COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

Investigation by the Department of Public Utilities On its Own Motion into Electric Distribution Companies' (1) Distributed Energy Resource Planning and (2) Assignment and Recovery of Costs for the Interconnection of Distributed Generation	))))))	D.P.U. 20-75

INITIAL COMMENTS OF THE NORTHEAST CLEAN ENERGY COUNCIL, INC. AND THE COALITION FOR COMMUNITY SOLAR ACCESS TO THE ELECTRIC DISTRIBUTION COMPANIES' SYSTEM ANALYSIS PLANNING PROPOSALS

Respectfully submitted,

NORTHEAST CLEAN ENERGY COUNCIL, INC.

COALITION FOR COMMUNITY SOLAR ACCESS

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I. INTRODUCTION

The Northeast Clean Energy Council, Inc. (NECEC) and the Coalition for Community Solar Access (CCSA) appreciate the opportunity presented by the Department to comment on the planning proposals put forward by the Electric Distribution Companies (the "EDCs") on April 23, 2021. NECEC and CCSA are encouraged by the direction towards integrated distribution planning, which represents a necessary step towards changing how grid system planning can adapt to a future with more supply from distribution energy resources ("DER"), increased electrification, and improved grid resiliency against the predictable and unpredictable factors resulting from the changing climate. Planning for DER growth enables cost effective, and systematically efficient siting, all while continuing to reduce the carbon emissions of the Massachusetts electric grid. Integrated distribution planning will be critical to assess systemwide capacity and needs, forecast load and resource growth, and find the most efficient way to improve the system and meet larger climate goals.[1] NECEC and CCSA are encouraged by the Department's exploration of this issue and by the thoughtful approaches reflected in each of the plans filed by the EDCs.

The EDCs and the Department have indicated that the planning process, once established, could take a number of years. This planning process is instrumental in charting a path towards decarbonization and should commence immediately subject to refinement as policy goals and additional forecasting is introduced. As noted in NECEC's

[1] The passage of the Next Generation Climate Roadmap, Ch. 8 of the Acts of 2021 ("Senate Bill 9") and the development of the Clean Energy and Climate Roadmap for 2030 only increase the need for the Department, the EDCs, and other stakeholders (including NECEC, CCSA and their members) to drive pathways to clean energy interconnection.

February 5, 2021 Reply Comments "[T]o accelerate the adoption of a distribution planning process in line with the Straw Proposal, the Department should direct the EDCs to leverage their existing planning processes and forecasts for DER interconnection. The ongoing group studies and ASO Studies and grid modernization plans have provided ample data and funding to inform and jump start a more comprehensive CIP planning process."[2] NECEC and CCSA believe that the provisional plans under consideration and the many years of study already undertaken by the EDCs provide adequate information to commence a system analysis planning effort without delay while ensuring a robust stakeholder process. The Department must balance the necessary time and input needed to finalize these plans with sufficient due process; thus, NECEC and CCSA submit that the expeditious start of this process is critical.

A. GUIDING PRINCIPLES FOR DISTRIBUTION RESOURCE PLANNING

NECEC and CCSA urge the Department to apply the following principles to the entire distributed resource planning process to achieve optimal results for the grid, for customers, for the DER industry and for the Commonwealth and its neighboring states.

1. Transparency

The Department must ensure transparency in providing system information around grid siting locations that can cost effectively host DERs and provide system

[2] D.P.U. 20-75, "The Northeast Clean Energy Council Inc.'s Reply Comments on The Department's Straw Proposal Regarding Distributed Energy Resource Planning and Methods for The Assignment of Costs Associated with Distributed Generation Interconnection," (February 5, 2021) at 8.

benefits now and in the future. Second, each EDC must provide high transparency into their forecasts and assumptions, particularly around resource valuation in relation to system wide benefits and policy goals.

2. Holistic View of All Beneficiaries

Grid scale improvements provide system wide benefits for all, including clean energy deployment, resiliency, and energy market benefits. Integrated into the planning process should be consideration for representing interests of clean energy development, electrification, customer, and environmental justice. It is time to move away from cost-causation principles that stifle development, slow grid benefits, and create an obstacle to the Commonwealth's decarbonization strategy. Massachusetts's future grid needs and costs must be shared equitably among all grid participants and other beneficiaries.

3. Foster the Use of Technological Advances

System Planning Proposals should incorporate the most up to date technical standards to better integrate and interconnect DER, and these should be implemented and reviewed by stakeholders periodically to ensure efficient and cost-effective deployment of technologies that can increase benefits, reduce costs and accelerate clean energy deployment.

4. Stakeholder Engagement and Coordination

Stakeholder engagement and coordination should be expansive and inclusive. Throughout the process, the EDCs, the Department, environmental justice communities,

developer and other stakeholders should have clear, consistent, and expedited pathways to facilitate DER interconnection, as well as common understanding between all parties of how the plan aligns with broader policy goals, and a framework in place to be responsive to policy adjustments. The process envisioned by NECEC and CCSA represents an important opportunity for all stakeholders to coordinate and create balanced outcomes for DER facilities and the grid itself.

5. Consistency, Flexibility and Agility

The regulatory process, utility interconnection studies, and construction timeframes to enable DER to connect to the grid should have certainty and acceleration, with a focus on increasing automation in the process where appropriate. The implementation of this process and coordination with the interconnection process represents an opportunity to significantly improve the status-quo, unlocking long-term benefits as the Massachusetts electric system bears an increasing burden in the decarbonization strategy. To the maximum extent practicable, NECEC and CSSA encourage the Department to provide guidance that promotes consistency among the different EDCs and allow for best practices to be shared efficiently.

B. TIMEFRAMES AND STAKEHOLDER ENGAGEMENT IN THE PROPOSALS

NECEC and CCSA encourage broad stakeholder engagement to establish the objective of the plans. Forming the objectives should similarly establish ways to create measurable milestones and target outcomes in relation to the objective. The process

should also include regular touchpoints, to evaluate whether the object has changed in any way, for instance if a new policy has been implemented. Those touchpoints should serve as a way to ensure the plan is aligned with up-to-date policy considerations, as well as ensure all applicable stakeholders are involved in the process.

Stakeholder engagement in the planning process should include feedback on DER forecasting and modeling. In addition, NECEC and CCSA encourage the Department to require planning tools to be open to review and evaluation, and fully incorporated into the stakeholder process. Forecasting should incorporate current interconnection queue data, to get a clear picture of existing and pipeline DER assets, as well as electrification and energy efficiency forecasts to highlight where infrastructure improvements will be necessary. National Grid and Eversource both highlight the need for DER forecasting as a foundational element of the process. NECEC and CCSA agree that a robust approach is warranted, leveraging existing information, regional and local studies, and EDC experience to the fullest extent possible. As tools, methodologies, and policies evolve over time, the EDCs should coordinate between their current distribution capital plans with the current interconnection queues and electrification forecasts.

To facilitate stakeholder review of forecasting and modelling, NECEC and CCSA suggest implementing a standard structure for periodic (e.g., annual) information sharing across all EDCs that would include:

1. System Baseline: Electric System "as-is," interconnected DER "as-is," and current capital investment plans (before implementation of the System Analysis Planning concept under consideration in this docket).
2. Pre-existing system issued and asset health

3. Current hosting capacity/queue & interconnection
4. DER forecasting scenarios & non-wires alternatives ("NWAs")
5. Long-term infrastructure needs/plan

Updating this information on an annual basis will help ensure the plans remain on target for the most up to date forecasts.

In addition to stakeholder review of forecasting and current state of a planning area, there should also be stakeholder input on proposed mitigation and alternative solutions for DER growth. Broadening stakeholder engagement on mitigation strategies will enable greater facilitation for learning across markets. In addition, NECEC and CCSA encourage utility representatives to discuss these topics with their utility affiliates in other markets, greater engagement can lead to innovation and efficiencies. The EDC proposals before the Department represent an opportunity to adopt a new planning process that should encourage as much open communication as possible to share best practices and achieve the objectives. To that end, the outputs of the initial planning phase should allow for access to modeling data. NECEC and CCSA recommend that the forecasts and models be as accessible to stakeholders as is reasonably practicable.[3]

In the interest of full transparency and fairness, NECEC and CCSA suggest that the Department utilize an independent third party to facilitate the stakeholder process. A third party will ensure all stakeholders remain engaged and informed throughout the process, increasing the probability of achieving the intended results.

[3] NECEC and CCSA recognize there may be security, critical infrastructure, and other limitations to the EDCs ability to share such data.

II. COMMENTS SPECIFIC TO COMPANY PROPOSALS

National Grid

Overall, National Grid ("NGRID"), like the other EDCs, takes a thoughtful and comprehensive approach in its distribution system planning proposal. In addition, the NGRID plan provides specific opportunities for stakeholder input. The comments below aim to build upon the strengths of National Grid's proposal to maximize its overall effectiveness.

NGRID proposes a rolling ten-year assessment of the distribution system broken down into multiple smaller areas of analysis, with plans to breakdown the load forecast further into a feeder level forecast, with each feeder having a customer load profile and any DER load shape modifier from expected solar PV interconnection. This feeder level approach to forecasting will provide high levels of granularity; it is important the process timelines capture the possible impact of this effort.

NGRID appropriately looks beyond the current state interconnection queue for DERs. To enhance coordination, it may be beneficial to benchmark their longer-term expectations for DERs to the ISO NE ten-year solar forecast to avoid incompatibility between Transmission and Distribution planning and forecasting. National Grid and other EDCs can provide better localized information that should inform the ISO process, and vice-versa. Use of the ISO solar forecast will be particularly important if the proposed Stage 1, Task 4 Market Adoption Study.

In its proposal, NGRID's Stage 1, Task 4 provides a DG market adoption strategy that looks to the existing hosting capability of each part of their system. As this strategy evolves, NECEC and CCSA encourage NGRID to incorporate not only capacity, but also

to be responsive to direct market signals informed by policy, cost considerations and other exogenous factors. NECEC and CCSA are confident that there will be significant growth in DG across the Commonwealth in the coming years, and we urge NGRID to consider how their planning effort can help respond to and, more importantly, inform the policies to come of expanded solar DG. There is a significant opportunity to plan for DER growth the Commonwealth has already indicated is necessary.

NGRID's proposal describes a review of many factors on the distribution system, including asset condition. NECEC and CCSA support NGRID identify those areas where asset conditions require near term upgrades to address imminent system failure and to make corresponding assessments that plan for additional capacity headroom to avoid repeated analyses.

While NGRID references its infrastructure investment plans that are established for supporting load, asset condition and reliability, it should ensure those infrastructure plans include related grid mod investments and are fully shared and accessible during the System Impact Analysis stage. Seeing where existing investments are planned as well as where additional investments may be needed for DER will help provide greater clarity on NGRID's forecasting assumptions.

Consistent with the principles above, NECEC and CCSA recommend that NGRID provide additional specificity on the role of energy storage in its NWA analysis. Energy storage can be effective at resolving local excess generation export issues. NGRID, like Eversource, seems to indicate that all DERs installed on the distribution system should be capable of exporting "up" to the transmission system. We encourage a more refined analysis of storage as an NWA that limits local export,

avoiding the need to design the system that anticipates full solar plus full discharge from the battery. To continue to study solar plus storage this way risks limiting the benefits that NWAs are designed to resolve.

Eversource

Eversource's proposal takes a very detailed look at the 10-year plan. NECEC and CCSA recommend that Eversource launch the stakeholder process in 2021 to accelerate the timeline, educate participants and identify key process steps for 2022. The process will be iterative in nature, and the sooner stakeholders are engaged and oriented, the more effective and efficient the process will be. On a high level, for all EDCs, NECEC and CCSA encourage an internal review of staffing levels to ensure they are sufficient to deliver on their proposal.

Eversource takes a broad look at loads, EE, DG, DER, EV, space heating, etc. when setting up the load shapes to be analyzed. The proposal also takes an aggressive look at the needs of forecasting in the future, which is important and supported in the planning guidance proposed above. Eversource's proposed enhanced forecasting techniques and methods will support taking a good look at minimum load issues as well as seasonal peak demand. It will take time to develop this skill set and associated software support but the analysis provided will be very informative.

Eversource's DER forecast utilizes the state interconnection queue expanded upon for near term, mid-term and then some scenario analysis for very long term, 2030 and 2050. This type of forecasting is helpful as an initial step, but stakeholder input and

other forecasting efforts such as the ISO 10-year solar forecast may be helpful resources for the 2030 case, and are likely to drive optimal plan alignment.

In addition to the interconnection queue, Eversource does incorporate real world impacts into their forecasting, such as looking at the level of saturation of DG and assessing where it will be difficult to take construction outages for upgrades that may limit existing DG/DER for weeks/months. NECEC and CCSA appreciate this holistic forecasting approach and suggest that stakeholder input can be critical to providing more information around these kinds of sensitivities.

Eversource appears to have a very high standard of delivery for resources on the distribution system. On the transmission system, when any equipment is out of service, a resource can expect curtailment or decommitment. NECEC and CCSA are concerned that the assumption that it is beneficial to connect all DG/DER to be fully delivered after N-1 is not clear nor explained. This planning assumption is a critical one to address with a robust level of stakeholder input. While the preservation of reliability for load is necessary, and extension of the same reliability to DER is admirable, it represents a significant shift from non-firm or firm system access. The impact on system plans and infrastructure needs is substantial, and a balance may need to be achieved between ensuring adequate levels of reliability while enabling hosting capacity optimization for DER facilities.

Similar to the comments on NGRID's proposal, it appears that Eversource is designing a system that supports full solar PV output and energy storage discharge at the same time during periods of minimum load. If storage has been used as an NWA to limit exports "up" to the transmission system, the "D" system should not be designed to cover

all the solar and full output from the battery. Such an approach is likely to be expensive and unnecessary.

III. IMPLEMENTATION CONSIDERATIONS

The distribution planning process envisioned has the opportunity to significantly accelerate and thoughtfully plan for our decarbonization future. In order for practical implementation NECEC and CCSA highlight the following considerations:

1. Alignment of distribution planning process and standards for interconnecting distributed generation. This may include alignment and management procedures for Group Studies and Interconnection Applications, queuing methodology and queue management to align with the planning process, consideration for energy storage and material modifications such that DER projects can optimize with the level of infrastructure identified.
2. Consultation with ISO-New England to advance clarity regarding the Proposed Plan Application process for identified transmission needs; and enablement of a consistent and streamlined Affected System Operator (ASO) process that can work in concert with the planning and distribution interconnection process.
3. The inclusion of tools and resources necessary to implement the planning process in upcoming EDC Grid Modernization filings.

IV. CONCLUSION

NECEC and CCSA appreciate the opportunity to comment on these plans and look forward to robust engagement from a broad set of stakeholders. Integrated distribution

planning will be a critical component to ensuring the Commonwealth's grid infrastructure is prepared for the growth of distributed energy resources in the coming years and decades. The Commonwealth's resource planning for the next ten years should be met with strategic infrastructure readiness to lower carbon emissions across all sectors in the Commonwealth and the region. NECEC and CCSA encourage each EDC to continue to solicit stakeholder feedback often, and we urge the Department to approve a set of planning processes as soon as practicable and that reflects the comments above.