

Written Testimony of Ralph Izzo, Chairman, President and CEO

Public Service Enterprise Group

House Energy and Commerce Subcommittee on Energy

“Role of Power Sector in Creating 100 Percent Clean Energy Economy”

October 30, 2019

My name is Ralph Izzo, and I’m the Chairman, President and CEO of New Jersey-based Public Service Enterprise Group. We’re the parent company of the state’s largest electric and gas utility serving 2.3 million electric customers, 1.8 million gas customers, and most of the state’s major urban population centers.

We’re also the parent company to PSEG Power, which owns and operates around 12,000 megawatts of power generation sold at wholesale in three separate competitive electricity markets in the Northeast and Mid-Atlantic. PSEG Power also has developed solar facilities totaling over 400 megawatts in New Jersey and 14 other states. We are proud that Power’s fleet as a whole is the country’s 17th largest, but ranks third lowest in carbon intensity at about half the national average. Finally, PSEG operates the power grid for the Long Island Power Authority serving 1.1 million customers.

Thank you for holding this hearing and for the even bigger task this Committee is undertaking to put our country on a path to achieving a 100 percent clean energy economy by 2050. We are fully supportive of the principles put forward in *A Framework for Climate Action* released by the Committee last spring. In addition, as a member of the cross-sectoral *CEO Climate Dialogue* (CCD) championing a national price on carbon, I also associate myself with the principles adopted by this organization.

My company was engaged in this Chamber’s prior efforts to enact a national price on carbon nearly a decade ago, and we are pleased to be a resource for you today as you embark on a new effort to develop a national framework for climate action.

Companies and States Have Been Moving Forward to Address Climate Change

I want to assure you that in the ten years since Congress last looked at this issue, my company has progressed in our effort to reduce carbon emissions. We have worked with our state to preserve 3,500 megawatts of at-risk nuclear generation that supplies over 90 percent of New Jersey’s zero-emitting electricity. We have invested over \$1.7 billion in solar energy. We have partnered with the Environmental Defense Fund and Google to prioritize methane reduction in the replacement of approximately 450 miles of cast iron natural gas distribution pipes. We have closed our last two remaining New Jersey coal plants, sold our partial interest in two Pennsylvania coal facilities, and will cease generating electricity from coal across our fleet by mid-2021 when we retire our last unit in Bridgeport, Connecticut. We have built three new, efficient natural gas combined cycle plants in three states. We have also proposed to state regulators an historic clean energy program in New Jersey to

bring the benefits of energy efficiency, electric vehicles, energy storage and cloud technology at scale to our entire customer base.

We have also seen the effects of extreme weather on our electric and gas infrastructure. In recent years we have raised or moved dozens of substations prone to flooding, strengthened the materials we use for our poles and wires, made our grid smarter, and created redundant pathways for power flow to reduce the frequency and duration of outages.

Through these and other efforts, as of 2018, PSEG has been able to reduce our greenhouse gas emissions across our full operations by 45 percent from 2005 levels. This summer we announced a long-term commitment to achieve an 80 percent reduction in carbon emissions from our generation fleet by 2046, also from 2005 levels. Further, it's our belief that with the necessary advances in technology, customer behavior and public policy, we can achieve our vision of attaining net-zero carbon emissions from our fleet by 2050.

Our 2050 ambitions align us with the goals established for New Jersey by Governor Phil Murphy, who is leading our state toward net zero with landmark clean energy legislation, a commitment to rejoin the Regional Greenhouse Gas Initiative or RGGI, and a major bet on offshore wind, among other steps.

The Time for Federal Action is Now

Mr. Chairman, with companies and many state leaders already focused on climate change, it may beg the question of why federal climate legislation is needed.

When the subject of carbon pricing comes up in my conversations, I'm often tempted to ask a riddle. Is the current price of carbon in New Jersey zero dollars per ton, \$5 per ton, \$17 per ton, \$100 per ton, or \$400 per ton? It may be hard to believe, but the answer is actually all of the above.

You see, the price of carbon depends on where you sit. In PJM, carbon is not factored in to the electricity price, so the cost is zero dollars per ton. In RGGI, the price is typically around \$5 per ton. Moving up the scale, New Jersey's Zero Emission Credit program to preserve zero-emitting nuclear computes to \$17 per ton. One can infer a carbon price of \$100 per ton from the cost of an offshore wind renewable energy credit (REC), and at the very top of the scale, a \$400 per ton cost of carbon can be derived from the solar REC price in New Jersey.

In the absence of a national price on carbon, our principal struggle is inefficiency. And inefficiency translates to customers as cost. States and companies are doing an admirable job in moving forward with the tools available, but achieving what is needed to avoid the worst impacts of a 1.5 to 2 degree Celsius temperature rise by mid-century -- in a manner that consumers can absorb -- requires a level of efficiency that can only come from a national approach.

Moreover, as of year-end 2018, the investor owned electric sector as a whole had achieved roughly a 37 percent reduction in CO2 emissions below 2005 peak levels. A national, economy wide climate approach is needed to ensure we maximize the opportunity for emissions reductions in other sectors, most obviously through electrification of transportation.

What Congress Can Do Immediately to Support Company and State Efforts

Mr. Chairman, here is more detail on what a company like PSEG would find helpful from Washington as we continue striving for progress. I'll offer suggestions for immediate action, and food for thought on the broader effort to establish a price on carbon.

In the immediate, we need to preserve existing zero emitting nuclear generation. Nuclear energy provides 20 percent of the nation's electricity, but 55 percent of America's **carbon-free** electricity. New Jersey gets over 90 percent of its zero emitting electricity from nuclear. When the Oyster Creek nuclear plant (owned by Exelon and not PSEG) closed just a year ago, its output was replaced megawatt for megawatt with natural gas.

Several states including New Jersey have taken action to ensure vital low carbon resources do not disappear as we wait for wholesale markets to properly value their attributes. And yet, as we sit here today, FERC is considering fundamental changes to PJM's capacity market. Certain options on the table would further undermine the economics of these distressed units and erode the actions states have already taken. This would be detrimental to the environment and to the resilience of the electric supply in our region.

Also in the immediate, Congress can help states harness the power of utilities to deliver significant carbon emissions reduction through a massive deployment of energy efficiency. In the riddle of what it costs New Jersey to avoid CO2 emissions, deploying utility energy efficiency to our customers generates energy savings. This translates to negative, or at worst, zero dollars per ton. In fact, utility energy efficiency is the only climate strategy available today that truly puts downward pressure on customer bills. And yet, unlike the zero carbon price in PJM that produces no emissions reductions, the proposal we have proposed to state regulators in New Jersey would eliminate 22 million metric tons of CO2.

Congress can support these efforts by providing federal dollars to states that approve utility energy efficiency programs. This could work in a manner similar to the Low Income Energy Assistance Program, with funds offsetting the customer cost impact of other climate investments. The Committee's LIFT Act contains a model for this concept targeted to methane reduction that could be broadened.

In addition, Congress can and should allocate federal dollars for climate-related research and development. It's not clear if the last 20 percent emissions reduction for PSEG to achieve net zero will occur through small modular nuclear reactors, reflective particles, carbon capture and storage, renewable gas, or something entirely different. But getting from a vision to a business strategy on this front requires that as a country, we start looking for answers today.

Finally, Congress should promote electrification of the transportation sector through policies that will accelerate adoption of electric vehicles and leverage the utility as an investor in charging infrastructure. In our state, the transportation sector accounts for over 50 percent of greenhouse gas emissions. We have installed over 200 charging stations in our service territory and have partnered with EVGo to install fast charge stations at five rest areas along the New Jersey Turnpike and Garden State Parkway. We have proposed installing 40,000 more charging stations, the bulk of which would be for residential use. Our proposal also supports electric vehicle innovation, including projects for ports, airports, other transit and school buses. Electrifying transportation is important for carbon reduction and also for cleaner air, as an electric mile is 70 percent cleaner than the average gasoline-fueled mile. As illustrated by the provisions in the Committee's LIFT Act, Congress is uniquely positioned to use federal policy levers to spur the mass acquisition of electric vehicles needed to make meaningful progress.

A National Price on Carbon is Needed

These immediate steps are important and in some cases critical, but establishing a price on carbon remains the most efficient way to tackle the challenge comprehensively. A national approach could take the form of a cap and trade program, a cap and dividend approach, or even an upstream fee. An attractive aspect of the fee approach is the revenue that could be generated and used for a consumer dividend, research and development, climate adaptation, debt reduction or a combination of purposes. The Electric Power Research Institute estimates current economy-wide greenhouse gas emissions of around 5 billion tons per year. Using the National Academy of Sciences benchmark of roughly \$50 per ton, this would yield \$250 billion per year – a significant sum by any measure. What’s more, a meaningful price on carbon would allow for streamlining or eliminating other costly economic incentives, including many of the credits now embedded in the tax code. It may even be possible to craft a combination of approaches for different sectors. Several basic considerations should guide the design of a program that:

- ***Is Ambitious yet Achievable.*** Emissions reduction targets should be consistent with science, and the reduction trajectory should occur over a timeframe that enables investment and deployment of new technologies to achieve them. Particularly as we approach 2050, technologies needed to achieve total net-zero emissions from the electric sector are not yet available. Market-based programs provide the price signal needed to drive innovation of cost-effective solutions.
- ***Is Politically Durable.*** Legislation that is politically durable will ensure continuity and consistent progress over the long-term, critical to controlling costs. Such certainty is needed to provide investors with the confidence to deploy capital and, for our sector, to provide regulators with a solid foundation on which to build an effective regulatory framework.
- ***Is Focused on Low-Income Impacts.*** Consideration should be given to ameliorating the impacts on low and moderate-income consumers through a return of revenue to those least able to afford the expense of decarbonization.
- ***Creates a Level Playing Field.*** Climate legislation should create a level-playing field and prevent market distortions within competitive industries. For instance, tackling our climate challenge will require all forms of zero-emitting electric generation, and national climate policy should recognize the important role played by nuclear alongside renewables and other sources. Moreover, existing zero-emitting generation should not be placed at a disadvantage relative to new investment, and companies or sectors with already low emissions intensity should not be penalized for having taken early action.
- ***Prevents Emissions “Leakage” Across Borders, Including State Borders.*** Consideration should be given to preventing leakage of emissions and economic activity across borders and jurisdictions. Nationally, disparate goals and targets should be avoided across states and regions, and federal legislation should seek to avoid unintended emissions increases within a regional electricity market that can occur if targets are not harmonized across the market footprint. Internationally, the U.S. should ensure fair competition through border tax adjustments based on carbon intensity.

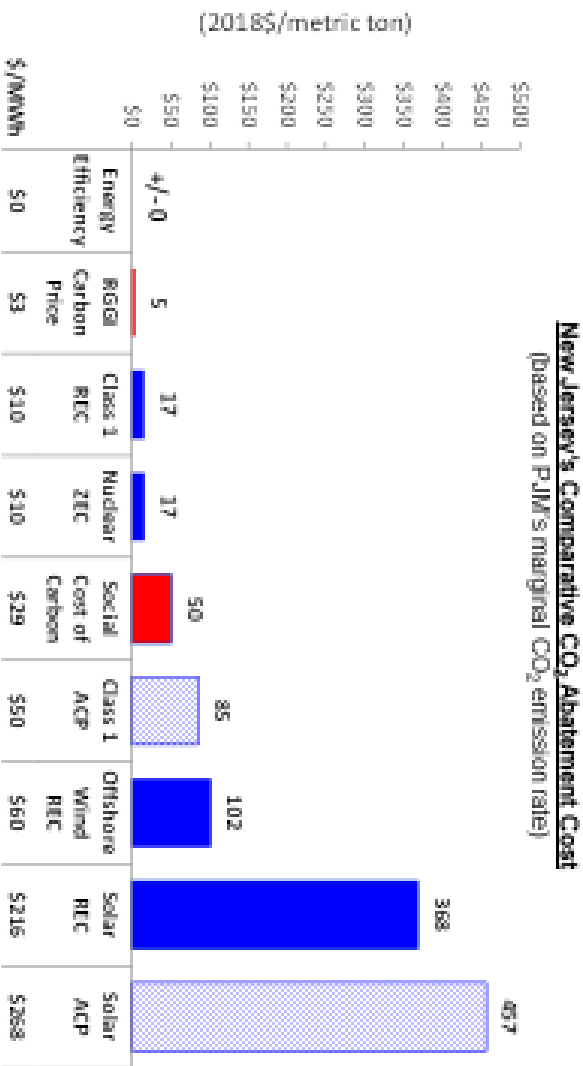
- **Leverages the “Patient Capital” of the Regulated Utility.** In the electric and gas sectors, federal legislation should recognize and leverage (rather than displace or compete with) the role of utilities in deploying “patient capital” to achieve public benefits across a broad customer base. “Patient capital” is a phrase that describes how a utility, with its access to low-cost financing and long-term rate-recovery mechanisms, can afford to make crucial carbon investments such as in energy efficiency that other investors might not find economically rewarding, or that might be too costly for customers to bear if provided by others. The utility is a crucial partner in the effort to deliver carbon reduction results and federal legislation should harness this opportunity.

Thank you for the opportunity to present these views. We look forward to working with Members of the Subcommittee to craft a national climate policy framework that not only supports states and companies in the efforts they are undertaking today, but provides the additional tools and efficiency to confront what is certainly the pre-eminent challenge of our time.

I look forward to answering any questions you may have.

Attachment

CO2 abatement costs vary widely, driven by costs and markets, and are ultimately borne by customers, so policy choices matter



Source: National Academy of Sciences' 2020 carbon price, carbon intensity from PJM, NJ BPU 2018 Compliance Report for Class 1 & SREC costs, non-compliance costs for energy year 2019, 2018 weighted average RGGI auction price, Offshore wind subsidy is the difference between the DREC price for 2024 and the calculated value of PJM energy and capacity using the BPU reference prices.

- **Energy efficiency, a carbon price and nuclear ZECs are more cost-effective tools, with renewables varying depending upon region**