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SPECIAL REPORT

***Climate Change and Energy Efficiency:
Recent Decisions and Regulatory Developments under the Obama Administration***
A Reference for Companies

Introduction

During the 2008 United States Presidential elections then-candidate Barack Obama spoke of shifting the country to a “clean energy economy” to boost the competitiveness of American companies, spur innovation into advanced energy technologies, lower greenhouse gas (GHG) emissions, and create good jobs. When the 2nd *German-American Energy Conference* opens in Berlin on March 22, 2010, now-President Obama will just have celebrated his 14th month in office. As Obama prepares for his second year, it is instructive to ask: has he delivered on his promise to move America toward a “clean energy” economy that relies more on alternative forms of energy and less on fossil fuels? Has he taken action to reduce U.S. GHG emissions? Is he making progress on creating or preserving millions of “green jobs” to ignite the nation’s economy?

The short answer to these complex questions is “yes”. While many cite the absence of a national system to “cap & trade” GHG emissions as evidence that the U.S. is not making progress on environmental issues at the federal level, the Obama Administration has taken action on a range of environmental issues through Executive Orders, edicts to executive branch agencies and departments, and direct leadership. Taken together, the steps reorient the approach of the U.S. Federal Government to environmental and energy issues, and signal a dramatic shift from the posture adopted during the two Bush Administrations.

This **Special Report** examines several of the significant developments that have occurred since Obama took office, with emphasis on items that have relevance to the private sector. There are two parts to the report. The first part presents a “snapshot” of each issue examined: brief explanations of the essential facts accompanied by information of relevance to industry and service providers. The second part (**Annex**) provides added information for interested parties that require further details.¹

Overview

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¹ This report was prepared for the 2nd *German-American Energy Conference* held in Berlin on March 22-23, 2010 under the aegis of the German Federal Economics and Environment Ministries with support from the Association of German Chambers of Industry and Commerce (DIHK), the German-American Chambers of Commerce, and the Federation of German Industries (BDI). The author’s conference presentation can be downloaded at <http://www.rgit-usa.com/>.

1. Executive Order 13514: Federal Leadership in Environmental, Energy & Economic Performance

Last October, U.S. President Barack Obama issued an Executive Order (E.O. 13514)² to “establish an integrated strategy toward sustainability in the Federal Government and to make reduction of greenhouse gas emissions a priority for Federal agencies.” The sweeping Executive Order (hereafter: the Order), which expands on an Executive Order issued by former U.S. President George Bush (E.O. 13423)³, requires Federal agencies and departments (hereafter: the Agencies) to undertake steps to improve energy efficiency, lower GHG emissions, reduce water use, eliminate waste, increase use of renewable energy, construct and operate high performance buildings, and pursue sustainable procurement. To enhance transparency and accountability, the Agencies must disclose online actions that are taken pursuant to the Order.

Requirements

The U.S. Federal Government (the Government) is the nation’s largest user of energy. In 2008 the Government spent more than \$24.5 billion on electricity and fuel.⁴ The Order requires 35 Federal Agencies and Departments to meet certain environmental goals. The primary objective is to lower Government-wide GHG emissions by 28 percent by 2020. To comply with the Order, covered agencies and departments are required to improve their own environmental performance, and secure improved environmental performance from vendors, suppliers and other third parties. A recap of key requirements is provided in the chart below; additional details are available in the **Annex**.

What Companies Need to Know

Substantial reductions in Government energy use, accompanied by improved performance, efficiency and conservation in other areas, would yield tremendous cuts in GHG emissions and other environmental gains. The mandates in the Order present at least two opportunities for interested parties in the private sector.

First, agencies and departments may need assistance in improving their respective environmental performance. This relates to cutting GHG emissions, improving energy efficiency in agency buildings and other property, reducing water consumption and waste streams, and boosting the use of renewable energy, etc. This may present opportunities for consultants, energy efficiency specialists and other experts.

Second, to comply with the Order, federal agencies and departments must pursue sustainable procurement and require that vendors, suppliers and other third parties cooperate to improve environmental performance. This presents opportunities for service providers and other procurement companies that can demonstrate sustainable business practices, lower-carbon supply chains and environmentally-friendly products.

Conclusion

Executive Order 13514 seeks to implement a new, government-wide approach to integrating environmental objectives into agency and department operations with focus on curbing GHG emissions, boosting energy efficiency, reducing waste streams, and adopting sustainable procurement practices. The Order represents a sea change in how the U.S. Government operates, and may lead to significant environmental savings if the various goals and mandates are achieved. The Order represents potential opportunities for the private sector. As always, when seeking to do business with the federal government, companies should familiarize themselves with the applicable procurement policies, conduct thorough due diligence, and establish contacts to the given target agency or department.

² <http://edocket.access.gpo.gov/2009/pdf/E9-24518.pdf>.

³ <http://edocket.access.gpo.gov/2007/pdf/07-374.pdf>. See also <http://www.fedcenter.gov/programs/eo13423/>.

⁴ Press Release, The White House, January 29, 2010.

Executive Order 13514: Recap of Key Mandates

<u>Requirement</u>	<u>By</u>	<u>To</u>	<u>Timing</u> ⁵	<u>Status</u>
• Submit GHG reduction plan for Scope 1 and 2 emissions by FY 2020.	Agency Head	CEQ Chair; OMB Director	Within 90 days	DONE
• Submit GHG reduction plan for Scope 3 emissions by FY 2020.	Agency Head	CEQ Chair; OMB Director	Within 240 days	In-process
• Submit inventory of GHG emissions (scopes 1-3) for FY 2010.	Agency Head	CEQ Chair; OMB Director	Within 15 months	Open
• Submit inventory of GHG emissions (scopes 1-3) per annum (after FY 2010).	Agency Head	CEQ Chair; OMB Director	January for prior FY	Open
• Provide Government-wide target for cutting scope 1 and 2 GHG emissions by FY 2020.	CEQ Chair	President	Within 120 days	DONE
• Provide Government-wide target for cutting scope 3 GHG emissions by FY 2020.	CEQ Chair	President	Within 270 days	In-process
• Designate "Senior Sustainability Officer" (SSO).	Agency Head	CEQ Chair; OMB Director	Within 30 days	DONE
• Submit multi-year Strategic Sustainability Performance Plan.	SSO	CEQ Chair; OMB Director	Within 240 days	In-process
• Provide GHG reporting and accounting procedures for agency use.	FEMP	CEQ Chair	Within 180 days	In-process
• Provide capability to perform GHG reporting and accounting electronically.	FEMP	CEQ Chair	Within 1 year	Open
• Review existing policies and practices re site selection.	DOT (plus other)	N/A	Within 180 days	In-process
• Review current policies and practices re use of public transport by federal employees, use of renewable fuel vehicles in federal shuttle bus fleets, etc.	GSA (plus other)	N/A	Within 180 days	In-process
• Issue guidance on fleet management (use of alternative fuel, etc.).	DOE (plus other)	N/A	Within 180 days	In-process
• Provide recommendations on working with federal vendors/contractors re cutting scope 3 GHG emissions.	GSA (plus other)	CEQ Chair; OMB Office of Federal Procurement Policy	Within 180 days	In-process
• Issue guidance re storm water management.	EPA (plus other)	N/A	Within 60 days	DONE
• Develop and implement regional implementation plan.	FEE	N/A	Within 180 days	In-process
• Submit progress report re agency actions re national adaptation strategy.	CEQ Chair	President	Within 1 year	Open

Notes

CEQ Chair = Chair of the Council on Environmental Quality (CEQ)

OMB = Office of Management and Budget

FEMP = Federal Energy Management Program within the U.S. Department of Energy (DOE)

GSA = General Services Administration

EPA = U.S. Environmental Protection Agency

FEE = Federal Environmental Executive

⁵ Unless otherwise noted, all timing requirements refer to the date of the Executive Order (October 5, 2010).

2. EPA Establishes GHG Reporting Program

The EPA has created an economy-wide program for reporting greenhouse gas (GHG) emissions (the Program). The Program took effect on December 29, 2009. Starting January 1, 2010, entities that emit at least 25,000 metric tons of carbon-dioxide-equivalents (CO₂e) of GHG on an annual basis must report those emissions. Per the EPA, circa 10,000 facilities comprising 85 percent of U.S. GHG emissions will fall subject to the Program. The first reports (GHG Reports) must be submitted by March 31, 2011. The Program does not set limits on or otherwise control GHG emissions.⁶

Why EPA Took This Action

The FY 2008 Consolidated Appropriations Act authorized the EPA to spend at least \$3.5 million to “develop a mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy.”⁷ The agency was instructed to include emissions from upstream generation activities and downstream sources.⁸ The EPA issued the draft rule on April 10, 2009.⁹ The final rule (Final Rule) was published on October, 30, 2009.

The EPA makes clear that, while the funding provided through the FY2008 Consolidated Appropriations Act provided the impetus for the Program, the Clean Air Act (CAA) provides the legal basis. The agency points specifically to Sections 114 and 208.¹⁰ The broader point is that in authorizing the funding, Congress signaled interest in establishing a program to report GHG emissions. As indicated in the footnotes, Congress reaffirmed this interest in FY 2009 through additional funding.

The Significance of the Action

Technically, the Program created in the Final Rule stands apart from other actions that the EPA has taken, or is taking, with respect to the regulation of climate change. As noted, the EPA argues that it could have established the Program even without the FY 2008 and FY 2009 funding. The agency asserts the Program has no connection to the Supreme Court decision that triggered the agency’s work on regulating GHG emissions.¹¹ Still, the EPA underscores that it expects the information to be collected through the Program to be helpful to its efforts to monitor and potentially regulate issues associated with climate change, to aid Congress in its deliberations, and to support the myriad activities that are underway at the state level.¹²

With respect to other EPA activities under the CAA, information yielded through the Program could inform decision-making related to new source performance standards (Section 111); influence the treatment of mobile sources (Sections 202, 213 and 231); factor into the promulgation of fuel regulations (Section 211(c)); and contribute to how the agency implements non-regulatory strategies and technologies for improving air pollution (CAA Section 103(g)).¹³

⁶ The 261-page Final Rule (hereafter: EPA Final Rule) is available at <http://edocket.access.gpo.gov/2009/pdf/E9-23315.pdf>. *Federal Register*, Vol. 74, No. 209 (October 30, 2009). See also <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>.

⁷ Consolidated Appropriations Act, 2008, Public Law 110–161, 121 Stat. 1844, 2128 (2008). EPA Final Rule, FN1, pg. 56264. Congress provided more funding in FY 2009 (Consolidated Appropriations Act, 2009, Public Law 110–329, 122 Stat. 3574–3716). EPA Final Rule, FN1, pg. 56264.

⁸ Consolidated Appropriations Act, 2008, Public Law 110–161, 121 Stat. 1844, 2128 (2008). EPA Final Rule, FN 1, pg. 56264.

⁹ Approximately 16,800 public comments were submitted. EPA Final Rule, pg. 56264.

¹⁰ Section 114(a)(1) authorizes the EPA to require emissions sources to monitor and report emissions for the purposes of carrying out the CAA. Section 208 authorizes the gathering of information with respect to manufacturers of new motor vehicles or new motor vehicle engines.

¹¹ The agency responded to the decision (*Massachusetts v. EPA*, 127 S. Ct. 1438 (2007)) with a Final Rule declaring that GHG emissions endanger human health and that emissions from motor vehicles cause or contribute to GHG concentrations in the atmosphere. This lays the groundwork for direct regulation of GHG emissions by the EPA. See *Federal Register* Vol. 74, No. 239 (December 15, 2009). A number of companies and industry associations, U.S. states and other parties are challenging the “endangerment/cause-contribute” findings in court. There are efforts underway in Congress (disapproval resolutions) to block the EPA from proceeding with GHG emissions regulations.

¹² The Final Rule does not preempt any other state or regional programs.

¹³ For example: EPA’s voluntary GHG reduction programs such as the non-CO₂ partnership programs and ENERGY STAR. <http://www.energystar.gov/>.

The EPA engages in multiple programs to address climate change. Perhaps the most contentious activity is the prospect of the EPA setting GHG emissions limits under present legislative authority. The EPA is finalizing work on limits that would apply to automobiles and light trucks. As noted in the footnotes, these efforts face legal and legislative challenges. There is significant concern with regard to the prescription of GHG emissions limits for motor vehicles, and the prospect of future limits covering other sources, mobile and stationary.¹⁴

An economy-wide reporting program of GHG emissions would certainly provide information that would be of value in setting emissions limits. First, the reporting program will indicate the extent to which various sources are able to collect data necessary for an accurate computation of their respective emissions, and the cost associated with gathering the data. Second, as the Program includes upstream and downstream sources, the GHG Reports should provide insight into the extent to which the reporting rules result in an over-reporting (or under-reporting) of the covered emissions. Finally, the CAA generally focuses more on stationary than mobile sources. By including certain mobile sources in the Program, the EPA will gain information that may be valuable in assessing the feasibility and utility of subjecting mobile sources to greater regulation.

What Must be Reported

The Program covers the emissions of the six commonly referenced greenhouse gases, including carbon dioxide and methane.¹⁵ The scope is consistent with other leading climate change endeavors, including the work of the Intergovernmental Panel on Climate Change (IPCC). The six GHG are reported annually in the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks*.¹⁶

For many of the entities covered by the Program (e.g. generators of fossil fuels, suppliers of fossil fuels and industrial gases, facilities that produce emissions through combustion and process activities), the reporting threshold is annual emissions totaling at least 25,000 metric tons of CO₂e.¹⁷ However, facilities in certain source categories, such as petroleum refineries and cement factories, must comply regardless of emissions volume ("all-in" reporting). The agency is quick to note that, per its analysis, "all or nearly all [of the] facilities" within these source categories already emit more than 25,000 mtCO₂e per year.¹⁸ The Final Rule does not require facilities to report electricity purchases or indirect emissions from electricity consumption.

Who Must Report

The Final Rule applies to certain downstream facilities that emit GHGs (primarily large facilities) and to most upstream suppliers of fossil fuels and industrial GHGs, as well as to manufacturers of vehicles and engines.¹⁹ The universe of industrial entities covered by the Final Rule is described in two ways.

First, the Final Rule identifies **stationary** and **mobile** sources of GHG emissions that are covered by the Program. Second, the Final Rule covers certain "**upstream**" sources, such as fuels suppliers, which may generate direct GHG emissions but which also deliver supplies (e.g. fossil fuels) to customers that result in GHG emissions (e.g. through combustion of the fossil fuels); and "**downstream**" sources, such as steel mills, that emit GHG directly through their combustion and other industrial processes.²⁰

¹⁴ Indeed, the EPA notes that it is reviewing petitions requesting that it regulate emissions from multiple mobile sources.

¹⁵ The Final Rule requires reporting of annual emissions of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and other fluorinated gases (e.g., nitrogen trifluoride (NF₃) and hydrofluorinated ethers (HFEs)). EPA Final Rule, pg. 56264.

¹⁶ <http://epa.gov/climatechange/emissions/usinventoryreport.html>.

¹⁷ The EPA considered four possible thresholds: 1,000; 10,000; 25,000; and 100,000 metric tons of CO₂e emissions per year.

¹⁸ http://www.epa.gov/climatechange/emissions/ghg_faq.html#somesectors.

¹⁹ The requirements apply to the manufacturers, not the owners or sellers of motor vehicles.

²⁰ There is no ultimate distinction between stationary and mobile sources, and upstream and downstream sources. Each pair of terms describes, respectively, the full population of industrial entities that fall subject to the Program.

Most sources will report their GHG emissions at the facility level.²¹ However, vehicle and engine manufacturers, plus certain suppliers of fossil fuels and industrial gases, will report at the corporate level. Covered facilities are required to report the facility's GHG emissions from all source categories for which the Final Rule prescribes GHG emission methods. In addition to reporting the facility's total GHG emissions, the report must show emissions broken out by source category within the facility. In some cases, emissions from source categories must be distilled further into emissions by process line or unit.²²

The EPA emphasizes that the enumeration of source categories and facilities that may fall subject to the Program is not exhaustive, and that parties seeking clarity should contact the agency.²³ The Final Rule refers to the population of sources and facilities that must submit the GHG reports as "Reporters".

Stationary Sources

Covered stationary sources include: facilities operating boilers, process heaters, incinerators, turbines, and internal combustion engines; extractors of crude petroleum and natural gas; pulp and paper mills; chemical manufacturers; petroleum refineries, and manufacturers of coal products; steel works and blast furnaces; manufacturers of motor vehicle parts and accessories; fossil fuel-fired utilities; cement manufacturers; solid waste landfills; beef cattle feedlots; dairy cattle and hog farms; natural distribution facilities; and carbon black manufacturing facilities.²⁴

Mobile Sources

Covered mobile sources include: heavy-duty, off-road, aircraft, locomotive and marine diesel engine manufacturing facilities; personal watercraft manufacturing facilities; and motorcycle manufacturing facilities.²⁵ The Program does not apply to the manufacturers of light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles.

The Program will require most motor vehicle manufacturers to report on the emissions of three GHG: carbon dioxide (CO₂), nitrous oxide (N₂O) and methane (CH₄). Whereas reporting of CO₂ emissions will start with 2011 model year vehicles, the methane requirements kick in with the 2012 model year, and the nitrous oxide reporting commences with the 2013 model year.²⁶ For aircraft engine manufacturers, reporting requirements will apply for the engine models in production in 2011.

Imports/Exports

The Program extends to certain importers and exporters, for example, the producers of coal-to-liquid fuels, if they meet the GHG emissions applicability criteria based on annual direct emissions or the annual quantity of product supplied.²⁷ Importers and exporters of coal-to-liquid fuels that import (or export) yearly at least 25,000 metric tons CO₂e are required to participate in the Program. Most suppliers have to report at the facility level; imports and exports are reported at the corporate level.²⁸

²¹ For the purposes of the Final Rule, facility means "any physical property, plant, building, structure, source, or stationary equipment located on one or more contiguous or adjacent properties in actual physical contact or separated solely by a public roadway or other public right-of-way and under common ownership or common control, that emits or may emit any greenhouse gas." EPA Final Rule, FN 4 pg. 56266.

²² Suppliers report quantities of GHG supplied and the quantity of CO₂e that could be emitted when the supplies are combusted or used.

²³ See Tables 1 and 2 on pages 56260-62 for additional information on covered sources and facilities.

²⁴ The only emission source in the agriculture sector covered by the Final Rule is manure management systems at livestock operations with GHG emissions at or above the 25,000 mt threshold. The EPA claims that circa 100 manure management systems at large livestock operations meet the threshold. <http://www.epa.gov/climatechange/emissions/downloads09/FactSheet.pdf>.

²⁵ The terms "manufacturer," and "manufacturing company," refer to companies that are subject to EPA emission certification requirements. This includes companies that manufacture engines domestically and foreign manufacturers that import engines into the U.S. The coverage may extend in some cases to domestic companies that are required to meet EPA certification requirements when they import foreign-made engines.

²⁶ See Table IV on page 56353 of the Final Rule for specifics.

²⁷ Supplied means produced, imported, or exported.

²⁸ Suppliers include producers, importers, and exporters of fuels and industrial gases.

Who is Not Yet Covered

The Program does not yet include GHG emissions associated with the source categories listed below (referred to in the regulations as “subparts”). **Update:** On March 22, EPA Administrator Jackson issued reporting standards for fluorinated GHG production facilities; petroleum and natural gas industry facilities; and facilities that inject carbon dioxide for sequestration or enhanced oil and gas recovery (see italics below). Interested parties have 60 days to submit comment once the proposed rules are published in the *Federal Register*.²⁹

- Electronics manufacturing
- Ethanol production
- *Fluorinated GHG production*
- Food processing³⁰
- Magnesium production
- *Oil and natural gas systems*
- SF6 from electrical equipment
- Underground coal mines³¹
- Industrial landfills
- Wastewater treatment
- Suppliers of coal

Program Costs

According to the EPA, the Program will cost \$132 million in the first year, and \$89 million per year going forward.³² The burden falling to the private sector would be \$115 million and \$72 million, respectively.³³ With regard to costs borne by the private sector, it is estimated that general stationary combustion sources would incur circa 26 percent of costs in the first year; and that pulp and paper manufacturers, as well as vehicle and engine manufacturers would each bear circa 9 percent of the first-year Program costs. Based on its analysis, the EPA does not expect Program costs to pose a burden on the financial resources of affected companies.

What Companies Need to Know

Affected or potentially affected Companies should review the Final Rule to comprehend the respective rules and requirements to ensure compliance. The following elements may be of particular interest to Reporters:

- *Best Available Monitoring Methods.* Through March 31, 2010, Reporters can, under limited circumstances, use “best available monitoring methods” to gather data on GHG emissions instead of complying with the monitoring requirements in the Final Rule. From April 1, 2010, Reporters must abide by the Final Rule.³⁴ Best available monitoring methods include: 1) monitoring methods used by the Reporter; 2) supplier data; 3) engineering calculations; and 4) other company data.
- *Electronic Submission.* The reports must be submitted electronically.³⁵
- *Signed Declaration.* Each must report must contain a signed certification indicating under penalty of law that the report has been prepared in accordance with the applicable regulations and that the information contained in the report is true and accurate.

²⁹Details concerning the various subpart requirements are accessible at <http://www.epa.gov/climatechange/emissions/subpart.html>.

³⁰The Final Rule notes that, while the food processing subpart is not being finalized, stationary fuel combustion sources at food processing facilities are subject to the reporting requirements if the general stationary fuel combustion emissions exceed the 25,000 mtCO₂e threshold.

³¹For now, the EPA is not promulgating subpart requirements for suppliers of coal.

³²EPA Final Rule, pp. 56362-63.

³³<http://www.epa.gov/climatechange/emissions/downloads09/FactSheet.pdf>.

³⁴Within 30 days of the Final Rule’s effective date (December 29, 2009) Reporters seeking postponement beyond April 1, 2010 could submit a request to the EPA. The EPA will not approve the use of best available methods beyond December 31, 2010.

³⁵The EPA is developing the system and plans to provide Reporters with training and instructional materials prior to the reporting deadlines.

- *Data Retention.* Reporters are required to retain for three years records that are necessary to enable the EPA to verify the data submitted in the GHG reports and to perform other audit procedures.
- *Leaving Program.* Apart from “permanently” discontinuing their GHG-emitting operations, Reporters are permitted to exit the Program under two circumstances: 1) the GHG report shows annual emissions less than 25,000 metric tons of CO₂e for five consecutive years;³⁶ or 2) the GHG report shows annual emissions of less than 15,000 metric tons CO₂e for three consecutive years. In both cases, the Reporter must notify the EPA beforehand of the intent to stop reporting. Entities must resume reporting if emissions rise again to hit or exceed the threshold (25,000 metric tons).
- *Self-Certification + 3rd Party Verification.* Reporters are required to self-certify the accuracy and integrity of the data that is contained in the GHG reports, buttressed by verification by the EPA.
- *Report Corrections.* Reporters have 45 days to correct erroneous information that has been submitted in a GHG report, and to submit an updated report. The EPA intends to review the reports via electronic data quality assurance checks and other verification procedures.
- *Research & Development (R&D).* On balance, the Final Rule does not include GHG emissions associated with R&D activities.³⁷ Pilot plants, however, are not scoped out from the Program. Pilot plants that meet the Program criteria must file reports on their emissions.³⁸
- *Enforcement.* The EPA can take action against Reporters that do not comply with the Final Rule. This could include administrative and civil fines (up to \$37,500 per day per violation), criminal penalties, and injunctive relief. Violations could be triggered by: failure to report GHG emissions;³⁹ failure to collect data needed to calculate GHG emissions; failure to monitor and test as required; failure to keep records needed to verify reported GHG emissions; and falsification of reports.

Conclusion

Environmental organizations generally applaud the Program, especially given the inability of Congress to enact climate change legislation. While industry groups welcomed changes that were made to the Draft Rule, there is concern that the Program will not preempt similar state and regional programs. The patchwork of programs can burden companies and other emitters with complex, costly and potentially conflicting requirements. Other private sector organizations, including the National Association of Manufacturers, urged the EPA to set the reporting threshold at 100,000 metric tons of CO₂e to ensure the Program only captured the largest GHG emitters.

Business entities that already collect data on GHG emissions, whether voluntarily or pursuant to other mandates, may be able to comply with the Program without incurring significant additional expense. Covered entities with less experience in tracking and reporting GHG emissions may have to invest substantial resources to satisfy the measuring, computational, reporting and other requirements. As the obligation to start collecting data on GHG emissions commenced January 1, 2010, large emitters should review the Final Rule as soon as possible to determine if they fall within the applicability criteria, and, if they do, develop a plan of action to ensure compliance with the applicable requirements.

³⁶ Suppliers would need to show that the products they supplied correlate to less than 25,000 metric tons of CO₂e on an annual basis for five consecutive years. In this case, the Reporter would be obligated to retain the accompanying GHG-data for the five year period.

³⁷ The Final Rule defines R&D as “activities conducted in process units or at laboratory bench scale settings whose purpose is to conduct R&D for new processes, technologies, or products, and whose purpose is not for the manufacture of products for commercial sale, except in a *de minimis* manner.” EPA Final Rule, pg. 56285.

³⁸ The EPA argues that, in contrast to R&D activities, “pilot plants tend to be relatively large in scale ...and because [they] are designed to prove the viability of a particular process or technology rather than to research a wide range of processes and products, their operations and emissions are more consistent than [those of] the excluded R&D activities.” EPA Final Rule, pg. 56285.

³⁹ For suppliers, the GHG emissions that would result from combustion or use of the products that they supply.

3. SEC Issues Climate Change Disclosure Guidance

The U.S. Securities and Exchange Commission (SEC) requires the issuers of securities (“registrants”) that are traded in the U.S. to disclose information about financial performance, operations, and risks that may be relevant to investors (and other stakeholders). While certain matters must be disclosed regardless of their value or qualitative importance, most other matters need only be disclosed if deemed to be **material**.⁴⁰

The complex disclosure requirements apply to U.S. and foreign firms that issue securities in the U.S. U.S. companies file “10-K” Reports. Foreign companies file “20-F” Reports.⁴¹ They can be accessed online.⁴² From time to time the SEC issues interpretive releases to provide guidance on a particular topic.⁴³ This permits the SEC to elaborate its views and clarify the interpretation of U.S. federal security laws and SEC regulations.

On February 8, 2010, in response to pressure from institutional investors like the California Public Employees’ Retirement System (CalPERS) and Ceres,⁴⁴ and the Treasurers of Connecticut, Maryland and Vermont, the SEC issued interpretive guidance regarding the disclosure of information related to climate change.⁴⁵ The guidance takes effect as of February 8, 2010. Its purpose is to “provide guidance regarding the Commission’s existing disclosure requirements as they apply to climate change matters,” not to create new mandates.

What Disclosure Rules Apply

SEC disclosure requirements are based on Regulations S-K and S-X. There are several rules in particular which may require disclosure relating to climate.

1. *Description of Business*. Registrants must describe their business: products, services, customers, etc. Registrants must disclose, if material, the effects of complying with environmental laws on capital expenditures, earnings and competitive position. (Item 101 of Regulation S-K)
2. *Legal Proceedings*. Pending material legal proceedings to which the registrant (or any of its subsidiaries) is a party must be disclosed. Environmental litigation must be disclosed under certain circumstances. (Item 103 of Regulation S-K)
3. *Risk Factors*. Registrants must discuss risk factors that make an investment in it speculative or risky. The risks should reflect the registrant’s business in clear terms. (Item 503(c) of Regulation S-K)
4. *Management’s Discussion and Analysis*. Registrants must discuss their financial condition and results of operations, including future prospects.⁴⁶ In determining whether to disclose information regarding contingent or speculative information, registrants must balance the likelihood of occurrence against the magnitude of effect. (Item 303 of Regulation S-K)
5. *Foreign Private Issuers*. Disclosure requirements for foreign private issuers (a foreign national or corporation incorporated under the laws of a foreign country)⁴⁷ are governed by the Form 20-F rules.⁴⁸ Disclosure regarding climate change may be necessary pursuant to the following:
 - Item 3.D –requires disclosure of material risks;
 - Item 4.B.8 –requires description of the material effects of government regulation on the issuer’s business and identification of the particular regulatory body;

⁴⁰ See Annex for an extended definition of materiality.

⁴¹ Form available at <http://www.sec.gov/about/forms/form20-f.pdf>.

⁴² <http://www.sec.gov/edgar/searchedgar/companysearch.html>.

⁴³ <http://www.sec.gov/rules/interp.shtml>.

⁴⁴ Ceres is a national network of investors, environmental organizations and other public interest groups working with companies and investors to address sustainability challenges such as global climate change. <http://www.ceres.org/>.

⁴⁵ <http://edocket.access.gpo.gov/2010/pdf/2010-2602.pdf>. Hereafter: SEC Guidance Document.

⁴⁶ Item 303(a) of Regulation S-K requires registrants to disclose any other information deemed to be necessary to an understanding of financial condition, changes in financial condition and results of operations.

⁴⁷ See Securities Exchange Act of 1934, Rule 3b-4.

⁴⁸ The Form 20-F rules are similar to the Form S-K rules.

- Item 4.D – requires description of environmental issues that may affect asset use;
- Item 5 – requires management to explain factors that affected financial condition and operations in prior periods, and to assess factors anticipated to have a material effect on financial condition and operations in future periods;
- Item 8.A.7 – requires information on legal or arbitration proceedings which may have, or have had in the recent past, significant effects on financial position or profitability.

What Information Is Covered

The SEC guidance enumerates certain topics that, **if material**, would have to be disclosed in connection with information related to climate change. When considering the extent to which climate change-related information should be included in a SEC filing, management should review the following potential sources:

1. *Impact of Legislation and Regulation.* Management should review the effects of U.S. climate change legislation and regulation, at the federal and sub-national levels, for materiality. The review should cover enacted laws and regulations plus known pending legislation and regulation. Management should review for positive (favorable) as well as negative consequences.
2. *International Accord.* Management should review the impact of international climate change agreements, such as the Kyoto Protocol, and disclose the effects when material.
3. *Indirect Consequences of Regulation or Business Trends.* Management should review 2nd order consequences and trends– legal, technological, political developments – and disclose if material.
4. *Physical Impacts of Climate Change.* Management should review whether the physical effects of climate change – increased sea level, drought, erosion, damaged farm land, extreme weather events – could be material to operations and financial results.

What Companies (Registrants) Need to Know

The SEC’s guidance is relatively general. Clarification can be expected as SEC staff review SEC filings.⁴⁹ Complying with certain requirements, such as determining the climate-relevant effects of pending legislation, may prove more difficult. The following tips may assist registrants with their compliance efforts:

- Be Specific – the SEC seeks information, especially regarding risks, that is specific to the registrant. Filings with generic or catch-all information are not appropriate.
- Check SEC Activity – registrants can review the SEC’s approach to other current issues, e.g. executive pay, to get a sense of how the climate change disclosure guidance may be handled in a live situation.
- Ask Around – communicate with business partners to ascertain comments the SEC may have made on disclosures filed by companies with similar operations or business models.
- Create Climate Change Officer – larger registrants may wish to create a senior-level “climate change officer” to direct the compliance with climate change-related disclosure and reporting requirements.
- Insurance – while most “Directors and Officers” policies provide coverage against state, SEC and shareholder lawsuits, they may not cover claims based on “pollution”. Registrants ought to review their policies to ascertain the need for changes to lower potential exposure to GHG-pollution actions.

Conclusion

It is noteworthy that the SEC took time to issue this guidance, given the other pressing items on its agenda. Registrants can expect closer scrutiny of climate change-related risks and disclosures in future SEC filings.

⁴⁹ Registrants should note that filings reviews could lead to SEC enforcement action.

4. NAIC Adopts Climate Change Disclosure Project

Last year, the National Association of Insurance Commissioners (NAIC) adopted a project that requires large, U.S.-domiciled insurance companies to disclose risks related to climate change as well as steps that are being taken to address the risks. The project is overseen by the NAIC's Climate Change and Global Warming Task Force (the Task Force), created in 2007 and located within the NAIC's Executive Committee.⁵⁰

Pennsylvania Insurance Commissioner Joel Ario, Chair of the Task Force, stated: "Climate change will have huge impacts on the insurance industry and we need better information on how insurers are responding to the challenge. As regulators, we are concerned about how climate change will impact the financial health of the insurance sector and the availability and affordability of insurance for consumers. This disclosure standard will give regulators the information we need to better understand these risks."

The survey reporting requirements take effect in two stages. For the first batch of reports covering 2009, all insurance companies with annual premiums of \$500 million or more are required to complete the "Insurer Climate Risk Disclosure Survey." For the second wave of reports covering 2010, the threshold is lowered to \$300 million or more in premiums. This constitutes circa 95 percent of the U.S. insurance market.⁵¹ Both groups of surveys are due on May 1, 2010.

The surveys must be submitted to the department of insurance in the state where the insurance company is domiciled. The state of domicile will take the lead in handling insurers that are active in multiple states. The Task Force will review the survey responses also, with a view to revising future iterations of the survey.

What Companies Need to Know

The survey consists of the following eight questions:

1. Does the company have a plan to assess, reduce or mitigate its emissions in its operations or organizations? If yes, please summarize.
2. Does the company have a climate change policy with respect to risk management and investment management? If yes, please summarize. If no, how do you account for climate change in your risk management?
3. Describe your company's process for identifying climate change-related risks and assessing the degree that they could affect your business, including financial implications.
4. Summarize the current or anticipated risks that climate change poses to your company. Explain the ways that these risks could affect your business. Include identification of the geographical areas affected by these risks.
5. Has the company considered the impact of climate change on its investment portfolio? Has it altered its investment strategy in response to these considerations? If so, please summarize steps you have taken.
6. Summarize steps the company has taken to encourage policyholders to reduce the losses caused by climate change-influenced events.
7. Discuss steps, if any, the company has taken to engage key constituencies on the topic of climate change.
8. Describe actions your company is taking to manage the risks climate change poses to your business including, in general terms, the use of computer modeling.

⁵⁰ http://www.naic.org/committees_ex_climate.htm. The mission of the Climate Change (EX) Task Force is to "serve as coordinator of the NAIC analysis of the impact of climate change on insurance consumers, insurance providers and insurance regulators. The Task Force shall examine the implications of climate change on insurer solvency, the availability of affordable insurance coverage for the nation's insurance consumers and its impact on insurance regulation." http://naic.org/committees_ex.htm.

⁵¹ Remarks by Sean Dilweg, Commissioner of Insurance, State of Wisconsin, during the "Disclosures of Climate Change Impacts: A Look at the SEC's Recent Ruling" webinar hosted by the Association of Climate Change Officers (ACCO) on February 22, 2010.

Critique from the Insurance Industry

While investment organizations like Ceres support the NAIC survey project, it has met with resistance within the insurance community. In a “Legal Backgrounder” authored for the Washington Legal Foundation, Robert Detlefsen, Vice President of Public Policy at the National Association of Mutual Insurance Companies, criticized the survey for obligating insurance companies to provide extensive information with regard to risks associated with climate change-influenced events.⁵²

Detlefsen argues that, in contrast to performing risk analysis with regard to weather-related risks, such as hurricanes and tornadoes, where insurers can access credible historical and climatological data for the purpose of advising property owners on steps they can take to avoid loss and minimize exposure, there simply is not enough concrete data on which to base risk assessment on climate change-induced events.⁵³ Assessing risk is difficult enough in the face of insufficient or preliminary data. Taking the next step – requiring insurance companies to disclose actions that they are taking in response to these poorly understood, uncertain risks (Detlefsen’s view) – as required in the NAIC survey, is even less responsible. Insurance regulators should proceed cautiously in implementing mandatory disclosure programs connected with climate change: the “coercive effect” of such a program, even if well intended, could lead to adverse unintended consequences, such as pressuring insurers to adopt positions based on popular opinion versus sound, actuarially-supported data.⁵⁴

About the NAIC

Formed in 1871, the NAIC is a voluntary organization of the chief insurance regulatory officials of the 50 U.S. states, the District of Columbia and the five U.S. territories. The NAIC Executive Office is in Washington, D.C. The NAIC serves the needs of consumers and the industry, providing support to the state insurance regulators in connection with their efforts to protect consumers and maintain the financial stability of the insurance marketplace.⁵⁵

Conclusion

The NAIC survey project underscores growing interest within the investor community to obtain data regarding climate change, and to put pressure on regulators in the financial and insurance markets to require that regulated entities (insurance companies, investment banks, companies with publicly traded securities) enhance their examination and reporting of risks associated with climate change, and engage in appropriate measures to respond to the risks. While insurance companies contribute minimal GHG emissions compared to manufacturing plants and fossil fuel generators, they engage with companies and consumers across the economy. As policymakers continue to grapple with the domestic and international dimensions of climate change, and global markets adjust to emerging notions of climate change-based risk, the insurance industry may become more closely involved in the development of climate change mitigation and adaptation strategies. It may also fall subject to greater scrutiny by regulators and other interested parties.

⁵² “MANDATED ‘CLIMATE RISK’ DISCLOSURE: TURNING PROFESSIONAL ACTIVISTS INTO INSURANCE INSPECTORS,” Robert Detlefsen, Washington Legal Foundation, Legal Backgrounder, Vol. 24, No. 15, May 8, 2009, pg. 2. Detlefsen cites Ceres as a motive force in pressuring the NAIC to adopt the survey. Ceres played an important role in lobbying the SEC to issue the guidance on climate change disclosure.

⁵³ *Ibid*,

⁵⁴ *Ibid*, pg. 4.

⁵⁵ <http://naic.org/>. NAIC members are the elected or appointed state government officials who along with their departments and staff regulate the conduct of insurance companies and agents in their respective state or territory.

Conclusion

As evidenced by the developments examined above, the Obama Administration is taking swift and decisive action on a number of climate, energy and environmental issues, even as it pushes a tremendously ambitious policy agenda. While the fate of comprehensive federal energy and climate change legislation in the U.S. Congress remains unclear, the executive branch, under Obama's leadership, is making progress in a number of key areas. These efforts are augmenting a plethora of activities that are under way at the regional, state and local levels. Increasingly, U.S. agencies and departments, such as the U.S. Securities and Exchange Commission, which do not have primary authority over energy and environmental issues, are becoming active in these areas in response to popular opinion, requests by interested parties, directives by the White House, and a growing recognition that "green" issues affect broad swaths of the U.S. and global economies.

These developments, and others not explored herein, present significant opportunities for the private sector. They also carry the potential for more stringent regulations that can drain financial and other resources. In his 2010 State of the Union Address President Obama reaffirmed his commitment to developing, manufacturing and selling clean energy products, to bolstering American innovation, especially in the energy sector, and to passing a comprehensive energy and climate bill. While the programs and regulatory decisions described in this Special Report can achieve a lot, they are no substitute for a unified, national approach to cutting GHG emissions, boosting energy efficiency, and pursuing other environmental objectives. It remains to be seen if Congress can match the President's enthusiasm and near-term results.

About the Author



David W. Campbell, Esq.
Director of Trade Policy
Office of the Representative of German Industry + Trade

Campbell manages the trade portfolio in the Washington, D.C. representation office for the Federation of German Industries (BDI) and the Association of German Chambers of Industry & Commerce (DIHK). Priority issues include U.S. climate, energy and environmental policy; U.S. trade policy; and transatlantic economic affairs. Campbell advises the BDI and the DIHK on key U.S. legislative, regulatory and statutory developments, briefs German and European business and political delegations, and delivers presentations to Members of Congress and executive branch officials on German laws, policies and technology.

Prior to joining RGIT Campbell worked at Ecologic Institute in Berlin and the Saxon State Ministry of the Environment and Agriculture in Dresden as a Fellow in the Robert Bosch Foundation Fellowship for Young American Leaders. Prior to studying law Campbell worked as a CPA at Arthur Andersen LLP for six years.

Campbell studied German Studies and Modern European Politics at Yale, Accounting at the University of Hartford, and Law at the Indiana University Maurer School of Law. He has served as a guest lecturer at the McDonough School of Business at Georgetown University, and at American University. He lives in the District of Columbia with his wonderful wife Amanda. dcampbell@rgit-usa.com.

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ANNEX

EXECUTIVE ORDER 13514

The objective of Executive Order (E.O.) 13514 (the Order) is to “establish an integrated strategy toward sustainability in the Federal Government and to make reduction of GHG emissions a priority for Federal agencies.” The Order expands on E.O. 13423 issued by former President George Bush⁵⁶. To enhance transparency and accountability, Agencies must disclose online actions that are taken pursuant to the Order.

Energy Use by U.S. Federal Government

The U.S. Federal Government (the Government) is the nation’s largest user of energy. In 2008 the Government spent more than \$24.5 billion on electricity and fuel.⁵⁷ This represents nearly 2 percent (1.1 quadrillion trillion BTUs) of the nation’s total energy use.⁵⁸ **Mobility** accounts for two-thirds of the Government’s energy use.⁵⁹ The U.S. Department of Defense accounts for 85 percent of mobility-related energy use (70 percent jet fuel, 14 percent navy fuel).

Federal buildings account for nearly 32 percent (389 trillion BTUs) of Government energy use. The Government operates more than 500,000 facilities (3 billion square feet). Within the building component, 50 percent relates to electricity use, 34 percent to natural gas use. With respect to energy use by agency, the Department of Defense accounts for 56 percent of the buildings-related energy use, the U.S. Postal Service and U.S. Department of Energy each account for 8 percent, and the U.S. Department of Veterans Affairs accounts for seven percent.

Substantial reductions in energy use by the Government, accompanied by improved efficiency and conservation in other areas, would yield tremendous cuts in GHG emissions. As the Department of Defense accounts for the lion’s share of the Government’s energy use, efforts to lower emissions and improve environmental performance will be dictated in large measure by changes associated with military operations.

Requirements

The Order requires 35 Federal Agencies and Departments to meet certain environmental goals. The broad goal is to cut Government-wide GHG emissions by 28 percent by 2020. Key requirements include:

1. *GHG Reductions*. Each agency must submit a target for curbing absolute GHG emissions by fiscal year (FY) 2020, relative to a 2008 baseline. The Order distinguishes between scope, 1, 2 and 3 emissions.⁶⁰ Scope 1 and 2 Reductions can come from: lowering energy intensity in agency buildings; increasing use of renewable energy; implementing renewable energy projects on agency property; curbing use of fossil fuels (e.g. using low-GHG emitting vehicles, optimizing the number of vehicles in an agency fleet). Agencies with fleets comprising at least 20 motor vehicles must lower petroleum use by at least 2 percent annually through FY 2020, relative to a 2005 baseline.

⁵⁶ <http://edocket.access.gpo.gov/2007/pdf/07-374.pdf>.

⁵⁷ Press Release, The White House, January 29, 2010.

⁵⁸ PowerPoint presentation by Richard Kidd, U.S. Department of Energy, February 26, 2010. BTUs is the abbreviation for “British Thermal Unit”.

⁵⁹ Facts and figures cited in paragraph taken from Kidd’s PowerPoint presentation.

⁶⁰ Scope 1 emissions are direct GHG emissions from sources that are owned or controlled by the Federal agency. Scope 2 emissions are direct GHG emissions resulting from the generation of electricity, heat, or steam purchased by a Federal agency. Scope 3 emissions are GHG emissions from sources not owned or directly controlled by a Federal agency but related to agency activities such as vendor supply chains, delivery services, and employee travel and commuting.

Scope 3 reductions can come from conferring with vendors and contractors to lower the carbon content in supply chains, products, services and utilities provided; and implementing strategies to lower the carbon content of employee commuting, travel, transit and training.

2. *GHG Emissions Inventory.* Each agency must submit a detailed inventory of GHG emissions.
3. *Water Use Efficiency.* Each agency must reduce potable water consumption intensity by 2 percent annually through FY 2020 (or in aggregate 26 percent), relative to a 2007 baseline, through water management strategies (e.g. low-flow fixtures). Each agency must reduce industrial, landscaping and agricultural water consumption by 2 percent annually through FY 2020 (or 20 percent *in toto*), relative to a 2010 baseline. Agencies must comply with storm water guidance.
4. *Waste Prevention.* Each agency shall divert at least 50 percent of non-hazardous solid waste (with exceptions) by the end of FY 2015; divert at least 50 percent of construction and demolition debris by the end of FY 2015; curb paper use; minimize toxic chemicals used; remove compostable materials from the waste stream; and implement integrated pest management practices.
5. *Regional Planning.* Each agency shall align Federal policies to link with local energy planning objectives, such as greater use of locally generated electricity; ensure that planning for new Federal facilities or leases takes account of sites that are pedestrian-friendly, accessible via public transportation and near existing employment centers; identify and analyze impacts associated with energy use and alternative energy sources in all Environmental Impact Statements and Environmental Assessments for new or expanded Federal Facilities; and coordinate with Federal, State, Tribal and Local authorities for watershed and ecosystem management.
6. *High Performance Buildings.* Each agency shall ensure that all new Federal buildings that enter the planning process from 2020 are designed to achieve zero-net-energy by 2030; ensure that all new construction and major renovation/repair of Federal buildings complies with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings* (Guiding Principles);⁶¹ ensure that at least 15 percent of existing buildings (above 5,000 sq. ft.) and building leases (above 5,000 sq. ft.) comply with the Guiding Principles by FY 2015, with annual progress toward 100 percent conformance; pursue cost-effective strategies to minimize consumption of energy and water (e.g. vegetated roofs); and manage building systems to reduce energy, water and materials use.
7. *Procurement.* Each agency is obligated to ensure that 95 percent of new contract actions (including task and delivery orders for products and services, excepting weapon systems), where consistent with agency performance requirements, is energy efficient, water-efficient, bio-based, non-ozone depleting, contains recycled content, is non-toxic, etc.
8. *Electronics Stewardship.* Each agency shall assign procurement preference for EPEAT-registered (Electronic Product Environmental Assessment Tool) products; implement policies to enhance energy efficient features on agency electronic products; ensure the procurement of Energy Star and FEMP-designated (Federal Energy Management Program) electronic equipment; and observe best-practices for energy-efficient management of servers and data centers.
9. *Environmental Management.* Each agency is required to continue the implementation of formal environmental management systems at all organizational levels; and ensure that these systems are appropriately implemented to help achieve the goals set forth in the Order.

Strategic Sustainability Performance Plan

Starting in FY 2011 (October 1, 2010) through FY 2021, each agency must craft and implement a comprehensive Strategic Sustainability Performance Plan (the Plan) that prioritizes agency action based on lifecycle return on investment. Each Plan is required to include a policy statement committing the agency to

⁶¹ http://www.energystar.gov/ia/business/Guiding_Principles.pdf.

comply with environmental and energy statutes, regulations and Executive Orders; achieve the sustainability goals set forth in the Order; be integrated into the Agency's strategic planning and budget process; identify agency activities and procedures, including as applicable new or revised procedures and activities, that will promote attainment of the Order's objectives; identify inter-agency benchmarks for tracking progress toward implementing the Order; consider environmental as well as economic and social factors when evaluating projects and activities via lifecycle return on investment; make available online information regarding the agency's compliance with the Order; assess the agency's climate change risks and vulnerabilities; highlight projects with net lifecycle benefits, and continue phasing out projects with net lifecycle costs.

Duties

The Order vests substantial responsibility in the Office of Management and Budget (OMB), the Council of Environmental Quality (CEQ), the Federal Environmental Executive (FEE), and the Department of Energy's Federal Energy Management Program (FEMP). The various responsibilities include the following:

- OMB. The Director of the OMB is required to review and approve each agency's multi-year Strategic Sustainability Performance Plan (the Plan) (NB: the CEQ Chair only has power to review and evaluate the Plan); ideally in concert with review of the agency's budget request; prepare and publish online scorecards that grade agency progress in implementing the Order; issue instructions to the agency heads regarding budget and appropriations matters associated with the Order's implementation.
- CEQ. The Chair of the CEQ is required to issue guidance regarding GHG accounting and reporting; review and approve, in consultation with the OMB Director, each agency's GHG-reduction targets; develop metrics, in coordination with the OMB Director, to determine agency progress toward its GHG-reduction targets; review and evaluate each agency's multi-year Strategic Sustainability Performance Plan (the Plan); provide the President with aggregate Government-wide GHG-reduction target for scope 1-3 emissions; administer the Presidential leadership awards program that recognizes agency performance and extraordinary innovation to achieve the goals of the Order.⁶²
- FEE. The Federal Environmental Executive, designated by the President, is required to identify strategies and tools to accomplish the requirements of the Order; monitor and advise the CEQ Chair and OMB Director regarding agency implementation of the Order.
- FEMP. The Federal Energy Management Program, located within the U.S. Department of Energy, is required, in coordination with other U.S. agencies and departments including the EPA, the Department of Defense and the Department of Commerce, to develop GHG reporting and accounting procedures for agency use in meeting their obligations under the Order; provide capability for the electronic accounting and reporting of GHG emissions; examine the need for revised federal GHG reporting requirements every three years
- Senior Sustainability Officer – Senior Sustainability Officers, nominated by the agency heads, are required to perform the functions set forth in Executive Order 13423 (see Section 3(d)(ii)); prepare the agency's GHG emissions-cutting target and GHG emissions inventory; prepare and submit for review and approval the multi-year Strategic Sustainability Performance Plan (the Plan); implement the Plan with agency staff; monitor the agency's progress in executing the Plan; and report annually to the agency head the extent to which the Plan is effective in achieving the objectives of the Order.

⁶² Established pursuant to Executive Order 13423.

SEC ISSUES CLIMATE CHANGE DISCLOSURE GUIDANCE

The U.S. Securities and Exchange Commission (SEC) requires the issuers of securities (“registrants”) that are traded in the U.S. to disclose information about financial performance, operations, and risks that may be relevant to investors (and other stakeholders). While certain matters must be disclosed regardless of their value or qualitative importance, most other matters need only be disclosed if deemed to be **material**.⁶³

Note: Additional information regarding the SEC’s guidance with respect to disclosure associated with climate change is provided after the “frequently asked questions” directly below.

3.1 What is the SEC?

The SEC oversees and regulates the bulk of America’s capital markets.⁶⁴ It has a congressional mandate to protect investors and to ensure the orderly, fair, transparent and efficient processing of investment and capital transactions. It oversees the key market participants, including securities exchanges, securities brokers and dealers, investment advisors, and mutual funds, and can wield powerful enforcement authority against individuals and companies that violate the securities laws.

3.2 How is the SEC organized?

The SEC consists of five presidentially-appointed Commissioners who serve staggered five-year terms. The Commission’s Chairman, designed by the President, acts as chief executive. No more than three Commissioners may belong to the same political party. The agency’s functional responsibilities are organized into five Divisions and 16 Offices, each headquartered in Washington, DC. The Commission has circa 3,500 staff. The Commission convenes regularly at meetings that are open to the public and the media unless the discussion pertains to confidential subjects, such as whether to begin an enforcement investigation.

3.3 What are the Primary U.S. Securities Laws?

While regulation of the U.S. financial industry rests on a patchwork of laws, three warrant brief mention: the *Securities Act of 1933*, the *Securities Exchange Act of 1934*, and the *Sarbanes-Oxley Act of 2002*.

The *Securities Act of 1933* has two primary objectives: ensure that investors receive financial and other information regarding securities that are offered for public sale; and prohibit unlawful acts (e.g. deceit, fraud and misrepresentation) connected with the sale of securities. The Act seeks to satisfy the first objective through the registration process.

Most securities sold in the U.S. must be registered with the SEC. Registration entails information about the security to be sold, a description of the offering company’s management and business, and a copy of the company’s financial statements that have been certified by independent accountants. Registration statements can be accessed online through the EDGAR (Electronic Data-Gathering, Analysis and Retrieval System) database.⁶⁵

The *Securities Exchange Act of 1934* created the SEC, vesting it with broad power to regulate and oversee the securities industry. The SEC’s authority extends to brokerage firms, clearing agencies and the so-called SROs (self-regulatory organizations) which include the various stock exchanges (e.g. New York Stock Exchange, American Stock Exchange) and the Financial Industry Regulatory Authority (FINRA), which operates the NASDAQ (National Association of Securities Dealers Automated Quotations) system.

⁶³ This concept is discussed below.

⁶⁴ <http://www.sec.gov/>.

⁶⁵ <http://www.sec.gov/edgar.shtml>.

The 1934 Act authorizes the periodic reporting of information by companies with publicly trade securities. Currently, companies with more than \$10 million in assets whose securities are held by more than 500 owners must file annual and other periodic report, which are available via the EDGAR database.

The *Sarbanes-Oxley Act of 2002* was enacted in response to several corporate meltdowns highlighted by the demise of Enron, a former energy trading firm in Houston, TX. Enron's billion dollar bankruptcy highlighted gaps in corporate governance, controls designed to prevent accounting fraud, and the activities of the auditing profession. The Act instituted sweeping reforms to boost corporate governance, and created the Public Company Accounting Oversight Board (PCAOB) to oversee the auditing profession. The Act requires that senior corporate management review and report on their company's internal controls on a regular basis. That provision has generated criticism, especially among smaller firms, for raising compliance costs and diverting management attention away from other pressing matters.

3.4 What are SEC Filings?

The SEC requires, per the *Securities Exchange Act of 1934*, the issuers of securities that are traded in the U.S. to periodically disclose information about financial performance, business operations, the activities of senior management, and a variety of risks that could be relevant to investors (the SEC's primary concern), as well as to customers, business partners and other stakeholders. The disclosure requirements are generally referred to as "SEC filings". They apply to U.S. and foreign firms that issue securities in the U.S. U.S. companies file "10-K" Reports. Foreign companies file "20-F" Reports. Both report types can be accessed online.⁶⁶

3.5 What is Materiality?

Materiality is a tool for determining which information ought to (or must) be included in a SEC filing, and which information may (but need not) be disclosed. It is the cornerstone of SEC disclosure requirements. In the absence of a specific requirement to report a particular piece of information (qualitative or quantitative), public companies are only required, on balance, to report data and information that are material.

There is no "one size fits all" definition of materiality or a specific numeric threshold. Rather, materiality must be determined case by case, company by company. The U.S. Supreme Court has ruled that "information is material if there is a substantial likelihood that a reasonable investor would consider it important in deciding how to vote or make an investment decision, or, put another way, if the information would alter the total mix of available information."⁶⁷ Where there is doubt whether information is material, those doubts are "to be resolved in favor of those the statute [e.g. investors] is designed to protect."⁶⁸

The Supreme Court rulings underscore two important characteristics of the materiality determination. First, materiality is to be judged from the (objective) perspective of an investor. Second, when unsure, a company should err on the side of caution and disclose more information than may be strictly necessary.

Materiality is well-understood in the accounting and auditing professions. Auditors compute materiality thresholds in connection with the audits of balance sheets to guide the scope of the audit test procedures and to reveal whether follow-up testing may be necessary when variances are encountered. Materiality baselines are often calculated as a percentage of total assets or total revenues.

⁶⁶ <http://www.sec.gov/edgar/searchedgar/companysearch.html>.

⁶⁷ SEC Guidance Document at 6292-6293, citing *TSC Industries, Inc. v. Northway, Inc.*, 426 U.S. 438 (1976), and *Basic, Inc. v. Levinson*, 485 U.S. 224 (1988).

⁶⁸ SEC Guidance Document, quoting *TSC Industries* at 448.

SEC Climate Change Disclosure Guidance

What Disclosure Rules Apply

SEC disclosure requirements are based largely on Regulations S-K and S-X.⁶⁹ The following rules [this section provides more detail than provided in part one] may require disclosure relating to climate:

1. *Description of Business.* Registrants must describe their business: principal products and services, major customers, competitive conditions, etc. Disclosure of certain costs associated with complying with environmental laws is mandated. Registrants must disclose, if material, the effects of complying with environmental laws on their capital expenditures, earnings and competitive position. The registrant is required to disclose estimated material capital expenditures for environmental control facilities for the remainder of the current fiscal year and the next fiscal year, and for additional future periods if deemed material. (Item 101 of Regulation S-K)
2. *Legal Proceedings.* Pending material legal proceedings to which the registrant (or any of its subsidiaries) is a party (and similar government action) must be disclosed. Registrants must describe material pending litigation involving its property.⁷⁰ Environmental litigation must be disclosed if the proceeding: is material; involves a monetary amount (e.g. claims for damages) that exceeds 10 percent of the registrant's current assets; or involves a governmental authority and potential monetary sanctions, unless the registrant reasonably believes there will be no monetary sanctions, or the amount of monetary sanctions will be less than \$100,000. (Item 103 of Regulation S-K)
3. *Risk Factors.* Registrants must discuss risk factors that make an investment in it speculative or risky. The risks should reflect the registrant's business in clear terms. (Item 503(c) of Regulation S-K)
4. *Management's Discussion and Analysis.* Registrants must provide a discussion of financial condition and results of operations. There should be emphasis on the registrant's future prospects, with commentary on liquidity, capital resources and results of operations. Management is expected to discuss other information (trends, commitments, events, uncertainties) that are deemed reasonably likely to occur and which may reasonably have a material effect (e.g. on future operating performance or financial condition). Management must determine the appropriate time-horizon: the SEC does not specify a period. In determining whether to disclose information regarding contingent or speculative information or events, registrants must balance the likelihood of occurrence against the magnitude of effect. (Item 303 of Regulation S-K)
5. *Foreign Private Issuers.* Disclosure requirements for foreign private issuers are governed by the Form 20-F rules. Disclosure regarding material climate change matters may be necessary pursuant to
 - Item 3.D –requires disclosure of material risks;
 - Item 4.B.8 –requires description of the material effects of government regulation on the issuer's business and identification of the particular regulatory body;
 - Item 4.D –requires description of environmental issues that may affect utilization of assets;
 - Item 5 – requires management to explain factors that have affected financial condition and results of operations for the historical periods covered by the financial statements, and to assess factors and trends that are anticipated to have a material effect on financial condition and results of operations in prospective periods; and,

⁶⁹Regulation S-K sets forth the disclosure requirements for the non-financial statement portion of SEC filings. It can be accessed at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div5&view=text&node=17:2.0.1.1.11&idno=17>. Regulation S-X prescribes the form and content of financial statements.

⁷⁰ Registrants need not disclose "ordinary routine litigation incidental to its business." Item 103 makes clear that environmental litigation is not to be considered "ordinary, routine...litigation".

- Item 8.A.7 – requires information on legal or arbitration proceedings, including governmental proceedings, which may have, or have had in the recent past, significant effects on financial position or profitability.

What Information Is Covered

Management should review the following potential sources to determine the need to disclosure climate change-related information in a SEC filing:

1. *Impact of Legislation and Regulation.* Management should review the effects of U.S. climate change legislation and regulation, at the federal and sub-national levels, for materiality. The review should cover enacted laws and regulations plus known pending legislation and regulation. A two-part test applies for pending legislation or regulation. First, management must determine whether the pending matter is reasonably likely to be enacted. Unless management can answer “not reasonably likely to be enacted,” it must assume enactment will occur. Second, management must evaluate whether the legislation/regulation, if enacted, is reasonably likely to have a material effect. Disclosure is required unless management can determine a material effect “is not reasonably likely.”
 Ramifications of pending legislation/regulation can include: costs to purchase (profits from sale of) cap & trade allowances; costs to install equipment to reduce greenhouse gas (GHG) emissions; an increase (decrease) in sales resulting from an increase (decrease) in demand for goods.
 Management should review for positive (favorable) as well as negative consequences: climate change laws and regulations may provide new (material) opportunities for registrants.
2. *International Accord.* Management should review the impact of international climate change agreements, such as the Kyoto Protocol, and disclose the effects when material. The evaluation process would be similar to that performed for U.S. legislation and regulation.
3. *Indirect Consequences of Regulation or Business Trends.* Management should review 2nd order consequences and business trends— legal, technological, political and scientific developments – and disclose those if material. These may include: decreased demand for goods that produce significant GHG emissions; increased demand for goods with comparatively low GHG emissions; increased competition to develop low-carbon products; increased demand for energy from alternative sources; decreased demand for services tied to carbon-heavy energy sources; and reputation risk.
4. *Physical Impacts of Climate Change.* Management should review whether the physical effects of climate change – increased sea level, drought, erosion, damaged farm land, extreme weather events – could be material to operations and financial results. Direct and indirect effects of severe weather associated with climate change could include: increased property damage, disrupted operations suffered by registrants located on coastlines; second-order impacts to registrants occasioned by weather-borne disruptions to the operations of key suppliers; increased insurance claims and liabilities for insurer-registrants; and elevated insurance premiums for policyholder-registrants.