

SRSG Operating Procedure No. 3
After-The-Fact Hourly Reserve Calculations

Issue Date 11/3/97

Revision Date 10/28/09

1. Purpose

The purpose of this Operating Procedure No. 3 is to establish the methodology for calculating the after-the-fact hourly reserves.

2. General

- 2.1 Each Party, consistent with Operating Procedure No. 2, shall submit by thirty (30) minutes after each hour its actual Spinning Reserve and Non-Spinning Reserve carried for the previous hour. These numbers are to be entered into a Party's site system.
- 2.2 A Party activating its reserves to cover a Disturbance on its System shall not be penalized for a deficiency incurred due to the activation of such reserves within the first sixty (60) minute period following the time of the Disturbance; provided, such Party has reported the Disturbance via the Party site system. In addition, when a Party is supplying Emergency Assistance to another Party, the supplying Party will not be penalized for being deficient for the portion of reserves it has activated to supply such Emergency Assistance.

3. Calculations

The following criteria and methods shall be used by the Parties to calculate the actual Spinning Reserve and Non-Spinning Reserve carried by a Party for a previous hour.

- 3.1 Spinning Reserve - to qualify a resource as Spinning Reserve such resource must meet the following criteria:
 - on line
 - unloaded
 - synchronized
 - immediately responsive
 - governor active, and
 - must have sufficient transmission to support the activation of such Spinning Reserve to the load center.

3.1.1 Dynamically scheduled resources may be counted as Spinning Reserve. Resources which are statically scheduled may not be counted as Spinning Reserve.

3.1.2 The amount of unloaded generation which is eligible to be counted towards Spinning Reserve is that amount which can be activated within ten (10) minutes (i.e. unit ramp rate * 10 minutes).

Spinning Reserve shall be determined as follows:

+ Capability of Each On-Line Unit in 10 Minutes (Exclude units connected by DC tie)

The Lesser Of:

1. Average Ramp Rate of a Unit (MW/min) * 10 minutes; or
2. Hourly Integrated Capability of a Unit - Hourly Integrated Output of a Unit

+ Spinning Reserve Receipts (Purchase)

+ Capacity of Hydro Units in Condense Mode (That Qualifies as Spinning Reserve)

The maximum capability of the unit, plus the load the unit is drawing while in condense mode.

- Spinning Reserve Deliveries (Sale)

3.2 Non-Spinning Reserve - to qualify a resource as Non-Spinning Reserve such resource must have sufficient transmission to support the activation of the Non-Spinning Reserve to the load center, must be capable of serving demand within ten (10) minutes, and must qualify as one (1) of the following :

3.2.1 A resource not connected to the system

3.2.2 An interruptible load

3.2.3 A resource external to a Party's control area or pseudo control area which is statically scheduled

3.2.4 Unloaded generation that does not qualify as Spinning Reserve, but which is eligible to be counted towards Non-Spinning Reserve.

Non-Spinning Reserve shall be determined as follows:

+ Capability of Each On-Line Unit in 10 Minutes Which Does Not Qualify For Spinning Reserve (i.e. Units Connected by DC Tie and/or Units Not Under Governor Action)

The Lesser Of:

1. Average Ramp Rate of a Unit (MW/min) * 10 minutes; or

2. Hourly Integrated Capability of a Unit - Hourly Integrated Output of a Unit.

+ For Each On Demand Contract Receipt (Firm, Contingent Purchase)

The Lesser Of:

1. Capacity - Scheduled Energy; or
2. Available energy in ten (10) minutes based on contractual ramp rate.

+ Pump Storage (Units which do not qualify as spinning.)

The maximum capability of the unit in ten (10) minutes, plus the hourly integrated pump load of the unit.

+ Units Off Line

The portion of generation of an off line unit which can be loaded in ten (10) minutes, i.e. Hydro, Quick Start Combustion Turbines.

+ SRSG Non-Firm Deliveries

Deliveries which are recallable in less than ten (10) minutes.

+ Interruptible Load

Hourly integrated load of customers that can be cut within ten (10) minutes.

- For Each On Demand Contract Delivery (Firm, Contingent Sale)

The Lesser Of:

1. Capacity - Scheduled Energy; or
2. Available energy in ten (10) minutes based on contractual ramp rate.

- SRSG Non-Firm Receipts

Receipts which are recallable in less than sixty (60) minutes.