MARYLAND COMMISSION ON CLIMATE CHANGE

Serena McIlwain, Chair

The Energy Resilience and Efficiency Working Group (EREWG) - Study Updates and Recommendations Discussion

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Outline

- Member Roll Call and Introduction
- Discussion on Proposed Recommendations
- Study Update by the Johns Hopkins University team
- Public Comment

Discussion on Proposed Recommendations

Recommendation #1

Maryland expands RMR to include MD climate goals

Maryland expands RMR to include Maryland climate goals. This working group supports the Maryland Public Service Commission (PSC), PJM Interconnection (PJM), and other related parties in their long-term planning and clean efforts. There should be a consideration of expanding the scope of alternatives when a Reliability Must Run (RMR) is evaluated to include all energy solutions that help meet the State's climate goals. This would include renewables, distributed energy resources, non-GHG emitting resources, energy storage, and demand-side solutions. This working group recommends developing a prioritized list of currently stalled clean energy projects within Maryland. Identifying which projects are most needed to advance clean energy production can help inform the state on where to start transmission upgrades and/or additions. This may be accomplished by developing a clean energy tracking system akin to the solar energy and energy storage tracking system described in the Brighter Tomorrow Act. *See* 2024 Md. SB 783. After the data has been collected, it can be supported by areas of priority/viability and shared with the PSC and PJM.

Recommendation #2

Maryland Study on Reconductoring and Transmission

The State shall, with the support of NREL, conduct a study on reconductoring opportunities in the State. The State, in partnership with a research institution such as the National Renewable Energy Laboratory ("NREL"), proposes to study the opportunity for transmission expansion in Maryland using methods such as retrofitting lines with advanced conductors in existing rights-of-way or grid enhancing technologies ("GETs"). Reconductoring replaces old conductors with new ones that have higher capacity for electrical current, while GETs optimize electricity flow and increase the throughput of existing grid infrastructure. Using Dynamic Line Rating (a type of GET) or reconductoring existing transmission lines could enable transmission system operators to make better use of the full carrying capacity of existing transmission infrastructure in addition to new traditional transmission lines to meet the identified needs. The recommended study would examine the transmission capacity expansion potential of alternative transmission solutions in Maryland.

Recommendation #3
Maryland SMR Placement Study

MEA shall conduct feasibility studies for the placement of SMRs on former fossil-fueled electricity generator sites. In 2022, MEA partnered with X-energy, along with its contractor, MPR Associates, and in conjunction with Frostburg State University to conduct a Feasibility Assessment for deployment of an X-energy Xe-100 Standard Plant –four advanced small modular reactors– ("SMRs") at a coal-fired power plant site in Maryland. The study presents a viable, comprehensive, and powerful business case for further development toward a project optimization of repurposing a coal generation facility to an advanced small modular reactor electric generation facility. Similar studies in Maryland may reveal the same and prevent transmission assets at former fossil-fueled generator sites from becoming stranded. This in turn may limit the need for future investments in transmission and the economic and other associated challenges in siting and constructing those assets.

Recommendation #4
Clean Energy Support

Maryland supports in-state clean generation. Maryland joins a chorus of states and countries looking to tackle climate challenge and decarbonize the economy. As Maryland develops our climate solutions, we should look to policies that value clean, firm generation.

Recommendation #5
Modern Economic and Energy Planning Structure

Maryland's economy requires the enactment of an energy planning structure.

a. Empowered to ensure actionable outcomes
b. Weighted consideration must be given to short-, medium- and long-term risk to reliability and ratepayer impacts.
c. Annual updating of solution sets.

A corollary is the necessity to have in place a clean energy standard, with stated annual milestones and requirement for outcomes to prioritize solutions that are least cost to Maryland's ratepayers.

Recommendation #6 Energy Planning with LBNL
Recommendation #7 GET and Storage with CPCN

6. Encourage Maryland's Public Service Commission to apply for and, if awarded, host technical assistance for state energy planning from Lawrence Berkeley National Laboratory (LBNL).

7. The State, with Attorney General legal adequacy approval, should evaluate a requirement for Grid-Enhancing Technologies (GETs) and Storage and Transmission on the portion of interstate lines that go through Maryland as a condition of the Certificate of Public Convenience and Necessity (CPCN) through the Public Service Commission (PSC).

a. Background: Because the PSC has the authority in the CPCN to minimize environmental impact, **requiring GETS and Storage on new lines has the ability to prevent future lines from being needed.** PSC would be given authority on an interstate line.

Recommendation #8
Offshore Wind Interconnection Study

The State, such as through the Public Service Commission, should conduct an analysis to determine if Maryland's Offshore Wind projects could be interconnected with Salisbury substations. This could build transmission in the state from Offshore Wind projects to Maryland load centers.

Background: This analysis can include cost reduction potential considerations, such as due to separately interconnecting Maryland's Offshore Wind with a new transmission line from Pennsylvania that may be required in the near future.

Recommendation #9

Load Scenario Modeling with 15-Year Projection

The State should **conduct a modeling scenario for load forecasting for additional load expected from data center growth, building decarbonization, and transportation electrification** in Maryland for the next 15 years.

Background: Having growth models for data centers, buildings, and transportation load growth would be beneficial for future policy making and energy planning decisions. To plan for the various transitions that will be happening, forecasting is important. This modeling scenario could then be built to include multiple inputs to identify the optimal mix of ground-source and air-source heat pumps, distributed energy resources, virtual power plants, and other energy considerations. For example an approach may be to use the Reliability Must Run (RMR) process to cover storage investments that address reliability concerns, similar to HB 112- Public Service Commission - Energy Storage Devices - Acquisition and Deployment, a bill proposed in 2024.

Presentation by
Johns Hopkins University

Public Comment