

PJM Manual 27:

Open Access Transmission Tariff Accounting

Revision: 97

Effective Date: February 1, 2023

Prepared by
Market Settlements Development Department

PJM © 2022



Table of Contents

Approval	Error! Bookmark not defined.
Current Revision	Error! Bookmark not defined.
Introduction	Error! Bookmark not defined.
About PJM Manuals	Error! Bookmark not defined.
About This Manual.....	Error! Bookmark not defined.
Using This Manual.....	Error! Bookmark not defined.
Section 1: Tariff Accounting Overview	Error! Bookmark not defined.
1.1 Open Access Transmission Tariff Overview.....	Error! Bookmark not defined.
1.1.1 PJM.....	Error! Bookmark not defined.
1.1.2 Transmission Owners	Error! Bookmark not defined.
1.1.3 Transmission Customers	Error! Bookmark not defined.
1.2 Tariff Accounting Services.....	Error! Bookmark not defined.
Section 2: Scheduling, System Control and Dispatch Service	4
Accounting	4
2.1 Scheduling, System Control and Dispatch Accounting Overview	4
2.2 PJM Scheduling, System Control and Dispatch Service Charges	5
2.2.1 PJM Administrative Cost Rates	6
2.2.1.1 Schedule 9-1: Control Area Administration Service.....	6
2.2.1.2 Schedule 9-2: Financial Transmission Rights AdministrationService ..	6
2.2.1.3 Schedule 9-3: Market Support Service	7
2.2.1.4 Schedule 9-4: Capacity Resource and Obligation ManagementService.....	8
2.2.1.5 Schedule 9-PJMSettlement: PJM Settlement, Inc. AdministrativeServices	8
2.2.2 PJM Pass-Through Rates.....	10
2.2.2.1 Schedule 9-MMU: MMU Funding.....	10
2.2.2.2 Schedule 9-FERC: FERC Annual Charge Recover.....	12
2.2.2.3 Schedule 9-OPSI: OPSI Funding.....	12
2.2.2.4 Schedule 9-CAPS: CAPS Funding	12
2.2.2.5 Schedule 10-NERC: North American Electric ReliabilityCorporation Charge	13
2.2.2.6 Schedule 10-RFC: ReliabilityFirst Corporation Charge	13
2.3 TO Scheduling, System Control and Dispatch Service Charges.....	14
2.4 TO Scheduling, System Control and Dispatch Service Credits.....	15
2.5 Reconciliation for PJM Scheduling, System Control and Dispatch Service Charges..	15
2.6 Reconciliation for TO Scheduling, System Control and Dispatch Service Charges....	15
Section 3: Reactive Supply and Voltage Control from Generation Error!	
Bookmark not defined.	
and Other Sources Service Accounting ...	Error! Bookmark not defined.

3.1 Reactive Supply and Voltage Control Service Accounting Overview **Error! Bookmark not defined.**

3.2 Reactive Supply and Voltage Control Credits **Error! Bookmark not defined.**

3.3 Reactive Supply and Voltage Control Charges **Error! Bookmark not defined.**

Section 4: Energy Imbalance Service Accounting **Error! Bookmark not defined.**

4.1 Energy Imbalance Service Accounting Overview **Error! Bookmark not defined.**

Section 5: Network Integration Transmission Service Accounting **Error! Bookmark not defined.**

5.1 Network Integration Transmission Service Accounting Overview **Error! Bookmark not defined.**

5.2 Network Integration Transmission Service Charges **Error! Bookmark not defined.**

5.3 Network Integration Transmission Service Credits **Error! Bookmark not defined.**

5.4 Direct Assignment Facilities Charges **Error! Bookmark not defined.**

5.5 Other Supporting Facilities Charges **Error! Bookmark not defined.**

5.6 Business Rules for Nodal Pricing Settlement of Network Load **Error! Bookmark not defined.**

5.7 Business Rules for Changing Settlement Area Definitions of Network Load **Error! Bookmark not defined.**

Section 6: Point-to-Point Transmission Service Accounting **Error! Bookmark not defined.**

6.1 Point-to-Point Transmission Service Accounting Overview **Error! Bookmark not defined.**

6.1.1 Firm Point-to-Point Transmission Service **Error! Bookmark not defined.**

6.1.2 Non-Firm Point-to-Point Transmission Service **Error! Bookmark not defined.**

6.2 Point-to-Point Transmission Service Charges **Error! Bookmark not defined.**

6.2.1 Firm Point-to-Point Transmission Service Charges **Error! Bookmark not defined.**

6.2.2 Adjustment to Firm Daily Point-to-Point Transmission Service Charges **Error! Bookmark not defined.**

6.2.3 Non-Firm Transmission Service Charges **Error! Bookmark not defined.**

6.2.4 Monthly Adjustment to Firm Point to Point Transmission Service Charges **Error! Bookmark not defined.**

6.3 Point-to-Point Transmission Service Credits **Error! Bookmark not defined.**

6.3.1 Firm Transmission Service Credits **Error! Bookmark not defined.**

6.3.2 Non-Firm Transmission Service Credits **Error! Bookmark not defined.**

Section 7: Black Start Service Accounting **Error! Bookmark not defined.**

7.1 Black Start Service Accounting Overview **Error! Bookmark not defined.**

7.2 Black Start Service Credits **Error! Bookmark not defined.**

7.3 Black Start Service Charges **Error! Bookmark not defined.**

Section 8: Energy Storage Resource Charging Energy **Error! Bookmark not defined.**

8.1 Overview of Energy Storage Resource Charging Energy **Error! Bookmark not defined.**

8.2 Charges for Direct Charging Energy **Error! Bookmark not defined.**

8.3 Charges for Load Serving Charging Energy..... **Error! Bookmark not defined.**

8.4 Calculating Charges for Non-Dispatched Charging Energy **Error! Bookmark not defined.**

Section 9: Billing **Error! Bookmark not defined.**

 9.1 Billing Process Overview **Error! Bookmark not defined.**

Revision History **Error! Bookmark not defined.**

Section 2: Scheduling, System Control and Dispatch Service Accounting

Welcome to the Scheduling, System Control and Dispatch Service Accounting section of the **PJM Manual for Open Access Transmission Tariff Accounting**. In this section, you will find the following information:

- A description of the scheduling, system control and dispatch service accounting (see “Scheduling, System Control and Dispatch Accounting Overview”).
- How the PJM scheduling, system control and dispatch service charges are calculated for PJM Members (see “PJM Scheduling, System Control and Dispatch Service Charges”).
- How the TO scheduling, system control and dispatch service charges are calculated for Transmission Customers (see “TO Scheduling, System Control and Dispatch Service Charges”).
- How the TO scheduling, system control and dispatch service credits are calculated for TOs (see “TO Scheduling, System Control and Dispatch Service Credits”).
- How the PJM scheduling, system control and dispatch service charge reconciliations are calculated for Network Transmission Customers (see “Reconciliation for PJM Scheduling, System Control and Dispatch Service Charges”).
- How the TO scheduling, system control and dispatch service charge reconciliations are calculated for Network Transmission Customers (see “Reconciliation for TO Scheduling, System Control and Dispatch Service Charges”).

2.1 Scheduling, System Control and Dispatch Accounting Overview

PJM scheduling, system control and dispatch service is required to schedule the movement of power through, out of, or into PJM. This service can only be provided by the operator of the PJM Region in which the transmission facilities that are used for Transmission Service are located. PJM Members, therefore, must purchase this service from PJM.

PJM scheduling, system control and dispatch service charges (“Schedule 9”) are based on the costs of operating PJM. This includes the costs associated with implementing the PJM Operating Agreement, administering the PJM Open Access Transmission Tariff, and implementing the Reliability Assurance Agreements. The charges for PJM scheduling, system control and dispatch service are allocated on an unbundled basis. These costs include:

- Salary and expenses of personnel
- Facilities
- Committee activities and investigations
- Communication facilities
- Principal and/or depreciation expense

- Interest expense and financing costs
- Costs accrued for PJM Settlement, Inc.

PJM scheduling, system control and dispatch service charges (“Schedule 9” or “Schedule 10”) includes a service that PJM Settlement, Inc. provides through billing and collection services for certain costs associated with specific entities. These pass-through costs are associated with the following entities:

- Federal Energy Regulatory Commission (FERC)
- Organization of PJM States, Inc. (OPSI)
- Consumer Advocates of PJM States, Inc. (CAPS)
- Market Monitoring Unit (MMU)
- North American Electric Reliability Corporation (NERC)
- ReliabilityFirst Corporation (FRC)

TO scheduling, system control and dispatch service charges (Schedule 1A”) are based upon certain control center facilities of the TOs also are required to provide this service. These services are purchased by Transmission Customers. The charges collected are used to reimburse the TOs for their monthly control center expenses.

2.2 PJM Scheduling, System Control and Dispatch Service Charges

This section describes the process of calculating the PJM scheduling, system control and dispatch service charges. These charges either represent the cost of operating PJM Interconnection, L.L.C. or the cost of specific entities requesting PJM Settlement, Inc. to collect their costs on behalf of them. The PJM scheduling, system control and dispatch service charge in any month to any PJM Member is the sum of the charges calculated for that Member under the following Service Categories or Schedules:

- Schedule 9-1: Control Area Administration Service
- Schedule 9-2: Financial Transmission Rights Administration Service
- Schedule 9-3: Market Support Service
- Schedule 9-4: Capacity Resource and Obligation Management Service
- Schedule 9-PJMSettlement: Costs of PJM Settlement, Inc.
- Schedule 9-MMU: MMU Funding
- Schedule 9-FERC: FERC Annual Charge Recovery
- Schedule 9-OPSI: OPSI Funding
- Schedule 9-CAPS: CAPS Funding
- Schedule 10-NERC: NERC Charges

- Schedule 10-RFC: RFC Charges

2.2.1 PJM Administrative Cost Rates

The Charges associated with the PJM administrative cost rates for PJM Scheduling, system control, and dispatch service are allocated on an unbundled basis in accordance with Schedule 9: “PJM Interconnection, L.L.C. Administrative Services” of the PJM Open Access Transmission Tariff. For each Service Category, PJM has established criteria by which to measure each PJM Members’ usage of that service. Each PJM Member’s Service Category charge is calculated by multiplying that Member’s monthly usage of that Service by a rate (in \$ per unit of usage) for that Service Category in that month. All Service Category rates are determined by PJM monthly, based upon the costs incurred in that month for each Service Category and the formulas described for each Service Category. Adjustments to the rate and charge may be needed if an update is required in the formula. Monthly reconciliation to the rate and charge will occur as further described in Section 2.5 of this PJM Manual.

2.2.1.1 Schedule 9-1: Control Area Administration Service

- This Service Category comprises all of the activities of PJM associated with preserving the reliability of the PJM Region and administering Point-to-Point Transmission Service and Network Integration Transmission Service.
- Usage of this service is defined as the sum of the Transmission Customer’s actual hourly transmission use during the month, and is measured in MWh. Transmission use includes network customers’ load plus losses and point-to-point customers’ scheduled energy transactions.
- The Control Area Administration Service Rate is updated monthly by PJM, based on costs and transmission use for that month.
- Each Transmission Customer’s Control Area Administration Service charge is equal to that customer’s total transmission use for the month multiplied by the applicable Control Area Administration Service Rate.

2.2.1.2 Schedule 9-2: Financial Transmission Rights Administration Service

- This Service Category comprises all of the activities of PJM associated with administering Financial Transmission Rights (FTRs).
- Usage of this service is comprised of two components. Component one is defined as the sum of the FTR holder’s hourly FTR MWs for each hour of the month that the FTR is in effect, regardless of the dollar value of the FTR. Component two is defined as the number of hours associated with all bids to buy FTR Obligations submitted by the Market Participant plus five times the number of hours associated with all bids to buy FTR Options submitted by each market participant for a month. Component two is applicable to all bids submitted into any round of a Long-term or Annual FTR auction (billed monthly) and to all bids submitted into the applicable monthly FTR auctions.

- The Financial Transmission Rights Administration Service Rate component one is updated monthly by PJM, based on costs and FTR MWh for that month. The Financial Transmission Rights Administration Service Rate component two is updated monthly by PJM, based on costs and FTR bid/offer hours for that month.
- Each FTR holder's Financial Transmission Rights Administration Service charge is the sum of component one and component two. Component one is equal to that Member's total FTR MWh for the month multiplied by the Financial Transmission Rights Administration Service Rate component one. Component two is equal to the number of hours in all bids to buy FTR Obligations submitted by the Market Participant for that month plus five times the number of hours in all bids to buy FTR Options submitted by each Market Participant for a month multiplied by the Financial Transmission Rights Administration Service Rate component two.

2.2.1.3 Schedule 9-3: Market Support Service

- This Service Category comprises all of the activities of PJM associated with supporting the operation of the PJM Interchange Energy Market and related functions.
- Component one usage has three different areas in where usage is defined.
 - o Usage for Transmission Customers is defined as the sum of the Network Transmission Customer's hourly energy delivered to serve load (including losses) in PJM plus the Point-to-Point Transmission Customer's hourly energy exported out of PJM (excluding wheeling transactions) for all hours of the month.
 - o Usage for Generation Providers is defined as the sum of the hourly energy input into the PJM Transmission System from generation facilities in PJM, plus the Network Transmission Customer's hourly energy imported into PJM, plus the Point-to-Point Transmission Customer's hourly energy imported into PJM (excluding wheeling transactions), plus the Market Seller's hourly energy delivered for import to the boundaries of PJM for sale to the PJM Spot Market for all hours of the month.
 - o Usage for Market Participants that submit offers to sell or bids to buy energy in the PJM Interchange Energy Market is defined as the total quantity in MWh of all cleared Increment offers, Decrement bids and "up-to" congestion bids during the month.
- Component two usage is defined as the number of bid/offer segments submitted by the market participant.
 - o A bid/offer segment equals each price/quantity pair submitted into the Day-ahead Energy Market.
 - o Segments are computed hourly for each fixed or price sensitive Demand bid, each Increment offer, and each Decrement bid.
 - o Segments are computed daily for each generation offer (including offers submitted into the generation rebidding period).

- o Bid/offer segments used to schedule day-ahead Point-to-Point energy transactions into, out of, or through PJM, including "up-to" congestion bids and pseudo-tie bids, may be in single hour or multi-hour periods, provided that the submitted MW value remains unchanged for the duration of the period and that the period does not cross from one day into another.
- The Market Support Service Rate component one is updated monthly by PJM, based on costs and energy MWh for that month. The Market Support Service Rate component two is updated monthly by PJM, based on costs and the number of bid/offers for that month.
 - Each PJM Market Participant's Market Support Service charge is the sum of component one and component two. Component one is equal to a Market Participant's total Transmission Customer MWh usage for the month plus a Market Participant's total Generation Provider MWh usage for the month plus a Market Participant's total cleared bid/offer MWh for the month multiplied by the Market Support Service Rate component one. Component two is equal to a Market Participant's all bid/offer segments submitted into the Day-ahead Energy Market (including offers submitted into the generation rebidding period) for the month multiplied by the Market Support Service Rate component two.

2.2.1.4 Schedule 9-4: Capacity Resource and Obligation Management Service

- This Service Category comprises the activities of PJM associated with (a) assuring that members have arranged for sufficient generating capacity to meet their capacity obligations under the PJM Open Access Transmission Tariff (OATT), Attachment DD, (b) processing Network Integration Transmission Service, (c) administering the PJM capacity markets, and (d) administering and providing technical support for the Reliability Assurance Agreement (RAA). These activities are performed through the PJM Capacity Exchange internet-based customer interactive tool.
- Usage of this service is defined as the sum of the Load-Serving Entity's monthly Accounted-for Obligations during the month (including FRRs) and the Capacity Resource Owner's Unforced Capacity measured in MWd.
- The Capacity Resource and Obligation Management Service Rate is updated monthly by PJM, based on costs and usage for that month.
- Each PJM Load Serving Entity (LSE) Capacity Resource and Obligation Management Service charge is equal to that PJM LSE's total Daily Unforced Capacity Obligation for the month multiplied by that month's Capacity Resource and Obligation Management Service Rate. Each PJM Capacity Resource owner, included FRR Capacity Plan, Capacity Resource and Obligation Management Service charge is equal to that PJM Capacity Resource owner's share of Unforced Capacity MWs for the month multiplied by that month's Capacity Resource and Obligation Management Service Rate

2.2.1.5 Schedule 9-PJMSettlement: PJM Settlement, Inc. Administrative Services

- This schedule recovers the expenses of PJM Settlement, Inc. commencing with the establishment of PJM Settlement, Inc., through two components. Sixty-eight percent of these expenses are recovered through component one of Schedule 9-PJMSettlement,

while thirty-two percent of these expenses are recovered through component two of Schedule 9-PJM Settlement.

- Component one usage is defined by the number of invoices that PJM Settlement, Inc. issues in each month, based on the date on which the invoice was issued rather than the month in which the settled activity occurred. An invoice will be excluded from this invoice count if the only activity it contains is a Schedule 9-PJM Settlement charge.
- Component two usage is based on market activity in six different areas. The usage for these areas is defined by the same calculations specified above in Schedule 9-1, Schedule 9-2, Schedule 9-3 and Schedule 9-4.
 - o Schedule 9-1 = reference section 2.2.1.1 of this PJM Manual
 - o Schedule 9-2, Component 1 = reference section 2.2.1.2 of this PJM Manual
 - o Schedule 9-2, Component 2 = reference section 2.2.1.2 of this PJM Manual
 - o Schedule 9-3, Component 1 = reference section 2.2.1.3 of this PJM Manual
 - o Schedule 9-3, Component 2 = reference section 2.2.1.3 of this PJM Manual
 - o Schedule 9-4 = reference section 2.2.1.4 of this PJM Manual
- The PJM Settlement, Inc. Administrative Service Rates are updated monthly by PJM, based on costs. Separate rates exist for each component and sub-component.
 - o The component one rate is equal to costs multiplied by 0.68, divided by total invoices issued for that month.
 - o The component two rate is based on costs multiplied by 0.32 and further divided into sub-components as follows:
 - 9-PSI: Schedule 9-1 Rate = $(\text{Cost} * 0.32 * 0.25) / \text{Total Schedule 9-1 usage}$
 - 9-PSI: Schedule 9-2, Component 1 Rate = $(\text{Cost} * 0.32 * 0.25 * 0.6) / \text{Total Schedule 9-2, Component 1 usage}$
 - 9-PSI: Schedule 9-2, Component 2 Rate = $(\text{Cost} * 0.32 * 0.25 * 0.4) / \text{Total Schedule 9-2, Component 2 usage}$
 - 9-PSI: Schedule 9-3, Component 1 Rate = $(\text{Cost} * 0.32 * 0.25 * 0.987) / \text{Total Schedule 9-3, Component 1 usage}$
 - 9-PSI: Schedule 9-3, Component 2 Rate = $(\text{Cost} * 0.32 * 0.25 * 0.013) / \text{Total Schedule 9-3, Component 2 Usage}$
 - 9-PSI: Schedule 9-4 Rate = $(\text{Cost} * 0.32 * 0.25) / \text{Total Schedule 9-4 Usage}$

- Each customer's PJM Settlement, Inc. Administrative Service charge is the sum of the charges for component one and component two. The component one charge is equal to the component one rate times the Market Participant's component one usage for that month. The component two charge is the sum of the following:
 - o Schedule 9-1 = Transmission Customer's total Schedule 9-1 usage for the month multiplied by the , 9-PSI: Schedule 9-1 rate
 - o Schedule 9-2, Component 1 = Market Participant's total Schedule 9-2, component 1 usage for the month multiplied by the 9-PSI: Schedule 9-2, Component 1 rate
 - o Schedule 9-2, Component 2 = Market Participant's total Schedule 9-2, Component 2 usage for the month multiplied by the 9-PSI: Schedule 9-2, Component 2 rate.
 - o Schedule 9-3, Component 1 = Market Participant's total Schedule 9-3, Component 1 usage for the month multiplied by the 9-PSI: Schedule 9-3, Component 1 rate.
 - o Schedule 9-3, Component 2 = Market Participant's total Schedule 9-3, Component 2 usage for the month multiplied by the 9-PSI: Schedule 9-3, Component 2 rate
 - o Schedule 9-4 = Market Participant's total Schedule 9-4 usage for the month multiplied by the 9-PSI: Schedule 9-4 rate

2.2.2 PJM Pass-Through Rates

The charges associated with the PJM pass-through rates of PJM scheduling, system control, and dispatch service are allocated on an unbundled basis in accordance with the specific Schedules of the PJM Open Access Transmission Tariff (OATT). Each Schedule has a rate calculated by PJM annually based on costs provided by each specific entity to PJM. Monthly reconciliation to the rate and charge will occur as further described in Section 2.5 of this PJM Manual.

2.2.2.1 Schedule 9-MMU: MMU Funding

- The Market Monitoring Unit (MMU) provides functions, as specified under the Open Access Transmission Tariff (OATT), Attachment M. PJM recovers those costs associated with the MMU providing those functions to the PJM region for the MMU.
- Component one usage has three different areas in where usage is defined.
 - o Usage for Transmission Customers is defined as the sum of the estimated Network Transmission Customer's hourly energy delivered to serve load (including losses) in

- PJM plus the Point-to-Point Transmission Customer's estimated hourly energy exported out of PJM (excluding wheeling transactions) for all hours of the month.
- o Usage for Generation Providers is defined as the sum of the estimated hourly energy input into the PJM Transmission System from generation facilities in PJM, plus the Network Transmission Customer's estimated hourly energy imported into PJM, plus the Point-to-Point Transmission Customer's estimated hourly energy imported into PJM (excluding wheeling transactions), plus the Market Seller's estimated hourly energy delivered for import to the boundaries of PJM for sale to the PJM Spot Market for all hours of the month.
 - o Usage for Market Participants is defined as the sum of the estimated offers to sell or bids to buy energy in the PJM Interchange Energy Market, which is defined as the total quantity in MWh of all cleared Increment offers, Decrement bids and "up-to" congestion bids during the month.
 - Component two usage is defined as the number of bid/offer segments submitted by the market participant.
 - o A bid/offer segment equals each price/quantity pair submitted into the Day-ahead Energy Market.
 - o Segments are computed hourly for each fixed or price sensitive Demand bid, each Increment offer, and each Decrement bid.
 - o Segments are computed daily for each generation offer (including offers submitted into the generation rebidding period).
 - o Bid/offer segments used to schedule day-ahead Point-to-Point energy transactions into, out of, or through PJM, including "up-to" congestion bids and pseudo-tie bids, may be in single hour or multi-hour periods, provided that the submitted MW value remains unchanged for the duration of the period and that the period does not cross from one day into another.
 - The MMU Service Rate component one is updated annually by PJM, based on MMU's estimated annual costs, which includes prior year's changes, multiplied by 0.987 and estimated energy MWhs for the year. The MMU Service Rate component two is updated annually by PJM, based on MMU's estimated annual costs, which includes prior year's changes, multiplied by 0.013 and estimated bid/offer segments for the year.
 - Each PJM Market Participant's MMU Service charge is the sum of component one and component two. Component one is equal to a Market Participant's total Transmission Customer MWh usage for the month plus a Market Participant's total Generation Provider MWh usage for the month plus a Market Participant's total cleared bid/offer MWh for the month multiplied by the MMU Service Rate component one. Component two is equal to a Market Participant's all bid/offer segments submitted into the Dayahead Energy Market (including offers submitted into the generation rebidding period) for the month multiplied by the MMU Service Rate component two.

2.2.2.2 Schedule 9-FERC: FERC Annual Charge Recover

- PJM as a public utility and the Transmission Provider under the PJM Open Access Transmission Tariff is subject to annual charges assessed by FERC in accordance with Part 382 of FERC's regulations..
- Usage for this schedule is defined as the estimated annual total hourly transmission usage under Point-to-Point Transmission Service or Network Integration Transmission Service by all customers.
- The FERC Charge Recovery Rate is updated annually by PJM, based upon FERC's estimated annual recovery cost plus any prior year changes and estimated transmission use.
- Each Transmission Customer's FERC Annual Charge Recovery charge is equal to the customer's total quantity in MWh of energy delivered during the month using Point-to-Point Transmission Service (scheduled energy transactions) and Network Integration Transmission Service (load plus losses) multiplied by the FERC Charge Recovery Rate.

2.2.2.3 Schedule 9-OPSI: OPSI Funding

- Organization of PJM States, Inc. (OPSI) submits its annual budget for the next calendar year to PJM no later than September 30. PJM posts the final Commission approved budget and rate by October 31.
- Usage for this schedule is defined as the estimated annual total hourly transmission usage under Point-to-Point Transmission Service or Network Integration Transmission Service by all customers.

The OPSI Funding Rate is updated annually by PJM, based upon OPSI's estimated annual budget, which includes prior year changes, and estimate transmission use.

- Each Transmission Customer's OPSI Funding Charge is equal to the customer's total quantity in MWh of energy delivered during the month using Point-to-Point Transmission Service (scheduled energy transactions) and Network Integration Transmission Service (load plus losses) multiplied by the OPSI Funding Rate.

2.2.2.4 Schedule 9-CAPS: CAPS Funding

- Consumer Advocates of PJM States, Inc. (CAPS) submits its annual budget for the next calendar year to PJM no later than September 30. PJM posts the final Commission approved budget and rate by October 31.
- Usage for this schedule is defined as the estimated annual total hourly transmission usage under Point-to-Point Transmission Service or Network Integration Transmission Service by all customers.
- The CAPS Funding Rate is updated annually by PJM, based upon CAPS's estimated annual budget, which includes prior year changes, and estimate transmission use.

- Each Transmission Customer's CAPS Funding Charge is equal to the customer's total quantity in MWh of energy delivered during the month using Point-to-Point Transmission Service (scheduled energy transactions) and Network Integration Transmission Service (load plus losses) multiplied by the CAPS Funding Rate.

2.2.2.5 Schedule 10-NERC: North American Electric Reliability Corporation Charge

- North American Electric Reliability Corporation (NERC) submits its annual budget for the next calendar year to PJM no later than September 30. PJM posts the final Commission approved budget and rate by October 31.
- Usage for this schedule is defined as the estimated annual total hourly transmission usage under Point-to-Point Transmission Service or Network Integration Transmission Service by all customers excluding the Dominion and EKPC Zones.
- The NERC Charge Rate is updated annually by PJM, based upon NERC's estimated annual costs of operations and estimate transmission use, excluding Dominion and EKPC Zones.
- Each Transmission Customer's NERC charge is equal to the customer's total quantity of MWh of energy delivered during the month using Point-to-Point Transmission Service (scheduled energy transactions) excluding the Dominion and EKPC Zones and Network Integration Transmission Service (load plus losses), excluding the Dominion and EKPC Zones, multiplied by the NERC Charge Rate. Any over or under collection of NERC's actual costs of operations for a given calendar year will be trued up via a billing adjustment each December of that year.

2.2.2.6 Schedule 10-RFC: ReliabilityFirst Corporation Charge

- ReliabilityFirst Corporation (RFC) submits its annual budget for the next calendar year to PJM no later than September 30. PJM posts the final Commission approved budget and rate by October 31.
 - Usage for this schedule is defined as the estimated annual total hourly transmission usage under Point-to-Point Transmission Service or Network Integration Transmission Service by all customers excluding the Dominion and EKPC Zones.
- The RFC Charge Rate is updated annually by PJM, based upon RFC's estimated annual costs of operations and estimate transmission use, excluding Dominion and EKPC Zones.
- Each Transmission Customer's NERC charge is equal to the customer's total quantity of MWh of energy delivered during the month using Point-to-Point Transmission Service (scheduled energy transaction), excluding the Dominion and EKPC Zones and Network Integration Transmission Service (load plus losses), excluding Dominion and EKPC Zones, multiplied by the RFC Charge Rate. Any over or under collection of RFC's actual costs for a given calendar year will be trued up via a billing adjustment each December of that year.

2.3 TO Scheduling, System Control and Dispatch Service Charges

This section describes the process of calculating the TO scheduling, system control, and dispatch service charge. Each Transmission Customer's charge is calculated by determining the Transmission Customer's hourly zone and non-zone transmission use and using these values to determine the Transmission Customer's monthly zone and non-zone transmission use. Zone transmission use is a Transmission Customer's Network or Point-to-Point load (including losses) within a PJM transmission zone. Non-zone transmission use is a Transmission Customer's non-zone Network load and its point-to-point energy transactions not directly serving load in PJM. The monthly values of all Transmission Customers are summed both by transmission zone and for the total PJM Region.

Transmission Customers with zone transmission use are charged by multiplying their transmission use for each zone by the applicable zonal rate in Schedule 1A of the Tariff. Transmission Customers with non-zone transmission use are charged by multiplying their nonzone transmission use by the pool-wide rate in Schedule 1A of the Tariff.

PJM Actions

- The PJM accounting process prepares a list of Transmission Customers.
- The PJM accounting staff collects each TO's zonal rate (\$/MWh).
- The PJM accounting staff collects the non-zonal rate (\$/MWh).
- The PJM accounting process retrieves the hourly list of point-to-point energy transactions for each Transmission Customer (MWh).
- The PJM accounting process calculates each Network Transmission Customer's monthly zone transmission use (MWh) by summing the Transmission Customer's entire hourly Network load (including losses) for each zone.
- The PJM accounting process calculates each Transmission Customer's monthly nonzone transmission use (MWh) by summing all of the Transmission Customer's hourly point-to-point energy transactions and non-zone Network load.

The PJM accounting process calculates each Transmission Customer's TO monthly charge for use in each zone as follows:

$TO \text{ Monthly Charge for Zone Use} = \text{Transmission Customer's Zone Transmission Use} * \text{Zonal Rate}$

- The PJM accounting process calculates each Transmission Customer's TO monthly charge for non-zone use as follows:

$TO \text{ Monthly Charge for Non-Zone Use} = \text{Non-Zone Rate} * \text{Total Non-Zone Transmission Use}$

- The PJM accounting process calculates each Transmission Customer's total monthly TO scheduling, system control and dispatch service charge by summing its monthly charges for all zone and non-zone use.

2.4 TO Scheduling, System Control and Dispatch Service Credits

Each TO receives a monthly TO scheduling, system control, and dispatch service credit equal to charges collected from Transmission Customers serving load in that TOs zone plus the TOs share of the charges collected from Transmission Customers serving non-zone load (e.g., non-zone network and point-to-point transmission customers). The TOs share of the charges collected from Transmission Customers serving non-zone load is determined according to the share percentage filed in Schedule 1A of the PJM Open Access Transmission Tariff.

2.5 Reconciliation for PJM Scheduling, System Control and Dispatch Service Charges

PJM will calculate reconciled PJM Scheduling, System Control and Dispatch Service charges (Schedules 9 and Schedule 10) for EDCs and Retail Load Aggregators (a.k.a. Electric Generation Suppliers) for past months' billings that were based on load ratio shares. The reconciliation kWh data must be supplied to PJM by the EDCs, and represents the difference between the scheduled Retail Load Responsibility InSchedules (in MWh) and the "actual" usage based on metered data. This hourly kWh data must be reported separately for each applicable InSchedule contract. PJM calculates the PJM Scheduling, System Control and Dispatch Service charge reconciliations by multiplying the kWh data (not de-rated for transmission losses) by the applicable Schedule 9 and Schedule 10 billing determinants for that month.

The reconciliation of the PJM Scheduling, System Control and Dispatch Service charge uses two billing determinants: the Control Area Administration Service billing determinant and the Transmission Customers' Market Support Service billing determinant. The Control Area Administration Service billing determinant is equal to the Monthly Control Area Administration Service Rate that was calculated in accordance with Schedule 9-1 of the PJM Open Access Transmission Tariff for the month being reconciled. The Transmission Customers' Market Support Service billing determinant is equal to the Market Support Service Rate for Transmission Customers that was calculated in accordance with Schedule 9-3 of the PJM Open Access Transmission Tariff for the month being reconciled. Schedule 9-1 and Schedule 9-3 are sub-component in calculating Schedule 9-PJMSettlement, therefore, reconciliation to these sub-components within Schedule 9-PJMSettlement will occur at the same timeframe. Note that the reconciliation for PJM Scheduling, System Control and Dispatch Service charges for a month may be either a positive or a negative value.

The monthly Schedule 9-MMU, 9-FERC, 9-OPSI, 9-CAPS, 10-NERC, and 10-RFC billing determinants are the applicable \$/MWh rates for those services. Note that the reconciliation charges for a month may be either a positive or a negative value.

2.6 Reconciliation for TO Scheduling, System Control and Dispatch Service Charges

PJM will calculate reconciled TO Scheduling, System Control and Dispatch Service charges (Schedules 1A) for EDCs and Retail Load Aggregators (a.k.a. Electric Generation Suppliers) for

past months' billings that were based on load ratio shares. The reconciliation kWh data must be supplied to PJM by the EDCs, and represents the difference between the scheduled Retail Load Responsibility InSchedules (in MWh) and the "actual" usage based on metered data. This hourly kWh data must be reported separately for each applicable InSchedule contract. PJM calculates the TO Scheduling, System Control and Dispatch Service charge reconciliations by multiplying the kWh data (not de-rated for transmission losses) by the applicable Schedule 1A billing determinants for that month.

The monthly TO Scheduling, System Control and Dispatch Service billing determinant is the \$/MWh rate for each zone as filed in Schedule 1A of the PJM Open Access Transmission Tariff. Note that the reconciliation of TO Scheduling, System Control and Dispatch Service charges for a month may be either a positive or a negative value.