

Survey Report

Survey Details

Name 2010-14.2.2 Phase 2 of Balancing Authority Reliability-based Controls | BAL-004-0

Description

Start Date 9/24/2015

End Date 11/12/2015

Associated Ballots

2010-14.2.2 Phase 2 of Balancing Authority Reliability-based Controls BAL-004-0 IN 1 ST

Survey Questions

1. Based on comments received from the SAR posting and the BAL-004-0 Survey posting, the SDT is recommending that BAL-004-0 be retired and WEQ Manual Time Error Correction Business Practice Standard – WEQ-006, should also be retired contemporaneously with BAL-004-0. Do you agree that the BAL-004-0 – Time Error Correction standard should be retired? If not, please explain.

Yes

No

Responses By Question

1. Based on comments received from the SAR posting and the BAL-004-0 Survey posting, the SDT is recommending that BAL-004-0 be retired and WEQ Manual Time Error Correction Business Practice Standard – WEQ-006, should also be retired contemporaneously with BAL-004-0. Do you agree that the BAL-004-0 – Time Error Correction standard should be retired? If not, please explain.

John Fontenot - Bryan Texas Utilities - 1 -

Selected Answer: Yes

Answer Comment:

Document Name:

Likes: 0

Dislikes: 0

Thomas Lyons - Owensboro Municipal Utilities - 3 -

Selected Answer: Yes

Answer Comment:

Document Name:

Likes: 0

Dislikes: 0

Nick Vtyurin - Manitoba Hydro - 1,3,5,6 - MRO

Selected Answer: Yes

Answer Comment:

Document Name:

Likes: 0

Dislikes: 0

Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC

Group Information

Group Name: Seattle City Light Ballot Body

| Group Member Name | Entity | Region | Segments |
|--------------------------|--------------------|---------------|-----------------|
| Pawel Krupa | Seattle City Light | WECC | 1 |
| Dana Wheelock | Seattle City Light | WECC | 3 |
| Hao Li | Seattle City Light | WECC | 4 |
| Bud (Charles) Freeman | Seattle City Light | WECC | 6 |
| Mike haynes | Seattle City Light | WECC | 5 |
| Michael Watkins | Seattle City Light | WECC | 1,3,4 |
| Faz Kasraie | Seattle City Light | WECC | 5 |
| John Clark | Seattle City Light | WECC | 6 |

Voter Information

| | |
|--------------------|------------------|
| Voter | Segment |
| Ginette Lacasse | 1,3,4,5,6 |
| Entity | Region(s) |
| Seattle City Light | WECC |

Selected Answer: Yes

Answer Comment:

That said, Seattle City Light would like to reiterate that we still feel Standard BAL-004-WECC-02, Automatic Time Error Correction, is a good standard to have. This standard is very effective in automatically correcting time errors, supporting system frequency and reducing primary and secondary inadvertent accumulations. It is our opinion, automatic time error correction programs similar to WECC could help in reliable operations of other Interconnections.

Document Name:

Likes: 0

Dislikes: 0

Scott McGough - Georgia System Operations Corporation - 3 -

Selected Answer: Yes

Answer Comment:

Document Name:

Likes: 0

Dislikes: 0

Scott McGough - Georgia System Operations Corporation - 3 -

Selected Answer: Yes

Answer Comment:

Document Name:

Likes: 0

Dislikes: 0

Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC

Selected Answer: Yes

Answer Comment:

Document Name:

Likes: 0

Dislikes: 0

Anthony Jablonski - ReliabilityFirst - 10 -

Selected Answer: Yes

Answer Comment:

ReliabilityFirst agrees that the practice of using manual TEC to place the Interconnection closer to the settings for automatic underfrequency load shedding does not support or enhance reliability. Therefore, RF believes the BAL-004-0 should be retired as long as sufficient advance notice of retiring the standard and adoption of specific business practices by applicable entities is adopted which will help eliminate any potential adverse unintended consequences.

Document Name:

Likes: 0

Dislikes: 0

Terry Blilke - Midcontinent ISO, Inc. - 2 -

Selected Answer: No

Answer Comment:

While we agree that TECs are primarily a commercial service and that the process should be converted to a procedure in the NERC Operating Manual or a NAESB business practice, we should not stop the implementation of TECs. NIST has demonstrated that there are equipment and processes that use grid frequency as a time reference.

While the reliability impact of TECs is miniscule, there are simple things that can be done to reduce the magnitude and impact of TECs. Europe uses clock-day TECs with a 0.01Hz offset and a 30 second window. NERC used to have a unilateral payback process that not only helped manage Inadvertent Interchange, it also reduced the magnitude of Time Error.

NERC could keep a simple requirement that sets the maximum offset for TECs and the process could be managed in a procedure similar to the Time Monitoring Procedure in the NERC Operating Manual.

See the attached slides for additional information.

Document Name: Summary of past Time Error Discussions and Recommendations.pptx

Likes: 0

Dislikes: 0

Terry Blilke - Midcontinent ISO, Inc. - 2 -

Selected Answer: No

Answer Comment:

While we agree that TECs are primarily a commercial service and that the process should be converted to a procedure in the NERC Operating Manual or a NAESB business practice, we should not stop the implementation of TECs. NIST has demonstrated that there are equipment and processes that use grid frequency as a time reference.

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NERC could keep a simple requirement that sets the maximum offset for TECs and the process could be managed in a procedure similar to the Time Monitoring Procedure in the NERC Operating Manual.

See the attachment for past NERC and NAESB discussions on TECs.

Document Name: Summary of past Time Error Discussions and Recommendations.pptx

Likes: 0

Dislikes: 0

Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO

Group Information

Group Name: MRO-NERC Standards Review Forum (NSRF)

| Group Member Name | Entity | Region | Segments |
|--------------------------|--------------------------------------|---------------|-----------------|
| Joe Depoorter | Madison Gas & Electric | MRO | 3,4,5,6 |
| Chuck Lawrence | American Transmission Company | MRO | 1 |
| Chuck Wicklund | Otter Tail Power Company | MRO | 1,3,5 |
| Theresa Allard | Minnkota Power Cooperative, Inc | MRO | 1,3,5,6 |
| Dave Rudolph | Basin Electric Power Cooperative | MRO | 1,3,5,6 |
| Kayleigh Wilkerson | Lincoln Electric System | MRO | 1,3,5,6 |
| Jodi Jenson | Western Area Power Administration | MRO | 1,6 |
| Larry Heckert | Alliant Energy | MRO | 4 |
| Mahmood Safi | Omaha Public Utility District | MRO | 1,3,5,6 |
| Shannon Weaver | Midwest ISO Inc. | MRO | 2 |
| Mike Brytowski | Great River Energy | MRO | 1,3,5,6 |
| Brad Perrett | Minnesota Power | MRO | 1,5 |
| Scott Nickels | Rochester Public Utilities | MRO | 4 |
| Terry Harbour | MidAmerican Energy Company | MRO | 1,3,5,6 |
| Tom Breene | Wisconsin Public Service Corporation | MRO | 3,4,5,6 |
| Tony Eddleman | Nebraska Public Power District | MRO | 1,3,5 |

Voter Information

| | |
|----------------|------------------|
| Voter | Segment |
| Emily Rousseau | 1,2,3,4,5,6 |
| Entity | Region(s) |
| MRO | MRO |

Selected Answer: No

Answer Comment:

While, fundamentally, we agree that TECs do not rise to the level of Reliability Standard, it doesn't appear that the SDT has done any coordination with NAESB to retire BAL-004 at the same time as the NAESB companion business practice, as outlined in the implementation plan. It is our belief that TECs should be relegated to a procedure in the NERC Operating Manual. We are also concerned that the SDT offers no reversion plan, should time drift excessively and NERC is asked to take action. We would be in favor of the SDT presenting an alternative to a Standard for TEC, and, until such alternatives are presented, will be voting no.

Document Name:

Likes: 0

Dislikes: 0

Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RFC

Group Information

Group Name: Duke Energy

| Group Member Name | Entity | Region | Segments |
|--------------------------|---------------|---------------|-----------------|
| Doug Hils | Duke Energy | RFC | 1 |
| Lee Schuster | Duke Energy | FRCC | 3 |
| Dale Goodwine | Duke Energy | SERC | 5 |
| Greg Cecil | Duke Energy | RFC | 6 |

Voter Information

Voter Colby Bellville **Segment** 1,3,5,6

Entity Duke Energy **Region(s)** FRCC,SERC,RFC

Selected Answer: Yes

Answer Comment: Duke Energy is in agreement with the retirement of the Time Error Correction standard, BAL-004-0.

Document Name:

Likes: 0

Dislikes: 0

Jared Shakespeare - Peak Reliability - 1 -

Selected Answer: Yes

Answer Comment:

Document Name:

Likes: 0

Dislikes: 0

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Selected Answer: Yes

Answer Comment:

While BPA supports the retirement of BAL-004-0, BPA recommends that industry retains the ability for Manual Time Error Corrections to be made outside of a Reliability Standard. Thank you.

Document Name:

Likes: 0

Dislikes: 0

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP

Group Information

Group Name: SPP Standards Review Group

| Group Member Name | Entity | Region | Segments |
|--------------------------|--------------------------------|---------------|-----------------|
| Shannon Mickens | Southwest Power Pool Inc. | SPP | 2 |
| Jason Smith | Southwest Power Pool Inc | SPP | 2 |
| Ron Gunderson | Nebraska Public Power District | MRO | 1,3,5 |

Voter Information

Voter **Segment**

Shannon Mickens 2

Entity **Region(s)**

Southwest Power Pool, Inc. (RTO) SPP

Selected Answer: Yes

Answer Comment:

We agree that BAL-004-0 should be retired and the retirement of this particular standard has no reliability impact on the BES.

Document Name:

Likes: 0

Dislikes: 0

Brian Van Gheem - ACES Power Marketing - 6 - NA - Not Applicable

Group Information

Group Name: ACES Standards Collaborators

| Group Member Name | Entity | Region | Segments |
|--------------------------|---|---------------|-----------------|
| Bob Solomon | Hoosier Energy Rural Electric Cooperative, Inc. | RFC | 1 |
| Ginger Mercier | Prairie Power, Inc. | SERC | 1,3 |
| Ellen Watkins | Sunflower Electric Power Corporation | SPP | 1 |
| Michael Brytowski | Great River Energy | MRO | 1,3,5,6 |
| John Shaver | Arizona Electric Power Cooperative, Inc. | WECC | 4,5 |
| John Shaver | Southwest Transmission Cooperative, Inc. | WECC | 1 |

Voter Information

| | |
|----------------------|---------------------|
| Voter | Segment |
| Brian Van Gheem | 6 |
| Entity | Region(s) |
| ACES Power Marketing | NA - Not Applicable |

Selected Answer: Yes

Answer Comment:

- 1) We would like to commend the drafting team in its efforts to strengthen its case for the retirement of the Time Error Correction standard. The addition of two new appendices to its white paper provides essential background on time error corrections and alternative methods that registered entities can use to achieve similar results.
- 2) While we continue to support the retirement of this standard, as we feel it puts an undue risk on the reliability of the BES, we have concerns regarding the direction taken by the SDT as part of this process. The implementation plan states the retirement of this standard is dependent on the retirement of NAESB standard WEQ-006. While we agree this is necessary, the limited coordination with NAESB we have observed will only delay these efforts. We believe a letter

of support from NAESB should be included in the white paper to demonstrate joint collaboration from all aspects of industry and strengthen your conclusions.

3) We also feel the SDT should identify, within the implementation plan, revising the NERC Operating Manual as a listed prerequisite for the retirement of this standard. We feel specific initiation and monitoring criteria listed within the retired standards should be moved to the time error correction section within the Manual. We also recommend the addition of the alternative methods provided within the white paper to complement this revision.

Document Name:

Likes: 0

Dislikes: 0

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC**Group Information**

Group Name: RSC

| Group Member Name | Entity | Region | Segments |
|--------------------------|--------------------------------------|---------------|---------------------|
| Paul Malozewski | Hydro One. | NPCC | 1 |
| Guy Zito | Northeast Power Coordinating Council | NPCC | NA - Not Applicable |
| Michael Forte | Con Edison | NPCC | 1 |
| Brian Shanahan | National Grid | NPCC | 1 |
| Rob Vance | New Brunswick Power | NPCC | 1 |
| Robert J. Pellegrini | United Illuminating | NPCC | 1 |
| Sylvain Clermont | Hydro Quebec | NPCC | 1 |
| Edward Bedder | Orange and Rockland Utilities | NPCC | 1 |
| Mark J. Kenny | Eversource Energy | NPCC | 1 |
| Gregory A. Campoli | NY-ISO | NPCC | 2 |
| Si Truc Phan | Hydro Quebec | NPCC | 2 |
| Randy MacDonald | New Brunswick Power | NPCC | 2 |
| Kelly Dash | Con Edison | NPCC | 3 |
| Michael Jones | National Grid | NPCC | 3 |
| David Burke | Orange and Rockland Utilities | NPCC | 3 |
| Peter Yost | Con Edison | NPCC | 4 |
| Wayne Sipperly | New York Power Authority | NPCC | 4 |
| Connie Lowe | Dominion Resources Services | NPCC | 4 |
| David Ramkalawan | Ontario Power Generation | NPCC | 4 |
| Glen Smith | Entergy Services | NPCC | 4 |
| Brian O'Boyle | Con Edison | NPCC | 5 |
| Brian Robinson | Utility Services | NPCC | 5 |
| Bruce Metruck | New York Power Authority | NPCC | 6 |
| Alan Adamson | New York State Reliability Council | NPCC | 7 |
| Kathleen M. Goodman | ISO-New England | NPCC | 2 |

| | | | |
|------------------------|---|------|---|
| Helen Lainis | Independent Electricity System Operator | NPCC | 2 |
| Silvia Parada Mitchell | NextEra Energy | NPCC | 4 |

Voter Information

| | |
|--------------------------------------|------------------|
| Voter | Segment |
| Ruida Shu | 1,2,3,4,5,6,7 |
| Entity | Region(s) |
| Northeast Power Coordinating Council | NPCC |

Selected Answer: Yes

Answer Comment: We support the SDT's recommendation to retire BAL-004-0 Time Error Correction standard.

Document Name:

Likes: 0

Dislikes: 0

Manual Time Error Correction Discussion

Terry Bilke, MISO

Background

The following slides are extracts from past work within the NERC Resources Subcommittee (RS) and the NAESB Time and Inadvertent Management Task Force (TIMTF) while attempting to address FERC's 693 concerns on Time Error Corrections and Inadvertent Interchange balances

Order No. 693 Concerns

- Address number and efficiency of TECs
- Concerned with large Inadvertent Interchange balances
- Asks NERC to investigate alternatives to present TEC practices

Reasons for Fast Time*

- Tariffs that treat under-generation more severely than over-generation
- Operator perception that negative Inadvertent Interchange balances are “worse” than positive balances
- Changes to Inadvertent Interchange Payback processes
- Unaccounted for Inadvertent Interchange

*Anecdotal

TEC Risk Misperception

- Frequency
 - 0.02 Hz offset occurs infrequently and only takes 4% of frequency margin to the prevailing first step of UFLS
 - Takes about 100 MW from 10,000 MW margin to UFLS in the East
 - Likelihood of a 9900 MW contingency during a TEC (whereby the TEC would contribute to a ULFS event) is next to nil
- Flow impact of an improper TEC is on the order of metering error (small fraction of a MW per tie line)

Other Observations

- NIST has found that there are indeed equipment and processes that rely on grid frequency as their time reference
- RCs effectively manage the Time Monitoring function using the procedure in the NERC Operating Manual, BAs would no doubt do the same

Suggested Approach

- A simple NERC requirement that sets the maximum offset for TECs and the obligation to halt a TEC if directed by an RC
- A procedural solution (either in the NERC Operating Manual or a NAESB Business Practice) based on what works or has worked in the past to address FERC's concerns
 - Wider window (+/- 30 seconds)
 - Smaller clock-day offset (+/- 0.01Hz similar to Europe)
 - Reinstate a payback process similar to what was followed under NERC's A1/A2 criteria (allow unilateral payback of 5MW or 10% of bias when Inadvertent balance is "in phase" with Time Error)
 - NERC RS to monitor TEC efficiency and Inadvertent balances