



SB 1083 – Public Utilities – Electric Distribution System Planning – Regulations & Plans

Senate Education, Energy, and Environment Committee
March 7th, 2024

Nicholas Bibby, Maryland State Lead, Advanced Energy United

Position: Favorable

Mr. Chairman and Honorable Members of the Education, Energy, and Environment Committee:

Advanced Energy United ('United') is testifying in support of Senate Bill 1083, legislation that is critical to preparing Maryland's grid for a future of increased vehicle and building electrification. United and our members see this as a step in ramping up the planning and buildout of distribution infrastructure in an expedited manner to keep consumer costs low, ensure that Marylanders have a positive and easy experiencing adopting new clean technologies, and secure Maryland's grid for the future.

United is a national business association, dedicated to educating and advocating for policies that empower our member companies to lead the transition towards a cleaner, reliable, and affordable energy economy. We represent over 100 businesses working across the energy sector, including large-scale and distributed renewables, geothermal, energy storage, energy efficiency and demand response providers, transmission developers, electric vehicle (EV) manufacturers, and charging infrastructure providers.

The Time to Prepare Our Grid is Now

The transition to electric buildings and electric vehicles is well underway in Maryland and nationwide, and is being driven by a combination of market forces and policies at the local, state and federal levels.

With regard to transportation electrification, the impact of state-level policies such as the Climate Solutions Now Act of 2022 is being amplified by major automakers from Ford and General Motors to Nissan and Honda planning to transition most or all of their light-duty vehicle fleets from gas powered to electric in the next 20 years. Coupled with that, EVs continue to set records in the auto market, with 12% of all light-duty car sales across the country in December 2023 being electric. With this increase in EV adoption comes increased demand for electricity. Analysis by the Electric Power Research Institute (EPRI) shows that Montgomery County alone will require an additional 1.8 terawatt-hours (TWh) of electricity production to support anticipated levels of light-duty electric transportation by 2030 – just six years away. That represents a nearly 350% increase in electric production as a result of passenger vehicle electrification in one county in the state.

Building electrification is and will continue to grow in Maryland, as more homes and businesses are increasingly turning away from traditional gas appliances in favor of new, high-performance electric system alternatives like heat pump water heaters and air source heat pumps. Two of the larger counties in Maryland, Montgomery and Howard, have both passed legislation to phase out fossil fuel use in new construction starting as early as 2027. On top of that, the sale of heat pumps surpassed that of gas furnaces for the second year in a row – this time, by 21% in 2023.

United and our member companies believe that there needs to be a shift in how we approach strengthening our grid, as this demand continues to increase due to electrification. Traditional long-term “top-down” resource planning will struggle to match the pace at which this transition to clean technologies is taking place and fails to take into account the highly distributed nature of these new facilities. The way we are currently planning risks delaying Maryland residents and businesses being able to access these superior technologies, and/or causing localized electric system challenges where large numbers of consumers do adopt things like heat pumps or electric vehicles. Ultimately, we see a critical need for decision-makers in Maryland and across the country to invest time and attention into this matter.



Senate Bill 1083 Builds Upon and Improves Existing Efforts

Maryland leads the nation in its ambitious climate policy thanks to the vision and action of the General Assembly. Through the Clean Energy Jobs Act (2019), Maryland set the statutory target of achieving 14.5% of the state’s electricity consumption from solar generation by 2030. The state has also set the course for a transition to an electrified vehicle fleet through a number of legislative efforts and the administration's recent adoption of the Advanced Clean Cars II and Advanced Clean Trucks Rule. All of these efforts were incorporated as critical underpinnings of MDE’s recently released Climate Pollution Reduction Plan, which serves as the roadmap to achieve the goals laid out in Senate Bill 528 “The Climate Solutions Now Act” (CSNA), which became law on April 9, 2022.

Each time that climate and clean energy goals have been adopted, follow-up was needed in order to close gaps and ensure proper implementation of the policy framework. Several Public Service Commission workgroups have commenced since the passage of CSNA including an Electrification Study, Interconnection, and Distribution System Planning Workgroup. They are each in different stages in the process of building consensus and making recommendations for regulations, and they are doing important work. But the scale and timeline of what is required to meet Maryland’s clean energy goals requires that we expand these efforts in several key ways, while staying aligned with the existing processes.

The ongoing PSC Distribution System Planning workgroup has brought together state regulatory and energy policy stakeholders to develop recommendations for regulations around distribution system planning, and to align planning processes with state goals and the proliferation of distributed energy resources. [The Electrification Study](#), done by the Brattle Group, after its high level analysis of the capacity of each utility's distribution systems to successfully serve customers under a managed transition to a highly electrified building sector, concluded that electrification is possible and provided top level guidance for what is needed from Maryland’s utilities. What is now needed is for utilities to develop their own bottom-up distribution impact studies to identify which parts of the grid will experience more immediate growth, and develop plans accordingly, including a consideration of non-wires solutions to help meet that load growth.



To help the state’s utilities take that next step and prepare for this transition while protecting the grid and Maryland ratepayers, United has worked closely with Senator Hester on SB 1083. This legislation would require the Maryland Public Service Commission and electric companies in the state to do their part in forecasting where upgrades to the distribution system will be needed to handle the influx of EVs and building electrification, due to the state’s ambitious goals. SB 1083 would ensure that electric companies in the state are proactively planning for where distribution system upgrades will be needed, and coordinating with gas companies in the process to ensure that new electric capacity is available ahead of expected increases in demand.

Ultimately, Maryland needs a smooth, reliable, and affordable transition as electrification ramps up – and that is what Sen. Hester’s SB 1083 takes the first step in achieving. Specifically, this legislation would:

- Enhance Maryland’s electric distribution system planning by using more highly localized, “bottom-up” forecasting to identify changes in customer demand down to which homes are likely to adopt EVs, heat pumps, solar, or storage technologies. This is the cutting edge of distribution system planning, and if this bill passes, Maryland’s utilities will be among the first to adopt this modern and highly sophisticated technique;
- Consider electric distribution system upgrades in overburdened communities to help speed adoption of technologies that will lower electric bills and improve indoor and outdoor air quality;
- Require coordination amongst gas and electric companies in the state to ensure the electric system is ready to accommodate new electric appliance load by the time it’s needed by customers, and that the state isn’t investing unnecessarily in two expensive sets of infrastructure to serve the same energy need – key to long-term energy affordability; and,
- Ensure electric companies are identifying optimal locations for the deployment of distributed energy resources (DERs), based on distribution system and customer needs, location type, and where overburdened communities might benefit.

Proposed Amendments



In further discussions with Sen. Hester, the PSC, and the Maryland Energy Administration, United agrees to the following amendments being adopted by this committee in SB 1083, which have been summarized at a high level as follows:

- Remove Section 7-804(B)(1)-(2) and move those sections to 7-805(A)(1), as United and the PSC have agreed this is the appropriate place for guidelines on bottom-up forecasts.
- Add Section 7-804(C) to ensure that the PSC regulations adopted under this Act minimize ratepayer costs for low- and moderate-income households.
- Add to Section 7-805(A)(2) to encourage the mitigation of anticipated new electricity load with options such as DERs and non-wire solutions.
- Add Section 7-805(A)(7) to ensure that electric distribution system upgrades in overburdened communities prioritize upgrades that increase access to EV charging station and projects that lower bills or improve localized air quality.

In conclusion, our core philosophy in our support for this legislation is to ensure that electric companies here in Maryland are using the latest-and-greatest techniques to properly upgrade their distribution infrastructure in advance of increased demand. This will help improve the customer adoption experience, leverage more distributed energy resources to avoid peak demand challenges, strengthen the state's electric grid, support the state's clean energy policy goals, and all while mitigating ratepayer impacts. This is a great first step in the right direction as we begin to really consider the impacts that electrification will have on the grid, and how we as a state are preparing for that transition. We look forward to continuing to work with the legislature, the PSC, and MEA to ensure that our grid is ready for this challenge and that we continue our buildout and preparation for increasing levels of vehicle and building electrification. United and our members support this legislation, and believe there is a unique opportunity for Maryland to cement its status as not only being bold in its energy policy, but being smart about it too.

For these reasons, United strongly supports SB 1083. Thank you for the opportunity to testify and we respectfully request a favorable vote, from this Committee.

