

New Jersey Energy Master Plan Stakeholder Meeting

Reducing NJ's Energy Consumption and carbon emissions October 11, 2018

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Energy Efficiency Entrepreneur since 1990. Delivered over \$300 million in cumulative energy efficiency bill savings to customers.

The acquisition of the maximum amount of cost effective energy efficiency will support the transition from fossil energy to Clean Renewable Energy. Energy efficiency is the lowest cost energy resource and New Jersey has only been achieving less than one third as much progress in mining this resource as neighboring states. Reducing our energy needs through aggressive energy efficiency lowers the need for more expensive clean energy generation. To achieve a 100% clean energy economy by 2050 will also require a transition from fossil based heating and hot water and will require the state will need to implement the following:

1. Revenue Decoupling (in some form) of all electric and gas utilities to remove disincentives to maximum use of energy efficiency as a major resource.
2. Rewards for utilities for energy efficiency achievements in excess of required goals through the allowance of incentive equity returns.
3. Standardized contracts available to all private sector participants with payments per KW and kWh reduced for the **verified** delivery of energy efficiency and permanent peak demand reduction. (This would require the use of standardized M&V protocols, which NJ pioneered in 1989) backed by metering data. This approach will be in addition to prescriptive rebates and unleash creative approaches to energy and demand reductions.
4. Aggressive non-wires alternative programs (EE, Load shifting, thermal and electric energy storage, Demand Response, for all proposed investments by utilities or related entities that propose to expand the capacity of the grid to support claimed load growth or reliability needs.
5. Non-wires (and non-pipes alternatives) to be delivered by the private sector that deliver similar benefits at a lower long term cost against including the cost of carbon and/or methane emissions.

6. Evaluation of the cost of proposed utility or private sector fossil based investments that include a societal cost for the attendant lifetime carbon and methane emissions of about \$40.00 per ton of carbon, which should increase over time.
7. A methane emission tax should be developed and gradually imposed due to the large impact methane has on our climate compared to carbon dioxide.
8. Ongoing contracts for grid load shaping investments through energy storage (electric and thermal) that lower peak generation using fossil generation. Emissions of climate warming pollutants by peaking generation is 2X to 3X per mWh of non-peak fossil generation.
9. A Green Energy Bank with state credit backing to fund complementary energy efficiency contracting ability to the utilities programs.
10. Legislation authorizing PACE financing to deliver aggressive carbon reductions from efficiency and renewable energy to the commercial sector, especially the multi-tenant commercial building sector. This financing approach is critical to addressing the divided benefit barriers that exist in the many millions of sq.ft. of commercial tenanted space.
11. Legislation authorizing residential PACE funding. This will speed the transition to solar + storage and conversion of heating and hot water from natural gas to renewable electricity in the residential sector This may require NJ putting up a first loss fund (as California did) to satisfy the credit concerns of Fannie Mae and Freddie Mac.
12. Natural gas utilities should be prohibited from investing in programs that convert use from electricity to natural gas consumption.
13. There should be a NJ state prohibition against increasing natural gas pipeline capacity which equivalent capacity can be supplied by electric technologies fueled with renewable energy, or nuclear in the shorter term.
14. Rapid turnaround of payments to contractors in payment for KW and kWh reductions. The faster a contractor can free up cash flow the more projects volume he can undertake at any one time and the more quickly progress can be achieved.
15. The use of digital images and video images to verify the project details to validate results of energy efficiency projects and trigger contractor payment.