

CUSTOMER GUIDE TO PJM BILLING

- Billing Line Items include PJM Open Access Transmission Tariff (OATT) references, PJM Operating Agreement (OpAgr) references, and PJM Manual references.
- Reports are available for viewing, printing, and downloading from PJM's Market Settlement Reporting System (MSRS).

BLI ID	Billing Line Item	Description	Reports
1100 2100	Network Integration Transmission Service (OATT Section 34, Attachments H-1 through H-17, Attachment H-A, and TOA Section 7.8 Manual 27, Section 5)	<p>Network customers pay daily demand charges to PJM transmission owners using the applicable zonal or non-zone Network Integration Transmission Service rates. For transmission owners (except those in ATSI, PPL, ComEd, Dayton, Duke, and Duquesne zones), the charges for their own transmission facilities are not actually paid (i.e., exempted with an equal amount credits) and are shown only to identify their cost responsibility as ordered by FERC.</p> <p>Charges: Daily demand charges calculated as network customers' daily network service peak load contribution times 1/365th of the applicable zonal rate(s) for the zone(s) in which the network load is located. Non-zone network service peak load contributions are coincident with the PJM Region peak. Virginia Network Load customers in the Dominion Zone pay applicable rates for Underground Billing under FERC Opinion No. 555.</p> <p>Credits: PJM zonal network transmission service revenues allocated to the applicable zone's transmission owners on a transmission revenue requirement basis. PJM non-zone network revenues allocated to transmission owners based on transmission revenue requirement ratio shares, with the ComEd, AEP, and Dominion shares further allocated to their respective zonal network customers based on demand charge ratios.</p>	<p>NITS Charge Summary</p> <p>NITS Credit Summary</p> <p>NITS Offset Charge Summary</p> <p>Non-Zone NITS Credit Summary</p> <p>Underground Transmission Service Charge Summary</p> <p>Underground Transmission Service Credit Summary</p>
1103 2103	Underground Transmission Service FERC Opinion No. 555	<p>Virginia Network Load customers in the Dominion Zone pay applicable Network Integration Transmission Service rates for Underground Billing under FERC Opinion No. 555.</p> <p>Charges: Virginia Network Load customers in the Dominion Zone pay applicable Network Integration Transmission Service rates for Underground Billing under FERC Opinion No. 555. The Underground Transmission Service Charge is equal to the Underground Transmission Service Rate times the customers proportion of the Daily Peak Load.</p> <p>Credits: Transmission Owners in the Dominion Zone receive applicable Network Integration Transmission Service rates for Underground Billing under FERC Opinion No. 555. The Underground Transmission Service Credit is equal to the Total Zone Underground Transmission Service Charge times the Owner's Zone Revenue Requirement Share.</p>	<p>Underground Transmission Service Charge Summary</p> <p>Underground Transmission Service Credit Summary</p>
1108 1115 2108	Transmission Enhancement (OATT Schedule 12)	<p>All network customers and merchant transmission owners pay transmission owners for required transmission enhancement projects in accordance with the zonal cost responsibility allocations in the appendix to Schedule 12. All transmission projects collecting these payments are on PJM's website under Transmission Services/Formula Rates.</p> <p>Charges: All network customers serving load in a responsible zone pay for that zone's applicable projects' revenue requirements in proportion to their network service peak load share in that zone, and responsible merchant transmission owners also pay their share of applicable revenue requirements. Note that several EDCs bear these charges for the default suppliers in their territory.</p> <p>Credits: Total revenues allocated to the applicable transmission enhancement project owners, or the applicable transmission zone network customers for zonal TOs that include these project costs in their network rates.</p> <p>Settlement Charges (1115):</p>	<p>Transmission Enhancement Charge Summary</p> <p>Transmission Enhancement Credit Summary</p> <p>Transmission Enhancement Charge Adjustments (EL05-121-009) Summary</p>

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1109 2109	MTEP Project Cost Recovery Manual 29, Section 2.2.2, 2.3.2	Transmission projects built by MISO or PJM Transmissions Owners with cost responsibility in the other RTO/ISO. <u>Charges:</u> Charges are allocated to the respective MISO/PJM zone with cost responsibility for the projects. <u>Credits:</u> Charges collected from the responsible zone are paid to the responsible Transmission Owner as credits.	
1110 2110	Direct Assignment Facilities Manual 29, Section 2.2.2, 2.3.2	<u>Charges:</u> The monthly charge to a Network Customer for necessary transmission facilities to ensure firm or non-firm point-to-point transmission service can be provided. <u>Credits:</u> The month credit to a Transmission Owner for the necessary transmission facilities to ensure firm or non-firm point-to-point transmission service may be provided.	
1120 2120	Other Supporting Facilities Manual 29, Section 2.2.2, 2.3.2 OATT Attachment H	<u>Charges:</u> The monthly charge to a Network Customer for low voltage facilities as specified in their service agreement and/or the applicable TO's Attachment H to the PJM tariff <u>Credits:</u> The monthly credit to a Transmission Owner for low voltage facilities as specified in their service agreement and/or the TO's Attachment H to the PJM tariff.	
1130 2130	Firm Point-to-Point Transmission Service (OATT Section 13.7, Schedule 7, and TOA Section 7.8 Manual 27, Section 6)	Firm point-to-point transmission customers pay demand charges for reserved capacity at the applicable tariff rates based on the term of the reservations. There is no charge for reserved capacity with a MISO point of delivery. <u>Charges:</u> Monthly demand charges for daily, weekly, monthly, and yearly delivery calculated based on the transmission customer's reserved capacity times the applicable tariff rate. The total demand charge in any week, pursuant to a reservation for daily delivery, shall not exceed the weekly delivery rate times the highest amount of reserved capacity in any day during such week. <u>Credits:</u> Total firm transmission service revenues allocated to PJM transmission owners based on transmission revenue requirement ratio shares, with the ComEd, AEP, and Dominion shares further allocated to their respective zonal network customers based on demand charge ratios.	<i>Firm PTP Charges</i> <i>Firm PTP Credit Summary</i>
1133 2133	Firm Point-to-Point Transmission Service Resale OATT Section 23.1, Attachment A-1	A Transmission Customer may sell, assign, or transfer all or a portion of its rights under its Service Agreement, but only to another Eligible Customer (the Assignee). The Transmission Customer that sells, assigns or transfers its rights under its Service Agreement is hereafter referred to as the Reseller. Compensation to Resellers shall be at rates established by agreement between the Reseller and the Assignee. <u>Charges:</u> The Firm PTP Transmission Service Resale Charge is equal to the Hourly Firm PTP Resale Rate times the Reseller's hourly Billable Profile Capacity <u>Credits:</u> The Firm PTP Transmission Service Resale Credit is equal to the Hourly Firm PTP Resale Rate times the Assignee's hourly Billable Profile Capacity	<i>Firm PTP Resale Charges</i> <i>Firm PTP Resale Credits</i>
1140 2140	Non-Firm Point-to-Point Transmission Service (OATT Sections 14.5 & 27A, Schedule 8 Manual 27, Section 6)	Non-firm point-to-point transmission customers pay demand charges for reserved capacity at the discounted rate. There is no charge for reserved capacity with a MISO point of delivery. <u>Charges:</u> Monthly demand charges for hourly, daily, weekly, and monthly delivery calculated based on the transmission customer's reserved capacity (in MWh) times the discounted rate of \$0.67/MWh. Rebates are provided for transaction MWh curtailed by PJM and for transmission congestion charges. <u>Credits:</u> Total non-firm transmission service revenues allocated to PJM network and firm point-to-point transmission customers in proportion to their monthly demand charges.	<i>Non-Firm PTP Charges</i> <i>Non-Firm PTP Credit Summary</i>

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1200 1205 1400	Spot Market Energy (OpAgr Schedules 1-3.2.1 & 3.3.1 and OATT Schedule 4 Manual 28, Section 3)	<p>Day-ahead Spot Market energy position MWs are calculated in hourly intervals for cleared day-ahead generation and increment offers, demand, decrement, and load response bids, and day-ahead energy transactions. Real-time Spot Market energy position MWs are calculated in five minute increments for real-time energy transactions, load (without losses), generation, and metered tie flows, as applicable. . In situations where five minute energy position interval data has not been provided, the energy position value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions.</p> <p><u>Day-ahead Charges:</u> Net Day-ahead Spot Market energy positions are charged at the PJM-wide day-ahead system energy price for each hour. Charges are positive for energy purchased from the PJM Spot Market (i.e. energy withdrawals) and negative for energy delivered to the PJM Spot Market (i.e. energy injections) and totals are summed for each hour.</p> <p><u>Balancing Charges:</u> Net real-time deviations from day-ahead energy positions are charged at one-twelfth the PJM-wide real-time system energy price for each five minute interval. In situations where five minute energy position interval data has not been provided (including all day-ahead energy position data), the energy position value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real-time deviation from the day-ahead energy position, and totals are summed for each hour.</p> <p><u>Reconciliation Charges:</u> Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the hourly PJM-wide real-time system energy price on a two-month billing lag.</p>	<p><i>DA Daily Energy Transactions</i></p> <p><i>RT Daily Energy Transactions</i> for customer review and verification</p> <p><i>Spot Market Energy Charge Summary</i></p> <p><i>Energy & Inadvertent Load Recon Charge Summary</i></p> <p><i>Energy Market and Congestion Loss Charge Details</i></p> <p><i>Balancing Generator LMP Charges</i></p>
1210 1215 1410 2211 2215 2415	Transmission Congestion (OpAgr Schedules 1-3.2.4, 3.4.1, & 5.1-5.2 Manual 28, Section 8)	<p>The increased energy costs due to redispatch during the applicable interval when the PJM transmission system is constrained are assessed to market participants based on the congestion price component of LMPs. Day-Ahead revenues collected are allocated as credits to FTR holders. Balancing Revenues are allocated as credits based on real-time load plus exports ratio shares.</p> <p><u>Day-ahead Charges:</u> Day-ahead Implicit Congestion charges are calculated hourly as the sum of day-ahead withdrawal values (i.e., all cleared day-ahead demand/decrement/load response bids and sale transactions priced at the applicable locations' day-ahead congestion prices) minus the sum of day-ahead injection values (i.e., all cleared day-ahead generation/increment offers and purchase transactions priced at the applicable locations' day-ahead congestion prices).</p> <p>Explicit Congestion charges for day-ahead energy transactions are calculated hourly and equal the scheduled MWh times the difference between day-ahead sink and source congestion prices. These charges are assessed to the buyer (or point-to-point transmission customer, if applicable).</p> <p><u>Balancing Charges:</u> Balancing Implicit Congestion charges are calculated for each five minute interval as the sum of balancing withdrawal congestion values (i.e., all deviations between demand/decrement/load response bids and sale transactions cleared day-ahead versus real-time load without losses, and sale transactions, priced at one-twelfth of the applicable locations' real-time congestion prices) minus the sum of balancing injection congestion values (i.e., all deviations between generation/increment offers and purchase transactions cleared day-ahead versus real-time generation and purchase transactions, priced at one-twelfth of the applicable locations' real-time congestion prices). In situations where five minute energy position interval data has not been provided (including all day-ahead energy position data), the energy position value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real-time deviation from the day-ahead energy position, and totals are summed for each hour.</p> <p>Explicit Congestion charges for balancing energy transactions are calculated for each five minute interval and equal any real-time deviations from the transaction MWs cleared day-ahead times one-twelfth of the difference between the real-time sink and source congestion prices. In situations where five minute energy position interval data has not been provided (including all day-ahead energy position data), the energy position value provided will be flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions and deviations. Charges may be positive</p>	<p><i>Transmission Congestion Charge Summary</i></p> <p><i>Explicit Congestion Charges</i></p> <p><i>Energy Market and Congestion Loss Charge Details</i></p> <p><i>FTR Target Credits</i></p> <p><i>Hourly Transmission Congestion Credits</i></p> <p><i>Congestion and Loss Load Recon Charges</i></p> <p><i>Congestion Uplift Charge Summary</i></p> <p><i>Network ARR Target Credit Summary</i></p> <p><i>Cross-Monthly Congestion Credit Summary</i></p> <p><i>Balancing Transmission Congestion Credit Summary</i></p> <p><i>Balancing Transmission Congestion Load Reconciliation Credit Summary</i></p>

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		<p>or negative depending on the direction of the real-time deviation from the day-ahead energy position, and totals are summed for each hour. These charges are assessed to the buyer (or point-to-point transmission customer, if applicable).</p> <p><u>Day-ahead Credits:</u> Total day-ahead congestion revenues (including net day-ahead MISO and NYISO Market-to-Market adjustments) are allocated as hourly credits based on FTR target allocations (FTR MW times the difference between day-ahead FTR sink and source congestion prices). The monthly total of excess hourly congestion credits and FTR Auction net revenues remaining after distribution to ARRs are used to proportionately reduce any remaining FTR target deficiencies in all hours of the month. Any additional excess monthly congestion revenues are allocated to previous deficient months of the planning period.</p> <p><u>Balancing Credits:</u> Total Balancing Transmission Congestion Charges (including MISO and NYISO real-time Market-to-Market adjustments and inadvertent interchange congestion contribution) are allocated among the PJM market participants in proportion to their real-time load (de-rated for transmission losses) plus their real-time PJM exports as a percentage of the total PJM load (excluding losses) and exports.</p> <p><u>Reconciliation Charges and Credits:</u> Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable source/sink congestion price on a two-month billing lag.</p>	
1216	Pseudo-Tie Balancing Congestion Refund OATT Schedule 16	<p>Generation resources that implement interchange via a Pseudo Tie between the Native Balancing Authority and Attaining Balancing Authority are able to offer into both the Attaining and Native Balancing Authority's energy market. Pseudo Tie Generator Imports into PJM are modeled as regular units in the PJM Energy Market, and as such follow the same bidding rules as units which are electrically inside PJM and participating in the PJM Energy Market. Pseudo Tie Generator Exports out of PJM are charged the Explicit Congestion and Loss LMP difference between their source generator and sink external PJM interface point. The real-time MW value used is the value as reported to PJM via Power Meter.</p> <p><u>Charges:</u> The Pseudo-Tie Balancing Congestion Refund Charge is calculated in 5-Minute intervals. The Pseudo-Tie Balancing Congestion Refund Charge is equal to the Pseudo-Tie Transaction Deviation MW times the Pseudo-Tie Real-Time Congestion Overlap Refund Price.</p>	<i>Pseudo-Tie Balancing Congestion Refund Charge Summary</i>
2217	Planning Period Excess Congestion (OpAgr Schedule 5.2.6 Manual 28, Section 8.4.4)	<p>For planning years in which the sum of total PJM congestion revenues collected during the planning year was greater than the sum of FTR holders' total net FTR Targets, Planning Period Excess Congestion credits are awarded to the ARR holders at the end of the planning year (May) to distribute those remaining excess congestion revenues. Planning Period Excess Congestion credits can only occur at the end of the Annual Planning Period (which runs from June 1st through May 31st), so they will only apply to May monthly billing statements.</p> <p>Planning Period Excess Congestion credits are allocated to ARR holders in proportion to their net positive total ARR Target Credits for the planning year.</p>	<i>Cross-Monthly Congestion Credit Summary</i>

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1218 2218	Planning Period Congestion Uplift (OpAgr Schedules 5.2.5 & 5.2.6 Manual 28, Section 8)	<p>For planning years in which the sum of actual Transmission Congestion credits paid to FTR holders during the planning year was less than the sum of their FTR Targets, Planning Period Congestion Uplift credits are awarded to the FTR holders at the end of the planning year (May) to completely fulfill those remaining FTR Target deficiencies. Planning Period Congestion Uplift credits and Planning Period Congestion Uplift charges can only occur at the end of the Annual Planning Period (which runs from June 1st through May 31st), so they will only apply to May monthly billing statements.</p> <p>The "Planning Period Congestion Uplift credit" is a "make-whole" congestion credit to FTR holders to satisfy any previously unfulfilled FTR Target Credits that remain at the end of the planning year. A summary of FTR Targets and all applicable Congestion Credits broken down by month can be viewed in the "Cross-Monthly Congestion Credit Summary" report in MSRS. Select the "All Billed" option for the period from 6/1/12 through 5/31/13 to see the complete set of details.</p> <p>The "Planning Period Congestion Uplift charge" is the participant's share of the allocated costs of providing the Uplift credits. Charges are allocated to FTR holders in proportion to their net positive total FTR Target Credits for the planning year. Details of this charge allocation can be viewed in the "Congestion Uplift Charge Summary" report in MSRS.</p> <p>The calculation for the Uplift charge is: (positive FTR Target credit / Total PJM Positive FTR Target Credit) * PJM Total FTR and ARR Uplift Credit.</p> <p>The uplift process is also outlined in Manual 28, sections 8.1 and 8.4.4</p>	<i>Congestion Uplift Charge Summary</i> <i>Cross-Monthly Congestion Credit Summary</i>

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1220 1225 1420 2220 2420	Transmission Losses (OpAgr Schedules 1-3.2.5, 3.4.2, & 5.4-5.5 Manual 28, Section 9)	<p>The increased costs of energy due to transmission losses represented in the PJM network model are assessed to market participants based on the loss component of LMPs, and the revenues collected are allocated to market participants' serving load and delivering PJM exports (that pay for PJM transmission service).</p> <p>Day-ahead Charges: Day-ahead Transmission Loss charges are calculated hourly as the sum of day-ahead withdrawal loss values (i.e., all cleared day-ahead demand/decrement/load response bids and sale transactions priced at the applicable locations' day-ahead loss prices) minus day-ahead injection loss values (i.e., all cleared day-ahead generation/increment offers and purchase transactions priced at the applicable locations' day-ahead loss prices).</p> <p>Explicit loss charges for day-ahead energy transactions are calculated hourly and equal the scheduled MWh times the difference between day-ahead sink and source loss prices. These charges are assessed to the buyer (or point-to-point transmission customer, if applicable).</p> <p>Balancing Charges: Balancing Loss charges are calculated for each five minute interval as balancing withdrawal loss values (i.e., all deviations between demand/decrement/load response bids and sale transactions cleared day-ahead versus real-time load, without losses, and sale transactions priced at one-twelfth of the applicable locations' real-time loss prices) minus balancing injection loss values (i.e., all deviations between generation/increment offers and purchase transactions cleared day-ahead versus real-time generation and purchase transactions priced at one-twelfth of the applicable locations' real-time loss prices). In situations where five minute energy position interval data has not been provided (including all day-ahead energy position data), the energy position value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real-time deviation from the day-ahead energy position, and totals are summed for each hour..</p> <p>Explicit loss charges for balancing energy transactions are calculated for each five minute interval and equal any real-time deviations from day-ahead transaction MWh times one-twelfth of the difference between real-time sink and source loss prices. In situations where five minute energy position interval data has not been provided (including all day-ahead energy position data), the energy position value provided will be flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real-time deviation from the day-ahead energy position, and totals are summed for each hour. These charges are assessed to the buyer (or point-to-point transmission customer, if applicable).</p> <p>Credits: Total hourly loss revenues, both day-ahead and balancing (including loss contribution of inadvertent interchange and spot market energy imbalance) allocated as hourly credits based on ratio shares of real-time load (without losses) plus exports that pay for transmission service (with non-firm exports receiving a reduced percentage of their allocation).</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable source/sink loss price on a two-month billing lag.</p> <p>Reconciliation Credits: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using a \$/MWh billing determinant calculated as the total loss credits divided by the total MWh of PJM real-time load plus exports (that pay for transmission service, with non-firm exports receiving a reduced percentage of their allocation) on a two-month billing lag.</p>	<p><i>Transmission Loss Charge Summary</i></p> <p><i>Explicit Loss Charges</i></p> <p><i>Energy Market and Congestion Loss Charge Details</i></p> <p><i>Transmission Loss Credit Summary</i></p> <p><i>Congestion and Loss Load Recon Charges</i></p> <p><i>Transmission Loss Load Recon Credit Summary</i></p>

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1230 1430	Inadvertent Interchange (OpAgr Schedule 1-3.7 Manual 28, Section 18)	<p><u>Charges:</u> PJM hourly total inadvertent interchange charges (+/-) priced at the load weighted-average PJM real-time LMP and allocated based on real-time load ratio shares.</p> <p><u>Reconciliation Charges:</u> Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the PJM-wide real-time system energy price on a two-month billing lag.</p>	<p><i>Inadvertent Interchange Charge Summary</i></p> <p><i>Energy & Inadvertent Load Recon Charge Summary</i></p>
1242 1243 1246 2240 2241 2246	Load Response (OpAgr, just prior to Schedule 2 Manual 28, Section 11)	<p><u>Credits:</u> Day-ahead and real-time economic and real-time pre-emergency and emergency load response credits are provided to CSPs equal to the reduced MWs times LMP. In situations where five-minute interval data has not been provided, the Load Response energy value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions. Those MW positions are then multiplied by one-twelfth of the applicable interval real-time zonal or aggregate LMP to determine credits, which are then summed for the hour.</p> <p><u>Charges:</u> For day-ahead and real-time economic load response, the charges are allocated to all real-time load where load is served in a zone that has benefitted from load reductions plus real-time exports. For pre-emergency and emergency load response, all balancing energy market participants are allocated charges using the same method as for PJM emergency energy purchases.</p>	<p><i>Load Response Summary</i></p> <p><i>Real-time Load Response Credits</i></p> <p><i>Econ Load Response Zonal Charge Allocations</i></p> <p><i>Emergency Load Response Allocation Summary</i></p> <p><i>Emergency Load Response Allocation Credits</i></p>
1245 2245	Pre-Emergency and Emergency Load Response (OpAgr, just prior to Schedule 2 Manual 28, Section 11 Manual 29, Section 2.2.1)	<p><u>Credits:</u> Day-ahead and real-time economic and real-time pre-emergency and emergency load response credits are provided to CSPs equal to the reduced MWs times LMP. In situations where five-minute interval data has not been provided, the Load Response energy value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions. Those MW positions are then multiplied by one-twelfth of the applicable interval real-time zonal or aggregate LMP to determine credits, which are then summed for the hour. The Emergency Load Response Charge is the sum of the Total PJM Emergency Load Response Energy Credits, the product of the Total PJM Emergency Load Response Make-Whole Credits and the maximum of the Positive Bal Net Interchange Used MWh and zero, divided by the Total PJM Bal Positive Interchange Used.</p> <p><u>Charges:</u> For day-ahead and real-time economic load response, the charges are allocated to all real-time load where load is served in a zone that has benefitted from load reductions plus real-time exports. For pre-emergency and emergency load response, all balancing energy market participants are allocated charges using the same method as for PJM emergency energy purchases. The Emergency Load Response charge is the sum of the PJM Member's charges for PJM Emergency Load Response. The Emergency Load Response Make-Whole Credit is equal to if the sum of the Emergency Load Response Make-Whole Credit across all hours of the day > 0, [(the product of the Emergency Load Response Bid Price and the RT Load Response Actual MWh Relief plus the Shutdown Cost all minus the Emergency Load Response Energy Credit</p>	<p><i>Emergency Load Response Allocation Summary</i></p> <p><i>Emergency Load Response Allocation Credits</i></p>

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1250	Meter Error Correction (OpAgr Schedule 1-3.6 Manual 28, Section 12)	Charges: Monthly charges (+/-) to PJM fully-metered EDCs and generators for corrections to metered energy values, with PJM Mid-Atlantic 500kV corrections allocated based on real-time load ratio shares, using the applicable generator or PJM load weighted-average real-time LMP for the month. Meter correction charges for any external PJM tie-line corrections are allocated to all LSEs based on real-time load (without losses) ratio shares. Effective February 2010, EDCs may elect to have their charges (+/-) directly allocated by PJM to LSEs in their zone based on load ratio shares if all LSEs in the EDC territory concur.	<i>Meter Correction Charge Summary</i> <i>Meter Correction Allocation Charge Summary</i>
1260 2260	Emergency Energy (OpAgr Schedules 1-3.2.6, 3.3.4, 3.5.1, & 4.3 Manual 28, Section 10)	PJM emergency energy transactions (made on behalf of market participants) are priced at 150% of LMP at the appropriate PJM interface in accordance with the PJM agreements with adjacent control areas. Charges: For each applicable five-minute interval, net costs of emergency energy purchased by PJM are allocated to real-time deviations from day-ahead net interchange that create a shorter real-time position, except for purchases for external control areas' MinGen Emergencies where costs are allocated to deviations that create a longer position. Credits: For each applicable five-minute interval, net revenues from emergency energy sold by PJM are allocated to real-time deviations from day-ahead net interchange that create a shorter real-time position and to any curtailed exports, except for PJM MinGen Emergency sales where revenues are allocated to deviations that create a longer position.	<i>Emergency Energy Charge and Credit Allocation Summary</i> <i>Emergency Energy Transactions</i>
1301 1302 1303 1305 1440	PJM Scheduling, System Control & Dispatch Service (OATT Schedules 1 and 9-1 through 9-4 Manual 27, Section 2)	Charges: PJM's monthly operating expenses for the following service categories are allocated to PJM members on an unbundled basis. <u>Control Area Administration</u> – Monthly formula rate is charged to transmission customers based on their usage of the PJM transmission system. Monthly transmission use (in MWh) includes network customers' real-time load and point-to-point customers' real-time energy use. <u>Financial Transmission Rights Administration</u> – Component 1: Monthly formula rate is charged to FTR holders based on FTR MW and hours each FTR is in effect (regardless of congested hours and dollar value of FTR). Component 2: Monthly formula rate is charged to FTR Auction participants based on the number of hours associated with each FTR obligation bid submitted in an FTR Auction (this rate is multiplied by 5 for FTR options). <u>Market Support</u> – Component 1: Monthly formula rate is charged to transmission customers based on their network load and exports, to providers of generation and imports, and to day-ahead energy market participants based on their accepted increment offers, decrement bids, and up-to congestion bids. Component 2: Monthly formula rate is charged for each energy bid/offer segment price/quantity pair submitted, including those submitted during the rebidding period. <u>Capacity Resource and Obligation Management</u> – Monthly formula rate is charged to LSEs based on their daily unforced capacity obligations and to capacity resource owners based on their daily unforced capacity (including FRRs). Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using a \$/MWh billing determinant calculated as the Control Area Administration Service Rate plus the Market Support Service Rate for transmission customers on a two-month billing lag.	<i>Schedule 9 and 10 Charge Details</i> <i>Schedule 9 & 10 Summary</i> <i>Schedule 9 & 10 Daily Usage Details</i> <i>Schedule 9 & 10 Load Recon Charge Summary</i>
1313	PJM Settlement, Inc. (OATT Schedule 9-PJMSettlement Manual 27, Section 2)	Charges: Monthly formula rate is charged to each customer account receiving an invoice from PJM Settlement on per-invoice basis.	<i>Schedule 9 and 10 Charge Details</i> <i>Schedule 9 & 10 Summary</i> <i>Schedule 9 & 10 Daily Usage Details</i>

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1314 1444	MMU Funding (OATT Schedule 9-MMU Manual 27, Section 2)	<p>Charges: Component 1: The rate is charged to transmission customers based on their network load and exports, to providers of generation and imports, and to day-ahead energy market participants based on their accepted increment offers, decrement bids, and up-to congestion bids. Component 2: Annual rate is charged for each energy bid/offer segment price/quantity pair submitted, including those submitted during the rebidding period.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the MMU rate on a two-month billing lag.</p>	<p><i>Schedule 9 and 10 Charge Details</i></p> <p><i>Schedule 9 & 10 Summary</i></p> <p><i>Schedule 9 & 10 Daily Usage Details</i></p> <p><i>Schedule 9 & 10 Load Recon Charge Summary</i></p>
1315 1445	FERC Annual Recovery (OATT Schedule 9-FERC Manual 27, Section 2)	<p>Charges: The rate is charged to transmission customers based on their usage of the PJM transmission system. Monthly transmission use includes network customers' real-time load and point-to-point transmission customers' real-time energy transactions.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the FERC rate on a two-month billing lag.</p>	<p><i>Schedule 9 and 10 Charge Details</i></p> <p><i>Schedule 9 & 10 Summary</i></p> <p><i>Schedule 9 & 10 Daily Usage Details</i></p> <p><i>Schedule 9 & 10 Load Recon Charge Summary</i></p>
1316 1446	Organization of PJM States, Inc. (OPSI) Funding (OATT Schedule 9-OPSI Manual 27, Section 2)	<p>Charges: The rate is charged to transmission customers based on their usage of the PJM transmission system. Monthly transmission use includes network customers' real-time load and point-to-point transmission customers' real-time energy transactions.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the OPSI rate on a two-month billing lag.</p>	<p><i>Schedule 9 and 10 Charge Details</i></p> <p><i>Schedule 9 & 10 Summary</i></p> <p><i>Schedule 9 & 10 Daily Usage Details</i></p> <p><i>Schedule 9 & 10 Load Recon Charge Summary</i></p>
1317 1447	North American Electric Reliability Corp. (NERC) (OATT Schedule 10-NERC Manual 27, Section 2)	<p>Charges: The rate is charged to transmission customers based on their energy delivered to load in the PJM Region, excluding load in the Dominion and East Kentucky Power Cooperative zones. Each calendar year, any over or under collection of NERC's actual costs are trued up in that year's December billing cycle.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the NERC rate on a two-month billing lag.</p>	<p><i>Schedule 9 and 10 Charge Details</i></p> <p><i>Schedule 9 & 10 Summary</i></p> <p><i>Schedule 9 & 10 Daily Usage Details</i></p> <p><i>Schedule 9 & 10 Load Recon Charge Summary</i></p>
1318 1448	Reliability First Corp. (RFC) (OATT Schedule 10-RFC Manual 27, Section 2)	<p>Charges: The rate is charged to transmission customers based on their energy delivered to load in the PJM Region, excluding load in the Dominion and East Kentucky Power Cooperative zones. Each calendar year, any over or under collection of RFC's actual costs are trued up in that year's December billing cycle.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the RFC rate on a two-month billing lag.</p>	<p><i>Schedule 9 and 10 Charge Details</i></p> <p><i>Schedule 9 & 10 Summary</i></p> <p><i>Schedule 9 & 10 Daily Usage Details</i></p> <p><i>Schedule 9 & 10 Load Recon Charge Summary</i></p>
1319 1449	Consumer Advocates of PJM States, Inc. (CAPS) Funding (OATT Schedule 9-CAPS Manual 27, Section 2)	<p>Charges: The rate is charged to transmission customers based on their usage of the PJM transmission system. Monthly transmission use includes network customers' real-time load (including losses) and point-to-point transmission customers' real-time energy transactions.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the CAPS rate on a two-month billing lag.</p>	<p><i>Schedule 9 and 10 Charge Details</i></p> <p><i>Schedule 9 & 10 Summary</i></p> <p><i>Schedule 9 & 10 Daily Usage Details</i></p> <p><i>Schedule 9 & 10 Load Recon Charge Summary</i></p>

BLI ID	Billing Line Item	Description	Reports
1320 1450 2320	Transmission Owner Scheduling, System Control and Dispatch Service (OATT Schedule 1A Manual 27, Section 2)	<p>All Transmission Customers purchase this from PJM to schedule energy through, out, within, or into PJM.</p> <p>Charges: Monthly charges for the operation of the PJM transmission owners' control centers are calculated for transmission customers based on their monthly usage of the PJM transmission system. Point-to-Point Transmission Customers pay a pool-wide rate of \$0.0912/MWh based on their energy deliveries including losses and network customers pay applicable zonal rates provided in Schedule 1A of the Tariff based on the real-time MWh of monthly load they serve.</p> <p>Credits: The charges collected from network customers for each zone are provided to the applicable transmission owner, and the non-zone revenues (e.g., received from point-to-point customers) are allocated to PJM transmission owners based on fixed percentage shares provided in Schedule 1A of the Tariff.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using zonal \$/MWh billing determinants equal to the applicable zonal Schedule 1A rates on a two-month billing lag.</p>	<p><i>Sched 1A Charge Summary</i></p> <p><i>Sched 1A Credit Summary</i></p> <p><i>Sched 1A Load Recon Charge Summary</i></p>
1330 2330	Reactive Supply and Voltage Control from Generation and Other Sources Service (OATT Schedule 2 Manual 27, Section 3)	<p>All Transmission Customers purchase this from PJM to maintain acceptable transmission voltages.</p> <p>Credits: Monthly credits provided to generation and transmission owners with FERC-approved reactive revenue requirements.</p> <p>Charges: Monthly pool-wide reactive revenue requirements allocated as charges to point-to-point customers (and to network customers in transmission zones with no reactive revenue requirements) based on their monthly peak usage of the PJM transmission system. Monthly peak usage equals the total hourly amounts of transmission capacity reserved, and not curtailed by PJM, divided by 24. The remaining reactive revenue requirements for each transmission zone not recovered from point-to-point customers are allocated to the network customers serving load in that zone based on their monthly network service peak load contributions.</p>	<p><i>Reactive Charge Summary</i></p>

BLI ID	Billing Line Item	Description	Reports
1340 1460 2340	Regulation and Frequency Response Service (OpAgr Schedules 1-3.2.2, 3.2.2A, 3.3.2, & 3.3.2A and OATT Schedule 3 Manual 28, Section 4)	<p>PJM conducts a regulation market to continuously balance generation resources with PJM load and to maintain Interconnection frequency within acceptable limits.</p> <p>Credits: Generators and demand resources receive five minute interval credits for pool- and self-scheduled regulation (with consideration of the resource's performance) priced at one-twelfth of the regulation market capability clearing price. Generators and demand resources receive five minute interval credits for pool- and self-scheduled regulation (with consideration of the resource's performance and the ratio between the requested mileage for the regulation dispatch signal assigned to the resource and the mileage for the traditional regulation signal (mileage ratio)) priced at one-twelfth of the regulation market performance clearing prices. Additional credits provided to pool-scheduled regulating resources for any unrecovered portion of regulation offer plus opportunity cost.</p> <p>Charges: PJM LSEs have an hourly regulation obligation equal to their real-time load (without losses) ratio share of regulation supplied excluding mileage (adjusted for any bilateral regulation transactions). Hourly charges are allocated based on obligation ratio shares times the sum of total PJM Regulation credits awarded for each hour of the Operating Day. In addition, any lost opportunity or other unrecovered cost payments that PJM provides to regulation suppliers are allocated to regulation market purchasers based on the amount of Regulation they purchased from the market in that hour.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using a \$/MWh billing determinant calculated as the total regulation market charges divided by the total MWh of PJM real-time load served on a two-month billing lag.</p>	<p><i>Regulation Summary</i></p> <p><i>Regulation Credits</i></p> <p><i>Load Response Regulation Credits</i></p> <p><i>Reg Load Recon Charge Summary</i></p>
1360 1470 2360 2366	Synchronized Reserve (OpAgr Schedules 1-3.2.3A & 3.3.5 and OATT Schedule 5 Manual 28, Section 6)	<p>PJM conducts synchronized reserve markets to ensure the capability of synchronized generation and economic load response that can be converted fully into energy within ten minutes.</p> <p>Day-ahead Credits: Day-ahead Synchronized Reserve Market credits are paid hourly to pool-scheduled or self-scheduled resources that are assigned synchronized reserve MWs within the day-ahead market by multiplying the hourly day-ahead synchronized reserve MWs assigned by the day-ahead synchronized reserve market clearing price.</p> <p>Balancing Credits: Balancing Synchronized Reserve Market credits for pool and self-scheduled resources are calculated for each five minute interval and equal the difference between the capped real-time synchronized reserve assignment and the day-ahead synchronized reserve assignment multiplied by one-twelfth of the applicable reserve zone's real-time synchronized reserve market clearing price (SRMCP). Resources failing to provide the capped real-time synchronized reserve assignment during a synchronized reserve event are assessed a shortfall charge equal to the product of the applicable real-time SRMCP and the lesser of the amount of the MW shortfall during the event or the capped real-time synchronized reserve assignment MW for all five-minute intervals the resource was assigned or self-scheduled for real-time synchronized reserve during the Operating Day. Additional lost opportunity cost credits are provided to pool-scheduled synchronized reserve resources for any portion of the total day-ahead and real-time synchronized reserve offer plus opportunity cost, energy use cost, and start-up cost not recovered via the total day-ahead and balancing Synchronized Reserve Market Clearing Price revenues less any shortfall charges. If applicable, additional profits from other reserve markets and/or the energy market (Market Revenue Neutrality Offset) or the cost attributable to a reserve market buy back (Opportunity Cost Credit Owed) for the same five-minute interval are also included as additional offsets in the lost opportunity cost credit determination.</p> <p>Charges: PJM LSEs that are not part of an agreement to share reserves with external entities have an hourly synchronized reserve obligation equal to their real-time load (without losses) ratio share of their applicable reserve zone or active sub-zone total assignments (adjusted for any bilateral synchronized reserve transactions). For each hour of the Operating Day, Synchronized Reserve Market Clearing Price charges are calculated for each applicable reserve zone or active sub-zone based on the adjusted obligation ratio shares times the sum of total PJM day-ahead and balancing Synchronized Reserve market clearing price credits adjusted for shortfall charges. In addition, Synchronized Reserve lost opportunity cost charges are calculated each hour for each applicable reserve zone or active sub-zone</p>	<p><i>Day-ahead Synchronized Reserve Credits</i></p> <p><i>Balancing Synchronized Reserve Credits</i></p> <p><i>Market Revenue Neutrality Increased Revenue Details</i></p> <p><i>Market Revenue Neutrality Offset Details</i></p> <p><i>Reserve Market Summary</i></p> <p><i>Synchronized Reserve Charges</i></p> <p><i>Synchronized Reserve Retroactive Penalty Charges</i></p> <p><i>Synchronized Reserve Load Recon Charge Summary</i></p>

BLI ID	Billing Line Item	Description	Reports
		<p>by allocating the total PJM synchronized reserve lost opportunity cost credits for the hour to market participants that do not meet their hourly obligation, in proportion to their synchronized reserve purchases for the hour. Resources that fail to provide assigned synchronized reserve during a synchronized reserve event also incur a retroactive penalty charge. This charge is determined by multiplying the retroactive penalty MWs times the RT SRMCP for all real-time settlement intervals the resource was assigned for self-scheduled to provide synchronized reserve for a duration immediately preceding the synchronized reserve event.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable location's (reserve zone or active sub-zone and non-zone) \$/MWh billing determinant calculated as the total applicable location's Synchronized Reserve charges divided by the total MWh of PJM real-time load served in that location on a two-month billing lag.</p>	
1361 1471 2361 2367	Secondary Reserve (OpAgr Schedules 1-3.2.3A.001 Manual 28, Section 19)	<p>PJM conducts secondary reserve markets to ensure the capability of off-line and on-line generation and economic load response available to provide energy with a response between ten minutes and thirty minutes as necessary to meet the 30-minute reserve requirement.</p> <p>Day-ahead Credits: Day-ahead Secondary Reserve Market credits are paid hourly to resources that are assigned secondary reserve MWs within the day-ahead market by multiplying the hourly day-ahead secondary reserve MWs assigned by the day-ahead secondary reserve market clearing price.</p> <p>Balancing Credits: Balancing Secondary Reserve Market credits for pool and self-scheduled resources are calculated for each five minute interval and equal the difference between the capped real-time secondary reserve assignment (including any reductions for shortfall MWs) and the day-ahead secondary reserve assignment multiplied by one-twelfth of the applicable reserve zone's real-time secondary reserve clearing price (SecRMCP). Additional lost opportunity cost credits are provided to pool-scheduled secondary reserve resources for each five minute interval for any portion of secondary reserve opportunity costs not recovered via the total day-ahead and balancing secondary reserve market clearing price revenues. If applicable, additional profits from other reserve markets and/or the energy market (Market Revenue Neutrality Offset) or the cost attributable to a reserve market buy back (Opportunity Cost Credit Owed) for the same five-minute interval are also included as additional offsets to the lost opportunity cost credit determination.</p> <p>Charges: PJM LSEs that are not part of an agreement to share reserves with external entities have an hourly secondary reserve obligation equal to their real-time load (without losses) ratio share of their applicable reserve market's zone or active sub-zone total real-time secondary reserve supplied (adjusted for any bilateral secondary reserve transactions). For each hour of the Operating Day, Secondary Reserve Market Clearing Price charges are calculated for each applicable reserve market zone and active sub-zone based on the obligation ratio share times the sum of total day-ahead and balancing PJM Secondary Reserve market clearing price credits. In addition, Secondary Reserve lost opportunity cost charges are calculated for each hour and for each applicable reserve market zone or active sub-zone by allocating the total PJM Secondary Reserve lost opportunity credits to market participants in proportion to their Secondary Reserve obligation ratio share for the hour.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable location's (reserve zone or active sub-zone and non sub-zone) \$/MWh billing determinant calculated as the total applicable location Non-Synchronized Reserve charges divided by the total MWh of PJM real-time load served in that location on a two-month billing lag.</p>	<p><i>Day-ahead Secondary Reserve Credits</i></p> <p><i>Balancing Secondary Reserve Credits</i></p> <p><i>Secondary Reserve Charges</i></p> <p><i>Reserve Market Summary</i></p> <p><i>Market Revenue Neutrality Increased Revenue Details</i></p> <p><i>Market Revenue Neutrality Offset Details</i></p> <p><i>Secondary Reserve Load Recon Charge Summary</i></p>

BLI ID	Billing Line Item	Description	Reports
1362 1472 2362 2368	Non-Synchronized Reserve (OpAgr Schedules 1-3.2.3A.001 & 3.3.5A Manual 28, Section 7)	<p>PJM conducts non-synchronized reserve markets to ensure the capability of generation off-line and available to provide energy within ten minutes as necessary to meet the primary reserve requirement.</p> <p>Day-ahead Credits: Day-ahead Non-Synchronized Reserve Market credits are paid hourly to resources that are assigned non-synchronized reserve MWs within the day-ahead market by multiplying the hourly day-ahead non-synchronized reserve MWs assigned by the day-ahead non-synchronized reserve market clearing price.</p> <p>Balancing Credits: Balancing Non-Synchronized Reserve Market credits for pool and self-scheduled resources are calculated for each five minute interval and equal the difference between the real-time non-synchronized reserve assignment and the day-ahead non-synchronized reserve assignment multiplied by one-twelfth of the applicable non-synchronized reserve clearing price. Additional lost opportunity cost credits are provided to pool-scheduled non-synchronized reserve resources for each five minute interval for any portion of non-synchronized reserve opportunity costs not recovered via the total day-ahead and balancing non-synchronized reserve market clearing price revenues. If applicable, additional profits from other reserve markets and/or the energy market (Market Revenue Neutrality Offset) or the cost attributable to a reserve market buy back (Opportunity Cost Credit Owed) for the same five-minute interval are also included as additional offsets to the lost opportunity cost credit determination.</p> <p>Charges: PJM LSEs that are not part of an agreement to share reserves with external entities have an hourly non-synchronized reserve obligation equal to their real-time load (without losses) ratio share of their applicable reserve market's zone or active sub-zone total non-synchronized reserve supplied (adjusted for any bilateral non-synchronized reserve transactions). For each hour of the Operating Day, Non-Synchronized Reserve Market Clearing Price charges are calculated for each applicable reserve market zone and active sub-zone based on the obligation ratio share times the sum of total day-ahead and balancing PJM Non-Synchronized Reserve market clearing price credits. In addition, Non-Synchronized Reserve lost opportunity cost charges are calculated for each hour and for each applicable reserve market zone or active sub-zone by allocating the total PJM Non-Synchronized Reserve lost opportunity credits to market participants in proportion to their non-synchronized Reserve obligation ratio share for the hour.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable location's (reserve zone or active sub-zone and non sub-zone) \$/MWh billing determinant calculated as the total applicable location Non-Synchronized Reserve charges divided by the total MWh of PJM real-time load served in that location on a two-month billing lag.</p>	<p><i>Day-ahead Non-Synchronized Reserve Credits</i></p> <p><i>Balancing Non-Synchronized Reserve Credits</i></p> <p><i>Reserve Market Summary</i></p> <p><i>Market Revenue Neutrality Increased Revenue Details</i></p> <p><i>Non-Synchronized Reserve Charges</i></p> <p><i>Non-Synchronized Reserve Load Recon Charge Summary</i></p>
1365 1475 2365	Day-ahead Scheduling Reserve (OpAgr Schedules 1-3.2.3A.01 and OATT Schedule 6 Manual 28, Section 19)	<p>Effective October 1, 2022, Day-ahead Scheduling Reserve was removed from the PJM market. Reconciliation Charges will conclude in the December 2022 monthly bill.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the \$/MWh billing determinant calculated as the total charges divided by the total MWh of PJM real-time load on a two-month billing lag.</p>	<p><i>Day-ahead Scheduling Reserve Load Recon Charge Summary</i></p>
1370 1375 1376 1478 2370 2375 2376	Operating Reserve (OpAgr Schedules 1-3.2.3 & 3.3.3 and OATT Schedule 6 Manual 28, Section 5 and Section 11)	<p>To ensure adequate operating reserve and for spot market support, pool-scheduled generation and demand resources that operate as requested by PJM are guaranteed to fully recover their daily offer amounts.</p> <p>Day-ahead Credits: Daily credits provided to pool-scheduled generators, demand response, and transactions cleared day-ahead for any portion of their offer amount in excess of their scheduled MWh times day-ahead bus LMP.</p> <p>Balancing Credits: Daily credits for specified operating period segments are provided to eligible pool-scheduled generators, demand response, and import transactions in real-time, and will be evaluated on a five minute interval basis for any portion of their offer amount in excess of: (1) scheduled MWh times</p>	<p><i>Operating Reserve Charge Summary</i></p> <p><i>Balancing Operating Reserve Generator Credit Details</i></p> <p><i>Operating Reserve Lost Opportunity Cost Credits</i></p> <p><i>Operating Reserve Transaction Credits</i></p> <p><i>Operating Reserve Generator Deviations</i></p> <p><i>Operating Reserve Generator Deviations – 5 min</i></p> <p><i>Operating Reserve Deviation Summary</i></p> <p><i>Operating Reserve Deviation summary – 5 min</i></p>

BLI ID	Billing Line Item	Description	Reports
		<p>day-ahead bus LMP; (2) MW deviation from day-ahead schedule times one-twelfth of real-time bus LMP; (3) any day-ahead operating reserve credits; (4) any secondary reserve market revenues in excess opportunity cost; (5) any synchronized reserve market revenues in excess of offer plus opportunity, energy use, and startup costs; (6) any non-synchronized reserve market revenues in excess of opportunity costs; (7) any applicable reactive services credits; and (8) less any amounts attributed to the Market Revenue Neutrality Offset. Cancellation credits are based on actual costs submitted to PJM Market Settlements. Credits for lost opportunity costs are also evaluated on a five minute interval basis and are provided to generators reduced or suspended by PJM for reliability purposes.</p> <p>Day-ahead Charges: Total daily cost of operating reserve in the day-ahead market excluding the total cost for resources scheduled to provide Black Start Service, Reactive Services or transfer interface control is allocated based on day-ahead load (including cleared demand, demand response, and decrement bids) plus exports ratio shares.</p> <p>Balancing Charges: Total daily cost of operating reserve in the balancing market related to resources identified as Credits for Deviations is allocated based on regional shares of five minute interval real-time locational deviations from the following day-ahead scheduled quantities of: (1) cleared generation offers (only for generating units not following PJM dispatch instructions and not assessed deviations based on their real-time desired MWs); (2) cleared increment offers and purchase transactions; and (3) cleared demand bids, decrement bids, and sale transactions. In situations where five minute interval data has not been provided (including all day-ahead data), the hourly MW value provided will be scaled or flat-profiled across each of the applicable five minute intervals of the hour in order to allow for the calculation of MW deviations on a five minute interval basis. Total daily cost of operating reserve in the balancing market related to resources identified as Credits for Reliability is allocated based on regional shares of real-time load (without losses) plus exports.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an daily basis using a \$/MWh billing determinant calculated as the total charges allocated to real-time load plus exports divided by the total MWh of PJM real-time load plus exports on a two-month billing lag.</p>	<p><i>Operating Reserve Transaction Credits</i></p> <p><i>Balancing Operating Reserves for Load Response Credit</i></p> <p><i>Operating Reserve for Load Response Deviation Charge Summary</i></p> <p><i>Operating Reserve for Load Response Charge Allocations</i></p> <p><i>Regional Balancing Operating Reserve Charge Summary</i></p> <p><i>Balancing Operating Reserve Load Recon Charge Summary</i></p> <p><i>CT Lost Opportunity Cost Forfeiture</i></p>
1371 1376 2371 2376	Day-ahead and Balancing Operating Reserve for Load Response Manual 28, Section 5.1	<p>Charges: The cost of Operating Reserve for Load Response for an Operating Day, is calculated as a ratio-share based on the real-time exports from PJM and real-time loads in each Zone for which the load-weighted average real-time LMP for the hour during which the reduction occurred is greater than or equal to the price determined under the Net Benefits Test for that month.</p> <p>Credits: Credits for reducing load are based on the actual MWh relief provided in excess of committed day-ahead load reductions plus an adjustment for losses if following dispatch by PJM. Payment is not made for any load reductions in real-time when the real-time five minute LMP is less than the price determined under the Net Benefits Test.</p>	<p><i>Operating Reserve for Load Response Charge Allocation</i></p> <p><i>Operating Reserve for Load Response Deviation Charge Summary</i></p> <p><i>Day-Ahead Operating Reserve for Load Response Credit</i></p> <p><i>Balancing Operating Reserve for Load Response Credit</i></p>
1377 1480 2377	Synchronous Condensing (OpAgr Schedule 1-3.2.3 Manual 28, Section 5)	<p>Credits: Daily credits for condensing and energy use costs are calculated on a five minute interval basis and are provided to eligible synchronous condensers dispatched by PJM for purposes other than synchronized reserve, post-contingency, or reactive services.</p> <p>Charges: Total daily cost of synchronous condensing (not for synchronized reserve or reactive services) is allocated based on real-time load (without losses) plus export ratio shares.</p> <p>Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using a \$/MWh billing determinant calculated as the total charges divided by the total MWh of PJM real-time load plus exports on a two-month billing lag.</p>	<p><i>Synchronous Condensing Credits</i></p> <p><i>Synchronous Condensing Charge Summary</i></p> <p><i>Synchronous Condensing Load Recon Charge Summary</i></p>
1378 1490 2378	Reactive Services (OpAgr Schedule 1-3.2.3B Manual 28, Section 5)	<p>Generating resources whose output is altered by PJM for the purpose of maintaining reactive reliability are guaranteed to fully recover their daily offer amounts or to be compensated for their lost opportunity costs.</p> <p>Credits: Daily credits are calculated on a five minute interval basis for each eligible generator in real-time and equal the operating reserve credits for generation increased, or equal the lost opportunity costs for generation reduced or instructed to condense, to provide reactive services.</p>	<p><i>Reactive Services Credits</i></p> <p><i>Synchronous Condensing Credits</i></p> <p><i>Reactive Services Charge Summary</i></p> <p><i>Reactive Svcs Load Recon Charge Summary</i></p>

BLI ID	Billing Line Item	Description	Reports
		<p><u>Charges:</u> Total daily cost of reactive services and the total day-ahead Operating Reserve credits for resources scheduled to provide Reactive Services or transfer interface control is allocated separately for each PJM transmission zone based on real-time load (without losses) ratio shares in the applicable transmission zone.</p> <p><u>Reconciliation Charges:</u> Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable zone's \$/MWh billing determinant calculated as the total applicable zone's charges divided by the total MWh of real-time load served in the that zone on a two-month billing lag.</p>	
1380 2380	Black Start Service (OATT Schedule 6A Manual 27, Section 7)	<p>All Transmission Customers purchase this from PJM to ensure the reliable restoration following a shut down of the PJM transmission system.</p> <p><u>Credits:</u> Monthly credits provided to generators with approved black start revenue requirements.</p> <p><u>Charges:</u> Monthly pool-wide black start revenue requirements and day-ahead and balancing Operating Reserve credits associated with scheduling resources for black start service or testing allocated as charges to point-to-point customers based on their monthly peak usage of the PJM transmission system. Monthly peak usage equals the total hourly amounts of transmission capacity reserved, and not curtailed by PJM, divided by 24. The remaining black start revenue requirements nominated by each zonal Transmission Owner and day-ahead and balancing Operating Reserve credits associated with scheduling resources for black start service or testing not recovered from point-to-point customers are allocated to the network customers serving load in that transmission zone based on their monthly network service peak load contributions.</p>	Black Start Charge Summary
1390 2390	Fuel Cost Policy Penalty (OpAgr Schedule 2, Section 5 Manual 15, Section 2)	<p>Market Sellers are required to have a PJM-approved Fuel Cost Policy for energy market units submitting cost-based offers. A Fuel Cost Policy Penalty is assessed if PJM determines and the Market Monitoring Unit (MMU) agrees or the MMU determines and PJM agrees that a cost-based offer is not compliant with the PJM-approved Fuel Cost Policy or other applicable cost-based offer guidelines in Schedule 2 of Operating Agreement.</p> <p><u>Charges:</u> An hourly charge is assessed to the participant that applies to all hours that the Market Seller does not have a PJM approved Fuel Cost Policy or a cost offer not in accordance with its Fuel Cost Policy.</p> <p><u>Credits:</u> Fuel Cost Policy Penalties are allocated as credits based on real-time load ratio share in the hour for which the Fuel Cost Policy Penalty has been assessed.</p>	Fuel Cost Policy Penalty Charge Details Fuel Cost Policy Penalty Credit Allocation Summary
1500 2500	Financial Transmission Rights Auction (OpAgr Schedule 1-7.3.8 Manual 28, Section 16)	<p>PJM conducts annual and monthly FTR auctions for the transaction of FTRs at market clearing prices. Net auction revenues are allocated daily to ARR holders and then FTR holders as excess congestion revenues.</p> <p><u>Charges:</u> Monthly auction charges are calculated for each market participant for each FTR (in 0.1 MW increments) purchased in the annual or monthly auctions based on the FTR's market price.</p> <p><u>Credits:</u> Monthly auction credits are calculated for each market participant for each FTR (in 0.1 MW increments) sold in the annual or monthly auctions based on the FTR's market price.</p>	FTR Auction Charges and Credits
2510	Auction Revenue Rights (OpAgr Schedule 1-7.4 Manual 28, Section 17)	<p>Auction Revenue Rights (ARR) are entitlements to receive an allocation of net FTR auction revenues that are allocated annually and reassigned daily to network and firm point-to-point transmission customers.</p> <p><u>Credits:</u> Annual FTR auction net revenues are allocated as daily credits based on ARR target allocations, which equal the ARR MW (divided by the number of auction rounds) times the difference between auction clearing prices at the ARR sink and source. Any ARR target deficiencies may be proportionately eliminated by any monthly FTR auction net revenues and excess congestion revenues in that planning period.</p>	ARR Target Credits
1600 2600	RPM Auction (OATT Att. DD, Section 5.14 Manual 18, Section 9.3)	<p><u>Credits:</u> Each sell offer for generation, demand, or qualified transmission upgrade resource MW cleared in an RPM Auction is paid the applicable resource's clearing price in the applicable auction. Resource make-whole payments are also provided to sell offers that clear less than the minimum amount specified. Sell offers are adjusted by approved unit-specific transactions for cleared capacity.</p> <p><u>Charges:</u> Each buy bid MW cleared in an incremental auction adjusted by cleared buy bid transactions</p>	RPM Auction Charges and Credits RPM Auction Make-Whole Charge Summary RPM Auction Charges

BLI ID	Billing Line Item	Description	Reports
		pays the applicable LDA's resource clearing price. Resource make-whole payments for an incremental auction are also allocated as charges to Market Buyers based on the MW shares of cleared buy bids adjusted by cleared buy bid transactions for the incremental auction. Resource make-whole payments for the base residual auction and the portion of the resource make-whole payment for an incremental auction that would be based on PJM cleared buy bids are allocated as charges to LSEs in the applicable LDA via the Final Zonal Capacity Price.	<i>RPM Auction Credits</i>
2605	RPM Seasonal Capacity Performance Auction Manual 18, Section 9.3.1	Credits: Each generation, demand, or energy efficiency resource provider that clears Seasonal Capacity Performance-Summer sell offer segments in an RPM Auction will receive a Daily Auction Credit equal to the total MW amount that cleared in Seasonal Capacity Performance-Summer sell offer segments times the resource clearing price applicable to the resource's Seasonal Capacity Performance-Summer sell offer segments in such RPM Auction. The Daily Auction Credit shall apply for June through October and May of the Delivery Year.	<i>RPM Auction Credits</i>
1610	Locational Reliability (OATT Att. DD, Section 5.14 Manual 18, Section 9.2)	Charges: Each LSE is charged for their daily unforced capacity obligation priced at the applicable zonal capacity price for the delivery year.	<i>Locational Reliability Charge Summary</i>
2625	LSE PRD Manual 18, Section 9.4.4	Credits: A PRD Provider will receive a PRD Credit for each approved Price Responsive Demand registration that is effective and applicable to load served by such Load Serving Entity on a given day. The total daily credit to a PRD Provider in a Zone shall be the sum of the credits received as a result of all approved registrations in the Zone on a given day. The PRD Credit PRD Performance penalties are assessed to the PRD Provider in the registration. When the PRD registration is associated with a sub-Zone, the Share of the Nominal PRD Value Committed in Base Residual Auction or Third Incremental Auction will be based on the Nominal PRD Values committed and registered in a sub-Zone.	<i>PRD Credits</i>
2630	Capacity Transfer Rights (OATT Att. DD, Section 5.15 Manual 18, Section 9.3)	To recognize the value of import capability to constrained LDAs, Capacity Transfer Rights (CTRs) are allocated to LSEs in those LDAs to offset their higher load charges. Credits: CTRs equal to the unforced capacity imported into the LDA (less any incremental CTRs) are allocated to LSEs in that LDA based on daily unforced capacity obligations. These MW allocations are priced at the difference between the LDA's clearing price and the unconstrained price.	<i>CTR Credit Summary</i>
2640	Incremental Capacity Transfer Rights (OATT Att. DD, Section 5.16, OATT Schedule 12A (b) Manual 18, Section 9.3)	Incremental CTRs are provided to fund for transmission upgrades (not including qualifying transmission upgrades cleared in the Base Residual Auction) that increase import capability into a constrained LDA. Incremental CTRs for Incremental-Rights Eligible Required Transmission Enhancements are determined and allocated as defined in Schedule 12A of the Tariff. Credits: Incremental CTR MW are priced at the sum of: 1) locational price adder of the sink LDA minus that of the Source LDA from the Base Residual Auction; and 2) locational price adder of the sink LDA minus that of the source LDA from the Second Incremental Auction multiplied by the increase in unforced capacity imported into the sink LDA in the Second Incremental Auction compared to the Base Residual Auction, divided by the base unforced capacity imported into the sink LDA. Incremental CTR credits determined for an Incremental-Rights Eligible Required Transmission Enhancement are allocated to the responsible customers that are assigned cost responsibility for the transmission enhancements in accordance with the cost allocations in the appendix to Schedule 12. Responsible customers include Network customers, Transmission Customers with an agreement for Firm Point-to-Point Service, or Merchant Transmission Facility Owners. Network customers serving load in a responsible zone receive credits in proportion to their network service peak load share in that zone.	<i>Incremental CTR Credits</i> <i>Incremental CTR for Required Transmission Enhancement Credits</i>
1650	Auction	Bilateral capacity transactions for multi-day durations are settled in the PJM capacity markets.	<i>Auction Specific MW Transaction Charges and Credits</i>

BLI ID	Billing Line Item	Description	Reports
2650	Specific MW Transaction (OATT Att. DD, Section 5.14 Manual 18, Section 9.3)	<u>Charges:</u> Sellers are charged for the transaction MW times the transaction's pricing point for each day for which the transaction is in effect. <u>Credits:</u> Buyers are credited for the transaction MW times the transaction's pricing point for each day for which the transaction is in effect.	
1661 2661	Capacity Resource Deficiency (OATT Att. DD, Section 8 Manual 18, Section 9.1)	Capacity resources that are unable or unavailable to deliver unforced capacity, and do not obtain replacement unforced capacity to satisfy their cleared sell offer pay this charge which is allocated to eligible LSEs. <u>Charges:</u> Each capacity resource's deficiency MW for each day it is deficient pays the daily deficiency rate. <u>Credits:</u> Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Non-Compliance Charge Summary Deficiency Credit Summary
1662 2662	Generation Resource Rating Test Failure (OATT Att. DD, Section 7 Manual 18, Section 9.1)	Generation capacity resources that fail a capacity test pay this charge which is allocated to eligible LSEs. This billing is performed in the June billing cycle after the conclusion of the delivery year. <u>Charges:</u> Each capacity resource's installed capacity minus its highest rating in the relevant testing period (on an unforced capacity basis) pays a daily deficiency rate which is the weighted average capacity resource clearing price plus the higher of: 1) 0.2 times the weighted average capacity resource clearing price or 2) \$20/MW-day; <u>Credits:</u> Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Non-Compliance Charge Summary Deficiency Credit Summary
1663 2663	Qualifying Transmission Upgrade Compliance Penalty (OATT Att. DD, Section 12 Manual 18, Section 9.1)	Cleared qualifying transmission upgrades delayed in coming into service for the applicable delivery year pay a daily penalty charge which is allocated to eligible LSEs. <u>Charges:</u> Capacity market sellers with import capability cleared in a base residual auction based on a qualifying transmission upgrade are charged each day that the upgrade is not in service during the applicable delivery year and the seller does not obtain replacement capacity resources. The import capability MW are charged at the higher of the following rates: 1) two times the locational price adder of the applicable LDA; or 2) the Net CONE less the clearing price in the applicable LDA. <u>Credits:</u> Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Non-Compliance Charge Summary Deficiency Credit Summary
1666 2666	Load Management Test Failure (OATT Att. DD, Section 11A Manual 18, Section 9.1)	Sellers with committed Demand Resources that fail performance tests pay a penalty charge which is allocated to eligible LSEs. This billing is performed in the August monthly bill issued in September after the conclusion of the Delivery Year. <u>Charges:</u> Net capability testing shortfall MW are charged daily at the weighted annual revenue rate for the applicable zone plus the greater of 0.2 times that weighted annual revenue rate or \$20/MW-day. <u>Credits:</u> Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Load Management Test Failure Charge Summary Load Management Test Failure Credit Summary
1667 2667	Non-Performance Charges and Bonus Performance Credits Manual 18, Section 8.4A	<u>Charges:</u> Capacity Performance Resource commitments and PRD commitments are exposed to Non-Performance Charges for underperformance during Emergency Actions throughout the entire Delivery Year. A Non-Performance Assessment will compare each Capacity Resource's Expected Performance against its Actual Performance for each Performance Assessment Interval. Resources that fail to perform to their expected performance are subject to Non-Performance Charge. <u>Credits:</u> Capacity Performance Resource commitments and PRD commitments are exposed to Non-Performance Charges for underperformance during Emergency Actions throughout the entire Delivery Year. A Non-Performance Assessment will compare each Capacity Resource's Expected Performance against its Actual Performance for each Performance Assessment Interval. Resources that over-perform may be eligible for Bonus Performance Credit.	NPA Billing Month Summary NPA DSR Reg Performance Details NPA DSR Resource Charge Details NPA Resource Charge Details NPA Resource Charge Dist Summ NPA Resource Outage Details NPA Unit Performance Details

BLI ID	Billing Line Item	Description	Reports
1669 2669	PRD Commitment Compliance Penalty (RAA Schedule 6.1, Section I Manual 18, Section 9.4)	A PRD Provider with a positive daily commitment compliance shortfall in a sub-zone/zone for RPM or FRR will be assessed a Daily PRD Commitment Compliance Penalty. Charges: Commitment compliance shortfall MW are charged daily at the Delivery Year Forecast Pool Requirement times the PRD Commitment Compliance Penalty Rate. Credits: Total revenues each day are allocated to all entities that committed Capacity Resources in the RPM Auction for that delivery year based on their daily revenues from Capacity Market Clearing Prices in such auctions, net of any daily compliance charges incurred.	PRD Commitment Compliance Penalty Charges PRD Commitment Compliance Penalty Credits
1900	Unscheduled Transmission Service (OpAgr Sch1-5.3a Manual 28, Section 14)	Charges: Hourly charges to NYISO for any costs incurred due to unscheduled use of the PJM transmission system in accordance with the PJM-NYPP Interconnection Agreement Schedule 6.02. Credits: Total hourly charges are allocated as credits with monthly excess congestion credits.	Hourly Transmission Congestion Credits
1930 2930	Generation Deactivation (OATT Part V)	Revenues are collected for generators requesting retirement where PJM studies find reliability issues that require the generation to continue operating. Cost allocations to zonal load and firm withdrawal rights are determined by PJM based on the beneficiaries. These responsible customers pay the generation owners a share of the Deactivation Avoidable Cost Rate or the FERC-approved Cost of Service Recovery Rate. Charges: Charges are being collected for NRG Power Marketing, LLC resource Indian River Unit 4 based on a Cost of Service Recover Rate for dates June 1, 2022 through December 31, 2026. The monthly charges are allocated on a one-month lag. Based on PJM's assessment of the contribution to the need for, and benefits expected to be derived from, the facilities, the zonal percentage cost allocation is 100% to DPL.	Generation Deactivation Charge Summary Generation Deactivation Refund Charge Summary
1952 2952	Deferred Tax Adjustment (OATT Attachments H-7B, H-8A and H-17C)	Charges: Each Network Customer that serves one or more end-use customers taking distribution service from PPL Electric Utilities Corporation, Duquesne Light Company, or PECO Energy Company under its applicable retail tariff on file with the Pennsylvania Public Utility Commission ("PPL Electric Distribution Customers", "Duquesne Electric Distribution Customers", and/or "PECO Energy Company Distribution Customers") shall pay a Monthly Deferred Tax Adjustment Charge. This charge permits PPL Electric, Duquesne Light and PECO Energy Company to recover a deferred income tax liability that is currently unfunded due to a Pennsylvania Public Utility decision to flow-through to customers certain income tax benefits.	Deferred Tax Adjustment Charge Summary
1957 2957	Schedule 11A PJM Net Manual 29, Section 2.4 OATT Schedule 11A	PJM Member request to purchase additional PJMnet connection(s) as described in the Open Access Transmission Tariff, Schedule 11A. PJM shall recover the costs of providing secure control center data communication ("PJMnet") in the manner set forth in this Schedule 11A from those Members who request additional PJMnet connections that are not required for reliability in the operation of the LLC or the Office of the Interconnection. Charges: The costs to be recovered under this Schedule 11A consist of the actual costs of owning, leasing, and operating PJMnet and all of its related assets.	
1980 1985 2980	Miscellaneous Bilateral Manual 29, Section 2.4	PJM Settlement administers agreed upon requests between specific PJM Members to bilaterally adjust their billing statement, as either charges or credits.	
1995	PJM Annual Membership Fee Manual 29, Section 2.4	Charges: The Primary/Voting Member, as described in PJM Manual 33, is charged an annual fee in for the upcoming calendar year membership.	

BLI ID	Billing Line Item	Description	Reports
1999	PJM Customer Payment Default (OATT Section 15.2.2)	<p>The PJM Board of Managers may direct billing Default Allocation Assessment(s) to non-defaulting PJM Members to recover the amount(s) not paid or recovered from any net buyer.</p> <p><u>Charges:</u> The default allocation assessment is equal to $.1 * (1 / \text{the total number of Members}) + .9 * (\text{the Member's gross activity as determined by summing the absolute values of the charges and credits for each of the Activity Line items as accounted for and billed for the month of default and the two previous months} / \text{the sum of gross activity for all eligible members})$</p> <p>The assessment value of $(0.1 * (1 / \text{number of eligible members}))$ shall not exceed \$10,000 per Member per calendar year, cumulative of all defaults, or more than once per Member default if Default Allocation Assessment charges for a single Member default span multiple calendar years.</p>	