



Thank you for your work and reading this input.

I work in the building performance industry in NJ. I test, measure, and model the performance of buildings and their systems and strive to improve building energy efficiency, comfort, durability, and safety.

Regarding NJ EMP Strategy 4: Reduce Energy Use and Emissions from the Building Sector:

I urge the EMP Committee to include, encourage, and incentivize the Passive House building standard. Passive House is a proven, valuable, ready to use standard for both new and existing buildings undergoing retrofit. Passive House is being successfully used in all relevant climates, for all building types (not just houses), and includes well-developed consultant, tradesperson/builder, and verifier training and testing.

Passive House buildings have specific metrics to meet for certification. In general the principles are:

1. Measured, very airtight building envelope.
2. High levels of continuous insulation with no thermal bridging.
3. High-efficiency doors and windows with optimized orientation and shading.
4. Dedicated mechanical ventilation incorporating heat / humidity recovery.

As a result of the above, Passive House buildings require a minimal space conditioning system.

Encouraging the Passive House building standard is excellent path towards Net Zero as the significantly reduced space conditioning demand corresponds to less renewable energy capacity needed to offset the electrified space conditioning. To support the successful deployment of the Passive House building standard, training for Passive House consultant, tradesperson/builder, and verifier should be included in the NJ Energy Efficient Buildings Hub planning.

Beyond energy and carbon benefits, Passive House buildings provide other advantages including:

1. Comfort - consistent temperatures and humidity throughout the building.
2. Indoor air quality - with verified building airtightness, control of the source and filtration of ventilation air is possible.
3. Resilience – lower heat gain and loss allow Passive House buildings to resist temperature changes during electrical outages.

NJ is poised to become a leader in transforming our new and existing buildings for the better. Including and incentivizing the Passive House standard in the EMP is a step in that direction.

Further, I suggest the EMP Committee:

1. Encourage an energy analysis at the change of ownership of buildings.
2. Establish a mechanism to provide information to new home and building owners about the applicable NJ Clean Energy Programs available.
3. Provide a mechanism to encourage heating electrification via the electrical rate structure.

Kind regards,
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