ReVireo

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Energy Master Plan Committee
Board of Public Utilities
44 S Clinton Avenue
Trenton, New Jersey 08625
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Re: Draft 2019 Energy Master Plan: Policy Vision to 2050

To Whom It May Concern:

ReVireo is submitting the following comments on the Draft 2019 Energy Master Plan (EMP). ReVireo is an energy efficiency and green building services company that works with architects, real estate developers, homebuilders, and general contractors to help them comply with energy code and participate in above-code energy efficiency and green building programs. ReVireo strongly supports the goals of the EMP and is grateful for the opportunity to submit the following comments.

Strategy 3: Maximize Energy Efficiency and Conservation and Reduce Peak Demand

13) What are the strengths and weaknesses of the utility-run energy efficiency programs, third-party supplier-run energy efficiency programs, and state-run programs that NJBPU should consider?

Strengths of NJCEP:

- Comprehensiveness of suite of available programs
- Responsiveness to stakeholder feedback
- Standardized/available statewide for simplicity and consistency
- Ability to register/lock in rebates during design/planning stages of project
- Reference best practice national standards and programs

Weaknesses of NJCEP (specifically, barriers to participation):

- Participation hindered by assumption of total energy code compliance as a baseline for new buildings, whereas most buildings are not actually constructed to comply with energy code so incremental hard costs over code to participate are more than assumed

- Some of the national standards referenced (e.g., ENERGY STAR, DOE ZERH) are best practice but include prescriptive technical and administrative requirements not directly tied to reducing energy use or carbon emissions. Such requirements can sometimes be an impediment for participation. Other state's programs, like Connecticut's Energize CT Program or the programs for utilities in Eastern Pennsylvania (i.e., PECO, FirstEnergy/Met-Ed, PPL), offer one level of rebates solely for energy efficiency and then a higher level for implementing best practice national standards (e.g., ENERGY STAR, DOE ZERH). Perhaps it might be good to have a similarly bifurcated approach where the baseline for participation is only energy efficiency and then increased incentives are available for certifying under a national standard.

15) Which states or cities have successfully implemented stronger-than-average building and energy codes? How should New Jersey seek to strengthen it building energy codes, and over what timeline?

The New York State Energy Research and Development Authority (NYSERDA) develops a stretch code for every new code cycle in New York called "NYStretch Energy Code." This energy code, as according to NYSERDA:

- Is readily adoptable with minimal changes by local governments
- Is in enforceable language
- Is coordinated with the New York State Uniform and Energy Codes
- Is about one cycle ahead of the next New York State Energy Code in its requirements
- Lowers energy use and greenhouse gas emissions associated with new and existing buildings
- Is cost-effective and regionally appropriate

Assuming municipalities in NJ can adopt a stricter code than the statewide code, NJ DCA could look to create its own stretch code with each new cycle, perhaps in coordination with other state agencies (e.g., NJ BPU, etc.), to give municipality a model code to adopt that is stricter than the state energy code. If municipalities do not have the legal authority to do this, then perhaps such a stretch code could still be useful to planning/zoning boards or other municipal entities with the authority to require adherence to enhanced standards.

New York City also requires that energy code progress inspections are completed during construction by a qualified third-party, who have to sign off on every item documented during design through the TR-1 Form and associated forms. This process ensures buildings are actually constructed to comply with energy code, as opposed to just being designed to comply. NJ should consider the development of such enforcement mechanisms to ensure as-built compliance with energy code.
Also, the IECC section for commercial buildings has more strict requirements for commissioning than ASHRAE 90.1. But NJ only adopts ASHRAE 90.1 as its commercial energy code and strikes the section of the IECC that applies to commercial buildings. If it did the opposite, and only used the IECC section for commercial buildings for commercial energy code then more buildings would be verified to perform as efficiently as designed.

Goal 3.1.4: Streamline marketing, education, awareness, and program administration.

- The NJ Clean Energy Program is the best vehicle for being a "clearinghouse" for all energy efficiency programs within the state.

Goal 3.3.2: Establish mechanisms to increase building efficiency in existing buildings.

- The HERS Rating process is the best methodology for assessing the efficiency of current building conditions, modeling simulations for improvement, and then verifying such improvement after energy efficiency measures are performed. It is used by mortgage industry and other financing entities for this process.

Goal 3.3.3 Build state-funded projects and buildings to the tightest thermal envelope

- This goal references requiring state buildings to be mandated to earn 75% of the available points in the LEED Energy and Atmosphere category as a means for the state to actively engage in minimizing additional load growth on the distribution grid and to reduce emissions generated from natural gas heating. However, some of the points in this LEED category do not directly reduce building demand. For example, a project can earn up to 3 points for installing renewable energy resources on site and up to 6 points for enhanced commissioning. While these are valuable credits, they will not directly contribute to this goal. Furthermore, LEED is a national program and currently references ASHRAE 90.1-2010 as the baseline building for which to compare proposed energy performance. The State has just adopted ASHRAE 90.1-2016 as the energy code for commercial buildings, meaning that LEED compares to a baseline that is two code cycles behind the State's current energy code. While we are in favor of setting a required minimum point threshold in the LEED Energy and Atmosphere category, the State should consider adhering to an energy efficiency requirement that references the State's own energy code.

Goal 3.3.5: Increase compliance of mandated building and energy codes

- In our experience, energy code enforcement can vary significantly across the state. This inevitably leads to different levels of compliance with the energy code. The state should closely examine energy code compliance levels, as well as municipalities capabilities to review and enforce energy code. The state should also examine alternative enforcement methods, such as those used in New York City where qualified private agencies are utilized to complete on-site energy code inspections.
- Also, more training is necessary to ensure that HVAC systems in low-rise residential construction are sized properly according to energy code requirements. Energy code requires a Manual J, S, and D be performed during design but these calculations are rarely collected at permit stage.

Goal 3.3.6 Establish benchmarking and energy labeling

- Benchmarking and energy labeling are both important steps to be taken. The State should add to this goal to include the study of benchmarking data with the goal of developing emissions caps for the State's larger buildings. Doing so would go hand in hand in with Goal 3.3.2: Establish Mechanisms to increase building efficiency in existing buildings. In general, the Energy Master Plan should consider legislation that requires increased efficiency in existing buildings in addition to strengthening rehab requirements. New York City is in the process of rolling out Local Law 97, which does just this. Washington D.C. has passed similar legislation.

Strategy 4: Reduce Consumption and Emissions from the Building Sector

Goal 4.1: Start the transition for new construction to be net zero carbon

- This goal specifically targets new residential construction, as opposed to all new construction. There is no reasoning provided here as to why this distinction was made. In the absence of compelling justification, this should be expanded to include all new construction.

Goal 4.1.1: Expand and accelerate the current statewide net zero carbon homes incentive programs for both new construction and existing homes.

- DOE ZERH program obstacles are prescriptive requirements and incremental cost
- Broadening availability to gut retrofits would probably have to involve not requiring certification under national new construction standards, which don't give much flexibility to gut retrofits or reward them for their inherently reduced carbon/waste footprint

Goal 4.1.2: Study and develop mechanisms and regulations to support net zero carbon new construction.

- Working with college to develop 10-year price projections to create and implement a stricter energy code than the IECC is a great idea that we fully support.

Thank You,

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CEO