

## Grid Modernization Workgroup Approved Recommendations

Strategic Area	#	Recommendation
<b>Infrastructure</b>	GM 1	Working with state agencies, encourage utilities to proactively advocate for state policies that support utilities building necessary transmission and distribution infrastructure to meet overall future renewable energy (i.e., solar) and electrification needs. Coordinating state infrastructure planning and strategizing should occur on a regular basis to ensure the state is capturing the efficiencies of joint planning for projects; ultimately saving customers money.
	GM 2	Further study and evaluate the state’s distribution grid to identify opportunities (i.e., battery storage, microgrids, etc.) and establish a baseline of current conditions to help guide and plan future infrastructure investment.
	GM 3	Study benefits and barriers, including cost, to Distributed Energy Resource Management Systems (DERMS) to accelerate the integration of more PV on the distribution grid. Work with one or more utilities to implement DERMS. Identify resources to incentivize the development and deployment of pilot scale DERMS on feeders or substations having high DER penetration.
	GM 4	Study natural gas infrastructure for dispatchable generation needed to support grid reliability as the penetration of intermittent generation, such as renewables, increases to meet state mandates and increase the load due to initiatives such as EVs.
<b>Infrastructure - Reliability</b>	GM 5	Work with utilities to acquire needed resources for infrastructure/technology to support existing customer reliability when considering legislation that will further expand utilities’ loads.
	GM 6	Identify “hot spots” in the state where grid infrastructure (i.e. substations) will be most susceptible to climate change and sea level rise in Delaware to avoid placing critical infrastructure in those areas and exploring, and where necessary, mitigating vulnerabilities that already exist in those areas to the extent possible.
<b>Cost Incentives</b>	GM 7	Conduct analysis on whether the State of Delaware should incentivize projects that relieve transmission congestion in order to lower prices and enable greater grid electrification efforts.
	GM 8	To the extent that aggregate impacts restrict circuits because the mitigation cost is too high for the next system, study alternate methodologies of handling the cost.
<b>Electric Rate Design</b>	GM 9	For grid modernization recommendations, conduct a cost/benefit analysis.

Strategic Area	#	Recommendation
EV	GM 10	Encourage investments in EV charging stations in economically disadvantaged communities.
Climate Impact and Load Forecasting	GM 11	DNREC should work with utilities, PSC, DPA, and PJM to include consideration of the impacts of climate change in load forecasting.
Microgrids	GM 12	Define microgrids, identify barriers, and develop goals, incentives, and selection process for the installation and operation of several Microgrid pilot projects serving different load customers. Encourage 'value stacking' of multiple financial and operational benefits (resilience, reliability, deferred distribution upgrade, demand charge reduction, PJM arbitrage, and frequency stabilization services).
Substation	GM 13	Encourage deployment of 'modern' substations as more than one-way providers of power by including substation level peak power generation and storage, demand response, and removing reverse flow restrictions.
Transmission / Distribution	GM 14	Development of utility-defined smart Inverter requirements and settings to prepare us for DERMS/FERC2222. Includes specifying utility profile settings to improve overall grid behaviors and avoid unnecessary real power curtailment when applied universally.
	GM 15	Enable proactive utility investment, including investments into communication and other infrastructure, including voltage headroom, required to safely and reliably interconnect DER. This must include pre-determination regarding cost recovery for the investments.
Batteries / Storage	GM 16	Study Delaware's electrical energy storage needs and set incremental goals to achieve both stand-alone and PV-attached storage goals. Encourage pilot deployments of different battery technology and scale (residential, commercial, utility) including expected lifetime and safety issues.
Time of Use Rates	GM 17	Study time of use (TOU) rates to incentivize residential storage and other DERs. Use industry-accepted modeling programs and results from other states to develop an optional TOU schedule to enable more storage to be added.
Workforce Development	GM 18	Identify what programs, career path education, job skill training, etc. are currently being offered in the state and determine what programs or policies will be needed to meet future grid modernization needs.