# Bonneville Power Administration

# TOPIC

Transmission Operator Integrated Compendium

Processes and Guidelines

Version 8.0

Prepared by the BPA CSRP Team

Effective August 6, 2021

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### **BACKGROUND**

The Transmission Operator Integrated Compendium (TOPIC) is a collection of documents, processes and procedures, explanations, and other material to provide guidance for implementing and sustaining Transmission Operator (TOP) Services. The development of the TOPIC is intended to be collaborative and transparent between BPA and Customers to ensure successful implementation of the service.

### **PURPOSE**

The Transmission Operator Integrated Compendium documents procedures necessary in order to provide BPA with the ability to carry out its TOP responsibilities as they relate to Customers' Bulk Electric System (BES) equipment. These TOP procedures are required in order to allow BPA to implement TOP authority over the BES equipment and demonstrate compliance with certain mandatory Reliability Standards and requirements. The procedures are mandatory for BPA and TOP Services Customers. These procedures contain, but are not limited to actions which must be taken by Customer prior to changing the status of or taking actions that could impact the control or protection of the BES transmission system associated with the transmission lines owned by Customer; orders, instructions, and other requests BPA may issue and Customer must follow in order for BPA to fulfill its TOP obligations.

# **OUTAGE COORDINATION (IRO-017)**

#### **General Overview**

BPA will coordinate outages of TOP Services Customers' covered BES equipment in accordance with IRO-017. TOP Services Customers must comply with BPA's Outage Coordination Policy. Emergency outages are covered in the Real Time Operating Procedures section below. For purposes of these procedures, a Control Center is a facility hosting operating personnel that monitors and controls the transmission system in real-time.

### **BPA Policy Reference**

**BPA Outage Coordination Policy:** 

https://txportal.bud.bpa.gov/orgs/TO/TOR/BPAOutageOffice/OutageCoordination/SOLViolation/BPA%20Outage%20Coordination%20Policy/BPA%20Outage%20Policy V11.0 Effective 05 12 2021.docx

### **General Responsibilities:**

- 1. BPA Outage Offices (Dittmer or Munro) ensure the work requested can be accomplished safely. In addition, they receive and review outage requests, assure that equipment nomenclature is accurate, assess conflicting outages, communicate with outage requestors, and finalize the outage plans. Finally, BPA Outage Offices ensure compliance with IRO-017 (Outage Coordination).
- 2. An Outage Requestor is the Facility Operator who requests an outage to perform planned maintenance, construction, testing, urgent, or emergency work.

#### **Customers without Control Centers**

TOP Services Customers without Control Centers are expected to coordinate outages with District Personnel, and District Personnel will submit outage requests to Dispatchers/Outage Offices. If the TOP Services Customer worked directly with the Outage Office prior to becoming a TOP Services Customer, continuing to do so is acceptable. Customers can call the Outage Office directly if unable to contact the local district.

### **Customers with 24/7 Control Centers**

BPA Dispatchers/Outage Offices will coordinate outages with parties having 24 hour Control Centers. TOP Services Customers with Control Centers are expected to submit outage requests by providing email notification to the BPA Outage Offices.

### 5 Month, 2 Month, 21 Day, 14 Day, and 4 Day Equipment

- 1. Equipment outages must be scheduled through the BPA Outage Offices using Form 6500.17 and according to the timelines in Appendix 2 of BPA's Outage Coordination Policy.
- 2. Additions/changes to Equipment in Appendix 2: If BPA determines that equipment must be added to the Equipment List in Appendix 2; BPA will coordinate with the Facility Owner/Operator and allow 21 days until the change will be implemented. BPA will distribute the updated Equipment List to TOP Services Customer contacts identified in the TOP Services contract Exhibit C.
- 3. 5 Month equipment 500kV transmission equipment & hard to get outages. This process is recommended but not required for lower voltage equipment.
- 4. 2 Month equipment Equipment (when taken out of service) that may impact the BES or require a capacity reduction to assure reliable operation on a constrained path.
  - a. 2 Month equipment outage requests are required to be submitted to BPA 2 Months prior to the month the outage is scheduled to start.

- b. A constrained path is an intertie or flowgate on which power flow is monitored to ensure reliable operation of the transmission system. Please see Appendix 4 of the Outage Coordination Policy for a map of the Northwest's current constrained paths.
- 5. 21 Day equipment BES equipment outages marked in the equipment list are required to be submitted to BPA 21 days prior to the Outage Week (Monday to Sunday) in which the outage is scheduled to start. This includes outages that may require additional time for Study Engineers to prepare Operating Plans. This includes generation derates of 50MW or greater at the unit or aggregate plant level.
  - a. 21 Day equipment outage requests are required to be submitted no later than 1500 hours Pacific Prevailing Time (PPT), **21 days prior to the outage week** in which the outage is scheduled to start.
- 6. 14 Day equipment All other BES Planned outages, unless noted in the exception list (See Appendix 1), are required to be submitted 14 days prior to the Outage Week (Monday to Sunday) in which the outage is scheduled to start. This includes generation derates of 50MW or greater at the unit or aggregate plant level.
  - a. All BES Planned outage requests are required to be submitted no later than 1500 hours PPT, 14 days prior to the outage week in which the outage is scheduled to start.
- 7. 4 Day equipment: The equipment and outage categories listed in Appendix 1 of BPA's Outage Coordination Policy, for example, redundant relays and direct control (SCADA), may or may not be considered BES. These are required to be submitted to BPA no later than 1200 hours PPT, 4 business days prior to the day the outage is scheduled to start.
- 8. Opportunity Outages (Transmission and/or Generation)
  - a. Requests made after the Reliability Coordinator's (RC) Short-Range timeline are considered Opportunity Outages, Transmission, or Generation and have the following requirements:
    - i. Requested a minimum of 4 business days in advance.
    - ii. Cannot be more than one day in length, with some exceptions.
    - iii. Cannot require an Operating Plan.
    - iv. Cannot be submitted after the Operation Planning Analysis (OPA) Lockdown window (with some exceptions).
  - b. Opportunity Outages that do not meet the minimum submission timelines will be assessed and approved at the discretion of the Outage Dispatcher or the Real-Time Dispatcher. Requests made after the OPA Lockdown time must be considered Urgent or Emergency or approved by the Real-Time Dispatcher. Requests made after the OPA lockdown must be studied or assessed by the Real-Time System Study Engineer. The RC must also approve the outage request.
  - c. Real-time or Same Day Opportunity Outages must be approved by Real-Time Dispatcher. The Real-Time System Study Engineer must perform the assessment/study. The RC must approve of the outage.

### **Study Engineer Coordination**

- 1. If a Customer's scheduled outage requires an operating plan, BPA study engineers will coordinate with the Customer's operational contact as listed in Exhibit C of the TOP Services agreement. If the operating plan does not require any action by the Customer, BPA may move forward with the operating plan without additional Customer coordination. If the operating plan requires action by the Customer, BPA will ensure Customer agreement before the outage may proceed.
- 2. In real time, BPA will implement the operating plan as written or adjust as necessary in real time. If the operating plan changes, BPA will coordinate with affected parties.
- 3. If system conditions require rescheduling a planned outage, BPA will coordinate with the Customer to reschedule the outage.

4. If a planned outage requires dropping load, BPA will coordinate with the Customer; however, BPA retains the final risk-based decision to drop load or cancel the outage.

### **Coordination with Third Parties**

- 1. BPA Outage Offices will review submitted outage requests from a reliability/coordination and reporting perspective. Application for Clearances and Hold Orders from foreign utilities requires additional detail specified in Appendix 6, Section C of BPA's Outage Coordination Policy.
- 2. Customer will be responsible for obtaining clearances from third parties at the time of the outage, unless the third party requires BPA to obtain clearances and BPA is able to facilitate the request.

### Form 6500.17e

| (08-2017)<br>Page 1 of 1   | U.S. DEPARTMENT OF ENERGY  BONNEVILLE POWER ADMINISTRATION  Approved by Forms Mgmt. 08/08/2017 |                          |                  |                 |                 |          |
|--|--|--------------------------|------------------|-----------------|-----------------|----------|
| TRANSMISSION OPERATOR PROVIDER (TOP)   |  |                          |                  |                 |                 |          |
|  | OUT  | TAGE REQUES              | T - CUSTOM       | ERS             |                 |          |
| Requested by (Name of con  | stoot)   |                          | . Contact Busine | aa Dhana Numb   | per b. Date     |          |
| 1. Requested by (Name of Con   | (act)  | a                        | . Contact Busine | ess Phone Numb  | b. Date         | e<br>[   |
|  |  |                          |                  |                 |                 |          |
| 2. Utility / Customer (Name)   |  |                          |                  |                 |                 |          |
| 3. Circuit / Equipment / Genera  | tion Unit:   |                          |                  |                 |                 |          |
|  |  |                          |                  |                 |                 |          |
|  |  |                          |                  |                 |                 |          |
|  |  |                          |                  |                 |                 |          |
| 4. Unit Status:  |  |                          |                  |                 |                 |          |
| a. List ALL Unavailable Units  |  | h Facility               | Dereto dita      |                 |                 | MW       |
| a. List ALL Unavallable Units  |  | b. Facility              | Derated to       |                 |                 | IVIVV    |
| 5. Start Date a. Switch Time   | b. Work Time   | c. Work Duration         | d. Stop Date     | e. I / S Time   | f. Duration Typ | pe       |
|  |  |                          |                  |                 | Continuou       | ıs Daily |
| 6. Reason for Request:   |  |                          |                  |                 |                 |          |
| a. Emergency   |  | b. Urgent                |                  | c.              | Routine Mair    | ntenance |
|  |  |                          |                  |                 |                 |          |
| 7. Clearance Required: Ye  | es No  | Information Only         |                  |                 |                 |          |
| 7. Clearance Required. T   | :S NO  | information Only         |                  |                 |                 |          |
|  |  |                          |                  |                 |                 |          |
|  |  |                          |                  |                 |                 |          |
| 8. REQUIRED NOTIFICAT  | IONS   |                          |                  |                 |                 |          |
| a. BPA Outage  |  |                          |                  |                 |                 |          |
|  |  |                          |                  |                 |                 |          |
|  |  | (Type below attachment') | email address i  | into Outlook)(A | ttach saved for | m 'as an |
| c. Munro Control Center:<br>Outage Coordination:   | d. (509) 466.2409  | e. e-mail: bp            | aoutage@bpa.g    | jov             |                 |          |
| f. Dittmer Control Center: Outage Coordination: g. (360) 418.2274 h. e-mail: bpaoutage@bpa.gov |  |                          |                  |                 |                 |          |

| Version | Issue Date | Action/Changes           | Approved   | Date       |
|---------|------------|--------------------------|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation | J. McNeill | 08/01/2017 |

| Rev. 1 | 01/01/2018 | Removed references to IT        | J. McNeill | 01/01/2018 |
|--------|------------|---------------------------------|------------|------------|
|        |            | systems, added definition of    |            |            |
|        |            | Control Center, added           |            |            |
|        |            | requirement to use Form         |            |            |
|        |            | 6500.17, added detail about     |            |            |
|        |            | distribution of Appendix 2.     |            |            |
| Rev. 2 |            | Errata change: changed mw to    | M. Walden  | 05/10/2018 |
|        |            | MW,                             |            |            |
|        |            | added Form 6500.17e             |            |            |
| Rev. 3 |            | Bullet and numbering changes    | C. Higgins | 07/10/2018 |
| Rev. 4 |            | Changed hours to consistent     | M. Walden  | 03/27/2019 |
|        |            | military time                   |            |            |
| Rev. 5 |            | Removed 45 day outage and       | M. Walden  | 07/15/2019 |
|        |            | added in 2 month and 5 month.   |            |            |
| Rev. 6 |            | Errata change: removal of extra | S. Hess    | 04/23/2020 |
|        |            | spaces in background, purpose,  |            |            |
|        |            | outage                          |            |            |

### NERC TRANSMISSION AVAILABILITY DATA SYSTEM

# (TADS) REPORTING

The purpose of the Transmission Availability Data System (TADS) is to implement a uniform approach to reporting and measuring transmission availability, performance, and other related reliability data. NERC will use the information to develop transmission metrics that analyze outage frequency, duration, causes, and many other factors related to transmission outages. NERC will also issue an annual public report showing aggregate metrics for each NERC Region. Each Transmission Owner reporting TADS data will be provided a confidential copy of the same metrics for its facilities. This requirement applies to BES elements only. While this requirement applies to Transmission Owners (TO), BPA provides the information needed for the necessary reporting.

- 1. BPA will include Customer-owned elements in outage reports posted daily and by calendar year on BPA's website <a href="https://transmission.bpa.gov/business/operations/Outages/">https://transmission.bpa.gov/business/operations/Outages/</a>. Customer may download the report and filter by Transmission Owner to acquire information needed for outage reporting. The report will include 'out' date & time, 'in' date & time, and cause.
- 2. Dates and times will be reported in Pacific Prevailing Time (PPT) and in Coordinated Universal Time (UTC).
- 3. Reporting Responsibility:
  - a. BPA will be responsible for reporting all elements where BPA has 100% ownership interest in such elements, as required. (BPA is TO)
  - b. Customer will be responsible for reporting all elements where Customer has 100% ownership in such elements, as required. (Customer is TO)
- 4. In instances where ownership interest is shared between BPA and Customer, the reporting entity shall be the entity who owns the majority of the element. In these cases, BPA and Customer will share information to complete forms for multiple-owner elements.

| Version | Issue Date | Action/Changes                               | Approved   | Date       |
|---------|------------|--|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation                     | J. McNeill | 08/01/2017 |
| Rev. 1  |            | Errata change added and removed (TO) acronym | M. Walden  | 05/10/2018 |
| Rev. 2  | 07/10/2018 | Indention changes.                           | C. Higgins |            |
| Rev. 6  |            | Errata change adding 'to 1.                  | S. Hess    | 04/23/2020 |

## **REAL-TIME OPERATING PROCEDURES**

#### Introduction

High levels of coordination will be required between BPA Real-time Dispatchers and TOP Services Customers. The following table describes BPA Real-time Dispatcher and Customer actions under various operating conditions. Actions differ depending on whether Customer maintains a 24/7 Control Center. For purposes of these procedures, a Control Center means a facility hosting operating personnel that monitor and control the transmission system in real-time.

For reference, the format of Operating Instructions issued by BPA is:
This is [Operator Name and Org]. I am instructing you [Entity] & [Operator's Name] on [Date and Time]: to [Action to be taken] by [XXX Hours or within XX Minutes] to mitigate critical system conditions.

|    |   | ACTION(S)  |  |  |
|----|---|--|--|--|
|    | EVENT   | 24/7 Control Center  | No 24/7 Control Center   |  |
| 1. | Mitigation required<br>(Real-Time Contingency<br>Analysis SOL<br>exceedance).   | BPA will issue Operating Instructions for the involved equipment. If unable to communicate with Customer, BPA may trip at BPA facilities to mitigate (this will generally affect a larger portion of the Customer system).   | BPA will notify the Customer (if time allows) then take action via direct control (SCADA). If unable to operate Customer equipment, BPA may trip at BPA facilities to mitigate (this will generally affect a larger portion of the Customer system).   |  |
| 2. | System Operating Limit (SOL) exceeded real-time.  | Adjust system limits if better limits are known. If SOL is still exceeded, work with Customer to mitigate exceedance within SOL time frame.  | Adjust system limits if better limits are known. If SOL is still exceeded and time allows, work with Customer to mitigate exceedance within SOL time frame or take action via direct control (SCADA).  |  |
| 3. | Customer BES equipment has been or needs to be removed from service in real-time for emergency or urgent maintenance, mitigation, or any other kind of emergency. | If initiated by Customer, Customer will notify BPA Real-Time Dispatcher of need to remove equipment from service, preferably before taking out of service or else without intentional delay. If initiated by BPA, BPA will notify Customer of need, preferably before taking out of service and allow the Customer to remove from service. If Customer unable to remove from service in a timely manner, BPA may have to take action at a BPA controllable device. | If initiated by Customer, Customer will notify BPA Real- Time Dispatcher of need to remove equipment from service, preferably before taking out of service or else without intentional delay. If initiated by BPA, BPA will notify Customer of need, preferably before taking out of service and allow the Customer to remove from service. If Customer is unable to remove from service in a timely manner, BPA may have to take action at a BPA controllable device. |  |

|    |  | ACTION(S)  |   |  |
|----|--|--|---|--|
|    | EVENT  | 24/7 Control Center  | No 24/7 Control Center  |  |
| 4. | Customer is ready to work on Planned outage.                                   | Customer will notify BPA real-time Dispatcher prior to starting outage. BPA will assess if outage can move forward based upon real-time system conditions. BPA gives approval for work to commence. Customer calls BPA when switching is complete to give switching times. Customer calls BPA before restoring to get approval to restore. Customer calls BPA when restoration complete to give switching times. | Customer will notify BPA real-time Dispatcher prior to starting outage. BPA will assess if outage can move forward based upon real-time system conditions. BPA gives approval for work to commence. Customer calls BPA when switching is complete to give switching times. Customer calls BPA before restoring to get approval to restore. Customer calls BPA when restoration is complete to give switching times. |  |
| 5. | Customer BES equipment trips out of service and locks out for unknown reasons. | Customer follows their operating procedures and notifies BPA. If any BES equipment cannot be returned to service within 30 minutes, another notification to BPA is required.   | BPA notifies Customer of equipment out of service, BPA takes control action(s) at the request of the Customer (test/restore equipment if requested). Customer notifies BPA if any BES equipment cannot be returned to service within 30 minutes.  |  |
| 6. | BPA owned line to<br>Customer BES trips out<br>of service.                     | Coordinate testing/restoration with Customer.  | BPA tests line (after patrol, if patrol is prudent), and restores line if test result is good. BPA notifies Customer if line tests bad. BPA notifies Customer if patrol finds trouble, if performed.  |  |
| 7. | Customer owned BES line to BPA terminal trips out of service.                  | Coordinate testing/restoration with Customer.  | At Customer request, BPA tests line (after Customer patrols, if patrol is prudent), and restores line if test result is good. BPA notifies Customer if line tests bad. Customer notifies BPA if patrol finds trouble, if performed.   |  |
| 8. | Customer owned BES line to foreign utility trips out of service and locks out. | Customer coordinates testing/restoration with foreign utility. Notify BPA Real-Time Dispatcher afterward to provide out- of-service time and either in-service time or notification that line tested bad.  | Coordinate testing/restoration with Customer.   |  |
| 9. | Foreign utility requests<br>Customer terminal of                               | Customer notifies BPA then coordinates with foreign utility.   | Coordinate operation with Customer.   |  |

|     |  | ACTION(S)  |   |  |
|-----|--|--|---|--|
|     | EVENT  | 24/7 Control Center  | No 24/7 Control Center  |  |
|     | BES line from them to be opened/closed.  |  |   |  |
| 10. | Foreign utility requests switching/tagging at Customer terminal of BES line from them.             | If BPA is notified, BPA will notify Customer.  | If BPA is notified, BPA will notify Customer.   |  |
| 11. | Customer requests that BPA operate their BES equipment.  | Not Applicable   | BPA will operate Customer equipment as requested.   |  |
| 12. | Customer up-rates or de-rates the facility rating of their BES equipment.                          | Customer will notify BPA as soon as practicable. If the de-rate is done in real-time, notify the real-time Dispatcher.   | Customer will notify BPA as soon as practicable. If the de-rate is done in real-time, notify the real-time Dispatcher.        |  |
| 13. | BPA receives alarms on Customer BES equipment.   | Not Applicable   | BPA will notify Customer of need to investigate and advise BPA of status of equipment.  |  |
| 14. | BPA receives voltage alarm on Customer bus.  | Customer will monitor and control voltage. Customer must notify BPA Real-Time Dispatcher if it observes a voltage deviation of ± 10% of nominal voltage sustained for ≥ 15 continuous minutes. | BPA will assess alarm(s) and determine if further action is needed using prudent Dispatcher judgment.                         |  |
| 15. | BPA requires operation of Customer BES equipment for BES operation (such as voltage/load control). | BPA issues Operating Instruction to Customer on their BES equipment.   | BPA notifies Customer and issues<br>Operating Instruction or takes<br>action via direct control (SCADA).                      |  |
| 16. | Station needs to be manned, either due to emergency or planned outage.                             | BPA calls out Customer personnel to man the station, unless an operating agreement between BPA and Customer states otherwise.  | BPA calls out Customer personnel to man the station, unless an operating agreement between BPA and Customer states otherwise. |  |
| 17. | RC issues Operating Instruction on Customer Equipment.   | BPA will issue Operating Instructions for the involved equipment.  | BPA will notify the Customer, if time allows, then take action via direct control (SCADA).                                    |  |
| 18. | Operating Instructions issued to foreign utility Balancing Authorities (BA) for Transmission       | BPA will issue Operating Instructions to the BA for Customer equipment as needed (typically will apply only if Customer has generation).   | BPA will issue Operating Instructions to the BA for Customer equipment as needed  |  |

|     |   | ACTION(S)   |   |
|-----|---|---|---|
|     | EVENT   | 24/7 Control Center   | No 24/7 Control Center  |
|     | Operator issues on Customer Equipment.  |   | (typically will apply only if Customer has generation).   |
| 19. | Foreign utility Balancing<br>Authorities (BA) issuing<br>Operating Instructions<br>to BPA on Customer BES<br>equipment.   | Foreign utility BAs may issue BPA, as the TOP, Operating Instructions on Customer equipment. BPA will issue Operating Instructions to the Customer as needed.   | Foreign utility BAs may issue BPA, as the TOP, Operating Instructions on Customer equipment. BPA will notify the Customer, if time allows, and will operate Customer equipment via direct action (SCADA).                         |
| 20. | Changes to Outage duration (equipment will not be removed from/returned to service as scheduled).   | Customer will notify BPA Real-Time Dispatcher, as soon as practicable, when the timeframe for an outage on their BES equipment changes.   | Customer will notify BPA Real-<br>Time Dispatcher, as soon as<br>practicable, when the timeframe<br>for an outage on their BES<br>equipment changes.  |
| 21. | EOP-004 Reporting Event (see Event Reporting Process).  | Customer will notify BPA for any event that requires EOP-004 reporting on their BES equipment. In most cases, Customer will complete event reporting and send BPA a courtesy copy. See Event Reporting Procedure for more detail. | Customer will notify BPA for any event that requires EOP-004 reporting on their BES equipment. In most cases, BPA will complete event reporting and send Customer a courtesy copy. See Event Reporting Procedure for more detail. |
| 22. | Planned telemetry or control equipment outages (BPA Real-Time Dispatcher will approve/disapprove outage, but will not be involved in Customer switching process). | Customer will notify BPA Real-Time Dispatcher prior to starting outage (BPA will assess if outage can move forward based upon Real-Time system conditions).   | Customer will notify BPA Real-<br>Time Dispatcher prior to starting<br>outage (BPA will assess if outage<br>can move forward based upon<br>Real-Time system conditions).  |
| 23. | Planned relay or other equipment outages (BPA Real-Time Dispatcher will approve/disapprove outage, but will not be involved in Customer switching process).       | Customer will notify BPA Real-Time Dispatcher prior to starting outage (BPA will assess if outage can move forward based upon Real-Time system conditions).   | Customer will notify BPA Real-<br>Time Dispatcher prior to starting<br>outage (BPA will assess if outage<br>can move forward based upon<br>Real-Time system conditions).  |
| 24. | Unplanned telemetry or control equipment outages (includes failure of Remote Terminal Units (RTUs)).  | Customer will notify BPA Real-Time Dispatcher of any unplanned telemetry or control equipment outages longer than 30 minutes in duration. BPA will work with Customer on plan of action pending                                   | BPA receives indication of loss of telemetry and control equipment. BPA notifies Customer of equipment failure. BPA will work with Customer on plan of action pending   |

|     |  | ACTION(S)  |   |  |
|-----|--|--|---|--|
|     | EVENT  | 24/7 Control Center  | No 24/7 Control Center  |  |
|     |  | restoration of equipment for outages longer than 30 minutes in duration.   | restoration of equipment for outages longer than 30 minutes in duration.  |  |
| 25. | Unplanned relay or equipment failures.   | Customer will notify BPA Real-Time Dispatcher of unplanned relay or equipment failures that impact their BES.  | BPA receives indication of loss of relay protection or equipment failures that impact Customer BES. BPA will notify Customer of failure/loss.   |  |
| 26. | Protection Scheme Status (Local Area Protection Schemes (LAPS), Auto- sectionalizing schemes (AS)).  | Customer will inform BPA if protection schemes are taken out of service or fail.   | Customer will inform BPA if protection schemes are taken out of service or fail.  |  |
| 27. | BPA loses communications with the Customer (cannot issue Operating Instructions).  | BPA will treat this as an unplanned loss of control and report if outage is longer than 30 minutes in duration.  | BPA retains control of Customer<br>BES equipment via direct control<br>(SCADA).   |  |
| 28. | Customer makes a change in ability for BPA to control via SCADA  | Customer will schedule planned work through BPA Outage office. For urgent/emergency work Customer will schedule with BPA real-time Dispatcher. Customer will notify BPA real-time Dispatcher prior to any switching. Customer will provide a contact phone number in case BPA needs the device operated. Customer calls BPA real time Dispatcher prior to restoring control.   | Customer will schedule planned work through BPA Field operations. For urgent/emergency work Customer will schedule with BPA real-time Dispatcher. Customer will notify BPA real-time Dispatcher prior to any switching. Customer will provide a contact phone number in case BPA needs the device operated. Customer calls BPA real time Dispatcher prior to restoring control. |  |
| 29. | Customer to issue a Hold Order on customer equipment to non BPA personnel and BPA has ability to control the equipment (this is not a BPA issued Hold Order) | Customer will schedule planned work through BPA Outage office. For urgent/emergency work Customer will schedule with BPA real-time Dispatcher. Customer will notify BPA real-time Dispatcher prior to any switching or issuance of the hold order. Customer will disable BPA ability to control the device. Customer will provide a contact phone number in case BPA needs the | Customer will schedule planned work through BPA Field operations. For urgent/emergency work Customer will schedule with BPA real-time Dispatcher. Customer will notify BPA real-time Dispatcher prior to any switching or issuance of the hold order. Customer will disable BPA ability to control the device. Customer   |  |

|       | ACTION(S)  |  |  |
|-------|--|--|--|
| EVENT | 24/7 Control Center  | No 24/7 Control Center   |  |
|       | device operated. Customer calls BPA real time Dispatcher prior to restoring control. | will provide a contact phone<br>number in case BPA needs the<br>device operated. Customer calls<br>BPA real time Dispatcher prior to<br>restoring control. |  |

| Version | Issue Date | Action/Changes                   | Approved   | Date       |
|---------|------------|----------------------------------|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation         | J. McNeill | 08/01/2017 |
| Rev. 1  | 01/01/2018 | Removed redundant rows, added    | J. McNeill | 01/01/2018 |
|         |            | voltage deviation reporting      |            |            |
|         |            | requirement, added clarifying    |            |            |
|         |            | edits to identify Customer-owned |            |            |
|         |            | equipment and BPA dispatcher.    |            |            |
| Rev. 2  |            | Put LAP and AS in ( ), corrected | M. Walden  | 05/10/2018 |
|         |            | typos.                           |            |            |
| Rev. 3  |            | Errata changes, defining RTU     | M. Walden  | 08/10/2018 |
| Rev. 4  | 12/20/2018 | Defined who the Customer         |            |            |
|         |            | should be notifying within BPA   |            |            |
| Rev. 4  |            | Added a numbers column for       | M. Walden  | 01/31/2019 |
|         |            | easy reference                   |            |            |
| Rev. 4  |            | Added the format of Operating    | J. McNeill | 03/27/2019 |
|         |            | Instructions issued by BPA       |            |            |
|         |            | template language.               |            |            |
| Rev. 6  |            | Errata changes                   | S. Hess    | 04/23/2020 |
| Rev. 7  | 05/05/2021 | Added Event 28 and 29 per        | M. Granath | 03/11/2021 |
|         |            | Operations' direction            |            |            |

# EVENT REPORTING (EOP-004-4 and OE-417)

### **General Responsibilities**

- 1. This Event Reporting process only applies to Customers' BES Equipment listed in Exhibit A BES Equipment Subject to this Agreement of the TOP Services Agreement.
- 2. Only one entity should report each event, and the reporting entity should provide a copy of the report to any other responsible entity. Copies of Customer reports should be emailed to <a href="mailto:disturbances@bpa.gov">disturbances@bpa.gov</a>.
- 3. Coordination on any reporting shall occur as appropriate. BPA will contact the Operations representative listed in Exhibit C Notices of the Customer's contract unless an alternate contact is specified.
- 4. If Customer files a DOE Form OE-417, Customer shall call the BPA Real-time Dispatcher. In addition, copies of Customer reports should be emailed to <a href="mailto:disturbances@bpa.gov">disturbances@bpa.gov</a>.
- 5. BPA reserves the right to make a final decision regarding whether or not an event requires reporting as a TOP.

**EOP-004-4 Event Reporting Responsibility** 

| Event Type                                  | Entity with                 | Threshold for Reporting   | Reporting under        |
|---|-----------------------------|---|------------------------|
|   | Reporting<br>Responsibility |   | TOP Services Agreement |
| Damage or<br>destruction of a<br>Facility   | RC, BA, TOP                 | Damage or destruction of a Facility within its RC Area, Balancing Authority Area or Transmission Operator Area that results in action(s) to avoid a BES Emergency.  | BPA                    |
| Damage or<br>destruction of its<br>Facility | TO, TOP, GO,<br>GOP, DP     | Damage or destruction of its Facility that results from actual or suspected intentional human action. It is not necessary to report theft unless it degrades normal operation of its Facility.                      | Customer               |
| Physical threats to its Facility            | TO, TOP, GO,<br>GOP, DP     | Physical threat to its Facility excluding weather or natural disaster related threats, which has the potential to degrade the normal operation of the Facility.  OR  Suspicious device or activity at its Facility. | Customer               |
| Physical threats to its BES control center  | RC, BA, TOP                 | Physical threat to its BES control center, excluding weather or natural disaster related threats, which has the potential to degrade the normal operation of the control center. OR suspicious                      | ВРА                    |

| Event Type  | Entity with<br>Reporting<br>Responsibility | Threshold for Reporting  | Reporting under TOP Services Agreement |
|---|--|--|--|
|   |  | device or activity at its BES control center.  | <b>3</b> 2 2 2                         |
| Public appeal for load reduction resulting from a BES Emergency                       | ВА   | Public appeal for load reduction to maintain continuity of the BES.  | N/A                                    |
| System-wide voltage reduction resulting from a BES Emergency                          | TOP  | System wide voltage reduction of 3% or more.   | BPA                                    |
| Firm load shedding resulting from a BES Emergency                                     | Initiating RC,<br>BA, or TOP               | Firm load shedding ≥ 100 MW (manual or automatic).   | BPA                                    |
| BES Emergency<br>resulting in voltage<br>deviation on a<br>Facility                   | TOP  | A voltage deviation of =/> 10% of nominal voltage sustained for ≥ 15 continuous minutes.   | ВРА                                    |
| Uncontrolled loss of<br>firm load resulting<br>from a BES<br>Emergency                | BA, TOP, DP                                | Uncontrolled loss of firm load for ≥ 15 minutes from a single incident: ≥ 300 MW for entities with previous year's peak demand ≥ 3,000 MW OR ≥ 200 MW for all other entities   | ВРА                                    |
| System separation (islanding)   | RC, BA, TOP                                | Each separation resulting in an island ≥ 100 MW.   | ВРА                                    |
| Generation loss   | BA   | Total generation loss, within one minute, of:  ≥ 2,000 MW in the Eastern, Western, or Quebec Interconnection OR ≥ 1,400 MW in the ERCOT Interconnection. Generation loss will be used to report Forced Outages not weather patterns or fuel supply unavailability for dispersed power producing resources. | N/A                                    |
| Complete loss of off-<br>site power to a<br>nuclear generating<br>plant (grid supply) | ТО, ТОР                                    | Complete loss of off-site power (LOOP) affecting a nuclear generating station per the Nuclear Plant Interface Requirements   | ВРА                                    |

| Event Type  | Entity with<br>Reporting | Threshold for Reporting   | Reporting under TOP Services |
|---|--------------------------|---|------------------------------|
|   | Responsibility           |   | Agreement                    |
| Transmission loss   | TOP                      | Unexpected loss within its area, contrary to design, of three or more BES Facilities caused by a common disturbance (excluding successful automatic reclosing).                 | ВРА                          |
| Unplanned   | RC, BA, TOP              | Unplanned evacuation from its BES   | BPA                          |
| evacuation of its BES   |                          | control center facility for 30  |                              |
| control center  |                          | continuous minutes or more.   |                              |
| Complete loss of Interpersonal Communication and Alternative Interpersonal Communication capability at its staffed BES control center | RC, BA, TOP              | Complete loss of Interpersonal Communication and Alternative Interpersonal Communication capability affecting its staffed BES control center for 30 continuous minutes or more. | ВРА                          |
| Complete loss of monitoring or control capability at its staffed BES control center   | RC, BA, TOP              | Complete loss of monitoring or control capability at its staffed BES control center for 30 continuous minutes or more.  | ВРА                          |

| Version | Issue Date | Action/Changes                                    | Approved   | Date       |
|---------|------------|---|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation                          | J. McNeill | 08/01/2017 |
| Rev. 1  | 01/01/2018 | Added Customer reporting responsibility if the    | J. McNeill | 01/01/2018 |
|         |            | Customer is the initiating entity in certain      |            |            |
|         |            | events.   |            |            |
| Rev. 2  |            | Clarified applicability of process                | J. McNeill | 05/24/2018 |
| Rev. 3  |            | Indention changes                                 | C. Higgins | 07/10/2018 |
| Rev. 3  |            | Adding full title to Exhibit references, adding   | J. McNeill | 09/14/2018 |
|         |            | specific contact info for BPA, and updating       |            |            |
|         |            | table for new version of standard.                |            |            |
| Rev. 4  |            | Corrected DOE form title and clarified that       | M. Walden  | 03/27/2019 |
|         |            | BPA has the right to make the final call as a     |            |            |
|         |            | TOP.  |            |            |
| Rev. 6  |            | Errata  | S. Hess    | 04/24/2020 |
| Rev. 7  |            | In the Event Reporting Section, added 'In         | S. Hess    | 04/28/2021 |
|         |            | addition, copies of Customer reports should       |            |            |
|         |            | be emailed to <u>disturbances@bpa.gov</u> ' under |            |            |
|         |            | bullet 4.   |            |            |

# VISIBILITY OR CONTROL EQUIPMENT REPAIR EXPECTATIONS

### Loss of Visibility and/or Control

In the event that BPA loses a single piece of data or a single control point on Customer-Owned equipment covered by TOP Services, BPA may consider allowing Customers' response to wait until normal working hours, based on the BPA dispatcher's judgment. Should BPA lose more than a single piece of data or a single control point but less than an entire station, the appropriate Customer response would be up to the judgment of the BPA's Senior Dispatcher dependent upon system conditions. In the event that BPA loses visibility and/or control of an entire station or group of stations owned by Customer and covered by TOP Services, BPA requires an immediate response (24/7) from Customer to troubleshoot and initiate corrective action and may require Customer to call out operations staff to man the station(s) that were lost.

| Version | Issue Date | Action/Changes                | Approved   | Date       |
|---------|------------|-------------------------------|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation      | J. McNeill | 08/01/2017 |
| Rev. 1  | 01/01/2018 | Clarified responsible parties | J. McNeill | 01/01/2018 |
| Rev. 2  |            | Capitalizing Customer         | M. Walden  | 08/10/2018 |
| Rev. 6  |            | Errata                        | S. Hess    | 04/24/2020 |

# BPA PLANNING COORDINATOR ANNUAL DATA EXCHANGE PROCESS

### **General Overview**

The Western Electricity Coordinating Council (WECC) develops a series of power flow and dynamics simulation models which are used by BPA and its Customers for performing planning and operational reliability and economic studies needed to fulfill various North American Electric Reliability Corporation (NERC) and Tariff compliance obligations.

Pursuant to requirement R1 of MOD-032-1, BPA established a set of common procedures for submitting data needed for developing the WECC interconnection planning models, found in the BPA MOD-032 Model Data Requirements & Reporting Procedures document. This document outlines these data reporting procedures needed to support the development of power flow and dynamics simulation base case models in a manner compliant with MOD-032 that realistically simulate steady state and dynamic behavior of the transmission system. This data exchange might also include additional data requirements. TOP Services Customers shall comply with the Annual Data Exchange format and schedule(s) issued by BPA.

### **BPA Policy Reference**

TOP Customers are expected to comply with BPA's MOD-032 Model Data Requirements & Reporting Procedures, available at the following link:

 $\frac{https://www.bpa.gov/transmission/OperationsReliability/Reliability/ProgramandNERCS tandards/projects/PlanningCoordinator/Pages/default.aspx$ 

### **Equipment Changes**

Per the obligations under the TOP Services Agreement, changes to any equipment identified in Exhibit A – BES Equipment Subject to this Agreement must be communicated immediately by sending notification to the CSRP mailbox with a description of the change. Examples include:

- Line rating memo
- Any changes to previously submitted CSRP Annual Data Exchange requests

| Version | Issue Date | Action/Changes                      | Approved   | Date       |
|---------|------------|-------------------------------------|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation            | L. Jones   | 08/01/2017 |
| Rev. 1  | 11/10/2017 | Added in Mid-Year changes portion   | L. Jones   | 10/03/2017 |
| Rev. 2  | 03/28/2018 | Removed the term "Mid-Year"         | M. Walden  | 03/27/2018 |
| Rev. 3  |            | Adding full title to Exhibit letter | M. Walden  | 08/10/2018 |
| Rev. 4  |            | Added in Customer providing data    | C. Higgins | 12/20/2018 |
|         |            | requests within BPA format and      | M. Walden  |            |
|         |            | schedule                            |            |            |
| Rev. 4  |            | Changed title to align with Annual  | M. Walden  | 01/11/2019 |
|         |            | Data Exchange.                      |            |            |
|         |            | Also, added blurb about facility    |            |            |
|         |            | ratings.                            |            |            |
| Rev. 6  |            | Errata                              | S. Hess    | 04/24/2020 |

### CONTRACT EXHIBIT UPDATE PROCESS

### **General Overview**

The process for updating a contract exhibit within a TOP contract is triggered by a change in equipment, cost, contact information, and/or Implementation Plan. The purpose of this process is to ensure that TOP contract exhibits are updated in a timely and consistent manner.

Annually in calendar year Q3, CSRP will validate the accuracy of all data within all exhibits and update as necessary.

### **Exhibit A, BES Equipment Subject to this Agreement Updates**

Customer shall notify CSRP by submitting the <u>System/Equipment Change Form</u> posted on the <u>external website</u> prior to any change in BES equipment. Please CC your Customer Service Engineer (CSE). BPA will coordinate with the Customer on BES determination. A change in BES equipment may include, but is not limited to:

- Adding new equipment
- Replacing or rebuilding existing equipment
- Upgrading equipment to have increased capacity or a higher rating
- Reconfiguring existing facilities (such as sectionalizing, bypassing, or modifying the layout of a substation)
- Adding, modifying, or removing remedial action schemes or special protection systems or other automatic controls that affect the BES
- Retiring or removing equipment

Customer's official notice of change must occur a minimum of 160 days prior to the change. More notice is preferred to ensure timely coverage of equipment in the planning or operations horizon. BPA will update Exhibit A – BES Equipment Subject to this Agreement to reflect equipment changes, share a draft with Customer to ensure changes are captured accurately, and offer a revised exhibit for signature.

### **Exhibit B, Billing Determinants Updates**

Exhibit B updates will be driven by the annual cost reconciliation and cost allocation processes. Customers will have the opportunity to review draft budget numbers at the annual customer meeting in fall/winter. Exhibit revisions reflecting updated costs for the following calendar year will be issued by October 1<sup>st</sup>.

### **Exhibit C, Notices Updates**

Exhibit C – Notices updates can be triggered by either party any time there is an update to contact information. If Customer information changes, Customer will notify CSRP by submitting the <u>Notices Change Form</u> found on the <u>external site</u>. CSRP will update the exhibit and issue the revision. If BPA contact information changes, CSRP will issue a revised exhibit.

### **Exhibit D, Implementation Plan Updates**

CSRP shall work with Customer prior to any change in Implementation Plan actions. External regulatory impacts or feedback may necessitate updates to the Implementation Plan. CSRP will update Exhibit D to reflect Implementation Plan changes, share a draft with Customer to ensure changes are captured accurately and minimize impact and costs to Customer, and provide a revised exhibit.

| Version | Issue Date | Action/Changes   | Approved   | Date       |
|---------|------------|--|------------|------------|
| Rev. 0  | 08/14/2017 | Original   | TOPCAT     | 08/01/2017 |
| Rev. 1  |            | Added in "in calendar Q3"                              | M. Walden  | 05/10/2018 |
|         |            | timeframe.   |            |            |
|         |            | Errata change; turned first                            |            |            |
|         |            | sentence from fragment to                              |            |            |
|         |            | complete sentence.                                     |            |            |
| Rev. 2  | 07/10/2018 | Added new language to the<br>"Exhibit A, BES Equipment | C. Higgins | 07/10/2018 |
|         |            | Subject to this Agreement                              |            |            |
|         |            | Updates" section regarding                             |            |            |
|         |            | customer coordination and                              |            |            |
|         |            | customer notice of change.                             |            |            |
|         |            | Language also aligns with the                          |            |            |
|         |            | TPIP document.   |            |            |
| Rev. 3  |            | Added in Ex. A / Ex. C form                            | C. Higgins | 12/20/2018 |
|         |            | submission process                                     | M. Walden  |            |
| Rev. 6  |            | Changed 90 day notice to 160                           | M. Walden  | 03/31/2020 |
|         |            | day notice per RC West timeline                        |            |            |
| Rev. 6  |            | Changed annual customer                                | S. Hess    | 04/24/2020 |
|         |            | meeting timeframe to fall/winter                       |            |            |
|         |            | from late summer per Step 8 of                         |            |            |
|         |            | Cost Reconciliation process,                           |            |            |
|         |            | errata   |            |            |

# **COST ALLOCATION**

#### **General Overview**

TOP services costs are allocated across participating Customers based upon peak load, the number of BES lines and buses covered under the contract, and the base charge spread across all Customers.

The total costs to be recovered in each calendar year are based upon the forecast cost of incremental resources BPA hires to implement the service. Program costs will not include any penalties or fines assessed to the TOP. The incremental resource cost is adjusted annually to reflect actual costs and projected changes for the upcoming calendar year. Based upon this adjustment, the program determines a net cost to be allocated across participating Customers.

Each calendar year's cost to be collected is split across four billing determinants. For example, in 2018, 39 percent of the total cost is allocated to the base rate, 20 percent of the total cost is allocated based upon Customer load, and the remaining 41 percent is split equally between lines and buses. Based upon the sum of all participating Customers' loads and equipment, rates are derived per megawatt, per line, and per bus.

The derived rates are applied to each Customer's specific load and equipment, the base charge is included, and the total becomes the Customer's share of the annual cost.

Charges for BES equipment changes outside the annual billing cycle will be prorated, beginning when the asset is energized. The BES Equipment List (Exhibit A) and Billing Determinants (Exhibit B) will be updated to reflect the Customer asset changes. Changes will only apply to the asset owner and will not affect the overall cost allocation to each participating TOP services Customer until the next year's billing cycle.

### **Process Steps**

**Step 1** – CSRP to pull the cost adjustment (over/under payment) from previous year(s) to update the Cost Spreadsheet

**Step 2** – CSRP will seek validation from internal organizations with allocated resources. Each organization will forecast their resource needs for the upcoming calendar year.

**Step 3** – CSRP to confirm Customer assets with the Customer and the Customer Service Engineer (CSE)

**Step 4** – CSRP to update the calendar year Cost Spreadsheet:

#### Example:

| TITLE                   | 2018 COSTS             | 2019 COSTS           | 2020 COSTS            |
|-------------------------|------------------------|----------------------|-----------------------|
| Project Annual Cost     | 965,000                | \$965,000            | 965,000               |
| Actual Collected Cost   |                        | \$775,000            | \$1.02 M              |
| Over/Under payment from | <165,000> (2017 due to | +25,000 (2018 due to | <30,000> (2019 due to |
| previous calendar year  | over collection)       | under collection     | over collection)      |
| Adjusted Calendar Year  | 800,000                | 990,000              | 935,000               |
| Projected Cost          |                        |                      |                       |

**Step 5** – The Cost Spreadsheet will calculate the new billing rates per:

- a) MW/cost (pulled from the previous calendar year FERC 714 report)
- b) Number of lines
- c) Number of buses

<sup>\*</sup> Base cost stays constant

**Step 6** – CSRP will update and distribute all participating Exhibit B – Billing Determinants no later than October 1<sup>st</sup> annually.

- a) CSRP will roll out draft numbers in the late Summer timeframe to the TOP Customers.
- b) CSRP will answer cost-related questions at the Fall/Winter TOP Working Group Session.

Step 7 - Exhibit B - Billing Determinants will be effective on January 1st

### **Reference Material**

**BPA FERC 714 Report** 

https://transmission.bpa.gov/Business/Operations/FERC714/

### FERC-714 Use

The FERC-714 Annual Power System Reports is a collection of annual reports to FERC including generation capabilities & peaks, Balancing Authority area loads & interconnections, scheduled and actual interchange, Customer load peaks, and system load forecasts. For TOP Services contractual costs, BPA uses the highest peak demand (MW) load shown on the "PT III, Sch1" tab as part of the calculation for determining Customer annual rate.

### **General Responsibilities**

The CSRP Program Manager has been assigned by the Tier II Manager whose organization has lead responsibility for sustaining, maintaining, and updating the Customer costs associated to the TOP Services performed by BPA for the life-cycle of the contractual agreement. The Program Manger:

- a) Establishes the Rate for each calendar year.
- b) Ensures TOP costs are communicated in a clear transparent manner.
- c) Provides continual emphasis on BPA's position of "Net-0."

| Version | Issue Date | Action/Changes  | Approved  | Date       |
|---------|------------|---|-----------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation.   | L. Jones  | 08/01/2017 |
| Rev. 1  | 11/02/2017 | Process updated in response to Customer feedback.   | L. Jones  | 10/06/2017 |
| Rev. 2  | 01/01/2018 | Added BES equipment charges language to describe the general overview of the process.   | L. Jones  | 01/01/2018 |
| Rev. 3  | 06/07/2018 | Clarified mid cycle equipment updates and associated charges  | L. Jones  | 06/07/2018 |
| Rev. 4  | 06/26/2018 | Added a new step 2 for seeking organization/management validation for what their resource needs for the upcoming calendar year. Errata changes. | L. Jones  | 06/26/2018 |
| Rev. 4  |            | Changed Segment to Sections to align with language in Exhibit A – Equipment List  | M. Walden | 08/10/2018 |
| Rev. 5  |            | Added in the NERC line definition and BPA's – to be revised at a later date.  | M. Walden | 07/15/2019 |

### TRANSMISSION OPERATOR INTEGRATED COMPENDIUM – VERSION 8.0

| Rev. 5 | Based on internal discussions, removed the NERC/BPA line definitions.                 | M. Walden | 10/02/2019 |
|--------|---|-----------|------------|
| Rev. 6 | Removed summer meeting option, just going to one meeting in the fall/winter timeframe | M. Walden | 03/31/2020 |
| Rev. 6 | Errata changes  | S. Hess   | 04/27/2020 |

# **COST RECONCILIATION**

#### **General Overview**

This is the process for identifying how costs and revenue (net zero) are reconciled from one year to the next. The purpose of this process is to ensure reconciliation of costs are performed consistently, to demonstrate the mechanics of how costs are reconciled, and to add transparency between BPA and its TOP Services Customers.

#### **Reference Document**

 BPA FERC 714 Report https://transmission.bpa.gov/Business/Operations/FERC714/

### **Process Steps**

- **Step 1:** Annually beginning in June, CSRP will begin the Cost Reconciliation process.
- Step 2: CSRP requests from Budget Office the allocated actuals (incremental to rate case) for CFTE/BFTE.
- **Step 3:** CSRP requests Customer Billing to run a report against the TOP Services contract number correlating to individual Customers.
  - a) CSRP to Q/A Exhibit B (Billing Determinants) against participating transmission bill(s).
- **Step 4:** CSRP to seek validation from the internal organizations with allocated resources. Each organization will validate their resource expenditures for the current calendar year.
- **Step 5:** Each year, CSRP to compare numbers and maintain Cost Spreadsheet.
- **Step 6:** CSRP to calculate the over/under collection to be applied to the following calendar year.
- **Step 7:** The next year's rates will be estimated by July and locked down by October 1 annually.
- **Step 8:** CSRP will roll out draft numbers and answer any cost-related questions in the Fall / Winter TOP Working Group Session.

### **General Responsibilities**

The CSRP Program Manager has been assigned responsibility by the Tier II Manager for sustaining, maintaining, and updating the Customer costs associated to the TOP Services performed by BPA for the lifecycle of the contractual agreement. The Program Manger:

- d) Establishes the Rate for each calendar year.
- e) Ensures TOP costs are communicated in a clear transparent manner.
- f) Provides continual emphasis on BPA's position of "Net-0" rate.

| Version | Issue Date | Action/Changes  | Approved   | Date       |
|---------|------------|---|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation.   | L. Jones   | 08/01/2017 |
| Rev. 1  |            | Errata change: Made first line into   | M. Walden  | 05/10/2018 |
|         |            | full sentence.  |            |            |
| Rev. 2  | 07/10/2018 | Errata changes. Numbering changes. Changed language in section "Process Steps/Step 4" for seeking organization/management validation for what their resource needs are for the current calendar year. | C. Higgins | 07/10/2018 |
| Rev. 6  |            | Removed Summer meeting option,  | M. Walden  | 03/31/2020 |
|         |            | moving to just one fall/winter one  |            |            |

### TOP BPA – CUSTOMER COORDINATION SESSIONS

#### **General Overview**

BPA will host focused annual coordination sessions for each TOP Services customer, with representation from System Operations and Field Operations personnel. The sessions are intended to review any topics as they pertain to the Transmission Owner or Transmission Operator.

#### **BPA's Annual Coordination Sessions**

### Who

### Customer

Operation Staff, Dispatch Supervisor, Operations Manager, Lead Field Personnel (those who perform switching)

#### **BPA**

District Manager, Chief Substation Operator, System Operations, Substation Operations, System Protection and Control Representatives, Customer Service Engineer, and Account Executive

#### What

Annual session to review the TO – TOP relationship Each session will be completely customized to that customer, their system, and our needs

### **Session Agenda:**

Review any operational issues from the last refresher training with the customer (BPA to pull operational items from the logs).

#### Other Suggested Agenda Items:

- Review TOPIC Roles and Responsibilities
- Line and Equipment Jurisdiction
- Outage Coordination
  - Validate and discuss outage coordination process
  - o New OMS implementation and customer associated timeline
  - Day-of changes to Planned Outages
  - Planned, Urgent, and Emergency Outage Requests
- Trouble Reporting (when, who, what)
- Communication
  - Terminology and Nomenclature
  - COM-002 Three-part communication
- Switching and Tagging Procedures for Clearances
- Switching and Tagging Procedures for Hold Orders
- Review of Protection Schemes
- Review Customer System
  - Prints and Diagrams
  - Inflight review TOP customer projects
  - Equipment and Line Ratings
  - Submitting to BPA

- o Requesting from BPA
- Review Modeling Changes
  - o BPA
  - Customer

| Version | Issue Date | Action/Changes            | Approved   | Date     |
|---------|------------|---------------------------|------------|----------|
| Rev. 0  | 8/6/2021   | Initial process creation. | L. Cardoza | 8/6/2021 |
|         |            |                           |            |          |
|         |            |                           |            |          |
|         |            |                           |            |          |

## TOP ANNUAL LETTER PROCESS

#### **General Overview**

This process governs the creation and execution of the Annual TOP Services letter. The letter validates BPA has successfully performed the Transmission Operator function per the NERC Standards on behalf of qualifying Customers. This letter is in addition to and does not replace BPA's Annual System Review (ASR) letter.

### **BPA's Annual TOP Compliance Letter to Customers**

For the Transmission Operator Role, BPA is providing services under a Customer executed contract. BPA will provide a letter certifying compliance to the Customer, stating that BPA performed the TOP function as described in NERC Reliability Standards:

- BPA's self-certification period is the calendar year.
- CSRP validates compliance status (including event driven standards) and prepares letter for signature January timeframe.
- CSRP sends executed Section 4c compliance letter to Customer by March 31<sup>st</sup> annually per contract provision.

| Version | Issue Date | Action/Changes                    | Approved   | Date       |
|---------|------------|-----------------------------------|------------|------------|
| Rev. 0  | 11/02/2017 | Replaced placeholder              |            | 10/06/2017 |
|         |            | language with process.            |            |            |
| Rev. 1  |            | Defined acronym ASR and           | M. Walden  | 05/10/2018 |
|         |            | removed February timeframe.       |            |            |
| Rev. 2  | 07/10/2018 | Indention and bullet changes.     | C. Higgins | 07/10/2018 |
| Rev. 3  |            | Capitalized Reliability Standards | M. Walden  | 08/10/2018 |
| Rev. 4  |            | Revised language on intent of the | L. Jones   | 01/31/2019 |
|         |            | letter and removed general rules  |            |            |
|         |            | as they were redundant.           |            |            |
| Rev. 6  |            | Added section specifications to   | M. Walden  | 03/31/2020 |
|         |            | the compliance letter             |            |            |
| Rev. 6  |            | Errata changes.                   | S. Hess    | 04/27/2020 |
|         |            | Changed preformed to              |            |            |
|         |            | performed                         |            |            |

### **TOPIC REVIEW & UPDATE PROCESS**

### **General Overview**

The process for updating the TOPIC is driven by:

- A change to Reliability Standards applicable to the TOP
- Customer requests a new process or a change to an existing process
- BPA identifies a need to change an existing process or to create a new process

The purpose of this process is to ensure consistent management of TOPIC processes and guidance that set expectations for BPA and Customers under TOP Services. The result of this management will be increased user visibility, transparency, collaboration, ownership, clarity in roles, and responsibility.

The TOPIC is a collection of processes and guidance documents used for the sole purpose of providing guidance, instruction, and reference to the Transmission Operator Services Agreement(s) between BPA and its Customer.

### **Transmission Operator Integrated Compendium (TOPIC) Definition**

"Transmission Operator Integrated Compendium" or "TOPIC" documents TOP procedures necessary in order to provide BPA with the ability to carry out its TOP responsibilities as they relate to Customer's BES equipment listed in Exhibit A – BES Equipment Subject to this Agreement.

#### **Version Control of the TOPIC**

The TOPIC has a summary of changes at the end of the document that will track programmatic changes using a whole number version control (i.e. Version 1, Version 2, etc). Examples of programmatic changes include but are not limited to:

- 1. Cost allocation process changes
- 2. Contract exhibit update process changes
- 3. Additions and/or changes to definitions
- 4. New standards applicable to the TOP

Each process will have separate version control that will track changes in standards, requirements, or compliance processes and will use decimals (e.g. Version 1.1, Version 1.2) The TOPIC version control process will mimic the NERC Standards versioning process; errata changes will use sub-numbering and content changes will use whole numbering. Examples of process changes include but are not limited to:

- 1. Existing standard or requirement changes, requiring an update of the associated process
- 2. Retirement of standard or requirement
- 3. Data request time frames are altered by BPA

### **Establishment of New or Updated TOPIC Process**

New or updated process/guidance is required:

- BPA Customer Service Reliability Program (CSRP) requests or approves need for new process/guidance and assigns individual process owner.
- BPA Customer requests a new process/guidance or revision/update to current process/guidance.
- BPA CSE/AE requests a new process/guidance or revision/update to current process/guidance.

### **Owner Determination & Guidance**

Process Owner is determined in part by organizational impact and knowledge; and is ultimately assigned by the CSRP team.

### Write Process/Guidance

Individual Process Owner and CSRP will work in collaboration to establish new process/guidance.

- Use TOPIC process templates to establish process.
- Follow consistent established format for supporting process.
- For other guidance (e.g. flowcharts, cheat sheets, etc.) that is deemed worthy of maintaining over time, the following critical elements much be present:
  - o Purpose/General Overview
  - Version
  - Date approved
  - Date last changed
  - Date last reviewed
  - Review Period

#### **BPA** and Customer Collaboration

CSRP will facilitate collaboration with BPA Customer by:

- Communicating process/guidance via email
- Post draft process on TOP <u>external website</u> for 30-day Customer comment period, as applicable
  - o BPA will post both a redline version as well as a clean version to aid in comparison
- CSRP will respond to Customer comments
- Reviewing process/guidance at the annual TOP Customer meeting

### **Finalize and Establish Review Period**

CSRP performs the following:

- Finalizes process/guidance document with approval date
- Post final process/guidance to the BPA TOP external website
- Send out communication when document is final

### **Periodic Review**

CSRP is responsible to periodically review the TOPIC document to ensure all processes and guidance documents are current and adequate.

### Responsibilities

CSRP Program Manager is responsible for:

Overall vision and direction of the TOPIC Review and Update Process

| Version | Issue Date | Action/Changes Approved            |            | Date       |
|---------|------------|------------------------------------|------------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation           |            | 08/01/2017 |
| Rev. 1  | 03/28/2018 | Included adding the redline and    | L. Jones   | 03/27/2018 |
|         |            | clean version of the TOPIC         |            |            |
| Rev. 2  |            | Errata change: Made the first line | M. Walden  | 05/10/2018 |
|         |            | a complete sentence. Changed       |            |            |
|         |            | TOPCAT for consistency             |            |            |
|         |            | throughout the document            |            |            |
| Rev. 3  | 07/10/2018 | Changed language under             | C. Higgins | 07/10/2018 |
|         |            | "General Overview" for what        |            |            |
|         |            | drives changes in the TOPIC.       |            |            |

|        | Added new language for "Version Control Of The TOPIC". Language changes/additions align with TPIP. |           |            |
|--------|--|-----------|------------|
| Rev. 4 | Added bullet to send out the TOPIC after has been finalized  | M. Walden | 08/10/2018 |
| Rev. 6 | Removed TOPCAT reference, defined CSRP, errata changes   | M. Walden | 03/31/2020 |
| Rev. 6 | Errata changes   | S. Hess   | 04/27/2020 |

## FAILURE TO ADHERE TO TOPIC PROCESSES

Purpose: In the event that a participating TOP Service entity fails to follow processes or procedures outlined in the TOPIC, BPA will take the following steps. This process applies to failure to follow processes or procedures in the same topical/subject area (the topical/subject areas are outlined within the TOPIC). It is important to note that failure to follow processes or procedures that compromise safety or reliability will result in immediate action.

Order of Escalation for contract violations (please note that the order of escalation will be based on the same violation occurring in a repetitive fashion):

### 1<sup>st</sup> Occurrence: Customer receives:

- a. Email notification of the issue to the Operations and Compliance managers outlining the entities inaccuracy in following the TOPIC
- b. Refresher training from BPA, if appropriate

This step is intended to refresh the entity of the relevant processes or procedures

### 2<sup>nd</sup> Occurrence: Customer will:

- a. Receive a formal letter to their General Manager, Operations Manager, and Compliance
   Manager (as applicable) outlining the entities 2nd instance of not following processes and/or procedures in the TOPIC
- b. Training refresher mandatory

3<sup>rd</sup> Occurrence: Escalate to Transmission Vice Presidents for next steps

a. Dependent on the situation, the Transmission Vice President will engage the entity to discuss the issues and any potential concerns.

### \*\*Each situation is treated as case by case

### **Version Control Block**

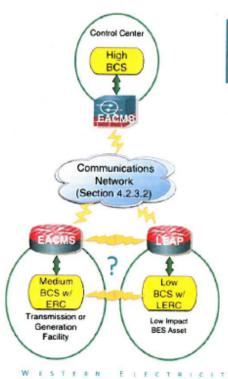
| Version | Date Edited | Ву                           | Approved by: | Summary of Changes               |
|---------|-------------|------------------------------|--------------|----------------------------------|
| Rev. 1  | 04/15/2019  | Lorissa Jones, Kammy         | TOP          | Creation                         |
|         |             | Rogers-Holliday, Allen Chan, | Executive    |                                  |
|         |             | Dena Sauer, Kelly Johnson    | Sponsors     |                                  |
| Rev. 5  |             | M. Walden                    | M. Walden    | Revised title so not to match    |
|         |             |                              |              | the penalty charge title BPA has |
|         |             |                              |              | for outside TOP Services         |
| Rev. 6  | 04/27/2020  | S. Hess                      |              | Errata and question posed        |

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# Lower-BCS Connection to Higher BCS

- Facilities may be owned by the same entity or different entities.
- · If multiple entities are involved, identify the:
  - Point(s) of connection between the entities,
  - Entity responsible for compliance at/around the demarcation point, and
  - Entity responsible for CIP-006-6 compliance.
- May involve EACMS or LEAP depending on impact ratings and connectivity characteristics.
- Protect all BCS, as applicable.

WESTERN ELECTRICITY COORDINATING COUNCIL



Connecting Lower BCS to a High BCS CC

- No "Backcasting" impact levels.
- Similar to the Far-end Relay Lesson Learned.
- Consider all communications paths.
- BCA/BCS Owners are responsible for CIP Compliance, but
  - Performance may be delegated via an operating agreement.

| Version | Issue Date | Action/Changes  | Approved  | Date       |
|---------|------------|---|-----------|------------|
| Rev. 0  | 08/14/2017 | Initial process creation                                    |           | 08/01/2017 |
| Rev. 1  | 01/01/2018 | Added enclosures from the L. Jones 03/23/2016 WECC workshop |           | 01/01/2018 |
| Rev. 6  |            | Removed Memo and WECC/CIP information                       | M. Walden | 03/31/2020 |

# **SUMMARY OF HISTORY LOG**

### **General Overview**

The Summary Table provides a high level view of the changes made throughout the document.

**Summary Table** 

| PROCESS   | SECTION  | ACTION/CHANGES   | DATE       |
|---|--|--|------------|
| Outage Coordination                                     | Throughout   | Bullet and numbering changes   | 07/10/2018 |
| NERC Transmission<br>Availability Data System<br>(TADS) | Throughout   | Indention changes  | 07/10/2018 |
| Event Reporting   | Throughout   | Indention changes  | 07/10/2018 |
| Contract Exhibit Update<br>Process                      | Exhibit A, "BES Equipment Subject to this Agreements Update"                     | Added new language to the "Exhibit A, BES Equipment Subject to this Agreement Updates" section regarding customer coordination and customer notice of change. Language also aligns with the TPIP document. | 07/10/2018 |
| Cost Allocation   | Process Steps  | Added a new step 2 for seeking organization/management validation for what their resource needs are for the upcoming calendar year. Errata changes.  | 07/10/2018 |
| Cost Reconcilliation                                    | Process Steps  | Errata changes. Numbering changes. Changed language in section "Process Steps/Step 4" for seeking organization/management validation for what their resourcee needs are for the current calendar year.     | 07/10/2018 |
| TOP Annual Letter<br>Process                            | Throughout   | Indention changes  | 07/10/2018 |
| TOPIC Review and<br>Update Process                      | General Overview; Transmission Operator Integrated Compendium (TOPIC) Definition | Changed language under "General Overview" for what drives changes in the TOPIC. Added new language for "Version Control Of The TOPIC." Language changes/additions align with TPIP.                         | 07/10/2018 |
| Event Reporting   | Real-Time Operating Procedures   | Numbered each section to make easier reference to.   | 01/31/2019 |
| General Responsibilites                                 | EOP-004-4  | Added new steps and clarity to event reporting per change to standard.   | 01/31/2019 |

| Version control of the | TOPIC Review      | Added in what drives a change to the   | 01/31/2019 |
|------------------------|-------------------|--|------------|
| TOPIC                  | and Update        | TOPIC to align language with the TP –  |            |
|                        | Process           | TPIP document                          |            |
| Real Time Operating    | Real-Time         | New template language for Operating    | 03/27/2019 |
| Procedures             | Operating         | Instructions issued by BPA             |            |
|                        | Procedures        |  |            |
| Cost Allocation        | Cost Allocation   | Added in NERC/BPA's line definition    | 07/12/2019 |
| Failure to Comply      | Failure to Comply | Created Process                        | 06/18/2019 |
| Outage Coordination    | Outage            | RC timeline                            | 08/01/2019 |
|                        | Coordination      |  |            |
| Line Definition        | Cost Allocation   | Removed NERC/BPA's line definition     | 10/02/2019 |
| Protection System      | Protection        | Removed entire section due to the PRC- | 03/11/2021 |
| Oversight              | System Oversight  | 001 standard retired on March 31, 2021 |            |
| Real-Time Operating    | Real-Time         | Operations added events 28 and 29      | 03/23/2021 |
| Procedures             | Operating         |  |            |
|                        | Procedures        |  |            |
| Event Reporting        | Event Reporting   | Added 'In addition, copies of Customer | 04/28/2021 |
|                        |                   | reports should be emailed to           |            |
|                        |                   | disturbances@bpa.gov' under bullet 4.  |            |
| Process creation       | TOP BPA –         | Initial process creation               | 8/6/2021   |
|                        | Customer          |  |            |
|                        | Coordination      |  |            |
|                        | Sessions          |  |            |

| Version | Issue Date | Action/Changes                           | Approved   | Date       |
|---------|------------|--|------------|------------|
| Rev. 0  | 07/10/2018 | Added a "Summary of History Log" to      | C. Higgins | 07/10/2018 |
|         |            | track overall changes within the TOPIC   |            |            |
|         |            | document.                                |            |            |
| Rev. 1  |            | Added in new history for Version 4       | M. Walden  | 01/31/2019 |
| Rev. 2  | 08/01/2019 | Added in failure to comply and line      | M. Walden  | 07/31/2019 |
|         |            | definitions. Also, updated new RC        |            |            |
|         |            | outage timeline.                         |            |            |
| Rev. 5  | 10/02/2019 | Removed NERC/BPA's line definition       | M. Walden  | 10/02/2019 |
| Rev. 7  | 05/05/2021 | Removed Protection System Oversight      | M. Granath | 03/11/2021 |
|         |            | Section due to PRC-001 retired on        |            |            |
|         |            | 3/31/2021, Added events 28 and 29 to     |            |            |
|         |            | Real Time Operating Procedures           |            |            |
| Rev. 7  |            | In the Event Reporting Section, added    | S. Hess    | 04/28/2021 |
|         |            | 'In addition, copies of Customer reports |            |            |
|         |            | should be emailed to                     |            |            |
|         |            | disturbances@bpa.gov' under bullet 4.    |            |            |
| Rev. 8  | 8/6/2021   | Initial process creation for TOP BPA –   | L. Cardoza | 8/6/2021   |
|         |            | Customer Coordination Sessions           |            |            |