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Member Impacting Project Overview RR113 – Node Connectivity Requirement Enhancement

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Version Control

Version	Date	Author	Change Description
V1	4/1/16	Karen Johnson	Initial creation and submission

Executive Summary

SPP operates a primary and a secondary Inter Control Center Protocol (ICCP) system that each have nodes at both the primary and backup sites. Both primary and secondary ICCP systems feed real-time data from companies to our primary and backup Energy Management Systems (EMS) concurrently. All asset owning market participants are required to provide relevant data over a direct ICCP link with SPP.

The RR113 – Node Connectivity Requirement Enhancement project will ensure maximum availability of ICCP data required for reliability of the Bulk Electric System (BES). The benefits of this revision request (RR) include increased data reliability from companies, minimized downtime of the ICCP connections with companies in the Integrated Marketplace and increased overall reliability of the BES. These ICCP connections receive reliable data from companies by ensuring companies are quickly able to failover to secondary ICCP servers.

The change in requirements introduced by RR113 – Node Connectivity Requirement Enhancement will create a need for some impacted companies to add ICCP hardware and/or implement software upgrades in order to meet the new requirements.

The Revision Request and its associated documents are available on spp.org in the SPP Change Working Group [Project Documentation](#) folder.

The revision request was approved by the following working groups:

ORWG	11-05-2015
TWG	11-17-2015
RCWG	11-17-2015
MOPC	01-12-2016
BOD	01-26-2016

In order to comply with the Operating Criteria, the revision request requirements must be implemented, verified, and tested no later than December 31, 2017.

Business Impact

SPP will have increased data reliability from companies, minimized downtime of ICCP connections with companies, and increased overall reliability of the BES.

Users Impacted

The companies affected by this revision request are those registered with NERC as a Generator Operator or Transmission Operator within the SPP Reliability Coordinator Area.

SPP Business Functions Impacted

Networking/Security
Operations Engineering
Customer Relations
EMS Apps & Network Modeling
Reliability Coordination
IT Applications Support

Technical Impact

SPP Systems/Processes Impacted

The SPP systems that are impacted by this project are the EMS/ICCP systems and network/security systems. SPP's ICCP on-boarding process will be updated to include testing for these requirements going forward.

Anticipated Member Systems/Processes Impacted

Participant's ICCP systems could be impacted if changes are needed to meet the requirements as stated in the RR. Company ICCP node failover/redundancy processes and/or data modeling processes could be impacted if changes are needed to meet the requirements as stated in the RR.

Member Requirements

Revision Request 113 states:

"SPP operates ICCP nodes at both their primary and backup sites. Both the primary and backup ICCP systems feed real-time data to our primary and backup Energy Management Systems (EMS) concurrently. To ensure maximum availability of ICCP data required for companies registered with NERC as a Generator Operator or Transmission Owner within the SPP Reliability Coordinator footprint must comply with the following as applicable.

- All SPP Transmission Operators are required to configure two ICCP nodes to connect to the SPP primary and backup systems concurrently and to make the same Block 1 and Block 2 data available to both nodes.
- All Transmission Operators and Generator Operators are required to configure two ICCP nodes so that, in the event of a failure of their active ICCP node, their alternate ICCP node reconnects to SPP's ICCP nodes within 240 seconds.
 - If the TO or GO has a third party contract for their ICCP connection then the third party should be able to reconnect within 240 seconds.
- All Generator Operators with more than 1500 MW of generation or fifteen capacity resources in the SPP Balancing Area are required to configure two ICCP nodes to read their Integrated Marketplace resource set point instructions from SPP's primary and secondary ICCP nodes.

In the event of an emergency situation or planned maintenance on ICCP Nodes:

- Maintenance outages should comply with the Outage Scheduling Information of the SPP Criteria (Telemetry and Control System Status).

In the event of an emergency ICCP outage, the TO or GO should contact SPP and follow the Outage Scheduling Information of the SPP Criteria (Telemetry and Control System Status). "

Project Approach

SPP will distribute a survey via the Request Management System (RMS) to each company which currently has a direct ICCP connection with SPP. The RMS ticket will be assigned to the ICCP Modeling Engineer or equivalent from the Point of Contacts listing SPP already has on file for each member. The survey will ask questions to assist SPP in determining applicable requirements for each company.

Once the surveys are completed, SPP will communicate via that same RMS ticket which requirements are applicable and the assignment of a testing group.

- Testing Group A will include companies that currently meet all their applicable requirements and only require testing to confirm.
- Testing Group B will include companies that have the necessary equipment and software capable of meeting their applicable requirements but need to configure it to do so appropriately.
- Testing Group C will include companies that do not currently have the necessary equipment and/or software to meet their applicable requirements. This group will require hardware and/or software changes.

Testing

Each company will be required to participate in testing to confirm that they have two or more nodes that can fail over in the required 240 seconds and to verify connectivity to both SPP systems and data availability to/from both systems, as applicable.

Group A companies will need to verify they are already compliant. SPP will contact each of these companies to schedule a failover test. The failover will be timed and the result will be documented in the company's RMS ticket. During the test, connectivity and data availability will also be verified and documented by SPP in the company's RMS ticket. Once all verification and testing is complete, the company's RMS ticket will be closed by SPP.

Group B companies will need to first perform necessary configuration changes to meet their applicable requirements. This work will be tracked and coordinated through on-going meetings with the company and SPP. Once complete, a failover test will be scheduled. The failover will be timed and the result will be documented in the company's RMS ticket. During the test, connectivity and data availability will also be verified and documented by SPP in the company's RMS ticket. Once all verification and testing is complete, the company's RMS ticket will be closed by SPP.

Group C companies will need to first obtain equipment and/or software needed and perform necessary configuration changes. This work will be tracked and coordinated through on-going meetings with the company and SPP. Once complete, a failover test will be scheduled. The failover will be timed and the result will be documented in the company's RMS ticket. During the test, connectivity and data availability will also be verified and documented by SPP in the company's RMS ticket. Once all verification and testing is complete, the company's RMS ticket will be closed by SPP.

Training

There is no training required.

Implementation/Back-out Plan

Implementation will be on an individual company basis due to the nature of the changes. This is not a change to the actual ICCP system, but rather company configurations.

There is no Back- out Plan for this project.

Summary of Timeline

Date	Responsible Party	Action
5/1/2016 - 6/1 2016	SPP	Gather POCs for ICCP RMS tickets Send survey via RMS tickets Gather results and determine company's status and group.
5/1/2016 - 6/1/2016	Company	Companies will be required to complete survey to confirm their current ICCP connections and configurations.
6/1/2016 - 7/1/2016	SPP	Categorize and group companies. Begin communications with each company to establish acquisition, configuration and/or testing timeline to meet applicable requirements.
7/1/2016- 7/1/2017	SPP	<ul style="list-style-type: none"> Verifying and testing Group A companies. Acquisition and/or configuration of Group B and C companies. Verification and testing will follow.
No later than 12/31/2017	SPP	All companies must be verified and tested. Confirmation that all RMS tickets are completed.

Project Assumptions

All costs incurred in the acquisition of hardware/software, configuration of systems and/or performance of testing requirements will be the sole responsibility of the company. SPP will not provide any payment or reimbursement of these costs.

Risks

- Company is not able to acquire necessary equipment and/or software or complete verification and testing within the required timeline.
- Misconfiguration could cause downtime to company or SPP ICCP systems.
- Scheduled failover testing could cause interruption to ICCP data for company and SPP.

Additional Documentation and Communication Plan

All project communication and information will be posted to the SPP change Working Group [Project Documentation](#) folder.

Liaisons

The project requests Project Liaisons from each company with a direct ICCP connection to perform the following functions during the project timeline:

- Review project documentation and provide feedback
- Provide survey response and updates to RMS tickets
- Assess milestones and deliverables for feasibility
- Serve as the main point of contact between SPP and Company
- Facilitate member review of MIPOs and Information Session presentation materials
- Coordinate company implementation and testing efforts
- Review project status and provide company's status
- Represent the company's interest on the project team

MIPO and Project Documentation

All project communication and information will be posted to the SPP Change Working Group [Project Documentation](#) folder. This MIPO will be updated upon change or with any new information, and according to the Member Project Touch Points and Deliverables. With any update, a redline version is posted to the project documentation folder, and the CWG is notified.

Next Steps

Action	Assignee	Status & Due Date
Send project communication	CWG Staff Secretary	
Identify project liaison	CWG Representative	
Create survey and RMS Tickets	SPP On-Boarding Specialist	

FAQs

These FAQs are added to the RMS Knowledge Base. Frequently asked questions will be added to the document as identified or necessary, as well as adding to the RMS Knowledge Base, located here: https://spprms.issuetrak.com/Kb_ListByCategory.asp.

More Information

At any time, Members can ask questions or get more information by completing an RMS ticket using this project's quick pick option. RMS link: <https://spprms.issuetrak.com/login.asp>.

If a new user ID is needed for RMS, click on that link and follow the directions for "Register Now".