

UNITED STATES DEPARTMENT OF ENERGY
SOUTHWESTERN POWER ADMINISTRATION

RATE SCHEDULE P-02¹
WHOLESALE RATES FOR
HYDRO PEAKING POWER

Effective:

During the period October 1, 2002, through September 30, 2006, in accordance with Federal Energy Regulatory Commission order issued October 22, 2003, Docket No. EF02-4011-000.

Available:

In the marketing area of Southwestern Power Administration (Southwestern), described generally as the States of Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas.

Applicable:

To wholesale Customers which have contractual rights from Southwestern to purchase Hydro Peaking Power and associated energy (Peaking Energy and Supplemental Peaking Energy).

Character and Conditions of Service:

Three-phase, alternating current, delivered at approximately 60 Hertz, at the nominal voltage(s), at the points of delivery, and in such quantities as are specified by contract.

Definitions of Terms:

A Customer is the entity which is utilizing and/or purchasing services from Southwestern pursuant to this rate schedule.

The "*Demand Period*" used to determine maximum integrated rates of delivery for the purpose of power accounting is the 60-minute period which begins with the change of hour. The term "*peak demand*" means the highest rate of delivery, in kilowatts, for any Demand Period during a particular month, at any particular point of delivery.

For the purposes of this Rate Schedule, the term "*point of delivery*" is used to mean either a single physical point at 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. "Peak demand" for such set of points is computed as the coincidental highest rate of delivery among the specified points rather than as the sum of peak demands for each individual physical point of delivery.

The term "*Peaking Contract Demand*" means the maximum rate in kilowatts at which Southwestern is, by contract, obligated to deliver Peaking Energy during any Demand Period. Unless otherwise provided by contract, the "*Peaking Billing Demand*" for any month shall be equal to the "Peaking Contract Demand."

¹Supersedes Rate Schedules P-98D

The term "*Uncontrollable Force*," as used herein, shall mean 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, war, riot, civil disturbance, labor disturbance, sabotage, 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.

The term "*System of Southwestern*" means the high-voltage transmission lines and related facilities Southwestern owns and operates, and/or has contractual rights to such transmission facilities owned by others.

"*Ancillary Services*" are those 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. Ancillary Services include:

"*Scheduling, System Control, and Dispatch Service*" is provided by Southwestern as Control Area operator and is in regard to interchange and load-match scheduling and related system control and dispatch functions.

"*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.

"*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 Control Area.

"*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.

"*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.

"*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 (defined below) 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.

Energy Associated with Hydro Peaking Power:

PEAKING ENERGY:

1,200 kilowatthours of Peaking Energy per kilowatt of Peaking Contract Demand will be furnished during each contract year.

SUPPLEMENTAL PEAKING ENERGY:

Supplemental Peaking Energy (in addition to Peaking Energy) will be furnished if and when determined by Southwestern to be available, to be provided at rates of delivery which do not exceed the Customer's Peaking Contract Demand.

Monthly Rates for Peaking Contract Demand:

CAPACITY CHARGE FOR HYDRO PEAKING POWER:

\$2.72 per kilowatt of Peaking Billing Demand.

Services Associated with Capacity Charge for Hydro Peaking Power

The capacity charge for Hydro Peaking Power includes such transmission services as are necessary to integrate Southwestern's resources in order to reliably deliver Hydro Peaking Power and associated energy to Customers. This capacity charge also includes Scheduling, System Control, and Dispatch Service and Reactive Supply and Voltage Control from Generation Sources Service.

Secondary Transmission Service under Capacity Associated with Hydro Peaking Power

Customers may utilize the capacity associated with Peaking Contract Demand for the transmission of non-Federal energy, on a non-firm, as-available basis, at no additional charge for such transmission service or associated Ancillary Services, under the following terms and conditions:

- (1) the sum of the capacity, for any hour, which is used for Peaking Energy, Supplemental Peaking Energy, and Secondary Transmission Service, may not exceed the Peaking Contract Demand;
- (2) the non-Federal energy transmitted under such secondary service is delivered to the Customer's point of delivery for Hydro Peaking Power;
- (3) the Customer pays or commits to provide for Real Power Losses associated with such deliveries of non-Federal energy; and
- (4) Southwestern determines that sufficient transfer capability exists between the point of receipt into Southwestern's system of such non-Federal energy and the Customer's point of delivery for Hydro Peaking Power for the time period that such secondary transmission service is requested.

Rates for Energy Associated with Hydro Peaking Power:

ENERGY CHARGE:

- (a) \$0.0050 per kilowatthour of Peaking Energy and Supplemental Peaking Energy delivered; plus (b).
- (b) A purchased power adder of \$0.0025 per kilowatthour of Peaking Energy delivered, as adjusted by the Administrator, Southwestern, in accordance with the procedure within this rate schedule. This adder does not apply to:

Supplemental Peaking Energy, or

Sales to any Customer which, by contract, has assumed the obligation to supply energy to fulfill the minimum of 1,200 kilowatthours of Peaking Energy per kilowatt of Peaking Contract Demand during a contract year (Contract Support Arrangements).

Monthly Rates for Transformation Service:

CAPACITY CHARGES FOR TRANSFORMATION SERVICE: A charge of \$0.28 per kilowatt will be assessed for capacity used to deliver energy at any point of delivery at which Southwestern provides transformation for deliveries at voltages of 69 kilovolts or less from higher voltage facilities.

Application of Capacity Charges for Transformation Service

For any particular month, charges for transformation service will be assessed on the greater of (1) that month's actual peak demand, or (2) the highest peak demand recorded during the previous 11 months, at any point of delivery. For the purpose of this Rate Schedule, the peak 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.

Rates for Ancillary Services:

CAPACITY CHARGES FOR ANCILLARY SERVICES:

- (a) Regulation and Frequency Response Service:
Monthly rate of \$0.06 per kilowatt of Peaking Billing Demand.
- (b) Spinning Operating Reserve Service:
Monthly rate of \$0.0056 per kilowatt of Peaking Billing Demand
Daily rate of \$0.00025 per kilowatt for non-Federal generation inside Southwestern's control area
- (c) Supplemental Operating Reserve Service:
Monthly rate of \$0.0056 per kilowatt of Peaking Billing Demand
Daily rate of \$0.00025 per kilowatt for non-Federal generation inside Southwestern's control area
- (d) Energy Imbalance Service:
\$0.0 per kilowatt for all reservation periods.

Availability of Ancillary Services

Ancillary Services (a) and (d) listed above are available only for deliveries of power and energy to load centers within Southwestern's Control Area. Ancillary Services (b) and (c) listed above are available only for deliveries of non-Federal power and energy generated by resources located within Southwestern's Control Area and for deliveries of all Hydro Peaking Power and associated energy from and within Southwestern's Control Area. Where available, such Ancillary Services must be taken from Southwestern; unless, subject to Southwestern's approval, they are provided by others.

Application of Ancillary Services Charges

For any month, the charges for Ancillary Services (a), (b), (c) and (d) listed above for deliveries of Hydro Peaking Power shall be based on the Peaking Billing Demand.

The daily charge for Ancillary Services (b) and (c) for non-Federal generation inside Southwestern's Control Area shall be applied to the greater of Southwestern's previous days estimate of the peak, or the actual peak, in kilowatts, of the internal non-Federal generation. For any particular customer with internal generation, the monthly accumulation of daily

charges shall be reduced by the amount that transmission customer(s) are charged for Ancillary Services (b) and (c) for a particular month under the applicable non-Federal transmission service rate schedule when the source of power is such internal generation.

Provision of Ancillary Services by Others

Customers for which Ancillary Services (a), (b), (c) and (d) 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.

Subject to Southwestern's approval of the ability of such resources or third parties to meet Southwestern's technical 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 notice or upon completion of any necessary equipment modifications necessary to accommodate such change.

Limitations on Energy Imbalance Service

Energy Imbalance Service primarily applies to deliveries of power and energy which are required to satisfy a Customer's load. As Hydro Peaking Power and associated energy are limited by contract, the Energy Imbalance Service bandwidth specified in Southwestern's Open Access Transmission Service tariff does not apply to deliveries of Hydro Peaking Power, and therefore Energy Imbalance Service is not charged on such deliveries. Customers which consume a capacity of Hydro Peaking Power greater than their Peaking Contract Demand may be subject to a Capacity Overrun Penalty.

Application of Capacity Overrun Penalty

Customers which have loads within Southwestern's Control Area are obligated by contract to provide resources, over and above the Hydro Peaking Power and associated energy purchased from Southwestern, sufficient to meet their loads. A Capacity Overrun Penalty shall be applied only when the formulas provided in Customer's contracts indicate an overrun on Hydro Peaking Power, and investigation determines that all resources, both firm and non-firm, which were available at the time of the apparent overrun were insufficient to meet the Customer's load.

CAPACITY OVERRUN PENALTY

For each hour during which Hydro Peaking Power was provided at a rate greater than that to which the Customer is entitled, the Customer will be charged a capacity overrun penalty at the following rates:

Months Associated With Charge	Rate per Kilowatt
March, April, May, October, November, December	\$0.10
January, February, June, July, August, September	\$0.30

Application of Energy Overrun Penalty:

By contract, the Customer is subject to limitations on the maximum amounts of Peaking Energy which may be scheduled during any month or during any four consecutive months. When the Customer schedules an amount in excess of such maximum amounts for any month, or schedules more than 1,200 hours of Peaking Energy per kilowatt of Peaking Contract Demand in any contract year, such Customer is subject to the Energy Overrun Penalty.

ENERGY OVERRUN PENALTY:

For each kilowatthour of overrun: \$0.055 per kilowatthour

Rates for Real Power Losses

The Customer shall purchase real power losses unless it elects to self-provide such losses under the provision detailed below in *Annual Election to Self Provide Real Power Losses*.

Real Power Losses are computed as four (4) percent of the total amount of non-Federal energy transmitted under a particular Customer's Peaking Contract Demand. The monthly charge for such Real Power Losses will be computed on a per kilowatthour basis as follows:

$$MC = .04 \times NFE \times R$$

with the factors defined as follows:

MC = The monthly charge (\$) by Southwestern for Real Power Losses of non-Federal energy transmitted under the capacity associated with Hydro Peaking Power;

NFE = The amount of non-Federal energy (kWh) transmitted under a Customer's Peaking Contract Demand during a particular month; and

R = The rate for Real Power Losses (\$ per kWh), is equal to the average of Southwestern's actual costs for the purchase of energy to replace Real Power Losses during the previous fiscal year (October through September), as reflected in Southwestern's financial records.

The rate for Real Power Losses will be posted on Southwestern's OASIS by November 1 of each year. This rate will be effective for one year beginning January 1 of each calendar year.

Annual Election to Self Provide Real Power Losses: The Customer may elect, on an annual basis, to self-provide all loss energy for which it is responsible subject to the following conditions:

- (1) Such election for self-provision shall be for a full calendar year (January through December) for that Customer and shall be exercised by execution of a service agreement, or equivalent, before December 1 of the prior calendar year;

- (2) Unless otherwise specified in the service agreement, the Customer shall schedule the delivery of real power losses into the System of Southwestern at the rate of one megawatt of real power losses for every 25 megawatts of non-Federal power and energy delivered to Customers' loads served from the points of delivery set forth in the Southwestern/Customer contract;
- (3) For any new customer taking transmission service from Southwestern, election to self-provide real power losses shall be made at the time the contract is negotiated. Such service shall be implemented as provided for in the contract and the election to self-provide shall apply through the end of that calendar year for all transmission services.

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.

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.

rkVAh = the total quantity of reactive kilovolt-ampere-hours (kvars) delivered during such Demand Period to the point of delivery or interconnection.

Power Factor Penalty and Assessment:

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:

$$C = D \times (.95 - LPF) \times \$0.10$$

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).

Application 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 a single physical point of delivery or to multiple physical points of delivery where a Customer has a single, electrically integrated load served through multiple points 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 or for a combination of physical points 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.

Adjustment for Reduction in Service:

If, during any month, the quantity of Peaking Contract Demand scheduled by the customer for delivery is reduced by Southwestern for a period or periods of not less than two consecutive hours by reason of an outage caused by either an Uncontrollable Force or by the installation, maintenance, replacement or malfunction of generation, transmission and/or related facilities on the System of Southwestern, the Customer's capacity charges for such month will be reduced for each such reduction in service by an amount computed under the formula:

$$R = (C \times K \times H) \div S$$

with the factors defined as follows:

R = the dollar amount of reduction in the monthly total capacity charges for a particular reduction of not less than two consecutive hours during any month, except that the total amount of any such reduction shall not exceed the product of the Customer's capacity charges associated with Hydro Peaking Power times the Peaking Billing Demand.

C = the Customer's capacity charges associated with Hydro Peaking Power for the Peaking Billing Demand for such month.

- K = the reduction in kilowatts in Peaking Billing Demand for a particular event.
- H = the number of hours duration of such particular reduction.
- S = the number of hours that Peaking Energy is scheduled during such month, but not less than 60 hours times the Peaking Contract Demand.

Procedure for Determining Southwestern's Net Purchased Power Adder Adjustment

Not more than once annually, the Purchased Power Adder of \$.0025 (2.5 mills) per kilowatthour of Peaking Energy, as noted in this Rate Schedule, may be adjusted by the Administrator, Southwestern, by an amount up to \pm \$.0011 (1.1 mills) per kilowatthour, as calculated by the following formula:

$$ADJ = (PURCH - EST + DIF) \div SALES$$

with the factors defined as follows:

- ADJ = the dollar amount of the total adjustment, plus or minus, to be applied to the Net Purchased Power Adder, rounded to the nearest \$.0001 per kilowatthour, provided that the total ADJ to be applied in any year shall not vary from the then-effective ADJ by more than \$.0011 per kilowatthour;
- PURCH = the actual total dollar cost of Southwestern's System Direct Purchases as accounted for in the financial records of the Southwestern Federal Power System for the period;
- EST = the estimated total dollar cost (\$5,520,600 per year) of Southwestern's System Direct Purchases used as the basis for the Purchased Power Adder of \$.0025 per kilowatthour of Peaking Energy;
- DIF = the accumulated remainder of the difference in the actual and estimated total dollar cost of Southwestern's System Direct Purchases since the effective date of the currently approved Purchased Power Adder set forth in this rate schedule, which remainder is not projected for recovery through the ADJ in any previous periods;
- SALES = the annual Total Peaking Energy sales projected to be delivered (2,241,300,000 KWh per year) from the System of Southwestern, which total was used as the basis for the \$.0025 per kilowatthour Purchased Power Adder.