

TEE Contingency Reserve Sharing  
Group  
(TCRSG)

**Operating Protocols**

## Revision History

Version	Description of Revision/Change	Revised by:	Effective Date
1	Initial		November 10, 2009
2	Annual review <ul style="list-style-type: none"> <li>• Updated Attachment A to show (1) 2009 peak load data, (2) MSSC based on gross MW instead of net MW, and (3) associated Contingency Reserves Requirements including additional Contingency Reserves (difference between gross and net MW) that were entered in ARS System as “Extra CRs” until completion of deliverability study</li> </ul>	C. Freibert	January 29, 2010
3	Updated Attachment A to adjust Contingency Reserves Requirements after completion of deliverability study that included MSSC based on gross MW and Trimble County 2 operations	C. Freibert	May 11, 2010
4	Annual review <ul style="list-style-type: none"> <li>• Added revision history</li> <li>• Revised language to provide that a Party experiencing a DCS event not be required to enter that event in the ARS System if the Party chooses to self-recover without using any of the group’s Contingency Reserves including its own (Section 2.1.2)</li> <li>• Revised language stating that each Party’s peak load data and MSSC shall be submitted to the Administrator by October 15 each year for the previous 12-month period ending October 1 (Sections 1.4 and 3.3)</li> <li>• Updated Attachment A to show 2010 peak load data and associated Contingency Reserves Requirements</li> <li>• Added language stating that the Operating Protocols will be reviewed on an annual basis (Section 8.0)</li> </ul>	M. Dalloul	January 31, 2011

5	<p>Annual review</p> <ul style="list-style-type: none"> <li>Revised language to clarify that a DCS event would be reported by the Administrator on behalf of the TCRSG only when the Party experiencing the event requests Contingency Reserves Activation from one or more other members of the TCRSG; if the Party experiencing the event does not request Contingency Reserves Activation from one or more other members of the TCRSG, that Party will report its DCS compliance as an individual BA (Section 1.10)</li> <li>Deleted language determined to no longer be needed regarding consequences for multiple Contingency Reserves Activation requests due to Other Extreme Conditions (Sections 2.2.3 and 2.3.2 and Attachment B)</li> <li>Corrected section reference numbers (Sections 5 and 6)</li> <li>Updated Attachment A to show 2011 peak load data and associated Contingency Reserves Requirements</li> </ul>	<p>C. Freibert</p> <p>C. Freibert</p> <p>C. Freibert</p> <p>M. Dalloul</p>	<p>January 31st, 2012</p>
6	<p>Annual review</p> <ul style="list-style-type: none"> <li>Updated Attachment A to reflect 2012 peak load data, and reallocation of Contingency Reserve Requirements, reviewed MSSC</li> </ul>	<p>S. Homberg</p>	<p>January 31st, 2013</p>
7	<ul style="list-style-type: none"> <li>Update Attachment A to reflect EKPC withdrawal for the TEE-RSG, reallocation of Contingency Reserve Requirements among members</li> </ul>	<p>S. Homberg</p>	<p>June 1st, 2013</p>
8	<p>Annual review</p> <ul style="list-style-type: none"> <li>Updated Attachment A to reflect 2013 peak load data, and reallocation of Contingency Reserve Requirements, reviewed MSSC</li> </ul>	<p>S. Homberg</p>	<p>January 31st, 2014</p>
9	<p>Interim changes (Section 2.6.1.2, 2.6.1.3, add 2.7.2.1)</p> <ul style="list-style-type: none"> <li>Require Tag for events &gt; 60 minutes</li> <li>Tagging Extension above TRM</li> <li>Extending an event at a reduced amount</li> <li>Administrator modify an event MWs ATF</li> <li>Corrected numbering in Section 5.2</li> </ul>	<p>S. Homberg</p>	<p>October 1st, 2014</p>
10	<p>Annual review</p> <ul style="list-style-type: none"> <li>Updated Attachment A to reflect 2014 peak load data, and reallocation of Contingency Reserve Requirements, reviewed MSSC</li> </ul>	<p>S. Homberg</p>	<p>January 31st, 2015</p>

11	<p>Annual review</p> <ul style="list-style-type: none"> <li>Updated Attachment A to reflect 2015 peak load data, and reallocation of Contingence Reserve Requirements, reviewed MSSC</li> <li>Revised language to introduction that clarifies that the Operating Protocols establish processes and procedures and if there is a conflict the “Agreement” is the legally binding document.</li> <li>Changes to (Section 2.2.3, 2.5.2, 2.6.1.2, 2.9)</li> <li>Allowing the use of OEC more than once a day if the contingent BA is in an EEA1 or higher and if a contingent BA cannot restore their Contingency Reserve requirement an EEA2 or higher must be declared.</li> <li>If a tag is required refer to Section 2.9</li> <li>Section 2.9 establishes the tagging requirements for events &gt; 60mins.</li> </ul>	S. Homberg	January 31st, 2016
12	<p>Annual review</p> <ul style="list-style-type: none"> <li>Updated Attachment A to reflect 2016 peak load data, and reallocation of Contingency Reserve Requirements, reviewed MSSC</li> <li>Revised language stating that each Party’s peak load data and MSSC shall be submitted to the Administrator by September 15 each year for the previous 12-month period ending September 1 (Sections 1.4 and 3.3)</li> </ul>	S. Homberg	January 31st, 2017
13	<p>Annual review</p> <ul style="list-style-type: none"> <li>Updated Attachment A to reflect 2017 peak load data, and reallocation of Contingency Reserve Requirements, reviewed MSSC.</li> <li>Various term changes associated with BAL-002-2</li> <li>Removed reporting requirements references</li> <li>Removed references to penalty reserves (Sections 1.15, 2.3.2, 2.4.2 and 3.5)</li> <li>Removed extensions of lesser amount (2.6.1.3)</li> <li>Added section to reflect BAL-002-2 compliance exemptions (4.2.1, 4.2.2)</li> <li>Removed subsequent event language found in 4.5, 4.6, 4.7 and 4.8</li> <li>Changed Attachment A to reflect BAL-002-2 and added a second Attachment A</li> </ul>	C. Lawson	January 1st, 2018

14	<p>Annual Review</p> <ul style="list-style-type: none"> <li>• Updated Attachment A to reflect 2018 peak load data and reallocations of Contingency Reserve Requirements, reviewed MSSC.</li> <li>• Added language to 4.2.2 to reflect BAL-002-3 changes</li> <li>• Removed second Attachment A</li> </ul>	C. Lawson	January 31 <sup>st</sup> , 2019
15	<p>Annual Review</p> <ul style="list-style-type: none"> <li>• Grammatical clean-up (Reserves to Reserve) throughout</li> <li>• Section 2.3.1 – Removed reference to spinning reserve adjustment</li> <li>• Added Attachment C</li> </ul>	C. Lawson	January 31 <sup>st</sup> , 2020
16	<p>Annual Review</p> <ul style="list-style-type: none"> <li>• Updated Attachment A</li> <li>• Updated Attachment C</li> </ul>	C. Lawson	January 31 <sup>st</sup> , 2021
17	<p>Annual Review</p> <ul style="list-style-type: none"> <li>• Updated Attachment A</li> <li>• Updated Attachment C</li> </ul>	W. Talley	January 31 <sup>st</sup> , 2022
18	<p>Annual Review</p> <ul style="list-style-type: none"> <li>• Updated Attachment A – updated to reflect 2022 peak load data and reallocations of Contingency Reserve Requirements, reviewed MSSC</li> <li>• Updated Attachment C – updated primary/alternate representatives</li> </ul>	W. Talley	January 31 <sup>st</sup> , 2023

19	Annual Review <ul style="list-style-type: none"><li>• Updated Attachment A – updated to reflect 2023 peak load data and reallocations of Contingency Reserve Requirements, reviewed MSSC</li><li>• Updated Attachment C – updated primary/alternate representatives</li><li>• Updated Section 2.3.1 to reference 2.2.2</li></ul>	R. Sears	January 31 <sup>st</sup> , 2024
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These Operating Protocols establish processes and procedures pursuant to which the Parties to the TEE Contingency Reserve Sharing Group Agreement (“Agreement”) will make Contingency Energy available to other Parties when conditions on one or more of the systems require that such assistance be made available.

Capitalized terms used in these Operating Protocols and not otherwise defined herein shall have the respective definitions provided in the Agreement or in the NERC Glossary. In the event of a conflict between the Operating Protocols and the Agreement, the Agreement shall control. The “Agreement” shall be the legally binding document.

The Parties and the Administrator shall adhere to, and the Administrator shall apply, as applicable, the following procedures and criteria for implementing a Contingency Reserve Activation under these Protocols, unless and until such Operating Protocols are modified in writing by action of the Operating Committee.

## 1. OBLIGATIONS

- 1.1 The TCRSG shall comply with the applicable Reliability Standards, including DCS requirements, as a single Reserve Sharing Group.
- 1.2 Each Party within the TCRSG Region shall comply with the DCS requirements under the Reliability Standards for its Balancing Authority Area by returning its ACE to the lesser of zero or its pre-disturbance level within the default Contingency Event Recovery Period.
- 1.3 The Contingency Reserve Obligation for the TCRSG shall equal the Most Severe Single Contingency of the TCRSG. The Contingency Reserve Obligation shall be allocated among the TCRSG Parties as shown in Attachment A. The Most Severe Single Contingency and the Contingency Reserve Obligation shall be reviewed at least annually and updated accordingly.
- 1.4 The Contingency Reserve Obligation shall be allocated among the Parties on a load ratio share basis using the coincident peak load levels of all LSEs in each Party’s Balancing Authority Area for the 12-month period ending on September 1 of each calendar year as described in Attachment A. The Most Severe Single Contingency for the TCRSG shall be allocated by pro-rating each Party’s coincident peak load MW amount for the 12-month period ending on September 1 each calendar year against the sum of the coincident peak load levels for each Party for the same 12-month period. Attachment A shall be updated by the Administrator by January 31 of each calendar year to reflect any changes in the allocation of the Contingency Reserve Obligation and when circumstances warrant or when instructed to do so by the Operating Committee.

- 1.5 Contingency Reserve shall be made available by each Party as necessary to satisfy the applicable Reliability Standards in an amount equal to each Party's Contingency Reserve Requirement established in Attachment A.
- 1.6 At any time, any Party may offer Contingency Reserve in addition to its Contingency Reserve Requirement ("Extra Contingency Reserve"), which shall be accessible only by the offering Party until the TCRSG Parties have fully deployed all available Contingency Reserve in accordance with their respective Contingency Reserve Requirements. After the Contingency Reserve Requirements of all the Parties are fully deployed, any unfulfilled and subsequent requests for Contingency Reserve Activation shall be allocated a pro-rated amount of Extra Contingency Reserve, if any.
- 1.7 In order to ensure full deployment of the Contingency Reserve allocation within the Contingency Event Recovery Period, each Party shall take into consideration: (a) the maximum time delay for Contingency Reserve Activation requests stated in Section 2.1.3 (up to three minutes), (b) the processing time between the Contingency Reserve Activation request and the Party receiving the request, and (c) any additional time required for the receiving Party to deploy its Contingency Reserve.
- 1.8 The minimum Operating Reserve-Spinning requirement shall be established by the Operating Committee and shall be the amount required by the applicable Reliability Standard or 0% of each Party's Contingency Reserve Requirement, whichever is greater.
- 1.9 A Party may use Qualified Interruptible Load in meeting its Contingency Reserve Requirement, provided that each Qualified Interruptible Load resource meets the applicable NERC and SERC criteria and applicable tariff requirements of the Party. Qualified Interruptible Load resources that are designated by a Party as Contingency Reserve resources shall be load that is capable of being removed from the system within the Contingency Event Recovery Period and remaining removed for the duration of the Contingency Reserve Activation Period or until replaced by equivalent resources following the Contingency event. The TCRSG will not limit the amount of interruptible load a Party may use as Contingency Reserve.
- 1.10 The Reportable Balancing Contingency Event level shall be determined in accordance with applicable Reliability Standards and included in Attachment A. The Operating Committee must approve any changes to the Reportable Balancing Contingency Event level.
- 1.10.1 The Administrator, on behalf of and on the direction of the TCRSG, shall document and if applicable report in accordance with the applicable NERC DCS Reliability Standards as a Reserve Sharing Group if any Party(ies) within the TCRSG Region experiences a Reportable Balancing Contingency Event as outlined in the applicable NERC DCS Reliability Standards



and such Party(ies) requests Contingency Reserve Activation from one or more other members of the TCRSG.

1.10.2 If a Party(ies) experiences a Reportable Balancing Contingency Event and does not request a Contingency Reserve Activation from one or more other members of the TCRSG, such Party shall document and, if applicable, report its DCS compliance under the applicable NERC DCS Reliability Standards as a single Party.

- 1.11 The Parties shall provide all data necessary to determine compliance with the applicable Reliability Standards to the Administrator as set forth in the TCRSG Administration Agreement. The Administrator shall compile the data and maintain the necessary reports for the time period covering the Contingency Event Recovery Period and the Contingency Reserve Restoration Period including any extensions of the Contingency Reserve Restoration Period caused by additional Balancing Contingency Events.
- 1.12 The Administrator shall implement and maintain a backup process for failure of the primary ARS System. In the event of a failure of the ARS System, the Administrator shall manually communicate the requirement for each Party to deploy its Contingency Reserve and the amount requested.
- 1.13 The Parties shall not count more than once the same portion of resource capacity (e.g., reserves from jointly owned generation) as Contingency Reserve.
- 1.14 A Party's ability to deliver Contingency Energy is subject to deliverability constraints as identified in the deliverability report.

## **2. CONTINGENCY RESERVE ACTIVATION REQUIREMENTS**

### **2.1 TCRSG Disturbances**

2.1.1 In accordance with the applicable NERC DCS Reliability Standard, each Party shall meet, and be measured against, the requirements of each Reportable Balancing Contingency Event.

When a Party experiences a Balancing Contingency Event and utilizes any of its Contingency Reserve set aside for the TCRSG, such Party shall enter the Balancing Contingency Event in the ARS System for a Contingency Reserve Activation for the amount needed, which may be less than the loss.

2.1.2 If the Contingent System fails to request assistance within 3 minutes of the start of the Balancing Contingency Event, and the TCRSG is non-compliant with respect to a Balancing Contingency Event, the Contingent System will bear any penalties imposed and (or) required mitigations for the non-compliant response to the Balancing Contingency Event. .

2.1.3 The maximum amount of Contingency Reserve that can be requested through the ARS System for multiple Contingency Reserve Activations is the sum of each Party's available Contingency Reserve (consisting of such Party's Contingency Reserve Requirement and Extra Contingency Reserve, if any) as reflected in the ARS System. If such total available Contingency Reserve for all Parties drops below the Most Severe Single Contingency, the ARS System shall alarm the Parties and the Administrator 15 minutes after a Contingency Reserve Activation has occurred of the need for the Parties to voluntarily make available Extra Contingency Reserve to cover the Most Severe Single Contingency. If the ARS System does not alarm the Parties of the shortage of Contingency Reserve, the Administrator will notify the Parties as necessary through other means.

## 2.2 Conditions Precedent to Contingency Reserve Activation

2.2.1 Loss of Generation. A Party may request a Contingency Reserve Activation if such Party experiences a Loss of Generation (i.e., the loss of a specific generating unit(s) not exceeding the capability of such generating unit(s)). After the initial Contingency Reserve Activation request based on Loss of Generation, any subsequent Contingency Reserve Activation requests, other than an extension due to the original Contingency, will be submitted as Other Extreme Conditions (or OEC).

2.2.1.1 Loss of Schedule. A Party may request a Contingency Reserve Activation if a Party experiences a Loss of Schedule. The Administrator shall handle the request in the same manner as the Loss of Generation in Section 2.2.1. After the initial use of Loss of Schedule, any subsequent Contingency Reserve Activation requests other than an extension due to the original Contingency will be submitted as OEC.

2.2.2 Other Extreme Conditions. The ARS System may be activated when such Contingency Reserve Activation is needed by a Party for OEC such as to prevent the curtailment of firm load, or to restore its ACE within acceptable limits as required to maintain compliance with applicable Reliability Standards. The use of OEC more than once in the same day by the Contingent System Party is only allowed after the TCRSG has re-established its Contingency Reserve Obligation (Extra Reserve maybe used). Or if an EEA1 or higher is declared by the Contingent System Party. If the Contingent System Party cannot restore its Contingency Reserve Requirement, it must request an Emergency Energy Alert Level 3 ("EEA3").

## 2.3 Contingency Reserve Allocation

2.3.1 The “BA Adjustment” field in the ARS System allows Parties to adjust the amount of available Contingency Reserve. Acceptable use of this field include: reduction in a Party’s Contingency Reserve Requirement due to an EEA3, as defined in Section 2.2.2;

2.3.2 A Party may voluntarily offer Extra Contingency Reserve, which shall be considered part of such Party’s Contingency Reserve and available to all Parties, subject to the following conditions:

2.3.2.1 Extra Contingency Reserve shall be deployed and subject to the terms and conditions of the Agreement and the Operating Protocols.

2.3.2.2 Extra Contingency Reserve may be offered in response to a request from the Administrator for additional Contingency Reserve.

2.3.2.3 A Party may offer Extra Contingency Reserve into the ARS System to allow the TCRSG to cover the Most Severe Single Contingency after Contingency Reserve have been deployed for a Disturbance.

2.3.2.4 Extra Contingency Reserve may be used in response to a Party’s own request for a Contingency Reserve Activation.

2.3.2.5 Extra Contingency Reserve shall be available for another Party’s request for Contingency Reserve Activation when the Contingency Reserve Requirements of all Parties in the TCRSG are fully deployed.

2.3.2.6 A Party providing Extra Contingency Reserve will not be assessed performance penalties if such Extra Contingency Reserve are not deliverable

2.3.2.7 A Party shall consider deliverability when offering Extra Contingency Reserve to the TCRSG, except in instances when the TCRSG is deficient due to an ongoing Contingency Reserve Activation.

## 2.4 Contingency Reserve Deployment

The Administrator shall ensure that the ARS System shall deploy the Contingency Reserve as follows:

2.4.1.1 The Contingency Reserve (including any offered Extra

Contingency Reserve) of the Contingent System are utilized first toward meeting the amount of Contingency Energy required by the Contingent System. Next, the Contingency Reserve of the TCRSG Parties will be utilized on a pro rata basis. If necessary to meet the Contingency Reserve Activation Request, any Extra Contingency Reserve will be deployed on a pro rata basis.

2.4.2 Each Party shall acknowledge a Contingency Reserve Activation on the ARS System and respond with its allocation of its Contingency Reserve Requirements and Extra Reserve as determined by the ARS System.

2.4.3 Contingency Reserve allocated and deployed under a Contingency Reserve Activation cannot be recalled or reallocated until expiration of such Contingency Reserve Activation.

## 2.5 Contingency Reserve Activation

2.5.1 A Contingent System Party shall request a Contingency Reserve Activation by identifying the Contingency type (Loss of Generation, Loss of Schedule or OEC) and the MW amount of the reserve request, and entering the information in the ARS System. The ARS System shall calculate the share of the total megawatts of Contingency Reserve to be provided by each Party and will notify the Contingent System and each Delivery System of their respective requirements.

2.5.2 Unless a request is submitted in the ARS System, or as a result of a Contingent System Party's declaration of an EEA2 or EEA3, such Party has adjusted its Contingency Reserve Requirement, the Contingent System Party shall retain its Contingency Reserve Requirement obligation to the other Parties. Upon receipt of a Contingency Reserve Activation request, schedules for Contingency Energy shall immediately be implemented utilizing an instantaneous or zero (0) Ramp. The minimum schedule shall be 30 minutes and the schedule shall end on the nearest half or top of the hour immediately following the conclusion of the 30 minute minimum requirement. A Tag may be required, refer to Section 2.9 Tagging Requirements.

2.5.2.1 Contingency Energy shall be supplied to any Party making a Contingency Reserve Activation using the ARS System.

2.5.2.2 Each Party shall be responsible for providing Contingency Energy under the Operating Protocols up to the maximum amount specified herein.

2.5.2.3 The Administrator shall ensure the implementation of Contingency Reserve is in accordance with the Operating Protocols.

2.5.3 The Administrator will configure the ARS System and any back-up system so that it achieves the following:

2.5.3.1 If a Contingency Reserve Activation is requested when a prior Contingency Reserve Activation is still in effect, the ARS System shall calculate additional allocations to attempt to accommodate the later Contingency Reserve Activation without modifying any previously determined allocations for the prior Contingency Reserve Activation.

2.5.3.2 Such additional allocations shall include the amount of remaining Contingency Reserve Requirement, including Extra Contingency Reserve that were not deployed in connection with the prior Contingency Reserve Activation(s).

2.5.3.3 The ARS System shall compare the total Contingency Reserve Activations then in effect to the total Contingency Reserve Obligation to ensure that the total requests for Contingency Energy do not exceed the Contingency Reserve Obligation, plus any Extra Contingency Reserve.

2.5.3.4 If a Delivery System experiences a sudden unscheduled loss of a resource while it is providing Contingency Energy to a Contingent System, it shall continue to provide such Contingency Energy in accordance with the Operating Protocols.

## 2.6 Contingency Reserve Extensions

The Contingent System Party may request only one extension of the Contingency Reserve Activation no later than 10 minutes prior to the termination of such Contingency Reserve Activation, at an end time to be selected by the Party, provided that:

2.6.1.1 Such extension shall end on a quarter hour and shall not extend the total Contingency Reserve Activation to greater than 105 minutes to ensure that Contingency Reserve are replenished within

the 90-minute Contingency Reserve Restoration Period after the 15-minute Contingency Event Recovery Period.

2.6.1.2 An extension which modifies an event to a duration greater than 60 minutes shall be tagged within 60 minutes of the loss of resource. A Tag may be required, refer to Section 2.9 Tagging Requirements.

2.6.1.3 With regard to any extension of a Contingency Reserve Activation, the requesting Party may extend the event at the current MW value. The requesting Party shall not request an increase or cancelation of an existing Contingency Reserve Activation. If the Contingent System Party needs additional assistance during the extension, such Contingent System Party may make a second Contingency Reserve Activation request for the additional amount of Contingency Reserve.

2.6.2 The extension of a Contingency Reserve Activation event does not constitute a new Contingency Reserve Activation event.

## 2.7 Contingency Reserve Activation Cancellations

2.7.1 A Party shall not cancel an initial request or an extension of a Contingency Reserve Activation, except that the Contingent System may request that the Administrator cancel a Contingency Reserve Activation if no other Party is participating in such Contingency Reserve Activation and the Contingent System has restored its Contingency Reserve.

2.7.2 The Administrator may cancel a Contingency Reserve Activation for ARS System problems or at the direction of the TVA Reliability Coordinator.

2.7.2.1 The Administrator with the prior approval of the OC may make modifications to event data (after the fact) to reflect actual values, when a Reliability Adjustment has modified energy delivered.

2.7.3 Any findings associated with non-compliance of applicable NERC Reliability Standards due to the cancellation of a Contingency Reserve Activation at the direction of the TVA Reliability Coordinator shall be reviewed and considered for submittal to NERC for exclusion in the calculation of Reportable Balancing Contingency Event compliance requirements.

## 2.8 Contingency Reserve Termination

2.8.1 The ramp rate used for terminating a Contingency Reserve Activation shall be: 10 minutes ramp out across the ending quarter, half or

top of the clock hour.

## 2.9 Tagging Requirements

2.9.1 A tag shall be submitted within 60 minutes of the Loss of Resource time, for an event requesting reserves which is greater than 60 minutes from the Loss of Resource time. (INT-10-2.1 R1) Tag Start and Stop time should match CRSG event start and stop time. If the CRSG event does not exceed 60 minutes from Loss of Resource, No Tag is required.

2.9.2 An event extended greater than 60 minutes from the Loss of Resource time, a Tag shall be submitted for the Start and Stop time of the Extension only.

2.9.2.1 TRM: An extension which creates an event greater than 60 minutes from the loss of resource and is greater than the TRM value, the contingent BA shall request Point-to-Point transmission service for the amount above TRM. A separate tag with a Tag Type of "Emergency" shall be submitted for the amount above TRM.

2.9.3 Loss of Resource (LOR) time shall be the breaker open time of the first unit or element lost triggering the event.

2.9.4 Tag Type shall be Emergency and the MISC Info field of the GCA line should have a Token = SUBTYPE and Value = TEE-RSG. A standard 10 minute Ramp should be used for start and stop of Tags.

2.9.5 Schedule: The schedule created for the event will continue to be the mechanism for energy deliver until the Implemented Tags starts. When a manually created schedule and Tag created schedule overlap one should be adjusted to prevent double counting of Interchange Schedules.

## 3. **REQUIRED DATA**

To perform the studies required to determine the Contingency Reserve Obligations, the Contingency Reserve Requirements, and compliance with the obligations imposed by the Operating Protocols, each Party shall submit data requested by the Administrator to the Administrator in conformance with the following minimum requirements:

- 3.1 All data submitted shall satisfy the requirements, as they may change from time to time, of any procedures adopted by the Operating Committee.
- 3.2 Data shall be submitted in an electronic format, or as otherwise specified by the Operating Committee and/or Administrator.

- 3.3 On or before September 15 of each calendar year, each Party's BA coincident peak load level of all LSEs in the BA for the preceding 12-month period ending on September 1 and the Most Severe Single Contingency for that same 12-month period shall be submitted to the Administrator. Such data shall be updated at any time for any known material changes. Based on each Party BA's Most Severe Single Contingency, the TCRSG's Most Severe Single Contingency will be reviewed and updated as necessary, but no less frequently than annually. Each Party's BA will use its established operating process to determine its MSSC.
- 3.4 The Parties acknowledge that additional information required to determine the Contingency Reserve Requirement shall be provided by the Parties to the Administrator in accordance with the provisions of the Agreement.

#### 4. COMPLIANCE DATA SUBMITTAL

- 4.1 The Administrator shall collect the data and perform the calculations necessary for each Reportable Balancing Contingency Event to determine TCRSG and individual Party compliance under this Agreement.
- 4.2 No later than the following business day after each Contingency Reserve Activation, the Contingent System shall provide the Administrator with the actual time of the Balancing Contingency Event ("T<sub>0</sub>") in hour, minute, and second detail in Central Prevailing Time ("CPT"), indication of whether or not it is a Reportable Balancing Contingency Event, and the MW amount
- 4.2.1 If the Balancing Contingency Event is determined to be a Reportable Balancing Contingency Event, the Contingent System will provide the TCRSG Administrator with the information required to complete the NERC CR Form 1.
- 4.2.2 If the TCRSG is exempt from returning Reporting ACE to the recovery value within the Contingency Event Recovery Period for a Reportable Balancing Contingency Event due to an exception in the applicable NERC DCS Reliability Standard, the Parties shall provide as applicable and the TCRSG Administrator shall compile and retain evidence that demonstrates applicability of such an exception.
1. A BA or the TCRSG may not be subject to compliance if it is experiencing a Reliability Coordinator declared EEA and has removed some or all of its Contingency Reserve from the TCRSG to mitigate and operating emergency and has depleted its CR to a level below its MSSC and has communicated with its RC to notify them of the conditions described above preventing the Responsible Entity from complying with applicable NERC DCS Reliability Standards and provided the RC with an ACE recovery plan including target



recovery time.

2. A Party and or the TCRSG may not be subject to compliance if the group experiences multiple contingencies where the combined MW loss exceeds the groups Most Severe Single Contingency or if the TCRSG experiences multiple Balancing Contingency Events within the sum of the time periods defined by the Contingency Event Recovery Period and the Contingency Reserve Restoration Period whose combined magnitude exceeds the TCRSG's Most Severe Single Contingency

4.3 In a format agreed to by the Operating Committee, each Party shall provide its ACE, Frequency Error, and other four-second data for the period starting 15 minutes prior to the Contingency Reserve Activation request time, and ending 45 minutes after the Contingency Reserve Activation request time, or per the reporting criteria of the applicable NERC DCS Reliability Standard. The data provided shall be from the same source data as used by the Party for determining compliance to the Reliability Standards.

4.4 The Party shall provide the Administrator with the information required in Section 4.2.1, Section 4.2.2, and Section 4.3 within 7 calendar days after the request for data from the Administrator for each Reportable Balancing Contingency Event.

4.4.1 All data provided to and generated by the Administrator may be subject to review under a NERC compliance audit.

4.4.2 The Party is responsible for the accuracy of all data provided to the Administrator and shall bear all responsibility for any associated non-compliance of the TCRSG directly attributed to the quality or accuracy of the data provided.

## **5 CALCULATION OF TCRSG COMPLIANCE TO THE DCS**

5.1 The Administrator shall collect the data and perform the calculations necessary to determine the TCRSG compliance with the applicable Reliability Standards associated with DCS.

## 6 NERC AND SERC PENALTY ALLOCATION

This section will outline the process for allocating NERC and SERC penalties for non-compliance with the Reliability Standards as they relate to the TCRSG and/or any Party's activities under the Agreement, the Administration Agreement or these Operational Protocols.  
DCS Requirements

6.1 According to applicable Reliability Standards, if the TCRSG does not meet the NERC DCS requirements financial or settlement penalties may be imposed, to the extent applicable. Any such settlements shall be allocated to those Parties that did not satisfy the NERC DCS requirements for each Reportable Balancing Contingency Event . The Administrator shall calculate the allocation using a methodology pre-approved by the Operating Committee.

6.1.1 For any Reportable Balancing Contingency Event in which the TCRSG is not DCS compliant, the Administrator shall coordinate with the Operating Committee any self-reporting. ).

- 6.1.2 In the event that the TCRSG receives a financial penalty associated with non-compliance of a Reportable Balancing Contingency Event, the Administrator shall allocate the financial penalty pro-rated to each Party's performance associated with the non-compliance event.
- 6.1.3 In the event the TCRSG mitigates through settlement for non-compliance of a Reportable Balancing Contingency Event the Operating Committee shall have approval of such settlement.
- 6.2 Any penalty not associated with Reportable Balancing Contingency Event that are incurred by TCRSG or any Party, which penalty is related to such Party's or the TCRSG's activities under the Agreement, the penalty will be allocated pursuant to the terms of the Agreement.

## 7 CONTINGENCY RESERVE DELIVERABILITY REQUIREMENTS

### 7.1 Transmission Reliability Margin ("TRM") Determination

- 7.1.1 Provision of TRM is the responsibility of the applicable Transmission Service Provider within the TCRSG Region. The Operating Committee and/or Administrator shall work with the applicable Transmission Service Providers to determine the proper amount of TRM to be used for Contingency Reserve Activations. Annual updates of deliverability studies will be performed by the applicable Transmission Service Provider as directed by the Operating Committee.
- 7.1.2 Each Party shall ensure the deliverability of its Contingency Reserve Requirement.
- 7.1.3 Each Party shall provide written certification ("Certification of Deliverability") stating that its Contingency Reserve Requirement is deliverable, generally describing the methodology utilized in its deliverability study and specifying the amount of TRM that has been set aside for the purpose of receiving and/or delivering Contingency Reserve.

### 7.2 Maintaining Contingency Reserve Deliverability

The deliverability of Contingency Reserve is maintained through the withholding of TRM from firm transmission service usage. However, no transmission owner will be required to upgrade its transmission system solely to provide TRM for TCRSG purposes. Such conditions will be identified during the deliverability study process under Section 7.1 and communicated to the Parties in a timely manner.

- 7.2.1 In the real-time operations, the amount of TRM that is set aside for the purposes of deliverability of Contingency Reserve (as stated in the

Certification of Deliverability) may be maintained through initiating  
redispatch and/or other operating actions.

## **8 ANNUAL REVIEW OF TCRSG OPERATING PROTOCOLS**

The Operating Committee will perform a review of the TCRSG Operating Protocols on an annual basis. This review will occur no sooner than October 1 and no later than March 31.

# Attachment A

TCRSG Most Severe Single Contingency (MSSC)		1347 MW	
Reportable Balancing Contingency Event (equal to or greater than)		900 MW	
TCRSG Party	2023 Peak Load	CONTINGENCY RESERVE	
LGEE	6,891	230	(1)
TVA	33,427	1117	(1)
Total	40,318	1347	(1)

- (1) CRRs are calculated using each Party’s 2023 peak load (peak load level during the 12-month period from September 1, 2022 to September 1, 2023).
- These CRRs were provided to the Transmission Planners to use in performing the Deliverability Study for 2024.
  - They are effective on January 31<sup>st</sup>, 2024

# Attachment B

## Billing Process

### Final Bill Determination

The cost of Contingency Energy provided under the TCRSG Agreement will be the greater of \$100/MWH or 110% of the verifiable cost as determined by the following TCRSG Costing Guidelines. Transmission costs (equal to the Transmission Provider's posted non-firm hourly point-to-point rate) incurred by the supplying Party will be added to the energy cost. This may include cost of redispatch for deliverability.

Billing and settlement between the Parties will follow the existing interchange settlement process, procedures and requirements.

### TCRSG Costing Guidelines

This section provides guidelines for costing of energy supplied during a Contingency Reserve Activation event under the TCRSG. These guidelines represent generally accepted practices among TCRSG participants.

#### General Guidelines

The cost of Contingency Energy provided during Contingency Reserve Activation events shall be the verifiable cost of the resource(s) used to provide such service. This cost can either be from the units that actually responded to the event or based on an economic stacking of resources that assigns the highest cost units to the sale. Under either approach, actual unit cost is applied. Under an economic stacking approach, units online during the event (including units providing Non-Spinning Reserve) are stacked from highest to lowest cost and decremented down from the unit hourly output until the MW response has been covered.

In general, megawatts at or below minimum load from units that were online prior to the event are not assigned to the sale because this energy represents sunk commitment costs for pre-existing sales or native load. Actual cost for such units can include incremental fuel and O&M costs, environmental costs or other costs that otherwise would not have been incurred absent the Contingency Reserve Activation event.

For offline units started in response to the event, all MW produced including those below minimum load are assigned to the sale. Actual cost for these units can include average fuel and O&M costs, environmental costs, or other costs that otherwise would not have been incurred absent the Contingency Reserve Activation. Startup costs may be assigned to the sale for those units that were started to supply Non-Spinning Reserve or started in response to a subsequent Contingency Reserve Activation during the recovery period.

Costs for all units assigned to the sale should be aggregated to determine an average cost for all response MWs. This cost becomes the basis for comparison to the 110% of verifiable costs.

#### Non-Spinning Reserve Generation Considerations

For units started that have a minimum runtime longer than the reserve call duration, costs incurred beyond the end of the call should not be assigned to the sale. These costs are generally borne by the supplier.

If minimum load for a unit started for a Contingency Reserve Activation is greater than the Non-Spinning Reserve request from that participant, all costs for that unit can still be assigned to the sale. Excess energy from these units will reduce the MW response from units carrying Spinning Reserve.

#### Demand Response Considerations

In general, pricing of reserve supplied from demand response resources should be based on the highest cost generation determined from the economic stacking process defined above. To the extent contracts for interruptible load used to supply Non-Spinning Reserve define payments for curtailment, those costs should only be used if they are less than or equal to the highest cost units in the

stack for the Party that otherwise would have supplied the reserves. Avoided costs for Non-Spinning Reserve units not started due to reserves supplied from demand response should not be used.

Forward and Economic Purchase Considerations

Pricing of Contingency Reserve sales should not include costs associated with forward purchases of energy.

Under circumstances where a Party is able to purchase economic energy during the replenishment period of the reserve activation which reduces the response from the Party's resources, the cost of those units or units that remain in the Party's economic stack can be assigned to the sale for the remainder of the activation.

**Schram**  
**Attachment C**

**Notice:** The Parties' designated contacts (which for the TCRSG Parties, may be such Parties' Representatives and Alternates under the Reserve Sharing Agreement) are as follows:

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