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To: <u>comments, EMP</u>

Cc: <u>Camacho, Aida</u>; <u>Power, Grace</u>

Subject: [EXTERNAL] COMMENTS FOR NJBPU Energy Master Plan

Date: Monday, September 16, 2019 12:42:27 PM

September 16, 2019

To the Board of Public Utilities and the Energy Master Plan Committee:

Governor Murphy's priorities are clear regarding energy and the necessity to forcefully addressing Climate Change. All planning by the State, county and local governments must take into consideration the certainty of sea-level rise with concomitant rivers rising, excessive rainfall causing increased flooding, stronger hurricanes, increased tornadoes and other predicted negative impacts. We also must plan for the very real threats from cyber (and physical) terrorism. Due to the increasingly ever-present Climate threat, many customers are already moving toward Distributed Energy Resources (DER) and that trend is expected to increase.

All such future planning must be guided by the latest scientific and fact-based information from our government and University climate experts.

New Jersey can be a cutting-edge leader - in Climate Change mitigation and in adaptation - and must do so in an efficient and cost effective way to protect all segments of our society. This EMP should be a glide path toward New Jersey's 2050's goal of 100% clean energy and mandated requirement of 80% renewables by 2050. Climate Change is making our weather increasingly extreme, and, unfortunately, we surely haven't

seen the worst of it yet.

I agree with most of what the draft EMP includes but, in order to be a real national leader, New Jersey must take much bolder action such as requiring zero carbon emissions from electricity generation by 2030, increasing our Offshore Wind goal to 5000MG by 2030 and placing a moritorium on new fossil fuel generating facilities and on natural gas pipelines whose primary purpose is to supply electricity generation (at least, until after a substantial review of the Rocky Mountain Institute's (RMI) recent reports). New Jersey's 2019 Energy Master Plan should pledge to meet the United Nations 2030 Agenda for Sustainable Development Goal 13 "Take urgent action to combat climate change and its impacts." "Urgent" is the critical word!

I commend the BPU for contracting with the well-respected RMI to do the critically necessary modeling. The draft EMP states that "the final EMP will include specific & targeted dates & metrics." I urge that you do - as we did in the 2008 NJEMP - to include in the final plan - Specific Action Items for each EMP Goal. The action items should identify implementation plans - who & what & when. I also, suggest that you review and consider the 2008 recommendations that have not been adopted, such as establishing a New Jersey Energy Institute.

STRATEGY 1: Reduce Energy Consumption and Emissions from the Transportation Sector:

The **DOT** must be much more engaged in this clean energy effort. In the last 10 years, NJ has dramatically lessened its emissions from electricity generation. As noted in the draft plan, transportation is now our major source of carbon emissions (46%). Yet, this draft EMP has few responsibilities assigned to the DOT.

For instance, Strategy 1 has a tri-agency partnership (BPU, DEP & EDA). But, DOT really should be active in this transportation area - they operate/maintain our major roadways - the Turnpike/Parkway/AC Expressway & major state highways, e.g. Rt 1.

While mentioning "Smart Growth" (pg 36) and briefly discussing the DOT Transit Village Initiative & Rt 18 traffic signal optimization pilot project - Smart Growth policies, plans and actions do not appear an EMP priority - and they should be. DOT must change **how** they plan & construct our road systems to apply road construction methods which will lessen idling in order to lower emissions.

Smart Growth concepts should be routinely applied - especially for new road construction or when new buildings are constructed along roadways - such as right-hand turn lanes, "smart" synchronized traffic lights, less curb cuts, etc. - which result in less vehicle idling. Walk-able/bike-able, mixed-use communities would eliminate unnecessary trips and lessen Vehicle Miles Traveled and lessen emission-created public health impacts. Regulations should be adopted so that municipalities & counties are required to use Smart Growth principles. For instance, in congested areas, businesses should

be organized to stager starting/closing hours.

As noted in the draft plan, NJ has one of the longest commute times in the country (pg 36). And, we are the most densely populated state - and have been for 40 years. How to "do" "Smart Growth" has been available for decades. Heck, I taught it at the Rutgers Bloustein School in 2001! DOT_cannot continue to do business as usual! For NJ's EMP to be truly successful, DOT must add Smart Growth to their mission and to their actions. DOT must do much more.

New Jersey should fully embrace Smart Growth - a cornerstone of Sustainability. DOT needs to work with DCA and DEP and other relevant State agencies on a Smart Growth Plan. New Jersey's universities, such as Rutgers' Bloustein School, have expertise as does the Regional Plan Associations and several non-profit organizations such as Sustainable Jersey and the Tri-State Transportation Campaign. So, the State CAN, in fact, reduce VMT to dramatically lessen on carbon emissions.

<u>Please</u> first focus on <u>diesel</u> emission vehicles in urban/EJ area. Heavy duty diesel vehicles must be eliminated as quickly as possible due to the known significant public heath impacts.

I agree that the Port Authorities (NYNJ & Delaware River) and airport vehicles should be a priority. However, those funds should come from these organizations <u>own</u> budgets and <u>not</u> from the SBC, utilities, etc. The Port Authorities should immediately study how to best reduce diesel emissions by

electrification in the port area and at the airport and provide, as a high priority, resources to eliminate diesel emissions - from equipment, trucks, airplanes and ships. They should research world-wide methods for funding, e.g. Los Angles' container fee. No New Jersey funds (e.g. SBC, RGGI, Volkswagen monies) should be used for this effort. The ban on older diesel vehicles should be re-instituted. Within a year the NYNJPA and the Delaware River Port Authority should develop a detailed plan with a timetable to make the Ports emission free by 2030.

Replacement of New Jersey Transit (NJT) diesel buses should be a high priority and occur in a structured way, e.g. first in our bus hubs (e.g. Newark & Camden) and then in the other cities with the most Particulate Matter (PM). All new buses should be electric or possibly hydrogen.

School bus fleets and private buses should be electrified over time. Retire the oldest, dirtiest buses with clean buses. By 2030 replace all school buses with clean ones. Additional light rail like the Lindenwold High-speed Line, River-line and Newark's light rail should be planned for our most congested areas.

While personal EVs should obviously be encouraged, the State should <u>first</u> focus on diesel vehicle fleets - government, large C&I (Fed Ex, UPS, utilities, chain stores, private trucking and delivery) - especially those serving our urban areas. Eliminating diesel would have a <u>double</u> beneficial impact in drastically reducing carbon emissions <u>plus</u> reducing harmful heath pollutants, e.g ozone & Particulate Matter ("black

carbon") which impacts so many children and adults e.g. deaths and asthma.

As noted in the draft plan, "While much media attention is spent on the growing EV market for passenger vehicles, dieselfueled medium & heavy duty trucks, such as trucks & buses, add significantly to local air pollution." (Goal1.1.8; page 33) I am not saying to ignore personal EVs. The Clean Cars Program EV tax exemption program is excellent. But, unless personal EVs are manufactured in NJ, NJ should not provide rebates for personal EVs. The federal government should give national rebates. If any EV rebates are given, there should be an income cap of 300% of federal poverty level. The cost of EV ownership will continue to fall and, and, with the state education & outreach campaign, usage of state dollars is not needed to encourage most of us to purchase personal EVs.

While "range anxiety" is real, the current high coat of "fast" chargers, utilities should not install them on public roadways and then rate-base them. Private investment in charging stations should be the norm. Fast charging devices are extremely costly now but prices will move downward the more EVs are sold in New Jersey and around the country. DOT should first competitively bid "fast" chargers along the Turnpike, Parkway and Expressway so that every rest stop has fast chargers available. Market forces should provide the investors. Reportedly, the Venture Capitalist market is interested in investing in EVs. EDA should make it a priority to identify those investors. Then DOT should issue RFP(s) for other major State roadways, e.g. Routes 1, 22, 55,73, 295. However, I suggest waiting until after the tollroads RFPs

demonstrate that there is a competitive market and also demonstrate that New Jersey is serious about this effort.

The EDCs will already be making significant revenue increases in electricity sales from EVs' charging. Utility affiliates could participate in RFPs but public utilities should not be allowed to rate-base EV chargers. EDCs could rate-base other EV infrastructure, e.g the electric lines needed due to the increased load. Possibly, EDCs might be authorized to install EV chargers for LMI multifamily buildings if there is no competitor willing to install but they should have to petition the BPU to do so.

A time-of-use charge should occur at most public charging station so that people will primarily rely upon their home charging unit and not charge during peak times.

Give tax incentives, and possibly low or no interest loans, to gas stations and auto repair shops to install "fast" chargers. This will allow the gasoline service sector to continue to do business into the future as they gradually eliminate their gasoline sales and increase electricity sales.

Tax incentives could be given to Commercial and Industrial charger installations. All EV Chargers should not be included in property tax assessments for a certain definite period of time - possibly 10/20 years.

Streamline permitting requirements statewide, e.g. siting, local inspections, etc. The State should draft model permitting guidelines for municipalities.

Review each EDCs Demand and Energy Charge to ensure that it doesn't disadvantage EVs (& Energy Storage).

EV tariffs should be similar state-wide and should quite likely be Time-of-Use rates (TOU) at least initially. But the BPU should also investigate world-wide EV rate structures and tariff designs. You should consider, and possible implement, the "retail credit for export" tariff.

Raise the "fast track" interconnection standard.

Streamline purchasing requirements by government entities in place of RFPs for every purchase. Allow a waiver of the time requirement of the government contracting law.

Consider a "cash for clunkers" program to get the most polluting vehicle off the road.

Require stricter emissions requirements for all off-road vehicles, e.g. dirt bikes, jet skis.

Some businesses rely on natural gas for manufacturing. Others have no diesel alternatives, most notably our farmers - those who make us still very proud to be "The Garden State." The relevant agencies should work closely with the Secretary of Agriculture, the Rutgers Agricultural Experiment Station and others to enable our agricultural community to successfully remain. New Jerseyans are very proud of our remaining farmlands. For such businesses the State should allow them to continue to use natural gas and/or diesel fuel until economic alternatives are developed.

Building codes should be amended to require proper EV wiring (not the chargers) in place for all new residential and C&I buildings.

Continually research internationally how EV batteries can be used for Battery Storage integration into the distribution system ("vehicle to grid", V2G). Work with other state, e.g. Connecticut, Delaware, Maryland, to be able to monetize - for peak shaving or DR - by methods such as aggregation. Also, review how best to utilize "used" batteries - currently they can be used as part of a battery/energy storage (with about 60% of usable battery still remaining).

What I am urging is that state & SBC resources should go primarily to where we will get quicker public health benefits for NJ - to eliminate diesel vehicles - most especially in our urban areas. Use federal monies, tax incentives, etc. as much as possible. Do not use SBC and other ratepayer monies.

We have carbon pricing on electricity and natural gas via the SBC, discussion should be held with RGGI States about the possibility of <u>carbon pricing for gasoline</u>. This would clearly require legislative action but because transportation is our #1 cause of GHG, this problem must be addressed head on.

STRATEGY 2: Accelerate Deployment of Renewable Energy (RE) and Distributed Energy Resources (DER)

NJ clearly must accelerate deployment of RE & Distributed

Energy Resources (DER).

I refer you to the white paper "The Role of Distributed Energy Resources in New Jersey's Clean Every Transition" which I submitted earlier on behalf of 3 non-profits (Center for Renewables Integration, Gridworks and Gridlab). That paper has cutting-edge, yet, doable recommendations. In fact, DER (e.g. EE, RE, Energy Storage, Smart Inverters, Demand Response) can actually be less costly than the traditional utility system.

A major point of that white paper - to mandate Non-Wire Alternatives - is included in Strategy 2 but only for statefunded projects. Non-wire Alternatives should be routinely utilized for all potential transmission (& possibly large distribution) projects. New Jersey should learn from other states, e.g. California and New York, where NWAs are being utilized. I urge the BPU to establish a strong policy (and then a rule) to mandate that, in the case of new transmission line proposals, the utility/developer must first consider NWAs that would meet the demand at the same or lower cost and, then, demonstrate to the Board that no such lesser cost alternative is available, before the EDC is authorized to construct a new proposed transmission line (or possibly, also, an expensive distribution line). This would be similar to an environmental legal requirement that any proposed project that would destroy forested wetlands must first demonstrate need; if need is proven, then demonstrate that no viable alternative can be found to meet the need. The BPU could contract with an independent 3rd party or a New Jersey State University to analyze whether an EDC's transmission proposal can be cost

effectively met instead by NWAs, e.g DERs. Like NWAs, DER RFPs could be on-going incentives to cut peak loads - NJ's most expensive electricity.

The BPU should avoid unnecessary long-term rate impacts. By doing so, you can avoid future stranded costs. Clearly DERs are becoming more and more popular for all customer classes. Customers want DER due to our increasingly extreme weather as well as possible terrorism(cyber and/or physical). Other EMP areas, such as significant increases in Energy Efficiency (retrofits, appliances, building codes, etc), Energy Storage, Geothermal, Microgrids, et al. will significantly lesson the need for transmission lines in the not too distant future. It is very likely that a transmission line built today (and good for 40 + years) will NOT be needed in 15/20 years. Ratepayers should not have to pay for those future stranded costs most of which can now be avoided by NWAs. While NWAs should certainly be included in rate base, they should, if possibly, be put out to bid by the EDCs.

Utilities' role should be limited to what DER competition cannot provide in order to allow for lower, unnecessary costs to ratepayers, i.e. not rate-based. I recommend that the Holding Companies of our EDCs and Natural Gas utilities use new (or existing) utility affiliates for DER such as New Jersey Resources does with their solar PV affiliate.

It is critical for New Jersey to work closely with OPSI States (and our Governor working closely with other OPSI Governors) to optimize the PJM Capacity Market to benefit DER. FERC and PJM have vital decision-making authority in

this extremely important arena. Recent decisions and some MOPRs bode very badly for DER to achieve financial recognition for the benefits provided to the Grid. DER should be allowed to bid into the PJM Capacity Market yet a FERC decision may completely cripple this effort. The NJBPU along with many other states oppose this FERC action. The BPU's staff (and other experts) have a much better understanding of the current dire situation than I. There is a need right now to immediately ratchet up action by all relevant parties. The submitted DER white paper mentions this as well.

New Jersey should study states that have successful DER programs and determine what NJ laws or regulations need to be changed. Other changes need to be made. For instance, a NJ law prevents downtown Trenton's State Veolia MG from using less expensive self-generated electricity. This law needs to be changed. In addition, reportedly, ice storage could help dramatically reduce peak, however NJ's incentive structure does not make the economics possible. NJ should review the incentives given in NYC, Texas and Florida and, hopefully, then make the necessary changes in NJ statues/regulations. This should help hospitals, universities and schools cut their peak. Like NWAs, DER RFPs could be on-going incentives to cut peak loads - NJ's most expensive electricity.

The DER white paper also recommends consideration of <u>non-pipeline alternatives</u> (NPA) when new gas pipelines are intended for electricity production. In fact, the **Rocky Mountain Institute** (who is doing the NJEMP modeling) just released last week, 2 reports that demonstrate how new gas infrastructure (new gas plants & new pipelines built to supply

generating facilities) are uneconomical. And, that they will become massive stranded costs - which the utilities will most likely ask the BPU to pass on to the customers.

In addition, while natural gas burns cleaner than coal, the hydraulic fracturing process produces substantial Green House Gas (GHG) emissions. Plus, natural gas pipelines & facilities release methane - a much more harmful GHG than CO2.

So, I urge the BPU to take a vey serious look at the RMI reports and, at least until that review is completed, place a moratorium on all new gas generation facilities and pipelines (used primarily for electricity generation). New gas hookups - for heating or for cooking - should only be allowed when there are existing natural gas pipelines in the street. I also recommend that, if the Board does authorize any new pipelines whose purpose is to supply natural gas for electricity generation, the Board Order specifies that no stranded costs will ever be paid for by future ratepayers.

I also recommend that the proposed North Bergen facility be denied by the NJDEP. NYC would receive the electricity while North Bergen residents would get the concomitant pollution. As the Plan confirms New Jersey still does not meet the national air quality standards.

Off Shore Wind (OSW):

New Jersey has the best Eastern Seaboard OSW potential - we have strong winds and we are in the center of the Atlantic coast's most likely OSW locations. NJ's remaining nuclear

power plants, scheduled to close in around 25 years, currently supply about 40% of our electricity. OSW production will increase over those years and should replace nuclear as our base-load generation. The Board should set forth a time schedule for the OSW industry so they have certainty. This will allow the industry including their supply chain to plan and, with other State incentives, invest and locate their manufacturing facilities here. We have the mid-Atlantic location, the needed infrastructure (rail, road and ports), universities with the expertise, and an educated work force.

For the most efficient OSW, an <u>offshore PJM backbone</u> transmission line must be built as soon as feasibly possibly. The OSW law mandates that all New Jersey electric customers pay for all of the OSW developer's costs due to the OREC being "all in."

If future connections are made to a PJM backbone transmission line, the additional costs of bringing the electricity to shore & connecting to the existing grid could then be eliminated. In addition, a backbone line should benefit North Jerseyans by helping to lower their high congestion pricing.

This line should be planned to eventually run from Virginia to Monmouth County. It should be treated the same way as other PJM transmission lines - those receiving the benefits, pay the costs. This is how Europe OSW operates (except for Great Britain) - their OSW transmission lines are treated as part of the entire grid and have RFPs for transmission separate from those of the OSW development projects. New Jersey needs to work closely with neighboring states to have PJM include this

OSW backbone transmission line as part of the PJM grid system. While the BPU is currently working with PJM on this possibility, I recommend that Governor Murphy reach out to other regional Governors and, as a coalition, insist upon quicker action by PJM.

BPU's second 1100 MW RFP probably will need to go forward with its own line to an onshore substation. But, I urge the Murphy administration to work closely with other states to move the PJM backbone line for approval as quickly as possible. Hopefully, the BPU would be able to release a future OSW time table that includes the both the OSW backbone line as well as future OSW developer projects. There are several companies expected to bid on the backbone line (mostly the experienced European developers) so there should be competition.

I am hopeful that the BPU OSW study, which includes the backbone transmission line, will be useful in expediting the PJM effort.

The Murphy administration should increase its OSW goal for 2030 to 5,000 MW (vs the proposed 3500). The OWS technology is improving, great sites are there and we need that electricity to replace the retiring nuclear facilities.

I note that over a decade ago, the BPU Clean Energy Program helped fund the "Power Buoy" which was pilot-tested off of Tuckerton and Atlantic City. Ocean Power Technologies, located in Pennington, manufactured the Power Buoy. That technology is now being utilized offshore of Oregon and

Australia. The Power Buoy would not be cost effective in the Atlantic by itself due to the Outer-continental Shelf (and, thus, less ocean energy). However, the Power Buoy should be cost effective when connected to a backbone line - in between the turbines.

Certainly NJ's EMP must change from "carbon-neutral" to "zero carbon." When CO2 is eliminated so are other pollutants, such as PM10, that has been proven for decades to cause serious health impacts such as asthma. I note that New York State has a new law that mandates - by 2040 - zero carbon for electricity generation. New Jersey should do at least the same if not better.

STRATEGY 3: Maximizing Energy Efficiency (EE) & Reducing Peak Demand:

As the draft EMP proposes, EE must be a much higher priority. The State might initially use tax incentives for builders and rebates for appliances. But, when the prices come down (like they did with LEDs & PV), the most efficient/effective appliance standards and building code standards should be adopted. NJ should adopt best-in-class appliance standards. In the not too distant future, appliances should be required to be "smart" so that EDCs can manage them for Demand Reduction & peak-shaving. The DCA and BPU should work with ACEEE and others to have national 'smart" appliance standards set.

The Clean Energy Program's (CEP) EE program should offer the most significant EE programs to the entire state. This allows all New Jerseyans to benefit as well as allows the State's CEP and 3rd party suppliers to market & work statewide. While the Utilities should be appropriately compensated for their EE programs, these should not be rate-based, and, should be competitively offered to 3rd party suppliers.

Develop "Pay as You Save" EE programs whereby the customer can pay off their EE costs via their EDC/Natural Gas utility monthly bill.

The CEP and the utility EE programs should initially be specifically targeted to the most congested areas of the State. This would help all customers by reducing the peak demand. In fact, many CEP programs, e.g. RE, Community Solar, might also be initially targeted to the most congested areas of the State so that electricity costs will be reduced for every customer in that congested zone by cutting expensive peak load. The EDCs must identify their most congested locations.

Stream-lining processes, and possibly incentivizing DER aggregation, would also help cut the costly peak demand. DER helps avoid other costs (peak-shaving, DR) and should be properly rewarded. More DER will occur when monetary benefits are more obvious and available.

Pilot tariffs should also be useful in determining how best to reduce the peak demand.

The newer heat pump technologies might well be effective and

efficient in much of New Jersey. We should make a concerted effort to determine where best to use it.

STRATEGY 4: Reduce Energy Use and Emissions from the Building Sector:

As the Draft Plan clearly recognizes decarbonization of the building sector will be a substantial undertaking but we must start now moving soon to net zero carbon construction. I concur in the recommendations laid out. Based upon the cost differentials set out in the plan, incentives should be given as soon as possible to convert current oil and propane homes to electric heat. Also, no new buildings should be constructed that have oil or propane heating.

The DCA, like the DOT, must be more actively engaged in the NJEMP. DCA adopts the State's building codes, typically following the ICC codes. DCA building codes should be upgraded for more efficient construction. DCA should investigate international and other states' building codes for insulation, windows, etc. For example, for years now, most European hotels have the room card "key" also being used for the room's electricity. NJ should work closely with ACEEE. NJ should consider adopting at least parts of California's building codes as well as something like the New York City's "Stretch Building Code" or "beneficial strategic electrification." The NJ building codes should be amended to allow for ease of use for Community Solar, other renewables, energy storage, electric vehicles, etc. Future DCA building codes should require that new homes be built pre-wired for

solar, EVs and possibly Energy Storage (obviously with exclusion for sites where PV wouldn't be viable - trees, etc,)

The State should utilize "whole building" energy audits, especially in LMI homes, and not just take the "low-hanging fruit", e.g. lighting. Consider an EE requirement for RE programs, e.g. require a whole building energy audit before PV is installed.

In older LMI residential buildings, EE residential (single and multifamily) programs should be linked with the DEP lead paint remediation program so that lead paint remediation is done at the same time. An integrated, streamlined process should be established.

DCA should work closely with affordable housing owners to better effectuate EE.

DCA also is responsible for our <u>municipal land use laws</u> in which they should adapt Smart Growth strategies. I suggest that DCA work with Rutgers, The State University and others to create a Smart Growth model code. DCA, should, again - like DOT - work with DOT, and use Smart Growth strategies for development, e.g. walkable/bike-able communities - cutting down on Vehicle Miles Traveled & carbon emissions.

STRATEGY 5: Modernize the Grid and Utility Infrastructure:

The time has again come for Utilities to do Integrated Distribution Plans (after 20 years). A major goal of these

IDPs should to to modernize our electricity system to provide reliable, resilient electricity at <u>least possible cost</u>. The future D & T system must be "smart" using the existing "smart" technologies, e.g. micro-phasers, smart inverters, smart appliances. The modern D&T grid must have two-way communications so that EDCs (or PJM) can control the electricity flows for smart appliances (as air conditioner cycling has been done for decades). This can then be used for DR and Peak-shaving. EVs should be part of these plans to cut the peak and/or for DR.

Non-wires Alternatives should be prerequisite. Like NWAs, DER RFPs could be on-going incentives to cut peak loads - NJ's most expensive electricity.

Thus, the EMP must consider the long-term impacts of today's decisions. The EMP and the BPU must prevent over-building of the D&T system so that future stranded costs to ratepayers are lessened if not eliminated.

Next year smart inverter standards will be provided by the IEEE. New Jersey should include in this EMP the immediate adoption of those standards as soon as they are available. The EDCs Interconnection Standards should be modified to conform within a year of the IEEE's publication.

Tariffs must be re-structured. The BPU should research; discuss with the EDCs, Rate Counsel & relevant stakeholders; and then implement the best-in-class tariffs - designed to encourage customers to modify our electricity use while saving money.

Given that "Smart Meters" have reached cost parity with traditional meters, I concur that the BPU should have the EDCs use smart meters in their meter replacement cycles. If the BPU later decides to have EDCs accelerate AMI, "Smart Tariffs" should be mandated as well. A smart meter with a dumb tariff does very little for the customer - the major benefits go mainly to the EDC (reduced labor costs). Data ownership should be by the customer and not the EDC. The critical issue of who has access to that AMI data must be studied/determined, e.g. aggregators. Likely, the customer should make that informed decision.

STRATEGY 6:

I commend the Murphy administration & the BPU for making LMI and Environmental Justice communities a priority. We need to proudly step forward and do what is right for everyone.

STRATEGY 7:

NJ is well on its way to expanding the Clean Energy Economy!

NJ should within a year establish a Green Bank to leverage public & private monies. The EDA (Economic Development Authority) should be the entity to do so & ASAP. For well over a year now EDA has been communicating with the Connecticut Green Bank officials & private entities, and so EDA could quickly move forward to establish NJ's Green

Bank.

Commercial Property Assessed Clean Energy (C-PACE) should be implemented as quickly as possible. New Jersey is far behind many other states in allowing municipality to voluntarily establish a program using private lenders to assist commercial enterprises.

Building upon New Jersey's strong history in innovation, the draft plan rightly includes growing our states clean energy incubators, workforce training and education.

In conclusion, I recommend that the final EMP include more specific intermediate timetables for goals, strategies, assigned responsibilities & actions - by 2030, by 2040.

Once again, I commend the Murphy administration & the NJBPU, and the other active State entities, for working so hard on this EMP that is so critical to New Jersey's future. I strongly urge the State to once again play a strong, cuttingedge, national leadership role to cost effectively grow our clean energy economy while dramatically reducing GHGs.

Respectfully submitted,

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