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Power by Association℠

Edison Electric Institute

Thomas R. Kuhn
President

February 20, 2013

The Honorable Henry A. Waxman
Co-Chair, Bicameral Task Force on Climate Change
2204 Rayburn Building
United States House of Representatives
Washington, D.C. 20515

The Honorable Sheldon Whitehouse
Co-Chair, Bicameral Task Force on Climate Change
717 Hart Building
United States Senate
Washington, D.C. 20510

Dear Representative Waxman and Senator Whitehouse:

The Edison Electric Institute (EEI) appreciates the opportunity to respond to your letter soliciting ideas for actions the federal government can take to address climate change and to discuss the power sector's actions that have reduced, and will continue to reduce, greenhouse gas (GHG) emissions. EEI is the association of U.S. shareholder-owned electric companies, international affiliates, and industry associates worldwide. Our U.S. members serve more than 98 percent of the ultimate customers in the shareholder-owned segment of the industry, and represent approximately 70 percent of the U.S. electric power industry.

The electric power industry has been a leader in reducing GHG emissions from electric generating units (EGUs) over the last two decades. Preliminary U.S. Energy Information Administration (EIA) data indicate that U.S. power sector carbon dioxide (CO_2) emissions for 2012 will be around 2 billion metric tons. If 2012 trends are confirmed by final data, power sector emissions would be at their lowest levels since 1996, and would be approximately 17 percent below 2005 emissions levels. This would continue the trend of declining CO_2 emissions from the power sector.

These reductions result from a variety of programs and regulations, including a wide range of existing and proposed Environmental Protection Agency (EPA) Clean Air Act (CAA) regulations that are driving the transition to a cleaner generation fleet. These include EPA's Mercury and Air Toxics Standards (MATS) rule, as well as national ambient air quality standards (NAAQS) and associated interstate transport rules like the Clean Air Interstate Rule (CAIR) and its predecessors the Acid Rain Program and the NOx SIP Call.

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Other imminent air programs are now factoring into planning decisions, such as GHG New Source Performance Standards (NSPS) for new sources, the Regional Haze program, and revised NAAQS.

Compliance with these regulations adds significant costs to the system that ultimately fall on electricity consumers, an additional burden on households and businesses that must be considered in these difficult economic times. EPA estimates that the MATS rule alone will cost an additional $9.6 billion annually.

Other factors contributing to reduced GHG emissions include existing state programs for renewable energy, customer demand-side management (DSM) and energy efficiency, as well as voluntary emissions reductions initiatives. In addition, the industry's growing use of natural gas as a fuel source for new generating facilities reduces GHG emissions.

Going forward, GHG emissions from the power generation sector will continue to decline as the EGU fleet transitions to lower and zero-emitting technologies. In addition, low natural gas prices and compliance with existing, pending and expected future CAA regulations addressing both traditional air emissions and GHG emissions are contributing to the closure of many older, smaller and less-efficient EGUs. To date, almost 60 gigaWatts (GW) of coal plant retirements have been announced publicly, with most taking place between 2010 and 2020. These retirements will have a significant impact on overall power sector GHG emissions. Another round of environmental regulations, such as the Clean Water Act section 316(b) Cooling Water Intake Structures rule, Effluent Limitation Guidelines, and Coal Combustion Residuals rule, could lead to additional plant retirements. And, of course, future regulations like the GHG NSPS for existing sources will be an enormous factor in utility planning decisions and GHG emissions going forward. All of these factors, plus other market forces, mean relatively cleaner resources, such as natural gas, renewables, and nuclear—which emit fewer or no GHGs compared to the existing fleet—are powering new generation. However, the effect of these rules on utility rates must be considered, and premature shutdowns of younger coal plants, which have made significant investments to comply with recent rules, such as MATS, must be avoided.

Utilities also are working with states and customers to reduce electricity demand, which helps reduce GHG emissions. The power sector's record on energy efficiency demonstrates its commitment to—and expertise in—helping consumers use energy more wisely. Electric utilities spent a record $5.12 billion on energy efficiency and demand response programs in 2011, or 21 percent more than the $4.22 billion spent in 2010, according to the EIA. In fact, since EIA began collecting national data in 1989, electric utilities have spent approximately $51 billion on these demand-side management programs (cumulatively from 1989 to 2011). These efforts have saved 1,279 billion kiloWatt-hours (kWh) of electricity. In 2011 alone, electric company energy efficiency programs saved 108.6 billion kWh of electricity—or enough to power nearly 9.68 million average U.S. homes for one year.

Beyond this success, even more can and should be done to achieve greater energy efficiency at the customer level. For instance, state regulatory authorities can be encouraged to consider business and regulatory models that provide incentives for utility and customer investment in cost-effective energy-efficiency measures and to focus on efficiency standards that promote end-user energy savings without having to resort to federal mandates on utilities to meet energy efficiency targets, the achievement of which rely on consumer behavior beyond utilities' control.

Electric utilities are working with the federal government, the largest energy consumer in the country, to reduce its energy use and related GHG emissions. Utility Energy Service Contracts (UESCs) are a tool that allows utilities and their federal customers to engage in long-term partnerships to install energy efficiency and renewable energy measures. According to the Federal Energy Management Program, the federal government is saving roughly $400 million a year from UESC projects. Since 1994, almost 1,700 UESCs have been awarded, worth slightly more than $2.3 billion, which have saved more than 14 trillion Btu. Going forward, UESCs will play a critical role in helping the federal government meet its energy efficiency, renewable energy and energy security goals in a cost-effective manner. Their use should be encouraged.

While significant reductions have been made—and will continue to be made—within the power sector, using electricity as a fuel can reduce emissions in other sectors as well. Plug-in electric vehicles (PEVs) have the potential to transform our nation's transportation fleet, enhancing domestic energy security while significantly reducing net GHG emissions. Battery-powered PEVs produce just one-third of the GHG emissions emitted by gasoline-fueled vehicles. As EPA noted in 2012 regarding the final GHG standards for light-duty vehicles for model years 2017-2025, PEVs provide immediate emissions reductions benefits when compared to gasoline- and natural gas-fueled vehicles. These emissions reductions benefits will only increase as electric utilities continue to transition the generation fleet to more efficient and cleaner generation sources. Electricity also has the potential to serve as a cleaner fuel choice in other, non-road applications, such as off-road vehicles and manufacturing, which will further reduce national GHG emissions.

While much progress has been made, the key to further emissions reductions from the power sector is the development of low-cost technologies that allow electric utilities to use all generation fuels in the most environmentally sustainable manner. To this end, continued technology research, development, demonstration and deployment (RDD&D) programs are crucial. Examples of programs to facilitate investment in new cleaner technologies by enhancing their cost-effectiveness and commercial availability include:

- An aggressive RDD&D program to accelerate the commercial availability of carbon capture and storage (CCS), as well as resolving legal and technical challenges.
- Removing regulatory barriers to exploration and development of energy resources and the construction of CCS.

- Continuing RDD&D on new generation technologies, improved efficiencies (e.g., heat rates) for existing technologies, renewables, and other energy resources, to help their commercial viability and reduce their costs.
- Continuing R&D on electric battery and storage technologies.
- Facilitating the construction of needed transmission infrastructure.
- Expanding natural gas pipeline capacity in some regions.

EEI believes efforts to further reduce GHG emissions should involve all sectors of the economy and seek to minimize their cumulative effects on costs to customers, impact on the economy, and the reliability of the electric system. Electric utilities will continue their efforts to transition to a cleaner, more modern electric generating fleet, help improve energy efficiency, and electrify the transportation sector. EEI stands ready to provide more information about the power sector's role in reducing GHG emissions to the Bicameral Task Force on Climate Change.

Sincerely,

Thomas R. Kuhn

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