

Ohio Grid Modernization Initiative Focuses on Customer Electricity Experience

Technological Advancements and Growing Share of Distributed Generation Will Continue to Drive Grid Modernization

March 14, 2017

MARCH 8 OH PUCO ANNOUNCEMENT

On March 8, 2017, the Public Utilities Commission of Ohio (OH PUCO) announced **PowerForward, a comprehensive review of technological and regulatory innovation to advance grid modernization** and enhance customer experience. With continued growth in distributed energy resources (DER) and demand-side opportunities, the power industry faces the challenge of transitioning to a modern grid that addresses the demands of the evolving electric sector. Other states where utility commissions have taken measures to address grid modernization, such as **New York and California**, have garnered nationwide attention, setting the pace with significant progress towards necessary enhancements.

1

PowerForward in Brief

Phase I

April 18-20, 2017



3-day conference on modern grid technologies

Phase II

Summer 2017



Determining technology for future grid

Phase III

Fall 2017



Addressing regulation and ratemaking

2

Utility Issues in Ohio

The new initiative comes amid contentious issues of **subsidizing aging power plants** and the **utilities' pitch for re-regulation** over the past two years. In October 2016, the OH PUCO rejected a Retail Rate Stability Rider (a virtual power purchase agreement) proposed by FirstEnergy and instead approved a Distribution Modernization Rider (DMR) of \$132.5 million annually for three years, with the possibility of a two-year extension. The DMR allows recovery of smaller amount of revenue compared to FirstEnergy's proposal of \$558 million per year for eight years. The OH PUCO noted that the **primary purpose of the DMR** is to ensure financial health and creditworthiness for **the utility to invest in future distribution modernization initiatives**. The decision came after the Federal Energy Regulatory Commission (FERC) **rejected PPAs of FirstEnergy and AEP** (Docket Nos. **14-1297-EL-SSO** and **14-1693-EL-RDR**) with their deregulated affiliates to support their aging coal and nuclear operations; the FERC decision prompted the state utilities to propose plans impacting retail rates in a bid to keep the bill riders within the OH PUCO jurisdiction and avoid FERC review. **Coal-fired baseload plants in Ohio are struggling to compete with low-cost natural gas and renewables** in the wholesale market. For this reason, the industry has kept a close watch on the debate over their future.

3

Grid Modernization Nationwide

With the PowerForward initiative, Ohio joins a growing list of states where utility commissions have taken measures to address grid modernization to keep pace with fast-evolving technological advances and growing distributed generation. Recent developments in state grid modernization initiatives include:

CA

Distributed Resources Plan
The DRP proceeding was initiated in August 2014 to establish policies, procedures, and rules to guide the state's investor-owned utilities in developing DRP proposals. It involves three tracks: Track 1 on methodologies, Track 2 on demonstration and pilot projects, and Track 3 on policy issues. On February 27, the CA PUC issued a decision in Track 2 of its DRP proceeding (R.14-08-013) reviewing DER-focused demonstration projects proposed by the state's utilities.

MN

e21 and Grid Planning
In October 2016, the MN PUC held a workshop on grid management and distribution planning (Docket No. 15-556) to explore a framework for an integrated distribution planning process based on a September 2016 report on the commission's investigation into grid modernization. e21 is an initiative to update Minnesota's regulatory framework.

NH

Grid Modernization
In April 2016, the NH PUC began a working group process to investigate grid modernization (Docket No. IR 15-296) with regard to distribution system planning, customer engagement with DERs (advanced metering functionality, rate design, customer data, and customer education), utility cost recovery, and financial incentives.

MA

Grid Modernization Plans
In August 2015, Massachusetts electric distribution companies – Eversource Energy, Unitil, and National Grid – filed grid modernization plans in docket numbers 15-122, 15-121, and 15-120, respectively, pursuant to the MA DPU June 2014 order requiring each utility in the state to develop and implement a 10-year grid modernization plan, to be updated regularly.

HI

Distributed Energy Resource Policies
In December 2016, the HI PUC issued an order establishing a procedural schedule to govern Phase II of its proceeding (Docket No. 2014-0192) on DER policies. Phase I, initiated in August 2014, led to the development of interim options for new DER investments, including grid-supply, self-supply, and time-of-use options following the closure of the net metering program that provided a methodology to compensate customer solar generators for excess power sent to the grid.

MD

Public Conference on Distribution
In September 2016, the MD PSC initiated a public conference (PC44) commencing a targeted review to ensure that the state's electric distribution systems are customer-centered, affordable, reliable, and environmentally sustainable.

DC

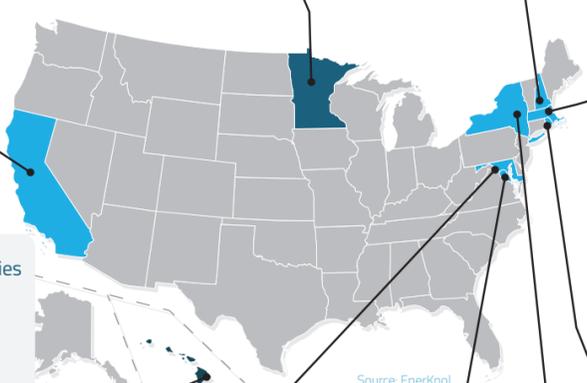
Modernizing the Energy Delivery System for Increased Sustainability
The DC PSC established MEDSIS in June 2015 (Formal Case No. 1130) to identify technologies and policies that can modernize the District's energy delivery system for increased sustainability and make the District's system more reliable, efficient, cost-effective, and interactive.

NY

Reforming the Energy Vision
Unveiled in 2014, REV seeks to transform the state's utility regulatory structure by creating distributed service platform (DSP) providers for integrating greater levels of DERs and empowering customers with better energy management options. On March 9, the NY PSC issued an order on distributed system implementation plan under REV. The order directs utilities to submit compliance filings by October 1, ensuring that Phase 1 of REV is fully implemented.

RI

Changing Distribution System
In March 2016, the RI PUC opened a proceeding (Docket No. 4600) to investigate the changing distribution system with regard to the costs and benefits of activities on the distribution system, cost-allocation, and appropriate rate structures.

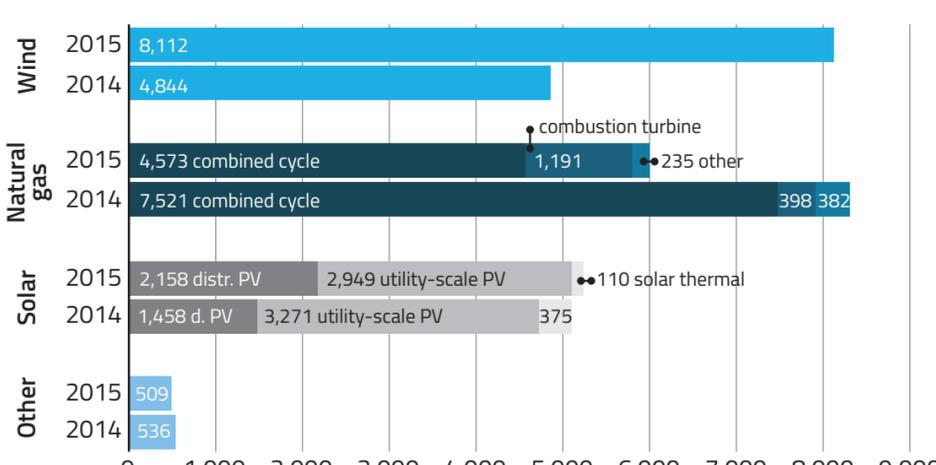


4

Changing Mix

The changing generation mix with DER growth and the need for increased resiliency and security have advanced grid transformation efforts. State PUCs have a vision for a grid that is more resilient and flexible while incorporating demand-side management and a broader resource mix. Grid modernization covers a broad range of issues, including DER integration, replacing aging infrastructure, outage management, and customer education to optimize energy consumption.

U.S. electric generation capacity additions, MW



BOTTOM LINE

Regulated and Deregulated
Unlike New York and California, which are governed by individual state independent system operators namely, Maryland is part of the multistate PJM interconnection. Therefore, the impact of PJM regulations and practices on prospective changes to Maryland's distribution grid remains to be seen. Meanwhile, Minnesota does not face a pressing need to address distributed system planning due to its vertically-integrated utilities and relatively low penetration of distributed generation. Minnesota, which is both vertically-integrated and regulated, could show the way forward for distributed system planning in other vertically-integrated states.

Pushing the Agenda
Moving forward, technological advancements and growing DER adoption will continue to drive the need for grid modernization. The growth in customer-sited generation has increased the demand for expanded energy choice and utility interaction. Furthermore, policies that support the development of a more integrated distribution grid will also be instrumental in driving grid modernization. Utility commissions will need to act proactively, rather than wait for DER proliferation, in order to facilitate robust planning processes to facilitate long-term infrastructure investments that support resiliency and security, and serve consumer interests.

EnerKnol connects you with comprehensive, real-time energy policy data from federal, regional, and state sources.

Visit enerknol.com to learn more!