Business Practice #68: Allocation of Transfer Capability for Network Integration
Transmission Service

Posted: March 18, 2014
Effective: May 2, 2014
Revision No.: 0.0

Policy Reference

PacifiCorp’s Open Access Transmission Tariff (“OATT”) sets forth PacifiCorp’s planning requirements and tariff obligations to provide safe, reliable, adequate and efficient transmission service.

- OATT section 28.2 defines PacifiCorp’s responsibilities, which include the requirement to “plan, construct, operate and maintain the system in accordance with good utility practice.”

- OATT section 28.3 includes the requirement for PacifiCorp to provide “firm service over the system so that designated resources can be delivered to designated loads.”

- OATT section 31.6 defines the requirement for Network Customers to supply ten-year annual load and resource updates for inclusion in planning studies. These requirements are also included in Attachment K to PacifiCorp’s OATT, which describes PacifiCorp’s transmission planning process. The Company solicits this data annually in order to plan and develop the transmission system to meet future load and resource requirements for all Network Customers under the Company’s OATT and for other long-term firm transmission customers for whom PacifiCorp also has a contractual planning obligation. For purposes of this business practice, such customers shall be referred to as “Network Customers.”

- Attachment C to PacifiCorp’s OATT describes PacifiCorp’s process for allocating capacity to Existing Transmission Commitments (“ETC”), which include reasonably forecasted Native or Network Load growth. For purposes of this business practice, such allocations shall be referred to as “Network Allocations.” In order to define ETC over the planning horizon, PacifiCorp completes an annual study to determine appropriate Network Allocations for each of its Network Customers. Attachment C requires that Network Allocations be studied and adjusted annually based upon load and resource data submittals.

In addition to terms and provisions in PacifiCorp’s OATT which relate to Network Allocations, PacifiCorp also complies with rules of the Federal Energy Regulatory Commission (“FERC” or the “Commission”) governing Network Allocations, including Order No. 890 and its progeny.

Definitions
No definitions other than those defined herein and currently contained in the OATT are required for this business practice.

**Purpose**

The purpose of this business practice is to clarify the procedures and approach utilized by PacifiCorp when determining appropriate Network Allocations for Network Customers. This business practice describes PacifiCorp’s methodology and process for determining Network Allocations, including the collection of 10-year load and resource forecasts submitted by PacifiCorp’s customers, a description of how analysis and criteria are utilized to determine Network Allocations, and the timing of annual and interim updates.

**Practice**

1. **Customer Submission of 10-year Load and Resource Forecasts**

Network Customers are required to supply an annual ten-year load and resource forecast (“L&R Data”). Forecasting data must be reasonable and based upon historical load growth and patterns or other known and measurable data. L&R Data is collected annually in January and February and consists of the following forecast components:

- Peak non-coincident demands in MW by month;

- Energy loads (MWh) by month, including any behind the meter generation amounts separately identified from amounts of load the customer wishes PacifiCorp to plan to serve;

- Existing and planned seasonal generation output at each point-of-delivery (“POD”) or sink(s). Any identified future resources must have an identified POD, otherwise planning cannot adequately study and assess appropriate transmission needs. Any forecast for a future resource which does not have a POD identified will be disregarded for purposes of planning and Network Allocation;

- Demand Control Load Management defined as demand-side management that is under the direct control of the system operator which could include control of the electric supply to individual appliances or equipment on customer premises; and

- Interruptible Demand (Load) defined as demand that the end-use customer makes available to its Load-Serving Entity via contract or agreement for curtailment.

In addition to the above forecast components, PacifiCorp also gathers prior calendar year historical hourly average generation data for peak periods for both network and non-network resources.
II. Network Allocation Methodology

Network Allocations are determined annually based upon Network Customers’ L&R Data. For the Planning Horizon, Network Allocations on posted path(s) are used to represent forecasted annual growth in firm use necessary to meet customer requirements over the Planning Horizon. PacifiCorp seeks to align Network Allocations with capacity produced from planned transmission upgrades identified in the L&R Study. Network reservations are provided to Network Customers for load service scheduling needs based upon the outcome of the Network Allocation process. Specific path allocations are reviewed annually during the Network Allocation study and on a case-by-case basis as new network resources are approved pursuant to Section 29.2 of the OATT or if PacifiCorp receives a notification of other relevant changes (see related subsection below, entitled “Release of or Adjustment to Network Allocations”).

The methodology used to determine Network Allocations consists of a detailed spreadsheet analysis. The general assumptions for the analysis include:

- PacifiCorp uses the L&R Data submitted by the customer:
  - Variable resources, including wind generation, are assumed to be the output level submitted by the customer.
  - A sensitivity setting wind generation to zero output is applied to determine if alternative allocations for dispatchable network resources should be considered for firm load service when variable resources are not available.
  - Load data is grossed up for losses at PacifiCorp’s currently effective real power loss factor pursuant to Schedule 10 of the OATT. This represents a reduced level of losses which would be associated with moving resources across constrained paths on the transmission system.
  - For PacifiCorp’s Eastern Control Area ("PACE"), the Network Allocation methodology is applied from the furthest ends of the system and moves inward, as follows:
    - Wyoming East to Wyoming North
    - Wyoming East to Wyoming Central
    - Wyoming Central to Trona
    - Trona to Northern Utah
    - Southern Utah to Northern Utah
    - Northern Utah to Goshen
  - For PacifiCorp’s Western Control Area ("PACW"), due to the non-contiguous nature of the system, it is assumed that customers have the capability to wheel across third party transmission.
PacifiCorp’s transmission system is composed of multiple load and resource “bubbles,” which are sections of PacifiCorp’s service territory where there exists an unconstrained contiguous transmission system. A bubble may have loads and resources contained within it which have been designated by one or more Network Customers.  

PacifiCorp’s Network Allocation methodology begins by analyzing each bubble and compares each Network Customer’s respective designated network loads and/or resources within each bubble.

- The methodology assumes that the Network Customer will utilize its designated network resources (“DNRs”) in a bubble to serve any designated network load (“DNL”) in that same bubble.

- If the result of applying a Network Customer’s DNRs to its DNL within the bubble is either net unserved load or net excess generation, the analysis focuses on the next immediately adjacent bubble (or bubbles) to determine whether DNRs should be transferred between bubbles. If a transfer is appropriate, a Network Allocation shall be given if there is Available Transfer Capability (“ATC”). In some cases, the Network Customer already has a Network Allocation between bubbles and, in this event; the methodology will focus on reviewing the existing allocation to determine if it should be adjusted based on the current L&R Data. The methodology for transfers between bubbles is discussed in the next section.

**Inter-Bubble Transfers**

Network Allocations to facilitate transfers between bubbles are made for the following reasons:

**Net unserved load:** In the event that DNRs within a bubble are not sufficient to serve a Network Customer’s DNL in the bubble, any unserved load must be served by imports of DNRs from other bubbles. The analysis identifies the next immediately adjacent bubble (or bubbles) where the Network Customer has DNRs that are not needed to serve DNL within the adjacent bubble (or bubbles) and seeks to transfer those DNRs to the bubble with net unserved load. The following logic/steps are applied in this instance:

1. If DNL is greater than DNRs within the bubble, an import is needed.

2. Determine if current Network Allocation is sufficient for required import (which is equal to the net unserved DNL):
   a. If no additional Network allocation is needed:
      i. Identify actual Network Allocation need;
   b. Verify if decrease in Network Allocation is needed; and
      i. If so, identify decrease to the Network Allocation for the relevant path.
   c. Verify if increase in Network Allocation is needed;

---

1 A Network Customer can only designate its own loads or resources; it may not designate the loads or resources of another Network Customer.
Net excess generation: In the event DNRs are in excess of DNL within a bubble, any excess DNRs must be exported out of the bubble to the next immediately adjacent bubble(s) where the Network Customer has DNL. This process is continued until the excess DNRs are fully utilized to meet DNL. The following logic/steps are applied in this instance:

1. If DNRs are greater than DNL within the bubble, an export is needed.

2. Determine if current Network Allocation is sufficient for required export. Provided Network Customer has remaining net unserved DNL in other bubbles, export may include all excess DNRs, subject to other limitations of Network Allocations, as discussed further below.
   a. If no additional Network allocation is needed:
      i. Identify actual Network Allocation need;
   b. Verify if decrease in Network Allocation is needed;
      i. If so, identify decrease to the Network Allocation for the relevant path.
   c. Verify if increase in Network Allocation is needed;
      i. If so, identify increase to the Network Allocation for the relevant path.

The following additional principles are applied in executing upon the Network Allocation methodology:

- To assess import/export capability between load bubbles and across constrained transmission paths used to transfer DNRs to DNL, total transfer capability (“TTC”) is assessed for the period of greatest restriction (summer or winter period, as applicable) based upon known transmission constraints (e.g., seasonal ratings limitations or nomograms).
  o PacifiCorp assumes that planned transmission upgrades will be in-service upon the forecasted in-service date and reflects any changes in TTC accordingly.

- Assessment of ATC available for import/export capability between load bubbles takes into account capacity already allocated to transfer reliability margin (“TRM”), long-term firm transmission demand, including existing Network Allocations (subject to this NT Allocation methodology).
  o Capacity needed to deliver reserves under the Northwest Power Pool (“NWPP”) Reserve Sharing Program for PacifiCorp’s most severe single contingency (“MSSC”) is separately allocated using Transmission Reliability Margin (“TRM”). TRM which is not required to be released as non-firm ATC may be allocated for reserve sharing and can be scheduled during a reserve sharing event.
o TRM may also be used to allocate capacity for other permissible uses of TRM, including:
  - Aggregate Load forecast
  - Load distribution uncertainty
  - Forecast uncertainty in transmission system topology (including, but not limited to, forced or unplanned outages and maintenance outages)
  - Allowances for parallel path (loop flow) impacts
  - Allowances for simultaneous path interactions
  - Variations in generation dispatch (including, but not limited to, forced or unplanned outages, maintenance outages and location of future generation)
  - Short-term System Operator response (Operating Reserve actions)

o If ATC exists between bubbles and is needed to transfer DNRs to DNLs, a Network Allocation is given to the Network Customer. In some cases, the Network Customer already has a Network Allocation between bubbles and, in this event; the methodology will focus on reviewing that allocation to determine if appropriate based on current L&R Data. A decrease may be needed.

o In the event that there is not sufficient ATC between bubbles to allow transfer of DNRs to DNLs, a Network Allocation will be provided based on what is available. If there are multiple Network Customers that require a transfer of DNRs to DNLs and insufficient ATC to accommodate all of the transfers, the ATC will be allocated pro rata among the Network Customers based upon the reservations of the Network Customers on the path.

- Network Allocations are also provided for remote DNRs which must be transferred from transmission connections with adjacent control areas into PacifiCorp’s system to the bubble (or bubbles) where the Network Customer has DNL.

- PacifiCorp will not provide a Network Allocation for one DNR to multiple DNLs for the same time frame where the combined allocation exceeds the individual resource’s nameplate capacity.

- In the case of excess DNRs and provided Network Customer has remaining net unserved DNL in other bubbles, exports may include all excess DNRs, provided there is ATC. The NT Allocation methodology approach is to move excess DNRs from the furthest ends of the system towards the center or “hubs” where the excess DNRs will provide the greatest optionality to the customer for serving DNL, provided that Network Customer has remaining net unserved DNL in other bubbles. Once excess DNRs are moved to the center or “hub” of the system, all available DNRs will be applied to any remaining DNL. Any remaining excess
DNRs above what is needed to serve DNL will be stranded in the bubble to which the DNRs were moved. The Network Customer must either selectively dispatch available resources within the bubble or purchase point-to-point transmission service to deliver the surplus resource to another buyer or off-system.

- Any Network Allocation amounts determined by the study which are less than 1 MW will be rounded up to the nearest whole MW.

**Release of or Adjustment to Network Allocations**
As explained above, Network Allocations are reviewed annually during the Network Allocation study process and on a case-by-case basis as new DNRs are approved pursuant to Section 29.2 of the OATT or if PacifiCorp receives a notification of other relevant changes.

- **Termination of DNRs:** PacifiCorp will adjust Network Allocations for indefinite terminations of DNRs which are terminations in excess of six (6) months (see Business Practice #33, Termination of Network Resources).

- **Future DNRs:** PacifiCorp will adjust Network Allocations for resources made through the Network Allocation process for which the Network Customer has not made an application pursuant to Section 29.2 of the OATT within the following timeframes:
  - For resources that consist of purchased generation pursuant to an executed contract, within 60 days of when the resource is to be designated or otherwise made effective;
  - For resources that are owned (physical assets), within one (1) year of when the resource is to be designated or otherwise made effective or earlier if during the Network Allocation annual process PacifiCorp determines that construction timelines for the resource require adjustment to the Network Allocation.

- **Future Network Load:** PacifiCorp will adjust Network Allocations for loads made through the Network Allocation process for which the Network Customer has not made an application pursuant to Section 29.2 of the OATT within 60 days of when the load is to be served or earlier if during the Network Allocation annual process PacifiCorp determines that timelines for network load service require adjustment to the Network Allocation.

**III. Timing of Annual and Interim Updates**

**Annual Update**
PacifiCorp will revise the Network Allocation spreadsheet analysis and work with customers on an individual basis to make any necessary adjustments according to the following schedule.

---

PacifiCorp Business Practices 7
June 1: Revise Network Allocation Spreadsheet
July 1: All new AREFs submitted by Network Customer
September 1: New Network Allocations become effective

**Interim Update**
In certain instances, PacifiCorp will revise the Network Allocation spreadsheet analysis prior to the next Annual Update:

- If a customer submits a new load or resource request via the Transmission Service Request Queue that was not included on the L&R data and that becomes effective prior to the next Annual Update

- If there is an increase or decrease to Total Transfer Capability, Transfer Reliability Margin, and/or Capacity Benefit Margin on a posted path

PacifiCorp will work with customers individually to make interim adjustments as necessary.

**Contact for Assistance:** BusinessPractices@PacifiCorp.com

**Revision History**

<table>
<thead>
<tr>
<th>Version</th>
<th>Posted Date</th>
<th>Change Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>5/2/14</td>
<td>Finalized draft</td>
</tr>
<tr>
<td>DRAFT</td>
<td>3/18/14</td>
<td>Initial draft posted for public comment</td>
</tr>
</tbody>
</table>