Class Year/Interconnection Queue Redesign

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June 10, 2019

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Agenda

- Background
- Meeting Objective
- NYISO's Proposals with Supporting Details
  - Deliverability Redesign
  - Class Year Study Efficiencies
- Next Steps

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Background

Date	Working Group	Discussion Points
03-06-19	Transmission Planning Advisory Subcommittee (TPAS)	Class Year Study: Lessons Learned and Discussion Regarding Potential Process Improvements/Redesign • Overview of the NYISO's Interconnection and Class Year Process • History of Recent Class Year Studies • Process Improvements Implemented in Recent Years • Discussion regarding Lessons Learned and Opportunities for Further Improvements • Ideas for Further Process Improvements/Redesign
04-01-19	TPAS	Class Year/Interconnection Queue Redesign Discussion • Potential Areas for Improvement • Ideas for Process Improvements/Redesign
05-03-19	Joint TPAS/Installed Capacity Working Group (ICAP WG)	Class Year/Interconnection Queue Redesign • Feedback on Ideas for Process Improvements Discussed at 4/1/2019 Meeting • NYISO's Preliminary Proposals o Deliverability Redesign o Class Year Study Efficiencies

Red text denotes substantive changes from those presented on May 3, 2019 and new slides

Meeting Objective

- **Discuss details supporting each proposal**
- **Ensure that proposals address the following key areas for improvement identified by stakeholders:**
  - Need to expedite the interconnection study process overall, particularly Class Year Study
  - Limit the possibility for unique issues related to a single or few projects to cause delays to numerous other projects
- **Maintain qualities of current process most important to stakeholders:**
  - Identification of SUFs for projects to reliably interconnect, including detailed design, engineering and construction estimates
  - Binding, good faith cost estimates that provide reasonable closure on upgrade costs
  - Equitable allocation of upgrade costs

NYISO's Proposals

NYISO's Preliminary Proposals

I. Deliverability Redesign

A. Require Deliverability Evaluation in SRIS

B. Remove Additional SDU Studies from Class Year Study

C. Mini Deliverability Study for CRIS-Only Projects

D. More Stringent CRIS Expiration Rules

II. Class Year Study Efficiencies

A. Frontload Class Year Study Work into Part 1 Studies

B. Eliminate Duplication in SRIS and Class Year

C. Require Project Data Earlier in Class Year Process

D. Revise Regulatory Milestones in relation to NYSERDA contracts and clarify milestones for Offshore Wind

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Deliverability Redesign

Deliverability Redesign

A. Require Deliverability Evaluation in the SRIS [formerly Issue 1B]

Overview

- For all Large Facilities, require deliverability evaluation in the SRIS
- If SDUs are identified in the SRIS that are not "new" SDUs (i.e., don't require additional SDUs), can begin evaluating them in the Part 1 Class Year Study

Benefits of this Proposal

- Potential to shorten the duration of Class Year Studies because deliverability evaluations in the SRIS provide information that can be used in the Class Year Study
- May allow Developers to consider changes to projects that might make the project more deliverable
- Not expected to prolong the SRIS in light of the proposal in II.B to narrow the scope of other SRIS analyses

Deliverability Redesign [new slide]

A. Require Deliverability Evaluation in the SRIS (continued)

Details

- Scope of the SRIS deliverability analysis
  - For projects proposing to interconnect in areas of known deliverability constraints, the SRIS will include a full deliverability analysis
  - For other projects, the SRIS will include a limited deliverability analysis (*e.g.*, only byways, only applicable Highways/Other Interfaces, etc.)
  - Scope will be identified in the SRIS scoping meeting and documented in the Operating Committee-approved scope
  - Projects not requesting CRIS would be exempt from this requirement, but would be foreclosed from requesting CRIS in its Class Year Study

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Deliverability Redesign [new slide]

A. Require Deliverability Evaluation in the SRIS (continued)

Details (continued)

- SRIS deliverability analysis will be a preliminary, nonbinding evaluation of deliverability, including identification of conceptual potential SDUs to address indicated deliverability issues
- Deliverability evaluation in the SRIS will:
  - State the assumptions upon which it is based
  - State the results of the preliminary analyses
  - Identify potential SDUs at a high level
  - Provide preliminary SDU cost estimates

Deliverability Redesign [new slide]

A. Require Deliverability Evaluation in the SRIS (continued)

Details (continued)

- Developers would be responsible for the additional study costs related to the deliverability evaluation studied as part of the SRIS
  - NYISO would require an additional $30,000 deposit toward the cost of evaluation
  - Deposit would be factored into the final settlement billing of the SRIS costs
- Transition rule for projects in the queue
  - Applicable to all projects that do not have an OC-approved SRIS scope as of the effective date of the tariff revisions

Deliverability Redesign

B. Remove Additional SDU Studies from the Rest of the Class Year Study [formerly Issue 1A]

Overview

- Additional SDU studies are required for the following subset of SDUs:
  - SDU not previously identified and cost allocated in a Class Year Study and not substantially similar to a SDU previously identified and cost allocated in a Class Year Study
- At the point in the Class Year Study when the need for additional SDU studies is identified:
  - If the project requiring such SDUs elects to proceed with cost allocation for those SDUs, the impacted Developers must pursue such studies outside the normal Class Year process
  - Allow rest of Class Year to proceed to decision and settlement
  - Allow next Class Year to begin

Deliverability Redesign

B. Remove Additional SDU Study (continued)

Benefits of this Proposal

- Potential to shorten duration of Class Year Studies and expedite commencement of next Class Year Study (allowing for more frequent Class Year Studies)
- Could potentially apply to Class Year 2019
  - Largely dependent on status of Class Year 2019 when FERC issues an order
  - If FERC order predates the point at which projects must elect to proceed with additional SDU studies, this proposal may apply (but may require transition mechanisms)

Deliverability Redesign [new slide]

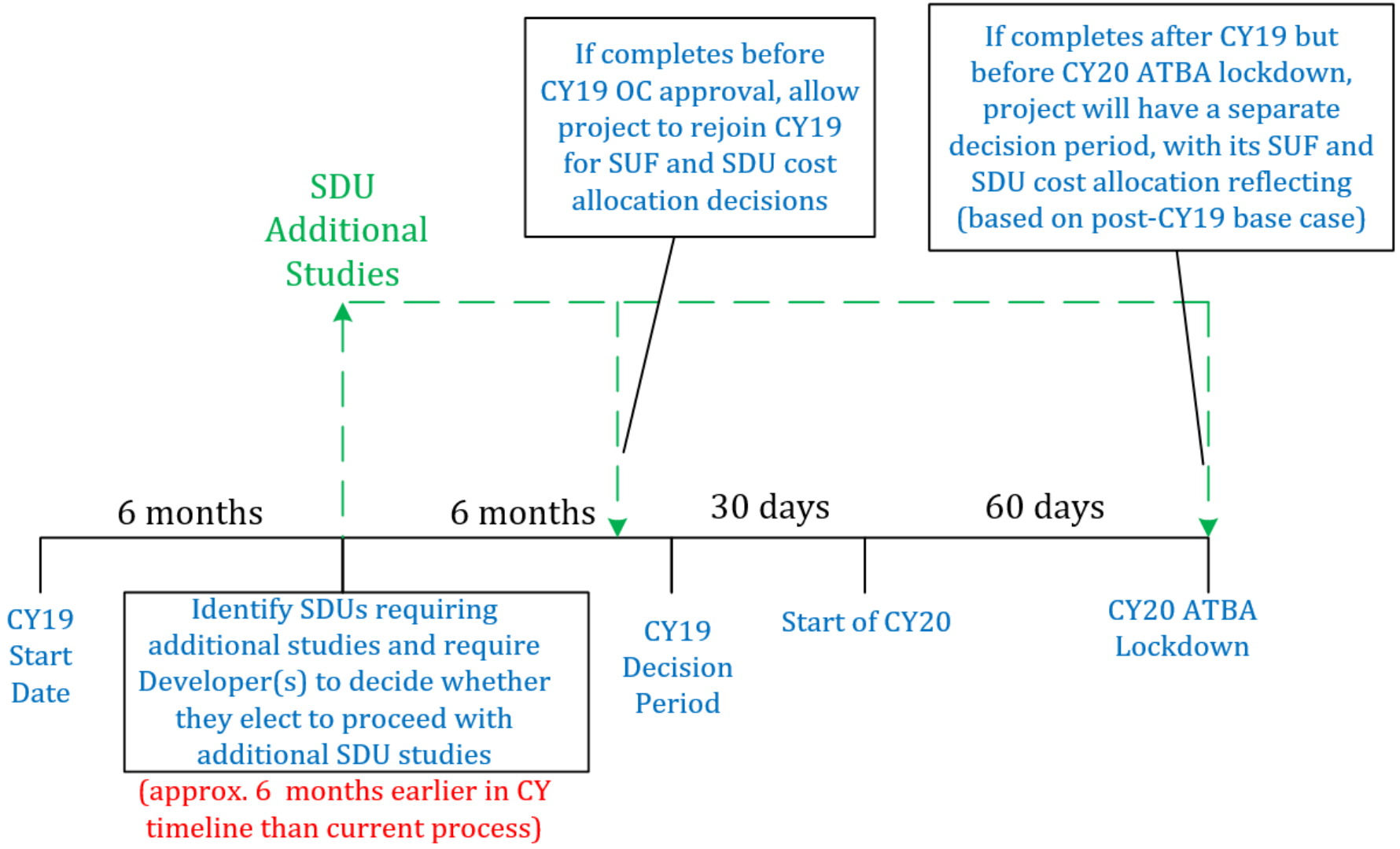
B. Remove Additional SDU Study (continued)

Details

- Point in Class Year when this separation will occur
  - Currently NYISO issues a formal Notice of SDUs Requiring Additional Studies after OC-approval of the Class Year Study
  - NYISO proposes to provide such notice earlier in the Class Year process:
    - As soon as the Deliverability Study is completed and the NYISO has identified the need for an SDU that would require additional SDU studies
- Impacted Developers not required to proceed with additional SDU studies
  - Only required if Developer elects to do so to obtain an SDU cost allocation
  - In the alternative, Developer may proceed as Energy only or accept only deliverable MW, if any

Deliverability Redesign [new slide]

B. Remove Additional SDU Study (continued)



Deliverability Redesign [new slide]

B. Remove Additional SDU Study (continued)

Details (continued)

- Base Case implications for next Class Year
  - If additional SDU study is completed prior to completion of its Class Year, project completes decision round with its Class Year for both SUFs and SDUs
  - If additional SDU study is completed after completion of its Class Year, but within 60 days of commencement of next Class Year (ATBA lockdown date):
    - The "additional SDU project" has its own separate decision period
    - In that decision period, SUF cost allocation for the "additional SDU project" will be based on a post-Class Year base case (reflecting decisions from Class Year projects that settled prior to this decision period)
  - If project rejects SUFs upon completion of additional SDU studies, the project is treated same as projects that rejected SUF cost in their Class Year

Deliverability Redesign [new slide]

B. Remove Additional SDU Study (continued)

Details (continued)

- Class Year cost allocation for the SDU if multiple projects
  - If more than one project requires SDUs for which additional studies are required, the additional SDU study will study them collectively and cost allocation among the projects will be in the Class Year that is open at the time the additional SDU study is complete
  - Projects can only proceed in separate additional SDU studies if they require different SDUs (*e.g.*, one project in Long Island requiring an SDU and another project in NYC requiring a different SDU)

Deliverability Redesign [new slide]

B. Remove Additional SDU Study (continued)

Details (continued)

- Impact on BSM evaluations
  - Separation of additional SDU studies from other projects requires enhancements to the forecast assumptions
  - If project electing to pursue additional SDU studies outside the Class Year Study process does not complete the additional SDU studies prior to completion of the Class Year:
    - It will not be included in the BSM forecast for projects remaining in the current Class Year
  - If project does complete the additional SDU studies prior to completion of the Class Year:
    - Project would be able to rejoin the Class Year with their cost allocated SDU and complete the Class Year decision and be subject to BSM rules similar to or the same as current rules
    - Project would be required to continue data submissions needed for BSM evaluations

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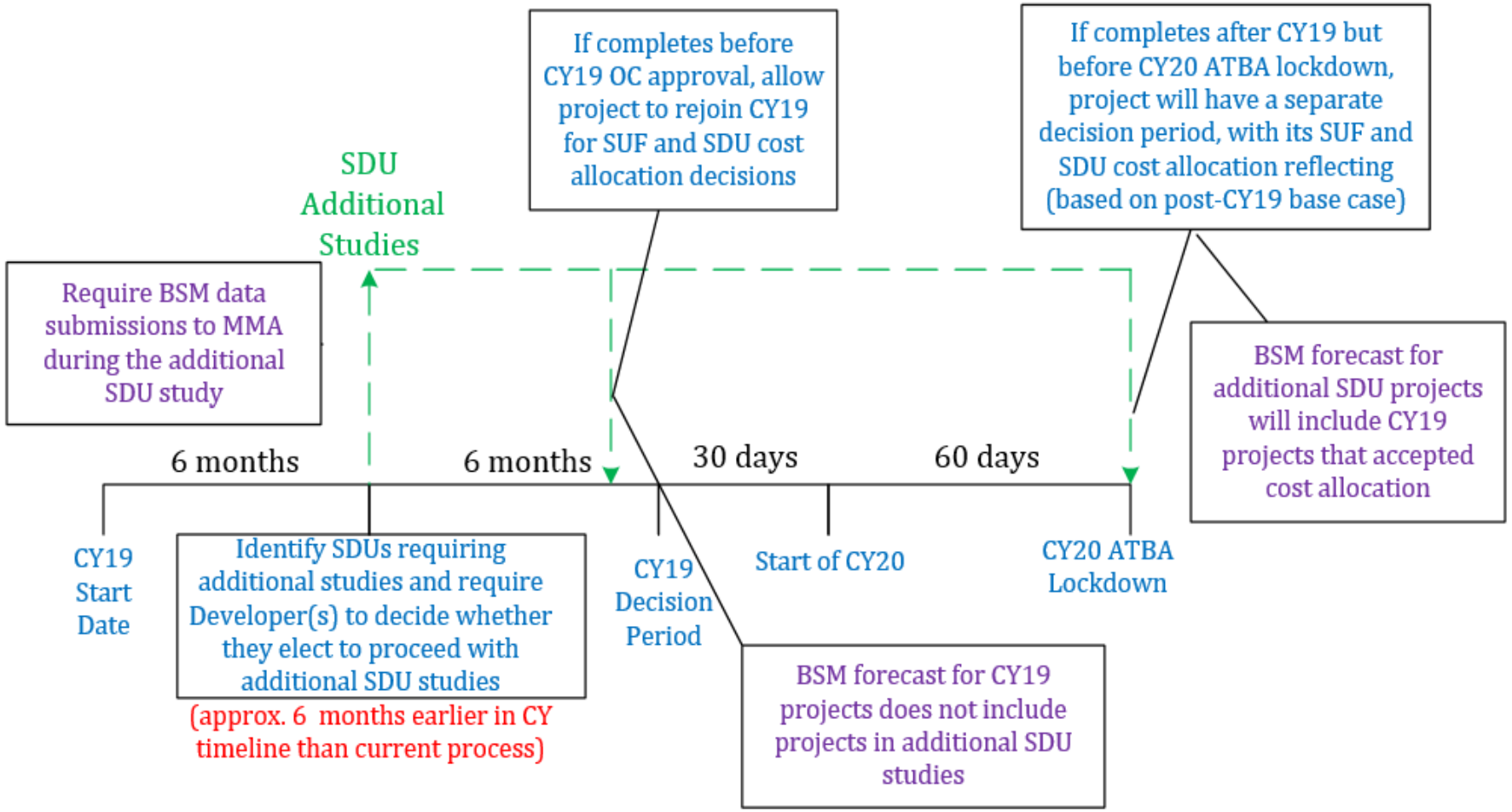
Deliverability Redesign [new slide]

B. Remove Additional SDU Study (continued)



Deliverability Redesign

C. Perform "Mini Deliverability Study" Outside the Class Year Process for CRIS-only projects

Overview

- Perform "mini" deliverability analysis outside of Class Year for facilities seeking only CRIS:
  - All CRIS-only requests, regardless of requested MW level, including:
    - CRIS request for new facilities or existing facilities with no CRIS
    - Small generators (larger than 2 MW) subject to NYISO's Small Generator Interconnection Procedures
    - Non-FERC jurisdictional facilities not subject to NYISO's interconnection procedures
    - Increased CRIS requests (for facilities with existing CRIS)
- Only a determination of deliverable MW

Benefits of this Proposal

- Expedited deliverability analysis

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Deliverability Redesign [new slide]

C. Mini Deliverability Study (continued)

Details (continued)

- CRIS-only requests eligible for this "mini" deliverability study will be limited to facilities that already have corresponding ERIS
  - Facilities going through uprates, for example, must have approved ERIS corresponding to the increased CRIS
- NYISO does not propose to cap the amount of CRIS that may be evaluated in the "mini" deliverability study
- NYISO does not propose to limit the eligible projects to those under a specified MW level

Deliverability Redesign [new slide]

C. Mini Deliverability Study (continued)

Details (continued)

- Process and Base Case Assumptions
  - The first "mini" deliverability study will commence on the first business day of the month after 30 days within a FERC order
    - Subsequent studies will be performed as frequently as possible thereafter
  - $30,000 deposit and execution of a *pro forma* study agreement
  - Base case for the "mini" deliverability study will include CRIS requests for projects in current Class Year

Deliverability Redesign [new slide]

C. Mini Deliverability Study (continued)

Details (continued)

- Process and Base Case Assumptions (continued)
  - No decision period upon completion of the "mini" deliverability study; projects requesting CRIS through this study will be deemed to accepts any deliverable MW
  - If project is not fully deliverable, project can accept its deliverable MWs, but for its full requested CRIS level, must proceed through a Class Year Study
  - Deliverability base cases will be "trued up" before commencement of next Class Year Study

Deliverability Redesign [new slide]

C. Mini Deliverability Study (continued)

Details (continued)

- Required Enhancements to BSM Rules
  - The BSM evaluation for facilities being evaluated in the "mini" deliverability study will be performed in parallel with the "mini" deliverability study
  - This expedited BSM evaluation would evaluate facilities 2 MW or less as well (subject to FERC Order accepting NYISO's Order No. 841 compliance revisions)
  - BSM Forecast Assumptions
    - Projects in ongoing Class Year will not be included in BSM forecast for projects in the "mini" deliverability study
    - Projects requesting CRIS in the "mini" deliverability study will have to have ERIS before requesting CRIS, and thus are more likely to go in-service prior to projects in the ongoing Class Year

Deliverability Redesign [new slide]

C. Mini Deliverability Study (continued)

Details (continued)

- Required Enhancements to BSM Rules (continued)
  - Data required for BSM evaluations must be received and deemed complete prior to the "mini" deliverability start date
  - For further consideration: whether starting capability year for mitigation study period should be sooner than current 3-year rule
    - Currently, the starting Capability Period for all Examined Facilities is assumed to be 3 years from the start of the Class Year
    - Having a starting Capability Period that is better aligned with when Examined Facilities in a "mini deliverability study" would be expected to become operational would provide more accurate forecast results

Deliverability Redesign

D. Create More Stringent CRIS Expiration Rules

Overview

- Do not allow existing facilities to retain CRIS if they do not enter the NYISO ICAP market for 3 years
- Prevent retention of CRIS that is not being used
- Clarification of CRIS inactivity within multi-unit PTIDs

Benefits of this Proposal

- Increases deliverability "headroom" retained by facilities not using, using only a portion of their CRIS or that have not yet entered the ICAP market

Deliverability Redesign [new slide]

D. More stringent CRIS Expiration Rules (continued)

Details

- Commencement of "3-year CRIS clock"
  - 3 year CRIS expiration clock is the time period within which a facility is CRIS-inactive, which can be no longer than 3 years
  - Currently, the 3 year CRIS expiration "clock" does not commence until facility enters the ICAP market
    - As a result, a facility with CRIS can go in-service and maintain its CRIS without its "3-year clock" starting until it enters the ICAP market and thereafter ceases to participate
    - In addition, a facility with CRIS can go in-service and participate as a load modifier and maintain CRIS indefinitely (*i.e.*, 3-year clock never starts if the facility remains a load modifier)

Deliverability Redesign [new slide]

D. More stringent CRIS Expiration Rules (continued)

Details (continued)

- Proposal would apply the 3-year CRIS inactivity clock when the unit goes in-service (*i.e.*, date the facility begins testing)
  - Once a facility goes in-service, if it does not participate in the ICAP market for 3 years, its CRIS will terminate, even if the resource is going in-service as a load modifier
- Participation in the ICAP Market
  - Under current tariff provisions, a facility becomes CRIS-inactive on the last day of the month during which (i) it ceases to offer capacity into ISO capacity auctions, or (ii) it ceases to be registered as a Capacity Resource for a Load Serving Entity through a bilateral transaction(s) or self-supply arrangement
  - Proposal may include clarification or revisions to the above language to make clear that acting as a load modifier makes a facility CRIS-inactive (*e.g.*, adding "in the NYISO market" to the above provision)

Deliverability Redesign [new slide]

D. More stringent CRIS Expiration Rules (continued)

Details (continued)

- Partial or completed CRIS-inactivity of units within multi-unit PTIDs (*i.e.*, several units within the same PTID)
  - Unit/facility within a multi-unit PTID that are not aggregations (e.g., run-of-river hydro) must submit an annual attestation that it has not retired or mothballed, or otherwise ceased participation in the market
  - CRIS for unit within an aggregation will expire if it has failed to provide a DMNC in the last 3 years

Deliverability Redesign [new slide]

D. More stringent CRIS Expiration Rules (continued)

Details (continued)

- Require corresponding ERIS for CRIS increases
  - 2 types of CRIS increases are currently permitted:
    - 2 MW CRIS increase, one time per facility over lifetime of facility that already has CRIS (not subject to a deliverability study)
    - Increased CRIS request above 2 MW (subject to a Class Year deliverability study)
  - This proposal would require that both of the above CRIS increases be conditioned upon the facility having corresponding ERIS before requesting increased CRIS
    - Unless facility going through Class Year for increased ERIS and CRIS at the same time

Deliverability Redesign

D. More stringent CRIS Expiration Rules (continued)

For Further Consideration

- Terminate portion of CRIS for facilities that do not use their full CRIS for certain period of time
  - Percentage of CRIS required over what time period to maintain CRIS
  - Manner in which CRIS will expire for units using partial CRIS
- Terminate CRIS in excess of ERIS
- CRIS-inactivity for single units within multi-unit PTIDs

Class Year Study Efficiencies

Class Year Study Efficiencies

A. Frontload Class Year Study Work in Part 1 Studies

Overview

- Evaluation of SUFs for projects on or near tie lines require additional time in the "Part 2" Class Year Study due to involvement of Affected Systems
- Frontload analyses to Part 1 Study
  - Evaluate non-local elective SUFs in Part 1 Studies
  - If a project's SRIS identifies potential transfer analysis and/or non-local SUF for an external interface, require the Part 1 for this project to include the potential SUF

Class Year Study Efficiencies

A. Frontload Part 1 Study Analyses (continued)

Benefits of this Proposal

- Could shorten the duration of the Class Year
  - Part 1 Class Year Studies can leverage SRIS analysis
  - Affected Systems can be brought into the process earlier
- Starts required analyses earlier in the Class Year process
- Could expedite analyses required in iterative decision process
  - For example, an SUF identified to mitigate impacts of 5 projects may need to be resized, or an alternative identified, if only 2 of these projects accept their cost allocation
- Could provide "bookend" cost estimates earlier in the Class Year Process

Class Year Study Efficiencies [new slide]

A. Frontload Part 1 Study Analyses (continued)

Details

- When performing Part 1 Class Year Studies, NYISO will leverage non-Local SUFs identified in SRIS
- NYISO will involve Affected Systems in the Part 1 Studies to commence their work earlier in the Class Year process
- Developer will be responsible for costs of evaluating non-Local SUF studies within the Part 1 Study
  - Currently, Developer is only allocated costs for Local SUF studies in the Part 1 analysis
  - For non-Local SUFs required by multiple projects, NYISO would divide the total study costs by the number of contributing projects

Class Year Study Efficiencies [new slide]

A. Frontload Part 1 Study Analyses (continued)

Details (continued)

- If alternative or larger non-Local SUFs are required as a result of the collective impact of Class Year projects identified in the Part 2 Study:
  - Analyses performed in Part 1 studies for the contributing projects can be utilized in the analysis of larger upgrades
  - Analyses performed in Part 1 studies will also be required for iterative decision rounds should all projects triggering the larger or alternative SUF reject their SUF cost allocation

Class Year Study Efficiencies

B. Eliminate Duplication in SRIS and Class Year Studies

Overview

- Focus Class Year analysis on incremental "system and/or projects' interaction analysis“
- Eliminate above analysis from the SRIS stage when project is unlikely to require SUFs
- Class Year can leverage applicable SRIS analysis for Class Year project's individual system impact
- If there is a significant change in the vicinity of a Class Year project compared to that of the SRIS stage, apply engineering judgment to determine scope of local analysis

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Class Year Study Efficiencies

B. Eliminate Duplication in SRIS and Class Year Studies (continued)

Benefits of this Proposal

- Could shorten duration of Class Year Study
- Could expedite SRIS by avoiding detailed analyses in SRIS that are duplicated in the Class Year Study
- Can offset study time and costs for deliverability analysis in the SRIS

Class Year Study Efficiencies [new slide]

B. Eliminate Duplication in SRIS and Class Year Studies (continued)

Details (continued)

- Specific analyses to be eliminated from Class Year Study:
  - Resource Adequacy analysis covered in the RNA
  - Analysis from SRIS:
    - Local thermal and voltage analysis (N-0, N-1, N-1-1 if conducted in SRIS)
    - Local stability analysis
- Specific analyses to be eliminated from scope of SRIS (e.g., transfer limit and N-1-1 analyses)

Class Year Study Efficiencies

C. Require Project Data Earlier in Class Year Process

Overview

- Currently, project data need not be submitted until the Developer submits its executed Class Year Study Agreement (30 days after the agreement is tendered)
- Project data needs to be validated, and if deficient, additional information/clarification is required from the Developer
- Require Developer to submit project data on the earlier of the Class Year Start Date or 30 days after the Class Year Study Agreement is tendered

Benefits of this Proposal

- Potential to shorten duration of Class Year Study

Class Year Study Efficiencies [new slide]

C. Require Project Data Earlier in Class Year Process (continued)

Details

- Require Developer to submit data requested on Attachment B to the Facilities Study Agreement and data required by the Connecting Transmission Owner on the Class Year Start Date
  - Even if the NYISO has not tendered a Facilities Study Agreement to the project Developer
- For Developers that request Facilities Study Agreements prior to commencement of the Class Year Study:
  - Must submit required data on the earlier of the Class Year Start Date or 30 days after the Agreement is tendered

Class Year Study Efficiencies [new slide]

C. Require Project Data Earlier in Class Year Process (continued)

Details (continued)

- TO-required data that will be required for Class Year Study to be identified in the SRIS scoping meeting
- Consequence to Developer that fails to provide required data is withdrawal from the Class Year
  - Counting as one of Developer's two Class Year "strikes"

Class Year Study Efficiencies

D. Revise & Clarify Regulatory Milestone Requirements

Overview

- Permit a project with a Renewable Energy Credit (REC) contract with NYSERDA to enter a Class Year
- Clarify application of regulatory milestone for offshore wind

Benefits of this Proposal

- Adds additional milestone for renewable projects and adds clarity to required regulatory milestone

Class Year Study Efficiencies [new slide]

D. Revise & Clarify Regulatory Milestone Requirements

Details

- Permit a project with a Renewable Energy Credit (REC) contract with NYSERDA to rely on such contract only for Class Year entry (in lieu of the deposit in lieu of regulatory milestone)
  - NYISO does not propose to allow such a contract to satisfy the regulatory milestone itself
  - A financial contract is not a milestone in project development akin to a the permitting milestones currently used as regulatory milestone requirements

Class Year Study Efficiencies [new slide]

D. Revise & Clarify Regulatory Milestone Requirements

Details (continued)

- Clarify application of regulatory milestone for offshore wind facilities
  - Applicable federal regulatory milestones for offshore wind facilities on the Outer Continental Shelf ("OCS") would be:
    - Construction and Operations Plan ("COP") deemed complete and sufficient by Bureau of Ocean Energy Management ("BOEM")
    - Notice of Availability of a Draft Environmental Impact Statement filed with the U.S. Environmental Protection Agency pursuant to the National Policy Act of 1969 ("NEPA") and implementing regulations
    - Final Finding of No Significant Impact for the project issued by the lead agency (i.e., BOEM) pursuant to the NEPA and implementing regulations

Class Year Study Efficiencies [new slide]

D. Revise & Clarify Regulatory Milestone Requirements

Details (continued)

- Clarify application of regulatory milestone for offshore wind facilities (continued)
  - Applicable NYS regulatory milestones for offshore wind facilities greater than 25 MW and within NYS jurisdictional waters would be:
    - a determination pursuant to Article 10 of the Public Service Law that the Article 10 application filed for the Large Generator is in compliance with Public Service Law § 164

Next Steps

Next Steps

- **Anticipated Schedule Going Forward**
  - July through September
    - —Refine proposals, and develop and vet tariff language
  - Q4 2019
    - —Stakeholder and Board approvals
    - —FERC filing
  - FERC order prior to Class Year 2019 Notice of Additional SDU Studies

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Feedback?

- Email feedback to: InterconnectionSupport@nyiso.com

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