ESMP-Relevant Proceedings and Working Groups

Preread & Reference Library for the Grid Modernization Advisory Council

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1. Summary documents

1.1. Department of Public Utilities (DPU) Annual Report

This report summarizes the responsibilities of the various Divisions within the Department, provides information regarding the day-to-day functions of the agency, and outlines the major activities and accomplishments of 2022. The **chapter on the Electric Power Division for 2022** is recommended. Many of the summaries for DPU proceedings below are sourced from this report.

https://www.mass.gov/info-details/dpu-annual-reports-to-the-legislature

2. DPU Proceedings

Note that all proceedings referenced in the section below are publicly available in the DPU fileroom: https://eeaonline.eea.state.ma.us/DPU/Fileroom/dockets/bynumber

2.1. Grid modernization

Orders 21-80/81/82-A, D.P.U. 21-80/81/82-B

The Department reviewed and adjudicated new grid-facing grid modernization investment proposals and customer-facing grid modernization investment proposals (i.e., advanced metering infrastructure ("AMI") implementation plans) from the electric distribution companies (EDCs). On October 7, 2022, the Department issued an Order (D.P.U. 21-80-A/D.P.U. 21-81-A/D.P.U. 21-82-A) preauthorizing continuing grid-facing grid modernization investments of $473 million for the term of 2022-2025.

On November 30, 2022, the Department issued an Order (D.P.U. 21-80-B/D.P.U. 21-81-B/D.P.U. 21-82-B) preauthorizing certain new grid-facing and customer-facing investments and preliminarily approving certain customer-facing investments, for a total of $1.2 billion ($80 million for new grid-facing investments, $937 million for core AMI investments, and $232 million for preliminary approval of supporting AMI investments). The Department set term limits on these investments to ensure the deployment is on schedule and benefits to customers can be realized as early as possible. The EDCs will implement technologies that will dynamically manage and operate distributed energy resources interconnected to the grid system and deploy new-generation AMI meters in the next few years.

Currently, the costs for grid-facing investments will be collected annually through the pre-existing Grid Modernization Factor ("GMF") cost recovery mechanism outside of base rates.

The costs for the AMI investments will be collected annually through a new AMI cost recovery mechanism outside of base rates; in Eversource's last rate case, D.P.U. 22-22, Eversource's AMI tariff was approved.

Order 21-80/81/82-A:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15598967

Order 21-80/81/82-B:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15824167

DPU Investigation into the Grid Modernization Phase 1 Implementation and Prudence Review (Dockets 22-40/41/42)

On May 10, 2018, the Department of Public Utilities approved the first grid modernization plans for NSTAR Electric Company d/b/a Eversource Energy, Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid, and Fitchburg Gas and Electric Light Company d/b/a Unitil ("Unitil"). The Department is reviewing the implementation of each company's grid modernization plan, including the final prudence reviews of grid modernization investments.

Guidehouse evaluation report of electric distribution companies implementation of Grid Modernization Plan Phase 1 investments:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15154708

2.2. **Electric vehicle charging infrastructure programs**

Between 2018 and 2021, the Department approved multiple utility electric vehicle ("EV") charging infrastructure programs by Eversource and National Grid for a total of $96 million, enabling deployment of level 2 and direct current fast charging EV charging stations in public and workplace sites and multi-unit dwellings, as well as implementation of off-peak charging rebates for residential customers. The costs for the EV programs are currently recovered through an annual cost recovery mechanism outside of base rates. The Department began an annual prudence review of National Grid's Phase I and Phase II EV charging programs in late 2020. In each annual prudency review, the Department disallowed cost recovery of certain costs National Grid spent imprudently: $144,000 in expenses that were spent imprudently during the 2019 program year (D.P.U. 20-64-A), $305,087 in expenses that were spent imprudently during the 2020 program year (D.P.U. 21-67-A), and $482,477 in expenses that were spent imprudently during the 2021 program year (D.P.U. 22-63-A). Eversource's EV program is also under prudence review as part of the 2018-2021 grid-facing grid modernization term report proceeding.

In 2021, the Department issued an Order (D.P.U. 20-69-A) providing detailed guidance to the EDCs on filing EV charging infrastructure plans, including requirements under the Transportation Act to develop demand charge alternatives for commercial and industrial customers. In July 2021, the EDCs submitted their coordinated EV charging infrastructure plans and. On December 30, 2022 the Department issued an Order approving a four year program with a budget of $206 million for National Grid, the Department approved; a four program with a budget of $188 million for NSTAR Electric, and a five year program with a budget of $998,000 for Unitil. The costs for these recently approved EV programs will also be recovered through an annual cost recovery mechanism outside of base rates.

Order 20-69-A: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/13552861

Order 21-90/91/92:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/16827694

2.3. **Utility-owned storage investment plans**

In May 2018, the Department preauthorized the first two utility-scale storage demonstration projects in the Commonwealth. In September 2022, Eversource commissioned the storage demonstration project in the Outer Cape. The capacity of the Outer Cape project is 25 MW/38 megawatt hours ("MWh"), and the project can provide back-up power by islanding to customers that are served by a single distribution line. The Department established a set of performance metrics for the storage project in 2019 and expects annual performance reports from Eversource

starting in 2023. The costs for the storage project are currently recovered through the GMF cost recovery mechanism outside of base rates.

In May 2021, the Department issued an Order (D.P.U. 20-69-A) providing guidance on future utility-scale energy storage proposals. Additional storage investment plans are expected in the near future.

Order 20-69-A: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/13552861

2.4. **Long-term system planning**

In May 2019, in response to increasing interconnection requests and DG saturation on the Commonwealth's distribution system, the Department opened an investigation (D.P.U. 19-55) into the interconnection of DG to ensure an efficient and effective interconnection process that will foster continued growth of DG while ensuring a safe and reliable EPS. As part of its investigation, the Department also solicited proposals from stakeholders for alternative methodologies to allocate interconnection related costs among DG customers. In February 2020, the Department received six proposals. In response, the Department developed and released its own proposal ("Straw Proposal") for public comment in October 2020 as part of a separate investigation into distributed energy resource planning and assignment and recovery of costs for the interconnection of distributed generation. Upon identification of an imminent issue of high interconnection costs for almost a gigawatt of DG seeking to interconnect to the EPS, the Department bifurcated its investigation into establishment of a **long-term system planning program** and establishment of a provisional program to address short-term concerns.

The 2022 Clean Energy Act established a new process and requirements for long-term electric system planning. The process established by the 2022 Clean Energy Act effectively establishes a statutory, long-term system planning requirement for enabling distributed energy resource development to increase timely adoption of renewable energy and distributed energy resources. Therefore, by Order on September 12, 2022, the Department found that its continued investigation of a long-term system planning program in D.P.U. 20-75 was moot. Accordingly, the Department suspended its investigation and closed the proceeding.

Order 20-75-C Closing Investigation into Long-Term System Planning Program: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15488190

2.5. **Provisional System Program/Capital investment projects (CIPs)**

In May 2019, in response to increasing interconnection requests and DG saturation on the Commonwealth's distribution system, the Department opened an investigation (D.P.U. 19-55) into the interconnection of DG to ensure an efficient and effective interconnection process that will foster continued growth of DG while ensuring a safe and reliable EPS. As part of its investigation, the Department also solicited proposals from stakeholders for alternative methodologies to allocate interconnection related costs among DG customers. In February 2020, the Department received six proposals. In response, the Department developed and released its own proposal ("Straw Proposal") for public comment in October 2020 as part of a separate investigation into distributed energy resource planning and assignment and recovery of costs for the interconnection of distributed generation. Upon identification of an imminent issue of high interconnection costs for almost a gigawatt of DG seeking to interconnect to the EPS, the

Department bifurcated its investigation into establishment of a long-term system planning program and **establishment of a provisional program** to address short-term concerns.

Following public comment, several rounds of information requests and a technical conference, the Department issued an Order in November 2021, establishing a provisional program for planning and funding essential upgrades to the EPS to foster timely and cost-effective development and interconnection of DG. The provisional framework allows the EDCs to file certain EPS infrastructure upgrade proposals (based on the Department's Straw Proposal and also known as capital investment projects or "CIPs") with the Department that limit the interconnection costs allocated to each DG facility. Under the provisional design, customers will help fund the initial construction of the EPS upgrades but will be partially reimbursed over time from fees charged to future DG facilities that are able to interconnect due to the prior upgrades. This new pathway should help facilitate an equitable allocation of costs and remove barriers to the Commonwealth's progress to a clean energy future. The Department issued its first Order in the provisional program on December 30, 2022, approving the CIP proposal filed by Eversource for the Marion-Fairhaven Group Study. Currently, CIP costs will be recovered through an annual CIP cost recovery mechanism outside of base rates.

Dockets stemming from the Provisional System Program include 22-47, 22-51, 22-52, 22-53, 22-54, 22-55, 22-61, 22-170, 23-06, 23-09, and 23-12. The total estimated distribution cost of the 11 Provisional Program proposals is approximately $825 million.

Order 20-75-B establishing the Provision Program:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14232299

Order 22-47 approving the Marion-Fairhaven Group Study:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/16827728

2.6. **Utility-owned solar energy projects**

Section 77 of the 2021 Climate Roadmap Act allows electric and gas distribution companies to construct, own, and operate solar generation facilities, paired, where feasible, with energy storage facilities, on land owned by the utility to assist municipalities, including those with environmental justice populations, at high risk from the effects of climate change. Program goals established by the statute include peak demand reduction and system resiliency. The statute imposes a cap of approximately 286 MW[1] on the amount of solar generation a distribution company can construct, own, or operate pursuant to Section 77.

In June 2022, NSTAR Electric Company d/b/a Eversource Energy and Eversource Gas Company of Massachusetts d/b/a Eversource Energy filed the first petitions pursuant to Section 77 with the Department. The petitions, docketed as D.P.U. 22-64 and D.P.U. 22-65, propose solar facilities paired with battery energy storage on company property in Yarmouth, Brockton, and Lawrence. Eversource's total capital cost estimate for three proposed projects is approximately $37 million.

[1] Under Section 77, a distribution company shall not construct, own, or operate new facilities equaling more than 10 percent of the total installed megawatt capacity of solar generation facilities in the Commonwealth as of July 31, 2020.

2.7. **Energy Efficiency Three-Year Plan**

The energy efficiency programs administered by the Utility Energy Efficiency Program Administrators (PAs) operate in accordance with three-year plans developed in collaboration with the Energy Efficiency Advisory Council (EEAC) and approved by the Massachusetts Department of Public Utilities. The currently approved plan covers 2022 through 2024. In addition to the three-year plans, mid-term modifications and regular reporting are also put in place to ensure program success. Energy Efficiency costs are currently recovered through an annual EE cost recovery mechanism outside of base rates.

To view the 2022-2024 Three-Year Plan, visit the EEAC website.

Order 21-120 through 21-129: https://ma-eeac.org/wp-content/uploads/2022-2024-3YP-Order_1.31.22.pdf

2.8. **Rate cases**

National Grid Rate Case (D.P.U. 18-150)
National Grid filed its rate case on November 15, 2018. Pursuant to statute, DPU had ten months to investigate and make a determination on the rates. The Department issues its Order on September 30, 2019 reducing the increase from approximately $132 million to $90 million. New rates took effect on October 1, 2019. The rate case also considered matters potentially relevant to ESMPs, including: performance-based ratemaking; performance incentive mechanisms related to peak demand reductions, and transportation electrification; capital investment recovery mechanism; solar phase II and smart grid pilot program roll-ins; energy storage demonstration program; phase II electric vehicle program; and rate structure.

Order 18-150:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/11262053

Unitil Rate Case (D.P.U. 19-130)
Fitchburg Gas and Electric Light Company d/b/a Unitil Electric Division filed its rate case on December 17, 2019. Pursuant to statute, DPU had ten months to investigate and make a determination on the rates. The Department issued its Order on April 17, 2020 approving the proposed settlement between Unitil and the Attorney General's Office.

Order 19-130
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/12053943

Eversource Rate Case D.P,U. 22-22
NSTAR Electric d/b/a Eversource filed its rate case on January 14, 2022. Pursuant to statute, DPU had ten months to investigate and make a determination on the rates. The Department issued its Order on November 30, 2022 reducing the requested increase from approximately $89 million to $64 million. New rates took effect on January 1, 2023. The rate case also considered matters potentially relevant to ESMPs, including: performance-based ratemaking; performance metrics related to peak demand reductions and resiliency; SMART program and solar expansion program investments; advanced metering infrastructure; and rate structure.

Order 22-22:

https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15824195

2.9. Performance-based ratemaking mechanisms

A performance-based ratemaking mechanism (PRBM) adjusts base distribution rates annually through the application of a revenue cap formular that accounts for – among other factors – economy-wide inflation minus a productivity offset and consumer dividend and adjusted for significant costs beyond the company's control (i.e. exogenous events). The Department of Public Utilities is then responsible for ensuring the annual PBR adjustments complied with directives approved in each company's last base rate proceedings. PBRMs use incentives and adjustments through a formula approach as a means of setting utility rates – in contrast to traditional rate-of-return rate making, which is based on a company's cost of service.

Eversource PBRM (D.P.U. 17-05 and D.P.U. 22-22)

NSTAR Electric first proposed and was approved for a performance-based ratemaking mechanism (PRBM) in D.P.U 17-05 to adjust their base distribution rates annually. In D.P.U. 22-22, the Department approved an additional 5-year term of the prior PBRM with further modification, including the addition of a "K-Bar" formula to allow for annual cost recovery associated with the Company's capital investments in order to provide the Company with "flexibility to address the evolving energy and climate policies governing EDCs, as well as to maintain aging infrastructure and enhance resiliency to address the impacts of climate change." Order, at 61. Specifically, the Department's Order approved the use of a "rolling average" of the Company's actual plant additions placed in service starting from 2018 to 2022 to calculate the annual K-Bar adjustment. Order, at 61, 65. Moreover, the Department set a cap for the Company's annual K-Bar adjustments based on the Company's forecasted five-year capital investment budget—that is, when calculating the K-Bar adjustment, the amount allowed for recovery may not exceed the Company's forecasted capital budget by more than ten percent. Id. at 64.

Order 17-05:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/9171660
Order 22-22:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15824195

National Grid PBRM (D.P,U. 18-150)

National Grid first proposed and was approved for a PBRM in D.P.U. 18-150 to adjust their base distribution rates annually. The current PBR term will conclude on September 30, 2024 and the company is expected to file its next base distribution rate case with a proposed PBRM later this year.

Order 18-150:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/11262053

2.10. Distribution system reliability and safety dockets

The Department requires each EDC to periodically file reports on issues related to electric distribution system safety, service quality, and reliability. The Department reviews these reports and meets with the companies, as necessary, to ensure that the companies' actions are consistent with Department requirements. Some of the periodic reports filed with the Department are described below.

Annual Planning and Reliability Report

The annual planning and reliability report include an analysis of the company's distribution system, including:

- A ten-year load growth forecast capable of identifying high-growth areas/zones;
- A description of the company's transmission and distribution design and planning criteria and an explanation of how those criteria are applied;
- A distribution system operating study focused on contingency analysis and management;
- An update to corrective actions and significant capital investments planned for the next five years;
- A Resiliency Report, pursuant to G.L. c. 164, § 146, will be filed with each Company's 2022 Annual Reliability Report; and
- Heat Maps, as part of the Resiliency Report, indicating highly loaded and highly constrained areas as well as outage vulnerability.

The 2023 annual planning and reliability reports are filed with the Department under the following dockets:

- National Grid: 23-ARR-01
- Eversource: 23-ARR-02
- Unitil: 23-ARR-04

Reporting of outage events

Each EDC is required to maintain, on a real-time basis, information regarding planned and unplanned outages that occur on its distribution system. Each company's outage report can be accessed by Department staff via a secure internet-based Outage Reporting Protocol ("ORP") system. The ORP information includes, for example:

- The location of the outage;
- Number of customers affected;
- Number of circuits affected or out of service;
- Likely cause;
- Any bodily injury; and
- Whether a critical facility, such as a hospital, is involved.

Each company annually files a report of all customer outages that occurred on its system in the prior year.

Service Quality Performance Reports

The Department requires that each EDC submit an annual service quality report that details how the company has performed with respect to standards established in the Department's service quality guidelines. The reports for 2022 were recently filed under the following dockets:

- Unitil, 23-SQ-10: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/17108169
- National Grid, 23-SQ-11: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/17112932
- Nantucket, 23-SQ-12: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/17112796
- NSTAR (Eversource), 23-SQ-13: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/17114883

Vegetation Management Programs

The Department oversees the full-scale base and pilot vegetation management programs implemented by the EDCs to trim trees and other vegetation near electric utility lines. The base vegetation management program requirements for the EDCs were established in the D.P.U. 11-85/11-119 series of Orders. For base vegetation management, each circuit is trimmed to certain specifications on a four-to-five-year cycle (i.e., ~25% of all circuit miles each year) regardless of vegetation clearance or overhang. Additionally, mid-cycle pruning is performed where needed. Hazard and risk trees are removed in coordination with the cycle pruning schedule, with additional off cycle profiling for risk and hazard trees based on reliability. Per the D.P.U. 11-85/11-119 series of Orders, all removed trees are tracked and reported to the DPU. Most of the pruning and tree removal work is completed by contractors with oversight performed by Company arborists. The EDCs also have more aggressive vegetation management pilot programs (e.g., Resiliency Tree Work ("RTW") Pilot Program). These programs are add-on/expansions of the EDCs base vegetation management program and support reliability performance and enhanced distribution system resiliency. Costs for the more aggressive vegetation management pilot programs are currently recovered through an annual RTW cost recovery mechanism outside of base rates. Both the base vegetation management programs and the pilot programs are reviewed by EPD staff for approval through their annual compliance filings, cost recovery filings, and electric distribution rate cases.

3. Working Groups

3.1. Energy Storage Interconnection Review Group (ESIRG)

In 2022, the Department issued an Order directing the DG and Clean Energy Ombudsperson to facilitate establishment of an Energy Storage Interconnection Review Group ("ESIRG"). The ESIRG was established in April 2022 and continues to meet regularly.

Order establishing ESIRG (19-55-E): https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14486015

Working group website: https://ngus.force.com/s/article/Energy-Storage-Interconnection-Review-Group

3.2. Technical Standards Review Group (TSRG)

In its Final Report to the Department of Public Utilities, the Massachusetts Distributed Generation Interconnection Working Group, as established in D.P.U. 11-75, recommended the creation of a Technical Standards Review Group to further address interconnection issues.

Report recommending establishment of TSRG:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/9254143

Working group website: https://www.mass.gov/info-details/massachusetts-technical-standards-review-group#upcoming-meetings-

3.3. Advanced metering infrastructure (AMI) stakeholder working group

In Order 21-80/81/82-B, the Department directed the EDCs to convene and facilitate an AMI stakeholder working group to discuss and reach consensus on 4 topics related to implementation of the Companies' respective AMI implementation plans approved by the Department on November 30, 2022.

The Department found the AMI Stakeholder Group may elicit valuable input to inform the Companies' implementation of AMI. Specifically, the Department directed the AMI stakeholder working group to focus on:

- Customer and third-party access to customer usage data;
- Customer education and engagement;
- Billing of time varying rates ("TVR") offered by competitive suppliers; and
- AMI deployment strategies that may expedite the ability for competitive suppliers to offer TVR products.

The Companies convened the stakeholder group by February 1, 2023. Starting on May 15, 2023, the Companies shall submit a quarterly status report to the Department in the instant proceedings. A final status report is due on August 1, 2024.

Order establishing the AMI stakeholder working group:
https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15824167

3.4. Clean energy transmission working group (CETWG)

The Clean Energy Transmission Working Group was established by the 2022 Climate Law and is charged with providing a comprehensive cost analysis of major transmission infrastructure upgrades that may be needed to deliver clean energy generation procured pursuant to the laws of the Commonwealth for the use of residents of the Commonwealth and the region.

The working group is also required to assess and report on any necessary transmission upgrades that may be required to support the deployment of clean energy projects that may interconnect into the commonwealth for the benefit of residents of the commonwealth and the region, including but not limited to offshore wind projects.