Guided Self-Certification Worksheet

Registered Entity Name]
NERC ID: [NCRXXXXXX]
PRC-023-2 – Transmission Relay Loadability
3rd Quarter 2015

SCOPE
PRC-023-2 Transmission Relay Loadability - R6

R6 Supporting Evidence and Documentation

R6. Each Planning Coordinator shall conduct an assessment at least once each calendar year, with no more than 15 months between assessments, by applying the criteria in Attachment B to determine the circuits in its Planning Coordinator area for which Transmission Owners, Generator Owners, and Distribution Providers must comply with Requirements R1 through R5. The Planning Coordinator shall: [Violation Risk Factor: High] [Time Horizon: Long Term Planning]

6.1 Maintain a list of circuits subject to PRC-023-2 per application of Attachment B, including identification of the first calendar year in which any criterion in Attachment B applies.

6.2 Provide the list of circuits to all Regional Entities, Reliability Coordinators, Transmission Owners, Generator Owners, and Distribution Providers within its Planning Coordinator area within 30 calendar days of the establishment of the initial list and within 30 calendar days of any changes to that list.

M6. Each Planning Coordinator shall have evidence such as power flow results, calculation summaries, or study reports that it used the criteria established within PRC-023-2.

Registered Entity Response:

Describe, in narrative form, how you meet (or do not meet) compliance with this Requirement.

Include a concluding statement stating the results of the self-certification.
Registered Entity Evidence:

Provide the following for all evidence submitted (Insert additional rows if necessary):

<table>
<thead>
<tr>
<th>File Name, File Extension, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), Description</th>
</tr>
</thead>
</table>

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Audit Team Evidence Reviewed:

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|                                                                                                           |

Compliance Assessment Approach Specific to PRC-023-2, R6

Review the evidence to verify the Registered Entity has:

<table>
<thead>
<tr>
<th>Verify that the Planning Coordinator conducted an assessment by applying the criteria in Attachment B to determine the circuits in its Planning Coordinator area for which Transmission Owners, Generator Owners, and Distribution Providers must comply with Requirements R1 through R5.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission lines operated at 100 kV to 200 kV and transformers with low voltage terminals connected at 100 kV to 200 kV and,</td>
</tr>
<tr>
<td>Transmission lines operated below 100 kV and transformers with low voltage terminals connected below 100 kV that are part of the BES.</td>
</tr>
<tr>
<td>Verify that the PC has conducted the assessment at least once each calendar year, with no more than 15 months between assessments.</td>
</tr>
<tr>
<td>Verify that the PC has a current list of such circuits subject to PRC-023-2, including identification of the first calendar year in which any criterion in Attachment B applies.</td>
</tr>
<tr>
<td>Verify the PC provided the list to the appropriate RCs, TOs, GOs and DPs within:</td>
</tr>
<tr>
<td>30 calendar days of establishment of the list.</td>
</tr>
<tr>
<td>30 calendar days of any changes to the list.</td>
</tr>
<tr>
<td>Note: Effective date 1/1/2014.</td>
</tr>
</tbody>
</table>

**Auditor Notes:**
Assessment Guidance

Per Requirement R6.1, please provide a file which lists each circuit identified as being subject to PRC-023-2 through the above mentioned assessment. For each circuit, include the criterion from PRC-023-2 by which the circuit was initially identified, the owner(s) of that circuit, and the entity (if known) responsible for maintaining that circuit’s compliance.

List of Circuits Subject to PRC-023-2

Please provide a list of all contingencies selected when evaluating circuits for inclusion under criterion B4.

List of Criterion B4 Contingencies

For circuits selected based on criterion B4, NPCC is requesting additional information for a random sample of those circuits. Please select a sample and provide additional information according to the following steps:

1. Select a random sample of five of the circuits selected based on criterion B4. If five or fewer circuits were identified, the sample will be comprised of all of the criterion B4 circuits. (A random sample can be selected using statistical functions available in Microsoft Excel or through use of RAT-STATS, a free sampling tool available from the U.S. Department of Health & Human Services Office of Inspector General.) Document the sample of criterion B4 circuits and the method used to select the sample.

2. For each circuit selected in the sample, please provide a brief narrative below that addresses the following areas:
   a. The selected contingencies that resulted in the circuit being identified
   b. Discussion of the engineering judgments made when selecting the contingencies in question
   c. The threshold used to evaluate the post-contingency loading and how it was selected, including the Facility Rating and assumed loading duration
   d. The loading experienced by the circuit as a result of the selected contingencies

If additional documentation is needed, please reference it in the narrative and include it with the self-certification submission. If Criterion B4 is not applicable to any identified circuits, please indicate “N/A” in the narrative box.

For each circuit selected in the assessment based on criterion B5, please provide a brief narrative of the technical studies or assessments that were conducted and resulted in each circuit’s selection. If additional documentation is needed, please reference it in the narrative and include it with the self-certification submission. If Criterion B5 is not applicable to any identified circuits, please indicate “N/A” in the narrative box.

For each circuit selected in the assessment based on criterion B6, please provide a brief discussion of the rationale for each circuit’s selection. If additional documentation is needed, please reference it in the narrative and include it with the self-certification submission. If Criterion B6 is not applicable to any identified circuits, please indicate “N/A” in the narrative box.
Per Requirement R6.2, the list of identified circuits must be provided to all Regional Entities, Reliability Coordinators, Transmission Owners, Generator Owners, and Distribution Providers within the Planning Coordinator’s area. For each entity to whom the list was communicated, please provide a brief narrative addressing the date on which initial communication took place, the means used to communicate the list, and any subsequent updates that were provided. Where similar means were used to communication to multiple entities, only one narrative response is necessary. Include copies of emails, screenshots of web portals, etc., as appropriate that were used to communicate the list, when submitting the self-certification response.

Circuits to Evaluate for R6

- Transmission lines operated at 100 kV to 200 kV and transformers with low voltage terminals connected at 100 kV to 200 kV.
- Transmission lines operated below 100 kV and transformers with low voltage terminals connected below 100 kV that are part of the BES.

Criteria

If any of the following criteria apply to a circuit, the applicable entity must comply with the standard for that circuit.

B1. The circuit is a monitored Facility of a permanent flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection as defined by the Regional Entity, or a comparable monitored Facility in the Québec Interconnection, that has been included to address reliability concerns for loading of that circuit, as confirmed by the applicable Planning Coordinator.

B2. The circuit is a monitored Facility of an IROL, where the IROL was determined in the planning horizon pursuant to FAC-010.

B3. The circuit forms a path (as agreed to by the Generator Operator and the transmission entity) to supply off-site power to a nuclear plant as established in the Nuclear Plant Interface Requirements (NPIRs) pursuant to NUC-001.

B4. The circuit is identified through the following sequence of power flow analyses performed by the Planning Coordinator for the one-to-five-year planning horizon:

   a. Simulate double contingency combinations selected by engineering judgment, without manual system adjustments in between the two contingencies (reflects a situation where a System Operator may not have time between the two contingencies to make appropriate system adjustments).
b. For circuits operated between 100 kV and 200 kV evaluate the post-contingency loading, in consultation with the Facility owner, against a threshold based on the Facility Rating assigned for that circuit and used in the power flow case by the Planning Coordinator.

c. When more than one Facility Rating for that circuit is available in the power flow case, the threshold for selection will be based on the Facility Rating for the loading duration nearest four hours.

d. The threshold for selection of the circuit will vary based on the loading duration assumed in the development of the Facility Rating.
   
i. If the Facility Rating is based on a loading duration of up to and including four hours, the circuit must comply with the standard if the loading exceeds 115% of the Facility Rating.

   ii. If the Facility Rating is based on a loading duration greater than four and up to and including eight hours, the circuit must comply with the standard if the loading exceeds 120% of the Facility Rating.

   iii. If the Facility Rating is based on a loading duration of greater than eight hours, the circuit must comply with the standard if the loading exceeds 130% of the Facility Rating.

e. Radially operated circuits serving only load are excluded.

**B5.** The circuit is selected by the Planning Coordinator based on technical studies or assessments, other than those specified in criteria B1 through B4, in consultation with the Facility owner.

**B6.** The circuit is mutually agreed upon for inclusion by the Planning Coordinator and the Facility owner.