR-Tech to increased risk in the event Clariant experiences financial setbacks or loses its right to operate the site upon which SCR-Tech leases property. This risk is heightened because of the fact the site is a Super Fund site, which increases the risks the site ultimately could be shut down or that Clariant will be financially unable to continue its ownership of the site. It may be difficult to locate to another site on a cost-effective basis, and SCR-Tech's business could be negatively impacted by any problems with continuing to conduct its operations at its current site.

SCR-Tech's business will be subject to potential seasonality.

Because some utilities and IPPs currently operate their SCR units only during the "ozone season" (May 1-September 30), SCR-Tech's business will be more limited than if SCR units were required to operate on a continual basis. The SIP Call was configured to impose a summer ozone season NOx cap over 19 states and the District of Columbia. During this period, utilities and IPPs will seek to operate their SCR catalysts at maximum capacity so as to reduce NOx emissions during this period. During non-ozone season periods, most operators currently have limited (if any) requirements to run their SCR systems. Unless and until such regulations are tightened, much of SCR-Tech's business will be concentrated outside ozone season each year. This will result in less business than if SCR units were required to be operated throughout the year and this also may result in quarters of relatively higher cash flow and earnings and quarters where cash flow and earnings may be minimal. These potential fluctuations in revenue and cash flow during a year may be significant and could materially impact our quarterly earnings and cash flow. This may have a material adverse effect on the perception of our business and the market price for our common stock.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive from our investments without significantly increasing risk. Some of the securities we invest in have market risk. This means that a change in prevailing interest rates would cause the principal amount of the investment to fluctuate. For example, if we hold a security issued with a fixed interest rate at the then-prevailing rate and the prevailing interest rate later rises, the principal amount of our investment will decline. In an effort to minimize this risk, we maintain our portfolio of cash equivalents and short-term investments in a variety of securities, including commercial paper, money market funds, government and non-government debt securities. The average duration of our investments in 2003 and 2002 was less than one year. Due to the short-term nature of these investments, we believe we have no material exposure to interest rate risk arising from our investments. Therefore, no quantitative tabular disclosure is required.

Item 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our Consolidated Financial Statements and the report of the independent auditors appear on pages 53 through 77 of this Form 10-K.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

- (a) **Evaluation of disclosure controls and procedures.** Our chief executive officer and our chief financial officer, after evaluating the effectiveness of our "disclosure controls and procedures" (as defined in the Securities Exchange Act of 1934 Rules 13a-14(c) and 15-d-14(c)) as of a date within 90 days before the filing date of this annual report (the "Evaluation Date"), have concluded that as of the Evaluation Date, our disclosure controls and procedures were adequate and designed to ensure that material information relating to us and our consolidated subsidiaries would be made known to them by others within those entities.
- (b) **Changes in internal controls.** There have been no significant changes in our internal controls or in other factors that could significantly affect our disclosure controls and procedures subsequent to the Evaluation Date.

PART III

Certain information required by Part III is omitted from this Annual Report as we intend to file our definitive Proxy Statement for our 2004 Annual Meeting of Stockholders, pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended, not later than 120 days after the end of the fiscal year covered by this Report, and certain information in the Proxy Statement is incorporated herein by reference.

Item 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Information concerning directors and executive officers of Catalytica Energy Systems, Inc. required to be included in this item is set forth under the headings "Information about our Directors," "Section 16(a) Beneficial Ownership Reporting Compliance," and "Executive Officers" in Catalytica Energy's Proxy Statement, and is incorporated into this report by reference.

The section entitled "Audit Committee Financial Expert" appearing in our Proxy Statement will set forth certain information with respect to the presence of an Audit Committee Financial Expert and is incorporated herein by reference. The section entitled "Code of Ethics" appearing in our Proxy Statement will set forth certain information with respect to our Code of Ethics and is incorporated herein by reference.

Item 11. EXECUTIVE COMPENSATION

The section entitled "Executive Compensation" appearing in our Proxy Statement will set forth certain information with respect to the compensation of our management and is incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The section entitled "Security Ownership of Principal Stockholders and Management" appearing in our Proxy Statement will set forth certain information with respect to the ownership of our common stock and is incorporated herein by reference.

The "Equity Compensation Plan Table" is contained in Item 5 of this annual report and is incorporated herein by reference.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The section entitled "Transactions with Management" appearing in our Proxy Statement will set forth certain information with respect to certain business relationships and transactions between us and our directors and officers and is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The section entitled "Fees Billed to the Company by Independent Public Accountants" appearing in our Proxy Statement will set forth certain information with respect to various accounting fees billed to us and is incorporated herein by reference.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

A. (1) Consolidated Financial Statements

The following consolidated financial statements of the Registrant are filed as part of this Report:

	<u>Page</u>
Report of Ernst & Young LLP, Independent Auditors	53
Consolidated Statements of Operations for the years ended December 31, 2001, 2002 and 2003 and for the period from January 1, 1988 (inception) through December 31, 2003	54
Consolidated Balance Sheets at December 31, 2002 and 2003	55
Consolidated Statements of Stockholders' Equity for the period from January 1, 1988 (inception) through December 31, 1996 and for the years ended December 31, 1997, 1998, 1999, 2000, 2001, 2002 and 2003	56
Consolidated Statements of Cash Flows for the years ended December 31, 2001, 2002 and 2003 and the period from January 1, 1988 (inception) through December 31, 2003	60
Notes to Consolidated Financial Statements	62

(2) *Consolidated Financial Statement Schedules*

None. Schedules have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

(3) *Exhibits*

<u>Exhibit Number</u>	<u>Notes</u>	<u>Description</u>
2.1	(1)	Assignment and Assumption Agreement between Catalytica, Inc. and the Registrant effective as of July 25, 1995.
2.2	(2)	Employee Matters Agreement between Catalytica, Inc. and the Registrant.
2.3	(2)	Master Trademark Ownership and License Agreement between Catalytica, Inc. and the Registrant.
2.4	(2)	Tax Sharing Agreement between Catalytica, Inc., Synotex, Inc. and the Registrant.
2.5	(2)	Master Confidential Disclosure Agreement between Catalytica, Inc. and the Registrant.
2.6	(1)	Cross-License Agreement between Catalytica, Inc. and the Registrant effective as of July 1995.
2.7	(1)	Cross-License Agreement between Catalytica Advanced Technologies, Inc. and Catalytica, Inc. dated July 1995.
2.8	(2)	Indemnification Agreement among Catalytica, Inc. and the Registrant.
2.9	(2)	Master Transitional Services Agreement between Catalytica, Inc. and the Registrant.
2.10	(2)	Real Estate Matters Agreement between Catalytica, Inc. and the Registrant.
2.11	(2)	Master Separation Agreement between Catalytica, Inc. and the Registrant.
3.1	(2)	Amended and Restated Certificate of Incorporation.
3.2	(1)	Amended and Restated Bylaws.
3.3	(3)	Audit Committee Charter.
4.1	(4)	Preferred Stock Rights Agreement, dated as of January 29, 2002, between the Registrant and Mellon Investor Services LLC, including the Certificate of Designation, the form of Rights Certificate and the Summary of Rights attached thereto as Exhibits A, B, and C, respectively.
10.4	(1)*	Promissory Notes from Peter B. Evans issued to Registrant both dated July 20, 1999.
10.6	(7)	Limited Liability Company Operating Agreement of GENXON Power Systems, LLC, dated October 21, 1996.
10.7	(8)	Amendment No. 1, dated December 4, 1997, to the Operating Agreement of GENXON Power Systems, LLC.
10.8	(9)+	Agreement, dated as of July 18, 1988, between Catalytica, Inc. and Tanaka Kikinzoku Kogyo K.K.
10.9	(10)+	Agreement, dated as of January 31, 1995, between Catalytica, Inc. and Tanaka Kikinzoku Kogyo K.K.
10.11	(1)	Omnibus Agreement, dated August 29, 2000, by and among Catalytica, Inc., Sundance Assets, L.P., Enron North America Corp. and the Registrant.
10.12	(2)+	Collaborative Commercialization and License Agreement among General Electric Co., GENXON Power System, LLC and the Registrant dated as of November 19, 1998.
10.16	(1)	Form of Indemnification Agreement for directors of the Registrant.
10.17	(1)	Registration Rights Agreement between Morgan Stanley Dean Witter Capital Partners and its affiliates and the Registrant.
10.18	(1)*	2000 Employee Stock Purchase Plan of the Registrant.
10.19	(1)*	Letter Agreement with Dennis S. Riebe dated August 29, 2000.
10.20	(5)*	Catalytica Energy Systems, Inc. 1995 Stock Plan (as amended).
10.21	(6)*	Letter Agreement with Ronald L. Alto dated February 16, 2001.
10.23	(6)	Share Transfer Agreement between the Registrant and JSB Asset, LLC dated December 15, 2000.

Exhibit Number	Notes	Description
10.24	(6)	Stock Purchase Warrant Agreement between the Registrant and Glaxo Wellcome, Inc. dated December 15, 2000.
10.26	(1)+	Technology Development and Transfer Agreement between Kawasaki Heavy Industries, Ltd. and Registrant dated December 13, 2000.
10.27	(1)+	Xonon Module Supply Agreement, dated December 13, 2000, by and among Kawasaki Heavy Industries, Ltd. and Registrant.
10.28	(1)*	Change of Control Severance Agreements between Patrick T. Conroy and the Registrant dated April 5, 2001, Dennis S. Riebe and the Registrant dated April 5, 2001, Craig N. Kitchen and the Registrant dated April 5, 2001, and Ralph A. Dalla Betta and the Registrant dated April 17, 2001.
10.29	(1)	Lease Agreement between GH Tech I L.L.C. and the Registrant dated June 22, 2001.
10.30	(11)+	Amendment No. 1 to the Collaborative Commercialization and License Agreement between Catalytica Combustion Systems, Inc. and GENXON Power Systems, LLC and General Electric Company dated January 3, 2002.
10.31	(11)*	Consulting Agreement with John A. Urquhart dated January 1, 2002.
10.32	(11)	GENXON Membership Transfer and Settlement Agreement dated December 19, 2001, between the Registrant, Woodward Governor Company, and GENXON Power Systems, LLC.
10.33	(11)	Control Patent Assignment and Cross-License Agreement between the Registrant and Woodward Governor Company dated December 19, 2001.
10.34	(11)	Loan Agreement between the Arizona State Compensation Fund and the Registrant dated
	(12)	March 18, 2002, as amended.
10.35	(12)*	Letter Agreement with Dominic Geraghty dated February 25, 2002.
10.36	(12)*	Change of Control Severance Agreement with Dominic Geraghty dated March 29, 2002.
10.37	(13)*	Letter Agreement with Ricardo B. Levy dated June 12, 2002.
10.38	(13)*	Letter Agreement with Craig N. Kitchen dated June 26, 2002.
10.39	(14)*	Letter Agreement with Michael J. Murry dated December 6, 2002.
10.40	(14)*	Change of Control Severance Agreement with Michael J. Murry dated March 23, 2003.
10.41	(15)*	Change of Control Severance Agreement with Robert W. Zack dated August 16, 2002.
10.42	(15)*	Letter Agreement with Robert W. Zack dated February 6, 2003.
10.43	(16)	Third Amendment and Extension to Lease Agreement between Jack Dymond Associates and Catalytica Energy Systems, Inc. dated June 20, 2003.
10.44	(17)	Membership Interests and Asset Purchase Agreement dated as of January 21, 2004 by and among EnBW Energy Solutions GmbH, with respect to Articles VII and X only, ENVICA GmbH, ENVICA Kat GmbH, E&EC Energy & Environmental Consultants GmbH, SCR-Tech GmbH, SCR-Tech LLC, CESI-SCR, Inc. and, with respect to Section 11.18 and Articles VI and IX only, Catalytica Energy Systems, Inc.
10.45	(17)	Amendment No. 1 to Membership Interests and Asset Purchase Agreement dated as of February 20, 2004 by and among EnBW Energy Solutions GmbH, ENVICA GmbH, ENVICA Kat GmbH, E&EC Energy & Environmental Consultants GmbH, SCR-Tech GmbH, SCR-Tech LLC, CESI-SCR, Inc. and Catalytica Energy Systems, Inc.
10.46	**	Lease Agreement dated December 16, 2002 between Clariant Corporation and SCR-Tech LLC and First Amendment to Lease Agreement dated February 18, 2004 between Clariant Corporation and SCR-Tech, LLC.
21.1	**	Subsidiaries of Registrant.
23.1	**	Consent of Ernst & Young LLP, Independent Auditors.
24.1	**	Power of Attorney.
31.1	**	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) / 15d-14(a) of the Securities Exchange Act of 1934, as amended.

Exhibit Number	Notes	Description
31.2	**	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) / 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	**	Certification of Chief Executive Officer pursuant to 18 U.S.C. 1350.
32.2	**	Certification of Chief Financial Officer pursuant to 18 U.S.C. 1350.

+ Confidential treatment has been granted for portions of these agreements.

* Represent management contracts or compensatory plans for executive officers and directors.

** Filed herein.

- (1) Incorporated by reference to exhibits filed with our registration statement on Form S-1 (Commission File No. 333-44772).
- (2) Incorporated by reference to exhibits filed with our Post Effective Amendment No. 1 to Form S-1 (Commission File No. 333-44772).
- (3) Appendix A to the Proxy Statement filed on Schedule 14A dated April 24, 2001 (Commission File No. 000-31953).
- (4) Incorporated by reference to exhibits filed with our registration statement on Form 8-A (Commission File No. 000-31953).
- (5) Incorporated by reference to an exhibit filed with our registration statement on Form S-8 (Commission File No. 333-101115).
- (6) Incorporated by reference to exhibits filed with our Form 10-K for the year ended December 31, 2000 (Commission File No. 000-31953).
- (7) Incorporated by reference to exhibits filed with Catalytica, Inc.'s Form 10-K for the year ended December 31, 1996 (Commission File No. 0-20966).
- (8) Incorporated by reference to exhibits filed with Catalytica, Inc.'s Form 10-K for the year ended December 31, 1997 (Commission File No. 0-20966).
- (9) Incorporated by reference to exhibits filed with Catalytica, Inc.'s Registration Statement on Form S-1 (Registration Statement No. 33-55696).
- (10) Incorporated by reference to exhibits filed with Catalytica, Inc.'s Form 10-K for the year ended December 31, 1994 (Commission File No. 0-20966).
- (11) Incorporated by reference to exhibits filed with our Form 10-K for the year ended December 31, 2001.
- (12) Incorporated by reference to exhibits filed with our Form 10-Q for the quarter ended March 31, 2002.
- (13) Incorporated by reference to exhibits filed with our Form 10-Q for the quarter ended June 30, 2002.
- (14) Incorporated by reference to exhibits filed with our Form 10-K for the year ended December 31, 2002.
- (15) Incorporated by reference to exhibits filed with our Form 10-Q for the quarter ended March 31, 2003.
- (16) Incorporated by reference to exhibits filed with our Form 10-Q for the quarter ended June 30, 2003.
- (17) Incorporated by reference to exhibits filed with our Form 8-K filed with the Securities and Exchange Commission on March 4, 2004.

B. Reports on Form 8-K

The Company filed the following report on Form 8-K during the quarter ended December 31, 2003: Current Report on Form 8-K dated November 6, 2003, furnishing a copy of the November 6, 2003 press release announcing the Company's financial results for the fiscal quarter ended September 30, 2003.

REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

Board of Directors and Stockholders
Catalytica Energy Systems, Inc.

We have audited the accompanying consolidated balance sheets of Catalytica Energy Systems, Inc. (a development stage company) as of December 31, 2002 and 2003, and the related consolidated statements of operations, stockholders' equity and cash flows for the years ended December 31, 2001, 2002 and 2003 and for the period from January 1, 1988 (inception) through December 31, 2003. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Catalytica Energy Systems, Inc. (a development stage company) at December 31, 2002 and 2003, and the consolidated results of their operations and their cash flows for the years ended December 31, 2001, 2002 and 2003 and for the period from January 1, 1988 (inception) through December 31, 2003, in conformity with accounting principles generally accepted in the United States.

/s/ Ernst & Young LLP

Phoenix, Arizona

January 30, 2004, except for the matters described in Note 12, for which the date is February 20, 2004

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
CONSOLIDATED STATEMENTS OF OPERATIONS
for the years ended December 31, 2001, 2002 and 2003
and for the period from January 1, 1988 (inception) through December 31, 2003
(In thousands, except per share amounts)

	<u>For the year ended December 31,</u>			<u>Cumulative</u>
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>Amounts from</u> <u>January 1,</u> <u>1988</u> <u>(inception)</u> <u>through</u> <u>December 31,</u> <u>2003</u>
Revenues:				
Research and development contracts	\$ 5,523	\$ 4,795	\$ 3,498	\$ 62,333
Costs and expenses:				
Research and development	14,622	14,229	11,260	109,277
Selling, general and administrative	7,017	9,654	7,224	39,969
Spin-off and related transaction costs	—	—	—	5,304
Legal settlements	3,250	—	—	4,500
Costs associated with discontinued product line	—	—	—	9,299
Total costs and expenses	<u>24,889</u>	<u>23,883</u>	<u>18,484</u>	<u>168,349</u>
Operating loss	(19,366)	(19,088)	(14,986)	(106,016)
Loss on equity investments	(707)	—	—	(10,258)
Impairment charge to implied goodwill of an equity investment	(2,145)	—	—	(2,145)
Interest and other income	2,672	1,405	823	8,236
Interest expense	(43)	(191)	(236)	(1,565)
Net loss	<u>\$(19,589)</u>	<u>\$(17,874)</u>	<u>\$(14,399)</u>	<u>\$(111,748)</u>
Basic and diluted net loss per share	<u>\$ (1.33)</u>	<u>\$ (1.02)</u>	<u>\$ (0.81)</u>	
Weighted average shares used in computing basic and diluted net loss per share	<u>14,747</u>	<u>17,529</u>	<u>17,669</u>	

See accompanying notes.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

**CONSOLIDATED BALANCE SHEETS
at December 31, 2002 and 2003
(In thousands, except per share amounts)**

	December 31,	
	2002	2003
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 45,965	\$ 32,806
Short-term investments	20,805	19,876
Accounts receivable:		
Trade, less allowance of \$100 and \$25 at December 31, 2002 and 2003, respectively	1,321	567
Joint venture	41	—
Inventory	479	460
Prepaid expenses and other assets	430	527
Total current assets	69,041	54,236
Property and equipment:		
Land	611	611
Building and leasehold improvements	11,202	11,325
Equipment	7,855	8,776
Less accumulated depreciation and amortization	(12,254)	(13,636)
	7,414	7,076
Notes receivable from related parties, less allowance of \$525 and \$692 at December 31, 2002 and 2003, respectively	226	18
Other assets	340	355
Total assets	\$ 77,021	\$ 61,685
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 738	\$ 380
Accrued payroll and benefits	2,428	1,590
Accrued legal settlements	500	—
Accrued liabilities and other	926	1,411
Current portion of long-term debt and capital lease obligations	188	135
Total current liabilities	4,780	3,516
Long-term debt and other long-term liabilities	3,062	2,942
Total liabilities	7,842	6,458
Stockholders' equity:		
Series A convertible preferred stock, \$0.001 par value; authorized—5,000 shares, none issued	—	—
Common stock, \$0.001 par value; authorized—70,000 shares; issued and outstanding—17,561 and 17,744 at December 31, 2002 and 2003, respectively	18	18
Additional paid-in capital	166,533	166,977
Deferred compensation	(23)	(20)
Deficit accumulated during the development stage	(97,349)	(111,748)
Total stockholders' equity	69,179	55,227
Total liabilities and stockholders' equity	\$ 77,021	\$ 61,685

See accompanying notes.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
for the period from January 1, 1988 (inception) through December 31, 1996
and for the years ended December 31, 1997, 1998, 1999, 2000, 2001, 2002 and 2003
(In thousands)

	Catalytica Energy Systems, Inc.						Catalytica Advanced Technologies, Inc.			Deficit Accumulated During the Development Stage	Stockholders' Equity		
	Preferred Stock			Common Stock			Preferred Stock					Deferred Compensation	
	Series A	Series B	Common	Series A	Series B	Common	Series A	Series B	Common				
Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount		
Capital contributions (August 1, 1995)	7,000	\$ 7	—	\$ —	500	\$ 1	3,000	\$ 3	1,000	\$ 1	\$ 10,138	\$ —	\$ 10,150
Net loss from January 1, 1988 (inception) to December 31, 1996	—	—	—	—	—	—	—	—	—	—	—	—	(19,078)
Balance at December 31, 1996	7,000	7	—	—	500	1	3,000	3	1,000	1	10,138	—	(8,928)
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(6,270)
Balance at December 31, 1997	7,000	7	—	—	500	1	3,000	3	1,000	1	10,138	—	(15,198)
Issuance of preferred stock to Enron in January 1998	—	—	1,339	1	—	—	—	—	—	—	29,921	—	29,922
Forgiveness of Catalytica, Inc. notes in January 1998	—	—	—	—	—	—	—	—	—	—	16,222	—	16,222
Issuance of stock options at various dates in 1998	—	—	—	—	—	—	—	—	—	—	88	—	88
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(6,897)
Balance at December 31, 1998	7,000	7	1,339	1	500	1	3,000	3	1,000	1	56,369	—	24,137
Issuance of stock options at various dates in 1999	—	—	—	—	—	—	—	—	—	—	82	—	82
Issuance of stock options at various dates in 1999	—	—	—	—	—	—	—	—	—	—	256	(256)	—
Acceleration of stock option vesting at various dates in 1999	—	—	—	—	—	—	—	—	—	—	11	—	11
Amortization of deferred compensation	—	—	—	—	—	—	—	—	—	—	—	52	52
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(11,730)
Balance at December 31, 1999	7,000	7	1,339	1	500	1	3,000	3	1,000	1	56,718	(204)	43,975
(carried forward)	—	—	—	—	—	—	—	—	—	—	—	—	—

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Continued)
for the period from January 1, 1988 (inception) through December 31, 1996
and for the years ended December 31, 1997, 1998, 1999, 2000, 2001, 2002 and 2003
(In thousands)

	Catalytica Energy Systems, Inc.				Catalytica Advanced Technologies, Inc.				Deficit Accumulated During the Development Stage	Stockholders' Equity				
	Preferred Stock		Common Stock		Preferred Stock		Common Stock							
	Series A	Series B	Shares	Amount	Series A	Series B	Shares	Amount						
Balance at December 31, 1999	7,000	\$ 1	1,339	\$ 1	500	\$ 1	3,000	\$ 3	1,000	\$ 1	\$ 56,718	\$(43,975)	\$ 12,552	
Cancellation of common stock and Series A preferred stock held by Catalytica, Inc.	(7,000)				(500)						8			
Purchase of \$50,000 of common stock by Catalytica, Inc. and distribution to Catalytica Energy shareholders on December 15, 2000					3,828		4				49,996			50,000
Distribution of remaining Catalytica Energy common stock to shareholders in connection with the spin-off from Catalytica, Inc. on December 15, 2000									7,499		(8)			
Cancellation of CAT common and Series A preferred stock in connection with its merger with Catalytica Energy in December 2000														
Conversion of Series B preferred stock to common stock by Enron in December 2000			(1,339)	(1)	1,343	1					(1)			
Forgiveness of Catalytica, Inc. inter-company debt in December 2000														
Carrying value of assets contributed by Catalytica, Inc. to Catalytica Energy in December 2000												7,263		7,263
Exercise of stock options at various dates in 2000												3,185		3,185
Issuance of stock options at various dates in 2000						28						15		15
Acceleration of stock option vesting at various dates in 2000												225	(176)	49
Amortization of deferred compensation												199		199
Net loss													117	117
													(15,911)	(15,911)
Balance at December 31, 2000												117,605	(263)	57,469
(carried forward)					12,698	13								

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Continued)
for the period from January 1, 1988 (inception) through December 31, 1996
and for the years ended December 31, 1997, 1998, 1999, 2000, 2001, 2002 and 2003
(In thousands)

	Catalytica Energy Systems, Inc.				Catalytica Advanced Technologies, Inc.				Additional Paid-In Capital	Deferred Compensation	Deficit Accumulated During the Development Stage	Stockholders' Equity
	Preferred Stock		Common Stock		Preferred Stock		Common Stock					
	Series A	Series B	Shares	Amount	Series A	Series B	Shares	Amount				
Balance at December 31, 2002												
(brought forward)	\$ —	\$ —	17,561	\$ 18	—	—	\$ —	—	\$ 166,533	\$ (23)	\$ (97,349)	\$ 69,179
Exercise of stock options at various dates in 2003	—	—	86	—	—	—	—	—	158	—	—	158
Purchase of shares through employee stock purchase plan at various dates in 2003	—	—	—	—	97	—	—	—	226	—	—	226
Issuance of stock options at various dates in 2003	—	—	—	—	—	—	—	—	56	(56)	—	—
Re-measurement of deferred compensation	—	—	—	—	—	—	—	—	4	(4)	—	—
Amortization of deferred compensation	—	—	—	—	—	—	—	—	—	63	—	63
Net loss	—	—	—	—	—	—	—	—	—	—	(14,399)	(14,399)
Balance at December 31, 2003	\$ —	\$ —	17,744	\$ 18	—	—	\$ —	—	\$ 166,977	\$ (20)	\$ (111,748)	\$ 55,227

See accompanying notes.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
CONSOLIDATED STATEMENTS OF CASH FLOWS
for the years ended December 31, 2001, 2002 and 2003
and for the period from January 1, 1988 (inception) through December 31, 2003
(In thousands)

	For the year ended December 31,			Cumulative Amounts from January 1, 1988 (inception) through December 31, 2003
	2001	2002	2003	2003
<i>Cash flows from operating activities:</i>				
Net loss	\$(19,589)	\$(17,874)	\$(14,399)	\$(111,748)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	1,854	2,887	2,350	7,727
Forgiveness of notes receivable from related parties	100	60	57	840
Provision (credit) for uncollectable accounts and notes	(200)	—	92	92
Notes payable issued for contract modification	—	200	—	200
Losses in equity investments	707	—	—	10,258
Acceleration of stock option vesting	—	—	—	293
Stock based compensation	233	20	63	622
Impairment charge to implied goodwill of an equity investment	2,145	—	—	2,145
Changes in:				
Accounts and notes receivable	1,008	(48)	859	(894)
Inventory	(124)	(301)	19	(586)
Prepaid expenses and other assets	(29)	68	(118)	(380)
Accounts payable	(535)	(16)	(358)	455
Accrued liabilities and other	(1,000)	(3,142)	(1,293)	558
<i>Net cash used in operating activities</i>	<u>\$(15,430)</u>	<u>\$(18,146)</u>	<u>\$(12,728)</u>	<u>\$(90,418)</u>
<i>Cash flows from investing activities:</i>				
Purchases of investments	(22,500)	(26,674)	(19,257)	(167,956)
Maturities of investments	9,500	23,280	19,945	148,780
Deposits on facilities	(400)	—	—	(400)
Contributions in equity investments	(1,894)	—	—	(11,445)
Loans to equity investments	—	(500)	—	(500)
Additions to property and equipment, net	(1,319)	(5,298)	(1,315)	(11,485)
<i>Net cash used in investing activities</i>	<u>\$(16,613)</u>	<u>\$(9,192)</u>	<u>\$(627)</u>	<u>\$(43,006)</u>

See accompanying notes.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)

for the years ended December 31, 2001, 2002 and 2003

and for the period from January 1, 1988 (inception) through December 31, 2003

(In thousands)

	For the year ended December 31,			Cumulative Amounts from January 1, 1988 (inception) through December 31, 2003
	2001	2002	2003	
Cash flows from financing activities:				
Proceeds from issuance of long-term debt, net of repayments	\$ —	\$ 2,989	\$ (130)	\$ 2,859
Net issuance of notes receivable to employees and related parties	(72)	—	—	(1,334)
Net payments on capital lease obligations	(50)	(62)	(58)	(180)
Advances from Catalytica, Inc.	—	—	—	41,934
Payments to Catalytica, Inc.	(602)	—	—	(16,441)
Proceeds from exercise of stock options	767	2	158	942
Proceeds from issuance of common stock to employees through stock plans	200	310	226	736
Proceeds from follow-on offering, net	47,642	—	—	47,642
Proceeds from issuance of common and Series A preferred stock at inception	—	—	—	10,150
Proceeds from issuance of Series B preferred stock and option to Enron	—	—	—	29,922
Proceeds from issuance of common stock in connection with spin-off from Catalytica, Inc.	—	—	—	50,000
Net cash provided by financing activities	<u>47,885</u>	<u>3,239</u>	<u>196</u>	<u>166,230</u>
Net increase (decrease) in cash and cash equivalents	15,842	(24,099)	(13,159)	32,806
Cash and cash equivalents at beginning of period	54,222	70,064	45,965	—
Cash and cash equivalents at end of period	<u>\$70,064</u>	<u>\$ 45,965</u>	<u>\$ 32,806</u>	<u>\$ 32,806</u>
Additional disclosure of cash flow information:				
Conversion of Catalytica, Inc. payable to additional paid-in capital	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 23,485</u>
Assets contributed from Catalytica, Inc.	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 3,185</u>
Liabilities transferred from Catalytica, Inc.	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 2,224</u>
Interest paid	<u>\$ 43</u>	<u>\$ 183</u>	<u>\$ 225</u>	<u>\$ 618</u>
Deferred compensation for issuance and revaluation of stock options to non-employees	<u>\$ 158</u>	<u>\$ (14)</u>	<u>\$ 60</u>	<u>\$ 635</u>
Assets invested in NovoDynamics, Inc.	<u>\$ 567</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 567</u>
Equipment additions financed under capital leases	<u>\$ 45</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 182</u>

See accompanying notes.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2003

Note 1. Description of Business

Description of Business. Catalytica Energy Systems, Inc.'s ("Catalytica Energy," "the Company," "we," "us" or "our") business activities include designing, developing, manufacturing and servicing advanced products based on our proprietary catalyst and fuel processing technologies to offer cost-effective solutions for reducing nitrogen oxides, or NOx, emissions. The Company also offers catalyst regeneration services to industries that use selective catalytic reduction ("SCR") systems to reduce NOx emissions, SCR system management services to optimize efficiency and reduce overall operating and maintenance costs and consulting services related to the design of SCR systems. We are also actively pursuing the development of NOx reduction solutions for mobile, stationary and off-road diesel engines and are conducting development efforts related to fuel processing systems for Proton Exchange Membrane, or PEM, fuel cells used in vehicular applications.

Formation and Operations of the Company. Catalytica Energy operated as part of Catalytica, Inc.'s research and development activities from inception through the date of its incorporation as a separate entity. In 1995, Catalytica Energy (formerly Catalytica Combustion Systems, Inc.) was incorporated and became a subsidiary of Catalytica, Inc.

On August 2, 2000, Catalytica, Inc. entered into an Agreement and Plan of Merger by and among Synotex Company, Inc. ("Synotex"), pursuant to which a subsidiary of Synotex merged with and into Catalytica, Inc. Immediately prior to the consummation of the Merger, Catalytica Energy and CAT were merged, Catalytica, Inc. contributed \$50,000,000 in exchange for shares of Catalytica Energy common stock and all of the common shares of Catalytica Energy were distributed on a pro rata basis to the Catalytica, Inc. stockholders.

In December 2001, Catalytica Energy purchased Woodward Governor Company's ("WGC's") equity interest in GENXON Power Systems, LLC ("GENXON") making it the sole equity owner of GENXON. GENXON was formed in October 1996 as a 50/50 joint venture between Catalytica Energy and WGC to develop the potential market for upgrading out-of-warranty turbines with new systems to improve emissions and operating performance. The financial statements of Catalytica Energy and GENXON were consolidated effective December 31, 2001.

In January 2004, Catalytica Energy formed two new wholly-owned subsidiaries, CESI-SCR, Inc. ("CESI-SCR") and CESI-Tech Technologies, Inc. ("CESI-Tech"). On February 20, 2004, CESI-SCR acquired 100% of the outstanding membership interests of SCR-Tech, LLC ("SCR-Tech") and SCR-Tech became a wholly-owned subsidiary of CESI-SCR. Also on February 20, 2004, CESI-Tech acquired various patents and other intellectual property rights from certain former owners of SCR-Tech.

Catalytica Energy is in the development stage. Accordingly, cumulative losses and cash flows from inception through December 31, 2003 are presented on the statements of operations and cash flows.

Note 2. Significant Accounting Policies

Principles of Consolidation. The consolidated financial statements include the accounts of Catalytica Energy and its wholly owned subsidiaries in the United States. Significant intercompany accounts and transactions have been eliminated in consolidation.

Reclassifications. Certain reclassifications have been made to the 2001 and 2002 consolidated financial statements to conform them to the 2003 presentation.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Cash Equivalents. Catalytica Energy considers all highly liquid investments with a remaining maturity of three months or less from the date of purchase to be cash equivalents. The Company's investments have consisted of commercial and government short-term paper with a remaining maturity of three months or less and money market accounts.

Short-Term Investments. Catalytica Energy accounts for short-term investments in accordance with Statement of Financial Accounting Standard ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities." The Company's investments are classified as available for sale and have been recorded at fair value, which approximates cost. Catalytica Energy's short-term investments consist principally of commercial paper with maturities of twelve months or less.

Investments in Equity Investments and Joint Ventures. Investments in equity investments and joint ventures where Catalytica Energy has a 20% to 50% ownership interest are accounted for under the equity method. Under this method, Catalytica Energy records its pro rata share of the investee's net earnings or losses. Investee's net losses are recorded until Catalytica Energy's net investment and obligation, if any, to pay down debt are reduced to zero. At December 31, 2003, there were no investments recorded on the balance sheet given the remaining equity investments are recorded at zero value and the Company has no future funding commitments.

Concentrations of Credit Risk. Assets subject to concentrations of credit risk consist principally of cash equivalents, short-term investments, and receivables. Catalytica Energy uses local banks and various investment firms to invest its excess cash, principally in commercial paper and money market funds from a diversified portfolio of investments with strong credit ratings. Related credit risk would result from a default by the financial institutions or issuers of investments to the extent of the recorded carrying value of these assets. Catalytica Energy performs ongoing credit evaluations of its customers and generally does not require collateral.

Allowance for Doubtful Accounts and Notes. The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its funding parties to make required payments. If the financial condition of the Company's funding parties were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. The following table summarizes the activity for the allowance for doubtful amounts on all accounts and notes receivable:

<u>Year ended December 31,</u>	<u>Beginning Balance</u>	<u>(Recovery) Provision</u>	<u>Impairment charge on loan to equity investment</u>	<u>Ending Balance</u>
2001	\$325,000	\$(200,000)	\$500,000	\$625,000
2002	625,000	—	—	625,000
2003	625,000	91,670	—	716,670

Fair Value of Financial Instruments. At December 31, 2003, the Company has the following financial instruments: cash and cash equivalents, short-term investments, accounts receivable, notes receivable from related parties, accounts payable, accrued payroll and benefits, accrued legal settlements, accrued liabilities and long-term debt and capital lease obligations. The carrying value of cash and cash equivalents, short-term investments, accounts receivable, accounts payable, accrued payroll and benefits, accrued legal settlements and accrued liabilities approximates their fair value based on the liquidity of these financial instruments or based on their short-term nature. The carrying value of notes receivable from related parties, long-term debt and capital lease obligations approximates fair value based on the market interest rates available to Catalytica Energy for debt of similar risk and maturities.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Inventory. Catalytica Energy's inventory consists principally of raw materials and is stated at the lower of cost (first-in, first-out) or market.

Property and Equipment. Property and equipment is stated at cost. Depreciation and amortization are provided on the straight-line basis over the lesser of the useful lives, which range from 3 to 30 years, of the respective assets or the lease term. Depreciation expense recorded during the years ended December 31, 2001, 2002 and 2003 was \$1,858,000, \$2,190,000 and \$2,254,000, respectively.

Impairment of Long-Lived Assets. In accordance with SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," the Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be fully recoverable. If this review indicates the carrying value of these assets will not be recoverable, as measured based on estimated undiscounted cash flows over their remaining life, the carrying amount would be adjusted to fair value. The cash flow estimates contain management's best estimates, using appropriate and customary assumptions and projections at the time. During the year ended December 31, 2002, the Company determined that certain leasehold improvements were impaired and recorded an impairment reserve of \$545,000 which is reflected as a component of selling, general and administrative expenses.

Comprehensive Income. Catalytica Energy has no significant components of other comprehensive income.

Research and Development Revenues. Catalytica Energy recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collection is reasonably assured. These revenues are derived primarily from research and development contracts. They are earned as contractual services are performed and are recognized in accordance with contract terms, principally based on reimbursement of total costs and expenses incurred. No amounts recognized as revenue are refundable. In return for funding, collaborative partners receive certain rights in the commercialization of the resulting technology. The contracts are also subject to periodic review by the funding partner, which may result in modifications, including reduction or termination of funding.

Use of Estimates. The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Research and Development Activities. Research and development costs are expensed as incurred.

Stock-Based Compensation. The Company accounts for stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25") and has adopted the disclosure only alternative of SFAS No. 123, "Accounting for Stock-based Compensation."

Any deferred stock compensation calculated under APB 25 and related interpretations is amortized over the vesting period of the individual options, generally four years, using the straight-line method of amortization.

Stock-based awards to non-employees are accounted for at fair value, as generally calculated using the Black-Scholes model, in accordance with SFAS No. 123 and Emerging Issues Task Force Consensus No. 96-18. Related options are subject to periodic re-measurements over their vesting terms.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Had compensation cost for Catalytica Energy's stock-based compensation plan been determined based on the fair value at the grant dates for stock option awards consistent with the method of SFAS No. 123, the Company's net loss would have been increased to the pro forma amounts indicated below:

	<u>Year ended December 31,</u>		
	<u>2001</u>	<u>2002</u>	<u>2003</u>
	(in thousands)		
Net loss, as reported	\$(19,589)	\$(17,874)	\$(14,399)
SFAS No. 123 Stock option plan compensation expense	<u>(4,103)</u>	<u>(2,798)</u>	<u>(1,211)</u>
Pro forma net loss	<u>\$(23,692)</u>	<u>\$(20,672)</u>	<u>\$(15,610)</u>
Pro forma basic and diluted net loss per share	<u>\$ (1.61)</u>	<u>\$ (1.18)</u>	<u>\$ (0.88)</u>

Income Taxes. Catalytica Energy accounts for income taxes under the asset and liability method in accordance with SFAS No. 109, "Accounting for Income Taxes." Under the asset and liability method, deferred income tax assets and liabilities are determined based on the differences between the financial reporting and tax bases of assets and liabilities and are measured using the currently enacted tax rates and laws.

Net Loss per Share. Basic and diluted net loss per share is presented in accordance with SFAS No. 128, "Earnings Per Share." As the Company's potentially dilutive securities (stock options and warrants) were anti-dilutive for the years ended December 31, 2001, 2002 and 2003, they have been excluded from the computation of weighted-average shares outstanding used in computing diluted net loss per share because the Company incurred a net loss for each of those periods. Total options and warrants outstanding as of December 31, 2001, 2002 and 2003 were approximately 1,688,000, 2,297,000 and 2,488,000, respectively.

The following table sets forth the computation of basic and diluted loss attributable to common stockholders per share (in thousands, except per share amounts):

	<u>Year ended December 31,</u>		
	<u>2001</u>	<u>2002</u>	<u>2003</u>
Numerator for basic and diluted loss per share	<u>\$(19,589)</u>	<u>\$(17,874)</u>	<u>\$(14,399)</u>
Denominator for basic and diluted loss per share— weighted-average shares outstanding	<u>14,747</u>	<u>17,529</u>	<u>17,669</u>
Basic and diluted loss per share	<u>\$ (1.33)</u>	<u>\$ (1.02)</u>	<u>\$ (0.81)</u>

Impact of Recently Issued Accounting Standards. Effective January 1, 2003 the Company adopted SFAS 145, *Rescission of FASB Statements No. 4, 44 and 64, amendment of FASB Statement No. 13, and Technical Corrections* ("SFAS 145"), which among other things, restricts the classification of gains and losses from extinguishment of debt as extraordinary to only those transactions that are unusual and infrequent in nature as defined by APB Opinion No. 30. The adoption of SFAS 145 did not have an effect on the Company's consolidated financial statements.

In January 2003, the FASB issued FIN No. 46, *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51*, which addresses consolidation by business enterprises of variable interest entities ("VIEs") either: (1) that do not have sufficient equity investment at risk to permit the entity to finance its activities without additional subordinated financial support, or (2) in which the equity investors lack an essential characteristic of a

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

controlling financial interest. In December 2003, the FASB completed deliberations of proposed modifications to FIN 46 ("Revised Interpretations") resulting in multiple effective dates based on the nature as well as the creation date of the VIE. VIEs created after January 31, 2003, but prior to January 1, 2004, may be accounted for either based on the original interpretation or the Revised Interpretations. For VIEs created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the first interim or annual period ending after December 15, 2003. Certain disclosures are effective immediately. VIEs created after January 1, 2004 must be accounted for under the Revised Interpretations. The Company currently has no contractual relationship or other business relationship with a variable interest entity and therefore the adoption of FIN No. 46 did not have an effect on the Company's consolidated financial position, results of operations or cash flows.

In April 2003, the Financial Accounting Standards Board issued SFAS 149, *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*. This statement amends and clarifies financial accounting and reporting for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities under SFAS 133. SFAS 149 is effective for contracts entered into or modified after June 30, 2003. The Company has no involvement with derivative financial instruments, does not use them for trading purposes and is not party to any leveraged derivatives. The Company's adoption of SFAS 149 did not have an effect on its consolidated financial position, results of operations or cash flows.

In May 2003, the FASB issued SFAS 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity*. This Statement requires that certain instruments that were previously classified as equity on a company's statement of financial position now be classified as liabilities. The Statement is effective for financial instruments entered into or modified after May 31, 2003, and to all other instruments that exist as of the beginning of the first interim financial reporting period beginning after June 15, 2003. The Company currently has no instruments impacted by the adoption of this statement and therefore the adoption did not have an effect on the Company's consolidated financial position, results of operation or cash flows.

Note 3. Transactions with Related Parties

NovoDynamics, Inc. In March 2001, we entered into agreements to invest \$2,258,000 in NovoDynamics, a company engaged in the development of data mining, informatics discovery and high throughput synthesis and testing technologies. This amount consisted of an advance of \$1,800,000 in cash, forgiveness of an advance of \$200,000 made to a company affiliated with NovoDynamics (NonLinear Dynamics, Inc.), and contribution of \$258,000 in assets of NovoTec. In accordance with these agreements, we completed this investment in NovoDynamics in April 2001. During 2001, we owned shares of Series A voting preferred stock representing approximately 38% of NovoDynamics' outstanding equity. We recorded the investment in NovoDynamics at our actual cost and, during the period from March 2001 through December 2001, recorded our pro-rata share of losses totaling \$613,000 under the equity method of accounting.

Additionally, in March 2001, we agreed to loan NovoDynamics up to \$1,500,000 if certain milestones were met. On December 31, 2001, we committed to loan \$500,000 of the \$1,500,000 to NovoDynamics, which was funded in January 2002. As of December 31, 2001, we recorded a note payable for the \$500,000 and a note receivable of \$500,000 on our balance sheet. Because repayment of the note was not certain at the time it was made, an allowance of \$500,000 was recorded against the loan and this amount was charged as impairment to implied goodwill of an equity investment on December 31, 2001. As of March 2003, our obligation to loan NovoDynamics additional funds under this agreement terminated, and we did not advance any additional funds to NovoDynamics.

On December 31, 2001, we determined that an impairment in the carrying value of the equity investment in NovoDynamics had occurred which was other than temporary based on NovoDynamics' financial history and

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

projected future losses. At that time, we determined the estimated fair value of the investment in NovoDynamics was zero and wrote off the net investment amount of \$1,645,000 as impairment to implied goodwill of an equity investment. At that time, we discontinued applying the equity method of accounting because the net investment was zero. Therefore, no loss related to the equity investment in NovoDynamics was recorded during the twelve months ended December 31, 2002 and 2003. At December 31, 2003, we owned approximately 31.8% of NovoDynamics' outstanding equity.

As of December 31, 2003, two of Catalytica Energy's directors held a direct investment in NovoDynamics Series B voting preferred stock, which represented slightly less than 1% of NovoDynamics' outstanding stock.

Transactions With Officers. In January 2001, Catalytica Energy's Senior Vice President of Business Development resigned. His separation agreement provided for a one-time severance payment totaling \$183,000. In addition, a previous loan of \$100,000 was immediately forgiven. Catalytica Energy recorded a charge in the first quarter of 2001 for \$283,000 related to the forgiveness of the officer's loan and severance. The former officer is currently indebted to Catalytica Energy for \$187,000 which is payable on March 31, 2005. Interest accrues on this note at an annual rate of 6% and is payable in installments through March 31, 2005.

Forgiveness of Notes. Forgiveness of notes receivable from related parties is attributed to forgiveness of housing allowance loans to employees, amortized over a period of five years.

Investments. As of December 31, 2003, Catalytica Energy had invested \$19,790,000 with Morgan Stanley Private Wealth Management, an affiliate of Morgan Stanley & Co., Incorporated. This amount is invested primarily in a money market account and commercial and government short-term paper which are included in our cash and cash equivalents or short-term investments. One of Catalytica Energy's board members is the Chairman and Chief Executive Officer of Morgan Stanley Private Equity and a Managing Director of Morgan Stanley & Co., Incorporated.

Note 4. Income Taxes

Recorded income tax benefit differs from the expected benefit determined by applying the U.S. federal statutory rate to the net loss as follows:

	Year ended December 31,		
	2001	2002	2003
	(in thousands)		
Income tax benefit at U.S. statutory rate	\$ 6,660	\$ 6,077	\$ 4,895
Valuation allowance for deferred tax assets	(6,660)	(6,077)	(4,895)
Income tax benefit	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. They include the following:

	<u>December 31,</u>	
	<u>2002</u>	<u>2003</u>
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	\$ 9,600	\$ 11,700
Capitalized research and development	3,800	9,000
Basis in fixed assets	—	1,800
Accruals and reserves not currently deductible	5,100	1,800
Total gross deferred tax assets	<u>18,500</u>	<u>24,300</u>
Less valuation allowance	<u>(18,500)</u>	<u>(24,300)</u>
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

Realization of the deferred tax assets is dependent on future earnings, the timing and amount of which are uncertain. Accordingly, a valuation allowance, in an amount equal to the related deferred tax assets has been established to reflect these uncertainties. The valuation allowance increased by \$9,827,000, \$7,260,000 and \$5,800,000 in 2001, 2002 and 2003, respectively, due to operating losses which increased net operating loss carryforwards that are not likely to be realized in the near future.

As of December 31, 2003, Catalytica Energy's federal and state net operating loss carryforwards were approximately \$31,000,000 and \$21,000,000, respectively. The federal net operating loss carryforward will expire in the years 2020 through 2023 and the state net operating loss carryforward will expire in the years 2006 through 2013 if not used to offset future taxable income.

The valuation allowance includes approximately \$746,000 for net operating loss carryforwards that relate to stock option compensation expense for income tax reporting purposes. Any utilization of these net operating loss carryforwards would be recorded as an increase in additional paid-in capital.

Utilization of the net operating loss carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitation may result in the expiration of net operating loss carryforwards before utilization.

Note 5. Capital Stock

Shares of Catalytica Energy common stock reserved for future issuance as of December 31, 2003 are as follows:

Employee stock purchase plan	1,293,224
Stock options	4,394,170
	<u>5,687,394</u>

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Glaxo Warrant. On July 31, 1997, Catalytica, Inc. issued a warrant to purchase 2,000,000 shares of Catalytica, Inc. common stock at \$12.00 per share to Glaxo Wellcome, Inc. On December 15, 2000, in connection with the spin-off of Catalytica Energy, the warrant was converted into a warrant to purchase 330,940 shares of Catalytica Energy common stock at \$11.23 per share, which expired on July 31, 2003.

Follow-on Offering. In August 2001, Catalytica Energy registered 5,000,000 shares of its common stock in a follow-on public offering, of which 4,250,000 shares were sold by the Company and 750,000 shares were sold by an existing stockholder, at a price to the public of \$12.18 per share. The gross proceeds to the Company from the follow-on public stock offering were \$51,667,000 and the Company incurred approximately \$4,025,000 in costs in connection with the offering.

Shareholder Rights Plan. On January 29, 2002, the Company's Board of Directors adopted a Shareholder Rights Plan. Under the plan, the Company distributed Preferred Stock Purchase Rights as a dividend at the rate of one Right for each share of its common stock held by stockholders of record on February 20, 2002 (the "Record Date"). The Board of Directors also authorized the issuance of Rights for each share of common stock issued after the Record Date, until the occurrence of certain specified events. The Shareholder Rights Plan was adopted to provide protection to stockholders in the event of an unsolicited attempt to acquire the Company. Each Right will entitle the registered holder to purchase from the Company one one-thousandth of a share of Series A Participating Preferred stock at an exercise price of \$45, subject to adjustment. The Company has authorized 5,000,000 shares of Series A preferred stock for issuance pursuant to this plan.

The Rights are not exercisable until triggered by certain conditions including the acquisition of beneficial ownership of 15% of the Company's common stock. However, Morgan Stanley Capital Partners III, L.P., and its affiliates may acquire up to 21.5% of the Company's common stock without triggering the Rights. If the Rights are triggered, then each holder of a Right which has not been exercised (other than Rights beneficially owned by the Acquiring Person) will have the right to receive, upon exercise, voting Common Shares having a value equal to two times the Purchase Price.

The Company is entitled to redeem the Rights, for \$0.001 per Right, at the discretion of the Board of Directors, until certain specified times. The Company may also require the exchange of Rights, under certain additional circumstances. The Company also has the ability to amend the Rights, subject to certain limitations.

Note 6. Employee Benefit Plans

Stock Option Plan. In 1995, the Company adopted the Catalytica Energy Systems, Inc. 1995 Stock Plan (the "1995 Plan") which was subsequently amended. Under the 1995 Plan, the Company's Board of Directors is authorized to grant incentive stock options to eligible employees and nonqualified stock options to eligible employees, consultants, and directors. Through December 31, 2003, the Company had reserved 5,000,000 shares of common stock for issuance under the 1995 Plan. The incentive stock options generally vest ratably over four years from the date of grant and expire no later than ten years from the date of grant. Nonqualified stock options offered to directors vest ratably over one to four years from the date of grant and expire no later than ten years from the date of grant.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The following table summarizes related stock option plan activity:

	Shares Available for Grant	Outstanding Options	
		Number of Shares	Average Exercise Price
Balance at December 31, 2000	747,132	1,224,414	\$ 7.43
Authorized	1,500,000	—	—
Granted	(793,268)	793,268	14.13
Expired/forfeited	174,134	(174,134)	16.74
Exercised	—	(486,235)	1.58
Balance at December 31, 2001	1,627,998	1,357,313	12.26
Authorized	1,500,000	—	—
Granted	(947,592)	947,592	3.50
Expired/forfeited	334,046	(334,046)	8.66
Exercised	—	(5,250)	0.40
Balance at December 31, 2002	2,514,452	1,965,609	8.68
Granted	(1,238,263)	1,238,263	2.80
Expired/forfeited	630,187	(630,187)	9.96
Exercised	—	(85,891)	1.84
Balance at December 31, 2003	<u>1,906,376</u>	<u>2,487,794</u>	\$ 5.66

A summary of Catalytica Energy's stock options as of December 31, 2003 is as follows:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$0.400-\$2.650	258,175	3.03	\$ 0.74	253,175	\$ 0.70
\$2.660-\$2.750	11,500	8.95	2.69	2,928	2.70
\$2.760	487,078	9.11	2.76	151,159	2.76
\$2.770	500,000	9.02	2.77	114,583	2.77
\$3.000-\$3.500	114,900	9.25	3.33	15,408	3.24
\$3.530	398,492	8.10	3.53	273,126	3.53
\$3.550-\$10.451	261,225	7.59	5.15	162,054	5.58
\$12.000-\$16.937	313,930	6.69	15.15	277,856	14.98
\$19.250-\$26.500	141,494	6.34	22.71	132,725	22.64
\$30.000	1,000	6.58	30.00	854	30.00
\$0.400-\$30.000	<u>2,487,794</u>	7.68	\$ 5.66	<u>1,383,868</u>	\$ 7.25

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Pro forma information regarding net loss is required by SFAS No. 123, which also requires that the information be determined as if the Company has accounted for its employee stock awards granted subsequent to December 31, 1994, under the fair value method of this Statement. The fair value for these options was estimated at the date of grant using a Black-Scholes multiple option pricing model with the following weighted average assumptions:

	<u>2001</u>	<u>2002</u>	<u>2003</u>
Volatility	72.17%	71.04%	63.55%
Risk Free Interest Rate	4.51%	4.29%	2.98%
Weighted Average Expected Life (years)	4.97	5.24	5.28
Dividend Yield	—	—	—

For pro forma purposes, the estimated fair value of the Company's stock-based awards to employees is amortized over the options' vesting period. The weighted average fair value of options granted during 2001, 2002 and 2003, was \$8.91, \$2.18, and \$1.66 respectively, as calculated in accordance with SFAS No. 123.

Deferred Stock Compensation. In December 2001, Catalytica Energy granted a charitable foundation options to purchase 20,000 shares of its common stock at \$4.55 per share, vesting over a four-year period. The options were granted to the foundation at the request of a member of the Company's board of directors who otherwise would have received the options for his board service. Since the recipient of these options is not an employee or director of Catalytica Energy, the Company recorded a deferred compensation obligation of \$91,000, of which \$12,000 and \$7,000 was earned and charged to operations in the year ended December 31, 2002 and 2003, respectively. This obligation was re-measured at December 31, 2001, 2002 and 2003 resulting in cumulative reductions to the deferred compensation obligation of \$54,000. In each subsequent reporting period (through the vesting period) this obligation will be re-measured.

In February 2002, Catalytica Energy granted this charitable foundation additional options to purchase 4,000 shares of common stock at \$3.53 per share, vesting over a one year period. The options were granted to the foundation at the request of a member of the Company's board of directors who otherwise would have received the options for his board service. Since the recipient of these options is not an employee or director of Catalytica Energy, the Company recorded a deferred compensation obligation of \$9,000, of which \$7,000 was earned and charged to operations in the year ended December 31, 2002. This obligation was re-measured at December 31, 2002 resulting in a reduction to the deferred compensation obligation of \$1,000. The remaining deferred compensation obligation of \$1,000 was earned and charged to operations during the year ended December 31, 2003.

In February 2003, Catalytica Energy granted this charitable foundation additional options to purchase 10,000 shares of common stock at \$2.76 per share, vesting over a one year period. The options were granted to the foundation at the request of a member of the Company's board of directors who otherwise would have received the options for his board service. Since the recipient of these options is not an employee or director of Catalytica Energy, the Company recorded a deferred compensation obligation of \$18,000, of which \$16,000 was earned and charged to operations in the year ended December 31, 2003. This obligation was re-measured at December 31, 2003 resulting in no adjustment to the deferred compensation obligation. In each subsequent reporting period (through the vesting period) this obligation will be re-measured.

In April 2003, Catalytica Energy granted a consultant and former officer options to purchase 25,800 shares of its common stock at a price of \$2.50 per share as compensation for consulting services, vesting over a six-month period. Since the recipient of these options is not an employee or director of Catalytica Energy, the

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Company recorded a deferred compensation obligation of \$38,000, of which \$38,000 was earned and charged to operations in the year ended December 31, 2003.

Compensation Expense Related to Stock Options. The Company has occasionally granted options to non-employees or directors and accelerated vesting of options for terminated employees. Compensation expense of \$74,000, \$0 and \$0 was recorded during the twelve months ended December 31, 2001, 2002 and 2003, respectively. The resulting charges were recorded as additional paid-in capital with the offset expensed as compensation.

Employee Stock Purchase Plan. In 2000, the Company adopted the Catalytica Energy Systems, Inc. 2000 Employee Stock Purchase Plan (the "2000 Plan") under which employees are eligible to purchase shares of the Company's common stock at a discount through periodic payroll deductions. The 2000 Plan is intended to meet the requirements of Section 423 of the Internal Revenue Code. Purchases occur following six month offering periods ending on June 30 and December 31 each year at a purchase price equal to 85% of the market value of the Company's common stock at either the beginning of the offering period or the end of the offering period, whichever is lower. Participants may elect to have up to 10% of their pay withheld for purchase of common stock at the end of the offering period, up to a maximum of \$25,000 per calendar year. Through December 31, 2003, the Company had reserved 1,500,000 shares of common stock for issuance under the 2000 Plan and had issued 206,776 shares under the 2000 Plan. For the year ended December 31, 2003, employees purchased 97,215 shares for \$225,500. The weighted average fair value of those purchased shares granted during the years ended December 31, 2002 and 2003 was \$1.33 and \$1.10, respectively. As of December 31, 2003, 1,293,224 shares were available for future issuance under the 2000 Plan.

401(k) Savings & Retirement Plan. The Company offers a 401(k) Savings & Retirement Plan to eligible employees meeting certain age and service requirements. This plan permits participants to contribute up to the maximum allowable by the Internal Revenue Service regulations. The plan provides for both a bi-monthly Company match and a discretionary annual contribution. Participants are immediately vested in their voluntary contributions plus actual earnings and in the Company's matching contributions. The Company's expense for this plan was \$381,000, \$474,000 and \$303,000 for the years ended December 31, 2001, 2002 and 2003, respectively.

Note 7. Major Customers and Geographic Revenues

Major customers are as follows:

	<u>Year ended December 31,</u>		
	<u>2001</u>	<u>2002</u>	<u>2003</u>
U.S. Department of Energy	35%	49%	58%
General Electric	48%	15%	22%
California Energy Commission	—	23%	15%
Solar Turbines	—	13%	4%
McDermott	9%	—	—
Other	—	—	1%

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Revenue by geographic region is as follows:

	<u>Year ended December 31,</u>		
	<u>2001</u>	<u>2002</u>	<u>2003</u>
United States	59%	86%	78%
Europe	41%	14%	22%

Note 8. Debt, Leases, Commitments and Contingencies

Debt agreements. In March 2002, Catalytica Energy received a term loan of \$3,010,000 from the Arizona State Compensation Fund. Proceeds of this loan were applied to the purchase of a 43,000 square foot manufacturing and administrative facility in Gilbert, Arizona. This five-year term loan bears interest at a fixed annual rate of 7.4% and matures in April 2007. Payments of principal and interest totaling \$21,000 are due monthly with a final principal payment of \$2,844,000 due at maturity. This loan is secured by a deed of trust in the acquired real property.

Pursuant to an April 2002 settlement agreement with Woodward Governor Company ("WGC"), Catalytica Energy recorded two notes payable of \$100,000 each. These notes are non-interest bearing and were paid in full in January 2003 and January 2004.

The aggregate minimum annual commitments under long-term debt agreements as of December 31, 2003, are as follows (in thousands):

<u>Year</u>	
2004	\$ 132
2005	35
2006	37
2007	<u>2,855</u>
	<u>\$3,059</u>

Capital leases. Catalytica Energy leases furniture and computer equipment under various capital lease agreements which expire through the first quarter of 2004. The total balance outstanding under these capital lease agreements at December 31, 2003 was \$3,000 of which \$3,000 is payable in 2004. Amortization of assets under capital leases is included in depreciation expense.

Operating leases. Catalytica Energy leases its research and development facility in Mountain View, California under an operating lease agreement entered into April 2003 to extend the lease agreement which expired on December 31, 2003. The amended lease is effective January 1, 2004, for a term of two years, with two options to extend the term for two additional years each. Catalytica Energy currently subleases approximately 6,300 square feet leased at this site. Catalytica Energy leases from the City of Santa Clara, California a site which houses the Company's field demonstration module of its Xonon Cool Combustion system. The lease of this space at Silicon Valley Power expires on February 28, 2006 and is cancelable with a 30 day notice. Additionally, Catalytica Energy leases copiers and office equipment under various lease agreements which expire through 2005.

From October 2001 to March 2002, Catalytica Energy leased its manufacturing and administrative facility in Gilbert, Arizona. In March 2002, Catalytica Energy completed the purchase of this facility which comprises 43,000 square feet for \$4,097,000. In connection with the purchase of this building, the lease agreement was

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

cancelled and Catalytica Energy has no further lease obligation. The Company currently leases to tenants approximately 16,000 square feet of this facility.

The aggregate minimum annual commitments under all operating leases as of December 31, 2003, are as follows (in thousands):

<u>Year</u>	
2004	\$297
2005	<u>253</u>
	<u>\$550</u>

Rent expense consisting of building and equipment rent was \$1,219,000, \$1,230,000 and \$1,079,000 during the years ended December 31, 2001, 2002, and 2003, respectively. Rental income from the various sublease arrangements was \$1,864,000, \$1,201,000 and \$1,233,000 during the years ended December 31, 2001, 2002 and 2003, respectively.

Scheduled rental income as of December 31, 2003 under the various lease and sublease arrangements, which expire through February 28, 2007, is as follows (in thousands):

<u>Year</u>	
2004	\$ 448
2005	449
2006	196
2007	<u>33</u>
	<u>\$1,126</u>

Commitments. Catalytica Energy has entered into research collaboration arrangements that may require us to make future royalty payments. These payments would generally be due once specified milestones, such as the commencement of commercial sales of a product incorporating the funded technology, are achieved. Currently, Catalytica Energy has four such arrangements with Tanaka Kikinzoku Kogyo K.K. ("Tanaka"), Gas Technology Institute ("GTI") (formally known as Gas Research Institute), the California Energy Commission ("CEC") and WGC. In certain cases these royalty payments are contingent upon the number of units sold during the period covered by the applicable agreement.

A significant amount of the development effort related to our catalytic combustion technology was funded by Tanaka under a January 1995 development agreement which divides commercialization rights to the technology between the parties along product market lines. We have exclusive rights to manufacture and market catalytic combustion systems for gas turbines of greater than 25 mega-watt ("MW") power output and non-exclusive rights for gas turbines of 25 MW power output or less. Tanaka has reciprocal exclusive rights to manufacture and market catalytic combustors for use in automobiles and non-exclusive rights for gas turbines of 25 MW power output or less. In each case, the manufacturing and marketing party will pay a royalty of 5% of net sales to the other party. Each party is responsible for its own development expenses, and any invention made after May 1, 1995 is the sole property of the party making the invention, while the other party has a right to obtain a royalty-bearing, non-exclusive license to use the invention in its areas of exclusivity. As commercialized, the Xonon system contains significant technology developed by us after May 1, 1995 and no technology developed by Tanaka after this date. Our development agreement with Tanaka expires in 2005, and we have no further royalty obligations to Tanaka after 2005.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

In September 1998, we entered into a funding arrangement with the CEC under which they agreed to fund a portion of our Xonon engine test and demonstration facility located in Santa Clara, California. Under this agreement, we are required to pay a royalty of 1.5% of the sales price on the sale of each product or right developed under this project for fifteen years upon initiation of the first commercial sale of a Xonon-equipped engine greater than 1MW. We have the right to choose an early buyout option for an amount equal to \$2,633,000, without a pre-payment penalty, provided that the payment occurs within two years from the date upon which royalties are first due to the CEC.

In January 2000, we entered into a funding arrangement with GTI to fund the next generation Xonon combustor and demonstrate its performance. We will be required to make royalty payments to GTI of \$243,000 per year for seven years beginning with the sale, lease or other transfer of the twenty-fifth catalyst module for gas turbines rated greater than 1 MW, up to a maximum of \$1,701,000.

On December 19, 2001, we entered into a Control Patent Assignment and Cross License Agreement ("Patent Assignment Agreement") with WGC pursuant to which WGC assigned a patent to us, and we and WGC cross-licensed certain intellectual property to each other. Under the Patent Assignment Agreement, we must pay WGC between \$5,000 and \$15,000 upon each shipment of a Xonon commercial unit. Additionally, as part of an April 2002 settlement agreement with WGC (the "Settlement Agreement"), we agreed to increase royalties by \$2,500 per unit on our shipment of the first 100 gas turbines greater than 10 MW. These increased royalties are guaranteed, and we must pay them on 100 units even if we do not ship any units of this size. We prepaid \$50,000 of these royalties to WGC in April 2002. We paid WGC \$100,000 in January 2003 and an additional \$100,000 in January 2004. These guaranteed payments totaling \$250,000 were recorded as a component of selling, general and administrative expenses during the three months ended March 31, 2002 and are in addition to the \$5,000 we must pay to WGC under the Patent Assignment Agreement upon each shipment of a Xonon commercial unit in a gas turbine of this size.

The Patent Assignment Agreement also provides that each time we sublicense the WGC technology to a gas turbine manufacturer or third party control manufacturer; we will pay WGC a control technology license fee of \$50,000, as well as a \$3,000 additional license fee for each sale of a Xonon control system sold by such manufacturer. As a part of the Settlement Agreement, we paid \$200,000 in April 2002 representing a pre-payment of the control technology license fees for our first four \$50,000 sublicenses of the WGC control technology. This payment was recorded as a component of selling, general and administrative expenses in March 2002. We are obligated to make the foregoing license payments to WGC through December 31, 2014 or until our cumulative payments and license fees to WGC total \$15,250,000, whichever occurs first.

WGC must pay us a fee of 1% of the sale price of each WGC control system installed in conjunction with Xonon catalytic modules for new and retrofit turbines. WGC is obligated to make these payments through December 31, 2014 or until we have received total payments of \$2,000,000, whichever occurs first.

Contingencies. In December 2000, we agreed to indemnify DSM for liabilities related to us and CAT incurred prior and subsequent to our spin-off from Catalytica, Inc. To date, no claims have been made against us pursuant to this indemnification and, at December 31, 2003, we believe the likelihood of any material claim being made against us is remote.

Note 9. Segment Disclosures

Catalytica Energy operates as one business segment. Consequently, segment disclosure for the years ended December 31, 2001, 2002 and 2003 is not provided.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Note 10. Restructuring and Related Activities

In the fourth quarter of 2001, Catalytica Energy's management approved a restructuring plan to move the Company's accounting and finance department to Gilbert, Arizona and to realign two additional functions within its corporate structure. Accordingly, the Company eliminated 7 employee positions in connection with this plan. Restructuring and related charges of \$359,000 were recorded as a component of selling, general and administrative expenses during the fourth quarter of 2001. The initiatives contemplated under the restructuring plan were substantially completed by July 1, 2002. Components of accrued restructuring costs and amounts charged against the accrual during 2001 and 2002 were as follows:

	Beginning accrual	Adjustments and expenditures	Restructuring costs incurred	Ending accrual
(in thousands)				
Year ended December 31, 2001	\$ —	\$359	\$ —	\$359
Year ended December 31, 2002	359	(37)	322	—

Note 11. Selected Quarterly Financial Data (Unaudited) (In thousands, except per share amounts)

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
	2002	2003	2002	2003	2002	2003	2002	2003
R&D revenues	\$ 649	\$ 531	\$ 1,123	\$ 959	\$ 1,497	\$ 1,107	\$ 1,526	\$ 901
Total expenses	6,250	5,256	6,759	4,577	5,673	4,351	5,201	4,300
Operating loss	<u>\$(5,601)</u>	<u>\$(4,725)</u>	<u>\$(5,636)</u>	<u>\$(3,618)</u>	<u>\$(4,176)</u>	<u>\$(3,244)</u>	<u>\$(3,675)</u>	<u>\$(3,399)</u>
Net loss	<u>\$(5,220)</u>	<u>\$(4,555)</u>	<u>\$(5,317)</u>	<u>\$(3,480)</u>	<u>\$(3,896)</u>	<u>\$(3,116)</u>	<u>\$(3,441)</u>	<u>\$(3,248)</u>
Basic and diluted net loss per share	<u>\$ (0.30)</u>	<u>\$ (0.26)</u>	<u>\$ (0.30)</u>	<u>\$ (0.20)</u>	<u>\$ (0.22)</u>	<u>\$ (0.18)</u>	<u>\$ (0.20)</u>	<u>\$ (0.18)</u>

Note 12. Subsequent Event

On February 20, 2004, we acquired 100% of the outstanding member interests of SCR-Tech LLC ("SCR-Tech") and certain patents and related intellectual property. SCR-Tech is a provider of catalyst regeneration technologies and management services for selective catalytic reduction, or SCR, catalyst systems, which are used by coal-fired plants and other utility-scale power generating facilities to reduce NOx emissions. In addition to an initial cash payment of \$3,518,000, we have committed to the following payments:

- (1) Upon the completion of certain training and delivery of the remaining assets to be acquired, a payment of \$545,000.
- (2) On August 20, 2005, a payment of \$875,000.
- (3) On February 20, 2006, a payment of \$1,000,000.
- (4) On December 1, 2007 and December 1, 2008, a payment of \$300,000 on each such date provided that Hans-Ulrich Hartenstein is an employee of SCR-Tech or its affiliates on such dates.
- (5) For each of the calendar years 2004 through 2008, certain amounts, if any, based upon the SCR-Tech business attaining certain target revenue was calculated.

CATALYTICA ENERGY SYSTEMS, INC. (a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

- (6) For each of the calendar years 2004 through 2008, certain amounts, if any, based upon the SCR-Tech business attaining certain cash flow amounts.
- (7) For each of the calendar years 2004 through 2018, an aggregate of up to \$5,022,220 payable in installments equal to the lesser of (a) 10% of certain revenues for the applicable calendar year and (b) \$502,220.

This acquisition did not meet the minimum materiality level established by the Securities and Exchange Commission.

Corporate Offices**Auditors****Board of Directors**

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Chairman of the Board

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Catalytica Energy Systems, Inc.

Michael J. Murry

President & Chief Executive Officer

Catalytica Energy Systems, Inc.

John Cardwright

President, Chief Executive Officer

Chairman

Engine Corporation

William B. Ellis, Ph.D.

Retired Chairman &

Chief Executive Officer

Central Utilities

Edward L. Holten

Chairman & Chief Executive Officer

Green Stanley Private Equity

David E. Merritt

President & Chief Executive Officer

Engine Corporation

Forrest M. O'Such

Private Investor

Susan E. Tierney, Ph.D.

Managing Principal

Analysis Group, Inc.

John A. Breuhard

President

John A. Breuhard Associates

Advisory Committee

Compensation Committee

Nominating/Governance Committee

Officers and Management

Michael J. Murry

President & Chief Executive Officer

John A. Dalla Betta, Ph.D.

Chief Technology Officer

Thomas M. Geraghty, Ph.D.

Senior Vice President

Corporate Development

John A. Schmofer

Senior Vice President

Manufacturing

Robert W. Zack

Chief Financial Officer

Catalytica Energy Systems, Inc.
Research & Development Center
130 Ferguson Drive
Mountain View, CA 94043
www.catalyticaenergy.com

SCR Tech LLC
P.O. Box 280
Charlotte, NC 28130-0280
www.scr-tech.com

Investor Information

To obtain additional information,
or to be placed on our e-mail
distribution list, please contact
Investor Relations:

Catalytica Energy Systems, Inc.
430 Ferguson Drive
Mountain View, CA 94043
Phone: 650-960-3000
Fax: 650-968-5184
info@catalyticaenergy.com

Annual Meeting of Stockholders

The Annual Meeting of Stockholders
will be held at 10:00 a.m. on
Thursday, June 10, 2004, at our
offices located at 1388 North Tech
Boulevard, Gilbert, AZ 85233

Stockholder Inquiries

Communications concerning stock
transfer requirements, lost
certificates and changes of address
should be directed to Mellon Investor
Services LLC, The Transfer Agent.

Mellon Investor Services LLC
85 Challenger Road
Ridgefield Park, NJ 07660
1-800-356-2017
www.melloninvestor.com

Corporate Counsel

Wilson Sonsini Goodrich & Rosati, P.C.
650 Page Mill Road
Palo Alto, CA 94304

Stock Symbol

Catalytica Energy Systems' common stock
is traded on the Nasdaq National Market
under the symbol CESI.

Common Stock

At March 19, 2004, there were approximately
33 holders of record of the Company's
common stock.

Quarter Ended	2003	
	High	Low
3/31	\$2.95	\$2.45
6/30	\$3.16	\$2.40
9/30	\$3.67	\$2.69
12/31	\$4.65	\$3.22

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other terms and product names may be trademarks
or registered trademarks of their respective owners,
and are hereby acknowledged.

This annual report contains forward-looking state-
ments relating to Catalytica Energy Systems' busi-
ness that involve risks and uncertainties. Our actual
results could differ materially from the results
indicated in these forward-looking statements as
a result of certain risk factors including those set
forth in the Form 10-K for the year ended December
31, 2003, which is included in this report. Catalytica
Energy Systems undertakes no obligation to update
publicly any forward-looking statements to reflect
new information, events or circumstances after
the date of this report. Investors are encouraged to
review this report and our Form 10-K for additional
factors that could affect Catalytica Energy Systems'
future performance. Additional copies of the Form
10-K can be obtained from the Company or the
Securities and Exchange Commission.



Catalytica Energy Systems, Inc.
www.catalyticaenergy.com

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