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Clean Air Act Roundtable with U.S. Senator Carper
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Senator Carper, Members of Congress, and distinguished guests, thank you for the opportunity to join you today. I am Michael Bakas, Senior Vice President of Distributed Energy Systems and a member of the founding management team at Ameresco. Founded in 2000, Ameresco is a leading provider of energy efficiency, energy infrastructure and renewable energy solutions in the United States, Canada and Europe. Our corporate headquarters is in Framingham, Massachusetts. We are a publicly traded company on the New York Stock exchange with over 1,000 employees.

Ameresco works with the public and private sectors to implement economic and environmentally compelling energy projects to improve infrastructure, reduce emissions, reduce operating costs and revitalize the near and long-term sustainability of building and facility assets.

Since 2000, Ameresco has designed, engineered, and constructed more than \$5 billion in energy-based projects in the United States. Our customers include federal, state and local governments, institutional, educational, and commercial and industrial clients.

In my 17 years with Ameresco, I have been directly responsible for developing energy projects that have been driven primarily by the air pollution policies promulgated under the Clean Air Act. These projects are comprehensive, advanced energy projects, such as landfill gas and biogas-to-energy facilities. Ameresco has developed these projects throughout the country in States such as Arizona, California, Delaware, Florida, Georgia, Illinois, Indiana, Maryland, Massachusetts, Michigan, Missouri, Oregon, Pennsylvania, South Carolina, Texas, Utah, Virginia, and Wisconsin.

In the case of landfill gas-to-energy projects, Ameresco uses landfill gas as a fuel to generate electricity, heat, and recently renewable natural gas. Landfill gas is a natural byproduct of the decomposition of organic material in landfills with its primary component being methane. Methane is a potent greenhouse gas 28 to 36 times more effective than carbon dioxide (CO₂) at trapping heat in the atmosphere over a 100-year period. According to the Environmental Protection Agency (EPA), municipal solid waste landfills are the third-largest source of human-related methane emissions in the United States, accounting for approximately 15.4% of these emissions in 2015.

If uncaptured, landfill gas would escape into the atmosphere, contributing greatly to greenhouse gas emissions and local air pollution. Through the development of these projects, Ameresco turns a harmful source of waste into a beneficial source of renewable energy that displaces fossil fuel for the benefit of the local community, its citizens and businesses.

In South Carolina, for example, Ameresco constructed a landfill gas-to-energy plant that provides renewable energy to BMW Manufacturing Company from a landfill that is 9.5 miles away. As publicized by BMW, the landfill gas provides 50% of the total energy demands for the BMW campus and is reported to reduce their energy costs by approximately \$7 million annually. This project created local jobs to construct and operate the facility, reduced BMW's operating costs, all while positively impacting the environment by reducing CO₂ emissions by 92,000 tons per year or the equivalent to the benefit of planting over 23,000 acres of trees annually (roughly 30 times the size of New York's Central Park).

In Delaware, Ameresco developed two landfill gas-to-energy plants in a public-private partnership with the Delaware Solid Waste Authority and the Delaware Electric Cooperative. Our project generates more than 10.6 megawatts of renewable electricity serving over 6,000 homes annually through Delaware Electric Cooperative. In addition to serving the citizens of Delaware renewable energy, from a local resource that was not being utilized, the project also assists the Delaware Electric Cooperative with voltage support, mitigation of congestion on the transmission system and improves the efficiency of the power system through the reduction of line losses. These benefits add to the resiliency of the Delaware Electric Cooperative's system at no additional cost to the citizens of Delaware. If it were not for the Clean Air Act and the support of the project partners, these renewable energy assets would never had come to fruition.

In addition to traditional renewable biogas facilities, Ameresco has developed advanced energy projects by generating cellulosic biofuels under the Renewable Fuel Standard program for which the Clean Air Act provided the legal foundation. Back in 2008, Ameresco developed its first such project in partnership with the San Antonio Water System. This was early on in the life of the Energy Policy Act and it took some time for this market to develop thus not many projects were viable. However, with support from the federal government and the expansion/extension of the Act through the Energy Independence and Security Act of 2007 the market began to evolve and become more dynamic generating viable clean energy projects coupled with a more robust group of active Stakeholders. For instance, in Phoenix, Arizona, under a public-private partnership, we are constructing one of the nation's largest wastewater treatment biogas-to-renewable natural gas facility of its kind in the U.S.

The facility will process raw biogas generated in anaerobic digesters, which is not being utilized, into renewable natural gas that will be sold to the vehicle fuels market through the natural gas pipeline. The biogas is a mixture of various gasses (mostly methane and carbon dioxide) produced through the anaerobic decomposition of organic matter delivered to the wastewater treatment plant from the cities of Phoenix, Glendale, Mesa, Scottsdale, and Tempe. In addition to generating great economic benefits for the municipalities as well as other significant infrastructure and economic benefits, the project is also expected to reduce carbon emissions by

nearly 45,000 tons per year, the equivalent of taking over 70,000 cars off the road or planting over 87,000 acres of trees annually....again, at no additional cost to our partner cities.

In total, the legal foundation provided under the Clean Air Act has allowed Ameresco to develop renewable biogas facilities that represent:

- Over \$525M in capital investment in local communities;
- Nearly 2,000 jobs created as estimated using the Environmental and Energy Study Institute guidelines as published by the EPA;
- Nearly 1,000,000 tons of CO₂ emissions removed from the environment each year which is equivalent to the CO₂ emissions from the consumption of over 21 million barrels of oil each year;
- Millions of dollars in energy cost savings to public and private Stakeholders; and,
- Millions of dollars in revenue generation for municipalities...all through public-private partnerships that did not require any investment by Federal, State or local government.

In summation, Ameresco has seen firsthand how the Clean Air Act has been the backbone for the deployment of advanced energy solutions which have created new opportunities to support highly-skilled jobs, while also investing in local infrastructure, transportation and manufacturing for both the public and private sector. Ameresco believes the Clean Air Act can spur innovation while delivering economic and environmental benefits to local communities.

Thus, we urge the Congress for its continued support of the Clean Air Act, and we appreciate this opportunity to describe these benefits. I am happy to answer any questions you may have.