

**UNITED STATES DEPARTMENT OF ENERGY
SOUTHWESTERN POWER ADMINISTRATION
RATE SCHEDULE NFTS-13¹
WHOLESALE RATES FOR NON-FEDERAL
TRANSMISSION/INTERCONNECTION FACILITIES SERVICE**

¹ Supersedes Rate Schedule NFTS-11.

Effective:

During the period October 1, 2013, through September 30, 2017, in accordance with interim approval from Rate Order No. SWPA-66 issued by the Deputy Secretary of Energy on September 30, 2013 and pursuant to final approval by the Federal Energy Regulatory Commission.

Available:

In the region of the System of Southwestern.

Applicable:

To Customers which have executed Service Agreements with Southwestern for the transmission of non-Federal power and energy over the System of Southwestern or for its use for interconnections. Southwestern will provide services over those portions of the System of Southwestern in which the Administrator, Southwestern, in his or her sole judgment, has determined that uncommitted transmission and transformation capacities in the System of Southwestern are and will be available in excess of the capacities required to market Federal power and energy pursuant to Section 5 of the Flood Control Act of 1944 (58 Stat. 887,890; 16 U.S.C. 825s).

Character and Conditions of Service:

Three-phase, alternating current, delivered at approximately 60 Hertz, at the nominal voltage(s), at the point(s) specified by Service Agreement or Transmission Service Transaction.

1. Definitions of Terms

1.1. Ancillary Services

The services necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the System of Southwestern in accordance with good utility practice, which include the following:

1.1.1. Scheduling, System Control, and Dispatch Service

is provided by Southwestern as Balancing Authority Area operator and is in regard to interchange and load-match scheduling and related system control and dispatch functions.

1.1.2. Reactive Supply and Voltage Control from Generation Sources Service

is provided at transmission facilities in the System of Southwestern to produce or absorb reactive power and to maintain transmission voltages within specific limits.

1.1.3. Regulation and Frequency Response Service

is the continuous balancing of generation and interchange resources accomplished by raising or lowering the output of on-line generation as necessary to follow the moment-by-moment changes in load and to maintain frequency within a Balancing Authority Area.

1.1.4. Spinning Operating Reserve Service

maintains generating units on-line, but loaded at less than maximum output, which may be used to service load immediately when disturbance conditions are experienced due to a sudden loss of generation or load.

1.1.5. Supplemental Operating Reserve Service

provides an additional amount of operating reserve sufficient to reduce Area Control Error to zero within 10 minutes following loss of generating capacity which would result from the most severe single contingency.

1.1.6. Energy Imbalance Service

corrects for differences over a period of time between schedules and actual hourly deliveries of energy to a load. Energy delivered or received within the authorized bandwidth for this service is accounted for as an inadvertent flow and is returned to the providing party by the receiving party in accordance with standard utility practice or a contractual arrangement between the parties.

1.2. Customer

The entity which is utilizing and/or purchasing services from Southwestern pursuant to this Rate Schedule.

1.3. Demand Period

The period of time used to determine maximum integrated rates of delivery for the purpose of power accounting which is the 60-minute period that begins with the change of hour.

1.4. Firm Point-to-Point Transmission Service

Transmission service reserved on a firm basis between specific points of receipt and delivery pursuant to either a Firm Transmission Service Agreement or to a Transmission Service Transaction.

1.5. Interconnection Facilities Service

A service that provides for the use of the System of Southwestern to deliver energy and/or provide system support at an interconnection.

1.6. Network Integration Transmission Service

Transmission service provided under Part III of Southwestern's Open Access Transmission Service Tariff which provides the Customer with firm transmission service for the delivery of capacity and energy from the Customer's resources to the Customer's load.

1.7. Non-Firm Point-to-Point Transmission Service

Transmission service reserved on a non-firm basis between specific points of receipt and delivery pursuant to a Transmission Service Transaction.

1.8. Point of Delivery

Either a single physical point to which electric power and energy are delivered from the System of Southwestern, or a specified set of delivery points which together form a single, electrically integrated load.

1.9. Secondary Transmission Service

Service that is associated with Firm Point-to-Point Transmission Service and Network Integration Transmission Service. For Firm Point-to-Point Transmission Service, it consists of transmission service provided on an as-available, non-firm basis, scheduled within the limits of a particular capacity reservation for transmission service, and scheduled from points of receipt, or to points of delivery, other than those designated in a

Long-Term Firm Transmission Service Agreement or a Transmission Service Transaction for Firm Point-to-Point Transmission Service. For Network Integration Transmission Service, Secondary Transmission Service consists of transmission service provided on an as-available, non-firm basis, from resources other than the network resources designated in a Network Transmission Service Agreement, to meet the Customer's network load. The charges for Secondary Transmission Service, other than Ancillary Services, are included in the applicable capacity charges for Firm Point-to-Point Transmission Service and Network Integration Transmission Service.

1.10. Service Agreement

A contract executed between a Customer and Southwestern for the transmission of non-Federal power and energy over the System of Southwestern or for interconnections which include the following:

1.10.1. Firm Transmission Service Agreement

provides for reserved transmission capacity on a firm basis, for a particular point-to-point delivery path.

1.10.2. Interconnection Agreement

provides for the use of the System of Southwestern and recognizes the exchange of mutual benefits for such use or provides for application of a charge for Interconnection Facilities Service.

1.10.3. Network Transmission Service Agreement

provides for the Customer to request firm transmission service for the delivery of capacity and energy from the Customer's network resources to the Customer's network load, for a period of one year or more.

1.10.4. Non-Firm Transmission Service Agreement

provides for the Customer to request transmission service on a non-firm basis.

1.11. Service Request

The request made under a Transmission Service Agreement through the Southwest Power Pool, Inc. (hereinafter "SPP") Open Access Same-Time Information System (hereinafter "OASIS") for reservation of transmission capacity over a particular point-to-point delivery path for a particular period. The Customer must submit hourly schedules for actual service in addition to the Service Request.

1.12. System of Southwestern

The transmission and related facilities owned by Southwestern, and/or the generation, transmission, and related facilities owned by others, the capacity of which, by contract, is

available to and utilized by Southwestern to satisfy its contractual obligations to the Customer.

1.13. Transmission Service Transaction

A Service Request that has been approved by SPP.

1.14. Uncontrollable Force

Any force which is not within the control of the party affected, including, but not limited to failure of water supply, failure of facilities, flood, earthquake, storm, lightning, fire, epidemic, riot, civil disturbance, labor disturbance, sabotage, war, act of war, terrorist acts, or restraint by court of general jurisdiction, which by exercise of due diligence and foresight such party could not reasonably have been expected to avoid.

2. Wholesale Rates, Terms, and Conditions for Firm Point-to-Point Transmission Service, Non-Firm Point-to-Point Transmission Service, Network Integration Transmission Service, and Interconnection Facilities Service

2.1. Firm Point-to-Point Transmission Service Rates, Terms, and Conditions

2.1.1. Monthly Capacity Charge for Firm Point-to-Point Transmission Service

\$1.48 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a longer term agreement.

2.1.2. Weekly Capacity Charge for Firm Point-to-Point Transmission Service

\$0.370 per kilowatt of transmission capacity reserved in increments of one week of service.

2.1.3. Daily Capacity Charge for Firm Point-to-Point Transmission Service

\$0.0673 per kilowatt of transmission capacity reserved in increments of one day of service.

2.1.4. Services Associated with Capacity Charge for Firm Point-to-Point Transmission Service

The capacity charge for Firm Point-to-Point Transmission Service includes Secondary Transmission Service, but does not include charges for Ancillary Services associated with actual schedules.

2.1.5. Applicability of Capacity Charge for Firm Point-to-Point Transmission Service

Capacity charges for Firm Point-to-Point Transmission Service are applied to quantities reserved by contract under a Firm Transmission Service Agreement or in accordance with a Transmission Service Transaction.

A Customer, unless otherwise specified by contract, will be assessed capacity charges on the greatest of (1) the highest metered demand at any particular Point of Delivery during a particular month, rounded up to the nearest whole megawatt, or (2) the highest metered demand recorded at such Point of Delivery during any of the previous 11 months, rounded up to the nearest whole megawatt, or (3) the capacity reserved by contract; which amount shall be considered such Customer's reserved capacity. Secondary Transmission Service for such Customer shall be limited during any month to the most recent metered demand on which that Customer is billed or to the capacity reserved by contract, whichever is greater.

2.2. Non-Firm Point-to-Point Transmission Service Rates, Terms, and Conditions

2.2.1. Monthly Capacity Charge for Non-Firm Point-to-Point Transmission Service

80 percent of the monthly capacity charge for Firm Point-to-Point Transmission Service reserved in increments of one month.

2.2.2. Weekly Capacity Charge for Non-Firm Point-to-Point Transmission Service

80 percent of the monthly capacity charge divided by 4 for Firm Point-to-Point Transmission Service reserved in increments of one week.

2.2.3. Daily Capacity Charge for Non-Firm Point-to-Point Transmission Service

80 percent of the monthly capacity charge divided by 22 for Firm Point-to-Point Transmission Service reserved in increments of one day.

2.2.4. Hourly Capacity Charge for Non-Firm Point-to-Point Transmission Service

80 percent of the monthly capacity charge divided by 352 for Firm Point-to-Point Transmission Service reserved in increments of one hour.

2.2.5. Applicability of Charges for Non-Firm Point-to-Point Transmission Service

Capacity charges for Non-Firm Point-to-Point Transmission Service are applied to quantities reserved under a Transmission Service Transaction, and do not include charges for Ancillary Services.

2.3. Network Integration Transmission Service Rates, Terms, and Conditions

2.3.1. Annual Revenue Requirement for Network Integration Transmission Service

\$15,533,800.

2.3.2. Monthly Revenue Requirement for Network Integration Transmission Service

\$1,294,483.

2.3.3. Net Capacity Available for Network Integration Transmission Service

872,000 kilowatts.

2.3.4. Monthly Capacity Charge for Network Integration Transmission Service

\$1.48 per kilowatt of Network Load (charge derived from $\$1,294,483 \div 872,000$ kilowatts).

2.3.5. Applicability of Charges for Network Integration Transmission Service

Network Integration Transmission Service is available only for deliveries of non-Federal power and energy, and is applied to the Customer utilizing such service exclusive of any deliveries of Federal power and energy. The capacity on which charges for any particular Customer utilizing this service is determined on the greatest of (1) the highest metered demand at any particular point of delivery during a particular month, rounded up to the nearest whole megawatt, or (2) the highest metered demand recorded at such point of delivery during any of the previous 11 months, rounded up to the nearest whole megawatt.

For a Customer taking Network Integration Transmission Service who is also taking delivery of Federal Power and Energy, the highest metered demand shall be determined by subtracting the energy scheduled for delivery of Federal Power and Energy for any hour from the metered demand for such hour.

Secondary transmission Service for a Customer shall be limited during any month to the most recent highest metered demand on which such Customer is billed. Charges for Ancillary Services shall also be assessed.

2.4. Interconnection Facilities Service Rates, Terms, and Conditions

2.4.1. Monthly Capacity Charge for Interconnection Facilities Service

\$1.48 per kilowatt.

2.4.2. Applicability of Capacity Charge for Interconnection Facilities Service

Any Customer that requests an interconnection from Southwestern which, in Southwestern's sole judgment and at its sole option, does not provide commensurate benefits or compensation to Southwestern for the use of its facilities shall be assessed a capacity charge for Interconnection Facilities Service. For any month, charges for Interconnection Facilities Service shall be assessed on the greater of (1) that month's actual highest metered demand, or (2) the highest metered demand recorded during the previous eleven months, as metered at the interconnection. The use of Interconnection Facilities Service will be subject to power factor provisions as specified in this Rate Schedule. The interconnection customer shall also schedule and deliver Real Power Losses pursuant to the provisions of this Rate Schedule based on metered flow through the interconnection where Interconnection Facilities Services is assessed.

2.5. Transformation Service Rates, Terms, and Conditions

2.5.1. Monthly Capacity Charge for Transformation Service

\$0.46 per kilowatt will be assessed for capacity used to deliver energy at any point of delivery at which Southwestern provides transformation service for deliveries at voltages of 69 kilovolts or less from higher voltage facilities.

2.5.2. Applicability of Capacity Charge for Transformation Service

Unless otherwise specified by contract, for any particular month, a charge for transformation service will be assessed on the greater of (1) that month's highest metered demand, or (2) the highest metered demand recorded during the previous 11 months, at any point of delivery. For the purpose of this Rate Schedule, the highest metered demand will be based on all deliveries, of both Federal and non-Federal energy, from the System of Southwestern, at such point during such month.

2.6. Ancillary Services Rates, Terms, and Conditions

2.6.1. Capacity Charges for Ancillary Services

2.6.1.1. Scheduling, System Control, and Dispatch Service

Monthly rate of \$0.09 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Service Agreement or Network Transmission Service Agreement.

Weekly rate of \$0.023 per kilowatt of transmission capacity reserved in increments of one week of service.

Daily rate of \$0.0041 per kilowatt of transmission capacity reserved in increments of one day of service.

Hourly rate of \$0.00026 per kilowatt of transmission energy delivered as non-firm transmission service.

2.6.1.2. Reactive Supply and Voltage Control from Generation Sources Service

Monthly rate of \$0.04 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Service Agreement or Network Transmission Service Agreement.

Weekly rate of \$0.010 per kilowatt of transmission capacity reserved in increments of one week of service.

Daily rate of \$0.0018 per kilowatt of transmission capacity reserved in increments of one day of service.

Hourly rate of \$0.00011 per kilowatt of transmission energy delivered as non-firm transmission service.

2.6.1.3. Regulation and Frequency Response Service

Monthly rate of \$0.07 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Service Agreement or Network Transmission Service Agreement plus the Regulation Purchased Adder as defined in Section 2.6.5 of this Rate Schedule.

Weekly rate of \$0.018 per kilowatt of transmission capacity reserved in increments of one week of service plus the Regulation Purchased Adder as defined in Section 2.6.5 of this Rate Schedule.

Daily rate of \$0.0032 per kilowatt of transmission capacity reserved in increments of one day of service plus the Regulation Purchased Adder as defined in Section 2.6.5 of this Rate Schedule.

Hourly rate of \$0.00020 per kilowatt of transmission energy delivered as non-firm transmission service plus the Regulation Purchased Adder as defined in Section 2.6.5 of this Rate Schedule.

2.6.1.4. Spinning Operating Reserve Service

Monthly rate of \$0.0146 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Service Agreement or Network Transmission Service Agreement.

Weekly rate of \$0.00365 per kilowatt of transmission capacity reserved in increments of one week of service.

Daily rate of \$0.00066 per kilowatt of transmission capacity reserved in increments of one day of service.

Hourly rate of \$0.00004 per kilowatt of transmission energy delivered as non-firm transmission service.

2.6.1.5. Supplemental Operating Reserve Service

Monthly rate of \$0.0146 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Service Agreement or Network Transmission Service Agreement.

Weekly rate of \$0.00365 per kilowatt of transmission capacity reserved in increments of one week of service.

Daily rate of \$0.00066 per kilowatt of transmission capacity reserved in increments of one day of service.

Hourly rate of \$0.00004 per kilowatt of transmission energy delivered as non-firm transmission service.

2.6.1.6. Energy Imbalance Service

\$0.0 per kilowatt for all reservation periods.

2.6.2. Availability of Ancillary Services

Scheduling, System Control, and Dispatch Service and Reactive Supply and Voltage Control from Generation Sources Service are available for all transmission services in and from the System of Southwestern and shall be provided by Southwestern. Regulation and Frequency Response Service and Energy Imbalance Service are available only for deliveries of power and energy to load within Southwestern's Balancing Authority Area, and shall be provided by Southwestern, unless, subject to Southwestern's approval, they are provided by others. Spinning Operating Reserve Service and Supplemental Operating Reserve Service are available only for deliveries of power and energy generated by resources located within Southwestern's Balancing Authority Area and shall be provided by Southwestern, unless, subject to Southwestern's approval, they are provided by others.

2.6.3. Applicability of Charges for Ancillary Services

Charges for all Ancillary Services are applied to the transmission capacity reserved or network transmission service taken by the Customer in accordance with the rates listed above when such services are provided by Southwestern.

The charges for Ancillary Services are considered to include Ancillary Services for any Secondary Transmission Service, except in cases where Ancillary Services identified in Sections 2.6.1.3 through 2.6.1.6 of this Rate Schedule are applicable to a Transmission Service Transaction of Secondary Transmission Service, but are not applicable to the transmission capacity reserved under which Secondary Transmission Service is provided. When charges for Ancillary Services are applicable to Secondary Transmission Service, the charge for the Ancillary Service shall be the hourly rate applied to all energy transmitted utilizing the Secondary Transmission Service.

2.6.4. Provision of Ancillary Services by Others

Customers for which Ancillary Services identified in Sections 2.6.1.3 through 2.6.1.6 of this Rate Schedule are made available as specified above must inform Southwestern by written notice of the Ancillary Services which they do not intend to take and purchase from Southwestern, and of their election to provide all or part of such Ancillary Services from their own resources or from a third party. Such notice requirements also apply to requests for Southwestern to provide Ancillary Services when such services are available as specified above.

Subject to Southwestern's approval of the ability of such resources or third parties to meet Southwestern's technical and operational requirements for provision of such Ancillary Services, the Customer may change the Ancillary Services which it takes from Southwestern and/or from other sources at the beginning of any month upon the greater of 60 days written notice or upon the completion of any necessary equipment modifications necessary to accommodate such change; Provided, That, if the Customer chooses not to take Regulation and Frequency Response Service, which includes the associated Regulation Purchased Adder, the Customer must pursue these services from a different host Balancing Authority; thereby moving all metered loads and resources from Southwestern's Balancing Authority Area to the Balancing Authority Area of the new host Balancing Authority. Until such time as that meter reconfiguration is accomplished, the Customer will be charged for the Regulation and Frequency Response Service and applicable Adder then in effect. The Customer must notify Southwestern by July 1 of this choice, to be effective the subsequent calendar year.

2.6.5. Regulation Purchased Adder

Southwestern has determined the amount of energy used from storage to provide Regulation and Frequency Response Service in order to meet Southwestern's Balancing Authority Area requirements. The replacement value of such energy used shall be recovered through the Regulation Purchased Adder. The Regulation Purchased Adder during the time period of January 1 through December 31 of the current calendar year is based on the average annual use of energy from storage¹ for Regulation and Frequency Response Service and Southwestern's estimated purchased power price for the corresponding year from the most currently approved Power Repayment Studies.

The Regulation Purchased Adder will be phased in over a period of four (4) years as follows:

Year	Regulation Purchased Adder for the Incremental Replacement Value of Energy Used from Storage
2014	¼ of the average annual use of energy from storage × 2014 Purchased Power price
2015	½ of the average annual use of energy from storage × 2015 Purchased Power price
2016	¾ of the average annual use of energy from storage × 2016 Purchased Power price
2017 and thereafter	The total average annual use of energy from storage × the applicable Purchased Power price

¹ The average annual use of energy from storage for Regulation and Frequency Response Service is based on Southwestern studies.

2.6.5.1. Applicability of Regulation Purchased Adder

The replacement value of the estimated annual use of energy from storage for Regulation and Frequency Response Service shall be

recovered by Customers located within Southwestern's Balancing Authority Area on a non-coincident peak ratio share basis, divided into twelve equal monthly payments, in accordance with the formula in Section 2.6.5.2.

If the Regulation Purchased Adder is determined and applied under Southwestern's Rate Schedule P-13, then it shall not be applied here.

2.6.5.2. Procedure for Determining Regulation Purchased Adder

Unless otherwise specified by contract, the Regulation Purchased Adder for an individual Customer shall be based on the following formula rate, calculated to include the replacement value of the estimated annual use of energy from storage by Southwestern for Regulation and Frequency Response Service.

RPA = The Regulation Purchased Adder for an individual Customer per month, which is as follows:

$$[(L_{\text{Customer}} \div L_{\text{Total}}) \times RP_{\text{Total}}] \div 12$$

with the factors defined as follows:

L_{Customer} = The sum in MW of the following three factors:

- (1) The Customer's highest metered load plus generation used to serve the Customer's load that is accounted for through a reduction in the Customer's metered load (referred to as 'generation behind the meter') during the previous calendar year, and
- (2) The Customer's highest rate of Scheduled Exports² during the previous calendar year, and
- (3) The Customer's highest rate of Scheduled Imports² during the previous calendar year.

L_{Total} = The sum of all L_{Customer} factors for all Customers that were inside Southwestern's Balancing Authority Area at the beginning of the previous calendar year in MW.

RP_{Total} = The "net" cost in dollars and cents based on Southwestern's estimated purchased power price for the corresponding year from the most currently approved Power Repayment Studies multiplied by the average annual use of energy from storage, as provided for in the table in Section 2.6.5, to support Southwestern's ability to regulate within its Balancing Authority Area. The "net" cost in dollars and cents shall be adjusted by subtracting the product of the quantity of such average annual use of energy from storage in MWh and Southwestern's highest rate in dollars per MWh for Supplemental Peaking

Energy during the previous calendar year.

² Scheduled Exports and Scheduled Imports are transactions, such as sales and purchases respectively, which are in addition to a Customer's metered load that contribute to Southwestern's Balancing Authority Area need for regulation.

For Customers that have aggregated their load, resources, and scheduling into a single node by contract within Southwestern's Balancing Authority Area, the individual Customer's respective Regulation Purchased Adder shall be that Customer's ratio share of the Regulation Purchased Adder established for the node. Such ratio share shall be determined for the Customer on a non-coincident basis and shall be calculated for the Customer from their highest metered load plus generation behind the meter.

2.6.6. Energy Imbalance Service Limitations

Energy Imbalance Service is authorized for use only within a bandwidth of ± 1.5 percent of the actual requirements of the load at a particular point of delivery, for any hour, compared to the resources scheduled to meet such load during such hour. Deviations which are greater than ± 1.5 percent, but which are less than $\pm 2,000$ kilowatts, are considered to be within the authorized bandwidth. Deviations outside the authorized bandwidth are subject to a Capacity Overrun Penalty.

Energy delivered or received within the authorized bandwidth for this service is accounted for as an inadvertent flow and will be netted against flows in the future. The inadvertent flow in any given hour will only be offset with the flows in the corresponding hour of a day in the same category. Unless otherwise specified by contract, the two categories of days are weekdays and weekend days/North American Electric Reliability Corporation holidays, and this process will result in a separate inadvertent accumulation for each hour of the two categories of days. The hourly accumulations in the current month will be added to the hourly inadvertent balances from the previous month, resulting in a month-end balance for each hour.

The Customer is required to adjust the scheduling of resources in such a way as to reduce the accumulation towards zero. It is recognized that the inadvertent hourly flows can be both negative and positive, and that offsetting flows should deter a significant accumulation of inadvertent. Unless otherwise specified by contract, in the event any hourly month-end balance exceeds 12 MWhs, the excess will be subject to Section 3.1 or Section 3.2 of this Rate Schedule, depending on the direction of the accumulation.

3. Non-Federal Transmission/Interconnection Facilities Service Penalties, Terms, and Conditions

3.1. Capacity Overrun Penalty

3.1.1. Penalty Charge for Capacity Overrun

For each hour during which energy flows outside the authorized bandwidth, the Customer will be obliged to purchase such energy at the following rates:

Months Associated With Charge	Rate per Kilowatt
March, April, May, October, November, December	\$0.15
January, February, June, July, August, September	\$0.30

3.1.2. Applicability of Capacity Overrun Penalty

Customers who receive deliveries within Southwestern's Balancing Authority Area are obligated to provide resources sufficient to meet their loads. Such obligation is not related to the amount of transmission capacity that such Customers may have reserved for transmission service to a particular load. In the event that a Customer underschedules its resources to serve its load, resulting in a difference between resources and actual metered load (adjusted for transformer losses as applicable) outside the authorized bandwidth for Energy Imbalance Service for any hour, then such Customer is subject to the Capacity Overrun Penalty.

3.2. Unauthorized Use of Energy Imbalance Service by Overscheduling of Resources

In the event that a Customer schedules greater resources than are needed to serve its load, such that energy flows at rates beyond the authorized bandwidth for the use of Energy Imbalance Service, Southwestern retains such energy at no cost to Southwestern and with no obligation to return such energy.

3.3. Power Factor Penalty

3.3.1. Requirements Related to Power Factor

Any Customer served from facilities owned by or available by contract to Southwestern will be required to maintain a power factor of not less than 95 percent and will be subject to the following provisions.

3.3.2. Determination of Power Factor

The power factor will be determined for all Demand Periods and shall be calculated under the formula:

$$PF = (kWh) \div \sqrt{(kWh^2 + rkVAh^2)}$$

with the factors defined as follows:

PF = The power factor for any Demand Period of the month.

kWh = The total quantity of energy which is delivered during such Demand Period to the point of delivery or interconnection in accordance with Section 3.3.4.

rkVAh = The total quantity of reactive kilovolt-ampere-hours (kVARs) delivered during such Demand Period to the point of delivery or interconnection in accordance with Section 3.3.4.

3.3.3. Penalty Charge for Power Factor

The Customer shall be assessed a penalty for all Demand Periods of a month where the power factor is less than 95 percent lagging. For any Demand Period during a particular month such penalty shall be in accordance with the following formula:

$$C = D \times (0.95 - LPF) \times \$0.10$$

with the factors defined as follows:

C = The charge in dollars to be assessed for any particular Demand Period of such month that the determination of power factor "PF" is calculated to be less than 95 percent lagging.

D = The Customer's demand in kilowatts at the point of delivery for such Demand Period in which a low power factor was calculated.

LPF = The lagging power factor, if any, determined by the formula "PF" for such Demand Period.

If C is negative, then C = zero (0).

3.3.4. Applicability of Power Factor Penalty

The Power Factor Penalty is applicable to radial interconnections with the System of Southwestern. The total Power Factor Penalty for any month shall be the sum of all charges "C" for all Demand Periods of such month. No penalty is assessed for leading power factor. Southwestern, in its sole judgment and at its sole option, may determine whether power factor calculations should be applied to (i) a single physical point of delivery, (ii) a combination of physical points of delivery

where a Customer has a single, electrically integrated load, (iii) or interconnections. The general criteria for such decision shall be that, given the configuration of the Customer's and Southwestern's systems, Southwestern will determine, in its sole judgment and at its sole option, whether the power factor calculation more accurately assesses the detrimental impact on Southwestern's system when the above formula is calculated for a single physical point of delivery, a combination of physical points of delivery, or for an interconnection as specified by an Interconnection Agreement.

Southwestern, at its sole option, may reduce or waive Power Factor Penalties when, in Southwestern's sole judgment, low power factor conditions were not detrimental to the System of Southwestern due to particular loading and voltage conditions at the time the power factor dropped below 95 percent lagging.

4. Non-Federal Transmission/Interconnection Facilities Service Miscellaneous Rates, Terms, and Conditions

4.1. Real Power Losses

Customers are required to self-provide all Real Power Losses for non-Federal energy transmitted by Southwestern on behalf of such Customers under the provisions detailed below.

Real Power Losses are computed as four (4) percent of the total amount of non-Federal energy transmitted by Southwestern. The Customer's monthly Real Power Losses are computed each month on a megawatthour basis as follows:

$$ML = 0.04 \times NFE$$

with the factors defined as follows:

ML = The total monthly loss energy, rounded to the nearest megawatthour, to be scheduled by a Customer for receipt by Southwestern for Real Power Losses associated with non-Federal energy transmitted on behalf of such Customer; and

NFE = The amount of non-Federal energy that was transmitted by Southwestern on behalf of a Customer during a particular month.

The Customer must schedule or cause to be scheduled to Southwestern, Real Power Losses for which it is responsible subject to the following conditions:

- 4.1.1. The Customer shall schedule and deliver Real Power Losses back to Southwestern during the second month after they were incurred by Southwestern in the transmission of the Customer's non-Federal power and energy over the System of Southwestern unless such Customer has accounted for Real Power Losses as part of a metering arrangement with Southwestern.
- 4.1.2. On or before the twentieth day of each month, Southwestern shall determine the amount of non-Federal loss energy it provided on behalf of the Customer during the previous month and provide a written schedule to the Customer setting forth hour-by-hour the quantities of non-Federal energy to be delivered to Southwestern as losses during the next month.
- 4.1.3. Real Power Losses not delivered to Southwestern by the Customer, according to the schedule provided, during the month in which such losses are due shall be billed by Southwestern to the Customer to adjust the end-of-month loss energy balance to zero (0) megawatthours and the Customer shall be obliged to purchase such energy at the following rates:

Months Associated With Charge	Rate per Kilowatthour
March, April, May, October, November, December	\$0.15

January, February, June, July, August, September	\$0.30
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4.1.4. Real Power Losses delivered to Southwestern by the Customer in excess of the losses due during the month shall be purchased by Southwestern from the Customer at a rate per megawatthour equal to Southwestern's rate per megawatthour for Supplemental Peaking Energy, as set forth in Southwestern's then-effective Rate Schedule for Hydro Peaking Power to adjust such hourly end-of-month loss energy balance to zero (0) megawatthours.