
ST PASA Report

User Guide- Public



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Disclaimer

Please note that it has no legal status and Market participants should always refer to the Market Rules and Market Procedures

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Purpose

The purpose of this User Guide is to provide Market Participants, and other interested parties, with sufficient guidelines on how to interpret the information given in the ST PASA Report. The Market Participants may then use this information for a variety of purposes, such as determining the best times to request generator outages.

REFERENCES

Wholesale Electricity Market Rules – particularly section 3.17 Short Term PASA.

Power System Operation Procedure: Short Term Projected Assessment of System Adequacy (ST PASA)

GENERAL REQUIREMENTS

The Wholesale Electricity Market (WEM) Rules requires System Management, a ringfenced business unit of Western Power, to perform the ST PASA.

The WEM Rules requires System Management to perform the ST PASA study every Thursday, covering the period from 8.00 of the following Friday for the following 3 weeks. The resolution of the ST PASA is 6-hourly intervals.

INPUTS TO THE ST PASA

The ST PASA uses the following inputs:

- Peak Load Forecast
 - Forecast of the Generation and Demand Side Facility outages. Note demand side facilities are curtailable, interruptible and schedulable load facilities.
 - Forecast of Network outages
 - Forecast of any energy constraints that may limit the output of Generators or Demand Side Facilities
 - Power System Reserve Requirements
 - Forecast of any Commissioning Tests
-

ST PASA OUTPUTS

The minimum output requirements of the ST PASA Report is listed in the WEM Rules in rule 3.17.9. To assist Market Participants further outputs are add.

The format of the ST PASA Report is a comma separated variable text file. The Appendix gives a definition of each section and item of the ST PASA Report.

LOAD FORECASTS

The load forecast is the peak demand that is placed on Market Generators and Market Demand Side Resources. It is based on a statistical methodology and so is provided as a mean, first standard deviation and second standard deviation quantities. It is the second standard deviation quantity that is used for outage planning.

It is based on the sum of the sentout generation/demand side resources in any time during the ST PASA study interval.

It must be noted that this quantity is somewhat less than what is generated by the facility due to power consumed at the facility, reducing that which is available to the WEM.

It must also be noted that the forecast load is not adjusted for losses in the Network. Hence the energy traded by the market is generally different to the load given in the ST PASA Report.

NETWORK OUTAGES

Various Network outages may limit the ability of a generator/demand side facility to produce its normal maximum output. Where these are forecast to occur they a listed in the ST PASA Report as well has there impact on the generation/demand side facilities.

It must be noted that there are many Network outages that do not restrict generation/demand side facilities and these are not listed in the ST PASA Report

INTER-REGIONAL RESTRICTIONS

When there is more than one region in the SWIS, the limitations on generation and demand side capacities will be listed. Similarly where an intra-regional constraint binding then this will be listed.

SECURITY PROBLEMS

Any Other Security issues

ADDITIONAL INFORMATION

A comment is made if there has been a major change to the methodology or assumptions from the previous ST PASA

APPENDIX – ST PASA Report Data Definitions

The CSV file comprises of Header, Data Name and Data Quantity rows

The first and last row are a Header rows with a “C” in the first field

There are 9 Data Name rows which indicate a particular type of information with an “I” in the first field

For each Data Name rows there may be several Data Quantity rows that follow with a “D” in the first field

Header 1 “STPASA_REPORT”

Data Name 1 RUN_DATETIME,,,,,,,,,,,,,,,,,,,,,

Data Definition The date and time of the ST PASA.

Example 2006/01/14 02:00:00

Data Name 2.1 INTERVAL_DATETIME

Data Definition The date and time at the 6-hour ST PASA study interval that the remaining data on the row applies

Example 2006/01/14 02:00:00

Data Name 2.2 PEAKLOAD_MEAN

Data Definition The system load that is expected (in MW)

Example 2530

Data Name 2.3 PEAKLOAD_MEAN P1SD

Data Definition The system load that is expected to occur or be exceeded 10% of the time (in MW)

Example 2805

Data Name 2.4 PEAKLOAD_MEAN P2SD

Data Definition The system load that is expected to occur or be exceeded 2% of the time (in MW)

Example 2925

Data Name 2.5 INSTALLED_GENERATION

Data Definition The system installed generation on a sent out basis including both scheduled and non-scheduled generators (in MW)

Example 4415

Data Name 2.6 AVAILABLE_GENERATION

Data Definition The system installed generation on a sent out basis including both scheduled and non-scheduled generators (in MW) less any scheduled generation undergoing an approved outage

Example 3834

Data Name 2.7 AVAILABLE_DEMANDRESPONSE

Data Definition The system available demand side capacity on a sent out basis including both curtailable and dispatchable loads (in MW)

Example 120

Data Name 2.8 UNSECURE_CAPACITY_MARGIN

Data Definition PEAKLOAD_MEANP2SD less AVAILABLE_GENERATION less AVAILABLE_DEMANDRESPONSE on a sent out basis (in MW)

Example -875

Data Name 2.9 TRANSMISSION_CONSTRAINT_QUANTITY

Data Definition Reserve for future use

Data Name 2.10 AVAILABLE_SUPPLY_CAPACITY

Data Definition AVAILABLE_GENERATION plus

AVAILABLE_DEMANDRESPONSE on a sent out basis (in MW)

Example 3954

Data Name 2.11 CAPACITY_PLANNING_MARGIN

Data Definition AVAILABLE_SUPPLY_CAPACITY less

PEAKLOAD_MEANP2SD on a sent out basis (in MW)

Example 875

Data Name 2.12 RESERVE_CAPACITY_REQ

Data Definition Minimum Reserve Margin allowable for outage planning on a sent out basis (in MW)

Example 520

Data Name 2.13 LOWCAPACITYRES_COND

Data Definition Flag indicating that CAPACITY_PLANNING_MARGIN is less than RESERVE_CAPACITY_REQ

0 for no

1 for yes

Example 0

Data Name 2.14 LOAD_FOLLOW_AS_CAPREQ

Data Definition Minimum Load Following Ancillary Service requirement on a sent out basis (in MW)

Example 40

Data Name 2.15 LOWLOADFOLLOW_COND

Data Definition Flag indicating that available load following ancillary service capacity is less than LOAD_FOLLOW_AS_CAPREQ

0 for no

1 for yes

Example 0

Data Name 2.16 SPINRES_CAPREQ

Data Definition Minimum Spinning Reserve Ancillary Service requirement on a sent out basis (in MW)

Example 130

Data Name 2.17 LOWSPINRES_COND

Data Definition Flag indicating that available spinning reserve ancillary service capacity is less than LOAD_FOLLOW_AS_CAPREQ

0 for no

1 for yes

Example 0

Data Name 2.18 READYRESERVE_CAPREQ

Data Definition Minimum Ready Reserve requirement on a sent out basis (in MW)

Example 130

Data Name 2.19 LOWREADYRESERVE_COND

Data Definition Flag indicating that available ready reserve capacity is less than READYRESERVE_CAPREQ

0 for no

1 for yes

Example 0

Data Name 2.20 LOADREJECT_AS_CAPREQ

Data Definition Minimum Load Rejection Ancillary Service requirement on a sent out basis (in MW)

Example 130

Data Name 2.21 LOWLOADREJECT_COND

Data Definition Flag indicating that available load rejection ancillary service capacity is less than LOADREJECT_AS_CAPREQ

0 for no

1 for yes

Example 0

Data Name 2.22 CAPACITY_RESERVE_PLANNING_MARGIN

Data Definition RESERVE_CAPACITY_REQ plus

LOADFOLLOW_AS_CAPREQ plus

SPINRES_AS_CAPREQ plus

READYRES_CAPREQ

on a sent out basis (in MW)

Example 595
