

New Jersey's Energy Master Plan & Recommended Somerset County Responses

A Report to the Somerset County Board of Chosen
Freeholders

By the Somerset County Energy Council

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Seven Top-Level Strategies of the Energy Master Plan (EMP)

1. Make Transportation More Efficient and Emission-Free
2. Obtain All Electricity From Emission-Free Sources by 2050
3. Increase Energy Efficiency Everywhere and Reduce Peak Demand
4. Make Buildings More Efficient and Almost Emission-Free
5. Update Electricity and Natural Gas Distribution Systems
6. Include LMI and Environmental Justice Communities in the New Green Economy
7. Seize this Chance to Grow NJ's Green Economy and Job Opportunities



1. Make Transportation More Efficient & Emission-Free

The EMP calls for de-carbonization of the transportation system (which currently accounts for 42% of NJ's GHG emissions). The pace will depend on grid modernization, especially "last mile" upgrades.

Somerset County Recommendations:

- Refresh & implement its EV Readiness Plan to
 - support build-out of EV charging stations and EV deployment;
 - increase awareness of EV benefits; and
 - phase-out the county's fleet of gas and diesel vehicles.

The EMP calls for improving multi-modal connections among homes, jobs, shops, and services.

Somerset County Recommendations:

- Advance implementation of its 2016 "Complete Streets" Resolution.
- Evaluate opportunities for walkways and bike lanes when upgrades to County roads are undertaken.
- Continue to support "Transit Village" designations and promote transit-oriented development (TOD).
- Promote its 2019 Walk-Bike-Hike Plan recommendations.

2. Obtain All Electricity From Emission-Free Sources by 2050

The EMP calls for 100% green power by 2050.

Greener will not be cheaper: prices could rise 20%-30% with a green grid.

Somerset County Recommendation: *Monitor the economic impacts of green pricing.*

The EMP calls for 7.5 GW of offshore wind capacity by 2035 (compared to 0 GW today).
500+ firms are already registered in NJEDA's Offshore Wind Supply Chain Registry.

Somerset County Recommendations:

- *Promote its prime location and other assets to attract green jobs and skilled workers as the supply-chain for offshore wind expands in NJ.*
- *Support the provision of workforce development programs at Somerset Vo-Tech and RVCC to help grow the "green economy."*
 - *Conduct a business needs survey*

The EMP calls for 17 GW of solar panel capacity by 2035 (compared to 3 GW today, NJ ranked 7th in US).

235 square miles are required to reach this capacity goal.

Somerset County Recommendations:

- *Encourage "Community Solar" projects, where private developers build larger arrays at a lower cost that serve multiple resident subscribers.*
- *Leverage county properties to host solar installations.*

2. Obtain All Electricity From Emission-Free Sources by 2050 (cont.)

The Governor initiated an Integrated Fixed Resource Requirement (FRR) Procurement Study by the NJBPU in response to FERC policy changes.

- If FRR is chosen, a capacity cost increase may be required to ensure wind plants can sell power, which would artificially raise ratepayer costs by \$2B annually (~24% rate increase).

Orsted's (NJ's EPC offshore wind project developer) capacity revenue loss is limited to \$18M - \$40M annually when its 1,100 MW plant begins operation in 2024.

- It may be less costly to subsidize offshore wind development by \$18-40 M annually.

Somerset County Recommendations:

- *Continue to monitor changes to FERC regulations and FRR status in NJ.*
- *Review the draft NJBPU Procurement Study when released for public input, and submit formal review comments and recommendations if appropriate.*

3. Increase Energy Efficiency Everywhere & Reduce Peak Demand

The EMP indicates that the 2018 Clean Energy Act mandates should be better thought-out, and calls for streamlining and removal of administrative roadblocks.

- There is huge work ahead in creating a smarter grid which “will provide the backbone on which other efforts to transition to a clean energy economy will rely”.
- The adoption of time-of-use pricing and smart home technology that will shape consumer use patterns, enable customers to monitor and manage usage, and incentivize EV owners to adapt EV charging schedules can maximize grid capacity.

Somerset County Recommendation: *Monitor progress and advocate as appropriate.*

The EMP calls for building and energy codes and appliance standards that are higher than national codes.

Somerset County Recommendations:

- *Monitor increases in new construction and renovation capital costs that could impact business development, economic competitiveness and housing affordability.*
- *Support the provision of education programs for local code officials and developers on updated energy code requirements (through RVCC).*

3. Increase Energy Efficiency Everywhere & Reduce Peak Demand (cont.)

The EMP calls for maximizing efficiency, reducing emissions and increasing energy conservation.

- Replacement of gas cooking and heating equipment with electric is recommended beginning in 2030.
- Office efficiency upgrade costs currently range from \$10 - \$12/sf (prisons higher).
- Thermal ice and/or battery storage for grid resiliency is also supported.

Somerset County Recommendations:

- *Obtain current energy audits for all county facilities and implement energy conservation measures (“ECMs”).*
- *Perform energy efficiency benchmarking of all County facilities and build upon existing Avid Exchange (Energy Solve) services to:*
 - *Demonstrate efficiency improvement compliance & track savings; and*
 - *Maintain best operating practices, maximize efficiency, and enable “Real Time Energy Management” (RTEM).*

3. Increase Energy Efficiency Everywhere & Reduce Peak Demand (cont.)

The EMP advocates for Public - Private Partnership to achieve resiliency upgrades to infrastructure and facilities

- Ensures governmental function during power outages.
- Achieves EMP 50% peak load curtailment by 2030.
- Leverages both the existing pool of federal funding and private capital funding.
- Encourages integration of renewable, conventional and energy storage technologies.

Somerset County Recommendation: *Advocate for the Removal of regulatory roadblocks restricting microgrid deployment*

4. Make Building More Efficient and Almost Emission-Free

The EMP calls for transitioning new construction to net zero carbon

- All new state buildings will be 100% electric and wired for EVs and Distributed Energy Resources (DER)
- State to monitor private new construction compliance with EMP requirements

The EMP calls for transitioning existing buildings to 100% electric beginning in 2030

- Plan conversion of natural gas, oil and propane fueled structures to heat pumps
- End incentives to convert from oil/propane to natural gas

The EMP recognizes NJBPU's major role of identifying practical solutions for EMP implementation including grid resources, cost constraints, yet-to-be developed required technologies and changes to regulatory landscape

Somerset County Recommendation: *Plan for designing new and retrofitting existing county buildings in parallel with this EMP strategy, and take advantage of all available funding incentives and subsidies.*

5. Update Electricity & Natural Gas Distribution Systems

The EMP calls for electric distribution system upgrades to handle increased demand and enable integration of clean distributed energy resources (DER) and

- recognizes that NJ must play a bigger role in regulatory and PJM processes concerning grid transmission upgrades and inter-state cost allocations;
- calls for an overhaul BPU rate-making process to better align with green goals; and
- recommends the preservation of existing gas distribution resources with 75% decline in usage.

Somerset County Recommendation: *Support prioritization of utility investments in grid modernization that will enable a successful and timely transition to a green economy, and that will improve energy system resilience and reliability.*

6. Include LMI & Environmental Justice Communities in the New Green Economy

The EMP includes four goals to spread the benefits of the new green economy across all communities by:

- encouraging municipal “Community Energy Plans” (CEPs);
- supporting development of both community solar and individual solar projects;
- Promoting deployment of EV charging stations and “shared mobility programs”; and
- increasing awareness of state-sponsored and state-subsidized programs

Somerset County Recommendations:

- *Encourage NJBPU policies that standardize client credit criteria and harmonize access to efficiency improvement programs by all users*
- *Promote the development of municipal CEPs by building awareness, obtaining BPU seed money, providing a blueprint for the CEP committee process, and helping with data analysis, ideas, and connections*
 - *Create a County Energy Plan to facilitate this goal*
- *Engage partnering organizations in developing and deploying information about state programs, with savvy use of social media, especially to underserved groups.*

7. Seize this Chance to Grow NJ's Green Economy & Job Opportunities

The EMP encourages research and development and the growth of supply chain clusters that support the green energy sector.

Somerset County Recommendation: *Collaborate with SCBP, GRWDB, RVCC, area research universities, industry leaders and other partners to recruit/attract green energy industry sector businesses and expand the work force.*

The EMP calls for building workforce development programs.

- Counties are directly responsible for workforce training in their vo-tech high schools and community colleges. Refer to existing clean energy workforce development models established in MA, CT, NY and CA.

Somerset County Recommendations:

- *Help the County Vo-Tech and RVCC become statewide leaders in clean energy, energy efficiency and grid modernization education and job training & certification programs.*
- *Encourage the expedited completion of RVCC's needs assessment (by 12-2020), in advance of the EMP needs assessment target of Dec 2021 in order to gain a competitive advantage.*
- *Support the identification and recruitment of industry partners who will assist RVCC with curriculum design and the establishment of certification programs, and provide career paths.*

7. Seize this Chance to Grow NJ's Green Economy & Job Opportunities (cont.)

The EMP proposes the establishment of a NJ Green Bank (as in CT, NY, RI and elsewhere) to leverage state-provided capital with multiples of private capital.

Somerset County Recommendation: *Support the expeditious establishment of the Bank and for a representative from Somerset County to have a seat on the board when the bank launches.*

NJEDA is launching life sciences R&D start-ups hub in New Brunswick. The EMP proposes another hub for helping clean energy R&D start-ups.

Somerset County Recommendation: *Investigate the development of a clean energy start-up hub including a clean energy industry incubator and/or a green building hub and incubator within the County.*

THANK YOU



For more information and to discuss these recommendations in greater detail, please contact the Somerset County Energy Council, which is part of the Somerset County Planning Division:

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