

# GLOSSARY

## **A** AGGREGATE PRICE NODE (APNODE)

A collection of Price Nodes (PNodes) whose prices are averaged with a defined weighting component to determine an aggregate price.

### **ANCILLARY SERVICES**

Generally refers to the services necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the transmission system. The Integrated Marketplace will set prices for certain ancillary services such as Operating Reserves, as part of both the Day-Ahead Market and the Real-Time Balancing Market.

### **ASSET OWNER**

An owner of any combination of: (1) registered physical assets (Resource, Load, Import Interchange Transaction, Export Interchange Transaction, Through Interchange Transaction); (2) Transmission Congestion Rights (TCRs); or (3) any combination of financial assets (Virtual Energy Offer, Virtual Energy Bid, Bilateral Settlement Schedules) within the SPP BA area.

### **AUCTION CLEARING PRICE (ACP)**

The prices generated at each source and sink settlement location in each round of the annual TCR auction and monthly TCR auction based upon the TCR offers and bids submitted.

### **AUCTION REVENUE RIGHT (ARR)**

A financial right, awarded during the annual ARR allocation process that entitles the holder to a share of the auction revenues generated in the applicable TCR auction(s) and/or entitles the holder to self-convert the ARRs into TCRs.

### **ARR FUNDING**

A financial right awarded during the annual ARR allocation process and/or incremental ARR allocation process, entitling the holder to a share of the auction revenues generated in the applicable TCR auction(s), and/or entitling the holder to self-convert the ARRs into TCRs.

### **ARR NOMINATION CAP**

The maximum total amount of ARRs that an eligible entity may nominate in each month and season during the annual ARR-allocation process and the monthly incremental ARR-allocation process.

## **AUTOMATIC GENERATION CONTROL (AGC)**

A computerized power system maintaining scheduled generation that is changing moment to moment to follow the loads in a defined area.

## **B** BALANCING AUTHORITY (BA)

The responsible entity that maintains load-interchange-generation balance within a Balancing Authority area. In coordination with the SPP Integrated Marketplace implementation, the current BAs will be combined to form a single SPP BA.

### **BALANCING AUTHORITY AREA**

The collection of generation, transmission, and loads within the metered boundaries of the BA.

### **BEHIND THE METER**

Commonly refers to the flow of electricity before it hits the meter on the transmission system wires.

### **BID**

A commitment to pay a specific maximum price for a quantity of energy or TCRs, such as a demand, virtual energy, or export interchange transaction bids, and/or a TCR bid.

### **BILATERAL SETTLEMENT SCHEDULE**

A financial arrangement between two market participants: (1) designating the buyer, seller, MW amount and settlement location for energy transactions, or (2) designating the buyer, seller, obligation percentage, and reserve zone for operating reserve obligation transfer transactions.

### **BLOCK DEMAND RESPONSE**

A behind-the-meter load reduction that requires a calculated response.

### **BLOCK DEMAND RESPONSE RESOURCE**

A controllable load, including controllable load of an aggregator of retail customers, that is not a dispatchable resource and that can reduce the withdrawal of energy from the transmission grid when directed by SPP.

## **C** CALIBRATION

The load-ratio share distribution of unaccounted-for energy within a settlement area.

### **CENTRAL PREVAILING TIME (CPT)**

Clock time for the season of a year, i.e., Central Standard Time and Central Daylight Time.

## **CLEARED ENERGY**

The total net quantity and energy represented by an asset owner's Day Ahead Market-cleared resource offers and demand bids in the DA Market at settlement location for the hour.

### **CLOSE OUT**

The end-of-the-year process used to allocate any excess congestion fund dollars to the holders of the candidate ARRs, on a pro rate share based on the nomination cap.

### **COMBINED CYCLE**

A resource configured using both gas turbines or engines and steam generators.

### **COMMERCIAL MODEL**

A representation of the attributes of and the relationships between MPs, asset owners, resource and load assets, and PNodes for use in the energy and operating reserve markets, and TCR markets.

### **COMMERCIAL OPERATIONS SYSTEM**

A suite of applications including Marketplace settlements, credit management, and the legacy settlement systems (Transmission Settlements, legacy Portal, and related legacy Customer Services functions).

### **COMMITMENT PERIOD**

The contiguous period of time between a resource's DA Market commit time and the same market's de-commit time.

### **COMMITMENT STATUS**

A parameter submitted as part of a resource offer that specifies the option under which the resource is to be committed.

### **COMMIT TIME**

The time specified by SPP or a local transmission operator in a commit order at which a resource should be synchronized and at or above Minimum Economic Capacity Operating Limit.

### **COMMON BUS**

A single bus to which two or more resources owned by the same asset owner are connected in an electrically equivalent manner, where such resources may be treated as interchangeable for certain compliance monitoring purposes.

### CONGESTION

Situation where the desired amount of electricity is unable to flow due to physical limitations (line, bus, storm damages) or regulated limitations, such as contingency reserves. Congestion impairs the ability to use least-cost electricity to meet demand, and a price difference between source and sink.

### CONGESTION HEDGING

A strategy used to reduce the risk of adverse price movements in an asset due to transmission overcrowding.

### CONTINGENCY

The unexpected failure or outage of a system component, such as a generator, transmission line, or other electrical element.

### CONTINGENCY RESERVE DEPLOYMENT INSTRUCTION

An instruction issued by SPP to resources cleared for contingency reserve in the Real-Time Balancing Market to deploy a specific MW quantity of contingency reserve as communicated as a component of the setpoint instructions.

### CONTINGENCY RESERVE RAMP RATE

A curve specifying MW/minute ramp rates that are used to determine a resource's maximum spinning reserve quantities or on-line supplemental reserve quantities.

### CONTRACT HEADER

Mechanism used by MPs to create bilateral settlement schedules for energy and operating reserve obligation by registering and confirming the parameters of the agreement between buyer and seller (such as schedule ID, settlement location, reserve zone, etc.) and the effective and termination dates. The contract header is validated and entered into the system.

### CONTROL AREA

A NERC (North American Reliability Corporation) operating entity bounded by interconnection metering or telemetering, and directly controlling generation to regulate the interconnection's frequency. The control area balances schedules with load and generation to maintain its interchange schedules with other control areas.

### CONTROL STATUS

A parameter communicated electronically to SPP by an MP at any time during an operating hour, indicating a resource's ability to follow setpoint instructions.

### CONTROLLABLE LOAD

Wholesale market load that can be at least partially curtailed in response to a deployment instruction.

### CO-OPTIMIZATION

The simultaneous/joint clearing of energy and operating reserve to produce the least-operational cost solution.

### COUNTER PARTY

The opposing entity in a financial schedule.

### CURRENT OPERATING PLAN

SPP's internal hourly resource commitment schedule for the Operating Day resulting from the various Day-Ahead Market and Day-Ahead Reliability Unit Commitment processes and updated, as required, during the Intra-Day RUC process that is used as input into the Real-Time Balancing Market.

### D DAY-AHEAD (DA)

The time period starting at 0001 and ending at 2400 on the day prior to the Operating Day.

### DA MARKET COMMITMENT PERIOD

The contiguous period of time between a resource's DA Market commit time and DA Market de-commit time.

### DAY-AHEAD MAKE WHOLE PAYMENT AMOUNT

A credit or charge to an asset owner, calculated for each resource with an associated DA Market commitment period.

### DAY-AHEAD MARKET (DA MARKET)

The financially binding market for energy and operating reserve that is conducted on the day prior to the Operating Day.

### DAY-AHEAD RELIABILITY UNIT COMMITMENT (DAY-AHEAD RUC)

The SPP process following the DA Market's close and prior to the operating day to assess resource and operating reserve adequacy for the operating day, commit and/or de-commit resources as necessary, and communicate resource commitments or de-commitments to the appropriate MPs, when necessary.

### DAY-AHEAD SCHEDULE

Schedule prepared by a scheduling coordinator or the ISO before the beginning of each trading day. This schedule indicates the generation levels and demand scheduled for each settlement period that trading day.

### DE-COMMIT TIME

The time specified by SPP or a local transmission operator in a de-commit order at which a resource should begin de-synchronization procedures.

### DEMAND BID

An MP proposal associated with a physical load to purchase a fixed or price-sensitive amount of energy at a specified location and period of time in the Day-Ahead Market.

### DEMAND CURVE

A series of quantity/price points used to set operating reserve market-clearing prices when there is an operating reserve supply shortage, and to set LMPs when there is shortage of capacity to meet energy requirements.

### DEMAND RESPONSE LOAD

A measurable load capable of being reduced at the SPP operator's instruction, and subsequently increased at the instruction of the SPP operator that is identified in the registration of a Dispatchable Demand Response Resource or a Block Demand Response Resource.

### DEMAND RESPONSE RESOURCE

A Dispatchable Demand Response Resource or a Block Demand Response Resource.

### Designated Resource

Any designated generation resource owned, purchased, or leased by a transmission customer to serve load in the SPP region. Designated resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the transmission customer's load on a non-interruptible basis.

### DESIRED DISPATCH

A MW value calculated from a resource's RTBM energy offer curve that represents the point at which the resource's incremental energy offer is equal to the resource's RTBM LMP.

### DISPATCH INSTRUCTION

The communicated resource target energy MW output level at the end of the dispatch interval.

### DISPATCH INTERVAL

The period of time for which SPP issues energy dispatch instructions and clears operating reserve in the Real-Time Balancing Market. The dispatch interval is currently five minutes.

### DISPATCH STATUS

A parameter submitted as part of a resource offer that specifies the option under which the resource is to be dispatched, once the resource has been committed and becomes a synchronized resource.

### **Dispatchable Controllable Load**

A registered load settlement location within which the associated demand response load resides, associated with a Dispatchable Demand Response Resource.

### **DISPATCHABLE DEMAND RESPONSE**

Load reduction which can be metered.

### **DISPATCHABLE DEMAND RESPONSE RESOURCE**

A controllable load, including behind-the-meter generation, that is a dispatchable resource and can reduce the withdrawal of energy from the transmission grid when directed by SPP.

### **DISPATCHABLE RESOURCE**

A resource for which an energy offer curve has been submitted and that is available for dispatch by SPP on a dispatch interval basis.

### **DISPATCHABLE VARIABLE ENERGY RESOURCE**

A variable energy resource capable of being incrementally dispatched down by the transmission provider.

## **E ELECTRICAL NODE (ENODE)**

A physical node represented in the network model where electrical equipment and components are connected.

### **ELIGIBLE ENTITY**

A transmission customer or market participant eligible to nominate ARR during the annual allocation process.

### **EMERGENCY**

An abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent loss of firm load, equipment damage, or tripping system elements that could adversely affect the electric system's reliability or the safety or persons or property.

### **ENERGY**

An amount of electricity that is bid or offered, produced, purchased, consumed, sold or transmitted over a period of time, which is measured or calculated in megawatt hours (MWh).

### **ENERGY AND OPERATING RESERVE MARKETS**

The Day-Ahead Market and Real-Time Balancing Market.

### **ENERGY MANAGEMENT SYSTEM (EMS)**

The software system used by SPP for the real-time acquisition of operating data and operations.

### **ENERGY OFFER CURVE**

A set of price/quantity pairs that represents the offer to provide energy from a resource.

### **EXPORT INTERCHANGE TRANSACTION**

An MP schedule for exporting energy out of the SPP Balancing Authority area.

### **EXPORT INTERCHANGE TRANSACTION BID**

An MP proposal to purchase a fixed or price-sensitive amount of energy in the Day-Ahead Market, or a fixed amount of energy in the Real-Time Balancing Market for delivery outside of the SPP Balancing Authority area at a specified external interface and period of time.

### **EXTERNAL CONTINGENCY RESERVE**

The sum of the external spinning reserve and external supplemental reserve.

### **EXTERNAL INTERFACE**

A settlement location representing a physical interconnection point(s) between the SPP Balancing Authority area and an external balancing authority area.

### **EXTERNAL RESERVE ZONE OBLIGATION TRANSFER SCHEDULE**

A schedule from a BA external to the SPP BA, into a reserve zone support by firm transmission service to the SPP border and that allows an MP to reduce its operating reserve obligation in that reserve zone.

### **EXTERNAL SPINNING RESERVE**

Spinning reserve contracted by an MP being supplied from an external BA to a reserve zone within the SPP BA to meet the MP's spinning reserve obligation in that zone.

### **EXTERNAL SUPPLEMENTAL RESERVE**

Supplemental reserve contracted by an MP and supplied from an external BA to a reserve zone within the SPP BA to meet the MP's supplemental reserve obligation within the zone.

## **F FIRM POINT-TO-POINT ARR NOMINATION CAP ("FPTP ARR NOMINATION CAP")**

The maximum total amount of FPTP candidate ARRs that an eligible entity may nominate in each month and season in the annual ARR allocation process.

### **FIRM POINT-TO-POINT TRANSMISSION SERVICE**

The highest quality or priority service offered to customers under a filed rate schedule that anticipates no planned interruption. Point-to-point transmission service is the transmission of capacity and energy from the point(s) of receipt to the point(s) of delivery.

### **FLOWGATE**

A transmission facility or transmission element(s) that has been identified as limiting the amount of power that can be reliably transferred over the bulk transmission system.

## **G GENERATION CONTROL AREA**

The control area or settlement area in which the schedule originates.

### **GRANDFATHERED AGREEMENT (GFA)**

Transmission agreements executed prior to the SPP Open Access Transmission Tariff's effective date.

### **GFA FIRM POINT-TO-POINT CANDIDATE ARR ("GFA FPTP CANDIDATE ARR")**

All or a portion of the MW quantity of the GFA's transmission service component providing service equivalent to FPTP transmission service, as defined in the SPP Tariff, verified prior to the start of the annual ARR allocation process, that the applicable eligible entity can nominate for conversion into an ARR in the annual ARR allocation process.

### **GFA NITS ARR NOMINATION CAP**

The maximum total amount of GFA NITS candidate ARRs an eligible entity may nominate in each month and season in the annual ARR allocation process.

### **GFA NITS CANDIDATE ARR**

All or a portion of the MW quantity of a GFA's transmission service component providing service equivalent to NITS, as defined in the SPP Tariff, verified prior to the start of the annual ARR allocation process, that the applicable eligible entity can nominate for conversion into an ARR.

### **GROSS-UP LOAD**

Amount by which a dispatchable controllable load or a block controllable load is increased to account for the load reduction associated with the dispatch of a dispatchable DRR or block DRR.

## **H HUB**

A settlement location consisting of an aggregation of price nodes developed for financial and trading purposes.

## **I IMPORT INTERCHANGE TRANSACTION**

An MP schedule for importing energy into the SPP BA area.

### **IMPORT INTERCHANGE TRANSACTION OFFER**

An MP proposal to purchase a fixed or price-sensitive amount of energy in the Day-Ahead Market or a fixed amount of energy in the Real-Time Balancing Market for delivery into the SPP BA area at a specified external interface and period of time.

### **INCREMENTAL ENERGY COST**

The cost of producing and transporting the next available unit of electrical power.

#### **INTERCHANGE TRANSACTION**

Any energy transaction crossing the boundary of the SPP BA area and requires checkout with one or more external BA areas. This includes any import-interchange transaction, export-interchange transaction, and/or through-interchange transaction.

#### **INTRA-DAY RELIABILITY UNIT COMMITMENT (INTRA-DAY RUC)**

SPP process following the completion of the DA RUC and throughout the operating day to assess resource and operating reserve adequacy for the operating day, commit and/or de-commit resources as necessary, and communicate commitment or de-commitment of resources to the appropriate MPs, as necessary.

#### **JOINTLY OWNED RESOURCE (JOU)**

A resource owned by more than one asset owner.

#### **LOAD**

The amount of electric power delivered or required at any specific point or points on a system. The requirement originates at the consumers' energy-consuming equipment.

#### **LOAD CONTROL AREA**

The control area or settlement area in which the schedule sinks.

#### **LOAD FORECAST**

Data used to determine obligation calculations and accessed through the Marketplace Portal. Load forecasts include weather data and hourly load data.

#### **LOAD RATIO SHARE**

The percentage of load at a single settlement location relative to SPP's total load.

#### **LOAD-SERVING ENTITY**

The entity that serves the end-use customer's energy requirements.

#### **LOCATIONAL MARGINAL PRICE (LMP)**

The market-clearing price for energy at a given price node equivalent to the marginal cost of serving demand at the price node while meeting SPP operating reserve requirements.

#### **LOSS POOL**

A collection of settlement locations dynamically determined for each asset owner based on that owner's transactional activity, used to determine the asset owner's allocation of over-collected loss revenues.

#### **LOSS REBATE**

Factors constructed by multiplying the portion of the net withdrawal served from within the loss pool at the settlement location by the delta between the local MLC (marginal loss component) and the local loss pool's injection weighted average MLC, and summing that portion of the net withdrawal served by the exchange at the settlement location by the delta between the local MLC and the exchange injection weighted average MLC.

#### **MANUAL DISPATCH INSTRUCTION**

A dispatch instruction created outside of the normal RTBM SCED (Security Constrained Economic Dispatch) dispatch instruction solution to address a system reliability condition that could not be resolved by the RTBM SCED.

#### **MARGINAL CONGESTION COMPONENT**

An LMP component representing congestion's marginal cost.

#### **MARGINAL ENERGY COMPONENT**

An LMP component representing energy's marginal cost.

#### **MARGINAL LOSS COMPONENT**

An LMP component representing the marginal losses at price node relative to the network distributed load bus.

#### **MARKET CLEARING PRICE (MCP)**

The price used for settlements of an operating reserve product in each reserve zone. A separate price is calculated for Regulation-Up, Regulation-Down, Spinning Reserve, and Supplemental Reserve.

#### **MARKET PARTICIPANT (MP)**

Any person or entity that directly participates in and/or receives services from SPP markets and services. An MP can buy and sell SPP services under its Open Access Transmission Tariff.

#### **MARKET PROTOCOLS**

Detailed procedures that implement SPP's governing documents relating to energy and operating reserve markets operations, TCR market, settlements, and market mitigation.

#### **MAXIMUM DAILY ENERGY**

The maximum amount of energy in MWh available to be produced in an Operating Day from a particular resource.

#### **MAXIMUM DAILY STARTS**

The maximum number of times a resource can be started within an Operating Day.

#### **MAXIMUM ECONOMIC CAPACITY OPERATING LIMIT**

An economic MW level at or below a resource's Maximum Normal Capacity Operating Limit, used for constraining energy dispatch and contingency reserve-clearing during normal system conditions.

#### **MAXIMUM EMERGENCY CAPACITY OPERATING LIMIT**

The maximum MW level at which a resource, other than a Block Demand Response Resource, may operate under emergency system conditions.

#### **MAXIMUM EMERGENCY CAPACITY RUN TIME**

The maximum length of time a resource can operate above its Maximum Normal Capacity Operating Limit up to its Maximum Emergency Capacity Operating Limit.

#### **MAXIMUM NORMAL CAPACITY OPERATING LIMIT**

The maximum MW level at which a resource may operate continuously.

#### **MAXIMUM QUICK-START RESPONSE LIMIT**

The maximum amount of supplemental reserve that can be provided by a quick-start resource from an off-line state.

#### **MAXIMUM REGULATION CAPABILITY**

A resource's regulation ramp rate multiplied by the regulation response time.

#### **MAXIMUM REGULATION CAPACITY OPERATING LIMIT**

The maximum MW level at which a Regulation Qualified Resource, a Regulation-Up Qualified Resource, or a Regulation-Down Qualified Resource may operate while providing regulation deployment.

#### **MAXIMUM RUN TIME**

The maximum length of time a resource can run from the time it is synchronized to the time it is off-line.

#### **MAXIMUM WEEKLY STARTS**

The maximum number of times a resource can be started within a rolling seven-day period.

#### **MEGAWATT (MW)**

A measurement unit of the instantaneous demand for energy.

#### **METER AGENT**

Entity responsible for submittal of revenue quality interchange, resource, and load meter data into Settlements through the market portal.



#### **METER DATA SUBMITTAL LOCATION**

One or more meter settlement locations for which meter data is submitted to SPP by the meter agent for settlement purposes.

#### **METER SETTLEMENT LOCATION**

The effective point at which an MP's registered load and resources interchange energy with the Real-Time Balancing Market.

#### **METERING PARTIES**

All parties identified in a transmission service agreement that have a vested interest in the meter data's accuracy.

#### **MID-TERM LOAD FORECAST**

A settlement area load forecast developed by SPP on a rolling hourly basis for the next seven days for input into Reliability Unit Commitment.

#### **MINIMUM DOWN TIME**

The minimum length of time required following desynchronization that a resource must remain off-line prior to a subsequent synchronization.

#### **MINIMUM ECONOMIC CAPACITY OPERATING LIMIT**

A MW level, at or above a resource's Minimum Normal Capacity Operating Limit, used for energy dispatch at a minimum level during normal operating conditions.

#### **MINIMUM EMERGENCY CAPACITY OPERATING LIMIT**

The minimum MW level at which a resource other than a Block Demand Response Resource may operate under emergency system conditions.

#### **MINIMUM EMERGENCY CAPACITY RUN TIME**

The maximum length of time a resource can operate below its Minimum Normal Capacity Operating Limit down to its Minimum Emergency Capacity Operating Limit.

#### **MINIMUM NORMAL CAPACITY OPERATING LIMIT**

The minimum MW level at which a resource may operate continuously.

#### **MINIMUM REGULATION CAPACITY OPERATING LIMIT**

The minimum MW level at which a Regulation Qualified Resource, a Regulation-Up Qualified Resource, or a Regulation-Down Qualified Resource may operate while providing Regulation Deployment.

#### **MINIMUM RUN TIME**

The minimum length of time a resource must run from the time it is put online to the time it is shut down.

#### **MIN-TO-OFF TIME**

The time for a resource to de-synchronize from the grid starting from the resource's Minimum Economic Capacity Operating Limit.

#### **MITIGATED ENERGY OFFER CURVE**

A set of price/quantity pairs that represents the mitigated energy offer, where such offers are developed in accordance with guidelines detailed in Integrated Marketplace Protocols Appendix G, to provide energy from a resource.

#### **MITIGATED NO-LOAD OFFER**

The mitigated compensation request in a Mitigated Resource Offer, where such compensation offers are developed in accordance with guidelines detailed in Appendix G, in dollars, by an MP representing the hourly fee for operating a synchronized resource at zero MWs.

#### **MITIGATED REGULATION-DOWN OFFER**

The mitigated offer, where such offers are developed in accordance with guidelines detailed in Appendix G, at which a Regulation Qualified Resource or a Regulation-Down Qualified Resource offers sell Regulation-Down in dollars per MW.

#### **MITIGATED REGULATION-UP OFFER**

The mitigated offer, where such offers are developed in accordance with guidelines detailed in Appendix G, at which a Regulation Qualified Resource or a Regulation-Up Qualified Resource offers to sell Regulation-Up in dollars per MW.

#### **MITIGATED RESOURCE OFFER**

The combination of a resource's Mitigated Start-Up Offer, Mitigated No-Load Offer, Mitigated Energy Offer Curve, Mitigated Regulation-Up Offer, Mitigated Regulation-Down Offer, Mitigated Spinning Reserve Offer, and Mitigated Supplemental Reserve Offer. Mitigated resource offer parameters are developed in accordance with guidelines detailed in Appendix G and are intended to capture the incremental cost, including the appropriate application of opportunity costs, of providing each service to the SPP energy and operating reserve markets.

#### **MITIGATED SPINNING RESERVE OFFER**

The mitigated offer, where such offers are developed in accordance with guidelines detailed in Appendix G, at which a spin-qualified resource offers to sell spinning reserve in dollars per MW.

#### **MITIGATED START-UP OFFER**

The mitigated compensation request in a Mitigated Resource Offer, where such compensation offers are developed in accordance with guidelines detailed in Appendix G, required by an MP for bringing an off-line resource on-line or for reducing consumption of a Dispatchable Demand Response Resource or Block Demand Response Resource.

#### **MITIGATED SUPPLEMENTAL RESERVE OFFER**

The mitigated offer, where such offers are developed in accordance with guidelines detailed in Appendix G, at which a supplemental-qualified resource offers to sell supplemental reserve in dollars per MW.

#### **MULTI-DAY RELIABILITY ASSESSMENT**

The process performed prior to the Operating Day to assess resource adequacy for the Operating Day, commit resources with long start-up times that cannot be considered as part of the DA Market or Day-Ahead RUC, and communicate commitment of such resources as necessary.

#### **NET ACTUAL INTERCHANGE**

The algebraic sum of all metered interchange over all interconnections between two physically adjacent BA areas.

#### **NET INADVERTENT**

The difference between the BA's net actual interchange and net scheduled interchange.

#### **NET SCHEDULED INTERCHANGE**

The algebraic sum of all interchange transactions between BAs for a given period or instant in time.

#### **NETWORK INTEGRATION TRANSMISSION SERVICE (NITS)**

Transmission service provided under Part II of the Tariff.

#### **NETWORK MODEL**

A representation of the interconnected SPP transmission system's transmission, generation, and load elements and the transmission systems of other regions in the Eastern Interconnection.

#### **NODE**

A specific eNode for which a settlement price is calculated.

### **NO-LOAD OFFER**

The compensation request in a resource offer, in dollars, by an MP representing the hourly fee for operating a synchronized resource at zero (0) MW output. No-load offers are generally representative of a combination of the fuel expense required to maintain synchronous speed at zero (0) MW output for behind the meter generation (i.e. the resource is operating under a “no-load” condition) and/or ongoing hourly costs associated with manufacturing process changes associated with load-consumption reductions for Dispatchable Demand Response Resource or Block Demand Response Resources.

### **NON-DISPATCHABLE VARIABLE ENERGY RESOURCE**

A variable energy resource not capable of being incrementally dispatched down by the transmission provider.

### **NON PERFORMANCE**

A penalty charged to resources cleared for regulation in the RTBM, but not following dispatch.

### **OFF-PEAK**

The hours or other periods defined by NAESB business practices, contract, agreements, or guides as periods of lower electrical demand.

### **ON-PEAK**

The hours or other periods defined by NAESB business practices, contract, agreements, or guides as periods of higher electrical demand.

### **OPEN ACCESS SAME-TIME INFORMATION SYSTEM (OASIS)**

A transmission service providers’s electronic posting system, maintained for transmission access data and to allow all transmission customers to simultaneously view the data.

### **OPERATING DAY**

A daily period beginning at midnight.

### **OPERATING HOUR**

A 60-minute period of time during the Operating Day corresponding to a clock hour, typically expressed as hour-ending.

### **OPERATING RESERVE**

Resource capacity held in reserve for resource contingencies and NERC control performance compliance which includes the following products: Regulation-Up, Regulation-Down, Spinning Reserve, and Supplemental Reserve.

### **OPERATING RESERVE ONLY RESOURCE**

A resource that cannot be cleared or dispatched for energy that is qualified to

provide any or all of the Operating Reserve products: Regulation-Up, Regulation-Down, Spinning Reserve, or Supplemental Reserve.

### **OPERATING TOLERANCE**

The MW range of a resource’s actual output above and below its average setpoint instruction over the dispatch interval, where the resource will not be subject to charges associated with Uninstructed Resource Deviation.

### **OVER-COLLECTED LOSSES**

Settlement of surplus related to marginal loss pricing, which is rebated based on payment of marginal losses.

### **P PARALLEL FLOW**

Flow on the transmission system not scheduled with SPP, caused by entities external to the SPP market’s footprint (also known as loop flow).

### **PAYBACK**

Process used to pay back ARR and TCR uplift dollars in months where excess funds are available. A yearly payback process pays back ARR and TCR funds carried over from the monthly process. Funds remaining after the yearly payback are allocated to the ARR holders.

### **POINT-TO-POINT TRANSMISSION SERVICE**

The reservation and transmission of capacity and energy on either a firm or non-firm basis, from the point(s) of receipt to point(s) of delivery.

### **PORTAL**

Internet interface between SPP and its members.

### **POST-OPERATING DAY**

The time period starting with the day immediately following the Operating Day.

### **POWER TRANSFER DISTRIBUTION FACTOR**

The percentage of power transfer flowing through a facility or set of facilities (flowgate) for a particular transfer when there are no contingencies.

### **PRE-DAY-AHEAD**

The time period starting six days prior to Day-Ahead and ending midnight on the day prior to Day-Ahead.

### **PRICE NODE (PNODE)**

A single node in the commercial model that has a one-to-one relationship to an ENode where locational marginal prices are calculated.

### **PRICE SEPARATION**

The divergence in prices due to transmission congestion from one geographical area to another in an energy market.

### **PSEUDO-TIE**

A telemetered reading or value updated in real time, but for which no physical tie or energy metering actually exists.

### **Q QUICK-START RESOURCE**

A resource that can be started, synchronized, and inject energy within 10 minutes of SPP notification.

### **R RAMP-RATE-DOWN**

A curve specifying MW/minute ramp rates applicable between resource operating ranges, used to dispatch resources in the down direction.

### **RAMP-RATE-UP**

A curve specifying MW/minute ramp rates applicable between resource operating ranges, used to dispatch resources in the up direction.

### **RAMP SHARING**

Applied when needed to clear sufficient amounts of Energy, Regulation-Up, and Spinning Reserve to meet requirements. Ensures ramping deficiencies across hours in the DA Market or RTBM dispatch intervals do not initiate unjustified scarcity pricing.

### **REAL-TIME**

The continuous time period during which the RTBM is operated.

### **REAL-TIME BALANCING MARKET (RTBM)**

SPP market operated continuously in real-time to balance the system through energy deployment and to clear Regulation-Up, Regulation-Down, Spinning Reserve, and Supplemental Reserve.

### **REFERENCE BUS**

The location on the SPP transmission system relative to which all mathematical quantities, including shift factors and penalty factors relating to physical operation, will be calculated.

### **REGIONAL TRANSMISSION OPERATOR SCHEDULING SYSTEM (RTOSS)**

Web-based service, hosted by OATI, that is part of the SPP electronic scheduling system.

### **REGULATION DEPLOYMENT**

The use of Regulation-Up and Regulation-Down through AGC equipment to automatically and continuously adjust resource output to balance the SPP BA area in accordance with NERC control performance criteria.

#### **REGULATION-DOWN OFFER**

The price at which a regulation-qualified resource or a regulation-down qualified resource has agreed to sell Regulation-Down in dollars per MW.

#### **REGULATION-DOWN QUALIFIED RESOURCE**

A resource that has met the eligibility requirements to submit Regulation-Down Offers into the energy and operating reserve markets, but has not met the eligibility requirements to submit Regulation-Up offers into the energy and operating reserve markets.

#### **REGULATION-ONLY RESOURCE**

A Regulation-Up Qualified Resource, Regulation-Down Qualified Resource, or a Regulation Qualified Resource that cannot be cleared or dispatched for energy or cleared for contingency reserve.

#### **REGULATION QUALIFIED RESOURCE**

A resource that has met the requirements to be eligible to submit Regulation-Up offers and Regulation-Down offers into the energy and operating reserve markets.

#### **REGULATION RAMP RATE**

A curve specifying MW/minute ramp rates that are used to determine a resource's maximum Regulation-Up and/or Regulation-Down quantities.

#### **REGULATION RESPONSE TIME**

The maximum amount of time allowed for a resource to move its output from zero Regulation Deployment to the full amount of Regulation-Up cleared, or to move from zero Regulation Deployment to the full amount of Regulation-Down cleared.

#### **REGULATION-UP OFFER**

The price at which a regulation-qualified resource or a regulation-up qualified resource has agreed to sell Regulation-Up in dollars per MW.

#### **REGULATION-UP QUALIFIED RESOURCE**

A resource that has met the requirements to be eligible to submit Regulation-Up Offers into the energy and operating reserve markets, but has not met the requirements to be eligible to submit Regulation-Down offers into the energy and operating reserve markets.

#### **RELIABILITY UNIT COMMITMENT (RUC)**

SPP process to assess resource and operating reserve adequacy for the Operating Day, commit and/or de-commit resources as necessary, and communicate resource commitments or de-commitments to the appropriate MPs, as necessary.

#### **RUC MAKE-WHOLE PAYMENT**

A credit or charge to a resource asset owner, calculated for each resource with a RUC commitment period. A payment is made to the owner when the sum of the resource's eligible RTBM Start-Up Offer costs, No-Load Offer costs, Energy Offer Curve, and Operating Reserve Offer costs associated with actual MWh amounts for energy and cleared RTBM Operating Reserve is greater than the energy and Operate Reserve RTBM revenues received for that resource over its RUC Make-Whole-Payment Eligibility period.

#### **RUC PERIOD**

Contiguous period of time between a resource's RUC commit time and RUC de-commit time.

#### **RESERVED CAPACITY**

The reservation MW between a specified source and sink associated with SPP transmission service.

#### **RESERVE SHARING EVENT**

A request for assistance to deploy contingency reserve by any signatory to the Reserve Sharing Group Agreement, following the sudden loss of a resource.

#### **RESERVE SHARING GROUP (RSG)**

A group of two or more BAs that collectively maintains, allocates, and supplies operating reserves required for each BA's use in recovering contingencies within the group.

#### **RESERVE SHUTDOWN**

An SPP-approved resource shutdown requested by an MP to make the resource unavailable for SPP commitment and dispatch, due to reasons other than to perform maintenance or to repair equipment.

#### **RESERVE ZONE**

A zone containing a specific group of price nodes for which a minimum and maximum operating reserve requirement is established.

#### **RESERVED CAPACITY**

The reservation MW between a specified source and sink associated with SPP transmission service.

#### **RESIDENT LOAD**

As defined in the SPP Tariff.

#### **RESIDUAL LOAD**

The sum of hourly metered interchange in a settlement area, plus the sum of all resource meter data submittal locations less all other load meter data submittal location for that settlement area.

#### **RESOURCE OFFER**

The combination of a resource's Start-Up Offer, No-Load Offer, Energy Offer Curve, Regulation-Up Offer, Regulation-Down Offer, Spinning Reserve Offer, and Supplemental Reserve Offer.

#### **RESOURCE-TO-LOAD DISTRIBUTION FACTOR**

The simulated impact of incremental power output from a specific resource ("source") on the loading of a specific flowgate, based on delivery to a representation of the locational weighting of all loads within all settlement locations ("sink").

#### **REVENUE NEUTRALITY UPLIFT**

Charge type set up as a revenue-distribution mechanism for charges and credits that have no other method of distribution to the MPs.

#### **S SECURITY CONSTRAINED ECONOMIC DISPATCH (SCED)**

An algorithm capable of clearing, dispatching, and pricing energy and operating reserve on a co-optimized basis that minimizes overall cost and enforces multiple security constraints.

#### **SECURITY CONSTRAINED UNIT COMMITMENT (SCUC)**

An algorithm capable of committing resources to supply energy and/or operating reserve on a co-optimized basis that minimizes capacity costs and enforces multiple security constraints.

#### **SERVICE REQUEST**

MP requests submitted through the Portal used to document and track customer-initiated issues, questions, and requests.

#### **SETPPOINT INSTRUCTION**

The real-time desired MW output signal calculated for a specific resource by SPP's control system on a specified periodicity that is equal to the current dispatch instruction, plus the regulation deployment instruction (which may be positive or negative), plus an adjustment to the dispatch instruction for energy to account for contingency reserve deployment instructions. The setpoint instruction represents the resource's desired output level and assumes the resource can attain this output instantaneously (i.e. infinite ramp rate).

#### **SETTLEMENT AREA**

A geographic area within the SPP BA area for which transmission interval metering can account for the geographic area's net area load.

### SETTLEMENT BILL DETERMINANT

Data inputs and intermediate calculations used to calculate a final result to be output to a settlement statement.

### SETTLEMENT CHARGE TYPE

The end result of settlement calculations.

### SETTLEMENT DETERMINANT REPORT

A daily report of interval input, intermediate calculation, and settlement result data with full settlement location and transactional detail generated for each asset owner and Operating Day settled, either on an initial, final, or resettlement basis. Separate reports are available for 1) 5-minute data, and 2) hourly and daily data.

### SETTLEMENT DISPUTES

A specific service request that can be submitted through the Portal if an MP does not agree with a portion of the settlement prepared and posted by SPP.

### SETTLEMENT INVOICE

A weekly summary of the SPP Integrated Marketplace net daily charges and credits by asset owner and operating day, generated for each MP and containing data for all of the operating days settled, either on an initial, final or resettlement basis, during the invoice period. Only the net amounts (current total less previously invoiced - if a Final or Resettlement) for each operating day contribute to the invoice amounts.

### SETTLEMENT LOCATION

A location defined for the purpose of commercial operations and settlement. A settlement location provides the finest granularity to calculate Day-Ahead Market and Real-Time Balancing Market settlements.

### SETTLEMENT STATEMENT

A daily summary of the SPP Integrated Marketplace's total daily charges and credits by charge type and operating day, generated for each asset owner and containing data for all of the operating days settled, either on an initial, final, or resettlement basis, on a single settlement execution day. The current, previous, and net amounts are included on each operating day's statement.

### SHADOW PRICE

A price for a commodity that measures its marginal value: the rate at which system costs could be decreased or increased by slightly increasing or decreasing, respectively, the amount of the commodity being made available. For example, the shadow price associated with a transmission constraint is equal to the change in total system production cost produced through re-dispatching the system, when

incrementally relaxing that transmission-line limit.

### SHORT-TERM LOAD FORECAST

A settlement-area load forecast developed by SPP on a rolling 5-minute basis for the next 120 dispatch intervals for input into the Real-Time Balancing Market.

### SIMULTANEOUS FEASIBILITY TEST

Analysis performed during each round of the ARR nomination process to ensure nominated candidate ARRs do not violate any normal transmission-line thermal ratings under normal system conditions, and do not violate short-term emergency transmission-line thermal ratings following a single contingency. The SFT is performed consistent with the transmission-system loading analysis performed as part of the DA Market's SCED process.

### SPINNING RESERVE OFFER

The price at which a spin-qualified resource has agreed to sell spinning reserve in dollars per MW.

### SPIN QUALIFIED RESOURCE

A resource that has met the requirements to be eligible to submit spinning reserve offers into the energy and operating reserve markets.

### SPP CRITERIA

Rules to promote and protect system reliability, and that members are obligated to follow.

### SPP HOLIDAYS

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving, Christmas Eve, Christmas Day.

### SPP REGION

The SPP transmission system's geographic area.

### START-UP OFFER

The compensation required by an MP for bringing an off-line resource on-line or for reducing consumption of a Dispatchable Demand Response Resource or Block Demand Response Resource. Start-Up Offers are generally representative of the out-of-pocket cost an MP incurs in starting up a generating unit from an off-line state through Minimum Economic Capacity Operating Limit. Start-Up Offers for Dispatchable Demand Response Resources and Block Demand Response Resources are generally representative of a combination of an MP's out-of-pocket costs in starting up a behind-the-meter generating unit, and/or out-of-pocket costs associated with preparing for manufacturing process

changes in preparation for reducing load consumption.

### STATE ESTIMATOR

The computer software used to estimate the electric system's properties, based on a sample of system measurements based on current system conditions.

### START-UP TIME

The time required to start a resource and reach the Minimum Economic Capacity Operating Limit following receipt of an SPP start-up order.

### STORED ENERGY RESOURCE

A device which replenishes its energy source (water, compressed air, battery, or flywheel) by withdrawing energy from the system.

### SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA)

Four-second resource and load bus signals from MP equipment to SPP.

### SUPPLEMENTAL QUALIFIED RESOURCE

A resource that has met the eligibility requirements to submit supplemental reserve offers into the energy and operating reserve markets.

### SUPPLEMENTAL RESERVE OFFER

The price at which a supplemental qualified resource has agreed to sell supplemental reserve in dollars per MW.

### SYNC-TO-MIN TIME

The time for a resource's output to reach Minimum Economic Capacity Operating Limit following synchronization to the grid.

### SYNCHRONIZED RESOURCE

A resource that is electrically connected to the grid by closing its circuit breaker.

## TARIFF

Establishes services to be provided and rights and obligations of the parties pursuant to those services. It specifies rates, terms, and conditions under which transmission customers and MPs participate in the Integrated Marketplace.

### TELEMETRY

Electronic communication of the measurements and states related to the electric system's elements. Telemetered information forms the basis for calculating settlement charge types, as well as determining the flows across transmission facilities and the status of circuit breakers and other devices.

### TRANSACTION

An agreement to transfer energy from a seller to a buyer.



#### **THROUGH INTERCHANGE TRANSACTION**

An MP schedule submitted between two external interfaces for use in the DA Market or RTBM for moving energy through the SPP BA area.

#### **TRANSITION STATE OFFER**

An offer associated with a specific combined-cycle resource configuration, representing the cost of moving from the current configuration to another valid configuration.

#### **TRANSITION STATE TIME**

An operating parameter associated with a specific combined-cycle resource configuration, representing the time required to move from the current configuration to another valid configuration.

#### **TRANSMISSION CONGESTION RIGHT (TCR)**

A financial right entitling the holder to a share of the congestion revenue collected in the Day-Ahead Market.

#### **TRANSMISSION CONGESTION RIGHTS FUNDING**

A credit or a charge to an asset owner, calculated for each TCR instrument held by the owner. TCR instruments are fully funded each hour.

#### **TRANSMISSION CONGESTION RIGHTS MARKETS**

The ARR's annual and monthly allocation processes and the annual and monthly TCR auctions.

#### **TRANSMISSION CUSTOMER**

An eligible customer, or its designated agent, that can or does execute a transmission service agreement or can or does receive transmission service.

#### **TRANSMISSION LOADING RELIEF**

A procedure used to curtail energy schedules to limit power flow across a transmission system element in order to avoid exceeding the equipment's peak operating limits.

#### **TRANSMISSION SERVICE REQUEST**

Submitted through the SPP OASIS (Open Access Same-Time Information System) so eligible transmission customers can request transmission service.

#### **TURN-AROUND RAMP RATE FACTOR**

A percentage factor between 0-100% applied to a Resources Ramp-Rate-Up or Ramp-Rate-Down. The factor applies only in the next dispatch interval when the resource is issued a dispatch instruction that is in the opposite direction of the previous dispatch instruction.

#### **U UNINSTRUCTED RESOURCE DEVIATION (URD)**

The average MW amount of actual resource output in a dispatch interval above or below the resource's average setpoint instruction in the dispatch interval.

#### **V VIRTUAL ENERGY BID**

An MP proposal to purchase energy at a specified price, settlement location, and period of time in the Day-Ahead Market that is not associated with a physical load.

#### **VIRTUAL ENERGY OFFER**

An MP proposal to sell energy at a specified price, settlement location, and period of time in the Day-Ahead Market that is not associated with a physical resource.

# ACRONYMS

AGC – Automatic Generation Control	MA – Metering Agent	PTP – Point-to-Point Transmission Service
AO – Asset Owner	MCC – Marginal Congestion Component	RNU – Revenue Neutrality Uplift
ARR – Auction Revenue Right	MCE – Market Clearing Engine	RSG – Reserve Sharing Group
AS Market – Ancillary Services Market	MCP – Market Clearing Price	RTBM – Real-Time Balancing Market
BA – Balancing Authority	MDSL – Meter Data Submittal Location	RTO – Regional Transmission Operator
BAA – Balancing Authority Areas	MEC – Marginal Energy Component	RTOSS – Regional Transmission Operator Scheduling System
CBA – Consolidated Balancing Authority	MLC – Marginal Loss Component	RUC – Reliability Unit Commitment
CBASC – Consolidated Balancing Authority Steering Committee	MP – Market Participant	SCADA – Supervisory Control and Data Acquisition
CCA – Critical Cyber Asset	MPPRR – Marketplace Protocol Revision Request	SCED – Security Constrained Economic Dispatch
CPT – Central Prevailing Time	MSL – Meter Settlement Location	SCUC – Security Constrained Unit Commitment
DA Market – Day-Ahead Market	MTLR – Mid-Term Load Forecast	SMP – System Marginal Price
DRR – Demand Response Resource	NAI – Net Actual Interchange	STLF – Short Term Load Forecast
EMS – Energy Management System	NERC – North American Electric Reliability Corporation	TC – Transmission Customer
GCA – Generation Control Area	NITS – Network Integrated Transmission Service	TCR – Transmission Congestion Right
ICCP – Inter-Control Center Communications Protocol	NSI – Net Scheduled Interchange	TO – Transmission Owner; Transmission Operator
IPP – Independent Power Producer	OASIS – Open Access Same-Time Information System	TSR – Transmission Service Request
ITE – Integrated Test Environment	OATT – Open Access Transmission Tariff	WSDL – Web Services Description Language
JOU – Jointly Owned Resource	OD – Operating Day	XML – Extensible Markup Language
LCA – Load Control Area	OR – Operating Reserve	
LFC – Load Frequency Control	PNode – Pricing Node	
LMP – Locational Marginal Price		
LSE – Load-Serving Entity		