

*Diane Scarangella, MA, GPC  
217 Harrison Street  
Leonia, New Jersey 07605  
[diascat@hotmail.com](mailto:diascat@hotmail.com)*

## **RESPONSE To The Draft 2019 New Jersey Energy Master Plan, Policy Vision to 2050 (June 10, 2019)**

**THE BOTTOM LINE:** In order to counter climate change in meaningful and effective manner, the 2019 NJ Energy Master Plan must impose guidelines that involve quick action and are far more specific than what is currently proposed in the Plan. To start with, the 2019 NJ Energy Master Plan **MUST** clearly state that

- ✦ New Jersey **WILL NOT APPROVE CONSTRUCTION** of any new energy generating plant (such as the Bergen Liberty plant targeted for North Bergen or the NJTransit proposed plant in Kearny), that utilizes fossil fuels.
- ✦ New Jersey **WILL NOT** approve any project that proposes the building of infrastructure (e.g. new pipelines) to transport fossil fuels, refine fossil fuels or to extract fossil fuels from New Jersey lands.
- ✦ New Jersey **WILL NOT** construct or use incineration as a method of energy generation and that it does not define trees or natural gas as a “renewable” energy source.

**The Plan must also present a *strategy and timeline for eliminating pollution and providing clean water in low income communities.***

The Draft currently includes references to environmental justice, yet NJ continues to consider applications to place power plants in or adjacent to environmental justice communities, flood zones and other areas “vulnerable to flood zones.”

**More specific recommendations concerning language in the Draft Plan is as follows:**

**RECOMMENDATION:** The Plan requires a more specific definition of “clean energy” and a specific and measurable goal statement regarding the elimination of fossil fuels as method of power generation and the reduction of greenhouse gas emissions.

According to **Governor Murphys' Executive Order #28**, "...NJ must shift away from its reliance on fossil fuels as a primary energy source and turn to clean energy sources..." (p. 13) The stated purpose of the 2019 New Jersey Energy Master Plan is to support "... **Governor Murphy's goal** of 100% clean energy by 2050 and the Global Warming Response Act (GWRA) state greenhouse gas emissions reductions of 80% below 2006 levels by 2050." ***But is "clean energy" the same as renewable energy? What is the actual target for state greenhouse gas emission reductions? How much of reduction is "80% below 2006 levels? And, most importantly, will this plan eliminate the use of fossil fuels in New Jersey AS SOON AS POSSIBLE?***

**The language throughout the Plan needs to be further defined and clarified. The EMP defines "100% clean energy by 2050" to mean 100% carbon-neutral electricity generation and maximum electrification of the transportation and building sectors..."** (Executive Summary, p. 9). But, how is the state defining "carbon-neutral electricity generation...?"

The interchangeable use of terms like "clean energy," "clean power," "carbon-neutral electricity generation," "renewable," "biomass," "bio power," "bio-gas," "landfill gas," and "bio fuel" create a plan that is open to wide interpretation. For example, is the state of NJ seeking "100% Clean Power by 2050?" "the implementation of a 50% renewable portfolio standard by 2030," "...a significant majority of electricity distribution...produced from renewable resources by 2050," or "...100% clean, carbon –neutral electricity generation by 2050?" This lack of specificity creates a loophole for developers to justify the construction of plants that could be powered by what the plan refers to as "renewable natural gas" and other "clean vehicle technology." (p. 32). What is "renewable natural gas?"

**RECOMMENDATION: To reach the goal of 100% renewable energy AS SOON AS POSSIBLE, New Jersey needs to invest in the creation of new and recyclable electricity storage devices and strategies. Funds, a timeline and specific research and development goals need to be presented in the plan.**

The Draft NJEMP identifies the two largest producers of greenhouse gas emission in NJ as the transportation sector (46%) followed by electricity generation (20%) (p. 43). Both of these emission sources rely on fuels to generate power that are recognized as a common source of greenhouse gas production and pollution. According to the Draft Plan, "...petroleum produces more greenhouse gases and air pollutants than electricity generation..." (p. 27).

To address greenhouse emissions, the Plan places greatest emphasis upon the creation of an infrastructure that supports consumer operation of vehicles that run on electricity and to NJ Transit, Port Authority and state transition to electric vehicles. It also focuses upon the reduction of electric consumption by 2% and gas consumption by .75% and seeks to transition homeowners and businesses to move to renewable energy sources for home/office overhead. The problem is that the proposed transition to electricity for transportation, home and office will require a massive increase in the amount of electricity to be generated and an equally massive upgrade in the grid (power distribution) and a sufficient energy storage capacity.

Storage of electricity is critical because of a combination of increased demand and the intermittent nature of many renewable production sources. Technology still needs to build a cost efficient battery with a large storage capacity. According to the report, “While costs for battery storage systems are dropping rapidly, the predominant chemistry Lithium-ion systems may not be cost-competitive for most applications through 2030.” (p. 57). The problem with Lithium Ion batteries is that the amount of batteries needed would require mining, the scale of which would result the destruction of natural lands throughout South America; and that cost-effective recycling methods are not in place to support the recharge and reuse of lithium ion. In order to transition, each of these issues (grid/distribution and storage) need to be addressed.

**RECOMMENDATION: Include a detailed business plan in the Energy Master Plan that provides alternative sources of income generation to offset the loss that can occur from the transition to renewable, non-fossil fuel, methods of power generation. Collaborate with labor unions and building trade associations to create programs that retrain workers from within and outside of state of New Jersey.**

According to the Plan, “as of 2018, the state’s electricity was generated through a combination of natural gas (51.6%) and nuclear (42.5%) power sources, with renewable energy generation approaching 5%.” (p. 14). The Plan, in fact, attributes the state’s ability to export “about 3% more electricity in 2017 than it sold in-state” to a “proliferation of new natural gas power plants,” (p. 42). And it is this proliferation of natural gas plants that made up for the “32% reduction” in electricity that is generated by nuclear power (p. 43).

At the same time, the state’s proposed shift to electrical mass-transit and personal transportation contributes to an increased demand for electricity. Fear of losing this income source due, in part, to “revenue risk” posed by “the intermittency of renewable energy,” (p.52), the loss of nuclear power options and an anticipated increased consumer demand may combine to support the conclusion that, despite generating 20% of New Jersey’s greenhouse gas emissions, “Given current economic conditions, natural gas is expected to remain the predominant electricity fuel source in the near future without a change in state, regional, or federal policies.” (p. 42-43).

The state’s need to continue to generate a profit from its methods of electricity generation and/or reduce the potential for revenue loss and debt associated with renewable energy sources are causes for its hesitancy to eliminate natural gas powered plants from this Master Plan. The Master Plan must identify when existing gas powered plants will be eliminated and what specific states will be taken to replace these plants with renewable energy sources.

**RECOMENDATION: To move forward in any meaningful way, the State Master Plan needs to remove “gas infrastructure projects,” from the State Plan, rather than calling for “...information necessary to evaluate the necessity or financial prudence of future gas infrastructure projects...” (p. 24)**

The Plan provides short term solutions that target “mandating non-wires solutions on state-funded projects, maximizing the use of source separated organic waste production, and encouraging anaerobic digestion for electricity production or “natural gas pipeline injections.” (p. 10) The Plan also recommends that “gas distribution companies incorporate advanced leak detection technology and prioritize gas pipeline repair and replacement...” (P. 79-80) as ways of reducing methane leaks and the related emission of greenhouse gases.

Other statements in the Plan reveal the continued intent of the state to gradually wean its electricity production from natural gas, but to rely upon natural gas for power generation during the transition phase. For example, the Plan states that “Natural gas burned in plants with state-of-the-art technology has been an important transition or “bridge” fuel...” (p. 43). According to the Draft Plan, natural gas, is a “bridge fuel that has helped wean the state off the heaviest polluting fuels...contributes reliability services to the grid.” (p. 43). *And the state is calling for the* sequencing in of renewable energy in utility home and building construction/sales: “the state should consider both the cost and emissions in the early stages of building heat system transition.” (p. 69.)

This statement leads one to believe that the state could consider the construction of gas-powered plants as a way of “storing up” gas-powered electricity for future reference. In other words, isn’t it possible that the state might approve some gas-powered plants now so that they are operating already and can provide the surge in electricity that will be required to power EV’s? THIS POSSIBILITY MUST BE ELIMINATED.

**RECOMMENDATION: Provide a clear definition of what is considered to be a “clean, renewable, sustainable fuel”? Identify the criteria that is used to categorize a liquid fuel as sustainable, renewable and/or clean? Provide a strategy, budget and time frame to support the development of cleaner liquid fuels.**

According to the Plan, there is a need, “given current economic conditions” (p. 43), to continue to rely on natural gas “as a predominant electricity fuel source for the near future...” (P. 43). As stated in the Plan “Today, due to proliferation of new natural gas power plants, NJ is considered a net exporter of electricity...” (P. 42). This because of NJ’s integration with PJM’s regional grid and its proximity to the largest natural gas field in the US (in Pennsylvania). PJM...”coordinates the flow of electricity between NJ and NY. Loss of this income source creates an instability that can be countered through the continued use of natural gas fuel, which is viewed as “contributing reliability services to the grid.” (P. 43).

Given the above, is the Plan deliberately “cloaking” natural gas and petroleum based biofuels in the language of renewable and sustainable energy sources in order to justify its continued use and profitability?

For example, the language in the Draft Plan supports the intent to continue to use liquid fuels by referring to these fuels as “renewable” and as examples of “clean vehicle technology.” Examples of such “cleaner liquid fuels” are describe as “renewable natural gas” (p. 32), “Sustainable Aviation Fuel” and “renewable diesel.” (p. 34-5). Are these statements intentionally misleading? Science tells us that these fuels are not clean and are not renewable. TO BE TRANSPARENT in intent, the Plan MUST CLEARLY DEFINE and utilize a SCIENTIFICALLY SOUND criteria for labeling a fuel “renewable” or “clean.”

**RECOMMENDATION: Deny NJTransit’s proposal to construct infrastructure in the Meadowlands to increase distribution and expand NJ’s “bulk electric grid” (p. 43).**

This proposed plant is redundant and not necessary. The construction of an additional power generation source using “renewable natural gas” supports NJ’s status as a “net exporter of electricity.” . Stockpiling natural gas-fired plants can provide a “bridge” from sales to consumer – a transition necessitated by the anticipated reduction in the amount of electricity that is generated by true renewable sources (wind, solar, geothermal and nuclear), the issue of storage and the dwindling of our out-of-state market. In fact, it might be conjectured that the state will eventually be required to purchase electricity to make up the deficit.

NJ Transits proposal to generate its own power also appears to be a response to the relationship between other state electric distribution companies and the ownership of their own transmission. Each of the four New Jersey electric distribution companies own transmission and are regulated by NJBPU. PJM, is regulated by FERC and is responsible for transmission infrastructure planning to manage growth (p. 76). These relationships have the potential for innate contradictions. For example, “state regulated electric distribution companies are compensated largely through growth in electricity sales, which runs counter to state goals of reducing electricity demand.” (p. 79) And, while NJBPU is responsible to manage growth, it is also responsible for the provision of incentives to reduce use of natural gas (p. 71). Where does NJTransit fit in this mix? Is it to be the fifth NJ utilities provider, hence regulated by the state? Or is to for company use only and out of the NJBPU/FERC mix?

**RECOMMENDATION: Define Biomass, Biofuel and Biopower more clearly and provide a list of “carbon neutral” sources of fuel that does not include wood and other organic materials.**

**RECOMMENDATION: Include a time plan for eliminating incinerating plants in the state of New Jersey.**

There are currently 35 large generating facilities in NJ (33 natural gas fired; 2 coal fired). The Plan calls for the use of “renewable electricity generation to support increased electrification and replacement of aging nature gas power plants...” (p. 45). But what will the state replace these aging plants with? The Plan sites “solar, wind, biomass, tidal, wave, fuel cell and geothermal technologies” as EDECA defined “NJ Class I” renewables (p. 46). The definition of this classification needs to be clearly stated in the Plan.

The Plan refers to biomass as “the conversion of organic waste” (p. 10), as biopower or “the conversion of organic materials into heat and electricity” (p. 55) and as “resource recovery, i.e., waste-to-energy plants” (P. 46). The meaning of each of these terms unclear. At the beginning of the Plan (p.10) there is a reference to “maximizing the use of Source separated organic waste for energy production and encouraging anaerobic digestion.” Later in the Plan (p. 55) New Jersey’s “existing biopower resources” are defined to “include landfill gas to energy plants, waste to energy plants, wastewater treatment plants and biogas to energy plants.”

Each of the above references needs to be clearly defined. , Biomass as a source of power generation is assumed to be a renewable source because it “burns” or uses organic materials. Biomass generators have been fueled by wood (in the form of pellets produced from clear cut forests), railroad ties and even rubber tires. Any biomass fuel requiring incineration to generate energy (e.g. trees, yard waste, etc.) **MUST BE REMOVED** from consideration and **MUST BE CATEGORIZED** as **NON-RENEWABLE** resources. The Plan **MUST** clearly state that **NO INCINERATORS** will be constructed or used to generate energy **AND** that **WOOD, TREES** and other yard waste are **NOT** defined as **RENEWABLE** and **ARE NOT CARBON NEUTRAL**.

**RECOMMENDATION: Provide plans for the clean-up of existing gas and other polluting power plants from proximity to economical disadvantaged communities and municipal opportunity zones. Deny any future construction of such plants, such as the proposed Bergen Liberty (Meadowlands) Gas-Fueled plant.**

Throughout the Plan there is mention of activities to address the use of electric vehicles in low income communities (price incentives) and for power generating plants to be “steered away from flood zones and other areas deemed vulnerable to climate change.” (p. 50). For example, the Plan observes that “fossil fuel power generators are often located in or near environmental justice communities, placing additional burdens on them in the way if disproportionately contaminated air.” (p. 82). In fact, Governor Murphy’s Executive Order #23, directs the NJDEP to “develop

guidelines on how all state departments can incorporate environmental justice into their actions...including NJBPU, NDEP, NJDCA and NJTransit...to ensure that they are actively participating in opportunities to reduce energy use and implement clean energy initiatives.” (p. 81). This includes the creation of a Community Energy Planning grant program through NJDCA, the administrator of 75 NJ municipal opportunity Zones.

**CONCLUSION: New Jersey needs to act quickly and decisively to address climate change. This requires some hard decisions that may not be popular, including the denial of any new gas-powered plants and the eventual termination of all existing plants that utilize fossil fuels. To accomplish this, the state needs to invest NOW in research and development, is manufacturing start-ups in green technology and it needs to take a hard line with unions to help them retrain workers for good paying jobs in sustainable and renewable energy.**

**To this end, the state plan must include clear definitions and intentions AND a sound business plan with specific deadlines, costs and goals.**