



INTEGRATED MARKETPLACE

External Stakeholder Data Points

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By Southwest Power Pool

REVISION HISTORY

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION	COMMENTS
February 2018	SPP	Initial Publication	
May 2020	SPP	Updates to public data section	

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INTRODUCTION

External stakeholders interacting with Southwest Power Pool's (SPP) Integrated Marketplace are required to provide data to and accept data from SPP systems. This document provides an inventory of data points per system and information on the methods used for exchange of the data.

Note: In this document, the term "external stakeholders" refers to any and all stakeholder types which could include Market Participants, members, customers, Transmission Owners/Operators, Transmission Customers, Meter Agents, Generators, Load Serving Entities, vendors, etc. Not all data points are accessible by all types of external stakeholders. Please contact Customer Relations for more information. For regulatory purposes, SPP may exchange data with agencies not considered "stakeholders" in the context of this document (i.e., FERC, state commissions, etc.).

External stakeholder data points are accessed using the interface types listed and illustrated below.

- User Interfaces (web-based UI)
- Web Services (programmatic API)
- FTP (File Transfer Protocol)
- ICCP

For each data point in the Data Point Inventory, the following information is specified:

- Data Point: The name/description of the data point
- Interface Type: The type of interface used for data exchange. The following interface types are utilized.
 - User Interface (UI) – Graphical user interface allowing stakeholders to interface with Integrated Marketplace systems
 - Programmatic (API) – Programmatic interfaces (web services) allowing stakeholders to interface with Integrated Marketplace systems.
 - Inter-Control Center Communications Protocol (ICCP) – Inter-utility real-time data exchange method
 - File Browser – UI-based file browsing/download
 - File Transfer Protocol (FTP) – Programmatic access to data files via the standard FTP protocol used for the transfer of computer files between a client and server
 - Request Management System (RMS) – UI allowing stakeholders and SPP to capture requests, questions, suggestions or problems. The RMS allows users to view issues, submit requests and search or look up submitted requests.
 - Email
- Stakeholder Action
 - Receive – SPP provides the data point to the stakeholder
 - Submit – Stakeholder provides the data point to SPP
 - Query – SPP publishes the data point for Stakeholder retrieval

The data points per system/category are inventoried below.

DATA POINT INVENTORY

BALANCING AUTHORITY

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Resource Deployment	ICCP	Receive
Meter Data [Intervals]	ICCP	Submit
Actual Tie-line Meter Data (Transmission Owners only)	ICCP	Submit
Conforming Load Data (Actual Load)	ICCP	Submit
Wind Farm Weather Data	ICCP	Submit
Non-Conforming Load Data (Estimated Load)	ICCP	Submit

CREDIT

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Virtual Reference Prices Report	Marketplace Portal UI	Query
TCR Reference Prices Report	Marketplace Portal UI	Query
Credit Limit Report	Marketplace Portal UI, Credit Limit Report API	Query

CREDIT STACKING SYSTEM (Z2)

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Transmission Customer Upgrade Report	Credit Stacking System UI	Query

Transmission Customer Activity Detail by Upgrade Report	Credit Stacking System UI	Query
Transmission Customer Billable TSR Activity Report	Credit Stacking System UI	Query
Transmission Customer Billable TSR Charge Type Activity Report	Credit Stacking System UI	Query
Transmission Customer Study TSR Activity Report	Credit Stacking System UI	Query
Transmission Customer Study TSR Charge Type Activity Report	Credit Stacking System UI	Query
Transmission Owner PTP Revenue Reallocation Summary Report	Credit Stacking System UI	Query
Transmission Owner NITS Revenue Reallocation Summary Report	Credit Stacking System UI	Query
Transmission Owner PTP Revenue Reallocation by Upgrade Report,	Credit Stacking System UI	Query
Transmission Owner Billable TSR Activity Report	Credit Stacking System UI	Query
Transmission Owner Charge Type Activity Report	Credit Stacking System UI	Query
Z2 Input Upgrade Data Report	Credit Stacking System UI	Query
Z2 Input Payment Data Report	Credit Stacking System UI	Query
Z2 Input Long Term Impact Data Report	Credit Stacking System UI	Query
Z2 Input Short Term Impact Data Report	Credit Stacking System UI	Query
Z2 Input Billable Aref Data Report	Credit Stacking System UI	Query

MARKETS

DEMAND DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Fixed Demand Bids	Markets UI, Markets API	Submit
Price Sensitive Demand Bids	Markets UI, Markets API	Submit
Cleared Fixed Demand Bids	Markets UI, Markets API	Query
Cleared Price Sensitive Demand Bids	Markets UI, Markets API	Query

ENERGY DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Commitment Schedules	Markets UI, Markets API	Receive
Energy Dispatch	Markets UI, Markets API	Receive
Mitigated Resources	Markets UI, Markets API	Receive
Emergency Limit Enabled/Disabled	Markets UI, Markets API	Receive
Commitment Status Conflict with Outage Management System	Markets UI, Markets API	Receive
Mitigated Make-Whole Payment	Markets UI, Markets API	Receive
Energy Override	Markets UI, Markets API	Receive
Commitment Acknowledgement	Markets UI, Markets API	Submit
DRR Load Forecast	Markets UI, Markets API	Submit
Resource Offer	Markets UI, Markets API	Submit

Energy Offer	Markets UI, Markets API	Submit
Mitigated Offer	Markets UI, Markets API	Submit
Mitigated Resource Offer	Markets UI, Markets API	Submit
JOU Share Ownership	Markets UI, Markets API	Submit
MCR Group Offer	Markets UI, Markets API	Submit
MCR Transition Offer	Markets UI, Markets API	Submit
Energy Audit Data	Markets UI, Markets API	Query
Energy Cleared Transactions	Markets UI, Markets API	Query
Commitment History	Markets UI, Markets API	Query
Mitigated Parameters	Markets UI, Markets API	Query
Qualification Status	Markets UI, Markets API	Query
Resource Forecast (Wind & Icing – Short-term, Mid-term, Long-term)	Markets UI, Markets API	Query

LOAD FORECAST DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Load Forecast	Markets UI, Markets API	Submit

MARKET DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Market Message (Used to notify AOs of significant, usually planned, market events)	Markets UI, Markets API	Receive

Market Timeline Event	Markets UI, Markets API	Receive
Violation Relaxation Limits	Markets UI, Markets API	Receive
Real-Time Approval Status	Markets UI, Markets API	Query
Binding Limits	Markets UI, Markets API	Query
Cleared Transactions	Markets UI, Markets API	Query
Demand Curve	Markets UI, Markets API	Query
LMP Summary by Settlement Location	Markets UI, Markets API	Query
MCP Summary by Reserve Zone	Markets UI, Markets API	Query
MW Summary	Markets UI, Markets API	Query
Settlement Locations and Nodes	Markets UI, Markets API	Query

NOTIFICATION LISTENER DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Notification Listener Ping	Markets UI, Markets API	Submit
Register Notification Listener	Markets UI, Markets API	Submit

RESERVE DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Reserve Cap	Markets UI, Markets API	Receive
Contingency Reserve Deployments	Markets UI, Markets API	Receive

Reserve Dispatch	Markets UI, Markets API	Receive
Reserve Obligation	Markets UI, Markets API	Receive
Reserve Regulation Status	Markets UI, Markets API	Receive
Reserve Requirements (Hourly minimum and maximum Reserve Zone requirements)	Markets UI, Markets API	Receive
Reserve System Requirements	Markets UI, Markets API	Receive
Resource Offer	Markets UI, Markets API	Submit
Reserve Offer	Markets UI, Markets API	Submit
Mitigated Offer	Markets UI, Markets API	Submit
Mitigated Resource Offer	Markets UI, Markets API	Submit
Reserve Cleared Offer	Markets UI, Markets API	Query
Mitigated Parameters	Markets UI, Markets API	Query

TRANSACTION LOG DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Transaction Log	Markets UI, Markets API	Query
Transaction Log Summary	Markets UI, Markets API	Query

VIRTUAL DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Virtual Bid/Offer Transaction State	Markets UI, Markets API	Receive

Virtual Bids	Markets UI, Markets API	Submit
Virtual Offers	Markets UI, Markets API	Submit
Virtual Cleared Bid	Markets UI, Markets API	Query
Virtual Cleared Offer	Markets UI, Markets API	Query

MARKET MONITORING PORTAL

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Day-Ahead Must Offer	Market Monitoring Portal UI	Submit
Plant Delivery Cost	Market Monitoring Portal UI	Submit
Opportunity Cost Calculation	Market Monitoring Portal UI	Submit (input data), Query (calculated cost adder)
Generator Detail Parameters	Market Monitoring Portal UI	Submit
Generator Detail Costs	Market Monitoring Portal UI	Submit
Mitigated Offer Development Methodology	Market Monitoring Portal UI	Submit

MARKET SETTLEMENTS

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Bilateral Settlement Schedules (Create, Update, Approve, Deny, Terminate)	Settlements UI, Settlements API	Submit

Meter Data	Settlements UI, Settlements API	Submit
Meter Report Card	Settlements UI, Settlements API	Query
Calibration Report	Settlements UI, Settlements API	Query
Interchange Report	Settlements UI, Settlements API	Query
Settlement Invoice	Settlements UI, Settlements API	Query
Settlement Statement	Settlements UI, Settlements API	Query
Determinant Report	Settlements UI, Settlements API	Query
Market Participant Summary Data	Settlements UI, Settlements API	Query
FERC Electric Quarterly Report	Settlements UI, Settlements API	Query
Settlement XML Notification Registration	Settlements UI	Submit
Settlement Payout Report	Settlements UI	Query
Meter Agent Miscellaneous Data	Settlements UI	Query
Market Participant Miscellaneous Data	Settlements UI	Query
FSE GFA (Federal Service Exemption Grandfathered Agreement) Source Sink Group	Settlements UI	Query

MODELING

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Commercial/Market Model Data	Model Change Submission Tool UI	Submit Query
Reliability Model Data	Model Change Submission Tool UI	Submit Query

Modeling Contact Information	Model Change Submission Tool UI	Submit Query
Model Status Change Notifications	Email	Receive
EMS Read-Only Data/Displays	Replicated Data Server UI	Receive
Network Model Equipment Rating (Ratings Submission Tool)	Ratings Submission Tool UI	Submit Receive
Real-Time Contingency Analysis Data	FTP	Query
Current & Next Day Study Cases	FTP	Submit Query
EMS Models	FTP	Query
Model Data Files/Reports	FTP	Submit Query
State Estimator Cases	FTP	Query
Asset Owner/Meter Agent Reports	Marketplace Portal File Browser, FTP	Query

ONBOARDING

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Onboarding Materials Request	Request Management System (UI)	Receive
LSA Setup Information	Request Management System (UI)	Submit

OUTAGE MANAGEMENT

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Transmission and Generation Outages	CROW UI, CROW API	Submit
Outage Request Information	CROW UI, CROW API	Query

Equipment/Station List	CROW API	Query
Transmission Outage Report	Marketplace Portal File Browser, FTP	Query

PUBLIC DATA

MARKETS PUBLIC DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Regulation Performance by Market Participant	Marketplace Portal File Browser, FTP	Query
SPP Resource Fuel Types by Bus Number	Marketplace Portal File Browser, FTP	Query
Mileage Factor	Marketplace Portal File Browser, FTP	Query
Day-Ahead Binding Constraints	Marketplace Portal File Browser, FTP	Query
Day-Ahead Congestion Constraint	Marketplace Portal File Browser, FTP	Query
Day-Ahead Locational Marginal Price by Bus	Marketplace Portal File Browser, FTP	Query
Day-Ahead Locational Marginal Price by Settlement Location	Marketplace Portal File Browser, FTP	Query
Day-Ahead Marginal Clearing Price	Marketplace Portal File Browser, FTP	Query
Day-Ahead Market Clearing	Marketplace Portal File Browser, FTP	Query
Day-Ahead Virtual Clearing by Market Operating Area (MOA)	Marketplace Portal File Browser, FTP	Query
Day-Ahead Virtual Reference Prices	Marketplace Portal File Browser, FTP	Query
Real-Time Balancing Market Binding Constraints	Marketplace Portal File Browser, FTP	Query

Real-Time Balancing Market Fuel on Margin	Marketplace Portal File Browser, FTP	Query
Real-Time Balancing Market Locational Marginal Price by Bus	Marketplace Portal File Browser, FTP	Query
Real-Time Balancing Market Locational Marginal Price by Settlement Location	Marketplace Portal File Browser, FTP	Query
Real-Time Balancing Market Marginal Clearing Price	Marketplace Portal File Browser, FTP	Query
Real-Time Balancing Market Operating Reserves	Marketplace Portal File Browser, FTP	Query
Market-to-Market Allocations on SPP Flowgates	Marketplace Portal File Browser, FTP	Query
Market-to-Market (M2M) Firm Flow Entitlement (FFE) on M2M Flowgates	Marketplace Portal File Browser, FTP	Query
Market-to-Market Flowgate List	Marketplace Portal File Browser, FTP	Query
Scarcity Demand Curve	Marketplace Portal File Browser, FTP	Query
Headroom and Floorroom	Marketplace Portal File Browser, FTP	Query
Historical Real-Time Balancing Market Energy Offers	Marketplace Portal File Browser, FTP	Query
Historical Real-Time Balancing Market Operating Reserve Offers	Marketplace Portal File Browser, FTP	Query
Historical Day-Ahead Energy Offers	Marketplace Portal File Browser, FTP	Query
Historical Day-Ahead Operating Reserve Offers	Marketplace Portal File Browser, FTP	Query
Capacity of Generation on Outage	Marketplace Portal File Browser, FTP	Query

Generation Mix Historical	Marketplace Portal File Browser, FTP	Query
Hourly Generation Capacity by Fuel Type	Marketplace Portal File Browser, FTP	Query
Hourly Load	Marketplace Portal File Browser, FTP	Query
System Wide Hourly Load Forecast (Mid-Term Load Forecast) vs. Actual	Marketplace Portal File Browser, FTP	Query
Mid-Term Resource Forecast	Marketplace Portal File Browser, FTP	Query
Resource Forecast by Reserve Zone	Marketplace Portal File Browser, FTP	Query
System Wide Short Term Load Forecast vs. Actual	Marketplace Portal File Browser, FTP	Query
Short Term Resource Forecast	Marketplace Portal File Browser, FTP	Query
Historical Tie Flow	Marketplace Portal File Browser, FTP	Query
Real-Time Balancing Market Locational Marginal Price Trend	Marketplace Portal File Browser, FTP	Query
Real Time Market Data Forecast vs. Actual	Marketplace Portal File Browser, FTP	Query
State Estimator Data	Marketplace Portal File Browser, FTP	Query

SETTLEMENTS PUBLIC DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Settlement Calendar (Transmission & Market)	Marketplace Portal File Browser, FTP	Query
Make Whole Payment Report	Marketplace Portal File Browser, FTP	Query
Over Collected Losses Report	Marketplace Portal File Browser, FTP	Query

Operating Reserve Allocation Report	Marketplace Portal File Browser, FTP	Query
Revenue Neutrality Uplift (RNU) Report	Marketplace Portal File Browser, FTP	Query
Excess Congestion Fund/Auction Revenue Fund Report	Marketplace Portal File Browser, FTP	Query
Base Plan Regional Firm Matrix (Schedule 11)	Marketplace Portal File Browser, FTP, OASIS	Query
Base Plan Regional Non-Firm Matrix (Schedule 11)	Marketplace Portal File Browser, FTP	Query
Base Plan Zonal Firm Matrix (Schedule 11)	Marketplace Portal File Browser, FTP	Query
Base Plan Zonal Non-Firm Matrix (Schedule 11)	Marketplace Portal File Browser, FTP	Query
Reactive Matrix (Schedule 2)	Marketplace Portal File Browser, FTP	Query
Scheduling Matrix (Schedule 1)	Marketplace Portal File Browser, FTP	Query
Zonal Firm Matrix (Schedule 7)	Marketplace Portal File Browser, FTP	Query
Zonal Non-Firm Matrix (Schedule 8)	Marketplace Portal File Browser, FTP	Query

TRANSMISSION CONGESTION RIGHTS PUBLIC DATA

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Daily Funding By Constraint By Market Day	Marketplace Portal File Browser, FTP	Query
Electrically Equivalent Settlement Locations	Marketplace Portal File Browser, FTP	Query
Monthly Funding By Constraint	Marketplace Portal File Browser, FTP	Query

Permanent Flowgates	Marketplace Portal File Browser, FTP	Query
Reference Prices	Marketplace Portal File Browser, FTP	Query
TCR Allocation Historical Results	Marketplace Portal File Browser, FTP	Query
TCR Auction Historical Results	Marketplace Portal File Browser, FTP	Query
TCR Product Period Hours	Marketplace Portal File Browser, FTP	Query

RELIABILITY

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Current/Next Day Reliability Reports	Globalscape UI, FTP	Submit Query
Real-Time Contingency Analysis	Globalscape UI, FTP	Query
Flowgate Details	Globalscape UI, FTP, OASIS	Query
Operating Guides	Globalscape UI, FTP	Query
Member Operating Area Generation (MAOGEN)	Globalscape UI, FTP	Query
Reserve Sharing Group	Globalscape UI, FTP	Query

SCHEDULING

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Member Input Ramp Reservation Data	OATI UI	Submit
Member Input Tag Data	OATI UI	Submit

Ramp Reservation Request Status	OATI UI	Receive
Disposition of Tag (Approved, Denied, Implemented, Adjusted, Curtailed)	OATI UI	Receive
Notification of Interchange Transactions	OATI UI	Receive
Interchange Transaction Offers and Bids	OATI UI	Submit
Schedule Data (available OD+1)	Schedule Data API	Query

TRANSMISSION CONGESTION RIGHTS

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Candidate ARR Data	TCR UI, TCR API	Query
ARR Nominations	TCR UI, TCR API	Submit
Allocation Results	TCR UI, TCR API	Query
ARR Awards	TCR UI, TCR API	Query
TCR Auction Awards	TCR UI, TCR API	Query
Auction Results	TCR UI, TCR API	Query
Nomination Caps	TCR UI, TCR API	Query
TCR Rejection Notice	TCR UI, TCR API	Query
TCR Disputes/Inquiries	TCR UI, TCR API	Submit
Acceptance of TCR Offer	TCR UI, TCR API	Query
TCR Bids, Offers	TCR UI, TCR API	Submit

Feasibility Model	TCR UI, TCR API	Query
Credit Result	TCR UI, TCR API	Query
LTCR Nominations	TCR UI, TCR API	Submit
Secondary Market	TCR UI, TCR API	Submit
Historical Peak Load	Request Management System (UI)	Submit
Candidate LTCR Data	TCR UI, TCR API	Query
Historical Bids and Offers	TCR UI, TCR API	Query

TRANSMISSION SETTLEMENTS

DATA POINT	INTERFACE TYPE	STAKEHOLDER ACTION
Transmission Owner/Customer Monthly Assessment	Settlements UI	Submit
Transmission Owner/Customer Schedule 12	Settlements UI	Submit
Transmission Owner/Customer Coincident Peak/NITS (Network Submission)	Settlements UI	Submit
Transmission Owner/Customer Direct Assignment	Settlements UI	Submit
Meter Agent Mega-Vahr (MVAR)	Settlements UI	Submit
Settlement Statement (Daily, Monthly, Schedule 2)	Settlements UI	Query
Invoice	Settlements UI	Query

Transmission Owner/Customer Miscellaneous Data	Settlements UI	Query
Transmission Owner/Customer Summary Data	Settlements UI	Query