Interconnection for Open Access Transmission Platform Projects







# Problem Statement And Changes Sought



#### **No Interconnection Access For Transmission Platform Projects**

- NYISO Large Facility Interconnection Procedures under Attachment X to the NYISO OATT expressly permit interconnections for:
  - 1. Proprietary gen-ties bundled with Large Generating Facilities; or
  - 2. Transmission facilities that connect another Balancing Authority Area (BAA) to the New York State Transmission System
- Transmission Platform Projects are not expressly referenced in Attachment X
  - Transmission Platform Projects, or "TPPs," provide a transmission platform to connect anticipated, but not yet defined, remotely-located generating facilities to an existing transmission grid
- Today's proposed additions to Attachment X remedy this



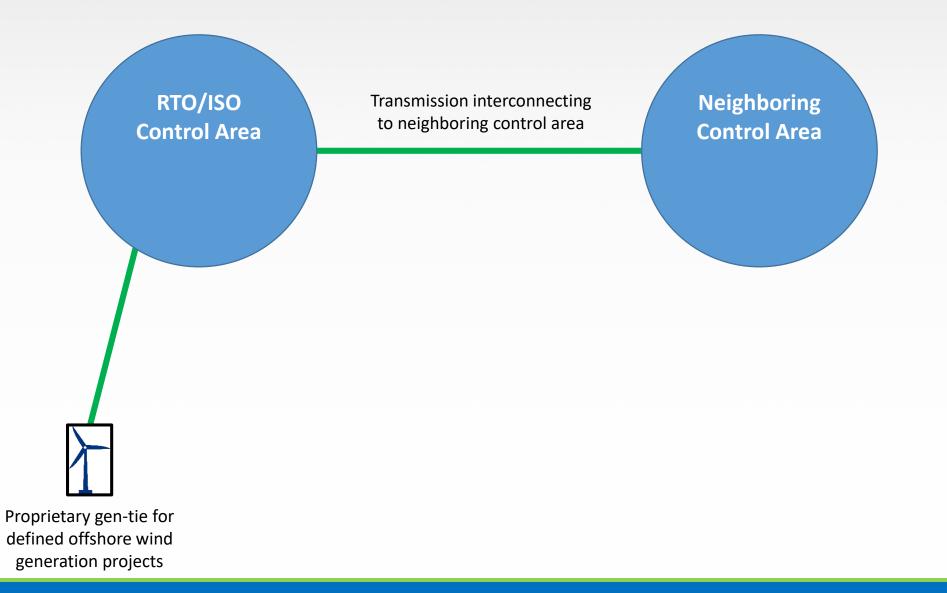
#### **Interconnection Under The NYISO Tariff**

- Attachment X expressly provides for interconnection of:
  - Gen-ties that can demonstrate Site Control for connecting Large Generating Facilities
  - Transmission facilities connecting another BAA to the New York State
    Transmission System
- Attachment P to the NYISO OATT allows for interconnection of other transmission facilities but, unlike Attachment X, does not allow the owners of such facilities to:
  - Obtain Energy Resource Interconnection Service (ERIS) to inject energy into the New York State Transmission System
  - In contrast, under Attachment X (as implemented through Manual 23), an Interconnection Customer can elect ERIS and have System Upgrade Facilities (SUFs) studied, included in a Facilities Study and an Interconnection Agreement, and ultimately in the Existing System Representation for future studies

#### Changes Proposed To Definition Of Class Year Transmission Projects In Attachment X

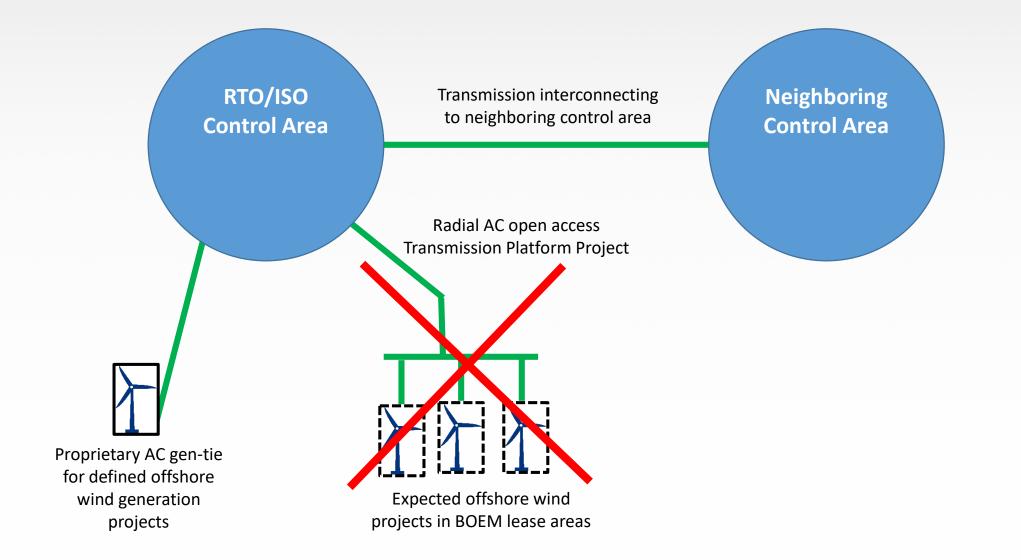
- Changes have been proposed to the definition of Class Year Transmission Projects in Attachment X for controllable transmission
  - HVDC or Controllable AC
  - Excluded are radial AC transmission facilities that would function as Transmission Platform Projects
- Because Attachment P does not provide for ERIS and elective SUFs that would provide rights to inject energy into the New York State Transmission System, a radial AC TPP cannot obtain injection rights to be used for connected Large Generating Facilities, unlike under Attachment X
  - This means that a radial AC TPP would not be able to plan for and invest in upgrades to obtain injection rights for the benefit of a future Large Generating Facility, which makes it impossible to commit significant capital for such upgrades

#### **Allowed Interconnection Requests Under Attachment X**



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#### No Interconnection Access For Transmission Platform Projects Under Attachment X



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## No Attachment X Interconnection For Transmission Platform Projects

- Allowing radial AC Transmission Platform Projects to interconnect under Attachment X may assist New York State in meeting the requirement to install 9,000 MW of offshore wind generating capacity by 2035 as mandated under the Climate Change and Community Protection Act of 2019
- Radial AC TPPs planned ahead of remotely located Large Generating Facilities in order to enable their later interconnection to the New York State Transmission System is technically feasible and presents no adverse impacts to the New York State Transmission System
- Other RTOs/ISOs allow for the interconnection of Transmission Platform Projects (e.g., CAISO, MISO, ERCOT), including radial AC TPPs in CAISO



#### CAISO

- CAISO's Location Constrained Resource Interconnection ("LCRI") policy – approved by FERC
  - Created new category of transmission facilities—radial AC Location Constrained Resource Interconnection Facilities ("LCRIFs")
  - LCRIFs connect two or more "Location Constrained Resource Interconnection Generators" in an area determined to have great potential for development of such generating facilities



## **CAISO - LCRIF**

Tehachapi Renewable Transmission Project Segments 1-3 Tehachapi Wind Resource Area Highwind Tehachapi (New) San Bernardino County Windhub (New) Online Seg Description Antelope-Pardee 500 kV T/L and Antelope Expansion 2008 Antelope-Vincent No.1 500 kV T/L 2009 Antelope-Windhub 500 kV & WindHub-Highwind 220 kV 2009 Kern County Los Angeles County Antelope (Upgraded) ANGELES NATIONAL FOREST Lancaster PALMOALE ▲ Substation Segments 1-3 0 £ Pardee. San Bernardino County SANTA Ventura County ERNA D

\*The facilities in the circle are LCRIF (1,150 MW).

8/30/2019

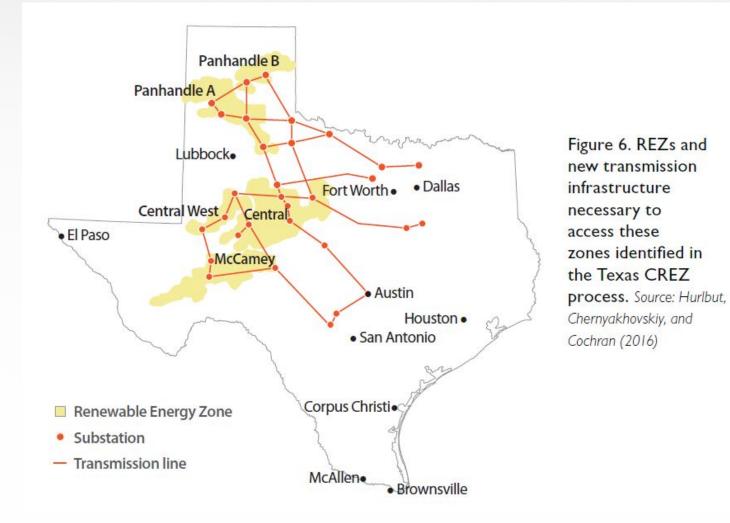


#### **MISO And ERCOT**

- MISO approved a 5,000 MW networked AC Transmission Platform Project as a multi value project in the Michigan Thumb area
  - Provides infrastructure necessary to accommodate development of ~2,300 to 4,200 MW of remotely-located wind generating facilities
- Texas developed ~2,400 miles of networked AC Transmission Platform Projects
  - They were used to connect to and transmit renewable energy from generating facilities expected to be deployed in Competitive Renewable Energy Zones ("CREZs"), which were identified areas suitable to develop renewable resource generating capacity, to loads located throughout the ERCOT control area

#### ERCOT





## AC Radial Transmission Platform Projects Can Be Studied With Additional ANBARIC<sup>®</sup> Energy Flows

- The developer of the radial AC Transmission Platform Project can request to have additional energy flows studied (e.g., from expected future connected Large Generating Facilities). This does not obviate future interconnection studies from those connecting Large Generating Facilities under the Attachment X interconnection process. This insures the NYISO Large Facility Interconnection Procedures under Attachment X are met.
- Until a Large Generating Facility connecting to a radial AC TPP is studied and interconnected under Attachment X, the TPP would not have any flows over it and therefore, there would be no need to "control" flows over it
- Once the Large Generating Facility connecting to the radial AC TPP is studied and interconnected under Attachment X, it would operate like any other radial gen-tie that is interconnected pursuant to Attachment X.

## **Proposed Addition To Definition of Class Year Transmission Project In** Attachment X

• Class Year Transmission Project shall mean a Developer's proposed new transmission facility that will interconnect to the New York State Transmission System or a proposed upgrade—an improvement to, addition to, or replacement of a part of an existing transmission facility—to the New York State Transmission System, for which (1) the Developer is eligible to request and does request Capacity Resource Interconnection Service, subject to the eligibility requirements set forth in the ISO Procedures; or (2) the Developer requests only Energy Resource Interconnection Service and the transmission facility over which power flow can be directly controlled by power flow control devices directly connected to the Class Year Transmission Project without having to re-dispatch generation; or (3) the Developer requests only Energy Resource for radial AC transmission facilities proposed for the purpose of connecting to the New York State Transmission facilities proposed for the purpose of connecting to the New York State Transmission facilities shall not include Attachment Facilities, Network Upgrade Facilities, System Upgrade Facilities or System Deliverability Upgrades.

## **Questions?**



