

CRIS for External-to-ROS Transmission Investment

External-to-ROS Deliverability Rights (EDR)

Ethan D. Avallone

Senior Market Design Specialist, Energy Market Design

Business Issues Committee

March 15, 2018

Rensselaer, NY



Agenda

- **Background**
- **Proposed Tariff Revisions**
- **Next Steps**
- **Appendix I: EDR Features**
- **Appendix II: EDR Enhancements**
- **Appendix III: Items for Consideration Beyond the Scope of this Project**
- **Appendix IV: Links to Previous Stakeholder Meeting Presentations**

Background

Background

- **Joint IITF/TPAS Meetings**

- HQUS proposed that NYISO develop a method of awarding CRIS to entities that create increased transfer capability into Rest of State (ROS) via transmission upgrades over external interfaces (e.g., the Queue No. 430 Cedars Rapids Transmission intertie project)

- **January 19, 2011 ICAPWG**

- The NYISO committed to reviewing the interaction between requests for External CRIS Rights from new non-UDR transmission and the current process for optimizing annual import limits

- **NYISO 12/16/2015 ICAPWG presentation**

- Options presented:
 - Link the incremental transfer capability created by the transmission expansion process to the External CRIS Rights request in the CY Deliverability Study process, or
 - Obtain CRIS through a “UDR-Like” Model
 - Stakeholders commented that developing market rules surrounding External to ROS Deliverability Rights would incentivize transmission expansion and may provide significant benefits

FERC Waiver

- **HQUS requested and FERC granted a waiver that permits HQUS to request, and be eligible to receive, CRIS corresponding to the incremental transfer capability (in MW) created by its Queue No. 430 Cedars Rapids Transmission intertie project , see H.Q. Energy Services (U.S.) Inc., FERC Docket No. ER17-505-000; Order Granting Tariff Waiver, 58 FERC ¶ 61,098 (2017).**
 - FERC noted that the issue was not addressed earlier due to other priorities, rather than objections from the NYISO or other stakeholders.
 - The waiver was limited to the specific HQUS Project.
- **FERC directed that CRIS obtained through the waiver should expired upon occurrence of the following events:**
 - Termination of the HQUS Project by the project being withdrawn from the NYISO Interconnection Queue.
 - If EDRs or a similar solution is successfully developed in the 2018 project process, but HQUS fails to pursue the procedures to obtain such an opportunity.
 - The issuance of a final, non-appealable FERC order resulting in the HQUS Project being ineligible to obtain EDRs or a similar capacity market opportunity.

Market Principle

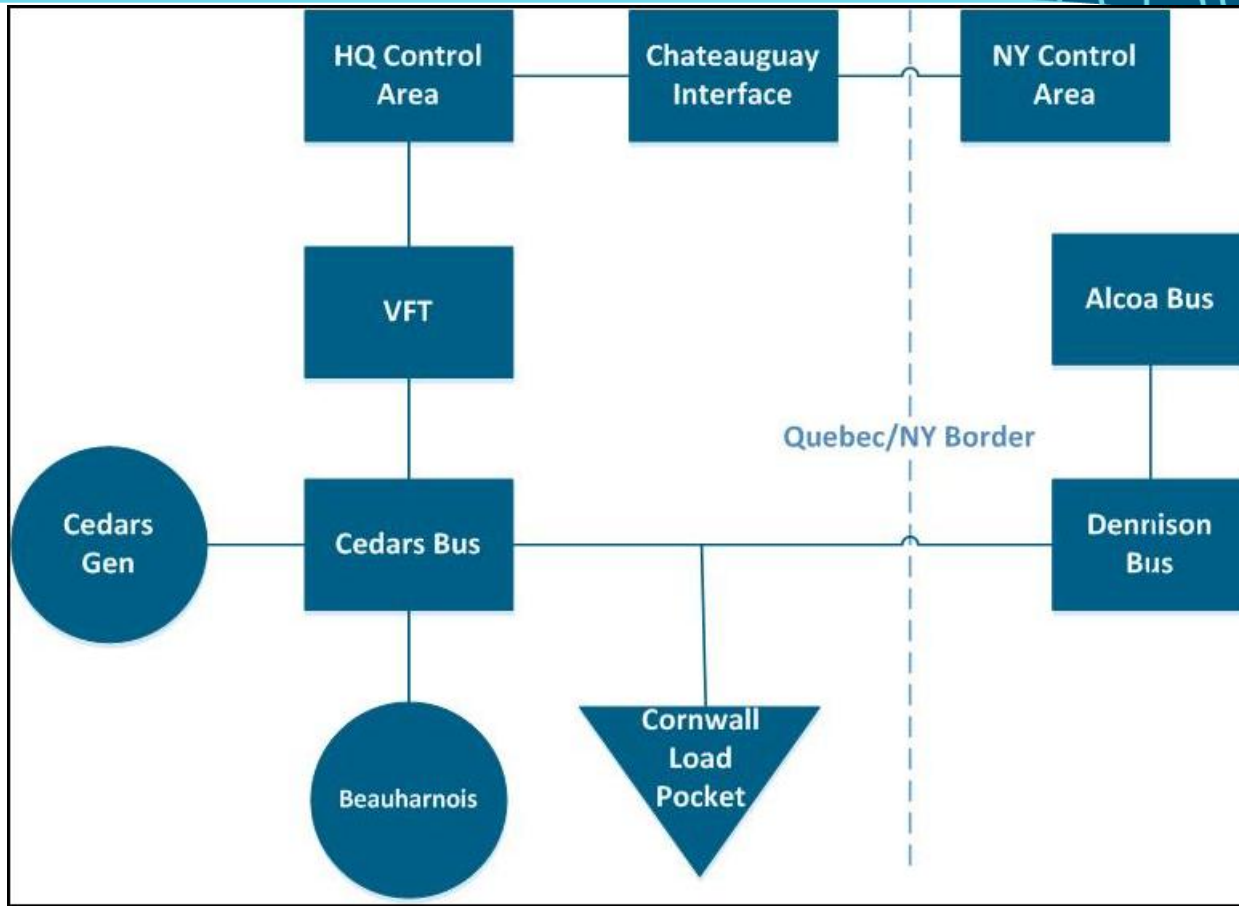
- Foster a market environment conducive to new investments

Project and Presentation Overview

- **This project will allow an entity to receive CRIS corresponding to incremental transfer capability on external interfaces that sink into ROS created by transmission upgrades**
 - The project must meet all of the other External-to-ROS Deliverability Rights (EDRs) qualification requirements
- **This presentation includes proposed draft tariff revisions to establish the applicable interconnection procedures for obtaining CRIS for such transmission upgrades and market rules for the participation using EDRs**

Current NYISO Interconnection Queue Project

- **The Cedar Rapids Transmission project**
 - H.Q. Energy Services U.S., Inc. is the Developer
 - Upgrades the Dennison – Alcoa 115kV transmission facility
 - Located in Load Zone D (NORTH)
 - The Transmission Owner of the facility being upgraded is National Grid
 - The project is an AC upgrade
 - The project application under the Transmission Interconnection Procedures was dated March 5, 2014
 - The proposed Commercial Operation Date date is Q4 2019



DRAFT – FOR DISCUSSION PURPOSES ONLY

©COPYRIGHT NYISO 2017. ALL RIGHTS RESERVED

Proposed Tariff Revisions

DRAFT – FOR DISCUSSION PURPOSES ONLY

© COPYRIGHT NYISO 2017. ALL RIGHTS RESERVED.



Tariff Revisions

- **OATT Tariff revisions would be filed on top of tariff revisions being submitted with the Order 1000 Compliance Filing required by FERC's 2/15/2018 Order, in accordance with FERC's e-tariff filing requirements.**
 - The tariff revisions slides that follow have been modified accordingly to reflect this fact.
- **OATT tariff revisions posted with today's meeting materials are on the updated tariff base.**
 - The updated tariff base includes revisions from the NYISO's anticipated Order 1000 Compliance Filing.
 - MST sections discussed as part of the CRIS for External-to-ROS Transmission Investment proposal will not be impacted by the Order 1000 Compliance Filing.
 - Two versions of the tariff language are posted
 - Redline revisions for the CRIS for External-to-ROS Transmission Investment proposal on the updated tariff base
 - Incremental Redline revisions from the 3/7/2018 ICAPWG/TPAS

Tariff Revisions

- A 2/15/2018 Order (related to Order 1000) requires a compliance filing that, among other items, requires the NYISO to revise the definition of Merchant Transmission Facility.
- Currently the definition of Merchant Transmission Facility includes transmission facilities eligible for and requesting UDRs.
 - The NYISO had planned to revise that definition to also include transmission facilities eligible for and requesting EDRs.
 - NYISO is revising the definition of Merchant Transmission Facility in its Order 1000 compliance filing revisions as directed by FERC.
- To encompass transmission projects seeking UDRs (that were previously encompassed in the definition of Merchant Transmission Facility), the NYISO is creating a new term “Class Year Transmission Project.”
 - The new term Class Year Transmission Project will encompass transmission projects eligible for and requesting CRIS in the form of UDRs as well as EDRs.

Tariff Revisions

- Tariff revisions are included in the sections listed below, (briefly described as follows):
 - MST 2.5 Definitions
 - Includes the definition of an EDR.
 - MST Section 5.12 Requirements Applicable to Installed Capacity Suppliers
 - Revisions in this section include EDRs as ICAP suppliers, as well as clarify that External CRIS Rights may not be used to satisfy a Locational Minimum Unforced Capacity Requirement.
 - Incremental Revisions to the MST language presented at the 3/7/2018 ICAPWG/TPAS meeting in response to stakeholder comments:
 - Section 5.12.1 specifies that the transmission project with associated incremental transfer capability must have received CRIS and EDRs, and have entered service.
 - Additional adjustments to that same paragraph were made so that the language was parallel for EDRs, generators, and UDRs regarding having CRIS and having entered service.

Tariff Revisions

- Tariff revisions are included in the following sections (revisions are not limited to the following brief description of the changes in each section):
 - OATT 25.1 Introduction
 - Additional clause in 25.1.1 “Purpose of the Rules,” consistent with other sections of Attachment S, to clarify that one of the purposes of Attachment S is allocating the cost of interconnection facilities required for CRIS in accordance with the Deliverability Interconnection Standard
 - Include the definition of a Large Facility as a Large Generating Facility or a Class Year Transmission Project
 - The following proposed revisions in OATT 25.1.1 presented on 3/7/2018 are **no longer** required due to the tariff revisions (proposed in the Order 1000 compliance filing) that are reflected in the new tariff base:
 - Include that these rules cover Transmission Projects for which a Transmission Developer is requesting EDRs
 - Such projects are encompassed in the new definition of “Class Year Transmission Project”
 - Modify the definition of Class Year, Class Year Project, and Headroom to refer generally to “projects” instead of specifically to “generation and merchant transmission”
 - Include, in the definition of Developer and NYISO Interconnection Standard, Transmission Developers or Transmission Projects requesting EDRs

Tariff Revisions

- **Tariff revisions are included in the following sections (revisions are not limited to the following brief description of the changes in each section):**
 - OATT 25.3 Deliverability Interconnection Standard
 - The NYISO proposes additional language, since the 3/7/2018 ICAPWG/TPAS, in Section 25.3.1 of OATT Attachment S to make it specify that that UDR and EDR projects are among the Large Facilities subject to a Class Year Deliverability Study.
 - OATT 25.6 Cost Allocation Methodology for ERIS
 - Revisions since the 3/7/2018 ICAPWG/TPAS specify that regulatory milestone requirements in 25.6.2.3.1 do not apply to projects that elect to enter a Class Year Study solely for the purpose of requesting CRIS.

Tariff Revisions

Tariff revisions are included in the following sections (revisions are not limited to the following brief description of the changes in each section):

- OATT 25.7 Cost Allocation Methodology for CRIS
 - Specify that EDRs must be deliverable throughout the ROS Capacity Region.
 - Specify that a developer requesting EDRs must obtain CRIS and fund or commit to fund System Deliverability Upgrades needed for its project to be deliverable at the requested level of CRIS
 - Specify that UDRs, EDRs or External CRIS Rights will be subject to the deliverability test in Section 25.7.8 and 25.7.9.
 - Specify that deliverability of External ICAP not associated with UDRs, EDRs, and External CRIS Rights will be evaluated separately as part of the annual process under the Services Tariff that sets import rights for the upcoming Capability Year, to determine the amount of External Installed Capacity that can be imported to the NYCA.
 - Specify that, if requesting CRIS, the generator or Class Year Transmission Project will be considered deliverable provided the Developer has paid its share of the total cost of System Deliverability Upgrades necessary to support the requested CRIS level, or made a satisfactory commitment to do so. and eligible to become an ICAP supplier when the project associated with the CRIS request is in service, subject to a number of requirements.
 - Specify that Class Year Transmission Project will be eligible to receive EDRs subject to eligibility requirements in the ISO Procedures

Tariff Revisions

- **Tariff revisions are included in the following sections (revisions are not limited to the following brief description of the changes in each section):**
 - OATT 25.8 Project Cost Allocation Decisions
 - Specify that an EDR can request a MW level of CRIS, not to exceed the increase in transfer capability created by its associated Class Year Transmission Project, as demonstrated in the project's System Reliability Impact Study.
 - OATT 30.14 Appendices
 - Supplemental data requested on the Interconnection Request form to help confirm whether the project is a transmission project requesting CRIS.

Next Steps

Timeline

Date	Targeted Event
Targeting 3/28/2018	MC vote
Q2 2019	Implementation

Appendix I: EDR Features

EDR Features

- **Allow entities to request CRIS associated with EDRs by undergoing a Deliverability evaluation in a Class Year Study**
 - Before requesting CRIS in a Class Year Study, however, a Developer would need to propose a transmission upgrade to increase transfer capability by submitting an application under the Transmission Interconnection Procedures (TIP)
 - A System Impact Study and a Facilities Study would be performed as part of the TIP
 - The TIP evaluations would be limited to the reliability impacts of the proposed transmission upgrade
 - The project would be evaluated for CRIS in a Class Year
 - The Class Year evaluation would be limited to the evaluation of the transmission upgrade's incremental transfer capability under the Deliverability Interconnection Standard
 - The Developer must have a completed System Impact Study of the transmission upgrade that creates the incremental transfer capability before entering a Class Year to request CRIS
 - The CRIS requested can be no greater than the MW of the incremental transfer capability determined by the NYSIO in the SIS to be created by the transmission upgrade

EDR Features

- **External to ROS Deliverability Rights (EDR)**
 - Used for new or incremental transfer capability on a Scheduled Line over an External interface, caused or created by investment in transmission facilities
 - Must sink in ROS (*i.e.*, not a Locality)
- **External capacity will sink in ROS and will be treated like other imports into ROS**
 - Does not require the addition of interfaces in the ICAP auction

EDR Features

- **As a Scheduled Line**
 - Provides a measurable and knowable increase in transfer capability
 - Will not apply to AC tie lines into ROS
- **No obligation to offer capacity associated with the EDRs**
- **No minimum price offer**
- **The NYISO will account for line availability and line losses**

EDR Features

- **CRIS can be transferred to an EDR project from either a generator, UDR, or another EDR project**
- **The Developer/holder of the CRIS associated with an EDR can change (subject to ISO Procedures)**
 - The holder of the CRIS will have the same opportunity as other ICAP Suppliers to identify a different billing organization or bidding organization
- **EDRs would not be limited in duration**

EDR Features

■ Annual Election

- Rightsholder may elect to return a MW amount of their EDRs, up to the maximum MW awarded
- MW returned will be available to be treated as emergency assistance in the IRM and LCR studies
- UCAP associated with the MW of EDRs “returned” cannot be offered in the ICAP market

EDR Features

- If a new Locality (New Capacity Zone (NCZ)) is created including the Load Zone in which the EDR sinks, then the EDR will no longer be an EDR; *i.e.*, it will not be eligible to qualify to offer capacity

Appendix II: EDR Enhancements

EDR Enhancements

- **The NYISO will continue with the limited scope of allowing only incremental transfer capability on Scheduled Lines sinking into ROS to be an EDR**
 - However, the NYISO plans to propose the potential additional enhancements described in the following slide for a 2019 project

2019 Project Prioritization

- The following are draft project prioritization descriptions for potential 2019 projects to accommodate proposed enhancements/expansions of the 2018 project, should the EDR concept be approved by stakeholders and FERC in 2018:

External-to-ROS Deliverability Rights (EDRs) for External Transmission Upgrades

This project will consider expanding upon the External-to-ROS Deliverability Right (EDR) participation model. As part of this endeavor, the NYISO will examine the potential for a Market Participant to receive EDRs to participate in the Capacity market by funding transmission system upgrades external to the NYCA that increase transfer capability at an external interface.

External-to-ROS Deliverability Right (EDR)/ Unforced Capacity Deliverability Right (UDR) Coordination

This project will consider expanding upon the External-to-ROS Deliverability Right (EDR) participation model. As part of this effort, the NYISO will consider rules governing allowing an EDR to sink into a Locality, and the transition between EDRs and UDRs.

Appendix III: Items for Consideration Beyond the Scope of this Project

Market Design Considerations Associated with Expanding UDR Definition

- **The following are market design hurdles that would need to be resolved:**
 - Rules to allow a UDR to sink into ROS while being sourced from a location external to NYCA would need to be developed
 - Rules to allow a UDR to sink into a Locality while being sourced from a different locality would need to be developed
 - e.g., A UDR that is sourced in Zone G and sinks in Zone J
 - Considerations if some UDRs could sink in Localities and some could not:
 - The treatment of such UDRs in planning studies would have to be agreed upon
 - Market rule changes would need to be evaluated to allow this product to participate in the market; for example
 - The impact on Locational Minimum Installed Capacity Requirements (LCRs) and the Installed Reserve Margin (IRM) cannot be quantified today
 - Would need to consider implications on the pricing hierarchy rules
 - HQ Cedars uprate would not qualify for a UDR product without significant expansions to the definition of a UDR
 - Expansion of the UDR definition would basically result in creating two types of UDRs, akin to two separate definitions; one that sinks in a Locality and the other that sinks in ROS
- **Due to these complications, the NYISO is moving forward with its original proposal to create a new product**

Market Design Considerations for Allowing EDRs to Sink into a Locality

- **There are significant market design considerations to allowing an EDR to sink into a Locality**
 - Can the EDR be used to meet Locality requirements?
 - What price should be paid to an EDR sinking into a Locality?
 - Is controllability a prerequisite for Locality capacity payments?
 - If controllability is not important for EDRs, then should imports over an AC interface be paid a blended price?
 - Are there consequences for reliability?
 - Planning impacts
 - The influence of an EDR that sinks in a Locality on planning study results, and impact on the LCR for a Locality if the resource cannot be used to meet the LCR for that same Locality
 - Impacts of having a resource sink into a Locality and consume deliverability Headroom, but is unable to sell into the Locality
- **Due to these complications, the NYISO is moving forward with its original proposal, and is further proposing the aforementioned issues be included as a project for prioritization**

Appendix IV: Links to Previous Stakeholder Meeting Presentations

Background

- The NYISO presented its market design concept proposal at the August 22, 2017 ICAPWG/TPAS
 - Additional stakeholder meetings discussed this topic:
 - 12/16/2015
 - 8/22/2017
 - 10/24/2017
 - 1/25/2018
 - 2/21/2018
 - 3/7/2018

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



www.nyiso.com