

Electric Grid Modernization

Policy Summary: In August 2015, the three electric distribution companies in the Commonwealth each filed a Grid Modernization Plan (“GMP”) with the Department of Public Utilities (DPU). As required by the DPU, each company’s ten-year GMP outlines how the company proposes to make measureable progress towards the following grid modernization objectives: (1) reducing the effects of outages; (2) optimizing demand, which includes reducing system and customer costs; (3) integrating distributed resources; and (4) improving workforce and asset management.

Grid modernization has the potential to contribute GHG emissions reductions in the Commonwealth both directly, by saving energy through reduced line losses and improved electric grid operation, and indirectly, by enabling the increased safe interconnection of distributed resources such as solar power, electric vehicles, and energy storage.

Rationale: Grid modernization will help make the electric grid more efficient and reliable, and will empower customers to manage and reduce their energy costs. The modern electric system will help maximize the integration of solar, wind, and other local and renewable sources of power. It will minimize outages by automatically re-routing power when lines go down, and immediately alert the utility when customers have lost power. Because customers will have new tools and information to enable them to use less electricity when prices spike, the electric system will be appropriately sized and less expensive.

Policy Design: In August 2015, the electric distribution companies filed a GMP with the DPU that laid out each company’s 10-year plan to make measureable progress towards the four grid modernization objectives. Each GMP was required to contain a detailed 5-year capital investment plan, supported by a business case showing that the benefits of each plan justify the costs. In addition, each GMP was required to include a: (1) research, development, and deployment plan; (2) customer education and outreach plan; (3) cybersecurity plan; and (4) proposal for performance metrics. The DPU is currently conducting an adjudicatory proceeding for each plan.

GHG Impact: This policy is a cross-cutting policy with no direct GHG emission reductions.

Other Benefits: Grid modernization will help improve the reliability and resiliency of the electric grid. In addition, grid modernization will give customers new tools and information that will, among other things, provide them with incentives to reduce energy usage at times of peak demand, thereby reducing electric system costs.

Legal Authority: The DPU implemented the requirements for grid modernization in a series of Orders under its general supervisory authority to ensure the electric customers are provided with the most reliable electric service at the lowest possible cost.