



presents

Climate Change Risks: Corporate Disclosure Requirements

Navigating the Groundbreaking SEC Guidance to Meet Corporate Reporting Obligations

A Live 90-Minute Teleconference/Webinar with Interactive Q&A

Today's panel features:

Jim Coburn, Senior Program Manager, **Ceres**, Boston
Jeffrey A. Smith, Partner, **Cravath Swaine & Moore**, New York

Thursday, February 18, 2010

The conference begins at:

1 pm Eastern

12 pm Central

11 am Mountain

10 am Pacific

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20 **Ceres**
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Y E A R S

*Investors and Environmentalists
for Sustainable Prosperity*

Jim Coburn

Climate risk disclosure in SEC filings

February 18, 2010

Climate: A Material Issue

- **Globalized Economy**
- **Resource Constraints**
 - Climate Change
 - Water Scarcity
- **Public Policy and Regulation**
 - Climate and Energy Policy
- **Increasing stakeholder expectations for companies**
 - Investors
 - NGOs
 - Employees
 - Customers

“Shareowners need information to make informed investment decisions and assess costs associated with the impact to the environment. These risks may include operational, market, liabilities, policy, regulatory, and reputation risk.”

– Rob Feckner, Board President, CalPERS

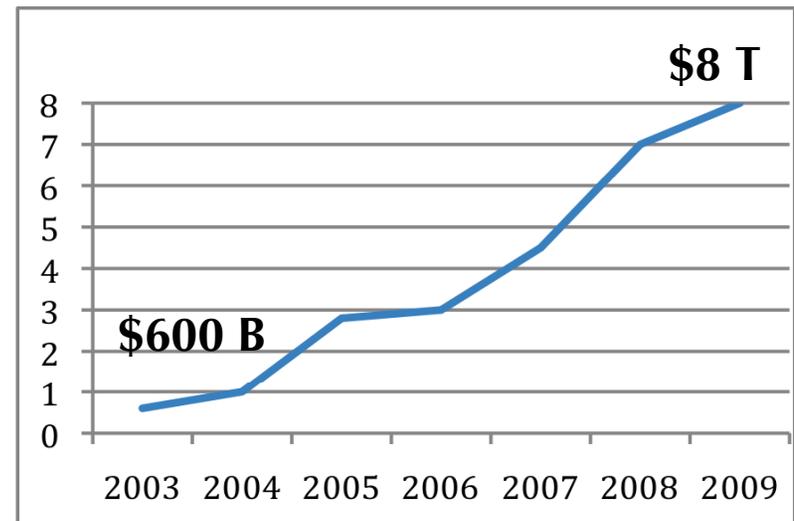
“Climate risk over time has the potential to wreak havoc on our investment portfolios if the companies we are invested in do not adapt to new standards of clean technology, energy efficiency, and new regulations.”

– Denise Nappier, CT State Treasurer

Investor Network on Climate Risk

- 80+ members representing \$8 trillion in assets
- **Climate Action Plan** from 2010 Investor Summit on Climate Risk:
 - Calls on national regulators worldwide, including SEC, to require companies to disclose material climate risks and programs to manage those risks
 - “The most appropriate place for this reporting is within the annual financial or risk reports submitted to investors and securities regulators.”

INCR Assets Under Management



Investor Network on
CLIMATE RISK
a project of **Ceres**

Outline of Presentation

- Background: State of Climate Disclosure in SEC Filings, Growing Investor Interest
- Comparing Investor Needs to New SEC Disclosure Guidance
- Strategies for Meeting Disclosure Requirements
- Related trends

Trends in climate disclosure in SEC filings

- **While a growing number of companies are discussing climate risks in securities filings, currently disclosure is inadequate and inconsistent**
- *Reclaiming transparency in a changing climate: Trends in climate risk disclosure from 1995 to the present (June 09)*
 - 23.7% of annual reports filed by S&P 500 discuss climate change
 - Utilities led other S&P sectors - over 95% of utilities discuss climate
- *Climate Risk Disclosure in SEC filings: An analysis of 10K reporting by oil & gas, insurance, coal, transportation & electric power (June 09)*
 - 28/100 do not discuss climate risks
- *McGuire Woods report on 2009 10-Ks*
 - Examined >400 S&P 500, MidCap and SmallCap companies
 - 17.3% had GHG emissions or climate-related disclosures

Growing Investor Interest in SEC Action: 2003-2010

- Calls to Action released at 2003 & other Investor Summits
- Letters to SEC leadership starting in 2004
 - 2004 letter to SEC signed by 14 institutional investors seeking recognition that climate risk must be disclosed as a material issue.
- Ceres/Environmental Defense Fund SEC petitions filed Sept. 18, 2007; 2008 & 2009
 - Petition signed by 20 investors & other groups; supported by 50 institutional investors from U.S. and Europe
- Oct. 31, 2007: First Senate hearing on climate risk disclosure in securities filings
 - Followed by letter to SEC from Senators Chris Dodd and Jack Reed encouraging SEC guidance on climate risk disclosure

Climate Risk Petitions

- 2007 petition to the SEC by investors, state regulatory officials:
 - Called for interpretive guidance on corporate obligations to disclose material information about climate change risks, opportunities.
 - 20+ Signatories – CA State Treasurer, FL CFO, Maine State Treasurer, NC State Treasurer, NY State Comptroller, NY Attorney General, Ceres, EDF
- Material physical, regulatory, and litigation risks from climate must be disclosed under MD&A, legal proceedings, description of business
- Supplemental petitions in June '08, Nov '09 cited growth in scientific, regulatory and economic evidence that climate change impacts business

Comparing Petition to SEC's Guidance: Regulatory Risks

- Petition called for SEC guidance on disclosure of material regulatory risks which address:
 - Compliance costs: international, federal, state, local laws
 - Legislation and regulatory proposals
 - Indirect effects, such as increased/decreased costs or demand for products and services

- SEC guidance addresses each item:
 - Existing laws, legislation addressed in section IV.A., "Impact of legislation and regulation"
 - Indirect effects addressed in section IV.C., "Indirect consequences of regulation or business trends"

Comparing Petition to Guidance: Process for Assessing Regulatory Risks

- Petition called for SEC guidance which asks registrants to calculate current and projected GHG emissions *in order to* assess regulatory risks, including:
 - Direct and indirect emissions
 - Estimate past GHG emissions to the extent necessary to assess significant trends in emissions levels
- SEC guidance:
 - Implies the need to calculate emissions to assess regulatory risks, demands for goods with high/low emissions, demand for alternative energy generation/transmission, etc.
 - Notes that some of the information disclosed in voluntary regimes (i.e. GRI) and mandatory state regimes also may belong in SEC filings

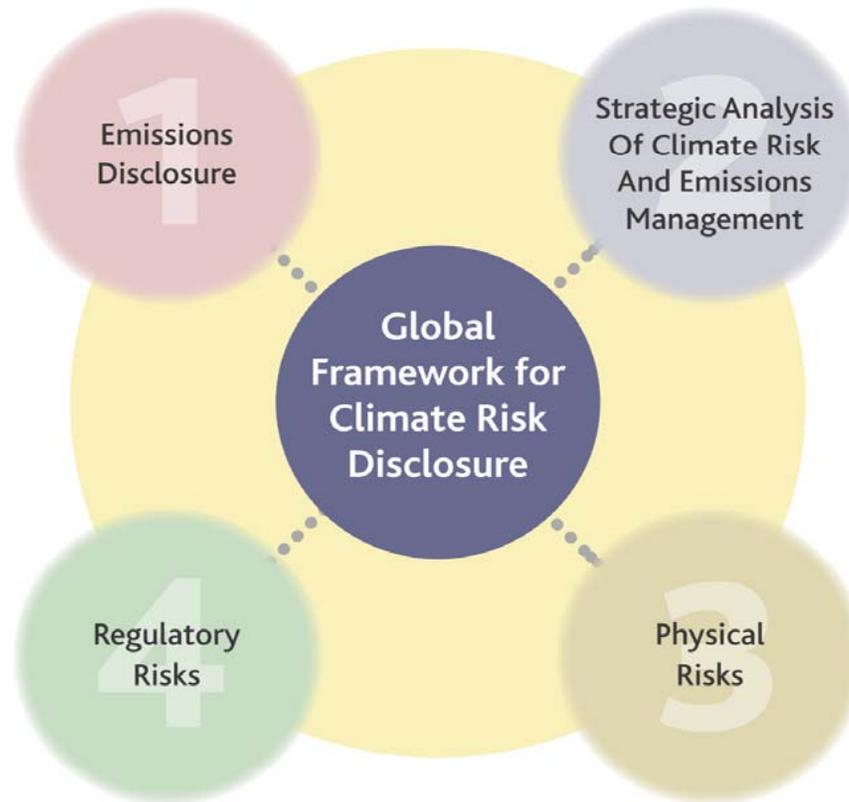
Comparing Petition to Guidance: Physical Risks

- Petition called for SEC guidance on disclosure of material physical risks which:
 - Asks *all* registrants to evaluate the consequences of these risks for personnel, physical assets, supply and distribution chains; disclose material risks
 - List examples including more intense storms, sea-level rise, water availability, etc.
 - Indirect effects such as credit risks for banks with borrowers in at-risk areas
- SEC guidance:
 - Asks registrants “whose businesses may be vulnerable to severe weather or climate related events” to disclose material risks
 - Discusses direct effects like property damage and indirect effects like supply chain disruptions
 - Also focuses on insurance:
 - Increased claims/liabilities for insurers and reinsurers
 - Increased premiums and deductibles for registrants operating in areas with severe weather

Global Framework for Climate Risk Disclosure

- Most detailed statement available of “investor expectations for comprehensive corporate disclosure” in SEC filings and voluntary reports
- Created by CalPERS, CT Treasurer, CA Controller, CalSTRS and investor groups worldwide
- “Companies need to provide accurate and timely disclosure of the risks associated with climate change. CalPERS helped to create this new framework to provide companies and financial regulators with a clear statement of investor expectations for effective corporate disclosure on climate risk.” — Rob Feckner, board president, CalPERS

Global Framework for Climate Risk Disclosure



Disclosure of “Strategic Analysis of Climate Risk & Emissions Management”

- Helps investors assess the quality and depth of management strategies to address climate risk/opportunities
- Key disclosure topics:
 - Climate change policy (ex.: Goldman Sachs Environmental Policy Framework)
 - Emissions management actions
 - Board activities on climate change
 - Senior management activities, including links between executive compensation and climate objectives
- SEC guidance is silent, but strategic analysis can be disclosed in MD&A, risk factors, and description of business
- Example of disclosure in SEC filings: Dupont disclosed climate change-related shifts in its business research and development strategies in '08 10-K

Disclosure of GHG emissions

- Key disclosure topics:
 - Historical direct and indirect emissions
 - Current direct and indirect emissions; and
 - Estimated future direct and indirect emissions of greenhouse gases from their operations, purchased electricity, and products/service

- Re: emissions disclosure, SEC guidance states that some information reported voluntarily to states, EPA, GRI, etc. “may be required to disclosed” in SEC filings

- Examples of disclosure in SEC filings:
 - Rio Tinto '08 20-F: Discloses emissions by group from '04-'08
 - Con Ed '08 10-K: Discloses emissions from '04-'08

Strategies for meeting disclosure requirements & broader trends

- Additional strategies for determining what risks to disclose:
 - Review investor guidance in Global Framework, petition
 - Review SEC and voluntary disclosure leaders (i.e., ACCA/Ceres reporting awards, CDP responses)
 - Engage with stakeholders

- Developing procedures to engage management/directors
 - Review *Corporate Governance & Climate Change* reports on high emitting industries, banks, and consumer/technology companies
 - Review 14-point climate governance framework

Corporate Governance & Climate Change

Corporate Governance and Climate Change: *Making the Connection*

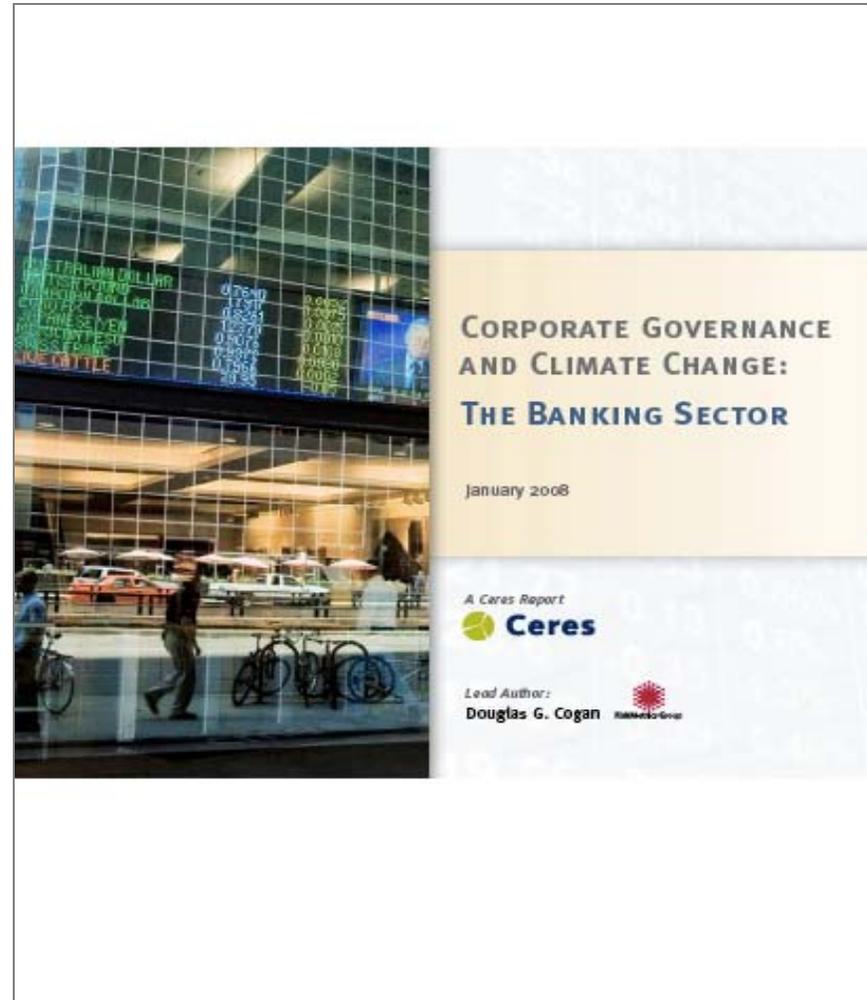
Summary Report

10 industries evaluated:

- Airlines
- Autos
- Chemicals
- Coal
- Electric power
- Food & beverage
- Forest products
- Industrial equipment
- Metals and mining
- Oil and gas

Authored by
Douglas G. Cogan
March 2006

A Publication of
 **Ceres**



Procedures for engaging mgmt/directors:

- Procedures/policies can address 5 key topics of concern to investors:
 - Board Oversight (i.e., board committees tasked with addressing climate change)
 - Management Execution (i.e., executive officers in charge of climate strategy)
 - Public Disclosure (i.e., voluntary & SEC reporting)
 - Emissions Accounting (i.e., setting emissions baseline for reducing emissions)
 - Strategic Planning & Performance (i.e., pursuing strategies to maximize opportunities from product and service offerings related to climate change)

14 point Climate Governance Framework

Climate Change Governance Index – Banking Sector

Board Oversight

1 Board is actively engaged in climate change policy and has assigned oversight responsibility to board member, board committee or full board.	Up to 16
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Management Execution

2 Chairman/CEO assumes leadership role in articulating and executing climate change policy.	Up to 22
3 Top executives and/or executive committees assigned to managed climate change response strategies.	
4 Climate change initiatives are integrated into risk management and mainstream business activities.	
5 Executives officers' compensation is linked to attainment of environmental goals and GHG targets.	

Public Disclosure

6 Securities filings disclosure material risks and opportunities posed by climate change.	Up to 18
7 Public communications offer comprehensive, transparent presentation of response measures.	

Emissions Accounting

8 Company calculates and registers GHG emissions savings and offsets from operations.	Up to 14
9 Company conducts annual inventory of GHG emissions savings and offsets from operations.	
10 Company has an emissions baseline by which to gauge future GHG emissions trends.	
11 Company has third-party verification process for GHG emissions data.	

Strategic Planning

12 Company sets absolute GHG emission reduction targets for facilities, energy use, business travel and other operations (including indirect emissions).	Up to 30
13 Company participates in GHG emissions trading programs.	
14 Company pursues business strategies to reduce GHG emissions, minimize exposure to regulatory and physical risks, and maximize opportunities from changing market forces and emerging controls.	

Related trends

- NAIC climate disclosure guidance for insurers
- NY Attorney General's settlements with electric power companies
- Accounting groups' statement on the need for global climate disclosure guidance
- Ontario Securities Commission's commitment to issue environmental disclosure guidance by 12/10

NAIC - Mandatory Climate Risk Disclosure

March 17, 2009: NAIC approved the ***first mandatory climate risk disclosure requirement in the world***

All insurance companies with annual premiums over \$500 million will be required to fill out an Insurer Climate Risk Disclosure Survey every year.

Among other issues, insurers will be required to disclose:

- Steps they are taking to manage risks
- Changes in catastrophe modeling
- Engagements with policymakers and customers on risks of climate change
- Alterations in investment strategies as a result of climate risk



National Association of
Insurance Commissioners

Weather-related losses were the third highest ever in 2008, exceeding \$200 billion globally with \$40 billion in losses from Hurricanes Ike and Gustav in the U.S. alone.

NY AG's settlements - AES example:

- AES must disclose material risks in its 10-K related to:
 - Existing and probable future climate change regulation and legislation
 - Climate-change related litigation
 - Physical impacts of climate change

- AES has committed to additional climate change disclosures including:
 - Current carbon emissions
 - Projected increases in carbon emissions from planned coal-fired power plants
 - Company strategies for reducing, offsetting, limiting, or otherwise managing its global warming pollution emissions and expected global warming emissions reductions from these actions
 - Corporate governance actions related to climate change, including if environmental performance is incorporated into officer compensation

Accounting groups on climate disclosure

- 12/7/09 — American Institute of Certified Public Accountants & 12 major accounting institutes release open letter to political leaders in Copenhagen
- Calls for the development of universally accepted accounting standards to provide financial reporting information on climate change that's useful to investors in their decision-making
- Notes that climate change is “one of the crucial factors likely to affect the development, performance and condition of a company's business.”

Ontario Securities Commission announcement

- 12/18/09 — OSC Notice 51-717 announced plans to issue environmental disclosure guidance by December 2010
- OSC will invite staff at other Canadian Securities Administrators to participate in the development of the guidance for environmental disclosures
- “We received valuable feedback from stakeholders and this has formed the basis for the initiatives that we are taking in 2010,” said James Turner, Vice-Chair of the OSC. “During the consultations, we heard support for the existing regulatory requirements as well as recommendations for the OSC to provide more guidance to issuers in order to improve the information disclosed to investors and the marketplace. For example, stakeholders said additional guidance would be welcome in respect of disclosure of climate change risk.”



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The SEC Interpretive Release: Climate Change Disclosure

February 18, 2010

Jeffrey A. Smith

CRAVATH, SWAINE & MOORE LLP

Existing SEC Regime

- Reg S-K Item 101- Disclosure of Capital Expenditures
 - Item 101(c)(xii): Requires disclosure of material effects that compliance with environmental law may have on capital expenditures, earnings and competitive position. Contingent effects must also be disclosed.
 - Time Frame: Current year; one year out; and far enough out not to make existing disclosure misleading.
 - Estimates: The registrant may be required to set forth the source, the assumptions, the methods and the extent of uncertainty, in order for the disclosure not to be misleading.

Existing SEC Regime

- Reg S-K Item 103 – Disclosure of Legal Proceedings
 - Item 103 requires disclosure of pending or contemplated material legal proceedings to which the registrant or any of its subsidiaries is a party or of which their property is the subject.
 - Environmental legal proceedings must be disclosed if:
 - The amount involved is material to the business or financial condition of the registrant.
 - The amount exceeds 10% of the current assets of the registrant and subsidiaries on a consolidated basis; OR
 - A governmental authority is a party, and the proceeding involves potential monetary sanctions, unless the registrant reasonably believes that monetary sanctions, exclusive of interest and costs, will be less than \$100,000.

Existing SEC Regime

- Reg S-K Item 303 — Management Discussion and Analysis (MD&A)
 - Item 303 requires discussion of currently known trends, events or uncertainties that are **reasonably expected to have a material impact** on liquidity, capital, sales, revenues or income.
 - Is the event reasonably likely to occur? If not, no disclosure.
 - If management cannot make that determination, disclose unless a material effect is not reasonably likely to occur.
 - Potential liability must be quantified to the extent reasonably practicable.

Existing SEC Regime

- Reg S-K Item 503 — Risk Factors
 - Specific, significant factors that may make an investment speculative or risky.
 - Avoid generic disclosure applicable to multiple companies or risks.

S-Ox Data Gathering and Management

- **Disclosure Controls and Procedures**
 - Implementation of an internal management system
 - Section 302 requires the CEO and CFO to certify that the information in periodic reports **fairly presents** the company's financial picture.
 - Section 906 imposes criminal liability on the certifying officers for false certifications.
 - Section 303 prohibits any action that might mislead an independent public accountant auditing the corporation.

S-Ox Data Gathering and Management

- **Financial Reporting**

- Section 404 requires a Management Internal Control Report to be included with each Annual Report

- Management is responsible for effective internal financial control and reporting.

- Auditors must confirm management's assessment.

Major Elements of the Release

- Key topics
 - Existing and pending legislation
 - International law and agreements
 - Indirect consequences of climate effects
 - Physical consequences of climate change
- Not directly covered
 - Carbon “footprint” — future direct and indirect emissions
- Process, protocols and consequences
 - Disclosure Control Procedures
 - S-OX certifications
 - Reconcile voluntary disclosure with new SEC disclosure

Superfund Disclosure: Déjà vu all over again?

Superfund also requires disclosure of certain other releases into the environment and creates potential liability for clean-up costs and for injury to the environment resulting from a release. [We have] received notices under Superfund or applicable state law that, along with others, [we] may be a potentially responsible party under such legislation for the cost of cleaning up a number of hazardous waste disposal sites in California, Illinois, Indiana, Michigan, Minnesota, New Jersey and Ohio. [We] may have been a generator of hazardous wastes at a number of other sites. [We are] unable to determine the costs which [we] may incur under such legislation; however, such costs could be substantial.

Past Practices – Future Requirements

- The cost of regulation and legislation – Items 101 and 303
- Litigation – permits, injunctions and liability – Item 103
- Market opportunities – Items 101 and 303
- Strategic risks – Item 503
- Strategic business plan – Items 101 and 303
- Physical effects – Items 101 and 303
- Indirect consequences in the supply chain – Items 101 and 103
- Reputational consequences – Items 101, 303 and 503
- Management focus and choices – Item 303
- Global strategy – Items 101 and 303

Regulatory Costs

We currently estimate that in 2010 the impact of the Kyoto Protocol on [our] cash operating costs would be an increase of about \$0.20 to \$0.27 per barrel. This estimate assumes a reduction obligation of 15% from 2010 business-as-usual energy intensity (5) and that the maximum price for carbon credits would be capped at \$15 per tonne of carbon dioxide equivalent until 2012. Based on these assumptions, we do not currently anticipate that the cost implications of federal and provincial climate change plans will have a material impact on our business or future growth plans.

Permit Litigation

On December 2, 2008, EAB issued its opinion in *In re: Deseret Power Electric Cooperative*, an appeal from the grant of a construction permit under the PSD program. The EAB held that the CAA does not dictate whether U.S. EPA must apply BACT for the control of CO₂ emissions in PSD permits. Moreover, the EAB ruled that U.S. EPA has discretion to interpret the CAA on this point, and it remanded the case to the U.S. EPA for reconsideration. On December 18, 2008, the U.S. EPA Administrator Johnson sent a memorandum (the “Johnson Memorandum”) to the agency’s regional administrators setting forth the agency’s interpretation that pollutants subject to PSD requirements exclude those pollutants for which EPA regulations only require monitoring and reporting of emissions, but include those pollutants subject to either a provision of the CAA or a regulation promulgated by the U.S. EPA under the CAA that requires actual control of emissions. Since neither the CAA nor agency regulations control CO₂ emissions under the Administrator’s interpretation CO₂, would not be considered subject to PSD requirements, including BACT. On January 15, 2009, several environmental groups filed suit challenging the interpretive memorandum . . . With the change in administration following the Presidential election, many interpretations of environmental laws and regulations by the former administration are being reevaluated. On February 17, 2009 the new Administrator of U.S. EPA granted the petition of environmental groups to reconsider the Johnson Memorandum.

Regulatory Costs

The countries within which we operate in Europe are all signatories of the Kyoto Protocol, and we have developed a GHG strategy in line with this protocol. Our European mills have been set CO₂ emissions limits of the allocation period 2005 to 2007. Based upon in-depth analysis of our mill production, it is unlikely that [we] will exceed [our] CO₂ emission limits. Consequently, in July 2005 [we] sold 90,000 surplus CO₂ credits [with a] value of \$2.5 million (euro 2.0 million) on the European Climate Exchange.

Market Opportunities

- The Company intends to capitalize on the high growth opportunities presented by government–mandated renewable portfolio standards, tax incentives and loan guaranties for renewable energy projects and new technologies and expected future carbon regulation. A primary focus of this strategy is supported by the econrg initiative whereby NRG is pursuing investments in new generating facilities and technologies that will be highly efficient and will employ no and low carbon technologies to limit CO₂ emissions and other air emissions. econrg represents NRG’s commitment to environmentally responsible power generation by addressing the challenges of climate change, clean air and water, and conservation of our natural resources while taking advantage of business opportunities that may inure to NRG as a result of our demonstration and deployment of “green” technologies. Within NRG, econrg builds upon a foundation in environmental compliance and embraces environmental initiatives for the benefit of our communities, employees and shareholders, such as encouraging investment in new environmental technologies, pursuing activities that preserve and protect the environment and encouraging changes in the daily lives of the Company’s employees.

Market Opportunities

Revenues from materials used to build the blades of wind turbine applications again showed strong growth, up over 17% compared to 2005. The outlook for wind energy remains robust with growing global demand for renewable energy, and we anticipate another year of mid-to-high teens revenue growth. Sales of composite materials used to manufacture wind turbine blades now represent the largest contributor within our Industrial market segment. These results reflect the underlying growth in global wind turbine installations.

Market Opportunities

We are a worldwide supplier of gas turbines for Integrated Gasification Combined Cycle (IGCC) applications, having provided gas turbines for a significant number of the world's operating IGCC plants. IGCC systems convert coal and other hydrocarbons into synthetic gas that, after cleanup, is used as the primary fuel for gas turbines in combined-cycle systems. IGCC systems produce fewer air pollutants compared with traditional pulverized coal power plants. We continue to invest in advanced technology development that will provide more value to our customers and more efficient solutions that comply with today's strict environmental regulations.

Strategic Risk

We write a considerable amount of business that is exposed to U.S. hurricanes and windstorms. This volatility is compounded by accounting regulations that do not permit reinsurers to reserve for such catastrophic events until they occur. We expect that increases in the values and concentrations of insured property will increase the severity of such occurrences per year in the future and that climate change may increase the frequency of severe weather events. In 2005, three major hurricanes made landfall in the United States and caused substantial damage. Underwriting is inherently a matter of judgment, involving important assumptions about matters that are unpredictable and beyond our control, and for which historical experience and probability analysis may not provide sufficient guidance.

Strategic Business Plan

We have invested in modeling technologies and a concentration management tool that allow us to monitor and control our accumulations of potential losses in catastrophe exposed areas in the United States, such as California and the gulf and east coasts, as well as in such areas in other countries. Actual results may differ materially from those suggested by the model. We also continue to actively explore and analyze credible scientific evidence, including the impact of global climate change, that may affect our ability to manage exposure under the insurance policies we issue.

Physical Effects

- Changes in weather patterns as a result of global warming could have an adverse effect on Allegheny's business.

Allegheny also could be impacted to the extent that global warming trends affect established weather patterns or exacerbate extreme weather or weather fluctuations. Although Allegheny's physical assets are located in a region in which they are unlikely to experience detrimental physical damage from the rising sea levels that have been modeled in various analyses that attempt to predict the effects of global warming, other weather – related effects that could be associated with global warming, such as an increase in the frequency and/or severity of storms or other significant climate changes within or outside of Allegheny's service territory, may have an adverse impact on Allegheny's business, results of operations, cash flow and financial condition.

Weather and Physical Effects

- Duke Energy recognizes the potential for more frequent and severe extreme weather events as a result of climate change and the possibility that these weather events could have a material impact on its future results of operations should these events occur. However, the uncertain nature of potential changes in extreme weather events (such as increased frequency, duration, and severity) and the long period of time over which any changes might take place make estimating any potential future financial risk to Duke Energy's operations that may be caused by the physical risks of climate change extremely challenging. **Currently, Duke Energy plans and prepares for extreme weather events that it experiences from time to time, such as ice storms, tornados, severe thunderstorms, high winds and droughts.** Duke Energy's past experiences preparing for and responding to the impacts of these types of weather-related events would reasonably be expected to help management plan and prepare for future climate change-related severe weather events to reduce, but not eliminate, the operational, economic and financial impacts of such events.

Indirect Effects: Reputation

- Energy companies are subject to adverse publicity, which may make Allegheny vulnerable to negative regulatory and litigation outcomes.
 - The energy sector has been the subject of negative publicity, most recently in the context of the dialogue regarding climate change. Allegheny has come under some scrutiny in this regard, and also has faced public opposition in connection with its transmission expansion initiatives, as well as certain of its demand-side conservation efforts. Negative publicity of this nature may make legislators, regulators and courts less likely to take a favorable view of energy companies in general and/or Allegheny, specifically, which could cause them to make decisions or take actions that are adverse to Allegheny.

Legislative Developments

The scientific community, led largely by the Intergovernmental Panel on Climate Change, has provided scientific evidence that human activity, and particularly the combustion of fossil fuels, has increased the levels of GHG in the atmosphere and contributed to observed changes in the global climate system. These findings have led to proposals for substantial transformation of the world's energy production and transportation systems in order to slow, and ultimately reduce, the production of CO₂ and other GHG emissions sufficiently to reduce atmospheric concentrations. Because approximately 90% of the electricity generated by the AEP System is produced by the combustion of fossil fuels, we are helping to lead the discussion nationally and internationally to find a reasonable, achievable approach and enact federal energy policy that is realistic in time frame and does not seriously harm the U.S. economy. We also are developing advanced coal technologies so that coal can continue to be the important energy resource it is today. **We support the adoption of an economy-wide, cap-and-trade GHG reduction program that allows us to provide reliable, reasonably priced electricity to our customers and that fosters the international participation that is necessary to make meaningful global progress on this global challenge.**

Regional Regulation

Maryland passed the Healthy Air Act in early 2006. This legislation imposes state-wide emission caps on SO₂ and NO_x, requires greater reductions in mercury emissions more quickly than required by CAMR and mandates that Maryland join the Regional Greenhouse Gas Initiative (“RGGI”) and participate in that coalition’s regional efforts to reduce CO₂ emission. On April 20, 2007, Maryland’s governor signed on to RGGI, as a result of which Maryland became the 10th state to join the Northeast regional climate change and energy efficiency program. The Healthy Air Act provides a conditional exemption for the R. Paul Smith Power station for NO_x, SO₂ and mercury, provided that PHM declares the station vital to reliability in the Baltimore/Washington DC metropolitan area. Pursuant to the legislation, the Maryland Department of the Environment (the “MDE”) has proposed specific regulations for R. Paul Smith to comply with alternate NO_x, SO₂ and mercury limits. The statutory exemption does not extend to R. Paul Smith’s CO₂ emissions. Maryland issued final regulations to implement RGGI requirements in February 2008, and Allegheny is participating in RGGI auctions.

Regional and State Regulation

- On January 1, 2009, ten northeast and mid-Atlantic states implemented a cap-and-trade program, RGGI, that affects our power plants in Maine, New York and New Jersey (together emitting about 1.7 million tons of CO₂ annually). RGGI caps regional CO₂ emissions and requires generators to acquire one allowance for every ton of CO₂ emitted over a three-year compliance period. Apart from state-specific set-asides and other factors, the vast majority of the region's CO₂ allowances are distributed to the market via public auction. RGGI auctions were held in September and December 2008, with clearing prices in the low \$3 per ton range for 2009 vintage allowances. We are required to purchase allowances by buying them in RGGI public auctions or via the secondary market, or by investment in qualified offsets, to cover CO₂ emissions from our facilities in the RGGI region. We anticipate a neutral to positive business impact from RGGI, given the efficiency of our power plants in RGGI states.

Regulatory Commercial Risks

- As a result of requirements for GHG emissions, we could be required to purchase allowances or offsets to emit GHGs or other regulated pollutants or to pay taxes on such emissions. Although the ultimate legislation and regulations that result from these activities could have a material impact on our business, we believe we will face a lower compliance burden than most competitors due to the relatively low GHG emission rates of our fleet. **Under a cap-and-trade or carbon tax approach to reducing GHG emissions, companies that sell power and steam under existing long-term contracts may not be able to recover compliance costs or carbon taxes. Many long-term contracts that were executed before GHG emissions regulations were anticipated do not contain applicable “change in law” provisions that would enable the generators to pass such costs or taxes to the customer. We have certain power and steam sales contracts that may not allow such costs or taxes to be recovered from our customers.**

Comparative Regulatory Risks

- The environmental profile of our power plants reflects our commitment to environmental stewardship. We have the lowest overall emissions of CO₂, SO₂, NO_x and Hg per MWh generated among the major U.S. independent power producers. The combination of our Geysers Assets and our high efficiency portfolio of natural gas-fired power plants results in substantially lower emissions of these gases compared to our competitors' power plants using other fossil fuels, such as coal or oil. To condense steam, we use cooling towers with a closed water cooling system, or air cooled condensers and do not employ "once-through" water cooling which uses large quantities of water from adjacent waterways negatively impacting aquatic life. As a result of our efforts to reduce potentially harmful air emissions and to minimize our impact on water resources, we believe it will not be necessary in the near term to make substantial additional investments in costly environmental projects. **We also believe that we will be less impacted by cap-and-trade limits, carbon tax, required environmental upgrades as a result of potential GHG or water regulations than our competitors who use other fossil fuels or steam condensation technologies.**

CO₂ Emissions

Carbon Dioxide, CO₂

Average U.S. Coal-, Oil -, and Gas-Fired Power Plant (1): 1,863
pounds / MWh of Electricity Generated

Calpine Natural Gas-Fired Power Plant (2): 790
pounds / MWh of Electricity Generated

Compared to Average U.S. Fossil-Fired Facility: 57.6% less

(1) The average U.S. coal, oil, and natural gas-fired power plant's emission rates were obtained from the U.S. Department of Energy's Electric Power Annual Report for 2007.

(2) Our natural gas-fired power plant estimated emission rates are based on our 2007 emissions and power generation data as measured under the EPA reporting requirements.

CO₂ Emissions and Footprint

- For Dominion Generation, our direct CO₂ emissions, based on ownership, were approximately 56 million metric tonnes in 2007. For 2007, DTI's direct CO₂ equivalent emissions were approximately 2.3 million metric tonnes, Dominion East Ohio's direct CO₂ equivalent emissions were approximately 1.4 million metric tonnes and Dominion E&P's direct CO₂ equivalent emissions were approximately 0.4 million metric tonnes. While we do not have final 2008 emissions data for Dominion Generation, DTI, Dominion East Ohio or Dominion E&P, we do not expect a significant variance in emissions from 2007 amounts. With respect to electric generation, the emissions reported are for CO₂ directly emitted to the atmosphere based on the combustion of carbon-based fuels. Direct CO₂ emissions are provided based on emissions from primary stack and emissions from any auxiliary combustion equipment located at the electric generation facility. Primary facility stack emissions of CO₂ from carbon based fuel combustion are directly measured via methods set forth under 40 CFR Part 75 of the United States Code (USC).

Comparative Emissions/Footprint

- In anticipation of the potential imposition of CO₂ emission limits on the electric industry in the future, Entergy has initiated actions designed to reduce its exposure to potential new governmental requirements related to CO₂ emissions. These voluntary actions included establishment of a formal program to stabilize power plant CO₂ emissions at 2000 levels through 2005, and Entergy succeeded in actually reducing emissions below 2000 levels. Entergy has now established a second formal voluntary program to stabilize power plant CO₂ emissions and emissions from controllable power purchases at 20% below 2000 levels through 2010 and continues to support national legislation that would increase planning certainty for electric utilities while addressing emissions in a responsible and flexible manner. **By virtue of its proportionally large investment in low- or non-emitting gas-fired and nuclear generation technologies, Entergy's overall CO₂ emission "intensity," or rate of CO₂ emitted per kilowatt-hour of electricity generated, is already among the lowest in the industry.** Total CO₂ emissions representing Entergy's ownership share of power plants in the United States were approximately 53.2 million tons in 2000, 49.6 million tons in 2001, 44.2 million tons in 2002, 36.8 million tons in 2003, 38.3 million tons in 2004, 35.6 million tons in 2005, 38.8 million tons in 2006, 40.2 million tons in 2007, and 43.9 million tons in 2008. In 2006, Entergy changed its method of calculating emissions and now includes emissions from controllable power purchases as well as its ownership share of generation, which accounts for the increase beginning in 2006 compared to the trend for the prior years.

Emissions Strategy

- The Company is actively pursuing investments in new generating facilities and technologies that will be highly efficient and will employ technologies to minimize CO₂ emissions and other air emissions through its Repowering NRG program. The Company anticipates that these investments will result in significant long-term GHG intensity reductions in its generating portfolio. The most notable of these projects in terms of the potential impact on the GHG intensity of the Company's portfolio is the 2,700 MW STP units 3 and 4 nuclear project in Texas. NRG has formed Nuclear Innovation North America, or NINA, a joint venture with the Toshiba American Nuclear Energy Corporation, to facilitate the development of STP 3 and 4 as well as additional nuclear projects. Further, in 2008, NRG's subsidiary, Padoma Wind Power, LLC, or Padoma, brought 270 MW of wind generating capacity on-line in west Texas at two facilities: (i) the 150 MW Sherbino I Wind Farm LLC, or Sherbino, a 50/50 joint venture with a subsidiary of BP Alternative Energy North America Inc., or BP, and (ii) the wholly-owned, 120 MW Elbow Creek Wind Power LLC facility. **The Company is actively developing low and no GHG emitting wind, solar, biomass and natural gas projects. The extent to which these projects, and the remaining coal projects under development, impact the Company's overall climate change exposure will depend on the Company's ability to complete development of these projects, the nature and geographic reach of any GHG regulation which goes into effect and the extent to which the climate change risk associated with our development projects is allocated between the Company and any offtakers under power purchase agreements or similar arrangements.**

Business Strategy and Capex

- A critical aspect of the Powering Virginia program is the extent to which we seek to reduce the carbon intensity of our generation fleet by developing generation facilities with zero CO₂ and low CO₂ emissions, as well as economically viable facilities that can be equipped for CO₂ capture and storage. There is no current economically viable technological solution to retro-fit existing fossil-fueled technology to capture and store greenhouse gas (GHG) emissions. Given that new generation units have useful lives of up to 55 years, we will give full consideration to CO₂ and other GHG emissions when making long-term decisions.

Capex, Cost and Strategy

Our new Virginia City Hybrid Energy Center which is currently under construction in Southwest Virginia will be a new source of GHG emissions, and we have taken steps to minimize the impact on the environment. The new plant is expected to use at least ten percent biomass for fuel and was designed to be carbon-capture compatible, meaning that technology to capture CO₂ can be added to the station when it becomes commercially available. Also, we have announced plans to convert our coal units at Bremo power station to natural gas, contingent upon the Virginia City Hybrid Energy Center entering service and receipt of necessary approvals.

Management Focus

Global climate change was another primary focus of management during 2008. Duke Energy's strategy for meeting customer demand while building a sustainable business that allows our customers and our shareholders to prosper in a carbon-constrained environment includes significant commitments to renewable energy, customer energy efficiency, advanced nuclear power, advanced clean-coal and high-efficiency natural gas electric generating plants, and retirement of older less efficient coal-fired power plants. In order to expand its wind energy operations, Commercial Power, through Duke Energy Generation Services (DEGS), acquired the wind power development assets of Energy Investor Funds from Tierra Energy in May 2007 and, in September 2008, acquired Catamount Energy Corporation (Catamount) from Diamond Castle Partners. DEGS currently has approximately 370 net MW of wind energy in operation and well over 5,000 MW of wind energy projects in the development pipeline. On June 6, 2008, Duke Energy Carolinas filed an application with the NCUC for approval of a Solar Photovoltaic (PV) Distributed Generation Program. The application seeks authorization to invest approximately \$100 million to install approximately 850 solar PV facilities on customer rooftops and other customer and company owned property over a two-year period, resulting in a total generating capacity of 20 MW.

Domestic Legislation

Duke Energy supports the enactment of federal GHG cap-and-trade legislation. Due to Duke Energy's concern about patchwork policies focused on a single industrial sector or particular region of the country, Duke Energy believes this legislation should establish a program that applies to all parts of the economy, including power generation, industrial and commercial sources, and motor vehicles. To permit the economy to adjust rationally to the policy, legislation should establish a long-term program that first slows the growth of emissions, stops them and then transitions to a gradually declining emissions cap as new lower-and non-emitting technologies are developed and become available for wide-scale deployment. Legislation should also include adequate cost-containment measures to protect the U.S. economy from grave and unintended impacts of the policy.

Duke Energy is unable to estimate the potential cost of complying with currently unspecified and unknowable future GHG legislation or any indirect costs that might result. Compliance costs are sensitive to numerous policy design details, allowance prices, and technology availability and cost.

International Agreements and U.S. Laws

The United States is not a party to the Kyoto Protocol. Instead, the U.S. greenhouse gas policy currently favors voluntary actions, continued research, and technology development over near-term mandatory greenhouse gas reduction requirements. Although several bills have been introduced in Congress that would compel carbon dioxide (CO₂) emission reductions, none have advanced through the legislature and presently there are no federal mandatory greenhouse gas reduction requirements. The likelihood of a federally mandated CO₂ emissions reduction program being enacted in the near future, or the specific requirements of any such regime, is highly uncertain. Several states have taken legislative or regulatory steps to manage greenhouse gas emissions, none of which will impact our operations. A number of U.S. states in the Northeast and far West are discussing the enactment of either state-specific or regional programs that could mandate future reductions in greenhouse gas emissions, or otherwise manage those emissions, although the outcome of those state discussions is highly uncertain. **We support the enactment of U.S. federal legislation that would be in the form of a federal-level carbon tax or other market based mechanism that provides the policy advantages of a carbon tax approach and also applies to all sectors of the economy.** Believing that it is in the best interest of its investors and customers to do so, [we are] actively participating in the evolution of federal policy on this important issue.

International Laws

- Most of the foreign countries in which NRG owns or may acquire or develop independent power projects have environmental and safety laws or regulations relating to the ownership or operation of electric power generation facilities. These laws and regulations, like those in the US, are constantly evolving and have a significant impact on international wholesale power producers. In particular, NRG's international power generation facilities will likely be affected by emissions limitations and operational requirements imposed by the Kyoto Protocol, an international treaty related to greenhouse gas emissions enacted on February 16, 2005, as well as country-based restrictions pertaining to global climate change concerns.

International Laws

- *MIBRAG/Schkopau, Germany*

Under the German National CO₂ Allocation Plan 2008 — 2012, MIBRAG was granted CO₂ allocations that are less than the needs of its three generating plants. MIBRAG has minimized the impact of the short allocation by coordinated forward selling of electricity and purchase of CO₂ certificates at times when the CO₂ / electricity spread is profitable. Additionally, MIBRAG has submitted an application under the hardship clause of the law to receive a higher allocation of the CO₂ allowances. The cost of compliance with the CO₂ regulation for NRG's Schkopau plant is passed through to its off-taker of energy under terms of its existing PPA.

- *Gladstone, Australia*

On December 3, 2007, Australia ratified the Kyoto Protocol that commits to targets for GHG reductions. Australia also set a target to reduce greenhouse gas emissions to 60% of 2000 levels by 2050. The government is establishing a single national system for reporting of GHG, abatement actions, and energy consumption and generation starting July 1, 2008. This will underpin the Australian Emissions Trading Scheme, currently in the early stages of design that will be operational no later than 2010.

Global Strategy

- Since fossil fueled power plants, particularly coal-fired plants, are a significant source of GHG emissions both in the US and globally, it is almost certain that future GHG legislative and regulatory actions will encompass power plants as well as other GHG emitting stationary sources. **In 2008, in the course of producing approximately 80 million MWh of electricity, NRG's power plants emitted 68 million tonnes of CO₂, of which 61 million tonnes were emitted in the US, 4 million tonnes in Germany, and 3 million tonnes in Australia. NRG emissions subject to RGGI were 12 million tonnes in 2008.** Federal, state or regional regulation of GHG emissions could have a material impact on the Company's financial performance. The actual impact on the Company's financial performance will depend on a number of factors, including the overall level of GHG reductions required under any such regulations, the degree to which offsets may be used for compliance and their price and availability, and the extent to which NRG would be entitled to receive GHG emissions allowances without having to purchase them in an auction or on the open market. Thereafter, the impact would depend on the level of success of the Company's multifold strategy, which includes (a) shaping public policy with the objective being constructive and effective federal GHG regulatory policy, and (b) pursuing its RepoweringNRG and econrg programs.