

Transmission Service Requests Evaluation

BPA Transmission Business Practice

Version 2
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This document describes the methods that Transmission Services uses to evaluate the impacts of Transmission Service Requests (TSRs) and/or Network Integration Transmission Service (NT) forecasts, including whether new transactions can be granted due to *de minimis* impacts, in both the Short-Term time horizon (0-13 months) and the Long-Term time horizon (the Planning Time Period for beyond month 13).

For more information, visit the [BPA Transmission Business Practices webpage](#) or submit questions to techforum@bpa.gov.

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A. Impacts of Long-Term Requests and Network Integration Forecasted TSRs

1. Long-Term TSRs and forecasted TSRs (FTSR) will be evaluated by determining the impact the transaction has on each Long-Term BPA Constraint (comprised of the 1:1 paths and Flow-Based paths) as described below.
 - a. Long-Term TSRs and FTSRs may impact several Long-Term BPA Constraints.
 - b. The impact of a TSR impacting a 1:1 path is equal to the requested demand, except for Redirect requests where the Original reservation encumbers the needed path, in which case the impact is 0 MW.
 - c. The impact of a TSR impacting a Flow-Based path is determined via PTDF calculations described below, which reflect how a TSR will flow across the BPA transmission system.
2. A Long-term TSR, or FTSR will be granted if there is:
 - a. Sufficient ATC to accommodate the impact at each Long-Term BPA Constraint for the time period requested, including the period accommodating Right of First Refusal (ROFR) as necessary, as adjusted for higher queued TSRs; or
 - b. The impacts are determined to be *de minimis*, as described below; and
 - c. No reliability, sub-grid, or local area issue(s) are identified.

- d. An offer of transmission service may be made to a TSR lower in the queue, while a higher positioned TSR is still pending when:
 - i. The lower positioned TSR will not utilize ATC over any Long-Term BPA Constraint that has been encumbered for the higher positioned TSR; or
 - ii. The lower positioned TSR requires ATC on one or more Long-Term BPA Constraints during a time period when transmission service can be offered without affecting the capacity encumbered for the higher positioned TSR.
- 3. When a Long-term TSR or FTSR cannot be granted, the transaction will remain in the Long-Term Pending Queue until a System Impact or other Study Agreement, as specified by the OATT, is offered by BPA, the TSR expires, or the customer withdraws their request.
- 4. PTDF calculations are prepared for each Long-Term TSR and FTSR submitted to BPA, to determine the impacts of the transaction, according to the following matrix:

	Request/Forecast Type		Evaluated Source	Evaluated Sink
a.	Original PTP		Requested Source	Requested Sink
b.	NT (for service to New Network Load from a non-wind resource)		Requested Source	Requested Sink
c.	NT (for service to New Network Load from a wind resource) ¹		(A) Requested Source	(A) Requested Sink
			(X) FCRPS	(X) Requested Sink
d.	PTP Redirect ²		(A) Requested Source	(A) Requested Sink
			(B) Existing Source	(B) Existing Sink
e.	NT (for service to existing Network Load from a non-wind resource)		Requested Source	Displaced Designated Network Resource ³ or FCRPS
f.	NT (for service to existing Network Load from an existing non-wind designated Network Resource through a new Transfer POD on BPA's system)		Existing Sink	Requested Sink

	Request/Forecast Type		Evaluated Source	Evaluated Sink
g.	NT (for service to existing Network Load from a wind resource or an NT forecasted resource) ⁴		(A) Requested Source	(A) Requested Sink
			(B) Displaced Designated Network Resource ³ or FCRPS	(B) Requested Sink
h.	Deferral or Renewal Competition ²		(A) Challenger's Requested Source ⁵	(A) Challenger's Requested Sink
			(B) Defender's Requested Source ⁵	(B) Defender's Requested Sink
<p>¹The impact to each Flow-Based path is deemed to be the larger of either the Path (A) or Path (X) impacts.</p> <p>² Impacts of Path (B) are subtracted from the impacts of Path (A) = (A-B).</p> <p>³ If no Displaced Designated Network Resource is identified in the customer comment field of the TSR, Transmission Services will assume FCRPS generation is being displaced.</p> <p>⁴ The incremental impact to each Flow-Based path is the larger of either the Path (A) or Path (B) impacts minus the impacts of Path (B) = (A or B) – B = (A-B) or 0 MW, whichever is larger.</p> <p>⁵ If the Source is associated with a wind resource designated as a Network Resource, the impact to each Flow-Based path is determined by using either the Requested Source or FCRPS, whichever results in the largest impact.</p>				

5. BPA further evaluates each Long-term TSR and FTSR to determine whether the PTDF calculated impact is an appropriate reflection of the impact to the transmission system anticipated if the TSR or FTSR were CONFIRMED. If the PTDF impacts are not an appropriate reflection of anticipated impacts, BPA determines the impacts using studies, similar to those used to calculate ETC and/or TTC values per the ATC Methodologies for the Planning Time Period.
6. When a Long-term TSR or FTSR is CONFIRMED:
 - a. BPA decrements ATC to reflect either the non-*de minimis* positive PTDF calculated impacts or the anticipated impacts described above;
 - b. Any *de minimis* impacts will be ignored; and
 - c. Any negative PTDF calculation impacts will be dealt with as follows:
 - i. The results of steps 4.a., 4.b., and 4.c, will not be decremented to increase posted ATC values; and
 - ii. The results of steps 4.d., 4.e., 4.f., 4.g., and 4.h. will be decremented to increase posted ATC values.
 - d. Transmission Services will review the ATC impacts for Long-term TSRs and FTSRs authorized based on the results of a Cluster Study or a System Impact Study and determine how those impacts should affect posted ATC values. In doing so, Transmission Services will model those impacts in a consistent and non-discriminatory manner and post a notice on the [ATC Methodology webpage](#)

explaining how it is modeling those impacts between base cases. Transmission Services will incorporate the impacts into the next base case update.

7. NT Requests for generation behind the meter:
 - a. When all of the energy produced by such generation is dedicated to serving the Load Serving Entity's Load on the Load side of BPAT's POD meter, a NT Transmission Service Request is not required and the generation behind the meter is deemed to have no Long-Term BPA Constraint impacts.
 - b. When only a portion of the energy produced by such generation is dedicated to serving the Load Serving Entity's Load on the Load side of BPAT's POD meter:
 - i. The NT Request for the portion of the energy produced that is dedicated to serve the Load Serving Entity's Load on the Load side of BPAT's POD meter will be deemed to have no BPA Constraint impacts.
 - ii. The NT Request for the portion of the energy produced that is used for delivery outside of the Load Serving Entity's system will be assessed using the relevant methodology in Step 4.

B. Long-Term *De Minimis* Impacts

1. All Long-term TSR s and FTSRs will be evaluated to determine if such transaction has a *de minimis* impact on one or more of the Flow-Based paths.
2. (Test 1) The positive net impact on the Flow-Based path is less than or equal to 10 MW and the PTDF of the requested path is less than or equal to 10 percent.
 - a. If the requested path is deemed *de minimis*, its impacts will be treated as equal to zero in determining the net impacts.
 - b. If the original reservation or encumbrance is deemed *de minimis*, its impacts will be treated as equal to zero in determining the net impacts.
3. (Test 2) The positive net impact on the Flow-Based path is less than or equal to 10 MW and the original impact divided by the new impact is greater than or equal to 80 percent.

Table 1: De Minimis Impact Criteria A Long-term TSR or FTSR must pass one of the following tests to be considered <i>de minimis</i> .	
Definitions	<p>A = 0 MW or non-<i>de minimis</i> positive impact of new request or forecast</p> <p>If $A \leq 10$ MW & $PUF_A \leq 0.1000$, A is treated as a zero in the determination of the net impact.</p> <p>B = 0 MW or non-<i>de minimis</i> positive impact of original reservation or encumbrance, if any</p> <p>If $B \leq 10$ MW & $PUF_B \leq 0.1000$, B is treated as a zero in the determination of the net impact</p> <p>$(A - B)$ = Net impact</p> <p>PUF_A = Flow-Based path PTDF associated with Source/Sink of new request or forecast</p> <p>PUF_B = Flow-Based path PTDF associated with Source/Sink of original request or forecast</p>
Test 1	<p>$(A - B) \leq 10$ MW</p> <p>AND</p> <p>$PUF_A \leq 0.1000$</p>
Test 2	<p>$(A - B) \leq 10$ MW</p> <p>AND</p> <p>$(B \div A) \geq 0.8000$, for non-zero A values</p>

4. Rounding Rule Calculations:

- a. Except as provided in Section 4.b, below, if a Long-term TSR or FTSR has a net impact to any Flow-Based path of between 0.001 MW and 0.9999 MW, Transmission Services will deem such impact to be equal to 1 MW for ATC and *de minimis* calculations.
- b. Transmission Services may deem an impact between 0.0001 MW and 0.5 MW equal to 0 MW for ATC and *de minimis* calculations if the Transmission Customer can demonstrate in writing all of the following:
 - i. The transaction is related to Transmission of the output of a specific Generating Facility and the MW demand of the Long-term TSR or FTSR fully covers the Generating Facility Capacity, **or**
 - ii. The transaction is for the total amount of the Power Purchase Agreement. If the transaction does not fully cover the amount, BPA will require further explanation about why the customer isn't requesting or forecasting the full amount; **and**
 - iii. There have been no other purchases from the same seller or the specific Generating Facility in the past 12 months.
- c. A Transmission Customer's demonstration, which is to be provided to their Transmission Account Executive and the designated Transmission Account

Service Specialist, may include any of the following types of documentation that identifies the maximum output of the facility, including all future phases of development, associated with the Long-term TSR or FTSR:

- i. LGIA or SGIA documentation;
 - ii. State energy Facility siting documentation;
 - iii. Documentation provided to local governmental entities with permitting or siting authority;
 - iv. Balancing Area Service Agreement documents; and/or
 - v. Other documentation Transmission Services determines is sufficient.
5. Other Considerations When Requesting PTP Transmission Service:
- a. For Transmission Service from a new generator project at a single Source with a Generating Facility Capacity of less than or equal to 4 MW, the *de minimis* test(s) will be suspended.
6. Long-term TSRs for Designated Network Resources (DNR):
- a. For TSRs to designate Network Resources intended to serve network load up to the amount of the NT Customer's load that is forecasted or determined to be Above Rate Period High Water Mark Load in accordance with the Regional Dialogue power sales agreement, or network load growth for NT Customers that do not have a Regional Dialogue power sales agreement, a net positive impact will be considered *de minimis* if it is less than or equal to 10 MW.
 - b. This will not be applied to TSRs submitted within the same 12 month period by the same Customer with the same Source and the same contract number as a TSR already submitted by that Customer.

C. Impacts of Short-Term Requests

1. Short-Term TSRs will be evaluated by determining the impact the request has on each BPA Short-Term ATC Path (comprised of 1:1 paths¹ and Flow-Based paths²) as described below.
2. All requests for Short-Term products enter a common queue and are evaluated in queue order, except requests submitted within 5 minutes of a given market opening (as explained in the [Simultaneous Submission Window Processing Business Practice](#)).
3. Evaluations are performed considering the impacts of all prior queued requests and reservations (including Long-Term). Prior requests that are still pending are deducted from ATC when evaluating later queued requests.
4. Except where noted, the evaluation process for Short-Term requests is the same for Firm and Non-Firm alike.
5. Evaluations are performed against Short-Term ATC as calculated according to the [ATC Implementation Document](#).

¹ List of 1:1 paths can be found in BPA's ATCID Section VII. Rated System Path Methodology

² List of Flow-Based paths can be found in BPA's ATCID Section VIII. Network Path Methodology

- a. All Short-Term Firm requests are evaluated against the same Short-Term Firm ATC value.
- b. Short-Term Non-Firm requests are evaluated against a separate Non-Firm ATC value corresponding to the priority of the request (priority 1-6) as shown below.

Transmission Service	Priority	ATC Value
Secondary Network	6-NN	RATC6
Monthly Non-Firm PTP	5-NM	RATC5
Weekly Non-Firm PTP	4-NW	RATC4
Daily Non-Firm PTP	3-ND	RATC3
Hourly Non-Firm PTP	2-NH	RATC2
Secondary Non-Firm Hourly PTP	1-NS	RATC1

- 6. Upon submittal, each Short-Term TSR is verified to ensure that it represents a valid request. See Section I of the [Requesting Transmission Service Business Practice](#) for a list of reasons a TSR may be considered invalid.
- 7. A Short-Term TSR that has been deemed valid then undergoes two separate evaluations: a Network Congestion Evaluation and an ATC Evaluation.
- 8. Both the Network Congestion Evaluation and ATC Evaluation are based on first determining the impact of the Short-Term TSR on each BPA Short-Term ATC Path as follows:
 - a. The impact on 1:1 paths is simply the MW requested on the Short-Term TSR request.
 - b. The impact on Flow-Based paths is determined using PTDF analysis according to the following formula.

$\text{MW impact} = (\text{POR}_{\text{PTDF}} - \text{POD}_{\text{PTDF}}) * \text{TSR Demand}$
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- 9. For Flow-Based paths, PTDF calculations are prepared for each Short-Term TSR to determine the impacts of the request according to the following matrix:

	Short-Term Request Type	Evaluated POR	Evaluated POD
a.	Original Firm or Non-Firm PTP	Requested POR	Requested POD
b.	PTP Firm Redirect ¹	(A) Requested POR	(A) Requested POD
		(B) Existing POR	(B) Existing POD
c.	Secondary Non-Firm Hourly PTP ²	Requested POR	Requested POD
d.	Firm or Non-Firm NT	Requested POR	Requested POD

	Short-Term Request Type		Evaluated POR	Evaluated POD
e.	Resale ³		Not Applicable	Not Applicable
f.	Relinquish ³		Not Applicable	Not Applicable
¹ Firm Redirects are credited with capacity from the Firm parent reservation on common Flow-Based paths. Impacts of Path (B) are subtracted from the impacts of Path (A) = (A-B). ² Secondary Non-Firm Hourly PTP are not credited with capacity from the Firm parent. ³ There is no ATC evaluation for Resale or Relinquish requests since there is no award of new ATC for either request type.				

10. All Short-Term TSR requests are subject to a Network Congestion Evaluation based on the calculated TSR impacts. The purpose is to ensure that the impacts of the TSR do not exacerbate congestion across BPA's Short-Term Flow-Based paths. When enabled, this evaluation is performed for all Short-Term Transmission Services (including Non-Firm hourly products), as described in Section E of this Business Practice.
11. In addition to the Network Congestion Evaluation, an ATC Evaluation is also performed for all Short-Term Transmission Services, with the exception of Non-Firm Hourly PTP and NT and Secondary Non-Firm PTP Redirects.
12. For evaluation of Flow-Based paths, the first step of the ATC Evaluation is to determine whether the calculated impact of the request meets the criteria to be deemed *de minimis* across any Flow-Based path (see Section D of this Business Practice for the Short-Term *de minimis* criteria). Requests deemed to be *de minimis* across a Flow-Based path do not require ATC for that Flow-Based path.
13. For evaluation of any Firm Redirect not considered *de minimis*, the ATC Evaluation credits the Redirect with capacity available from the Firm parent on any Flow-Based paths held in common between the parent and the Redirect. ATC is needed on any Flow-Based path in which the Redirect impact exceeds the rights held on the parent reservation (i.e., the net impact of the Redirect is positive).
14. The ATC Evaluation is performed individually for each BPA Short-Term ATC Path and a composite result is determined. The composite result of the ATC Evaluation will pass for a given Short-Term TSR request if all of the BPA Short-Term ATC Paths meet any one of the following conditions for the time period requested:
 - a. An Original or Redirect request has zero impact or provides counterflow (negative impact).
 - b. An Original or Redirect request is deemed to have a *de minimis* impact under Test 1 (see Section D of this Business Practice).
 - c. An Original or Secondary Non-Firm Redirect request is deemed to have a non-*de minimis* impact under Test 1, but sufficient ATC is available to accommodate the impact.
 - d. A Firm Redirect request has a net impact less than or equal to zero because the impact of the Redirect is fully credited by the parent.
 - e. A Firm Redirect request is deemed non-*de minimis* under Test 1, but sufficient ATC is available to accommodate the incremental impact of the Redirect.

15. The composite result of the ATC Evaluation will fail for a given Short-Term TSR request if one of the following conditions is true for any of the BPA Short-Term ATC Paths for the time period requested:
 - a. An Original or Secondary Non-Firm Redirect request is deemed to have a non-*de minimis* impact under Test 1, and sufficient ATC is not available to accommodate the impact.
 - b. A Firm Redirect request is deemed to have a non-*de minimis* impact under Test 1, and sufficient ATC is not available to accommodate the incremental impact of the Redirect.
16. If the Network Congestion Evaluation passes, but the ATC Evaluation fails for any Short-Term TSR request, then an attempt will be made to meet the deficient ATC needs through the [Preemption of Short-Term Requests and Reservations Business Practice](#).
 - a. There is no assurance that the Preemption process will result in sufficient ATC to grant a full offer or even a partial offer of service.
17. A Short-Term TSR will be granted in full (ACCEPTED on OASIS) if:
 - a. The Network Congestion Evaluation passes for all BPA Short-Term ATC Paths; and
 - b. The ATC Evaluation passes for all BPA Short-Term ATC Paths; or
 - c. The ATC Evaluation fails for one or more BPA Short-Term ATC Paths, but sufficient ATC is made available through the Preemption process for a full offer.
18. A Short-Term TSR will be granted in part (COUNTEROFFER on OASIS) if:
 - a. The Network Congestion Evaluation passes for all BPA Short-Term ATC Paths; and
 - b. The ATC Evaluation fails for one or more BPA Short-Term ATC Paths, but sufficient ATC is available (through Preemption or otherwise) to grant at least partial service across all BPA Short-Term ATC Paths.
19. A Short-Term TSR will be denied (REFUSED on OASIS) and receive no further consideration if:
 - a. The Network Congestion Evaluation fails for any BPA Short-Term ATC Path; or
 - b. The ATC Evaluation fails for one or more BPA Short-Term ATC Paths and insufficient ATC is available (through Preemption or otherwise) to grant any service on at least one BPA Short-Term ATC Path.
20. When a Short-Term TSR is CONFIRMED:
 - a. The non-*de minimis* impacts of the TSR will be decremented from ATC for all BPA Short-Term ATC Paths per the [ATC Implementation Document](#); and
 - b. Any *de minimis* impacts will be ignored in the ATC calculations; but
 - c. Those *de minimis* impacts will be accumulated internally and reported in a running total by BPA Short-Term ATC Path and by time.

D. Short-Term *De Minimis* Impacts

1. All Short-Term TSRs that impact Flow-Based paths will be evaluated to determine if such transaction has a *de minimis* impact on one or more of the Flow-Based paths it impacts.
 - a. No *de minimis* tests are applied if the calculated impact on a Flow-Based path is less than or equal to zero, as no ATC is required for that Flow-Based path.
 - b. The same *de minimis* criteria is used for Short-Term ATC Evaluations (Section C) and Network Congestion Evaluations (Section E).
2. Test 1 is applied the same to Firm and Non-Firm Original requests, Firm Redirects, and Secondary Non-firm Redirects alike. When evaluating Redirects under *de minimis* Test 1, the impact of the Redirect is considered on its own without regard for the impact of the parent.
3. BPA will maintain a cumulative total of all *de minimis* impacts granted across each BPA Short-Term ATC Path. BPA may impose an upper limit on the cumulative total by Short-Term ATC Path following the documented Business Practice process.
4. Table 2 summarizes the *de minimis* test.
 - a. (Test 1) The positive impact on the Flow-Based path is less than or equal to 10 MW and less than or equal to 10 percent of the requested demand.

Table 2: Short-Term <i>De Minimis</i> Impact Criteria	
A Short-Term TSR must pass the following test to be considered <i>de minimis</i> .	
Definitions	$A = 0$ MW or positive Flow-Based path MW impact of new Original or Redirect request $PUF_A = (POR_{PTDF} - POD_{PTDF})$ of TSR A
Test 1	$A \leq 10$ MW AND $PUF_A \leq 0.100$

E. Network Congestion Evaluation

1. BPA may deny requests, including Redirects, for a specified affected Flow-Based path for hours in which BPA forecasts or experiences congestion where such requests have an impact requiring ATC on the affected Flow-Based path. Network Congestion Evaluation, called Transmission Loading Relief (TLR) Avoidance, enables BPA Transmission Services to restrict granting transmission requests to mitigate network congestion. When used, TLR Avoidance applies to all Short-Term products (Monthly, Weekly, Daily, and Hourly). TLR Avoidance can be enabled independently for Firm, Non-Firm, or enabled for both.
2. To minimize the number of new TSRs that are approved when it is anticipated that congestion on the network will cause the capacity on any Flow-Based path to exceed the limits, a network congestion event will be declared.
3. During a network congestion event, BPA Transmission Services will activate the Network Congestion Evaluation through a validation for the impacted Flow-Based path(s) and impacted hour(s) for new TSRs.

4. BPA Transmission Services will post the implementation and status of the validation for the impacted Flow-Based path(s) on OASIS at <http://www.oasis.oati.com>.
 - a. To view the posting, click on the Message selection under the Notices menu, Select BPAT in the Provider field and CURTAILMENT in the Category field and select the time period on the Message filter.
 - b. Customers can sign up to receive notification of the postings on the OASIS website at Misc, Alarm Preferences. Search for the Curtailment option under the Message Alarms grouping.
5. When the Network Congestion Evaluation is activated for Firm or Non-Firm:
 - a. ATC posted in SysData on OASIS for the impacted Flow-Based path(s) will be changed to zero during the impacted hour(s).
 - b. New TSRs on the network will be evaluated for ATC impacts on the impacted Flow-Based path(s) according to Section C of this Business Practice.
 - c. New TSRs that do not request MW over the impacted Flow-Based path(s) or during the impacted hour(s) will pass the Network Congestion Evaluation process.
 - d. New resales and new loss returns on the impacted Flow-Based path(s) during the impacted hour(s) will pass the Network Congestion Evaluation process.
 - e. New TSRs which have either a *de minimis* impact or a negative impact (counterflow) on the impacted Flow-Based path(s) during the impacted hour(s) will pass the Network Congestion Evaluation process.
 - f. New Firm Original TSRs that require ATC on the impacted Flow-Based path(s) during the impacted hour(s) will fail the Network Congestion Evaluation process.
 - g. New Non-Firm Original and Secondary Non-Firm Redirect TSRs that require ATC on the impacted Flow-Based path(s) during the impacted hour(s) will fail the Network Congestion Evaluation process.
 - h. New Firm Redirect TSRs will fail the Network Congestion Evaluation process if the Firm Redirect has a greater ATC impact than the Firm Parent TSR on the impacted Flow-Based path(s) during the impacted hour(s).
 - i. New TSRs that fail the Network Congestion Evaluation process will be REFUSED with an error message "TLR is unavailable" in the Seller Comments field.
 - i. New TSRs that fail the Network Congestion Evaluation process will not be evaluated for counteroffers.
 - ii. New Redirect TSRs will be evaluated on the redirected path only.
6. When the network congestion event has been resolved, the Network Congestion Evaluation will be turned off and new TSRs will be processed by normal procedures.