



Carbon Tracker Initiative Ltd  
2nd floor  
40 Bermondsey Street  
London  
SE1 3UD

February 13, 2015

Mary Jo White  
Chair

Keith F. Higgins  
Director, Corporate Finance Division  
Securities and Exchange Commission  
100 F Street, NE  
Washington, DC 20549

Re: Disclosure Effectiveness Review

Dear Chair White and Mr. Higgins:

The Carbon Tracker Initiative welcomes the opportunity to comment on the Commission's ongoing review of disclosure effectiveness. Carbon Tracker is a financial think-tank that analyzes the long-term financial risks to public companies from the transition to a low carbon economy.

Carbon Tracker lauds the Commission for its 2010 Interpretive Guidance, which recognized that Management Discussion & Analysis (MD&A) and other disclosure requirements apply to financial risks from climate change.<sup>1</sup> However, company disclosures appear not to have satisfied investor demand. In 2013, an international group of 75 institutional investors coordinated by Ceres and Carbon Tracker, representing more than \$3 trillion in assets, wrote to 45 global companies in the oil and gas, coal, and electric power sectors, requesting that they assess how their business plans would fare in a carbon-constrained world. In the 2014 proxy season nearly one out of every five shareholder proposals dealt with energy and climate change.<sup>2</sup>

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<sup>1</sup> 75 Fed. Reg. 6290 (Feb. 8, 2010).

<sup>2</sup> Heidi Welsh & Michael Passoff, "Proxy Preview 2014." February 2014.



In the last several years, climate change policy experts and finance professionals have become increasingly focused on need to limit fossil fuel emissions within certain limits, or a 'carbon budget.' Internationally recognized norms have coalesced around the goal of preventing warming of more than two degrees above pre-industrial averages. To meet that budget, society can only burn one fifth to one third of existing fossil fuel reserves and resources, resulting in drastically reduced demand and knock-on price impacts. In short, the risk to fossil fuel companies from climate change is that this downward pressure to a two-degree or low-carbon world will cause declines in demand for and price of their commodities. For fossil fuel companies, "climate risk" translates to "market risk."

Enhanced disclosure is needed and MD&A regulations are the most immediately relevant

Trends in the energy system have the potential to change the economics for fossil fuel extractives companies. While these trends will implicate many aspects of disclosure, investors first need to understand how these trends will impact fossil fuel companies' financial condition—precisely the information sought by Item 303 of Regulation S-K.

Item 303 requires disclosure of the trends and uncertainties reasonably likely to make earnings and cash flow variable so *investors* can determine the likelihood that past performance is not indicative of the future.<sup>3</sup> Under Item 303, companies must analyze "known trends, events, demands, commitments and uncertainties that are reasonably likely to have a material effect on financial condition or operating performance."<sup>4</sup> Unless they can affirmatively determine that the trend, event, demand, commitment or uncertainty is not "reasonably likely" to occur or is immaterial, it must be disclosed. Trends and uncertainties include "legal, technological, political and scientific" developments that might indirectly impact a company by, for example, lowering demand for its products.<sup>5</sup> Perhaps even more important than identifying the trends themselves, companies must analyze how those trends and uncertainties will impact the company's financial condition. MD&A disclosure may often be qualitative, but quantitative disclosure may be required if "reasonably available."<sup>6</sup> The Commission has made clear that disclosure of known trends and uncertainties is not optional.<sup>7</sup>

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<sup>3</sup> 17 CFR Parts 211, 231 and 241, SEC Release Nos. 33-8350; 34-48960 (Dec. 29, 2003).

<sup>4</sup> 75 Fed.Reg. 6294 (Feb. 8, 2010).

<sup>5</sup> 75 Fed.Reg. 6294 (Feb. 8, 2010).

<sup>6</sup> 17 CFR Parts 211, 231 and 241, SEC Release Nos. 33-8350; 34-48960 (Dec. 29, 2003).

<sup>7</sup> "Not all forward-looking information falls within the realm of optional disclosure. In particular, material forward-looking information regarding known material trends and uncertainties is required to be disclosed as part of the required discussion of those matters and the analysis of their effects." 17 CFR Parts 211, 231 and 241, SEC Release Nos. 33-8350; 34-48960 (Dec. 29, 2003).



The direction of travel is clear but company disclosure is not

In 2009, countries responsible for most greenhouse gas emissions globally agreed to limit warming to less than two degrees above pre-industrial levels as part of the Copenhagen Accord. The Accord was followed by individual country commitments. The United States, for example, pledged a 17% from 2005 emissions levels by 2020.<sup>8</sup> The following year as part of the Cancun Agreement, countries of the world reaffirmed the two degrees goal and recognized the possibility that the goal should be reduced to 1.5°C above pre-industrial levels. It has not been signed or finalized, but the working decision document from the 2014 Conference of the Parties in Lima recognizes the need for net-zero emissions by 2100.<sup>9</sup>

Each of these agreements and proposals suggests drastic transformations for fossil fuel companies, yet those trends are rarely identified or discussed in company MD&A disclosure. Indeed, the few fossil fuel companies that have engaged with the 2°C goal outside of required filings have argued that it is economically and/or politically too difficult to achieve, making it unnecessary to consider the implications of such a scenario at all.<sup>10</sup> By failing to disclose downward pressure towards two degrees or analyze the implications of that goal, companies are implying that the risk that policy makers will bend the demand curve low enough to have a material impact on their business is “remote.”

It is a categorical mistake to assume that a 2°C limit on global warming is only relevant if found in a binding international treaty, since transformation of the energy system happens at all levels of society.

Indeed, national and local objectives related to the 2°C limit are abundant--almost 500 climate-related laws have been passed in the 66 countries responsible for 88% of the anthropogenic emissions of greenhouse gases.<sup>11</sup> The financial implications of these risks are also being evaluated. Mark Carney, Governor of the Bank of England, recently

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[http://unfccc.int/files/meetings/cop\\_15/copenhagen\\_accord/application/pdf/unitedstatescphaccord\\_app.1.pdf](http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/unitedstatescphaccord_app.1.pdf)

<sup>9</sup>

[https://unfccc.int/files/meetings/lima\\_dec\\_2014/application/pdf/auv\\_cop20\\_lima\\_call\\_for\\_climate\\_action.pdf](https://unfccc.int/files/meetings/lima_dec_2014/application/pdf/auv_cop20_lima_call_for_climate_action.pdf)

<sup>10</sup> The “impossibility” argument ignores numerous credible sources that have outlined pathways to limiting warming to 2°C. The IEA has modeled such a transition while still satisfying 60% of primary energy demand in 2050 from fossil fuels. See, IEA, World Energy Outlook 2013, “Annex A—Tables for Scenario Projections,” 573-574. Both Ecofys and the European Union have developed similar reasonable de-carbonization pathways to limiting warming to 2°C. <http://www.ecofys.com/en/publication/feasibility-of-ghg-emissions-phase-out-by-mid-century/>; [http://ec.europa.eu/clima/policies/roadmap/index\\_en.htm](http://ec.europa.eu/clima/policies/roadmap/index_en.htm).

<sup>11</sup> <http://www.globeinternational.org/the-1st-globe-forest-legislation-study/62-policy-and-legislation/climate-legislation-study>



indicated that the Bank was “deepening and widening” its inquiry into financial stability risks flowing from the possibility that carbon assets will become “stranded” in a low-carbon scenario.<sup>12</sup>

Moreover, policy action to reduce fossil fuel usage and emissions is occurring independent of national agreements. By Executive Order, New York State has established a climate action plan that aims to reduce the State’s greenhouse gas emissions by 80% from 1990 levels by 2050.<sup>13</sup> This plan was based largely on scientifically-vetted pathways to the 2°C goal.<sup>14</sup> The State of California has developed a de-carbonization pathway to meet similar goals within its borders. The Compact of Mayors, a consortium of the world’s largest cities, has pledged additional cooperation on meeting emissions reductions targets and report that annual reductions of 3.7 gigatons of carbon dioxide by 2030 and 8.0 gigatons by 2050 over and above existing national targets are possible.<sup>15</sup>

Finally, radical transformations in costs of renewable and fossil fuel energy suggest that markets will play a role. Deutsche Bank’s leading solar analyst calculates that solar photovoltaics have already reached grid parity in 10 states and will reach it in all 50 states by as early as 2016.<sup>16</sup> By contrast, it has been reported as of November of last year that no big oil project came on stream in the three prior years with a break even below \$80 a barrel,<sup>17</sup> while the average price of WTI crude oil has nearly halved after hovering around \$100 per barrel for the last five years.<sup>18</sup>

It is notable that, even absent a binding treaty, countries are tracking their progress in bending energy demand in accordance with the 2°C goal. In October of 2014, the European Union agreed to a binding emissions reduction target of 40% below 1990 levels by 2030, with an ultimate goal of achieving sufficient reductions by 2050 to meet Europe’s pro rata share of emissions reductions necessary to limit warming to 2°C.<sup>19</sup> Roughly a month later, the United States and China, the two largest global emitters of greenhouse gases, pledged additional emissions reductions, “mindful of the temperature

<sup>12</sup> October 30, 2014 Letter from Mark Carney, Governor of Bank of England to Joan Walley MP. <http://www.parliament.uk/documents/commons-committees/environmental-audit/Letter-from-Mark-Carney-on-Stranded-Assets.pdf>

<sup>13</sup> <http://www.dec.ny.gov/energy/44992.html>.

<sup>14</sup> [http://www.dec.ny.gov/docs/administration\\_pdf/irchap2.pdf](http://www.dec.ny.gov/docs/administration_pdf/irchap2.pdf)

<sup>15</sup> Peter Erickson and Kevin Tempest, “The contribution of urban-scale actions to ambitious climate targets.” (Sept. 2014) Available at: [http://c40-production-images.s3.amazonaws.com/researches/images/28\\_SEI\\_White\\_Paper\\_full\\_report.original.pdf?1412879198](http://c40-production-images.s3.amazonaws.com/researches/images/28_SEI_White_Paper_full_report.original.pdf?1412879198)

<sup>16</sup> <http://cleantechnica.com/2014/10/29/solar-grid-parity-us-states-2016-says-deutsche-bank/>

<sup>17</sup> Ambrose Evans-Pritchard, “Oil industry risks trillions of 'stranded assets' on US-China climate deal,” *The Telegraph*, <http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/11242193/Oil-industry-risks-trillions-of-stranded-assets-on-US-China-climate-deal.html> (Nov. 19, 2014).

<sup>18</sup> <http://www.bloomberg.com/energy/>.

<sup>19</sup> [http://ec.europa.eu/clima/policies/2030/index\\_en.htm](http://ec.europa.eu/clima/policies/2030/index_en.htm)



goal of 2°C.”<sup>20</sup> The United States announced an economy-wide target of reducing its emissions by 26%-28% below its 2005 level in 2025, while China targeted a peaking of carbon dioxide emissions in 2030 and an increase in non-fossil fuel use in primary energy consumption to 20% by 2030.<sup>21</sup> China followed the announcement by introducing a plan to cap coal consumption at 4.2 billion tons by 2020.<sup>22</sup> Such affirmations are particularly relevant in countries such as the United States, where emissions reductions can be implemented through regulation as opposed to legislation.

The relevant “trend” is how the increasing threat of unmanageable warming will exert pressure to curb emissions from fossil fuel consumption. The overall direction of travel is clear; the timing and speed of the transition is open to debate, but there is clear movement visible having material impacts already. The destination point for this trend is well-defined, making the 2°C limit a proxy for the technological, scientific, policy, legal and regulatory pressure for a low-carbon society that can be expected over the coming years. For fossil fuel companies, a direct reference to the two-degree target is the clearest way to capture this trend.

#### A transition to a low-carbon economy would be material to fossil fuel companies

Carbon Tracker’s research reveals that policy actions sufficient to limit warming to 2°C will have significant repercussions for coal, oil & gas companies. Relying on scientific estimates of climate sensitivity to various emissions pathways, Carbon Tracker’s 2011 report concluded that, to have an 80% chance of limiting warming to 2°C, no more than 20% of existing fossil fuel reserves and resources could be burned.<sup>23</sup> That conclusion is broadly consistent with analysis from the International Energy Agency and the Intergovernmental Panel on Climate Change.<sup>24</sup> In 2013, Carbon Tracker stress-tested its carbon budget and showed that even using a higher limit of 3°C of warming and lower probabilities of success still left excess fossil fuel reserves and resources.<sup>25</sup>

<sup>20</sup> <http://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>.

<sup>21</sup> <http://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>.

<sup>22</sup> <http://mobile.nytimes.com/2014/11/21/business/energy-environment/china-to-place-limit-on-coal-use-in-2020.html?referrer=& r=1>

<sup>23</sup> James Leaton, *Unburnable Carbon—Are the world’s financial markets carrying a carbon bubble?* at 6 (2011). Carbon Tracker’s carbon budget was grounded in peer-reviewed scientific literature on emissions and warming pathways. See Malte Meinhausen, *et al.*, “Greenhouse-gas emission targets for limiting global warming to 2 °C,” 458 *Nature* 1158 (2009).

<sup>24</sup> A comparison of the IEA, IPCC and Carbon Tracker carbon budgets is available at: <http://carbontracker.org/wp-content/uploads/2014/08/Carbon-budget-checklist-FINAL-1.pdf>.

<sup>25</sup> Even in a world where carbon constraints are relaxed to provide a mere 50% chance of limiting warming to 3°C above pre-industrial temperatures, all existing reserves and resources still cannot be burned. Carbon Tracker, *Unburnable Carbon 2013: Wasted Capital and Stranded Assets*, <http://www.carbontracker.org/wp-content/uploads/2014/09/Unburnable-Carbon-2-Web-Version.pdf>



In 2014, Carbon Tracker analyzed how a carbon-constrained world would impact the highest-cost oil projects and identified over \$1.1 trillion in potential capital expenditure through 2025 that would be uneconomic in a carbon-constrained world.<sup>26</sup> This is not to say that all future projects are bad investments, but it shows the need for companies to consider and clarify the implications of a carbon-constrained world on their existing business plans.

Recent history suggests the potential for abrupt change. One need look no further than Germany where a transition away from fossil fuels and nuclear power has resulted in the stranding of numerous utility assets. Germany's largest utility, initially blindsided by these risks, recently announced that it will spin-off its fossil fuel holdings, after writing down their value by \$5.6 billion, and pursue a renewables-only strategy in the core business.<sup>27</sup> NRG Energy recently announced a plan to reduce carbon dioxide emissions by 90% by 2050, a transformation approximating the pro rata reductions necessary for a two-degree limit.<sup>28</sup>

The U.S. coal sector presents a similar cautionary tale. Coal is the most carbon-intensive of all fossil fuels. Over the last five years, as measured by the Dow Jones US Total Market Coal Sector index, the US coal market has lost 64% of its value, underperforming the Dow Jones Industrial Average by an absolute 135%.<sup>29</sup> This was due to a range of factors, including falling gas prices, increased competition from renewables, and EPA measures to improve air quality and reduce pollution. It is troubling that, notwithstanding the Commission's 2010 guidance, there was very little disclosure by coal mining companies that market value could be destroyed in this way. Focused on the past being repeated, few coal companies were able to grasp and disclose to their shareholders the magnitude of the risks posed by transition to a low-carbon economy or the trends towards such an economy. These examples show how the impacts on demand and prices of the changing dynamics of energy markets towards a low carbon future are already affecting the financial condition of these sectors, leaving investors wondering what might happen next.

Given the materiality of these trends, companies should disclose their potential impact; the Commission should consider requiring disclosure of future capital expenditure plans and carbon content of reserves

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<sup>26</sup> By uneconomic, we mean that, over their useful lives, the projects are unable to generate cash flows sufficient to cover an internal rate of return for shareholders.

<sup>27</sup> Tino Andresen, "EON Banks on Renewables in Split from Conventional Power," <http://www.bloomberg.com/news/2014-11-30/eon-banks-on-renewables-with-plan-to-spin-off-conventional-power.html>

<sup>28</sup> <http://www.njspotlight.com/stories/14/11/20/nrg-sets-ambitious-target-of-90-cut-in-greenhouse-gas-emissions-by-2050/>

<sup>29</sup> Bloomberg LP, CTI/ETA Analysis 2014.



While it may be relatively difficult to predict which regulatory changes or technological developments will most heavily influence a transition to a low-carbon energy economy, the material questions for fossil fuel companies are slightly different: how much demand fits in a low-carbon budget, what share of that budget will a company command, and which company projects will fit within it? In other words, how will these trends likely to impact the company's financial condition?

Fossil fuel companies should be capable of making such disclosures. Indeed, several European oil majors have noted, in response to voluntary CDP disclosures, that they test their assets against "two-degree" or similar "low-carbon" scenarios.<sup>30</sup> And, both Royal Dutch Shell and BP have indicated their support for shareholder resolutions which, among other things, will require them to test the resilience of their projects against IEA scenarios, including the "450 Scenario," which charts a pathway for potentially limiting warming to two degrees.

Effective disclosure of the market risks from climate change would focus on how low-carbon scenarios would impact commodity demand and price and include the knock-on effects of those shifts on future capital expenditure plans, liquidity and reserves valuations, if any. While companies should provide qualitative analysis of these risks in their MD&A disclosures, the Commission could improve disclosure by ensuring that registrants also make quantitative disclosures when reasonably available.

While existing regulations and guidance should be sufficient to improve MD&A disclosures, we also propose two changes that would provide greater clarity to investors. First, uniform requirements for future capital expenditure disclosure would increase transparency. Investors deserve to understand the break-even points of new capital expenditures so they can understand how far up the cost curve companies are reaching and, as a consequence, how much exposure those companies have to reduced demand and price scenarios. One way of making the investment mix more transparent would be to require aggregated disclosure of the anticipated full-cycle costs of a company's future projects, segmented into break-even cost price bands using a standard, comparable internal rate of return. Such forward-looking information could be part of a new quantitative tabular disclosure in the MD&A section and might involve company analysis of data similar to that analyzed under Item 1202 scenario analysis.

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<sup>30</sup> See Luke Sussams, "Recognising Risk, Perpetuating Uncertainty" (Nov. 2014), Available at: [www.carbontracker.org/report/climateriskdisclosures](http://www.carbontracker.org/report/climateriskdisclosures) (relying on data from CDP's 2014 climate change questionnaire and supplementary oil and gas sector module). While these companies have noted that they do test assets against a two-degree scenario, to the best of our knowledge those companies do not publicly disclose the assumptions or conclusions of that testing.



Second, companies should provide better granularity as to how their portfolios will fit in a low carbon world. One of the best metrics for doing so is a reference to the carbon content of their reserves and resources. This information would give investors a clearer picture of the extent of a company's exposure to global, national or regional emissions budgets. It would be helpful if the total CO2 was banded by reserve and/or resource classification to better understand the company's development pipeline. Notably, some companies have already provided such information outside of their SEC filings. The SEC could establish standards to ensure that company reporting was comparable.

We believe these measures would help ensure that disclosures reflect the latest trends that have created risks and opportunities for businesses.

Carbon Tracker thanks the Commission for the opportunity to comment on the review of disclosure effectiveness and welcomes additional dialogue.

Sincerely,

Mark Campanale  
Founder and Executive Director, the  
Carbon Tracker Initiative

A handwritten signature in black ink, appearing to read 'Mark Campanale'.

Anthony Hobley  
Chief Executive Officer, the Carbon  
Tracker Initiative

A handwritten signature in black ink, appearing to read 'Anthony Hobley'.

Robert Schuwerk  
Senior Counsel, the Carbon Tracker  
Initiative

A handwritten signature in black ink, appearing to read 'Robert Schuwerk'.

John Wunderlin  
North American Program Manager, the  
Carbon Tracker Initiative

A handwritten signature in black ink, appearing to read 'John Wunderlin'.