

NERC Operating Committee Response to NERC Standards Committee/ RISC Triage of IERP Gaps

Updated August 2014

The NERC Operating Committee reviewed three perceived gaps, Outage Coordination, Governor Frequency Response, and Situational Awareness, as identified by the Independent Experts in their June 2013 report. As an important step in this review, the OC's Executive Committee met via WebEx with the Independent Experts to more thoroughly discuss and understand the thinking which led to these elements being cited as possible gaps. During the WebEx, the OCEC and the Independent Experts also reviewed all of the proposed requirements in the Independent Experts draft Authority matrix. The results of the OC's discussions, and the Project 2014-03 SDT's consideration within the revised TOP and IRO standards for two of the three perceived gaps (Outage Coordination and Situational Awareness) are presented below. The third gap identified by the Independent Experts, Governor Frequency Response, is outside the scope of Project 2014-03.

Outage Coordination

Draft requirements 3, 7, 8 and 9 of the Independent Experts draft Authority Standard focus on Outage Coordination. One concern recognized the fact that the Reliability Coordinators have a wide area view and broader situational awareness, allowing for early identification and resolution of conflicts. Therefore the RCs should have the most influence on outage coordination. Further concerns identify standards that are currently in flux, particularly those remanded standards in which requirements are being removed.

Operating Committee opinion

The Operating Committee concurs that Outage Coordination is an important grid reliability function. Outage coordination should originate from the TOPs and GOPs; with conflicts resolved by their respective RC. It makes sense for this process to begin with a set of previously approved scheduled long term outages with a sufficient time margin for results to be incorporated into seasonal operating studies. Further, the RC should retain the authority for final approval up to the time the asset is removed from service, as well as recall authority (if technically feasible and appropriate to recall) as needed to prevent or mitigate emergencies.

Longer term outage coordination is necessary for those assets that require long maintenance planning pursuant to the type of work required, such as turbine rebuilds, nuclear refueling, etc. This likely belongs in the scope of the Planning Coordinator (PC) for outages planned more than 12-months into the future. A Reliability Standard could be written that requires PCs to coordinate long term outages and which requires responsible entities (e.g., GOs, TOs) to request a time slot in which to perform whatever maintenance is required.

In either case, during the longer term planning horizon, or the Operations planning and real time operations time frame, each PC or RC should have an understanding of the impacts on neighboring PCs or RCs when those assets are planned to be out or are forced out, with notification/coordination requirements with these PCs or RCs.

SDT response:

To enhance reliability, the Project 2014-03 SDT has provided explicit requirement language to address the need for planned outage coordination at the Reliability Coordinator level. See proposed IRO-014-3, Requirement R1, part 1.4. The Project 2014-03 SDT has developed a new standard, IRO-017-1 Outage Coordination, to address overall outage coordination issues.

Proposed IRO-014-3, Requirement R1, part 1.4: Exchange of information including planned and unplanned outage information to support its Operational Planning Analyses and Real-time Assessments.

Situational Awareness (EMS RTCA models)

In this gap the Independent Experts recommend the development of a standard that defines the requirements for EMS RTCA models or performance expectations of the models (Project 2009-02 – Real Time Monitoring and Analyses Capabilities).

Operating Committee opinion

The Operating Committee has a concern that this gap could be interpreted as recommending a “HOW” standard where specific tools would be required even for the smallest TOPs, as opposed to a “WHAT” standard that would allow for other ways to accomplish the objective. In conversations with the Independent Experts it became clear that proper situational awareness was the primary concern. The OC concurs that real time contingency analysis process (real time updated topology and telemetry) should be performed on each BES facility. This functionality could be performed by use of an RTCA application at the TO or RC level, or coverage by alternate means would be appropriate.

SDT response:

The Project 2014-03 SDT has adapted approved IRO-008-1, Requirement R2 for the Transmission Operator. See proposed TOP-001-3, Requirement R13. In addition, the Project 2014-03 SDT has revised the definition of Real-time Assessment to allow for contracting needed services to accommodate concerns for smaller entities.

Proposed: Real-time Assessment - An evaluation of system conditions using Real-time data to assess existing (pre-Contingency) and potential (post-Contingency) operating conditions. The assessment shall reflect applicable inputs including, but not limited to: load, generation output levels, known Protection System and Special Protection System status or degradation, Transmission outages, generator outages, Interchange, Facility Ratings, and identified phase

angle and equipment limitations. (Real-time Assessment may be provided through internal systems or through third-party services.)

Proposed TOP-001-3, Requirement R13: Each Transmission Operator shall ensure that a Real-time Assessment is performed at least once every 30 minutes.

Remainder of the draft Authority Standard Requirements

Authority R1

Each RC, TOP and BA shall have the requirement and authority to take actions, including issuing a Reliability Directive, to prevent, mitigate and respond to an Emergency or Adverse Reliability Impact.

Operating Committee opinion

The current IRO-001-1.1 and TOP-001-1a are expected to be retired and replaced by IRO-001-3. In either case, these standards contain the authority to act, but the requirement to act appears to be implicit. The OC agrees that the RC, TOP and BA should explicitly be required to act.

SDT response:

The Project 2014-03 SDT agrees and has adjusted the wording in the standards to address this issue.

Proposed IRO-001-4, Requirement R1: Each Reliability Coordinator shall act, or direct others to act by issuing Operating Instructions, to ensure the reliability of its Reliability Coordinator Area.

Proposed TOP-001-3, Requirement R1: Each Transmission Operator shall act, or direct others to act by issuing Operating Instructions, to ensure the reliability of its Transmission Operator Area.

Proposed TOP-001-3, Requirement R2: Each Balancing Authority shall act, or direct others to act by issuing Operating Instructions, to ensure the reliability of its Balancing Authority Area.

Authority R2

Each RC, TOP and BA shall have the requirement and authority to approve, deny or cancel planned outages of its EMS, telecom and other hardware, and associated analysis tools.

Operating Committee opinion

The current IRO-002-2 provides for the RC to have control of its tools but does not include the TOP or BA. IRO-002-2 is expected to be retired and replaced by IRO-002-3, which clarifies that the system operators have the authority to approve outages of analysis tools (The OC suggests adding “under the direct control of their company”), but does not include TOPs or BAs. The OC concurs with the clarification in IRO-002-3, and the OC further agrees that TOPs and BAs should be included.

SDT response:

The Project 2014-03 has added proposed TOP-001-3, Requirements R16 and R17 to provide Transmission Operators and Balancing Authorities with capabilities similar to those of the Reliability Coordinator.

Proposed TOP-001-3, Requirement R16: Each Transmission Operator shall provide its System Operators with the authority to approve planned outages and maintenance of its monitoring, telecommunication, and Real-time Assessment capabilities.

Proposed TOP-001-3, Requirement R17: Each Balancing Authority shall provide its System Operators with the authority to approve planned outages and maintenance of its monitoring, telecommunications, and analysis capabilities.

Authority R4

RC, TOP and BA shall provide its System Operators with the responsibility and authority to implement the actions under R1, R2 and R3.

Operating Committee opinion

During the OCEC/Independent Expert webex, the Independent Experts explained that the objective of this requirement is to mandate the posting of a letter in the control rooms granting authority to the system operators to carry out their required tasks. While the Operating Committee believes this is a good practice, it does not believe that it rises to the level of a Standards Requirement.

SDT response:

The Project 2014-03 SDT agrees with the position of the Operating Committee Executive Committee. A letter of authority located in the Control Room is an example of good utility practice. A change to the requirements is not warranted.

Authority R5

Each TOP, BA, GOP, and DP shall comply with directions from a RC, TOP or BA under R1 unless it communicates to the RC, TOP or BA that it cannot because the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements.

Operating Committee opinion

In relation to R1 above this understanding seems implicit. However, in the interest of clarity the OC would support this requirement.

SDT response:

The Project 2014-03 SDT agrees.

Proposed TOP-001-3, Requirement R3: Each Balancing Authority, Generator Operator, Distribution Provider, and Load-Serving Entity shall comply with each Operating Instruction issued by its Transmission Operator(s), unless such action cannot be physically implemented or it would violate safety, equipment, regulatory, or statutory requirements.

Proposed TOP-001-3, Requirement R5: Each Transmission Operator, Generator Operator, Distribution Provider, and Load-Serving Entity shall comply with each Operating Instruction issued by its Balancing Authority, unless such action cannot be physically implemented or it would violate safety, equipment, regulatory, or statutory requirements.

Proposed IRO-001-4, Requirement R2: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's Operating Instructions unless compliance with the Operating Instructions cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements.

Authority R6

Each RC shall comply with directions from another RC under R1 unless it communicates to the other RC that it cannot because compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements.

Operating Committee opinion

IRO-014-5, IRO-015-1 and IRO-016-1 describe inter RC procedures, Plans, notifications and coordination. These standards are expected to be retired and replaced by IRO-014-2 incorporating the pertinent requirements from the retiring standards. However, none of these standards explicitly include a requirement for one RC to comply with a directive from another RC.

The OC recognizes that coordination between RCs is vitally important. It is also recognized that an RC is the entity with the best understanding and situational awareness of its unique footprint. Therefore it is not believed to be beneficial for operational reliability for one RC to direct the actions of another RC. Rather, it is more appropriate to have this type of coordination documented within the requisite Joint Operating Agreements in which the appropriate assistance would be documented and understood in advance of such actions.

SDT response:

The Project 2014-03 SDT believes that proposed IRO-014-2 Requirements R3 – R6 already require Reliability Coordinators to coordinate and implement action plans even if the RC cannot agree that a problem exists or what the exact action plan is

Proposed IRO-014-2, Requirement R3: Each Reliability Coordinator, upon identification of an expected or actual Emergency in its Reliability Coordinator Area, shall notify other impacted Reliability Coordinators.

Proposed IRO-014-2, Requirement R4: Each impacted Reliability Coordinator shall operate as though the Emergency exists during each instance where Reliability Coordinators disagree on the existence of an Emergency.

Proposed IRO-014-2, Requirement R5: Each Reliability Coordinator that identified an Emergency in its Reliability Coordinator Area shall develop an action plan to resolve the Emergency during those instances where impacted Reliability Coordinators disagree on the existence of an Emergency.

Proposed IRO-014-2, Requirement R6: Each impacted Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Emergency during those instances where Reliability Coordinators disagree on the existence of an Emergency, unless such actions would violate safety, equipment, regulatory, or statutory requirements.