

Section 5: Network Integration Transmission Service Accounting

Welcome to the *Network Integration Transmission Service Accounting* section of the **PJM Manual for Open Access Transmission Tariff Accounting**. In this section, you will find the following information:

- An overview of Network Integration Transmission Service Accounting (see “Network Integration Transmission Service Accounting Overview”).
- How charges for Network Integration Transmission Service are calculated for Network Customers (see “Network Integration Transmission Service Charges”).
- How credits for Network Integration Transmission Service are calculated TOs (see “Network Integration Transmission Service Credits”).

5.1 Network Integration Transmission Service Accounting Overview

The PJM provides accounting services for Network Integration Transmission Service. Network Integration Service allows Network Customers to integrate, economically dispatch, and regulate their current and planned Network Resources to serve their Network Load that is located in PJM and any additional load that is properly designated by the Network Customers. Network Customers taking Network Integration Service must obtain or provide Ancillary Services.

Network Customers pay the Transmission Provider for the following costs:

- monthly demand charge
- direct assignment facilities charge
- other supporting facilities charge
- Ancillary Services

Each Network Customer pays a monthly demand charge that is based on its daily Network Service Peak Load contribution (including losses) located with the Zone and the Network Integration Transmission Service rate for the Zone in which the Network Load is located.

The Network Service demand charges are then allocated to the appropriate TO based on its Annual Transmission Revenue Requirement. The Annual Transmission Revenue Requirement is the total annual cost to support capital and O&M expenses for the Transmission System for the purpose of Network Integration Transmission Service.

The current Network Integration Transmission Service Rate and the Annual Transmission Revenue Requirement for each Zone in PJM is posted on the PJM website under Markets & Operations/Market Settlements (<http://www.pjm.com/markets-and-operations/market-settlements/network-integration.aspx>). The PJM Non-Zone network rate is \$14,714/MW/year.

5.2 Network Integration Transmission Service Charges

A daily demand charge for network transmission service is calculated by the PJM for each Network Customer, including TOs, for the Zone(s) in which the Network Load of the Network Customer is located. It is based on the Network Customer's daily network service peak load contribution (including losses), coincident with the zonal peak for the 12 months ending October 31 of the preceding year for each zone in which load is served. For non-zone network service, the customer pays the non-zone rate based on their load at the hour of the PJM regional peak for the 12 months ending October 31 of the preceding year. The preceding year's zonal peak load contributions are effective each January 1.

For Network Customers taking Network Integration Transmission Service under state required retail access programs, peak load contributions may change daily, and are expressed in tenths of a MW. These daily peak load contributions are submitted to PJM by the associated Electric Distribution Companies (EDCs) 36 ~~business-day~~ hours prior to the day being billed, and may be corrected up to 12:00 PM Eastern Prevailing Time of the next business day following the Operating Day. These daily peak load contributions are then subtracted from the EDC's fixed peak load obligation to obtain the EDC's daily peak load contribution.

Network customers who are TOs (excluding those in the PPL, ComEd, Dayton, Duquesne, ATSI and DEOK zones) do not actually pay themselves for use of their own transmission facilities. Network demand charges are shown on TOs' invoices only to identify their cost responsibility, as ordered by FERC, and they are offset by an equal amount of network service credits.

PJM Actions:

- The PJM accounting process prepares a list of Network Customers.
- The PJM accounting process retrieves the following information:
- Network Customer's daily peak load contribution (including losses) by zone.
- Zonal network integration transmission service rates (\$/MW-year)
- The PJM accounting process calculates the daily demand charge for each Network Customer (\$) for each zone in which load is served as follows:

$$\text{Sum of} \left(\frac{\text{Zonal Daily Peak Load Contribution} * \text{Annual Zonal Network Integration Transmission Service Rate}}{365 \text{ days per year}} \right)$$

- The PJM accounting process calculates the demand charge for each Network Customer (\$) by summing the daily charges.
- PJM calculates the negative charge offsets for the network customers in the Allegheny Power zone based on their peak load contribution and the applicable tariff rebate rate.
- PJM calculates the low voltage charge for the network customers in the ATSI zone based on their peak load contribution in each ATSI utility service territory, the ATSI zone network integration transmission service rate and the applicable customer's low voltage billing factor for each service territory.

- PJM calculates the ComEd and AEP RTO Startup Cost Recovery charges for the network and firm point-to-point transmission customers serving load in the ComEd and AEP zones.

5.3 Network Integration Transmission Service Credits

The monthly transmission service demand charges for Network Customers are then allocated to the appropriate TO. This allocation appears as a credit on the PJM Open Access Tariff portion of the bill.

The following TOs do not actually pay themselves for use of their own transmission facilities: Allegheny Power, Atlantic Electric, AEP, BG&E, Delmarva, Dominion, JCP&L, MetEd, Penelec, PECO, PEPCO, PSEG, Rockland, and EKPC. Network demand credits on these TOs' invoices include their own demand charges which are only shown to identify their cost responsibility.

PJM Actions:

- The PJM accounting process prepares a list of Network Customers and TOs for each zone.
- The PJM accounting process retrieves the following information for each zone:
- annual Transmission Revenue Requirement for each TO (\$)
- demand charge for each Network and Firm Point-to-point load-serving Customer (\$)
- The PJM accounting process calculates the total Zone charges (\$) for each Zone by summing the demand charges for each Network Customer within the Zone.
- The PJM accounting process calculates the Zone revenue requirement for each Zone by summing Transmission Revenue Requirements for all TOs within that Zone.
- The PJM accounting process calculates the TOs share of the Transmission Network Service charges (\$) as follows:

$$\text{TO's Network Integration Service Credit} = \frac{\text{TO's Annual Transmission Revenue Requirement} * \text{Total Zone Charges}}{\text{Zone Revenue Requirement}}$$

- The PJM accounting process calculates the total low voltage charge for the ATSI Zone and credits the sum to ATSI.

Non-zone network revenues are allocated to PJM transmission owners based on transmission revenue requirement ratio shares, with the ComEd, AEP, and Dominion shares further allocated to their respective load-serving network and firm point-to-point customers based on demand charge ratios.

5.4 Direct Assignment Facilities Charges

If, based on a System Impact Study, the PJM determines that the Transmission System is not capable of providing Firm or Non-Firm Point-to-Point Transmission Service without:

- degrading or impairing the reliability of service to Native Load Customers, Network Customers, and Transmission Customers taking Firm Point-to-Point Transmission Service or

- interfering with PJM's ability to meet prior firm contractual commitments to others

The TO is obligated to expand or upgrade the Transmission System. The Transmission Customer must agree to compensate the TO(s) for any necessary transmission facility additions, consistent with FERC policy.

The TO determines the costs and provides them to PJM. The PJM then bills the appropriate Transmission Customer. These charges may also apply to existing network customers based on specifications in their network service agreements.

5.5 Other Supporting Facilities Charges

The Transmission Customer shall also pay charges based on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H of the PJM Open Access Transmission Tariff for the applicable Zone(s).

The Transmission Customer provides these billing quantities to PJM via their Network Integration Transmission Service agreement. PJM bills the appropriate Transmission Customer and provides the revenues to the appropriate Transmission Owner.

5.6 Business Rules for Nodal Pricing Settlement of Network Load

The definition of eligibility for nodal settlement shall be:

- Any LSE taking network transmission service from PJM via Schedule F-1 of the PJM Tariff and serving retail load that is connected to a single identifiable bus or set of buses with hourly metering such that the customer's load can be clearly separated from other load on the bus or buses.
- Other than those eligible in the preceding bullet, PJM will address eligibility on a case by case basis based on whether a bus or buses can be identified, whether the load can be separated from other LSE load on the bus or buses, and that hourly metering is in place.

The effective date of moves to nodal price load settlement for ALL eligible loads is:

- The available date for moves to nodal price load settlement for all loads requesting such will be June 1 of each year to coincide with the PJM planning year.
- Requests for nodal price load settlement must be provided by the LSE of record for the given load to PJM and the zonal EDC including the proposed applicable bus distribution no later than January 15th or at least 30 days prior to the start of PJM's annual ARR/FTR allocation process, whichever is later. By January 25th, or 10 days after the initial notice from LSE whichever is later, the zonal EDC must specify the appropriate node definition in PJM InSchedule for this load. The LSE must confirm the InSchedule(s) by February 1st, or 15 days after the initial notice whichever is later.

Requests from the LSE of record to move their load to nodal price settlement must be submitted in writing to the PJM Market Settlement Operations Department, and they must include the following information:

- Name of nodal priced load; name of the PJM billing account in which this load is to be represented; name of the zonal EDC; the peak load at the time of the PJM annual

peak from the previous year; and, the load bus identifier(s) with associated distribution percentages (totaling exactly 100%) in order for PJM to create the aggregate node definition.

All ARRs or FTRs granted in the annual direct allocation process must be configured to a nodal sink point for load that takes or has requested nodal settlement. This does not apply to any purchased FTRs.

Any network load receiving nodal settlement will be permanently settled at that node or nodes unless the physical interconnection infrastructure changes to require mapping the load to a different bus or group of buses. This rule shall be in force unless and until FERC approves any submitted tariff language changes by which a move from nodal to zonal settlement can occur.

Demand response offered into all of PJM's load response programs will be settled at the applicable load settlement aggregate point for the load that is reduced (zone, residual zone, or node bus or buses).

5.7 Business Rules for Changing Settlement Area Definitions of Network Load

This section is only applicable to network load served under Attachment F of the PJM OATT.

- A change in the definition of an existing energy settlement area for purposes of setting energy settlement prices is defined as:
- Splitting an existing area into two or more areas
- Combining two or more existing areas into a single area
- Creating aggregates of groups of buses within an existing area
- Any other activity that changes the defined area for which energy prices are aggregated for settlement purposes.

Exceptions:

- A. Implementing nodal settlement for an individual customer served under Schedule F-1 of the PJM OATT.
- B. Changes due to addition, replacement or retirement of transmission system components or metering facilities.

Note: Rules in the PJM OATT require that each settlement area must be a subset of a single transmission zone.

- PJM's policy is that once a more specific settlement area is defined for load settlement, that settlement area must remain in use unless subject to exception "B" as stated above. When implementing exception "B," PJM will require the most specific bus definition available after any physical change to be used in place of the previously used definition.

Notifications:

- At any time following the receipt of a request regarding a potential change to settlement area definitions, PJM may enter into informal discussions with member companies. PJM will make a confidential notification of any such discussions to the ex

officio members representing regulatory authorities (as defined in Section 8.2.2 of the PJM Operating Agreement) and state offices of the consumer advocate (as defined in Section 8.2.3 of the PJM Operating Agreement) of the PJM Members Committee.

- Formal notification by a PJM Member of intent to change energy settlement area compositions will be given to PJM no later than October 1 of the year before the new area composition is to become effective. PJM shall promptly notify all other Members of planned changes in energy settlement area definitions through notices to members of the Members Committee, Electricity Markets Committee and Market Implementation Committee and to the ex officio members representing regulatory authorities (as defined in Section 8.2.2 of the PJM Operating Agreement) and state offices of the consumer advocate (as defined in Section 8.2.3 of the PJM Operating Agreement) of these three standing Committees.
- No later than December 1, the affected EDC and Network Customer will fully identify the composition of the new area. PJM will promptly transmit this information to members of the Members Committee, Markets and Reliability Committee and Market Implementation Committee and to the ex officio members representing regulatory authorities (as defined in Section 8.2.2 of the PJM Operating Agreement) and state offices of the consumer advocate (as defined in Section 8.2.3 of the PJM Operating Agreement) of these three standing Committees.
- The LSE nodal peak load at the time of the PJM annual peak from the previous year must be submitted by January 15th or at least 30 days prior to the start of PJM's annual FTR/ARR allocation process, whichever is later.

Technical requirements:

- All changes in the definition of PJM energy settlement areas will become effective on the first day of a planning period --- June 1 of each year.
- Changes to metering, data transmission, settlement or other systems may be required to be made by PJM, the EDC(s) in the affected transmission zone, other Network Customers and the PJM member(s) requesting the change in settlement area definitions. Each involved party must commit to making needed additions, changes or upgrades in time to meet the June 1 implementation date for the new settlement area definitions. Accordingly, each party must either certify that it can make all necessary infrastructure changes in time to meet the June 1 implementation date for the new settlement area definitions, or must identify activities that cannot be implemented in time. Such declaration must be made to PJM for distribution to all parties by December 1 of the year before the expected June 1 implementation date. Certifications shall not be unreasonably withheld.
- Implementation will be delayed one year to the following June 1 if all notifications and technical certifications have not been received according to the above business rules.