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## Background

NERC, in proposed change to Interchange Standard 004-3, provides new guidance for tagging of pseudo-ties. In summary, the pseudo-ties can be either tagged or included in a congestion management program and it also requires registering each pseudo-tie in the EIR.

The WEQ BPS, establishes submission of pseudo-ties to the SDX as a mechanism for including pseudo-ties in the Eastern Interconnection’s TLR process. The WEQ-008 proposed business practice also requires each TSP to approve Pseudo-Tie Definitions in SDX that impact the TSP’s system.

This proposal will address the following industry concerns from the perspective of TSPs who are using the Tag Secondary Network Transmission Service Method:

1. A Transmission Service Reservation’s capacity allocated in the Pseudo Tie Definition in SDX should only be used for the pseudo-tie and should not be used for other purposes by the Transmission Customer.
	1. PTP capacity should not be available for a Redirect on a Firm Basis (See WEQ-001-9).
	2. PTP capacity should not be available for Redirects on a Non-Firm Basis (See WEQ-001-10).
	3. PTP capacity should not be available for Resales (see WEQ-001-11).
	4. Network Service capacity should not be available for Request for temporary termination of DNR (see WEQ-001-105.3.2)
	5. Network Service capacity should not be available for Request for indefinite termination of DNR (see WEQ-001-105.3.3)
	6. Network customer may not terminate Secondary Network Capacity (see WEQ-001-106.2)
2. 2-way communication doesn’t exist between the SDX and the e-tagging system, nor is there any 2-way communication between the SDX and OASIS.
3. Transmission service which is dedicated to a pseudo-tie will not be available for other uses.
	1. The capacity can be changed over time as needed.
	2. There will be a mechanism for keeping the capacity allocation in sync between SDX and OASIS.

This paper uses several new terms and acronyms which are outlined here for clarity:

1. Pseudo-Tie Definition (*PTD*) -- represents the data entry in the SDX that defines the Pseudo-Tie for Transmission Service Providers who use the Generator Priority Schedule method.
2. Request Type “PT” -- is a new OASIS type of request (e.g., ORIGINAL, REDIRECT, RESALE) which is used for identifying capacity set aside for pseudo-ties. Referred to as *PT* in this document.
3. EIR Registered Pseudo-Tie – represents the data entry in NAESB’s WebRegistry that defines the pseudo-tie.

## Proposal

### Assumptions:

1. Pseudo-ties will be registered in WebRegistry, as requested by the NERC Coordinate Interchange Standards Drafting Team (CISDT) in the Request for Enhancement to NAESB EIR #[ER13001](http://www.naesb.org/pdf4/er13001.doc)[[1]](#footnote-1).
2. The BPS PFV recommendation will require all Transmission Providers on the path of a pseudo-tie to approve new and adjusted Pseudo-Tie Definition in SDX.
3. Each Pseudo-Tie Definition in the SDX will require the following:
	1. A single unique identifier of an EIR-Registered Pseudo-Tie
	2. Each TSP on the physical path(s) of the pseudo-tie
	3. For each TSP, one or more PT OASIS reservation’s OASIS aRef, the maximum MW flow permitted on the reservation for the pseudo-tie, and the curtailment priority associated with the reservation (e.g., 7-F, 2-NH or 1-NS).

### Overview:

Each EIR Registered Pseudo-Tie will show the source, sink and each transmission system in the physical path. Each Pseudo-Tie Definition in the SDX will show for each transmission system in the physical path the upper limit MW for each time interval in the PTD. A new request type will be used in OASIS to dedicate capacity on a given TSP’ system to the EIR Registered Pseudo-Tie. The TSP will compare the capacity dedicated to the pseudo-tie on OASIS (PT) to the capacity shown on the PTD in validating changes to the PTD. The TSP will compare the capacity on the PTD to the capacity to be dedicated on OASIS in granting OASIS requests for capacity.

### Requirements:

1. OASIS standards will be modified as follows:
	1. A new Request Type named **PT** will be established with the following characteristics:
		1. It will be a form of scheduling rights, similar to a Resale in PTP.
		2. It will have the same reservation priority as the Parent reservation.
		3. It must include the unique identifier from the EIR-Registered Pseudo-Tie.
		4. Only one PT reservation may be submitted for a given EIR-registered pseudo-tie.
		5. Multiple PT reservations against a Parent reservation but each must have a unique identifier from the EIR-Registered Pseudo-Tie
		6. It cannot be resold or redirected.
		7. It may be applied to PTP or NITS.
		8. It must have the same reservation characteristics (source, sink, POR, POD, etc) as the parent reservation.
		9. Capacity may be adjusted over time. If increased, capacity will be taken from the parent reservation. If decreased, capacity will be restored to the parent reservation.
		10. The parent reservation must not be subject to preemption and competition (e.g., for firm service it must be unconditional with respect to section 13.2 of the OATT)
		11. The PT reserved capacity will act as an encumbrance on the parent reservation and, therefore, will reduce the Capacity Available to Redirect of the parent reservation.
		12. It may be submitted in conjunction with a new request for NITS or PTP service.
2. All requested PT OASIS capacity shall equal or exceed capacity on a corresponding PTD.
	1. The request for PT OASIS capacity may only be submitted by the transmission customer. (The sink LSE, who submits the PTD, is not permitted to submit requests on OASIS unless the sink LSE is also the transmission customer.)
	2. The TSP may deny a request for new or additional PT capacity on OASIS if there is insufficient Capacity Available to Redirect on the parent reservation.
	3. The TSP may deny a request for reduction in PT capacity on OASIS if the capacity is shown on a PTD in the SDX.
3. Only OASIS PT capacity may be declared on an SDX PTD.
	1. A TSP may deny any SDX PTD that requests capacity in excess of the associated PT OASIS reservation. (SDX PTD that requests capacity lower than that of the associated PT OASIS reservation must be permitted.)

### How would this work:

1. A BA would register a pseudo-tie in WebRegistry (as required in the Request for Enhancement to NAESB EIR #ER13001). This must be done before any further EIR related activities take place.
2. For Tag Secondary Network Transmission Service Method:
	1. E-tags cannot use PT reservations because that capacity is set aside exclusively for Pseudo-Tie Definitions process.
3. For Generator Priority Method:
	1. New Pseudo-Tie
		1. Each Transmission Customer on the pseudo-tie’s path will submit on OASIS requests for PT capacity (Request Type: PT)
		2. TSP will review and approve or deny the OASIS request.
		3. The sink LSE (or other authorized submitter) will submit the Pseudo-Tie Pseudo Tie Definition to SDX.
		4. The SDX will notify each TSP on the PTD path of the need for validation of the PTD.
		5. Each PTD will compare the PTD’s transmission capacity to the OASIS PT capacity and approve if sufficient capacity is declared on OASIS to accommodate the PTD. If not, the PTD will be denied.
	2. Increase in pseudo-tie capacity in SDX
		1. If insufficient capacity is reserved on OASIS, the Transmission Customer will request increased capacity (probably should be handled as a request to replace any existing PT reservation for a given pseudo-tie).
		2. Sink LSE will submit replacement PTD in SDX.
		3. TSP will validate.
	3. Reduction in pseudo-tie capacity in SDX
		1. Sink LSE submits replacement PTD in SDX.
		2. TSP will validate and approve (since there was sufficient capacity to accommodate the earlier, higher-capacity PTD there will be sufficient capacity to accommodate the lower capacity PTD)
		3. Transmission Customer may, but is not required to, submit a reduction in the PT reservation on OASIS.
			1. If submitted, the TSP may refuse the reduction if the requested capacity is insufficient to accommodate capacity declared in SDX.

### Benefits of this approach:

1. Pseudo-Tie capacity is reserved on OASIS for use in the SDX (transparency).
2. Each Transmission Customer controls the maximum capacity dedicated to a PTD, rather than the sink LSE. This may reduce Transmission Customers’ desire to have validation rights to approve new or modified Generator Priority Schedules.
3. Increases and decreases in SDX PTD capacity is done in a one-for-one validation. A pseudo-tie identifier from EIR registration can only be used on one PTD and there will only be one PT reservation per parent per pseudo-tie identifier.
	1. When the TSP or TC validates a PTD, the TSP only needs to look up the reservation numbers in the PTD and verify that the capacity on the OASIS reservation is equal to or greater than the capacity on the PTD. (This functionality could also be added to SDX to eliminate the need for TSP & TC validation of capacity.)
	2. When the TSP or TC validates a PT request, the TSP only needs to look up the PT’s OASIS reservation aRef in SDX and verify that the capacity requested is greater than or equal to the capacity on the Generator Priority Schedule.
4. PT reservations will not be subject to preemption and competition (OATT Sections 13.2 and 14.2) so there is no risk that a reservation is lost after approval of a Generator Priority Schedule.

### Downside of this approach:

1. Transmission Providers will need to perform manual comparisons when validating or will need to invest in new software to perform TSR and PTD validations.
2. Transmission Customers will need access to SDX in order to find out how much capacity is tied up in Generator Priority Schedules since this information is used by TSPs for validation purposes.
3. Transmission customers will need to perform manual comparisons when validating PTD’s or requesting PT capacity, or they will need to invest in new software to perform TSR and PTD comparisons.
1. A new object called Pseudo-Tie is created by BAs. The new object should have e-Tag physical path data including Source/Sink BA, the intermediate BAs and TSPs, associated RCs, and the appropriate POR/POD and Source/Sink points. See table below. All cited entities in the Pseudo-tie object must approve the object. Objects should be published in the XML publication file and each have a unique object ID that cannot be duplicated.

Source BA Source

TSP POR POD BA

TSP POR POD BA

TSP POR POD BA

Sink BA Sink [↑](#footnote-ref-1)