ATTACHMENT J

Recovery Of Costs Associated With New Facilities

I1. Direct Assignment Facilities

Where a System Impact and/or Facilities Study indicates the need to construct Direct Assignment Facilities to accommodate a request for Transmission Service, the Transmission Customer shall be charged the full cost of such Direct Assignment Facilities. Such costs shall be specified in a Service Agreement.

II2. Network Upgrades

~~a. The costs of completed Network Upgrades shall be handled as follows:~~

~~i. Prior to February 1, 2006:~~

~~The Transmission Customer(s) requesting Transmission Service which requires Network Upgrades shall pay the costs associated with those Network Upgrades to the extent consistent with Commission policy. Such costs shall be specified in a Service Agreement to be filed with the Commission.~~

~~ii. Beginning February 1, 2006:~~

~~All Network Upgrades constructed for service under this Tariff shall be rolled-in with all other transmission facilities. There shall be no direct assignment of Network Upgrade costs to Transmission Customers. However, the Transmission Provider shall not allow the construction and roll-in of a Network Upgrade when the Transmission Provider finds more economic or efficient alternatives. This roll-in of Network Upgrade costs shall not include the portion of any such Network Upgrades paid for during the Transition Period through direct assignment to Transmission Customer(s).~~

There shall be four types of Network Upgrades: Base Plan Upgrades, Economic Upgrades, Requested Upgrades, and generation interconnection related Network Upgrades as defined in Attachment V to this Tariff. The costs of completed Network Upgrades shall be allocated as specified in Sections III through VI of this Attachment.

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III. Base Plan Upgrades

A single Base Plan Upgrade is comprised of any upgrade or group of upgrades required to be made to a single transmission circuit, where a transmission circuit is comprised of all elements load carrying between circuit breakers or the comparable switching devices.

A. Allocation of Base Plan Upgrade Costs

1. If the cost of a Base Plan Upgrade is less than or equal to $100,000, the annual transmission revenue requirement associated with such Base Plan Upgrade shall be allocated to the Base Plan Zonal Annual Transmission Revenue Requirement of the Zone in which the Base Plan Upgrade is located.

2. If the cost of a Base Plan Upgrade is greater than $100,000, then:

i. X% of the annual transmission revenue requirement associated with such Base Plan Upgrade shall be allocated to the Base Plan Region-wide Annual Transmission Revenue Requirement and recovered through the Base Plan Region-wide Charge. The initial value of X shall be 33%.

ii. (100-X)% of the annual transmission revenue requirement associated with such Base Plan Upgrade shall be allocated to the Base Plan Zonal Annual Transmission Revenue Requirement and recovered through the Base Plan Zonal Charge. This portion of the annual transmission revenue requirement for each Base Plan Upgrade shall be allocated to the Base Plan Zonal Annual Transmission Revenue Requirement of specific Zones based on the Zones' share of the incremental MW-mile benefits as computed in Section 4 of Attachment S to this Tariff. Each Zone with a benefit of at least 10 MW-miles from a given Base Plan Upgrade shall be allocated a portion of the Base Plan Zonal Annual Transmission Revenue Requirement for such upgrade based on its incremental MW-mile benefit divided by the sum of the incremental MW-mile benefits for all of those Zones with a benefit of at least 10 MW-miles from the upgrade.

B. Conditions for Classifying Upgrades Associated with Designated Resources As Base Plan Upgrades

If the cost of any Network Upgrade or group of Network Upgrades to a single transmission circuit associated with a new or changed Designated Resource is less than or equal to $100,000: (i) such upgrade(s) shall be classified as a Base Plan Upgrade; and (ii) the annual transmission revenue requirement associated with such upgrade(s) shall be allocated in accordance with Section III.A.1.

Network Upgrades, with a cost that exceed $100,000, associated with new or changed Designated Resources shall be classified as Base Plan Upgrades if the Designated Resource or the associated upgrades (as applicable) meets each of the following conditions:

1. The Transmission Customer's commitment to the Designated Resource has a duration of at least five years;
2. In the first year the Designated Resource is planned to be used by the Transmission Customer, the accredited capacity of the Transmission Customer's existing Designated Resources plus the lesser of: (a) the planned maximum net dependable capacity applicable to the Transmission Customer or (b) the requested capacity; shall not exceed 125% of the Transmission Customer's projected system peak responsibility determined pursuant to SPP Criteria 2; and
3. The cost of Network Upgrades associated with the new or changed Designated Resource is less than or equal to $180,000/MW times the lesser of: (a) the planned maximum net dependable capacity applicable to the Transmission Customer or (b) the requested capacity (the "Safe Harbor Cost Limit").

The Transmission Customer must provide SPP the information that SPP deems necessary to verify that the new or changed Designated Resource meets conditions 1 and 2 above.

If the Designated Resource or the associated upgrades (as applicable) does not meet the conditions set forth in 1 and 2 above, and the Transmission Customer does not secure a waiver of the relevant condition(s), the costs of the upgrades will be directly assigned to the Transmission Customer. If the costs of upgrades associated with a new or changed Designated Resource exceeds the Safe Harbor Cost Limit, and the Transmission Customer does not secure a waiver of that limit, the costs of the upgrades in excess of the limit will be directly assigned to the Transmission Customer. The Transmission Customer shall receive transmission

revenue credits in accordance with Attachment Z to this Tariff for any such directly assigned costs.

C. Waiver of Conditions for Classifying Upgrades Associated with Designated Resources As Base Plan Upgrades

1. Waiver Process

If the Designated Resource or the associated upgrade (as applicable) does not meet one or more of the conditions in Section III.B. of this Attachment, the Transmission Customer may seek a waiver from SPP in order that the costs of the Network Upgrade may be classified in whole or in part as Base Plan Upgrade costs.

If the Designated Resource does not meet the conditions set forth in Section III.B.1. or III.B.2. of this Attachment, the Transmission Customer must submit its request for a waiver to SPP simultaneous with its designation of a new or changed Designated Resource to be included in the SPP Transmission Expansion Plan.

Studies performed by SPP as part of the transmission expansion planning process will determine whether the costs for Network Upgrades associated with a new or changed Designated Resource may exceed the Safe Harbor Cost Limit. If SPP determines that the costs for Network Upgrades associated with a new or changed Designated Resource may exceed the Safe Harbor Cost Limit, SPP shall notify the affected Transmission Customer. If the affected Transmission Customer intends to request a waiver regarding the costs in excess of the Safe Harbor Cost Limit, the Transmission Customer must submit to SPP its request for a waiver within 15 days of such notice.

Following receipt of a request for a waiver, SPP will review the request and make a determination on a non-discriminatory basis of whether a waiver should be granted based upon consideration of the factors described in Section III.C.2. of this Attachment. The Transmission Customer requesting the waiver shall be responsible for the reasonable costs of any studies that SPP performs in

making its determination. SPP will provide a report and recommendation to the Markets and Operations Policy Committee for each requested waiver. The Markets and Operations Policy Committee will consider the waiver request and the SPP report and recommendation, and will provide its own recommendation (along with the SPP report and recommendation) regarding each requested waiver to the SPP Board of Directors. Barring unusual circumstances, a valid waiver request will be reviewed and submitted to the SPP Board of Directors within 120 days following the receipt of the waiver request.

2. Factors to be Considered in Evaluating Waiver Requests

Any waiver request submitted by a Transmission Customer pursuant to Section III.C.1. of this Attachment shall be evaluated based upon the following general factors, including but not limited to:

i. There are insufficient competitive resource alternatives for one or more Transmission Customers.

ii. The resource that is the subject of the designation utilizes a source of fuel that benefits the SPP Region by providing needed fuel diversity.

iii. In the event that the aggregate costs of a Network Upgrade exceed the Safe Harbor Cost Limit, (i) those costs up to the level of the Safe Harbor Cost Limit shall be classified as Base Plan Upgrade costs, and (ii) those costs that exceed the Safe Harbor Cost Limit may be classified in whole or in part as Base Plan Upgrade costs taking into account the extent to which the duration of the Transmission Customer's commitment to the new or changed Designated Resource exceeds the five-year commitment period set forth in paragraph III.B.1 above.

iv. The five-year commitment period for the new or changed Designated Resource may be waived if: (i) the associated Network Upgrade costs are significantly less than the Safe Harbor Cost Limit; or (ii) the associated Network Upgrades provide benefits to other Transmission Customers that would offset in less than five years any costs allocated to them as a result of the upgrade being classified as a Base Plan Upgrade.

v. If a request for a waiver is received by SPP based upon other circumstances, such waiver request shall also be considered pursuant to the waiver process described in Section III.C.1. of this Attachment.

If the costs of the Network Upgrade(s) required for a new or changed Designated Resource are not eligible for classification as Based Plan Upgrade costs, the Transmission Customer may nevertheless request the construction of such upgrades. In such event, the costs of such upgrades shall be allocated in accordance with Section V of this Attachment.

D. Review of Base Plan Allocation Methodology

1. SPP shall review the reasonableness of the regional allocation factor (X%) and the zonal allocation methodology at least once every five years. The SPP and/or the Regional State Committee may initiate a review of the regional allocation factor and/or the zonal allocation methodology if either body determines that circumstances warrant. Any change in the regional allocation factor and/or the zonal allocation methodology shall be filed with the Commission.

2. For each SPP Transmission Expansion Plan, SPP shall calculate the cost allocation impacts of the Base Plan Upgrades to each Transmission Customer within the SPP Region. The results will be reviewed for unintended consequences by the Regional Tariff Working Group and reported to the Markets and Operations Policy Committee and Regional

State Committee.

IV. Economic Upgrades

The cost of an Economic Upgrade shall be borne voluntarily by the Project Sponsors. The Project Sponsors shall receive transmission revenue credits in accordance with Attachment Z to this Tariff.

V. Requested Upgrades

The cost of a Requested Upgrade shall be allocated in accordance with Attachment Z to this Tariff. The Transmission Customer shall receive transmission revenue credits in accordance with Attachment Z.

VI. Generation Interconnection Related Network Upgrades

The cost of a generation interconnection related Network Upgrade shall be allocated in accordance with Attachment V to this Tariff. The Interconnection Customer shall receive transmission credits in accordance with Attachment V.

VII. Treatment of Upgrades that Permit Deferral or Avoidance of Base Plan Upgrades

A. Base Plan Avoided Revenue Requirement

To the extent an Economic Upgrade, a Requested Upgrade or a generation interconnection related Network Upgrade defers or displaces the need for a Base Plan Upgrade, SPP shall calculate the Base Plan Avoided Revenue Requirements that are achievable due to such upgrade. The Base Plan Avoided Revenue Requirements shall be capped at the original project costs for the approved Base Plan Upgrade which is deferred or displaced. If such upgrade defers or displaces the need for a Base Plan Upgrade associated with a new or changed Designated Resources for which the costs exceed the Safe Harbor Cost Limit, the Base Plan Avoided Revenue Requirements shall be capped at the Safe Harbor Cost Limit. That portion of such an upgrade that defers or displaces the need for a Base Plan Upgrade shall be considered a Base Plan Upgrade for the purposes of cost allocation to the extent of the Base Plan Avoided Revenue Requirements.

B. Deferred Base Plan Upgrade

In the case of a Base Plan Upgrade that may be deferred as a result of the Economic Upgrade, Requested Upgrade or generation interconnection related Network Upgrade ("Deferred Base Plan Upgrade"), the achievable Base Plan Avoided Revenue Requirement shall be equal to the time value of the affected Transmission Owner's(s') revenue requirement(s) for the Deferred Base Plan Upgrade over the period of the deferral, calculated as follows:

1. A Transmission Owner's annual revenue requirement for a Deferred Base Plan Upgrade shall be determined using the same method as is used by the Transmission Owner to calculate its revenue requirement for transmission facilities for other purposes, but applying that method to the projected incremental investment in the Deferred Base Plan Upgrade.

2. The time value of the deferral shall be calculated by discounting to present value the avoided annual revenue requirement for each individual year in the deferral period and summing the resulting values. For each individual year in the deferral period, the time value of the deferral will be determined by discounting the annual revenue requirement for that year first from January 1 of that year and then from December 31 of that year, summing the two resulting values, and dividing by two. For any partial year encompassed by the deferral period, the time value of the deferral shall be calculated in the same manner as indicated in the immediately preceding sentence, except that the resulting value will be pro-rated based on the number of months in the partial year divided by 12.

C. Displaced Base Plan Upgrade

In the case of a Base Plan Upgrade that may be displaced as a result of the Economic Upgrade, Requested Upgrade or generation interconnection related Network Upgrade ("Displaced Base Plan Upgrade"), the achievable Base Plan Avoided Revenue Requirement shall be equal to the time value of the affected Transmission Owner's(s') revenue requirement(s) for the Displaced Base Plan Upgrade over the expected service

life of the facility that is displaced. The methodology for calculating the Base Plan Avoided Revenue Requirement shall be the same as set forth in Section VII.B. of this Attachment, except that the expected service life of the facility shall be substituted for the deferral period in all instances.

D. Allocation of Base Plan Avoided Revenue Requirements

The Base Plan Avoided Revenue Requirements shall be allocated as follows:

1. X% of the Base Plan Avoided Revenue Requirements shall be allocated to the Base Plan Region-wide Transmission Revenue Requirement and recovered through the Base Plan Region-wide Charge. The initial value of X shall be 33%.

2. (100-X)% of the Base Plan Avoided Revenue Requirements shall be allocated to the Base Plan Zonal Annual Transmission Revenue Requirement and recovered through the Base Plan Zonal Charge. The portion of the Base Plan Avoided Revenue Requirements which shall be allocated to the Base Plan Zonal Annual Transmission Revenue Requirement shall be allocated to the specific Zones that would have benefited from the Base Plan Upgrade project(s) that will be deferred or displaced. The zonal allocation of the Base Plan Avoided Revenue Requirements shall be determined in accordance with Section III.A. of this Attachment and Section 4 of Attachment S to this Tariff.

3. The Project Sponsor(s) for an Economic Upgrade, the Transmission Customer for a Requested Upgrade or the Interconnection Customer for a generation interconnection related Network Upgrade shall be responsible for the net of the present value of the total costs for its upgrade less the present value of the Base Plan Avoided Revenue Requirements. The method for determining the Base Plan Avoided Revenue Requirement shall be filed with the Commission prior to the imposition of any charges or credits hereunder.

VIII. Uncompleted Network Upgrades

~~b.~~ The costs of Network Upgrades that are not completed through no fault of the Transmission Owner charged with construction of the upgrades shall be handled as follows:

If a proposed Network Upgrade was included in the SPP Transmission Expansion Plan a Transmission Provider-approved Transmission Plan~~a Transmission Provider-approved Transmission Plan, required by the Transmission Provider~~, or otherwise accepted or approved by the Transmission Provider, the Transmission Provider shall develop a mechanism to recover such costs and distribute such revenue on a case by case basis. Such recovery and distribution mechanism shall be filed with the Commission. The~~the~~ Transmission Owner(s) that incurred the costs shall be reimbursed for those costs by the Transmission Provider. These costs shall include, but are not limited to: the costs associated with attempting to obtain all necessary approvals for the project and studies and any construction costs. ~~The Transmission Provider shall develop a mechanism to recover those costs which will be filed with the Commission on a case by case basis.~~

ATTACHMENT K

Redispatch Procedures and Redispatch Costs

I. Redispatch to Accommodate a request for Firm Transmission Service

A. Purpose

This Procedure shall apply only to entities that, when applying for Firm Point-To-Point or Network Integration Transmission Service, were told that the service could be provided only if redispatch occurs, and that agreed to pay redispatch costs. If an entity in these circumstances does not agree to pay redispatch costs, then its request for Firm Point-to-Point or Network Integration Transmission Service will be denied in whole or in part. To the extent the Transmission Provider can relieve any system constraint for Firm Point-To-Point or Network Integration Transmission Service by redispatching the generation resources of the Transmission Owner(s) or other willing generators, it shall do so, provided that the Eligible Customer agrees to compensate the Transmission Provider pursuant to the terms of Section 27 of this Tariff and this procedure, and the Transmission Provider and/or the applicable Transmission Owner agree to provide the service. The procedure under this Section I is not for the purpose of sustaining non-firm service.

B. Obligations

The Transmission Provider shall arrange for the redispatch of the generation resources of the Transmission Owner(s) or other willing generators for the stated purpose if it (they) have agreed to provide the redispatch service. As a condition precedent to receiving Firm Point-to-Point or Network Integration Transmission Service, a Transmission Customer agrees to pay (1) the applicable Transmission Service charges described in Schedules 1 through 11~~10~~; and (2) the actual redispatch cost necessary to relieve transmission constraints. To the extent practical, the redispatch of all such resources shall be on a least cost basis. The total charges to be paid by the Transmission Customer under this Tariff shall not exceed the total charges the Transmission Customer would have paid under the Transmission Service Tariffs of the Transmission Owners for the Transmission Service in the same amount from the same Point of Receipt to the same Point of Delivery unless any additional charges to the Transmission Customer are permitted by Commission policy.

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ATTACHMENT L

TREATMENT OF REVENUES

I. Payments and Distribution of Revenues

Payment will be made in accord with Section 7 of the Tariff to the Transmission Provider as agent for the Transmission Owners for all services provided under this Tariff. The Transmission Provider will distribute the revenues received to the Transmission Owners in accord with the provisions of this Attachment L.

II. Allocation of ~~Base~~ Transmission Service Revenues

A. Grandfathered Agreements

Except by mutual agreement of the Parties to Grandfathered Agreements, the Transmission Provider shall have no claim to the revenues collected under such agreements, and shall not collect or allocate any revenues for transmission service related to such transactions. The Transmission Owner providing the transmission service under the Grandfathered Agreements, therefore, will continue to receive payment directly from the customer under the Grandfathered Agreement.

B. Network Integration Transmission Service

Revenues collected by the Transmission Provider for Network Integration Transmission Service under Schedule 9 shall be fully allocated to the Transmission Owner(s) of the host Zone. Where a Network Customer has designated Network Load not physically interconnected with the Transmission System under Section 31.3, revenues collected by the Transmission Provider for Network Integration Transmission Service for that network load shall be allocated to the Transmission Owners on the same basis as Point-To-Point Transmission Service.

C. Point-To-Point Transmission Service

Except to the extent required under Section IV of this Attachment L, revenues collected by the Transmission Provider for Point-To-Point Transmission Service under Schedules 7 and 8 shall be allocated as follows:

1. Revenues collected by the Transmission Provider for Point-To-Point Transmission Service under Schedules 7 and 8 associated with power transactions where the generation source(s) and load(s) are located within the host Zone shall be fully allocated to the Transmission Owner of that host Zone whether the generation source is controlled by the Transmission Owner or another entity.

2. All other Transmission Provider Point-To-Point Transmission Service revenues under Schedules 7 and 8 collected by the Transmission Provider (i.e., other than those revenues specified in paragraph C.1)are shared between all Zones fifty percent (50%) in proportion to Existing Zonal Annual Transmission Revenue Requirements ~~annual revenue requirements~~; and fifty percent (50%) based upon the MW-mile impacts incurred by the Transmission Owners. The Existing Zonal Annual Transmission Revenue Requirements ~~annual revenue requirements~~ used shall be those stated in Attachment H. The MW-mile impacts shall be determined by use of the procedures in Attachment S.

3. Where there are Transmission Owners within a Zone whose facilities have not been included in the rates stated in Attachments H and T, the Transmission Provider will further allocate the Point-to-Point Transmission Service revenues allocated to that Zone among the Zones Transmission Owners on the same basis as the revenues are allocated to the Zone. For the application of this provision each Transmission Owner shall have an annual revenue requirement filed with the Commission.

4. For Point-To-Point revenue collected for use over transmission facilities that have been upgraded in an aggregate study, a portion of the revenue will be credited to the Transmission Customers. Transmission Customers who funded the upgrade will receive a portion of the revenue equal to the response factor percentage of each reservation based on the monthly ATC calculation. Allocation shall continue for all new requests until such time as Transmission Customers have been fully compensated for the portion of the upgrade over the base transmission

service rate, including interest per the Commission's regulations at 18 C.F.R. § 35.19a(a) (2) (iii). The amount of revenue allocated to Transmission Customers shall not exceed %100 of the revenue from Schedules 7 and 8 after the Transmission Provider has paid for upgrades required to provide the new service. For multiple Transmission Customers having a pro-rata allocation of an upgrade, the response factor percentage amount shall be divided based on the pro-rata allocation until each has been fully compensated. This allocation shall also apply to Transmission Owners direct assignment costs who exercise their right to upgrade facilities.

III. Allocation of Revenues from Base Plan Charges

Revenues associated with the Base Plan Zonal Annual Transmission Revenue Requirement and with the Base Plan Region-wide Annual Transmission Revenue Requirement, specified in Attachment H and collected by the Transmission Provider under Schedule 11, shall be allocated to Transmission Owners owning Base Plan Upgrades in proportion to their respective annual transmission revenue requirements for Base Plan Upgrades.

IV.~~III.~~ Allocation of Other Revenues

1. Revenues associated with redispatch service will be paid to the generation owner providing the service for the Transmission Provider.
2. Revenues associated with Reactive Supply and Voltage Control from Generation Sources Services under Schedule 2 will be paid to the generation owner providing the service for the Transmission Provider consistent with the development of the charges under Schedule 2.

3. Energy or revenues received as compensation for transmission losses shall be distributed consistent with Attachment M.

4. Revenues associated with Scheduling and Tariff Administration Service under Schedule 1 will remain with the Transmission Provider to pay for the costs of providing that service (except for the revenues for related services provided by individual Control Areas for the movement of power within, into, or out of the respective Control Areas which shall go to the appropriate Transmission Owner(s)).

5. Payments associated with penalties imposed under this Tariff will be used to reduce the Transmission Provider's Scheduling and Tariff Administration Service costs (though the non-penalty portion of the charge will go back to the Transmission Owner(s) that actually provided the service).

6. Transmission Owner costs associated with System Impact and Facilities Studies compensated by the Transmission Customer shall go to the appropriate Transmission Owner(s).

7. The revenues associated with Direct Assignment Facilities shall go directly to the Transmission Owner(s) owning the facilities.

8. The revenues associated with Network Upgrades, not otherwise provided for in Section III of this Attachment L, shall be first assigned to the Transmission Owner building the Network Upgrades to meet the annual revenue requirements of such facilities. If multiple Transmission Owners construct the facilities, the revenues shall be shared in accordance with each Transmission Owner's respective revenue requirement for such facilities or as otherwise agreed by the Transmission Owners. The remaining revenues shall be allocated in accordance with Section II of this Attachment L.

98. The revenues associated with Wholesale Distribution Service shall go directly to the Transmission Owner(s) owning the facilities consistent with Schedule 10.

10~~9~~. Any additional revenues received under Section 22.1 shall be treated in the same manner as revenues under Section II.D. of this Attachment L.

~~IV~~V. Exception to the Provisions of Section II.C of this Attachment L

Pursuant to the Agreement of the Southwest Power Pool Transmission Owners and Southwest Power Pool for the Upgrade for the LaCygne to Stilwell 345 kV Transmission Line ("LaCygne-Stilwell Agreement") submitted to the FERC on February 20, 2003 in Docket No. ER03-547, and conditionally accepted by the Commission in an order dated April 10, 2003, the Transmission Provider and the Transmission Owners agreed to create an exception to the provisions of this Attachment L for the sole purpose of distributing revenues associated with upgrades to the LaCygne to Stilwell 345 kV line, as set forth in the LaCygne-Stilwell Agreement, which has been incorporated into this Attachment L.

ATTACHMENT S

Procedure for Calculation of MW-Mile Impacts for Use in Assignment of Revenue Requirements, Revenue Allocation and Determination of Losses

1. Introduction

The purpose of this Attachment S is to set out ~~provide written documentation~~ of the procedures for calculation of MW-mile impacts for use in assignment of revenue requirements, revenue allocation and determination of losses as implemented by the Transmission Provider. The megawatt-mile technique is a distance based impact method of assessing transmission use and topology recognizing that power will, to some extent, flow over all available paths from the generating source to the load. Definitions of the models and parameters used in the calculations are presented, as well as a description of the calculations performed. ~~by the "Megawatt-Mile Software".~~ Details of the application of MW-mile impacts to the assignment of revenue requirements, allocation of revenues and the determination of losses are discussed in Attachments J, L and M respectively. ~~The megawatt-mile technique is a distance based method of calculating impacts for transmission use considering that power will, to some extent, flow over all available paths from the generating source to the load.~~

2. Definitions, Models and Parameters Used

2.1 Composition of the Network Model - The network models used in the MW-mile ~~transmission service charge~~ calculations are derived from loadflow models of the Transmission System~~SPP system~~ assembled annually by SPP. Prior to April 1 each year, data are submitted, models assembled, modifications required for using the models in the MW-mile impact calculations are made, and the impact tables for the upcoming Summer and Winter seasons are computed.

2.1.1 Seasonal Models - The seasonal models used in the calculations are the Summer Peak Load Operating Model ~~model~~ and the Winter Peak Load Operating Model~~model~~, as modified for use in the MW-mile analysis~~transmission service charge computations~~. Modifications to the models include some AREA (SPP Transmission Owners are represented by AREAs in the model) renumbering and required changes to phase shifter representations as outlined in section 2.1.4. Estimated MW-mile ~~MW-Mile~~ impacts for future Summer and Winter seasons may be calculated using the appropriate planning model from the annual series of SPP models.

2.1.2 Transmission Elements Included in the MW-mile Analysis - The intent in constructing the network model(s) is to include and accurately represent all facilities that are expected to exhibit a material response to changes on the Transmission System. This set of facilities may not include all facilities that are included in a Transmission Owner's revenue requirement.~~Transmission Service Charge Calculations - All transmission lines and terminal equipment reflected in the Transmission Owners' transmission accounts and included in transmission rates may be included in the network model.~~

2.1.3 Transmission Facility Rating Assumptions - The ratings used are the most limiting rating reported in the then-current SPP operating model for ~~on~~ the normal continuous MVA capacity ~~ratings~~ of each transmission facility ~~facilities~~ for the applicable season. For transmission lines, these ratings are normally the lesser of the conductor thermal rating and the rating of terminal equipment such as switches, wavetraps, etc. For transformers, these ratings are normally the continuous rating of the transformers. The corresponding ratings from the applicable SPP planning model are used in estimating MW-mile impacts for future years.

2.1.4 Modeling Phase Shifters - Phase shifting transformers within SPP are represented based on typical operations

~~2.2 Timing of Formula Changes - Each May 1, the formula provided in Attachment H will be modified to reflect actual data for the prior calendar year.~~

2.~~3~~2 Transmission Facility Ownership Representation - Transmission Owners are required to update their transmission facility ownership representation annually. This update shall reflect all new transmission facility additions and retirements for the prior calendar year including any new network facilities constructed pursuant to any regional transmission planning process.

2.~~3~~2.1 Transmission Lines and Terminals - Each transmission line which is to be included ~~participate~~ in the calculation of the MW-mile impacts has a record in a branch ownership file. ~~This file is required by the Megawatt-Mile Software in order to calculate MW-mile impacts for use of every branch.~~ The ownership file contains two types of records for every transmission line: one record contains the total line mileage; the other reflects the percent of each Transmission Owner's "ownership" (i.e., for collecting rents) of the line. If ownership percentages for a given branch are not provided, the ownership will be divided equally to the AREA numbers in which the buses on either end of the branch reside in the loadflow model. If a transmission line does not have a mileage entry in the ownership file, it will not be included ~~participate~~ in the calculation since the line mileage is not known.

2.~~3~~2.2 Transformers - The transformer ownership file is similar to the branch ownership file, except that there is no mileage record associated with the transformer. The records for transformers serve the same function as for transmission lines. If ownership percentages for a given branch are not provided, the ownership will be divided equally to the AREA numbers in which the buses on either end of the branch reside in the loadflow model.

2.~~3~~2.3 Generation and Load - The ownership representation for generation and load is maintained in generation and load ownership files. These files are required ~~by the Megawatt-Mile Software~~ in order to model transactions. For each bus that has either generation or load, a record in the ownership file is used to allocate~~s~~ to the AREAs their percent ownership. If no record is entered for a load bus or generator bus, the ownership is allocated to the AREA in which the bus resides in the loadflow model.

2.~~3~~2.4 Representation of Utilities Outside of SPP - Utilities outside of SPP are to be represented in the model as needed to result in accurate impact calculations. Minimum representation for a non-Member involved in a sale to a SPP Member is ownership of a generator bus in the non-Member's system or a generator bus judged to be electrically close to the non-Member's system. Similarly, minimum representation for a non-Member involved in a purchase from a Member is ownership of a load bus in the non-Member's system or a load bus judged to be electrically close to the non-Member's system.

3. Calculating ~~the~~ Impact~~s~~ for Revenue Allocation and Determination of Losses~~Transmission Service~~

3.1 Explanation of the Impact Calculation - ~~The megawatt-mile approach is a distance based method of assessing transmission service impacts considering that power will, to some extent, flow over all available paths from the generating source to the load.~~ The distribution of flows over each and every facility due to transactions between each combination of potential parties is calculated. ~~The megawatt-mile method of calculating transmission service charges utilizes two computer programs known as the Megawatt-Mile Software to accomplish the necessary computations.~~ A commercially available power systems analysis software package~~, PTI's PSS/E,~~ is used to perform~~s~~ the necessary network flow calculations~~, through activity MWMI, which was written specifically for this application. MWMI also keeps track of cost information and branch, load, and~~

~~generation ownership. A second stand alone program is required to read the output of MWMI and to develop allocation factors.~~

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3.2 The "Megawatt-Mile" Method

(a) The megawatt-mile technique starts from a solved loadflow model of the Transmission Systemsystem. Transactions are modeled between each combination of potential parties by changing generation on the sending, or selling end, and changing the load on the receiving, or buying end. The amount by which the generation and load are changed is small. A linear analysis technique is then used to determine the distribution of flows on each branch in the network. This value is used in subsequent calculations.

(b) Individual branch impacts ~~charges~~ are calculated given the flow on the branch due to the transaction and the line mileage (for transmission lines) as described in Ssection 2.2 ~~and 2.3~~. The individual branch impacts for transmission lines are determined as follows:

Transmission Line Impacts = P * L [MW-miles]

where

P = calculated flow due to the transaction

L = line length in miles

(c) Similarly, the individual branch impacts for transformers are determined as follows:

Transformer Impacts = P * mile [MW-miles]

where

P = calculated flow due to the transaction.

(d) The sum of all the individual branch impacts for each Transmission Owner is calculated in units MW-miles. These ~~charges~~ impacts can be summarized, by Transmission Owner, for all combinations of power transfers between Transmission Owner systems.

$$\textit{MW-mile Impacts} = \sum \textit{MW-miles [MW-miles]}$$

3.43 Application to Determination of Losses ~~Service Charge Rates~~ - Transmission service MW-mile impacts using this MW-mile methodology shall be set forth in matrices developed by SPP and posted on SPP OASIS. The matrices shall be changed twice per year. The Summer season shall consist of the months of June through September inclusive. The Winter season shall consist of the months of October through May inclusive.

3.54 Generator and Load Dispatch - All capacity transactions are simulated as coming from all of a seller's on-line generation, except for that generation which is already fully loaded, in proportion to unit MVA base (nameplate rating). The transaction is simulated as delivered to all of the buyer's load.

Energy transactions are simulated as coming from all of the seller's on-line generation, except for that generation which is already fully loaded, in proportion to the unit MVA base (nameplate rating) and delivered to all of the buyer's load.

Each load on a bus at which the buyer represents load ownership will be allocated ~~picks up~~ a proportionate amount of the transaction. The portion of the transaction allocated to ~~picked up~~ at any given bus is the amount of load owned by the buyer on that bus divided by the total load owned by the buyer.

4. Calculating the Impact for Base Plan Zonal Annual Transmission Revenue Requirement Assignment

The zonal portion of the revenue requirements associated with Base Plan Upgrades shall be assigned to Zones using the Incremental MW-mile Benefit Determination. SPP shall develop a summer season model of the Transmission System, as specified in this Attachment S, using the most recent information available, that includes all of the transmission enhancements included in the approved SPP Transmission Expansion Plan. For this benefit determination, a comparison is made between this model with all upgrades in service and with each approved upgrade removed. The difference in MW-mile impacts for each Zone provides the information necessary for the determination of the magnitude of benefit for each Zone.

4.1 Explanation of the Incremental MW-mile Benefit Determination Calculation – The incremental MW-mile is determined by building the base case with all Base Plan Upgrades in service. A MW-mile calculation is performed by measuring the

flows on each line multiplied by the distance as described in Section 3.2. The net change of the MW-mile impacts is used for this calculation. Then a benefit determination calculation is made with each new transmission upgrade removed individually. The reduction in MW-mile impact due to each new transmission upgrade is the measure of its zonal benefit.

4.2 The results of this MW-mile analysis shall be posted on the SPP website.

ATTACHMENT Z

AGGREGATE TRANSMISSION SERVICE STUDY PROCEDURES

~~1~~I. Introduction

This attachment describes the process used to evaluate long-term transmission service requests using an Aggregate Transmission Service Study process. The Transmission Provider will combine all long-term point-to-point and long-term designated network resource requests received during a specified period of time into a single aggregate transmission service study. Using this aggregate study process, SPP will combine all requests received during an open season to conclude an optimal expansion of the transmission system that provides the necessary ATC to accommodate all such requests at the minimum total cost. ~~This attachment also details cost allocation, cost recovery, and credits associated with the new facilities.~~ For the purposes of this Attachment Z, all Transmission Owners that are not taking Network Integration Transmission Service will be treated the same as Transmission Customers taking Network Integration Transmission Service. . This attachment details: (i) cost allocation and cost recovery for Requested Upgrades; and (ii) transmission revenue credits for Requested Upgrades, Economic Upgrades, and directly assigned costs that are in excess of the Safe Harbor Cost Limit for Network Upgrades associated with new or changed Designated Resources.

~~2.~~II. Open Season

The Aggregate Transmission Service Study process commences with the initiation of an open season. The open season will be 4 months in duration. During that period, customers may make requests for long-term transmission service that start no earlier than 4 months after the close of the season. Customers may submit and withdraw requests during the open season without any obligation. At the close of the open season, the Aggregate System Impact Study (ASIS) will include only queued requests for which Aggregate System Impact Study Agreements (ASISAs) have been executed. At the close of the open season, customer will have

15 days to execute such ASISAs per Section 19 of the Tariff. Existing long-term firm service Customers who desire to exercise a reservation priority

under Section 2.2 shall do so pursuant to the terms of Section 2.2 of the Tariff and shall not be included in the aggregate study.

~~3.~~III. Aggregate Impact Study

a. At the close of the Open Season, all transmission service requests subject to an ASISA will be included in the ASIS. This study shall be done in accordance with Section 19 of the Tariff. The power flow models shall be developed for each season for the period from the earliest start of service to the latest end of service for the applicable requests. The models will include all other applicable existing reservations having equal or greater queue priority including prospective renewals of existing service having a reservation priority pursuant to Section 2.2 of the Tariff. System constraints will be identified and appropriate upgrades determined during the ASIS. The Transmission Provider shall determine the upgrades required to reliably provide all of the requested service. SPP shall also perform a regional review of the required upgrades to determine if alternative solutions would reduce overall cost to customers. The Transmission Provider shall estimate the total cost of these upgrades.

b. SPP shall recognize constraints due to contractually limited facilities and allocate available capacity on a first come first served basis on the contractual constraint only.

c. Within the ASIS the Transmission Provider will identify the facilities limiting the availability of the requested aggregate transmission service and the upgrades required to provide this service. It will also provide an estimate of the cost of those upgrades. The assignment of upgrade costs to each reservation will be provided to enable customers to estimate their costs. Upon receipt of the Impact Study, customers will have 15 days to execute an Aggregate Facilities Study Agreement (AFSA) per Section 19 of the Tariff.

IV.~~4.~~ Aggregate Facilities Study

The Transmission Provider shall perform an Aggregate Facilities Study including the requests of all customers who have executed an Aggregate Facilities Study

Agreement (AFSA). The first phase of the facilities study process shall consist of a revision of the impact study to reflect the withdrawal of requests for which an AFSA was not executed, if any. The Aggregate Facilities Study shall be done in accordance with Section 19 of the Tariff. The Transmission Provider, in conjunction with the applicable Transmission Owners, shall determine the necessary cost and lead-time for construction of each upgrade and the estimated cost of service for each request. The Transmission Provider, in conjunction with the applicable Transmission Owners, shall determine the optimal set of solutions to reduce the overall costs for the study group and reliably provide the requested service in a timely manner.

V.5. Cost Allocation for Requested Upgrades

The cost of Requested Upgrades shall be allocated in accordance with this Section.

a. For the purpose of determining the cost responsibility for each transmission service request, all upgrades required to provide transmission service for all transmission service reservations included in an Aggregate Facilities Study shall be included in an Aggregate Cost Allocation Assessment. The cost of each transmission upgrade component will be allocated to each customer in the aggregation group on a pro-rata impact basis as provided in paragraph b. The cost of a facility upgrade shall be allocated to all customers in the aggregate group whose reservation period begins after commercial operation date of a facility upgrade (COD) or begins before the COD of a facility and extends past the COD. If an upgrade is first required during a season after completion of service, no cost would be assigned to the customer. With regard to the cost allocation, SPP shall review all upgrades and determine the earliest date that each upgrade is required. This date is considered the COD for each upgrade. All requests that have a positive impact on the upgrade and for which the service has not been completed prior to the COD for such upgrade, shall be allocated costs for the upgrade. These requests shall be reviewed and the request that ends at the latest point in time (End of Term: EOT), shall define the amortization period for the facility.

b. An allocation of the cost of each facility upgrade to each request shall be determined on a pro-rata basis for the positive incremental power flow impacts of the