



August 3, 2018

To:

Honorable Chair Kevin J. McIntyre, Federal Energy Regulatory Commission (FERC)
Honorable Commissioner Cheryl A. LaFleur, FERC
Honorable Commissioner Neil Chatterjee, FERC
Honorable Commissioner Robert F. Powelson, FERC
Honorable Commissioner Richard Glick, FERC
Chair Kris Hafner, Western Electricity Coordinating Council (WECC)
Chief Executive Officer Melanie M. Frye, WECC
Chair Roy Thilly, North American Electric Reliability Council (NERC)
Chief Executive Officer James B. Robb, NERC

Subject: *The Future of a Western Interconnection with Multiple Reliability Coordinators*

Dear Commissioners, Chairs, and Leadership of FERC, WECC, and NERC:

The undersigned entities to this letter represent a broad group of public interest organizations across the Western states, whose primary goals are to achieve a reliable, modernized, and low carbon Western electricity grid that is capable of accommodating the many technological, policy, and market-based changes that are rapidly occurring in our region. Because grid reliability and resilience are essential to our goals, we are writing to express our concern about the potential devolution of the Western Interconnection's currently robust Reliability Coordinator (RC) function toward a minimalist function necessary to meet Electric Reliability Organization (ERO) requirements. The following remarks begin with background explaining the current state of reliability coordination in the Western Interconnection and conclude with specific recommendations for appropriately addressing near-term RC fragmentation in order to avoid the devolution of this important function.

Background

As the only independent RC responsible for ensuring bulk system reliability for most of the Western Interconnection, Peak Reliability has achieved a high standard of operational excellence, while concurrently developing advanced tools and methodologies to improve grid reliability and efficiency beyond the minimum reliability requirements established by the North American Electric Reliability Corporation (NERC). In particular, Peak's advancements – including the Enhanced Curtailment Calculator tool – have improved grid responsiveness and renewable energy integration in the Western Interconnection. However, more work remains to be done.

Regardless of the number of organizations providing RC services in the West going forward, the Western Interconnection needs a *proactive* RC function that has sufficient resources and continually provides and enhances a range of services to support interconnection-wide reliability, rather than a *reactive* function that only moves forward following major Western outages such as those in 1996 and 2011.

Unlike the Eastern and Texas interconnections, the Western Interconnection has evolved into a loosely knit network of transmission facilities. The western bulk power system covers long distances with a wide range of climate, terrain, and topographical diversity. These characteristics and a rapidly changing resource mix present unique stability challenges, including unscheduled flows and inter-area oscillations, and the need for management of approximately 279 Remedial Action Schemes (RAS). By contrast, Southwest Power Pool in the Eastern Interconnection has fewer than 10 RAS. To protect grid reliability, this system topology requires robust real-time interconnection-wide situational awareness and the capability to take effective action across the interconnection. An uncoordinated, fragmented RC function may increase risks to grid reliability.

However, interconnection-wide situational awareness and reliability directives alone are not sufficient to achieve effective grid reliability, given the rapid shift toward new technologies occurring in the Western Interconnection. For example, the RC function must develop and implement new tools and analyses that enable the unique capabilities of inverter-based technologies to improve grid reliability. Moreover, many other entities rely on the services, data and models of the RC function to perform assessment and compliance activities, including those required by NERC and Western Electricity Coordinating Council (WECC) reliability standards.

Concerning RC certification and oversight, the likely fragmentation of the RC function in the Western Interconnection in the coming months will require that WECC, NERC and the Federal Energy Regulatory Commission (FERC) rapidly increase their level of attention and oversight to effectively accommodate the operation of multiple RCs in the West. Ultimately, close oversight is essential to determine how well Western Interconnection RCs are collectively: (1) executing the shared function of ensuring grid-wide reliability; and (2) preparing tools and conducting analyses necessary to improve situational awareness and reliability assessment on a continuous basis.

Recommendations

The undersigned public interest organizations offer the following recommendations to ensure ongoing system reliability in the Western Interconnection under a fragmented RC function. Our recommendations can be divided into two categories: (1) recommendations directed at the oversight agencies, and (2) recommendations directed at the future providers of RC services in the Western Interconnection.

1. Oversight Agencies

Oversight agencies should aim to execute an open and transparent audit process that includes input from experts and stakeholders on the most effective way to achieve interconnection-wide grid reliability for our rapidly changing bulk power system. A checklist-type audit approach for certification and oversight of individual RCs may be insufficient to uncover all potential interconnection-wide reliability weaknesses, as well as opportunities for improvement. Rather, enhanced oversight involving a more cohesive, top-down approach for determining RC effectiveness, is crucial during the transition to multiple RC organizations and their ongoing operations.

Maintaining the West's high degree of grid reliability beyond minimal ERO requirements for RC certification – and specifically, ensuring continued availability of the advanced applications and tools developed by Peak Reliability and currently available to Western Interconnection Balancing Authorities (BAs) and Transmission Operators (TOPs), is vital to the best interests of RC customers and consumers within the Western Interconnection. The emergence and coordination of new RC providers in the West must be overseen independently and transparently by the appropriate regional entity, regional advisory body, and stakeholders to ensure that devolution of the West's RC function does not occur. To ensure comprehensive oversight, the undersigned organizations offer the following recommendation to FERC:

FERC, pursuant to its authority under Section 215(j) of the Federal Power Act, should direct the Western Interconnection Regional Advisory Body (WIRAB) to provide ongoing review and advice regarding the competency and performance of all RC providers in the Western Interconnection. Such review and advice should, at a minimum, involve an annual performance review conducted by WIRAB or its designees, in accordance with a prescribed set of performance criteria. The criteria should be aimed at ensuring reliability achievements consistent with the public good, and in accordance with those identified best practices achieved by Western RCs that demonstrably yield economic and social benefits to customers and ratepayers in the Western Interconnection. Further, WIRAB should publicly share the results of its annual review, including any recommendations for ongoing improvements, at one of its biannual meetings.

2. Future Providers of RC Services

As the Western Interconnection RC function evolves, the undersigned organizations further recommend that organizations that are ultimately designated as Reliability Coordinators in the Western Interconnection do the following to ensure that the Western Interconnection's RC function does not devolve:

1. Provide more than the minimum capabilities required by NERC to meet the unique challenges of rapidly changing Western grid conditions.
2. Maintain situational awareness, oversight and responsiveness across the Western Interconnection without gaps during transitions where BAs and TOPs transfer from one RC organization to another.
3. Maintain and continually align the West-wide System Model (WSM) across all Western RC organizations, including key elements such as complete and accurate RAS models and support of ongoing Model Enrichment Projects (including enhanced monitoring of System Operating Limits, or SOLs; enhanced generator modeling; and improved visualization).
4. Execute or align with the following current Peak Reliability tools and initiatives, including the sharing and incorporation of relevant data into event analysis, system assessment, and where possible, real-time operations –
 - i. Enhanced Curtailment Calculator (ECC): The ECC is a tool that uses near real-time inputs from Peak’s State Estimator and Supervisory Control and Data Acquisition (SCADA) platforms to accurately determine SOL exceedances. The ECC supports the reliable management of SOL exceedances by implementing preventive actions and abating unnecessary curtailments, thereby leading to both effective and efficient grid operations.
 - ii. WECC Interchange Tool (WIT): The WIT is a central source for confirmed interchange throughout the Western Interconnection, including E-Tag validations.
 - iii. Western Interconnection Synchrophasor Project (WISP): WISP includes 584 phasor measurement units and 77 phasor data concentrators. The use of WISP increases grid operators’ visibility into the bulk power system in near real-time, enables earlier detection of grid reliability threats, and facilitates critical information sharing between neighboring control areas.
 - iv. Technical Assistance: Contribution of assistance to less technically capable BAs and TOPs – a service currently provided by Peak Reliability’s Hosted Applications.
5. Perform analyses of potential reliability risks and opportunities arising from the Western Interconnection’s changing resource mix.
6. Develop new tools to enhance situational awareness, predictive transient stability analysis and real-time coordination, thus providing for more reliable and efficient operation of the Western Interconnection.

7. Ensure that any RC operating within a market (i.e., a Regional Transmission Organization or Independent System Operator) is fully capable of exercising its reliability responsibilities independent of market influence.
8. Provide for inclusive, transparent and accountable governance of each RC organization, including full representation of all affected stakeholders.
9. Recognize WIRAB's statutory authority as an advisor to FERC, NERC, and WECC on Western Interconnection reliability matters, and memorialize that role for WIRAB to directly advise the California Independent System Operator (CAISO), the Southwest Power Pool (SPP), and any other prospective RC service providers that present in the Western Interconnection.

Signatories to this letter are deeply engaged in Western Interconnection processes and forums to assure that the region can transition to a low carbon grid as soon as possible, while ensuring improved reliability of the Western grid. In this era of tremendous technological and organizational change it is imperative that the West maintains its focus on reliability and resilience while modernizing the grid and its operating platforms. We look forward to engaging with RC and jurisdictional agencies during this transition.

Thank you for your consideration of these comments.

Sincerely,

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