A. Introduction

1. Title: Operating Reserves

2. Number: RFC OPR-001-1

3. Purpose:
   To establish a ReliabilityFirst Corporation (RFC) requirement for Operating Reserves to support NERC Reliability Standard BAL-002-0.

4. Applicability:
   - Balancing Authorities (BA) within RFC footprint
   - Reliability Coordinators (RC) within RFC footprint

5. Effective Date: TBD

B. Requirements

R1 Each Balancing Authority shall have a plan of committed resources for Regulating Reserve for the next operating day for its Balancing Authority Area.

R1.1 For the peak hour of the next operating day, each Balancing Authority shall commit resources to provide Regulating Reserves responsive to its AGC of not less than 1% of its forecasted peak load within the ReliabilityFirst Corporation footprint.

R1.2 Resources allocated to Regulating Reserve shall not be included as part of Contingency Reserve.

R2 Each Balancing Authority shall have a daily plan of committed resources for Contingency Reserves for the next operating day for its Balancing Authority Area.

R2.1 Each Balancing Authority, either individually or through participation in a Reserve Sharing Group shall plan for Contingency Reserve equal to or greater than its single largest contingency as defined by the individual Balancing Authority or RSG as applicable.

R2.2 Each Balancing Authority or Reserve Sharing Group plan shall consist of at least 50% of its single largest contingency as Operating Reserve — Spinning and the remainder to be made up of any combination of Operating Reserves — Spinning and Operating Reserves — Supplemental.

R2.3. No amount of resource capacity (e.g. reserves from jointly owned generation) shall be counted more than once as Contingency Reserve by multiple Balancing Authorities or Reserve Sharing Groups.

R3 Each Balancing Authority shall provide documentation (see Attachment A) of its single largest contingency and of committed resources for Contingency and Regulating Reserves for the next operating day for its Balancing Authority Area as follows:
R3.1 Each Reliability Coordinator shall determine and publish the time each Balancing Authority shall provide its plan for the next operating day to the Reliability Coordinator.

R3.2 Each Balancing Authority shall document its forecasted load and total operating capacity in MWs for the peak hour of the next operating day for its Balancing Authority Area as adjusted for contracted Regulation Services.

R3.3 Each Balancing Authority shall document its committed resources in MWs for Regulating Reserves in accordance with R1.

R3.4 Each Balancing Authority shall document its committed resources in MWs for Contingency Reserves identifying the amount designated as Operating Reserve – Spinning and Operating Reserve – Supplemental in accordance with R2.

R3.5 Each Balancing Authority shall maintain such documentation for the previous and current calendar year.

R4 For each operating day, each Reliability Coordinator shall review the report provided by the Balancing Authority under R3 and document that daily Balancing Authority Operating Reserves as required in R1 and R2 are met.

C. Measures

M1. Each Balancing Authority shall have evidence of documentation in accordance with R1 and R2.

M2 Each Balancing Authority shall have evidence of load and capacity reports sent to the Reliability Coordinator in accordance with R3.

M3 Each Reliability Coordinator shall have evidence that it determined and published submittal times for the Balancing Authority in accordance with R3.

M4 Each Reliability Coordinator shall have evidence that it reviewed and documented the Balancing Authorities submitted documents in accordance with requirement 4.

D. Compliance

1. Compliance Monitoring Process

1.1 Compliance Monitoring Responsibility
Reliability/First Corporation

1.1.1 Balancing Authorities shall report by exception to the Compliance Monitor any deficiencies of Regulating Reserves or Contingency Reserves within 24 hours of the next business day.

1.1.2 Reliability Coordinator shall report by exception to the Compliance Monitor any deficiencies of Regulating Reserves or Contingency Reserves within 24 hours of the next business day.
1.1.3 On an Annual basis or less the Balancing Authority and Reliability Coordinator can be subject to an Audit process at the discretion of the Compliance Monitor

1.2 Compliance Monitoring Period and Reset Time Frame

Compliance Monitoring Period – Daily
Reset period - One calendar month without a violation

1.2 Data Retention
Current calendar year plus previous calendar year

1.3 Additional Compliance Information
None

2. Levels of Non-Compliance

2.1 Level One – None

2.2 Level Two – The Balancing Authority has not provided a daily report in accordance with R3, or
The Reliability Coordinator has not reviewed a daily report in accordance with R4, or
The Reliability Coordinator has not determined and published submittal times for the Balancing Authority in accordance with R3.

2.3 Level Three – The Balancing Authority has not planned Regulating or Contingency Reserves as required under R3 for up to four individual days.

2.4 Level Four – The Balancing Authority has not planned Regulating or Contingency Reserves as reported under R3 for five or more individual days.
The following are definitions of terms used in this Standard

**NOTE:** These definitions are consistent with the NERC Glossary as of the effective date of this Standard but may differ if the NERC Glossary changes.

**AGC**: Equipment that automatically adjusts generation in a Balancing Authority Area from a central location to maintain the Balancing Authority's interchange schedule plus Frequency Bias. AGC may also accommodate automatic inadvertent payback and time error correction.

**Contingency Reserve**: The provision of capacity deployed by the Balancing Authority to meet the Disturbance Control Standard (DCS) and other NERC and Regional Reliability Organization contingency requirements.

**Operating Reserve - Supplemental**: The portion of Operating Reserve consisting of:
- Generation (synchronized or capable of being synchronized to the system) that is fully available to serve load within the Disturbance Recovery Period following the contingency event; or
- Load fully removable from the system within the Disturbance Recovery Period following the contingency event.

**Operating Reserve – Spinning**: The portion of Operating Reserve consisting of:
- Generation synchronized to the system and fully available to serve load within the Disturbance Recovery Period following the contingency event; or
- Load fully removable from the system within the Disturbance Recovery Period following the contingency event.

**Regulating Reserve**: An amount of reserve responsive to Automatic Generation Control, which is sufficient to provide normal regulating margin.

**Regulation Service**: The process whereby one Balancing Authority contracts to provide corrective response to all or a portion of the ACE of another Balancing Authority. The Balancing Authority providing the response assumes the obligation of meeting all applicable control criteria as specified by NERC for itself and the Balancing Authority for which it is providing the Regulation Service.

### E. IntraRegional Differences

None

### F. Notes

Balancing Authorities are permitted to define Supplemental (30 Minute) Reserves as an option.

## Version History

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Appendix A

Day-Ahead Operating Reserve Report

Date _______________

Report for date _______________

Balancing Authority __________________________

Peak hour load forecast _______________ @ ____ Peak Hour

Total Operating Capacity _______________ @ Peak Hour

Regulating Reserves Carried:

Reserve Sharing Group Name (if applicable) ______________________

Single Largest Contingency __________________________

Contingency Reserves Requirement: __________________________

Contingency Reserves:
- Operating Reserves - Spinning ______________________
- Operating Reserves - Supplemental ______________________
- Total ______________________

Reliability Coordinator Review:

Name: __________________________

Date/Time: ______________________

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<th>Qualified DSR</th>
<th>Total</th>
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Sample Daily Load and Capacity

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