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COMMENTS ON NEW JERSEY'S ENERGY MASTER PLAN

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New Jersey's Energy Master Plan ("EMP") primary objective should be to provide a strategic vision for ensuring every resident and business has access to reliable and affordable energy. As a part of that vision, all types of energy should be considered to ensure New Jersey's energy portfolio has a diversity of sources, with a clear goal of moving towards increasing New Jersey's reliance on renewable energy.

In examining how best to deliver reliable and affordable energy, the plan needs to be rooted in a firm understanding of New Jersey's current and future energy needs. Today, almost half of all electric generation in New Jersey is carbon free (nuclear). Governor Murphy has set a goal of generating 3500 megawatts of power from offshore wind. If successfully implemented and realized, New Jersey will still be about 1000 megawatts short, in 2018 demand, of replacing its existing carbon-free energy. That means, in a world where we expect to be completely on renewables by 2050, almost the entirety of all electricity generated in New Jersey will have to be from sources that currently do not exist. Further, while New Jersey's energy demand has remained relatively stable over the last decade, our needs could significantly change the sources of energy required in the future as we attempt to transition our transportation infrastructure away from petroleum sources. Without a firm grasp of what our needs will be, it will be difficult to set realistic goals for our energy needs and devising systems to help us reach them.

The plan must ensure that existing infrastructure is both sufficiently maintained, improved, and if necessary grown to be resilient enough to deliver reliable power in even the most extreme conditions. As Superstorm Sandy exposed, much of our existing energy infrastructure is old, especially relative to other states. This past winter, the natural gas pipeline into New England could not address the needs of their region during the extreme winter events they experienced, and some power users were required to import Russian LNG as a way to continue to provide heat to their customers. We cannot allow our desire to encourage

investment and the development of renewable sources of energy to come at the cost of guaranteeing that our energy system has a strong backbone to support us through whatever events we may face.

While some may want to end our reliance on natural gas as a fuel source to help reduce our carbon emissions, the reality today is that 75% of all consumers in New Jersey rely upon natural gas to heat their homes. More importantly, if the goal is to find ways to reduce New Jersey's carbon footprint, then we must examine ways to fundamentally alter the transportation systems in New Jersey since they account for almost 50% of all of New Jersey's emissions.

Assuming we can accomplish both goals – reducing New Jersey's reliance on natural gas and electrifying our transportation sector – this plan has to consider how to improve our electrical grid to handle all the new demands that will be placed on it. Currently, plugging an electric car into the grid uses the same amount of energy as an average American household uses in a day. New Jersey has about 3.9 million cars on its roads. Looking ahead to 2030, the number of those cars owned by consumers who charge them in their homes at night will be significant. So, in the span of a decade or two, New Jersey has to find a way to meet all its current needs, while adding both home heating and for many, an electric car to that mix.

Finally, I think it's important to look at the impacts all of this can have on the economy. Because of its geographic location and its already built natural gas infrastructure, New Jersey enjoys some of the lowest natural gas prices in the country. Yet, New Jerseyans still pay some of the highest electric bills in the country. Even worse, New Jersey industrial users pay almost 50% more than the national average for their electricity. Aside from its natural geographic advantage, from an energy perspective, New Jersey is already at a disadvantage to attract and retain many types of business investments. Unless economic safeguards are built into the drive to increase the mixture of renewables in New Jersey's energy portfolio, New Jersey will continue to price itself out of certain markets and may drive more business away as they will have the option of locating in lower-cost alternative states.

Geography does play a significant role for New Jersey to invest in offshore wind. Hopefully that investment will also encourage the development of ancillary industries to support not only the New Jersey offshore wind community, but all of the offshore operations that are being proposed up and down the east coast. However, while it appears like this will be creating new jobs, the reality is the energy sector already supports many well-paying jobs. As New Jersey seeks to encourage the shift in our energy portfolio, the new jobs are merely replacing existing jobs. This is not an insignificant shift, as maintaining our natural gas infrastructure alone creates millions of work hours. Those hours only increase when one begins to factor in the existing power plants and other ancillary support positions. Most of those workers are already New Jersey residents and energy users. Ensuring they can continue

to work and earn a fair wage should be a paramount consideration of this plan.