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Witness: Aaron J. Doll
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Sponsoring Party: Empire District Electric Co.
Case No.: ER-2014-0351
Date Testimony Prepared: December 2014

**Before the Public Service Commission
of the State of Missouri**

Supplemental Direct Testimony

of

Aaron J. Doll

December, 2014



Empire Exhibit No. 104
Date 4-14-15 Reporter KF
File No. ER-2014-0351

SUPPLEMENTAL DIRECT TESTIMONY OF
AARON J. DOLL
ON BEHALF OF
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2014-0351

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. Aaron J. Doll. My business address is 720 S. Schifferdecker Avenue, Joplin, Missouri.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by The Empire District Electric Company (“Empire” or “Company”). My
6 title is Manager of Market Settlements & Systems.

7 **Q. ARE YOU THE SAME AARON J. DOLL WHO FILED DIRECT TESTIMONY**
8 **HEREIN?**

9 A. Yes. I filed Direct Testimony to support the inclusion of Integrated Marketplace-related
10 charges and transmission related revenue and expense into Empire’s Fuel Adjustment Clause
11 (“FAC”).

12 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT TESTIMONY**
13 **IN THIS CASE?**

14 A. My Supplemental Direct Testimony provides schedules mapping both revenues and costs
15 to the proposed FAC, including revenues and costs associated with transmission.
16 Furthermore, my schedules provide charge type descriptions and a glossary of terms.

17 **Q. WHY ARE FURTHER SCHEDULES BEING PROVIDED SURROUNDING**
18 **COSTS AND REVENUES ELIGIBLE FOR RECOVERY IN THE FAC?**

1 A. Based on discussions with the Office of Public Council (“OPC”), Empire has agreed to
2 provide additional details regarding Empire’s FAC. Although Empire believes its rate case
3 submissions were in full compliance with all Commission rules, including 4 CSR 240-
4 3.161(3)(H) and (I), the attached schedules provide additional clarity to the definition and
5 mapping of all of the FAC components, especially the relatively new Southwest Power
6 Pool (“SPP”) Integrated Marketplace charges and the Southwest Power Pool/Midwest
7 Independent System Operator (“MISO”) transmission charges which Empire has requested
8 to include as components of its proposed FAC.

9 **Q. PLEASE DESCRIBE SUPPLEMENTAL SCHEDULE AJD-1.**

10 A. Schedule AJD-1 is the mapping of current and proposed general ledger accounts to the
11 tabular form of the current FAC tariff language.

12 **Q. PLEASE DESCRIBE SUPPLEMENTAL SCHEDULE AJD-2.**

13 A. Schedule AJD-2 is the listing and description of the current general ledger accounts with
14 eligible costs and revenues currently included in the proposed FAC. In the case of SPP
15 Integrated Marketplace-related charges, further details are provided denoting charge type
16 and netting processes/intervals when possible.

17 **Q. PLEASE DESCRIBE SUPPLEMENTAL SCHEDULE AJD-3.**

18 A. Schedule AJD-3 is the listing, description, and further details of the transmission-related
19 general ledger accounts with eligible costs and revenues currently included in the proposed
20 FAC.

21 **Q. PLEASE DESCRIBE SUPPLEMENTAL SCHEDULE AJD-4.**

1 A. Schedule AJD-4 is a glossary describing: charge types related to the SPP Integrated
2 Marketplace, SPP Transmission Schedules, MISO transmission schedules, and other
3 common transmission terms.

4 **Q. ARE THE SPP INTEGRATED MARKET AND SPP TRANSMISSION CHARGES**
5 **SUBJECT TO CHANGE IN THE FUTURE?**

6 A. Yes. The SPP Integrated Market is in its first year of operation, and the charge types are
7 certain to evolve over time. Empire's proposed FAC includes the flexibility to capture the
8 impact of the evolving charges in both the Integrated Market and transmission areas.

9 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?**

10 A. Yes, at this time.

SUPPLEMENTAL SCHEDULE AJD-1

FC 501 & 506		
#	Description	Accounts
1	Coal Commodity and railroad transportation	501042, 501400, 501401, 501601, 501604, 501605, 501011
2	switching and demurrage charges	
3	applicable taxes	
4	natural gas costs	501054
5	alternative fuels	501300
6	fuel additives	
7	Btu adjustments assessed by coal suppliers	
8	Quality adjustments assessed by coal suppliers	
9	Fuel hedging costs	501211, 501212, 501216
10	fuel adjustments included in commodity and transportation costs	
11	broker commissions and fees associated with price hedges	501607
12	oil costs	501045
13	propane costs	
14	combustion product disposal revenues and expenses	501183
15	consumables related to AQCS (ammonia, lime, limestone, powder activated carbon, urea, sodium bicarbonate, & trona)	506127, 506128, 506129, 506201, 506202, 506203, 506204
16	settlement proceeds	
17	insurance recoveries	
18	subrogation recoveries for increased fuel expenses in Account(s) 501	

SUPPLEMENTAL SCHEDULE AJD-1

FC		547 & 548
#	Description	Accounts
1	Natural gas generation costs related to commodity	547205, 547206, 547207, 547208, 547210, 547605, 547606
2	oil	547213
3	transportation	
4	storage	
5	capacity reservation	
6	fuel losses	
7	hedging costs for natural gas	547211, 547212, 547301
8	oil	
9	natural gas used to cross-hedge purchased power	
10	fuel additives	548202
11	settlement proceeds	
12	insurance recoveries	
13	subrogation recoveries for increase fuel expenses	
14	broker commissions	547607
15	fees and revenues and expenses resulting from fuel and transportation portfolio optimization activities	

SUPPLEMENTAL SCHEDULE AJD-1

PP		555, 565, 457
#	Description	Accounts
1	Purchased Power costs	555430, 555437
2	PPA demand (capacity) cost (< 1 Year PPA)	565419
3	settlements	
4	insurance recoveries	
5		
6	subrogation recoveries for purchased power expenses	
7	virtual energy charges	555820, 555920
8	generating unit price adjustments	
9	load/export charges	555910, 555810
10	energy position charges	555800, 555900
11	ancillary services including penalty & distribution charges	555840, 555850, 555860, 555870, 555940, 555950, 555960, 555970
12	broker commissions	
13	fees and margins	
14	SPP energy marketing charges including but not limited to:	
14a	Energy	555800, 555810, 555820, 555900, 555910, 555920
14b	Ancillary Services	555840, 555850, 555860, 555870, 555940, 555950, 555960, 555970
14c	Revenue Sufficiency	555880
14d	Losses	
14e	Revenue Neutrality	555880
14f	Congestion Management	555990, 555995
14g	Demand Reduction	555880
14h	Grandfathered Agreements	555880
14i	Virtual Transaction Fee	555880
14j	Pseudo Tie	555980
14k	Miscellaneous	555980

SUPPLEMENTAL SCHEDULE AJD-1

PP 555, 565, 457		
#	Description	Accounts
15	Non-Spp costs/revenues (MISO, PJM, etc)	555430
16	<u>Costs not received from centrally administrated market including:</u>	
16a	Costs for purchases of energy	
16b	Costs for purchases of generation capacity (< 1 year)	
16c		
17	SPP NITS service Charges (Schd 11)	565414, 457141, 457142
18	<u>SPP Point-to-point revenue</u>	
18a	Schedule 7 - Firm PTP	457137
18b	Schedule 8 Non-firm PTP	457138
18c	Schedule 1 Sc	457160
19	Schedule 1a - SPP Tariff Administration	565414
20	SPP Schedule 12 - FERC Assessment	565415
21	<u>Non SPP costs/revenues associated with:</u>	
21a	Network transmission service	
21b	Point-to-point transmission	565416
21c	System control & dispatch	565416
21d	Reactive supply & voltage control	565416

E 509, 411		
#	Description	Accounts
1	Net Emission Allowances	411800, 509052

OSSR 447		
#	Description	Accounts
1	Revenue from off-system sales	447113, 447124, 447133, 447143, 447810, 447820, 447830, 447840

REC 456		
#	Description	Accounts
1	Renewable Energy Credit Revenue	456071, 456072, 456073, 456074

SUPPLEMENTAL SCHEDULE AJD-2

GL	Descriptions	Details
501011	Conv & Seminar-Fuel	
501042	Fuel - Coal	
501045	Fuel - Oil	
501054	Fuel - Natural Gas	
501183	Sales Of Ash	
501211	Ineffect (Gain)Loss Deri Steam	
501212	Effective (Gn)Lss Deriv Steam	
501216	NonFAS133Deriv(Gain)/LossSteam	
501300	Fuel - Tires	
501400	Ops Labor-Fuel Handling	
501401	Ops Mtls-Fuel Handling	
501601	Fuel Administration - Asbury	
501604	Fuel Administration - Riverton	
501605	Fuel Administration Plum Point	
501607	Fuel Adm E Trader Commission	
547205	Natural Gas SLCC Tolling	
547206	Nat Gas-Tolling SLCC Ineffectiv	
547207	Nat Gas-Tolling SLCC Effective	
547208	Comb Turb Fuel Sales - Nat Gas	
547210	Combust Turb Fuel Natural Gas	
547211	Ineffect (Gain)Loss Deriv Gas	
547212	Effective (Gain)Loss Deriv Gas	
547213	Fuel - No 2 Oil Fuel	
547301	NonFAS133 Deriv (Gain)/Loss	
547605	Fuel Adm State Line	
547606	Fuel Adm Energy Center	
547607	Fuel Adm E Traders Commission	
411800	Gains-Disposition Emmiss Allow	
509052	Emission Allowance Exp	
456071	Misc Elec Rev-Green Credits-AR	
456072	Misc Elec Rev-Green Credits-KS	
456073	Misc Elec Rev-Green Credits-MO	
456074	Misc Elec Rev-Green Credits-OK	
506127	Limestone Expense - Iatan	
506128	Powdered Activated Carbon	
506129	Ammonia Expense	
506201	Limestone Expense	
506202	Ammonia Expense	
506203	Powdered Activated Carbon	
506204	Lime Expense	
548202	Ammonia Expense	
447113	Gen Ark Off-Sys Sale-Resale	
447124	Gen Ks Off-System Sale-Resale	
447133	Gen Mo Off-Sys Sale-Resale	
447143	Gen Ok Off-Sys Sales-Resale	

SUPPLEMENTAL SCHEDULE AJD-2

GL	Descriptions	Details
555430	Direct Purchases	Long-term PPA's, MISO congestion and losses, AECI Line losses, MISO Inadvertent, MISO Schedule 24, MISO ARR Distribution, MISO ARR Transaction, MISO Miscellaneous
555431	Purchase Power Tolling Fees	No longer in use
555432	Energy Imbalance	No longer in use
555437	Interrupt Svc Compensation	
555800	DA Asset Energy	Net DA Asset Energy, netted by MWh position (purchase or sale) per settlement interval
555810	DA Non-Asset Energy	Net DA Non Asset Energy, netted by MWh position (purchase or sale) per settlement interval
555820	DA Virtual Energy	Net DA Virtual Energy, netted by MWh position (purchase or sale) per settlement interval
555840	DA Reg-Up	Net DA Regulation-Up Amount & DA Regulation-Up Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555850	DA Reg-Down	Net DA Regulation-Down Amount & DA Regulation-Down Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555860	DA Spinning	Net DA Spinning Amount & DA Spinning Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555870	DA Supplemental	Net DA Supplemental Amount & DA Supplemental Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555880	DA Other	<u>Other DA charges that settle at the EDE EDE Load node including:</u> DA Make Whole Payment (MWP), DA MWP Distribution, DA Over-collected losses Distribution Amount, DA Demand Reduction (DR), DA DR Distribution Amount, DA Grandfathered Agreement (GFA) Carve-Out Daily, DA GFA Carve-Out Monthly, DA GFA Carve-Out Yearly, GFA Carve-Out Distribution Daily Amount, GFA Carve-Out Distribution Monthly Amount, GFA Carve-Out Distribution Yearly Amount, DA Virtual Transaction Fee Amount

SUPPLEMENTAL SCHEDULE AJD-2

GL	Descriptions	Details
555900	RT Asset Energy	Net RT Asset Energy, netted by MWh position (purchase or sale) per settlement interval
555910	RT Non-Asset Energy	Net RT Non Asset Energy, netted by MWh position (purchase or sale) per settlement interval
555920	RT Virtual Energy	Net RT Virtual Energy, netted by MWh position (purchase or sale) per settlement interval
555940	RT Reg-Up	Net RT Regulation-Up Amount & RT Regulation-Up Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555950	RT Reg-Down	Net RT Regulation-Down Amount & RT Regulation-Down Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555960	RT Spinning	Net RT Spinning Amount & RT Spinning Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555970	RT Supplemental	Net RT Supplemental Amount & RT Supplemental Distribution Amount, netted by dollars (revenue or expense) per settlement interval
555980	RT Other	<u>Other RT charges that settle at the EDE EDE Load node including:</u> Reliability Unit Commitment (RUC) MWP, RUC MWP Distribution Amount, RT Over Collected Losses Distribution Amount, RT Regulation Non-performance, RT Regulation Non-performance Distribution, RT Contingency Reserve Deployment Failure, RT Contingency Reserve Deployment Failure Distribution Amount, RT Regulation Deployment Adjustment, RT Out of Merit, RT Joint Operating Agreement, RT Reserve Sharing Group (RSG), RT RSG Distribution Amount, RT DR, RT DR Distribution Amount, RT Revenue Neutrality Uplift Distribution, RT Miscellaneous, RT Psuedo-Tie Congestion Amount, RT Psuedo-Tie Losses Amount
555990	TCR Activity	All TCR charges including: TCR Funding Amount, TCR Daily Uplift Amount, TCR Monthly Payback Amount, TCR Annual Payback Amount, TCR Annual Closeout Amount, TCR Auction Transaction Amount
555995	ARR Activity	All ARR Charges including: ARR Funding Amount, ARR Uplift Amount, ARR Monthly Payback Amount, ARR Annual Payback, ARR Annual Closeout Amount,
447430	Aec - Off-Sys-Missouri	No longer in use
447540	Oklahoma G R D A Off-System	No longer in use
447610	Energy Imbalance - Arkansas	No longer in use
447620	Energy Imbalance - Kansas	No longer in use
447630	Energy Imbalance - Missouri	No longer in use
447640	Energy Imbalance - Oklahoma	No longer in use
447810	SPP IM Revenue - AR	The Arkansas share of any and all of the above charge types that net to a revenue per the appropriate netting procedure(s)
447820	SPP IM Revenue - KS	The Kansas share of any and all of the above charge types that net to a revenue per the appropriate netting procedure(s)
447830	SPP IM Revenue - MO	The Missouri share of any and all of the above charge types that net to a revenue per the appropriate netting procedure(s)
447840	SPP IM Revenue - OK	The Oklahoma share of any and all of the above charge types that net to a revenue per the appropriate netting procedure(s)
565419	Off Sys Sales Trans Costs	Was listed on proposed accounts, should have been on current accounts; no longer in use

SUPPLEMENTAL SCHEDULE AJD-3

GL	Descriptions	Details
565413	Trans Of Electricity By Others	Currently unused since 2010
565414	SPP Fixed Chg - Native Load	SPP Transmission charges including: Schedule 11 SPP Base Plan Funding Regional, Schedule 11 SPP Base Plan Funding Zonal, Schedule 1A Tariff Administration, and any appropriate adjustment charges relating to the aforementioned charges
565415	SPP Var Chg - Native Load	Schedule 12 FERC Assessment Charge
565416	Non SPP Fixed Chg -Native Load	Transmission charges associated with an interconnect agreement with City Utilities Springfield for the Nichols substation & MISO related <u>transmission charges relating to Empire's Plum Point JOU including:</u> Schedule 7 Firm Point-to-point, Schedule 26 Network upgrades change from Transmission Expansion Plan, Schedule 45 Cost Recovery of NERC Recommended Action, Schedule 1 System Control & Dispatch, Schedule 2 Reactive Supply & Voltage Control Schedule 3 Regulation Reserve, Schedule 10 Demand & Energy Charges (FERC Assessment Charge)
565417	PP Non SPP Var - Native Load	Former Non-SPP variable Charge; no longer used
565418	Gen Non SPP Var - Native Load	Former Non-SPP variable Charge; no longer used
457133	Oth El Rev-Reg & Freq Response	Regulation & Frequency Response; no charges beginning March 1, 2014. Regulation products are now handled through the IM
457135	Oth El Rev-Oper ReservSpinning	Spinning Reserve; no charges beginning March 1, 2014. Operating Reserve products are now handled through the IM
457136	Oth El Rev-Oper Reserv Supplem	Supplemental Reserve; no charges beginning March 1, 2014. Operating Reserve products are now handled through the IM
457137	Ot El RvOffSys LTFSTF PTP Trns	Schedule 7 Firm Point-to-Point Revenue
457138	Ot El RvOffSys NnFrm PTP Trns	Schedule 8 Non-Firm Point-to-Point Revenue
457139	Ot El RvOffSys NITS Rev	Schedule 9 Network Revenue; not included due to matching of revenue and expense (pay ourselves) with the exception of the muni's
457140	Oth El Rev-Off-Sys Losses	No charges beginning March 1, 2014. Losses are now handled through the IM; no longer used
457141	Sch 11 NITS	Schedule 11 NITs Revenue
457142	Sch 11 PTP	Schedule 11 Point-to-Point revenue
457160	Sch 1 PTP	Schedule 1 System Control & Dispatch
924XXX	Insurance premium for replacement power	Insurance Premium for replacement power - No sub-account currently so not mapped at this point
547210	Natural gas and fixed transportation & fixed storage	547210 is a current FAC account, however, currently fixed transportation and fixed storage are removed before FAC calculation

SUPPLEMENTAL SCHEDULE AJD-4

Charge	Definition
Day Ahead Asset Energy	Settlement of the net DA Market energy position at an Asset Owner's resources and loads.
Day Ahead Non-Asset Energy	Settlement of the net Day Ahead Market energy position at locations other than an asset owner's
Day Ahead Virtual Energy	Settlement of the net Day Ahead Market energy position of an asset owner's cleared virtual bids &
Day Ahead Regulation Up	Settlement of the net Day Ahead Market cleared regulation-up at an asset owner's resources
Day Ahead Regulation Down	Settlement of Day Ahead Market cleared regulation-down at an asset owner's resources (ancillary
Day Ahead Spinning Reserve	Settlement of Day Ahead Market cleared spinning reserve at an asset owner's resources (ancillary
Day Ahead Supplemental Reserve	Settlement of Day Ahead Market cleared supplemental reserve at an asset owner's resources
Day Ahead Regulation Up Distribution	Cost allocation of Day Ahead Market cleared regulation-up to an asset owner's zonal obligation
Day Ahead Regulation Down Distribution	Cost allocation of Day Ahead Market cleared regulation-down to an asset owner's zonal obligation
Day Ahead Spinning Reserve Distribution	Cost allocation of Day Ahead Market cleared spinning reserve to an asset owner's zonal obligation
Day Ahead Supplemental Reserve Distribution	Cost allocation of Day Ahead Market cleared supplemental reserve to an asset owner's zonal
Day Ahead Make Whole Payment	Revenue guarantee to resources committed economically in the Day Ahead Market (payment to the
Day Ahead Make Whole Payment Distribution	Cost allocation of make whole payment for resources committed in the Day Ahead Market to an
Day Ahead Over-Collected Loss Distribution	Rebate of surplus collected as a result of the marginal pricing of losses (over-collection of marginal
Day Ahead Virtual Energy Transaction Fee	Fee for virtual bids & offers
Day Ahead Demand Reduction	Credit (or charge) required in order to remove the settlement impact of grossing up the host load by
Day Ahead Demand Reduction Distribution	Charge (or credit) calculated for each AO for each hour in which a DRR was cleared in order to fund the credits paid for Demand Response Reduction.
DA Grandfathered Agreement (GFA) Carve-Out Daily	Daily charge or credit to non-GFA market participants relating to market charges, excluding ARR/TCR, that cause revenue insufficiency as a result of existing SPP Grandfathered Agreements as defined in the SPP Open Access Transmission Tariff
DA Grandfathered Agreement (GFA) Carve-Out Monthly	Monthly charge or credit to non-GFA market participants relating to market charges, excluding ARR/TCR, that cause revenue insufficiency as a result of existing SPP Grandfathered Agreements as defined in the SPP Open Access Transmission Tariff
DA Grandfathered Agreement (GFA) Carve-Out Yearly	Yearly charge or credit to non-GFA market participants relating to market charges, excluding ARR/TCR, that cause revenue insufficiency as a result of existing SPP Grandfathered Agreements as defined in the SPP Open Access Transmission Tariff
GFA Carve-Out Distribution Daily Amount	Daily charge or credit to non-GFA market participants relating to ARR/TCR that cause revenue imbalance as a result of existing SPP Grandfathered Agreements as defined in the SPP Open Access Transmission Tariff
GFA Carve-Out Distribution Monthly Amount	Monthly charge or credit to non-GFA market participants relating to ARR/TCR that cause revenue imbalance as a result of existing SPP Grandfathered Agreements as defined in the SPP Open Access Transmission Tariff
GFA Carve-Out Distribution Yearly Amount	Yearly charge or credit to non-GFA market participants relating to ARR/TCR that cause revenue imbalance as a result of existing SPP Grandfathered Agreements as defined in the SPP Open Access Transmission Tariff

SUPPLEMENTAL SCHEDULE AJD-4

Charge	Definition
Real-Time Asset Energy	Settlement of the net Real Time Balancing Market (RTBM) incremental energy position at an asset
Real-Time Non-Asset Energy	Settlement of the net RTBM incremental energy position at locations other than an asset owner's
Real-Time Virtual Energy	Settlement of the net RTBM energy position of an asset owner's cleared virtual bids & offers
Real-Time Regulation Up	Settlement of RTBM incremental cleared regulation-up at an asset owner's resources
Real-Time Regulation Down	Settlement of RTBM incremental cleared regulation-down at an asset owner's resources
Real-Time Spinning Reserve	Settlement of RTBM incremental cleared spinning reserve at an asset owner's resources
Real-Time Supplemental Reserve	Settlement of RTBM incremental cleared supplemental reserve at an asset owner's resources
Real-Time Regulation Up Distribution	Cost Allocation of RTBM incremental settlement of regulation-up by load ratio share
Real-Time Regulation-Down Distribution	Cost Allocation of RTBM incremental settlement of regulation-down by load ratio share
Real-Time Spinning Reserve Distribution	Cost Allocation of RTBM incremental settlement of spinning reserve by load ratio share
Real-Time Supplemental Reserve Distribution	Cost allocation of RTBM incremental settlement of supplemental reserve by load ratio share
Reliability Unit Commitment (RUC) Make Whole	Revenue guarantee to resources committed economically in the RTBM
Reliability Unit Commitment (RUC) Make Whole	Cost allocation of make whole payment for resources committed in RUC to an asset owner's RTBM
Real-Time Over-Collected Losses Distributions	Rebate of surplus collected as a result of the marginal pricing of losses
Real-Time Revenue Neutrality Uplift Distribution	Uplift of the imbalance from all other settlement charge types
Real-Time Regulation Non-Performance	Charge for operating outside of tolerance for cleared Reg-Up or Reg-Down in RTBM.
Real-Time Contingency Reserve Deployment Failure	Penalty for failing to provide contingency reserve when deployed
Real-Time Regulation Deployment Adjustment	Adjustment to resource revenue for the combined impact of energy and regulation deployment
Real-Time Out of Merit Energy	Adjustment to compensate resources for additional cost incurred as a result of being manually
Real-Time Joint Operating Agreement	Payment for price coordination of a co-managed reciprocal flow gate
Real-Time Reserve Sharing Group	Settlement for response to a contingency reserve event
Real-Time Reserve Sharing Group Distribution	RT load ratio share of the RT reserve sharing event
Real-Time Regulation Non-Performance	Cost allocation of penalties collected for regulation non-performance
Real-Time Regulation Non-Performance Distribution	RT load ratio share of the RT regulation non-performance amount
Real-Time Contingency Reserve Deployment Failure	Cost allocation of penalties collected for contingency reserve failure
Real-Time Contingency Reserve Deployment Failure	RT load ratio share of the RT contingency reserve deployment failure amount
Real-Time Reserve Sharing Group Distribution	Cost allocation of settlement for reserve sharing group events

SUPPLEMENTAL SCHEDULE AJD-4

Charge	Definition
Miscellaneous	recalculation to previously billed charges that cannot be handled through a standard final settlement or resettlement execution for that operating day. This is anticipated to occur only on an
Real-Time Demand Reduction	Credit (or charge) required in order to remove the settlement impact of grossing up the host load by
Real-Time Demand Reduction Distribution	Charge (or credit) calculated for each AO for each hour in which a DRR was cleared in order to fund
RT Psuedo-Tie Congestion Amount	Congestion amount for each resource or load that has pseudo-tied out of SPP balancing authority for each dispatch interval of the Operating Day
RT Psuedo-Tie Losses Amount	Loss amount for each resource or load that has pseudo-tied out of SPP balancing authority for each dispatch interval of the Operating Day
Transmission Congestion Rights Funding	A financial right that entitles the holder to a share of the congestion revenue collected in the Day-Ahead Market.
Transmission Congestion Rights Daily Uplift	Allocation of the deficit between congestion collections and TCR funding
Transmission Congestion Rights Monthly Payback	Use of excess congestion in a month to payback uplift in that month
Transmission Congestion Rights Annual Payback	Use of excess congestion in a year to payback remaining uplift in that year
Transmission Congestion Rights Annual Closeout	Allocation of the net difference between ARR value and the daily settlement of TCR auctions
Transmission Congestion Rights Auction Transaction	Settlement of the purchase or sale of a TCR instrument at auction
Auction Revenue Rights Funding	A financial right, awarded during the annual ARR allocation process and/or monthly ARR allocation process, that entitles the holder to a share of the auction revenues generated in the applicable
Auction Revenue Rights Daily Uplift	Allocation of the net difference between ARR value and the daily settlement of TCR auctions
Auction Revenue Rights Monthly Payback	Allocation of the net difference between ARR value and the monthly settlement of TCR auctions
Auction Revenue Rights Annual Payback	Use of excess auction revenue in a year to payback uplift in that year
Auction Revenue Rights Annual Closeout	Allocation of the net difference between ARR value and the daily settlement of TCR auctions

SUPPLEMENTAL SCHEDULE AJD-4

Charge	Definition
Schedule 11 Base Plan Funding Zonal Expense (SPP)	Zonal component of the charge assessed by the Transmission Provider in accordance with Schedule 11 to recover the revenue requirement of facilities classified as Base Plan Upgrades.
Schedule 11 Base Plan Funding Regional Expense (SPP)	Regional component of the charge assessed by the Transmission Provider in accordance with Schedule 11 to recover the Region-wide Annual Transmission Revenue Requirement.
Schedule 11 Base Plan NITS zonal revenue	The Transmission Customer shall pay all charges assessed pursuant to Schedule 11 to the extent the zonal revenue from such charges is not recovered by the Transmission Provider from the Transmission Customer
Schedule 11 Base Plan NITS regional revenue	The Transmission Customer shall pay all charges assessed pursuant to Schedule 11 to the extent the regional revenue from such charges is not recovered by the Transmission Provider from the Transmission Customer
Schedule 1a - Tariff Administration (SPP)	The Transmission Provider shall provide Tariff Administration Service to carry out its responsibilities under this Tariff. The Transmission Customer must purchase this service from the Transmission Provider.
Schedule 12 - FERC Assessment (SPP)	Schedule 12 provides for recovery of the estimated amount to be assessed by the Commission in the next year for transmission service provided in the current year, with subsequent true-up to actual cost, when such cost is known.
Schedule 7 Firm PTP (SPP)	The Transmission Customer shall pay the zonal rate (per kW of reserved capacity) based upon the Zone where the load is located for Firm Point-To-Point Transmission Service where the generation
Schedule 8 Non-firm PTP (SPP)	The Transmission Customer shall pay the zonal rate (per KW of reserved capacity) based upon the Zone where the load is located for Non-Firm Point-To-Point Transmission Service where the generation source is outside the SPP Region and the load is located within the SPP Region and for Non-Firm Point-To-Point Transmission Service where both the generation source and the load are located within the SPP Region.
Schedule 1 System Control & Dispatch (SPP)	Scheduling, System Control and Dispatch Service is required to schedule the movement of power through, out of, within or into a Control Area.
Schedule 9 Network Revenue (SPP)	The Transmission Customer shall compensate the Transmission Provider for Network Integration Transmission Service at the applicable charges set forth below in addition to other applicable charges specified in the Tariff.

SUPPLEMENTAL SCHEDULE AJD-4

Charge	Definition
Schedule 7 Firm PTP (MISO)	Firm PTP transmission from MISO needed in order to psuedo-tie Plum Point out of MISO and into SPP
Schedule 2 Reactive Supply & Voltage Control (MISO)	In order to maintain Transmission System voltages within acceptable limits, generation facilities and non-generation resources capable of providing this service that are connected to the Transmission System are operated to produce (or absorb) reactive power. Reactive Supply and Voltage Control from Generation or Other Sources Service (Reactive Supply) must be provided to support each transaction on the Transmission System.
Schedule 10 Demand/Energy Charges - FERC Assessment (MISO)	Schedule 10-FERC recovers the Transmission Provider's obligation to the Commission for its annual charge.
Schedule 26 Network upgrades (MISO)	The Transmission Customer shall compensate the Transmission Provider the current Network Upgrade Charge ("NUC") for Reserved Capacity at the sum of the applicable charges set forth below in addition to all other charges for Transmission Service for which the Transmission Customer is responsible under this Tariff.
Schedule 45 Cost recovery of NERC recommended action (MISO)	Charges incurred by the Transmission Customer based on "essential" actions taken to ensure the reliability of the bulk transmission system
Schedule 1 System Control & Dispatch (MISO)	This service is required to schedule the movement of power through, out of, within or into the MISO Balancing Authority Area
Base plan upgrades	Those upgrades included in and constructed pursuant to the SPP Transmission Expansion Plan in order to ensure the reliability of the Transmission System. Base Plan Upgrades shall also include: (i) those Service Upgrades required for new or changed Designated Resources to the extent allowed for in Attachment J to this Tariff, (ii) ITP Upgrades that are approved for construction by the SPP Board of Directors, and (iii) high priority upgrades, excluding Balanced Portfolios, that are approved for construction by the SPP Board of Directors. For Zones 1 through 15, all such upgrades shall specifically exclude planned Transmission System facilities identified in the SPP Transmission Expansion Plan that are: (i) placed in service during the 2005 calendar year or (ii) required to be in service to meet the SPP Criteria and the NERC Reliability Standards for the summer of 2005. For Zones 16, 17, and 18, all such upgrades shall specifically exclude planned Transmission System facilities in those zones identified in the SPP Transmission Expansion Plan Report (2009 – 2018) that are required to be in service to meet the SPP Criteria and the NERC Reliability Standards for the summer of 2008 or which are in operation prior to January 1, 2009, except for those upgrades that are in service prior to January 1, 2009 and are components of Phase 1 of the NPPD 345kV Norfolk to Lincoln (ETR) project or OPPD Sub 1255/3455 Transformer project. Network Upgrades that are components of Phase 1 of the NPPD 345kV Norfolk to Lincoln (ETR) project or OPPD Sub 1255/3455 Transformer project that are in service prior to January 1, 2009 will be Base Plan Upgrades, however, the Zonal component of the costs shall be 100% allocated to the respective host zone.