

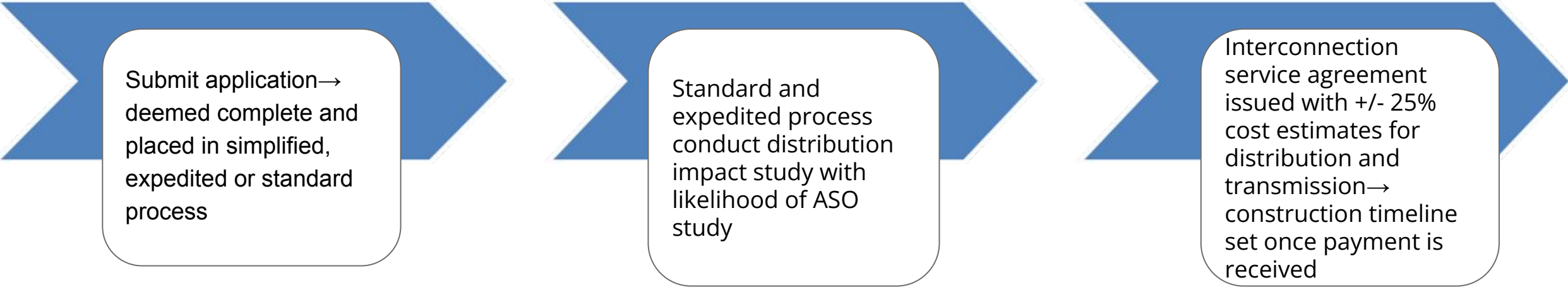
# Alignment necessitated by proactive distribution planning

October 2023



# Distributed Generation (DG) Interconnection

A customer proposing to interconnect a DG facility to the electric power system (EPS) of an electric distribution company (EDC) subject to the jurisdiction of the DPU must follow the interconnection process pursuant to that EDC's Standards for Interconnection of Distributed Generation Tariff



Submit application→  
deemed complete and  
placed in simplified,  
expedited or standard  
process

Standard and  
expedited process  
conduct distribution  
impact study with  
likelihood of ASO  
study

Interconnection  
service agreement  
issued with +/- 25%  
cost estimates for  
distribution and  
transmission→  
construction timeline  
set once payment is  
received

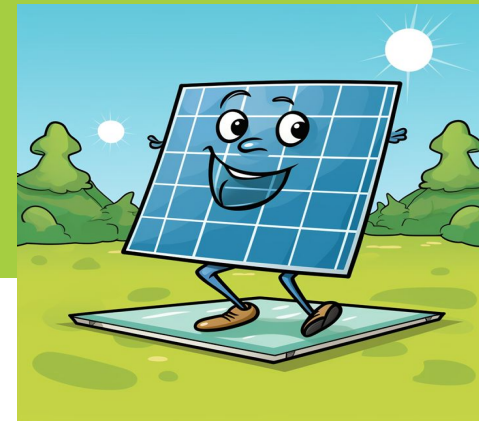
# Affected System Operator Studies

**When the interconnection of a DG facility to a distribution EPS has the potential to adversely affect a neighboring EPS (distribution or transmission), a study of potential adverse impacts is required by ISO-NE, pursuant to the Section I.3.9 Process outlined in the ISO-NE Tariff (Affected System Operator (ASO) Study).**

- Under ISO-NE Planning Procedure No. 5-1 regarding ISO-NE's review of such changes, a Proposed Plan Application (PPA) is required for new or increased generation greater than five MW; ISO-NE reserves the right to require a PPA for new or increased generation greater than one MW and less than five MW.
- **In reaction to the significant deployment of DG in the Commonwealth ASO studies have been required for most projects one MW and greater since 2019:**
  - Studies can take 12-18 months (sequentially or concurrently with a distribution impact study)
  - Likely to continue indefinitely as all substations have reached DG "saturation"
  - The DPU set rules concerning ASO studies in Order on Affected Operating Studies, D.P.U. 19-55-C (2020).



# Proactive vs Reactive Interconnection



## Reactive State

- Currently MA handles DG interconnection reactively
- Cost causation → the facility that triggers the need for an upgrade pays the cost 100%
- Group studies (at both distribution and transmission) can share in triggered costs
- Provisional Program → limited scope application of alternative cost allocation allowing for cost sharing of reactive upgrades in 2020 group study areas
- Reactive processing results in timing concerns, lack of regulatory certainty and reactionary infrastructure development driven by DG

## Proactive State

- The ESMP process requires proactive identification and construction of capital investments to enable DG and customer electrification hosting capacity necessary to meet the Commonwealth's clean energy policies and objectives
- Proactive upgrades could provide for regulatory certainty of timing and costs, cost sharing over time and service territory, siting signals driven by benefits to the Commonwealth vs interconnecting customers

# Necessity of Alignment

**Since the ESMPs main objective is to forward the Commonwealth's clean energy policies and objectives, alignment of distribution and transmission upgrades are essential to meeting the Commonwealth's 2050 GWSA goals**

- Capital investments proposed in the ESMP may have associated transmission upgrades
- Determining necessary transmission system upgrades will require impact assessments (1-2 years)
- Construction of infrastructure upgrades at the distribution and transmission level are likely to take 3-7 years to complete
- DG facilities will not be interconnected until both systems are upgraded to allow for safe and reliable service
- Without alignment we may face at a minimum a 4-9 year delay

\*Timelines are significantly influenced by permitting processes



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# Recommendations

**Seek methods to resolve coordination and process challenges to decarbonize in New England:**

- Support ESMP enabling proactive transmission infrastructure
- Support ISO-NE / state queue coordination and development of cost recovery mechanisms
- Develop efficient process for ASO studies
  - D.P.U. 19-55-C → state jurisdictional requirements for DG ASO studies
  - Clarification of interaction between DG ASO and FERC Generator queues
  - Regional coordination and best practices for DG ASO studies



# Thank You

