Comment Form

Project 2010-14.1 Balancing Authority Reliability-based Control
BAL-002-2 – Disturbance Control Performance - Contingency Reserve for Recovery from a Balancing Contingency Event

Please do not use this form to submit comments on the proposed revisions to BAL-002-2 Disturbance Control Performance - Contingency Reserve for Recovery from a Balancing Contingency Event. Comments must be submitted using the electronic comment form by 8 p.m. December 11, 2013. If you have questions please contact Darrel Richardson (email) or by telephone at (609) 613-1848.

Background Information:
Since loss of generation occurrences so often impacts all Balancing Authorities throughout an Interconnection, BAL-002 was created to specify recovery actions and time frames. The original Standards Authorization Request (SAR) approved by the Industry presumes there is presently sufficient contingency reserve in all the North American Interconnections. The underlying goal of the SAR was to update the Standard to make the measurement process more objective and to provide information to the Balancing Authority or Reserve Sharing Group such that the parties would better understand the use of contingency reserve to balance resources and demand following a Reportable Contingency Event. The primary objective of BAL-002-2 is to measure the success of recovering from contingency events.

Based on comments received from industry stakeholders the drafting team made the following modifications to the draft standard.

- Modified the definition for a Reportable Balancing Contingency Event to provide additional clarity.
- Modified the effective date to use the most current NERC approved language.
- Modified Requirement R1 to provide additional clarity.
- Modified Requirement R1 to clearly state when CR Form 1 had to be used.
- Modified Requirement R1 by adding Requirement R1 part 1.3 to clearly identify that a BA would not be held compliant with Requirement R1 when its Reportable Balancing Contingency Event exceeded its MSSC during the Contingency Event Recovery Period or its Contingency Reserve Restoration Period
- Removed the 5 hour exemption from Requirement R2.
- Modified the measure for Requirement R2 to identify when data would be excluded from the calculation of Contingency Reserve.
- Modified the VSLs to align with the requirements.
• Modified the BAL-002-2 Background Document to provide rationale for excluding events greater than a BA’s MSSC.
You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

1. Please provide any issues you have on this draft of the BAL-002-2 standard and a proposed solution.

Comments: Firstly, we would like to thank the SDT for their efforts and consideration of these comments.

We continue to disagree with defining new terms that are unique to this standard and then including them in the NERC Glossary when the standard is approved. Many of these terms are used exclusively in this standard only, and as such, should be kept within this standard and not moved to the NERC Glossary. Moving these terms to the NERC Glossary creates an unnecessary maintenance burden, and may create a conflict with similar terms used in other NERC documents.

We agree with the Drafting Team’s goal to better define when the requirements apply. The approach taken makes it difficult to follow the true meaning of the requirements. We get differing opinions among our peers on what the standard is saying.

There are different approaches used in the standards to say when a requirement applies and when it doesn’t (“exemptions”, “exclusions”, or “does not apply”). We suggest an alternative approach that would simplify the requirements. We recommend adding a Part under each requirement detailing exclusions.

Exclusions:
- R1 and R2 do not apply during EEA 2 or EEA 3.
- R1 does not apply for multiple non-simultaneous events [Rationale: These events are adequately addressed by IROL, BAAL and EEA requirements]
- R1 does not apply for single or simultaneous events where the capacity loss is > MSSC.

This will allow the Drafting Team to use simpler wording for the requirements.

Comments on R1

Events > MSSC. As noted earlier, events where the capacity (not MW) loss > MSSC should not be evaluated under this standard. Even if the MW loss was within the reporting threshold, the BA would have lost the reserves it needed to assist the recovery. We agree that events > MSSC can be reported on a different sheet

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1 The IROL standards still require operators to take whatever action is necessary to prevent cascading with the next contingency, to include shedding load or redispatch. The new BAL-001 standard will require the Balancing Authority to take action within 30 minutes to get frequency back within acceptable bounds. The Energy Emergency Alert process still exists to address any reserve shortfall.
on the reporting form, but there should not be an associated measure. The report should capture the time, unit, power, and capacity loss. Multiple lines on the report would be needed for each event series. When multiple contingencies occur, we want the operator to assess their actions based on impact on the transmission system rather than achieving a zero ACE. As noted earlier, there are protective backstops in place (IROL, BAAL, EEA).

**Change from Quarterly Metric.** DCS performance has always been calculated and reported on a quarterly basis. This is similar to CPS1 and CPS2 whose performance is based on annual and monthly calculations. While we understand that this change was a directive in Order No. 693, the Drafting Team has the option to point out the rationale why the directive will have unintended consequences. We believe this single event metric will lead to changes in how Reserve Sharing Groups select events, only reporting those very large events rather than allowing members to call for reserves for smaller contingencies. This is a step backward from a reliability perspective. Should the Drafting Team decide to not retain the quarterly metric, we strongly recommend staying with a quarterly report form with each event listed separately to reduce the administrative overhead.

**Comments on R2**
As proposed we believe this requirement will have significant negative unintended consequences. Reserves are an inventory intended to be used when there is a reliability need. The original Policy 1 listed multiple reasons for carrying operating reserves (errors in forecasting, generation and transmission equipment unavailability, number and size of generating units, system equipment forced outage rates, maintenance schedules, regulating requirements, and Regional and system load diversity).

The first unintended consequence is that BAs are discouraged from deploying their contingency reserves except for DCS-reportable events. There will be a reluctance to deploy reserves if it will take the balance to less than MSSC. We may also experience repeated frequency swells at the start and end of each hour as BAs try to “bank” average reserves or make up for earlier deficiencies early in the hour.

The second unintended consequence for those BAs that don’t withhold contingency reserves for non-DCS events is that they will be obliged to increase the amount of contingency reserves they carry so they always have more contingency reserves than their MSSC. This will increase costs to our customers without a demonstrated need.

What is the driver for this requirement? It is not within the scope of the Drafting Team’s SAR, nor was it directed in Order No. 693. DCS performance in North America has been stellar compared to what was considered adequate performance under Policy 1.

One approach is to include a commodity measure that fits within the context of the original DCS and would not discourage the operator from deploying reserves for non-reportable events. For example, consider a medium size BA that has heavier than expected loads due to rain/darkness and associated wet coal conditions at one or more of its plants:
- The operator starts falling behind on the load pickup, but deploys most of its on-line reserves to keep up with load.
- Because of the wet coal, there are some limitations on the units that further reduce its reserves.
• The operator finds out 10 minutes after the hour that they were < MSSC on reserves.
• The operator initiates action to replenish reserves, but since s/he is already well into the hour, s/he won’t be able to fully recover them for 90 minutes (same as the current standard expects).

This means the operator did the right thing, but had 3 hours where reserves were < MSSC. As long as the operator had a plan and could withstand the next contingency, there is no negative impact on reliability.

Finally, as we noted in the informal posting of this standard, the team has not provided a simple, clear definition on how contingency reserves are measured as prosed under R2. The definition should be something that can be implemented in an EMS. Does it include all generation headroom available in 10 minutes? In 15 minutes? Do regulating resources with headroom count as contingency reserves? Are load resources available in 15 minutes or 10 minutes counted? What about demand response resources that aren’t directly measured?

**Proposed Solutions**
As noted earlier, we recommend including exclusions that will allow simplification of the requirements. The two requirements could then be simplified as follows:

**R1.** The Responsible Entity experiencing a Reportable Balancing Contingency Event shall, within the Contingency Event Recovery Period, return its ACE to at least:
- Zero, if pre-contingency ACE was positive or equal to zero.
- Pre-contingency ACE value, if pre-contingency ACE was negative.

We offer two suggestions for R2:

**R2.** The Responsible Entity experiencing a Reportable Event shall replenish its Contingency Reserves within 105 minutes of the onset of the Reportable Event.

Alternatively, it would be consistent with the current standard to have:

**R2.** The Responsible Entity’s hourly average Contingency Reserves shall not be < its MSSC for more than three consecutive clock hours.

In addition regarding R2, the removal of the “five hours exemption” in R2 is not an enhancement since it could encourage some BAs to avoid activating their contingency reserves in some situations to avoid being non-compliant. For example, if there is an important un-forecasted increase of demand, an IROL limit violation or a voltage problem, the activation of contingency reserve could probably most of the time resolve the problem. With the new proposition it would lead to a non-compliance on R2 of BAL-002-2. Because of this the 5 hours exemption should be considered to be kept for reliability reasons.

Considering the Quebec Interconnection, there are contingencies that occur where generation and load are lost at the same time. There are contingencies where 1900 MW of generation is lost and
1600 MW of DC converters at the same time, the net loss for the BA/Interconnection being 300 MW. The net loss causes a small ACE change and is under the Reportable Balancing Contingency Event threshold. In addition, the 1600 MW of DC converter loss would probably be reported by another entity as a DCS due to a loss of an import. For this reason, suggest that the Balancing Contingency Event and the Reportable Balancing Contingency Event definitions be revised to include the concept of net loss for the BA instead of only the generator MW output.

As for the Reportable Balancing Contingency Event threshold, the 500 MW threshold for the Quebec Interconnection should be reconsidered. As for now, the actual threshold set at 80% of MSSC which corresponds generally around 800 MW already traps events that are significant for the Interconnection and truly measure events where contingency reserve is being deployed by operator actions. A too low threshold might capture events that are recovered with frequency response and AGC action, which are deployed quickly after the event since Quebec is in a single BA Interconnection. The proposed threshold in the draft would augment the reporting needs without any improvement in measuring contingency reserve deployment.