ZERO-POINT
DEVELOPMENT, INC.
WHERE GREEN ENERGY BEGINS

Friday Feb 5, 2021

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

Zero-Point Development thanks the Department for leading this effort and would like to express its sincere appreciation for the time provided to review comments and offer replies on this important topic.

Respectfully submitted.

Responses to broad comments

Transmission studies and costs:

Common responses to the DPU's Question 2 "Should transmission studies and costs be included in proactive system planning related to interconnection?" seem to agree that Distribution and transmission planning must be coordinated.[1] Zero-Point Development agrees that any interconnection planning for anticipated or in process DG and electrification of the commonwealth must be closely coordinated with and inform transmission system planning, analysis, and costs to be successful. There is considerable agreement between a majority of stakeholders on the value provided by energy storage and demand response resources which was also pointed out in the DOER's 2016 State Of Charge Report that envisions the ability of those resources to relieve the capacity burden on the transmission system[2]. The comments submitted thus far however have not addressed how to provide for the proper transmission capacity analysis to realize those

[1] ("Note that DOER anticipates closer coordination between state policy and transmission planning in the medium to longer term future" DOER Initial Comment.DPU 20-75, 12-23-20, at 23)
("Distribution and Transmission upgrades are related" Eversource_Initial_Comments_12-23-20, at 6)
("The interconnected and networked nature of the entire EPS requires a comprehensive review", National Grid - Comments on Straw Proposal (12.23.20), at 12-13)
("It is important that transmission be part of the comprehensive solution so that it does not become a barrier to the Commonwealth's advancement of its clean energy policy objectives, including efficient DG deployment." NECEC_comments_12-23-20, at 8)
("The integrated nature of the transmission system and distribution systems requires studies to identify constraints on both". Unitil_Comments_12.23.20, at 5)
[2] ("Energy storage can be a lower cost alternative to transmission infrastructure investment, often called a "non-wires alternative."" ESI: State of Charge Report, 09-16-2016, at 42)

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benefits. ISO-NE and therefore the transmission system operators currently do not have visibility into the distribution system or contractual arrangements and designations to appropriately determine the thermal impact of energy storage and demand resources that operate to unburden the impact of DG on the transmission system prior to any further network analysis.[3] The lack of visibility into the Distribution system results in a transmission system study that can significantly overbuild the transmission system during thermal analysis.

For example, a demand resource or stand-alone ESS that is operated at or near a solar DG site or near a distribution substation with the intent to shift the solar generation to high load hours is evaluated as accretive even though it can use protective relay settings currently available in the market to prevent exporting during solar production hours. Rather than being seen as a non-wires alternative, a 3MW ESS situated on a feeder that already has a 5MW solar site would be seen as 8MW of generation that must be accommodated even though this is not the case. This results in an overbuild of the transmission system that the applicant is not a beneficiary of. These costs are in opposition to the Commonwealths goals to enable renewable energy and does not support the grid modernization and non-wires solutions needed to meet the timeline of the current road map. While we envision the development of a DERMS system that can achieve the full benefits of storage and demand resources, these simpler issues can and should be addressed now to realize the benefits of existing DG.

Although the Department may not have jurisdiction over transmission level policies the Department does have jurisdiction over how those transmission costs that reach the distribution level and stakeholders are assigned to its beneficiaries, including beneficiaries via public policy.[4] Given the time-sensitive nature of the current interconnection que, immediate action is desired. We request that the Department consider requiring that until such policies have been updated, the overbuilt transmission costs from an analysis that does not consider these simpler types of operating profiles are recovered from all of its beneficiaries and not the DG applicants that comply with those operating constraints.

Stakeholder involvement in planning criteria:

The Department proposes to establish DG-related planning criteria with stakeholder input[5]. While Zero-Point Development understands that the EDC's have a responsibility to provide safe and reliable electric service through a "series of standards, engineering parameters and other delineations"[6]. Stakeholder input limited to regional DG forecasting assumptions only is not sufficient. Developers must follow a complex set of concerns that have strong impacts on the interconnection costs it can afford such as city bylaws, property value, tax rates, construction requirements, and civil engineering costs to name a few, that vary based on a particular location. An infrastructure investment that places costs on DG development can easily result in a price point that forces DG to develop away from the newly created hosting capacity. Stakeholders should have input at the early stage of a proposal area before a solution is presented to provide input on cost sensitivities so that time isn't spent on proposals that need to be redone or abandoned. A cap on the dollar-per-kW billed to each facility that benefits from the investment to ensure that the hosting capacity can be utilized, along with

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[3] ISO NEW ENGLAND PLANNING PROCEDURE NO. 5-1, 5-2, 5-3

[4] ("In instances of public policy or where other discernable beneficiaries are identified, costs might be assigned and recovered from other than just the entity responsible for the cost." D.P.U. 20-75 Vote and Order_10.22.2020, at 3)

[5] (D.P.U. 20-75 Att. A-Proposal_10.22.2020, at 5)

[6] (Eversource_Initial_Comments_12-23-20, at 4)

stakeholder input on the results of each proposed solution will ensure that the investment achieves its goal of supporting the Commonwealths climate objectives.

Common System Modification and Capital Investment Project, fee allocation:

Zero-Point Development substantially agrees with NECEC's comments[7] on the allocation of these fees.

Several commenters disagree, however, on the use of Nameplate Capacity or Export Capacity as a mechanism for allocating costs. For this purpose, neither "Nameplate Capacity" nor "Export Capacity" adequately addresses how costs should be allocated in all cases based on impact to the electrical grid or utilization of added hosting capacity. The interconnection tariff group study language uses the term Design Capacity[8] which can be interpreted as Nameplate Capacity or Export Capacity. DG Facility size is not always reflective of costs caused or use of hosting capacity. Export Capacity does not adequately reflect system impact when non-exporting system is placed BTM and offsets significant load during solar production hours. Neither definition adequately reflects system impact for a stand-alone energy storage or a demand response resource that operates as a non-wires alternative by shifting generation either by relay settings or even by a DERMS system operated by the EDC. We would like to respectfully suggest that the Department work with stakeholders in a relatively short duration conference to develop a definition that more accurately represents system impact.

[7] (NECEC_comments_12-23-2020)
[8] ("Cost allocations shall be assessed on the basis of the aggregated system design capacity for each applicant's Facility (in MW AC)" D.P.U. 17-164-A on October 15, 2020. Section 3.4.1(h))

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Responses to individual comments

"Further, an assessment that identifies upgrades to equipment approaching the end of its useful life as supplemental to a DG-related upgrade alone could provide the lowest cost solution to both DG and non-DG related upgrades."[9]

We agree that this could provide a more optimal solution provided that a portion of the normal replacement cost without DG is socialized in the rate base before being applied against recovery from DG. An appropriate starting point might be the data shown in (Pope_ Energy_Comments_12-23-2020, at 13)[10]

"Due to the fact that developers have already taken steps to curtail their own panels through smaller inverters, and that the EDCs design their systems to the inverter capabilities, further curtailment comes at a steep price in terms of energy loss.........Any economical feasible curtailment has already been conducted by the developers themselves out of self-interest to maximize revenues under limited inverter ratings."[11]

We sincerely appreciate Eversource's detailed analysis of this feasibility and agree that with a static curtailment that is well informed by system parameters this is representative of our view. We do, however, see additional benefit to dynamic curtailment which could include disconnecting the system during critical points throughout the year. Making that data available would allow developers to weigh the cost of lost generation against cumulative upgrades ultimately enabling more connected generation.

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[9] (DOER *supra* note 1, at 23)
[10] (D.P.U. 18-150, Pages 295-302)
[11] (Eversource *supra* note 6, at 33-34)

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Terms

We respectfully request some more clarification on terms used throughout the comments.

Specifically, "completed project design" [12]. A customer has completed their design long before the project receives an ISA. Design Complete as an EDC process level comes months after an ISA. We would also request verification of the term "in-flight" [13]. We presume these both to mean post-ISA but want to be sure the statements are understood.

Additionally, we suggest that any reference to an "ISA" should be replaced with "Fully Executed ISA". DG projects have no fixed value until a Fully Execute ISA is received which set's its effective date, costs, construction schedule, and an obligation for the EDC to move forward.

Once again, we thank the Department for the opportunity to comment.

Regards,

Zero-Point Development.

[12] (Unitil *supra* note 1, at 15-16)
[13] (National Grid *supra* note 1, at 15)