

OPERATING COMMITTEE
August 10, 2016 – 1:00–5:00 PM
NWPP Offices – 7505 N.E. Ambassador Place, Suite R – Portland, Oregon
Portland/Vancouver Room

1. Introductions, Arrangements, and Agenda Changes Chad Edinger (TPWR), Chair

Chad Edinger welcomed everyone to the meeting. Introductions were made around the room. Don Badley provided an overview of the conference room and meeting arrangements. The meeting agenda is included as Attachment #1. A listing of attendees is included as Attachment #2.

2. May 11, 2016 OC Meeting Notes – Accept by Consensus Don Badley, NWPP

Don Badley commented that Jim Farrar and Denise Lietz sent clarifying revisions to the draft meeting notes. The revised notes were then redistributed to the OC on July 12th. No further revisions were suggested. By consensus, notes of the May 11, 2016 OC meeting were accepted as modified.

3. Action Items from April 1, 2015 Meeting – Status Review Badley

- Share TPC's list of planning tasks with OC. *When TPC completes the list.*
- Meg Albright elected to serve as one of two OC representatives to the group of 8 dealing with the Membership Agreement. Complete
- NWPP Staff will make arrangements for a tour of Centralia Thermal Plant that is part of the September 2016 Engineer's Forum. Completed

4. Engineers Forum

The NWPP Engineers Forum is going forward and registrations are still being accepted; the registration cut-off date is around September 1st. The Forum is scheduled for September 15th & 16th in Tacoma. A tour of the Centralia steam plant is scheduled for September 16th. The Forum will be hosted by TPWR in their building. The Engineers Forum is open to all employees of NWPP Participants.

David Pennington commented that the Engineers Forum proceedings will be recorded.

5. Training – Update

a. Training Coordinators Meeting – Summary David Pennington, NWPP

David Pennington reported that following the outcome of the June Training Coordinators meeting, the NWPP staff is in the process of collaborating with Peak Reliability in the development of eLearning content. David commented that NWPP and Peak agreed to develop online versions of Peak's SOL methodology course, as well as a basic system restoration course, as pilot projects for the collaboration

b. NWPP System Restoration – Update Greg Park, CHPD

Greg Park reported that he recently met with Peak Reliability, LeRoy Patterson, Brian Reich, and Kelly Blackmer to discuss system training and there appears to be synergies between the NWPP and Peak due to the long listing of course content they already have – System Restoration being a big one.

Currently restoration training is scheduled for Tuesdays in the Spring. Greg requested feedback if Wednesdays would work better. Greg will follow-up with Peak.

- c. **Formation of Personnel Training Subcommittee – Discussion & approval** Greg Park, CHPD
The WECC Operator Training Subcommittee being retired. Greg asked if there is enough interest or need in the NWPP for the OC to sponsor its own training subcommittee. Greg explained that he is looking to reacquire lost training opportunities and assist NWPP Participants with training development in mutual areas of interest. He also felt that there is a benefit for system operators from different BAs to meet and hear the same course covering regional issues in the NWPP area.

Currently, with the training coordinator group, the OC has established a forum with two meetings authorized for the 2016-17 budget year. Greg is suggesting that we charter a group to work on NWPP regional issues. Chad suggested having the group develop a charter for this group. Greg volunteered to reach out to others and develop a charter.

Action Item:

Don Badley, will distribute an email to the OC indicating Greg Park will be developing a scope document addressing NWPP Training needs. Once a draft scope is developed it will be circulated among all NWPP training coordinators for comments.

A final draft to be presented at the October NWPP OC Meeting.

- d. **NWPP Training (LMS) – Update** David Pennington, NWPP
David Pennington reported that, to date, the online NWPP Learning Management System (LMS) has delivered 3,622 CEH in the last 2.5 years. The monthly amount of hours delivered has increased from approximately 100 CEH per month last year, to roughly 200 per month this year. The new version of the training platform is still under development, and NWPP staff is aiming to have it available for testing with Training Coordinators in Fall 2016, with a soft launch roughly around the first of 2017. As NERC continues to refine and enhance the overall training developed by providers, NWPP continues to regularly maintain and update their library of course content. To this end, 5 CEH courses have been removed from the platform for the time being while they undergo revision and improvement.

6. **NWPP Agreement – Group of 8 Report** Denise Lietz (SCL), Task Force member
Denise Lietz reminded the OC to follow up with their utilities' executives to assure the requested updates are being circulated and reviewed internally. Comments are due back to the NWPP by August 19th. The next meeting is scheduled to occur on August 25th.

Raj Hundal, one of the members of the group of 8, requested any disagreeing comments be provided back to the group with reasons for the disagreement and how to address them.

Action Item:

NWPP Staff, ChaRee DiFabio, to distribute email requesting any feedback regarding the NWPP Agreement is due back by the requested August 19th date.

If your organization is not able to provide the requested feedback by this date, please indicate when it is feasible.

7. Peak Reliability RC – Update

Vic Howell, Peak RC

- a. Measuring system inertia in real-time – Implementation update
Vic Howell reported that Peak RC began calculating system inertia for the Western Interconnection (WI) on July 1, 2016; a brief description is given in Attachment #3.
- b. IRO-017 – Outreach and Update
Vic explained that Peak RC does not have a centralized outage coordination process in the WI. However, a small team was formed to design and develop a process for coordinating outages. Currently, they are working on implementing changes from comments, distributing the changes and soliciting a second round of comments. In Attachment #4, Vic identifies the team members, milestones and goals of the project.
- c. OATI outage on August 3, 2016 – Discussion
Vic presented a description of the OATi e-tagging outage in a PowerPoint presentation; refer to Attachment #4.

There is concern with regard to the OATi e-tagging outage and where the responsibility is held for addressing tags. Ultimately, the responsibility lies with the BA; however, if a BA has contracted with OATi for e-tagging services, then OATi should be held to the contracted service they are obligated to provide.

Action Item

Chad Edinger will reach out to the OC members who use the OATi e-tagging system to determine how best to provide a united response to OATi on addressing this issue so that it won't happen again into the future.

8. TOP-003-3 (Effective 1/1/16) & Regional Coordination

Chad Edinger , TPWR

- a. Co-Presentation by Linda Hoffmann, Stacen Tyskiewicz, & Tim Loepker (BPA)
Linda Hoffmann used the following outline as talking points.
 - PEAK's Expectation: BAs and TOPs coordinate prior
 - BPA's motivation
 - Outage Strategy
 - Approach and findings
 - Ask of NWPP:
 - Collaboratively work with our peers/partners to craft:
 - Standards, and Common Timeline(s) for Outages
 - Serving region more effectively
 - Standard for TOP-003 Data Specification
 - Manageable compliance, Info, etc.
 - Next Steps

Linda has been monitoring Peak RC's outage coordination process. She commented that Peak has been strongly encouraging entities to get their outage coordination schedules to Peak in a timely fashion. She also commented that BPA's analysis for outage coordination takes time because they deal with so many different entities and issues (like fish, permitting, etc.).

Stacen Tyskiewicz commented that TOP-003-3 will create a lot of work when it is implemented in January 2017. BPA is proposing new secure area on the Peak RC site

for participants to share data in common format. Currently, BPA is in the process of building what this might look like with all peers/partners. They believe this may help everyone but if they don't get a lot of buy-in they will just drop the whole effort.

b. **Fate of NWPP 45 Day Outage Coordination**

Peak RC expects TOPs and BAs to acquire outage requests and coordinate with their neighbors before giving the outage request to the RC for final coordination.

While the NWPP Outage Coordination process is still in existence, it is no longer being utilized. One of the NWPP OC Goals is to determine the disposition of the process within the NWPP, the action items are:

- determine disposition of the outage coordination process (August 2016), and
- if retained, formal Outage Coordination Plan implementation (June 2017)

The NWPP will host a meeting of Outage coordinators (Vic Howell and Linda Hoffmann will provide the names).

Action Item:

NWPP Staff, ChaRee DiFabio, to facilitate Outage Coordination Meeting with BPA, Peak RC, and others.

9. NERC – Essential Reliability Services Work Group

Rich Hydzik, AVA

a. Update on any potential measures or guidelines the group is considering.

Rich Hydzik reviewed the Essential Reliability Services Work Group activity.

Currently, they have a goal to put together a sufficiency goal paper by December. This will result in creation of a guideline.

10. BAL-001-2 & CPS Reporting Changes

Chad Edinger, TPWR

Chad Edinger commented on an Email from Tim Reynolds requesting BAs to continue data submissions for CPS evaluation on a voluntary basis. Chad reviewed the instructions and form that will be used; refer to Attachments #5 and #6. NERC will be coming out with instructions on how to submit the data.

11. CAISO EIM Entities Update

All

a. PSE, PGE, Idaho Power

Thomas Bagnell reported that PSE is currently in parallel operations in testing their system integration with CISO.

Bob Frost commented that PGE is scheduled to parallel operations in August 2017 and to go live October 1, 2017. Utilicast was hired as their system integrator and Bob commented on the great job they have done.

IPC is scheduled to go live April 1, 2018; they are in the very early stages of this project. They, too, have hired Utilicast.

Jerry Rust reported that California has delayed their Regional Grid Bill to 2017.

12. Recent and Upcoming NERC/WECC Voting & Comments

Chad Edinger, TPWR

- a. IRO-002-5 Vote (8/3/16)
Chad reported that standard IRO-002-5 was approved by a vote of the industry.
- b. TOP-001-4 Vote (8/3/16)
Standard TOP-001-4 failed
- c. EOP-008 Comment (8/12/16)
Standard COM-001-3 was approved.
Balloting on EOP-005, 6 & 8 is coming up

13. NERC – Update

Jerry Rust, NWPP

Jerry Rust gave an update on NERC activities. He emphasized that the Reliability Functional Model is being revised, particularly with regard to the Interchange Authority, and he suggested that OC members should review the changes and comment on them.

Action Item:

NWPP Staff, Don Badley, will provide a link to the comment form regarding the Functional Model Comment period which ends 9/7/2016.

14. WECC – Update

- a. WECC OC Meeting Update
Rich Hydzyk, AVA
Rich Hydzyk reported the UFAS proposed compensation package for phase shifting operations did not get approved. The concept of using the absolute-sum of Net Actual Interchange for purposes of settlement during hours of COPS operations was not acceptable to many. Those balloting “NO” were requested to provide comments regarding why they voted “NO”. Since this proposal failed, the existing UFAS process will remain in force.

The Organization Structure Review Task Force proposed restructuring the OC into two Committees, i.e., 1) event analysis (focusing specifically on event analysis) and 2) a SIMS group (a new group to address situational awareness). He recommended review of presentation from this meeting that is currently posted to WECC website.
- b. Retirement of R2 from BAL-002-WECC-2
Don Badley, NWPP
A letter has been sent a letter to WECC Compliance asking for a waiver for BAL-002-WECC-2 Requirement R2 (a.k.a. spinning reserve) while WECC conducts a field test to measure the impact on BAL-002-WECC-2. The field test is expected to continue for one year.
- c. Seasonal Assessments – Request for breakdown of renewables
Beginning with the Winter Assessment, more comprehensive information about variable generation (i.e., utility grade renewables) within each balancing authority area will be required for the seasonal assessments. A data form with columns for WIND, SOLAR, and OTHER will be developed and distributed with the request.

15. Current Operations

All

NaturEner, as a certified BA, will be assuming operational control of GWA and WWA from Gridforce.

Jerry Rust reminded the OC that the Engineers Forum is open to all employees of NWPP Participants. The Forum is scheduled for 9/15-16/2016 at Tacoma Power's Offices.

Action Item:

ChaRee DiFabio will distribute an email regarding this meeting and will request folks to continue to register if they are interested. Registration will close on Sep. 1, 2016.

16. OC Goals for 2016-2017 Operating Year – Review

Edinger

No additional items were added to the OC's goals for the 2016-17 Operating Year.

17. Review of Action Items Decided at this Meeting

Badley

- NWPP Staff, Don Badley, will distribute an email to the OC indicating Greg Park will be developing with other training coordinators, a scope document addressing NWPP training needs. Once a draft scope is developed it will be circulated among the NWPP training coordinators for comments. A final draft to be presented at the October NWPP OC meeting.
- NWPP Staff, ChaRee DiFabio, to distribute email requesting any feedback regarding the NWPP Agreement. Responses must be returned by August 19th.
- Chad Edinger will reach out to the OC members who use the OATi e-tagging system to determine how best to provide a united response to OATi on addressing this issue so that it won't happen again into the future.
- NWPP Staff, ChaRee DiFabio, to facilitate Outage Coordination Meeting with BPA, Peak RC, and others.
- NWPP Staff, Don Badley, will provide a link to the comment form regarding the Functional Model Comment period which ends 9/7/2016.
- ChaRee DiFabio will distribute an email regarding the Engineers Forum meeting and will request folks to continue to register if they are interested. Registration will close on Sep. 1, 2016.
- Chad Edinger to touch base with Raj Hundal and Denise Lietz by the end of August to determine whether the OC will meet via webinar or face-to-face. The decision hinges on the comments received by August 19th and after the Group of 8 have met.

18. Future Meetings

- a. Joint Meeting – Does OC want to hold a joint meeting with TPC in October?
- b. October 13 – Portland, OR
Items to be included on the October OC agenda are: 1) Reliability Functional Model, 2) outage coordination and 3) NWPP Agreement.

ADJOURN

ATTACHMENTS

NWPP OPERATING COMMITTEE MEETING

August 10, 2016



Agenda
August 8, 2016

OPERATING COMMITTEE
August 10, 2016 – 1:00–5:00 PM
NWPP Offices – 7505 N.E. Ambassador Place, Suite R – Portland, Oregon
Portland/Vancouver Room

✓ **Action Item**

1. **Introductions, Arrangements, and Agenda Changes** Chad Edinger (TPWR), Chair
- ✓ 2. **May 11, 2016 OC Meeting Notes – Accept by Consensus** Don Badley, NWPP
3. **Action Items from April 1, 2016 Meeting – Status Review** Badley
 - Share TPC's list of planning tasks with OC. *When TPC completes the list.*
 - Meg Albright elected to serve as one of two OC representatives to the group of 8 dealing with the Membership Agreement.
 - NWPP Staff will make arrangements for a tour of Centralia Thermal Plant that is part of the September 2016 Engineer's Forum.
- ✓ 4. **Training – Update**
 - a. Training Coordinators Meeting – Summary David Pennington, NWPP
 - b. NWPP System Restoration – Update Greg Park, CHPD
 - c. Formation of Personnel Training Subcommittee – Discussion & approval Park
 - d. NWPP Training (LMS) – Update Pennington
5. **NWPP Agreement – Group of 8 Report** Denise Lietz (SCL), Task Force member
6. **Peak Reliability RC – Update** Vic Howell, Peak RC
 - a. Measuring system inertia in real-time – Implementation update
 - b. IRO-017 Outreach and Update
 - c. OATI outage on August 3, 2016 – Discussion
7. **TOP-003-3 (Effective 1/1/16) & Regional Coordination** Chad Edinger, TPWR
 - a. Co-Presentation by Linda Hoffmann, Stacen Tyskiewicz, & Tim Loepker (BPA)
 - b. Fate of NWPP 45-Day Outage Coordination
8. **NERC – Essential Reliability Services Work Group** Rich Hydzik, AVA
 - a. Update on any potential measures or guidelines the group is considering.
9. **BAL-001-2 & CPS Reporting Changes** Chad Edinger, TPWR
10. **CAISO EIM Entities Update** All
 - a. PSE, PGE, Idaho Power



Agenda August 8, 2016

11. Recent and Upcoming NERC/WECC Voting & Comments

Chad Edinger, TPWR

- a. IRO-002-5 Vote (8/3/16)
- b. TOP-001-4 Vote (8/3/16)
- c. EOP-008 Comment (8/12/16)

12. NERC – Update

Rust

13. WECC – Update

- a. WECC OC Meeting Update
- b. Retirement of R2 from BAL-002-WECC-2

Rich Hydzik, AVA
Badley

14. Current Operations

All

15. OC Goals for 2016-2017 Operating Year – Review

Edinger

16. Review of Action Items Decided at this Meeting

Badley

17. Future Meetings

- a. Joint Meeting – Does OC want to hold a joint meeting with TPC in October?
- b. October 13 – Portland, OR

ADJOURN

NWPP Operating Committee Meeting
August 10, 2016
Meeting Attendance

Name	Organization
Darren Wilkie	Alberta Electric System Operator
Kit Blair	Avangrid Renewables
Rich Hydzik	Avista Corporation
Margaret Albright	Bonneville Power Administration
Linda Hofmann	Bonneville Power Administration
Stacen Tyskiewicz	Bonneville Power Administration
Tim Loepker	Bonneville Power Administration - Outage Office
Greg Park	Chelan County Public Utility District
Jeff Heminger	Douglas County Public Utility District
Chris Nebrigich	Idaho Power Company
Kathryn Downey	PacifiCorp
Vic Howell	Peak Reliability
Bob Frost	Portland General Electric Company
Thomas Bagnell	Puget Sound Energy
Denise Lietz	Seattle City Light
Chad Edinger	Tacoma Power
Diane Brignone	Tacoma Power
Gareth Tomlinson	Tacoma Power
James Farrar	Turlock Irrigation District Water and Power
Craig Speidel	Western Area Power Administration - Upper Great Plains
Attending via telephone	
Antonio Franco	Gridforce Energy Management
Raj Hundal	Powerex
Asher Steed	B. C. Hydro and Power Authority
Mike McGowan	NorthWestern
NWPP Staff	
Jerry Rust	Northwest Power Pool staff
Don Badley	Northwest Power Pool staff
Charee DiFabio	Northwest Power Pool staff
Harlan Tallman	Northwest Power Pool staff
David Pennington	Northwest Power Pool staff
Keith Johnson	Northwest Power Pool staff
Sabin Urdes	Northwest Power Pool staff

System Inertia Calculation

Version 1.0

Date: May 9, 2016

**Peak
Reliability**



INTRODUCTION

The North American Electric Reliability Corporation (NERC) Planning Committee and Operating Committee jointly created the Essential Reliability Services Task Force (ERSTF) in 2014 to consider the issues that may result from the changing generation resource mix. The purpose of the ERSTF is to develop measures, use data from across North America to assess the validity of these measures, and provide insight into trends and impacts of the changing resource mix. The ERSTF established three technical sub-teams focusing on 1) frequency support, 2) ramping capability, and 3) voltage support.

Frequency Support sub team developed two measures (Measure 1 and Measure 3) to monitor Synchronous Inertial Response (SIR) at an Interconnection level and at Balancing Authority (BA) level. In order to monitor SIR, it is required to have the total Inertia constant (H) and H*MVA data of all online units at Interconnection level and BA Level.

INERTIA CALCULATION

PEAK developed a software application to calculate total Inertia constant (H) and H*MVA of all online units at interconnection and BA level. The new application runs once every minute in Energy Management System (EMS) host system. It calculates H and H*MVA data and writes the data into SCADA points, where MVA is the rated MVA of the unit. The data of all inertia SCADA points are historized and all points are available to share via ICCP.

Following assumptions are used in calculating total inertia:

- Unit online status is determined based on Unit output MVA. Calculate unit output MVA using State Estimation solution MW, MVAR values and 5MVA is used as threshold to determine whether the unit is online or not. The purpose of the threshold is to filter out units that are in the process of synchronizing with the system as well as filter out some telemetry errors.
- Inertial contribution from online synchronous condensers or generating units operating in synchronous condenser mode are included. 5MVA threshold automatically includes the units in Synchronous condenser mode with reactive power output greater than +/- 5MVAR.
- Units in pump mode are included in System inertia calculation. The 5MVA threshold automatically includes the units in pump mode with load greater than 5MW.
- Total system inertia is calculated as MVA*seconds at interconnect level and BA level.
- At Peak, State Estimator runs every minute and Inertia values are also calculated once every minute based on State Estimation solution values and updated in SCADA. The SCADA values are sent to external entities over ICCP upon change.

- Unit Inertia Constant (H) values are loaded into West Wide System Model (WSM) based on WECC Basecase dynamic data. WECC Basecase versus WSM mapping is used to identify the units in WSM.
- If there is no mapping available between WECC Basecase and WSM, inertia constant value is initialized with ZERO.

PEAK RELIABILITY — RELIABILITY COORDINATION

7600 NE 41st STREET • SUITE 201 • VANCOUVER • WASHINGTON • 98662-6772
4850 HAHNS PEAK DRIVE • SUITE 120 • LOVELAND • COLORADO • 80538-6001

Peak Reliability Update 8/10/2016 NWPP OC Meeting

Vic Howell
Manager, Operations Engineering Support



PEAKRELIABILITY
assuring the wide area view

Peak Update

- Inertia Calculation
- OATi outage on 8/3/2016
- IRO-017-1 Outage Coordination Process Project

Inertia Calculation

- Started on 7/1/2016
- Calcs for system inertia at Interconnection level and BA level in real time once per min
- The data is available for sending over ICCP
- NERC doesn't yet have infrastructure to receive the data over ICCP
- Storing the data in PI
- System Inertia Calculation Paper

3



OATi Outage on 8/3/2016

- Entities began reporting problems with their E tagging systems.
- The RCSOs began investigating tools affected – appeared WIT was functional.
- At around 0620 MST the RCSO Lead contacted OATI support – severity of the problem was not determined.
- Lead began to formulate the IA Emergency declaration message for RMT when he noticed Peaks webSAS application was operational again.
- While investigating the status of his tools, the Lead noticed RMT messages began coming in (0640 MST) about tagging systems starting to work again.

4



OATi Outage on 8/3/2016

- The Lead chose to not implement the IA emergency declaration.
- Generally, the RCSOs would declare an IA emergency when WIT goes down or there are widespread tagging issues, upon confirmation with OATI.
- In hindsight the RCSOs should have declared the emergency somewhere around the 0615 MST time frame (based on RMT messages) but they were trying to determine the scope of the issue.
- In the past we have declared the emergency when it wasn't system wide and that created other problems so they were being thorough in their investigations.

5



IRO-017-1 Outage Coordination

- New NERC Reliability Standard effective 4/1/2017

Standard IRO-017-1 — Outage Coordination

A. Introduction

1. **Title:** Outage Coordination
2. **Number:** IRO-017-1
3. **Purpose:** To ensure that outages are properly coordinated in the Operations Planning time horizon and Near-Term Transmission Planning Horizon.

6



Outage Coordination in the West

- No centralized outage coordination process*
- Wide ranging technology and process implementations



- IRO-017 – major cultural shift

7



Stakeholder Engagement

- Stakeholder list – BA, TOP, TO, GOP, GO
- Small team formed to design and develop process
- Small team explores options and collaboratively develops solutions
- No “right answer”, pros and cons with every solution
- Team focused on the greater good, lays the foundation for future enhancements

8



Stakeholder Small Team Members

- Annmarie Steinhoff – APS
- Rodney Wheeler – CAISO
- Steve Rutledge – SCE
- Alan Masters – Xcel
- Warren Rust – CSU
- Mike Brown – BPA
- Kelly Myers – PAC
- Derek Book – PRPA
- Robert Wall – USACE
- Roger Rockstad – USBR
- Henry Lavoo – TEP
- 9 • Chris Yoon – PSE



Project Milestones

Milestone	Date
Post initial draft of Outage Coordination Process for stakeholder comment	6/17/2016
1 st round Stakeholder comments due	7/15/2016
Post 2 nd draft of Outage Coordination Process for stakeholder comment	8/17/2016
2 nd round Stakeholder comments due	9/7/2016
Post final Outage Coordination Process	10/3/2016
Process implementation date	2/7/2017
IRO-017-1 mandatory and compliance in effect	4/1/2017



Outage Coordination Process Goals

- Achieve BES reliability for outage conditions
- Facilitate compliance with NERC Standard IRO-017-1
- Minimize late-term cancellation of scheduled outages
- Dovetail IRO-017-1 process with BA/TOP processes as much as possible

11



Strategy

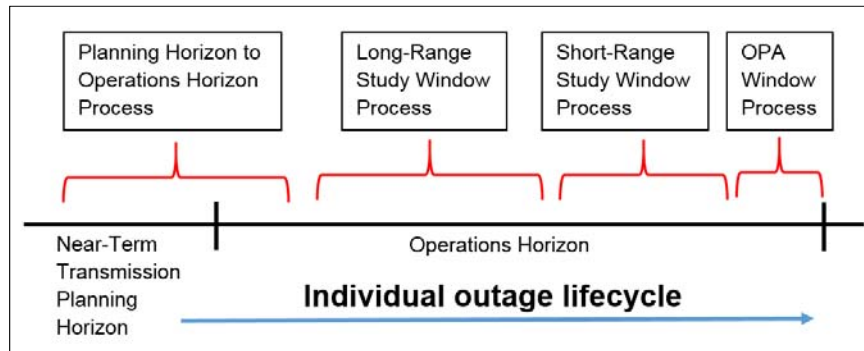
- Initially develop an achievable outage coordination process
- Enhance process over time using phased approach



12



Outage Coordination Process Lifecycle



13



Where are we now?

- First draft posted for stakeholder comment
- Comments received, responses posted
- Currently drafting second posting for stakeholder comment
 - Simplifying where possible
 - Clarifying areas of confusion

14



Next Steps

- Second OC Process draft to be issued for comment on August 17th
- Second comment period ends on September 7th
- Stakeholder Engagement webinar scheduled for September 29th
- Post final process document on October 3rd
- Process implementation on February 7th
- IRO-017-1 effective date April 1st
- Peak preparing training/rollout plan

15



CPS1 and BAAL Exceedance Data Submittal Form Instructions

Fill out the Green Cells as directed below.

Steps

1 Submitter Contact Information

Fill out the contact information of the person submitting the data.

- 2 Enter the date you are submitting the form.
The reporting period will automatically be chosen (for the preceding quarter) based on the date entered.
This will also populate the month headers for data entry.

- 3 Select the Interconnection in the dropdown Menu.
This will set the dropdown menu to the appropriate BAs for selection.

- 4 Select the BA in the dropdown Menu.

Data Coordination (if applicable)

- 5 Select whether your data is coordinated with and is covered by another party in the drop down menu.
If your BA used another party, fill out the entity's contact information

CPS1 Data Entry

- 6 Enter the CPS1 monthly percentages for each month.
- 7 Enter the rolling 12 month percentage for each month.
- 8 (Optional) Enter the total number of clock-minutes CPS1 was less than -700% for each month.

BAAL Data Entry

- 9 Enter the number of monthly exceedances including for 10 to 14 minutes for each month.
- 10 Enter the number of monthly exceedances for 15 to 19 minutes for each month.
- 11 Enter the number of monthly exceedances for 20 minutes and over for each month.
- 12 (Optional) Enter the total number of clock minutes BAAL was exceeded for each month.

7-7-16

NOTE: These data are being collected from Balancing Authorities to support the Resources Subcommittee with their task of evaluating interconnection reliability related to control performance, and providing FERC with the analysis requested in FERC Order No. 810. These data were requested by Operating Committee Chairman Jim Case in his letter of May 19, 2016. NERC will disclose this information only as required and in accordance with the procedures pursuant to Section 1500 of the NERC Rules of Procedure.

CPS1 and BAAL Exceedance Data*

Submitter's Contact Information

Technical Contact Name	Email	Telephone	Date Submitted (mm/dd/yyyy)
			10/1/2016
Reporting Period	0		
Select Interconnecton	Western	Select BA	

Data Coordination (if applicable)

OUR DATA HAS BEEN COORDINATED WITH AND IS COVERED BY ANOTHER PARTY			Yes
Select Coordinating Entity	Contact Name	Telephone	Email

CPS1 Data Entry

	January	February	March
CPS1 Monthly Percentage			
CPS1 Rolling 12 Month Percentage			
Clock-Minutes CPS1 <-700% (Optional)			

BAAL Data Entry

	January	February	March	Quarterly Total
10-14 Minute Exceedance				0
15-19 Minute Exceedance				0
> 20 Minute Exceedance				0
BAAL Clock-Minute Exceedances (Optional)				0

* These data are being collected from Balancing Authorities to support the Resources Subcommittee with their task of evaluating interconnection reliability related to control performance, and providing FERC with the analysis requested in FERC Order No. 810. These data were requested by Operating Committee Chairman Jim Case in his letter of May 19, 2016. **NERC will disclose this information only as required and in accordance with the procedures pursuant to Section 1500 of the NERC Rules of Procedure.**