

# 2023 Interconnection Queue Reform

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# Agenda

- Overview
- Interconnection Process Overview
- Challenges in the Current Interconnection Process
- Interconnection Statistics
- Objectives for 2023 Queue Reform Process Improvements
- Stakeholder Feedback to Date

# Previous Discussions

Date	Working Group	Discussion Points and Links to Materials
April 19, 2023	TPAS	2023 Interconnection Queue Reform: Feedback on April 3, 2023 Straw Proposal: <a href="https://www.nyiso.com/documents/20142/37053822/Queue%20Reform%20TPAS%20Slides_041922_TPAS_Draft%2020230413.pdf/c9c21b27-0b7a-5a89-a091-0790705d481f">https://www.nyiso.com/documents/20142/37053822/Queue%20Reform%20TPAS%20Slides_041922_TPAS_Draft%2020230413.pdf/c9c21b27-0b7a-5a89-a091-0790705d481f</a>
April 3, 2023	TPAS	Interconnection Queue Reform Straw Proposal: <a href="https://www.nyiso.com/documents/20142/36836640/09_Queue%20Reform%20TPAS%20Slides_040322_TPAS_draft.pdf/cc1c5223-34e8-1479-333f-67cf9ee90020">https://www.nyiso.com/documents/20142/36836640/09_Queue%20Reform%20TPAS%20Slides_040322_TPAS_draft.pdf/cc1c5223-34e8-1479-333f-67cf9ee90020</a>
March 2, 2023	TPAS	Interconnection Queue Reform Comments: <a href="https://www.nyiso.com/documents/20142/36521630/07_Interconnection%20Queue%20Reform%20Comments.zip/dc30b22b-a459-98a0-0d4e-8db7963f1ba0">https://www.nyiso.com/documents/20142/36521630/07_Interconnection%20Queue%20Reform%20Comments.zip/dc30b22b-a459-98a0-0d4e-8db7963f1ba0</a>
February 14, 2023	TPAS	2023 Interconnection Queue Reform: <a href="https://www.nyiso.com/documents/20142/36220115/Queue%20Reform%20TPAS%202023.02.14_Final.pdf/b06bb80a-5650-32d9-ced7-0ba55b81de59">https://www.nyiso.com/documents/20142/36220115/Queue%20Reform%20TPAS%202023.02.14_Final.pdf/b06bb80a-5650-32d9-ced7-0ba55b81de59</a>
January 19, 2023	TPAS	2023 Interconnection Queue Reform: <a href="https://www.nyiso.com/documents/20142/35685644/08_Queue%20Reform%20TPAS%20Slides_FINAL_.pdf/5359d2e0-6d0d-5447-5d44-3b198dde519">https://www.nyiso.com/documents/20142/35685644/08_Queue%20Reform%20TPAS%20Slides_FINAL_.pdf/5359d2e0-6d0d-5447-5d44-3b198dde519</a>

# Overview

# 2023 Queue Reform Overview

## ■ Objectives:

- Improve the NYISO's overall interconnection process to reduce time and increase efficiencies, while maintaining system reliability.
- Provide sufficient incentives and disincentives to ensure that projects less commercially ready do not bottleneck the study process for projects prepared to move forward that are progressing in the queue.

## ■ 2023 Project Deliverable:

- Q4 Market Design Complete (*i.e.*, BIC/OC or MC vote)

# Interconnection Study Process Overview

# Interconnection Study Process

## ■ Purpose/Mission

- Evaluate impacts of proposed generation, transmission, and load projects on the system.
- Identify and cost allocate upgrade facilities for reliable interconnection and capacity deliverability.

# Interconnection Study Process

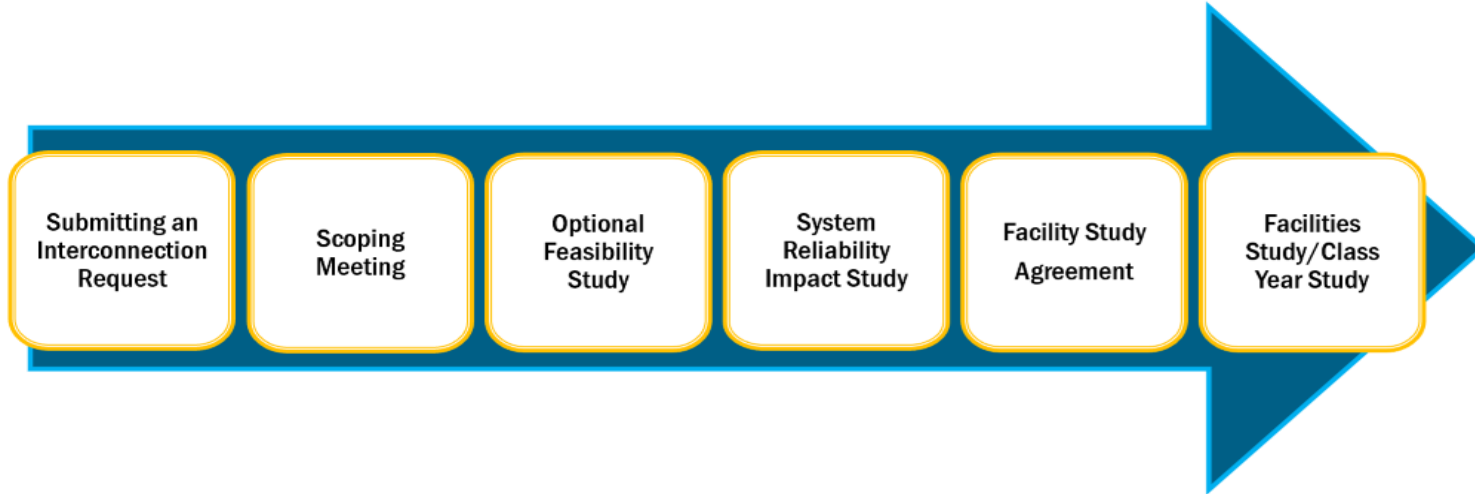
- **Generator and Merchant Transmission**
  - **OATT Attachment X – Large Facility Interconnection Procedures**
    - Large generating facilities (> 20 MW)
    - Class Year transmission facilities (aka Controllable transmission projects) seeking (1) CRIS to receive UDRs or (2) ERIS-only
    - Material increases to the capability of existing generation facilities
  - **OATT Attachment S – Class Year Study and Expedited Deliverability Study**
    - Class Year process/cost allocation
    - Includes deliverability requirements for CRIS
  - **OATT Attachment Z – Small Generator Interconnection Procedures**
    - Small generator projects ( $\leq$  20 MW)
    - Only projects that are interconnection to FERC-jurisdictional facilities (i.e., transmission lines or distribution lines on which there is already a generator making wholesale sales) and have the intention of making wholesale sales
- **Load Interconnections subject to NYISO study procedures are evaluated under OATT Section 3.9.**
- **Transmission Expansion projects are evaluated under OATT Attachment P or OATT 3.7, as applicable**



# Interconnection Study Process

- 3 Successive Interconnection Studies:
  - **Optional Feasibility Study** – optional single project study to evaluate the configuration and local system impacts of a proposed project to inform developers of potential issues with the point of interconnection
  - **System Impact Study** – single project study to evaluate transfer capability and system reliability; non-binding good faith cost estimate of system upgrades
  - **Facilities Study**
    - **Class Year Study for Large Facilities and Small Generating Facilities with non-Local SUF**
      - Reliability evaluation and identification of least cost System Upgrade Facilities and binding cost allocations that each developer must accept or reject (and if accepted, pay cash or post Security)
      - Deliverability evaluation of requested CRIS MW and identification of least cost System Deliverability Upgrades and binding cost allocations that each developer must accept or reject (and if accepted, pay cash or post Security)
    - **Small Generator Facilities for Study Small Generating Facilities with only Local SUFs**
      - Single project evaluation
      - Identification of least cost system upgrades and cost allocations

# Interconnection Study Process



# Challenges in the Current Interconnection Process

# Interconnection Queue Challenges

- Increasing volume of Interconnection Requests
- Multiple projects connecting at the same/or nearby location, triggering upgrades
- More projects in the queue that are at earlier stages of development, evidenced by:
  - Frequent use of qualifying contracts or deposits in lieu of satisfaction of regulatory milestones;
  - Frequent project modifications late in the interconnection process;
  - Increased number of Class Year rejections;
  - Developers submitting alternative projects; and
  - High number of project withdrawals.

# Interconnection Queue Challenges, cont.

- Parties' lack of familiarity with NYISO interconnection procedures
- Flexibility afforded to Developers to address data and modeling deficiencies
- Flexibility afforded to parties in the review and comment phases of studies
- Increased complexity of study processes over time
- Interaction/coordination among different processes (SGIP, TIP, etc.)
- New and evolving reliability standards

# Interconnection Statistics

# Interconnection Statistics

- **Number of total active projects in the interconnection queue has nearly tripled in 2018:**
  - **2018: 120+ active OFES/SIS/SRIS studies**
  - **2019: 160+ active OFES/SIS/SRIS studies**
  - **2020: 220+ active OFES/SIS/SRIS studies**
  - **2021: 290+ active OFES/SIS/SRIS studies**
  - **2022: 280+ active OFES/SIS/SRIS studies**
  - **2023: 280+ active OFES/SIS/SRIS studies**

# Interconnection Statistics

- **Modification Requests that are reported to TPAS/OC for information (for Large Facilities):**
  - 2023 (up to 5/5/23): 38
  - 2022: 35
  - 2021: 34
- **Project Withdrawals:**
  - 2023 (up to 4/30/23): 69
  - 2022: 74
  - 2021: 98



# Interconnection Statistics

- Class Year History: Class Year 2017 - Class Year 2021

Class Year	# of Projects		Start Date	Completion Date	Duration
	ERISand CRIS	CRIS Only			
CY17	20	7	03/01/2017	07/09/2019*	2.33 years (27 months)
CY19	38	40	08/01/2019	02/08/2021**	1.5 years (18 months)
CY21	54	3	03/11/2021	01/11/2023**	1.8 years (22 months)

\*This was a bifurcated Class Year. This date is the completion of CY17-2.

\*\*This date is the completion of regular Class Year projects.

# Stakeholder Feedback

# Stakeholder Feedback

- **General**

- General support for mandatory feasibility evaluations and removing the SRIS
- General support for a clustered study approach, but considerable concern/objections to overlapping queue windows and potential for restudies
- More details of each phase and overall implementation details, including site control requirements are needed to fully consider the straw proposal
- NYISO needs to coordinate process changes with NYSERDA, ORES and DPS
- Suggestion to merge Small Generators into the Queue Window approach with “exit ramps” for all projects that have only local SUFs

# Stakeholder Feedback

## ■ Developer comments:

- Considerable support for expansion of the Small Generator pre-application process to Large Facilities
- Make the following information available to prospective Developers:
  - List of substations in each service area with available capacity and ability to expand
  - Substation design information and CEI diagrams prior to entering the queue
  - Past queue window/Class Year Study details, past construction costs, environmental assessments for substations, potential issues associated with interconnection points
  - Access to fully developed power flow cases from the previous queue window/Class Year Study to assess interconnection viability.

# Stakeholder Feedback

- **Developer comments, continued:**
  - Maintain current site control requirements
    - Concerns regarding what “full site control” means
    - Site control requirement should be tailored for Offshore Wind to account for federal regulatory requirements/restrictions
  - Maintain flexibility with regulatory milestones
    - Retain the option to provide deposit in lieu of regulatory milestones.
    - Allow a project that has completed a Class Year and posted security up to 18 months to satisfy the regulatory milestone requirement (vs. the current 6-month requirement).
  - Increase flexibility with Commercial Operation Dates (up to 6 years from CY Study completion)

# Stakeholder Feedback

- **Developer comments, continued:**
  - Comments on the Queue Window phases:
    - Add incentives for projects that enter the queue window with a month or more before the deadline. This could reduce the inrush of projects at the last minute.
    - Combine Phase 1 and Phase 2.
    - At the Phase 2 decision point, require demonstration of continued site control including the generator lead route. Overlapping windows would be beneficial to speeding up the process.
    - Open the succeeding application review periods immediately after the close of the previous queue window application review period.
    - Allow project to modify the POI at the close of Phase 1 if the initial POI is found to be infeasible.
    - Clarify mutually exclusive project criteria.

# Stakeholder Feedback

## ■ Developer comments, continued:

- Additional comments on the Queue Window phases:
  - At the Phase 2 decision point, require demonstration of continued site control including the generator lead route.
  - Concerns regarding how/when increased study deposits become at risk
    - » Phase 1 deposit should be fully refundable,
    - » Developer should be able to withdraw without penalty should local opposition not approve the project, PPA terminated outside of developer control & before phase 2.
    - » Use \$/MW basis for security.
    - » Projects that submit deposits during the transition should have a mechanism for porting those costs to new projects that will land into the new process.
    - » Actual study cost should be a one-time fixed cost and not a monthly basis.

# Stakeholder Feedback

- **New York Transmission Owner (NYTO) Comments:**
  - The proposed overlapping cluster approach has fundamental flaws that, if implemented, would lead to invalid study assumptions, longer overall study duration and a higher level of uncertainty for developers paired with increased and undefined deposit forfeiture risk. Over time, the use of overlapping cluster studies would result in increased need to do restudies.
  - Adopting a limited scope mandatory Feasibility Study and eliminating the SRIS, together with better coordination and transparency during the Class Year Study have the potential to significantly reduce the duration of the interconnection process.



# Stakeholder Feedback

- NYTO Comments, continued:
  - Pre-Application Improvements:
    - Provide clear pre-application guidance and periodic orientations for developers.
    - Provide each developer with limited system information specific to that developer's proposed project to facilitate more effective IRs by developers.
    - A more stringent and clearer process for developer CEII clearance is necessary to effectuate this step, including certification of compliance with all applicable requirements, including cyber protections, by each identified recipient.

# Stakeholder Feedback

- **NYTO Comments, continued:**
  - Interconnection Request/Validation
    - Require developers to demonstrate workable individual project models (e.g., short circuit, steady-state, and stability) and require NYISO to validate the individual models provided with the application.
    - Require developer to identify in the IR the POI with specificity of facility and voltage level.
    - Developers should not be permitted to submit IRs for mutually exclusive projects (where the Developer does not intend to develop one or more projects).
    - The NYISO should verify the correct CTO and Affected System (if any) in advance of the first milestone involving the CTO or Affected System.

# Stakeholder Feedback

## ■ NYTO Comments, continued:

- Need clear rules on prioritizing scarce substation or tap availability
- Projects having lower priority (a later queue position, cluster, group or Class Year) should be given an opportunity to switch to an alternative POI or be removed from the cluster.
- Mandatory preliminary feasibility studies
  - To determine whether projects should be removed from/not admitted to a cluster or Class Year
  - Scope should be limited to review of one-line diagrams provided by developers and evaluation (*i.e.*, desktop analysis) of physical feasibility of proposed interconnections.
  - NYISO or the CTO should provide good faith, non-binding cost estimates of local SUF and CTOAF, schedules to construct and short circuit analysis.
  - Develop criteria for what “feasible” means—avoid “false positives.”
  - Study should be waivable if developer, and the CTO agree.
  - Study deposits should be required with the IR.

# Stakeholder Feedback

## ■ NYTO Comments, continued:

- The NYISO proposal includes Phase 1A, Phase 1B and Phase 2 studies.
  - The NYISO should clarify that studies requiring simulations will not be part of Phase 1A studies.
  - The NYISO will have to issue the final ATBA and ATRA base cases before any studies requiring simulations will be performed.
- Coordination with Small Generator and T&D interconnection requests
  - Large Generator, Small Generator and Distribution interconnection requests regularly impact one another. IRs under one process may impact feasibility of other projects, render studies invalid or give rise to reliability problems that must be addressed in another process (SGIA, LGIA, local T&D).
  - More coordination of the interconnection processes and review of inclusion rules can improve efficiency and base cases for interconnection studies, and decrease the need for restudies, producing more effective study results, saving time and decreasing uncertainty.

# Stakeholder Feedback

## ■ NYTO Comments, continued:

- The NYTOs recommend developing limits in the types and frequency and timing of changes developers can propose. Limits to the timing of developer changes can be in relation to the maturation of the interconnection study so study results are not delayed by late proposed changes.
- The NYTOs support review of the adequacy of milestone timing limitations so projects that are speculative or that are not going to be built do not prejudice later queued projects that are ready to proceed. This form of interconnection rights reservations should not be indefinite, particularly where a later queued project would be economically viable and prepared to proceed but for an earlier stalled project's indefinite reservation of scarce capacity.

# Stakeholder Feedback

- **Other Comments:**

- Allow Small Generators with non-Local SUFs to opt out of a Class Year Study and accept cost allocation and post Security for such SUFs without going through a Class Year Study.

**\* For more details on the Stakeholder Comments received, please refer to the individual Stakeholder Comments posted along with the May 5, 2023 TPAS Materials.**

# Next Steps

# Timeline

## ■ Anticipated Schedule Going Forward

- ~~Q1 2023~~
  - ~~Review and consider stakeholder feedback~~
  - ~~Develop initial proposals~~
- Q2 2023
  - Vet initial proposals with TPAS
  - Address stakeholder feedback
- Q2/Q3 2023
  - Refine proposals
  - Develop and vet tariff language with TPAS
- Q4 2023
  - Stakeholder approvals
- Q1 2024
  - Board approvals and FERC Filing



# Our Mission & Vision



## Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



## Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

# Questions?