

PEAKRELIABILITY NEWSLETTER

PEAK – THE PROVEN RELIABILITY COORDINATOR

Message from Marie Jordan, Peak CEO and President



Transparency has been and will continue to be our top priority as Peak works through the changes needed to address the newly competitive Reliability Coordinator (RC) market in the West.

Peak entered this year's budget cycle against that competitive backdrop – other players plan to offer RC services, and our funders have not yet determined which entity they will choose after Dec. 31, 2019. To address the uncertainty, we knew the best and most appropriate course was to develop budgets that support

two scenarios – one that supports the continuation of Peak, and one much less preferable option that would fund a wind down of Peak effective Dec. 31, 2019. Let me be clear – the second option is not our preference, but to be fully transparent it was important that it be considered.

Peak continues to believe that a full West-wide RC model is in the best interest of the region, and we are very interested in continuing to provide those services long term. We know that other RCs are developing and that some entities may choose to leave Peak. Many entities and regulators have contacted us and want Peak to stay intact as an organization; they want to make sure the Interconnection makes RC choices based on quality, not just cost. Regulators also note that just certifying an entity as an RC doesn't ensure quality. Peak has proven quality.

I have no doubt that the California ISO has the capability to build an RC; they were an RC before, but there have been a lot of changes since then. A prudent option for those considering a change would be to preserve reliability by waiting until CAISO is fully functioning and has worked out any glitches before signing on.

While we've called our ongoing RC option the "Transitional RC," I want to be clear that it is NOT a temporary RC. It is an option, as markets evolve, for those who want to stay on to receive RC-only services. We also see it as an opportunity for

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PEAK SEEKS FEEDBACK, COMMITMENT ON FUTURE DIRECTION

Peak continues moving forward with its plan to offer Transitional Reliability Coordination (TRC) services while waiting for Western energy markets to mature. The budget associated with the TRC was presented to stakeholders during the June 5 MAC Budget Review webinar. The proposed TRC reduces risk to reliability and provides entities with cost certainty until markets in the West are mature. The TRC was announced March 30 as part of the release of the Peak/PJM Connex business plan; see white paper [HERE](#). While the TRC is the preferred option and is strongly recommended by Peak, a second option that describes the wind down of Peak was presented to stakeholders during the June 5 webinar.

Peak is now seeking feedback from interested parties in three areas – comments on budget options for 2019 and 2020, comments on policy issues related to the future of reliability in the Western Interconnection and, for Funding Parties, a

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entities to continue receiving proven RC services, tools and technology while waiting for markets to evolve, minimizing risk to reliability. Peak continues to work closely with PJM Connex on what we believe will be an outstanding market option for the West.

For now Peak (and CAISO and SPP too, for that matter) is developing RC budget and cost estimates not really knowing with certainty who we will be serving. To properly and prudently plan, it's important to us at Peak that we set out the options, share them broadly and get a clear view of the preferences of Funding Parties and others in the region, making sure they also are aware of the risks of going to an unproven RC.

So, to better determine the size of our future RC footprint, Peak is asking Funders to commit to Peak's ongoing RC services through Dec. 31, 2020, by signing a non-binding Letter of Intent (LOI) by July 30, 2018. Based on that outcome, we will begin to develop a detailed implementation plan, continuing to be as transparent as possible. See budget timeline on page 3.

Our ask is similar to that of SPP and CAISO; both have asked entities to sign LOIs for RC services. We know that many BAs and TOPs have already signed with both CAISO and SPP. They are quite rightly preserving their options so they can determine the best fit for their organization. These are not an indication of decisions made.

Costs for ongoing Peak RC services are being reduced through reductions in executive management, staffing and fewer Board seats. Our employees have been fully briefed on these reductions, and the Board is supportive of this direction. Peak is in a good position because it has mature RC systems and tools, but there will be changes in operational scope and a reduction in Peak's innovative capacity going forward, and innovations will first need approval of membership.

We know there are some risks in the decisions that we're making, but we've evaluated those risks and believe they are manageable. It's clear that entities are looking for price reductions and in this competitive environment we must listen to what our funders are saying and have them help decide what we will offer in 2020.

Even with the uncertainty, Peak employees have not taken their eyes off the ball. Reliability continues to be our fundamental, first and foremost role, and our focus on operational excellence – our day jobs – has led to a successful start to 2018 performance metrics, a clean audit from WECC, and recognition as the RC of the Year by the North American Synchronphasor Initiative (NASPI).

Uncertainty and rumors will undoubtedly continue to surface as the West prepares for such a major transition, and **I strongly encourage anyone with questions or concerns to [contact me personally](#)**. It is only through full transparency and complete information that Western entities will be able to make the decisions that will ensure continued reliability.

– Marie Jordan

PEAK AWARDED AS OUTSTANDING RC

Because of its innovative work with synchronphasor technology, Peak Reliability was recently named the 2017 Outstanding Reliability Coordinator (RC) by the North American Synchronphasor Initiative (NASPI).

The award recognized Peak for its work to improve real-time monitoring and situational awareness across the Western Interconnection through its collaborative work to pioneer programs that enhance system reliability. The company continues to work alongside stakeholders and vendors to develop and enhance software-driven solutions using real-time phasor data to assist with difficult issues such as model validation and oscillation detection.

"Our employees and partners bring innovation, unsurpassed knowledge and skills to their jobs every single day," said Brett Wangen, Peak's chief engineering and technology officer. "This award is a direct reflection of their commitment to reliability and their drive to continually seek ways to improve upon our services."

Over the past decade, in collaboration with its stakeholders, Peak has built and operated a single, wide-area RC dedicated to Bulk Electric System reliability in the Western Interconnection. The company recently announced a formidable partnership with PJM Connex to ensure it can continue to meet the needs of its stakeholders.

NASPI is an international community of electric industry members, researchers and vendors working together to advance the understanding and adoption of synchronphasor technology to enhance power system reliability and efficiency.

Peak seeks Feedback, Commitment on Future Direction

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non-binding Letter of Intent. The schedule (see chart on this page) is further explained below.

“While markets enhance reliability and enable RC services at very low cost, when market operators will be up and running is open for debate,” said Marie Jordan, Peak president and CEO. “Until then, Peak’s TRC offers a path that provides for reliability, cost certainty and transparency, and unmatched quality. It also provides a more permanent, low-cost option for those who prefer to stay out of the market and continue receiving RC services from Peak.”

Peak’s TRC ensures that Balancing Authorities (BA) and Transmission Operators (TOP) receive quality RC services that reduce compliance risk until the market operators are established and operational, allowing time to make a fully informed choice and orderly transition, if they choose to make a change. “Our challenge is to ensure entities in the West are not pressured into making quick, irreversible decisions before all their options are fully operational and vetted,” said Jordan.

The introduction of future RC options meant that Peak had to develop its upcoming budget in an environment in which Peak’s Funders have not yet determined which entity will be their RC provider after Dec. 31, 2019.

Due to this uncertainty, Peak’s draft budgets support two scenarios. As noted in the CEO column, Scenario 1 remains the direction Peak firmly believes is best for the West.

SCENARIO 1 2019 Status Quo and 2020 TRC, available [HERE](#)

- 2019 funding will remain at the same level as 2018 and 2017
- The 2020 budget will reflect the \$28.7 million as described in the TRC white paper

SCENARIO 2 2019 Wind Down and 2020 Wind Down Completion, available [HERE](#)

- 2019 funding will reflect a wind down scenario where Peak will cease operations Dec. 31, 2019
- The 2019 budget will include additional expense related to staff retention and contractual obligations required to transition RC responsibilities
- 2020 budget contains funding required to complete the administrative and legal requirements arising from the closure of Peak

In addition to seeking comments on the budget process, where Funders and stakeholders are invited to submit comments via Peak’s public website, Peak is also seeking expanded comments on the larger policy questions that the funding scenarios present for the future of Peak and the reliability of the Western Interconnection. Instructions about how to comment on policy issues related to the budget scenarios are posted [HERE](#).

Also, to allow Peak to properly and prudently plan, Peak recently notified its Funding Parties that it is seeking commitments to the TRC through Dec. 31, 2020. Commitment will be in the form of a non-binding Letter of Intent submitted by Funders to Peak’s legal department via email by July 30, 2018.

All BAs and TOPs in the West have a compliance obligation to contribute to the overall reliability of the Bulk Electric System, and all need what matters most to reliability – an RC provider that can deliver reliability, low-cost services and quality.

“Quite simply, that’s Peak,” Jordan said. “Peak speaks for reliability in the West. It’s our mission and our purpose. No one can match us in terms of experience, quality, certainty and cost transparency.”

More information on the budget and future direction of Peak can be found on the [peakrc.com](#) website, on the [2019 Business Plan and Budget](#) and [Peak Transitional RC](#) pages.

FUNDING AMOUNT AND FUTURE DIRECTION OF PEAK TIMELINES

FUNDING	June 28 MAC budget review during MAC meeting	June 29 Draft Funding Amount (DFA) posted for comment (both scenarios)	July 30 DFA comment period closes	August 6 Peak responses to DFA comments posted on website	August 27 Objections to Peak’s DFA responses due	September 4 Peak posts proposed Funding Amount on website
	June 8-30 TRC vs. Wind Down comment window	July 9 Publish TRC vs. Wind Down LOI	July 18 TRC vs. Wind Down status webinar	July 26-30 TRC vs. Wind Down LOI submission window	August 3 TRC vs. Wind Down LOI results posted	August 6 Peak announces strategic direction
FUTURE DIRECTION OF PEAK						

Final Decision September 18 –
Board of Directors votes on proposed Funding Amount and ratifies Strategic Direction

PEAK MEMBERS GATHER FOR ANNUAL MEETING

Gathering feedback from members was a key feature of the Annual Members' Meeting, held May 1 in Portland. The morning included breakout sessions with individual membership classes and election of Member Advisory Committee (MAC) representatives, as well as annual reports from Jim Shetler, MAC chair, and John Procaro, Peak Board chair.

Newly elected to the MAC is Kristie Cocco of Arizona Public Service, representing Class 1. Re-elected MAC members include Phillip Shafeei, Colorado Springs Utilities, Class 2; Caitlin Liotiris, Utah Association of Energy Users, Class 4, and Karen Olesky, Public Utilities Commission of Nevada, Class 5. Because there were no nominations for Class 3, during the MAC meeting, Shetler appointed Allen Schriver, NextEra Energy Resources, to a one-year term.

Steven Cobb, Salt River Project, Class 1, and JT Thompson, NIPPC, Class 3, stepped down from the MAC and were thanked for their service.

In his annual meeting report, Shetler provided an overview of the past year and MAC's increased focus on reliability and Peak operations. A priority for 2018 is helping members understand the transitions underway in reliability coordination in the West.

"We do know that Peak tomorrow will probably be very different from Peak today," Shetler said. "One of the things we've asked class representatives to discuss with members is, in light of this transition, what role MAC should play in helping this effort and assisting members in understanding what's going on."

In his presentation, Procaro provided a Peak Board update on governance, operations and strategy.

"Peak has matured into a top-tier Reliability Coordinator (RC), and the Board believes Peak now

has a team of competent executives, managers, staff and operations personnel," Procaro said. He shared some of the recent technical innovations, including work with users to improve and customize data management/user interfaces within Hosted Advanced Applications (HAA).

He noted reliability issues of the past year, including the solar eclipse, wildfires and the loss of Aliso Canyon gas storage, and said the Board believes Peak did a very good job dealing with those challenges. While pleased with Peak's performance, Procaro said the Board recognizes there is always room for improvement so it will continue to encourage Peak's focus on continuous improvement in both operations and costs.

Procaro also discussed what led to reliability services becoming a competitive offering in the West, and shared the Board's belief that one RC in the West maximizes reliability. Maintaining Peak as a viable RC option in the West led late last year to the Board approving the Peak/PJM initiative to facilitate the development of custom market and reliability functions for the Western Interconnection, Procaro said.

Given the uncertainty and knowing things will change to a certain extent, Procaro said the Board asked Peak management to plan for three different scenarios – the successful development of western energy markets, a transitional RC and, worst case, a wind down plan for the Peak RC.

"We need to work with members to maintain the West-wide view," Procaro said, "and continue to maintain our focus on reliability and cost."

He thanked Peak members, MAC members and the Peak team for their contributions to the reliability of the Western Interconnection. "We look forward to continuing to provide service to our members."

MAC MEETING INCLUDES ELECTIONS, DISCUSSIONS

A reliability discussion kicked off the May 1 Member Advisory Committee (MAC) meeting, part of MAC's increased focus on reliability. Presenters were Art Storey, retired after 49 years in the industry, including as manager of the New York Power Pool's Power Control Room, and Ken McIntyre, currently vice president and director of Standards and Compliance at NERC. Storey shared his experiences and lessons learned about reliability as New York transitioned to a competitive energy marketplace. McIntyre discussed NERC's role in certifying new Reliability Coordinators (RC).

In MAC business, Jim Shelter, Class 1 representative, was re-elected as MAC chair, and Christopher McLean, Class 5 representative, was re-elected as vice chair.

Prior to the vote, MAC representatives discussed any concerns about having both officers from California entities, in light of the California ISO plans to exit Peak in September 2019. Because no biases or issues were noted, the vote moved forward with the request that MAC stay aware of any issues going forward. As Shetler noted, MAC representatives come wearing many hats, including roles within MAC, as a Class representative and a company representative, and all need to make clear as to which they are speaking for.

Class representatives reported on member feedback from their Class member meetings earlier in the day. A common theme was the transition underway as the West explores multiple RC options, and a desire to collect answers to critical questions that will help entities make informed decisions. A taskforce was set up to explore this further.

Other presentations at MAC included an update on the transitional RC from Marie Jordan, Peak president and CEO, and discussion on MAC engagement initiatives; discussion on the next MAC performance survey was deferred until September.

UPDATE FROM MAY BOARD MEETING

The May 2, 2018 Peak Board of Directors meeting included updates and discussion on Peak's year-to-date performance and Operational Excellence Days, a Board-requested update on the Enhanced Curtailment Calculator (ECC), the Peak CEO Report (see separate articles), and an update on the PJM/Peak market initiative.

Reports from the MAC and WIRAB were given early in the agenda to allow them a better opportunity to provide input to the Board. The Board also re-elected John Procario as chair, and Tom King as vice-chair.

General discussion topics included an ongoing desire for as much transparency as possible, and flexibility as organizations prepare to make decisions about their future Reliability Coordinator (RC) provider. Peak was also recognized by the Board for its operational performance and for delivering year-over-year improvements with a flat budget.

PEAK RECEIVES INTERNATIONAL RECOGNITION

Peak Reliability is being recognized with a Special Achievement in GIS (SAG) Award at the 2018 Esri User Conference in July 2018. The international award notes Peak's outstanding work with GIS technology; recipients came from a pool of more than 100,000 users.

Peak was recognized for development of an Interconnection-wide geospatial visibility platform that provides system operators additional valuable information useful for managing the unique challenges of the Western Interconnection.

The platform helps address unique operating characteristics of the Western Interconnection, including geographic size, varying climate and topology and localized environmental factors, including wildfires common in the West. Using GIS, Peak is developing a tool that will include these factors to help drive better informed reliability decisions.

PERFORMANCE UPDATE – PEAK CONTINUES FOCUS ON RELIABILITY

Peak's ongoing focus on reliability and day-to-day business operations was apparent in the updates provided to the Peak Board of Directors at its May 2, 2018 meeting.

"While there's a lot going on, I can assure you that Peak has been focused, and will continue to be focused primarily on enhanced reliability in the West," said Terry Baker, managing director of operations.

He provided a report to the Board on Operational Excellence Days (OED), available [HERE](#), outlining the metrics that are evaluated every day to measure performance.

"After we review the metrics, we always discuss what we could have done better and assign action items as needed. Our focus is on continuous improvement," Baker said.

Metrics evaluate tool and human performance in engineering, operations and information technology, supplemented with subjective assessments. An OED is achieved if the daily tally is greater than 95.74 percent.

"This is an increase from the initial bar set in 2017 of greater than 93 percent; we wanted to be harder on ourselves," Baker said.

Performance improvements continue, however, and Peak is exceeding this performance metric as of the first quarter 2018, with 42 OEDs.

Baker added that during a North American Transmission Forum (NATF) Assistance Visit in September 2017, the Peak OED process was recognized as a "Best Practice" by the Assistance Visit team.

Other performance metrics for 2018 remain on track. Peak is currently slightly below 2018 budget, its outreach plan is on target, and an employee engagement survey began in May. The Strategic Metrics report is available [HERE](#).

RC CERTIFICATION UPDATE

Following the Sept. 8, 2011 blackout, Peak entered into a Stipulation and Consent Agreement with FERC that documented mitigating activities related to the blackout event. On June 26, 2017, Peak notified FERC that all mitigating activities identified in the Stipulation and Consent Agreement were completed.

Peak's continued certification as a Reliability Coordinator was approved by NERC on April 26, 2018, without condition. For more information, contact [Scott Downey](#), Peak director of compliance.

USER GROUPS COLLABORATE ON INDUSTRY ISSUES

RC User Group Update

The most recent Reliability Coordinator User Group meeting was held May 3, hosted by PacifiCorp in Portland.

Almost 80 attended, 53 from membership and 26 from Peak staff. Highlights included an overview by the Northwest Power Pool of BAL-002 and EOP-011.

Bonneville Power Administration (BPA), PacifiCorp, Sacramento Municipal Utility District (SMUD) and Peak participated in a panel discussion on IRO-018 and TOP-010 implementation. Also, Peak led a discussion on the future of Peak Reliability services and provided an overview of its RMTNet and TSAT emerging tools, along with updates from its SMART, WIT, PHAAUG and OPWG working groups.

The next RC User Group meeting is planned for Fall 2018.

SMART

The Synchronized Measurements and Advanced Real-time Tools (SMART) group met May 15-16, at WECC offices in Salt Lake City. There were 17 attendees, representing 12 organizations.

The group is working collaboratively on challenges as new technologies such as synchrophasor applications and real-time transient stability analysis tools are implemented into control rooms in the West. One taskforce is addressing system dynamic limits and frequency responsive measure monitoring. Another is monitoring real-time oscillation detection and source locating, and a third taskforce is working on data management and system architecture. System model validation and coordination, including wind turbine modeling issues and new synchrophasor-based RAS implementation, is being addressed by a fourth taskforce.

The next meeting is scheduled for October 11 at Peak's Vancouver office. For more information, contact [Hongming Zhang](#).

ECC IMPLEMENTATION CONTINUES

An update on the Enhanced Curtailment Calculator (ECC) tool was provided at the May 2, 2018 Peak Board meeting, part of a Board request to be kept informed on progress and on the value being obtained using the ECC.

The presentation, available [HERE](#), summarized reliability improvements since implementation of the ECC, a reliability tool developed by Peak for all Transmission Operators (TOP) and Balancing Authorities (BA). ECC's primary purpose is to more efficiently utilize the transmission system and provide System Operating Limits (SOL) exceedance management with greater accuracy due to use of real-time data.

Since June 2017, when webSAS was transitioned to ECC, there has been a reduction in Unscheduled Flow (USF) events, and the duration of these events is generally shorter. ECC, plus Peak-led SOL methodology changes, have given Path Operators more flexibility in how they provide relief during these events, and ECC's real-time

data is providing the increased granularity that leads to more accurate corrective measures when they are needed. The tool will be increasingly important in seams coordination and mitigating SOL exceedances in a coordinated fashion as other RCs and multiple markets develop in the West.

Acceptance of the new tool has been good, with the ECC Taskforce collaboratively working on improvements in the tool, according to Jeremy West, Peak manager, Interconnection Reliability Initiatives. Providing entities with flexibility and more choice in how they interact with the RC to provide relief has been appreciated, he said.

The ECC Final State Design technical summary document and white paper was posted May 15 to the [peakrc.com](#) website for a three-week final industry review period. This paper outlines Phase 4, the final ECC phase, due for completion by the end of 2019. The review period ended June 5, 2018. More information is available [HERE](#).





AUDIT NETS POSITIVE RESULTS

The 2018 WECC Compliance Audit of Peak was completed March 2, 2018. Operations, Planning and Critical Infrastructure Protection reliability standards were included in the audit scope.

The audit represented an assessment opportunity for Peak's Compliance program. It was a culmination of many months of preparation by the Peak team, and the positive audit results validated that effort.

"We are pleased with the audit results, which reflect favorably upon the entire Peak team," said Scott Downey, director of compliance. "We will use this assessment to validate and further our continuous Compliance program improvement efforts here at Peak."

INTERCHANGE UPDATES

BAL-003 Frequency Bias Settings (FBS) updates were implemented April 3, 2018, requiring changes to the WECC FBS as well as FBSs for each individual Balancing Authority (BA).

Tami Keith, Peak operations and interchange specialist and coordinator of Peak's WECC Interchange Tool (WIT) User Group, reminds all BAs to visit the NERC website to confirm they have the most **current information**, as the NERC Implementation Document was originally published March 24, 2018, but was revised a few days later.

Entities using their own internal system to calculate their inadvertent interchange need to make sure they have updated this information in both the WIT tool and their internal system.

In other news, Peak has been working with OATI regarding the deregistration of the Gila River Power BA. The Salt River Project purchased the Gila River Power Station in late 2017 and Peak is working with all involved entities to ensure the primary Inadvertent Interchange was transferred to the new BA in early June 2018.

Also, Peak is working with OATI and Avangrid, which will become its own BA. Testing has been ongoing, with the current go-live date set for July 31, 2018.

UPCOMING PEAK MEETING DATES

JUNE

- 21 HAA user group webinar
- 28 Peak MAC webinar/conference call

JULY

- 26 Peak MAC webinar/conference call
- 30-31 ECC taskforce meeting, Xcel Energy, Denver

AUGUST

- 23 Peak MAC webinar/conference call

SEPTEMBER

- 17-18 Peak Board, MAC and Board committee meetings
Heathman Lodge, Vancouver

OCTOBER

- 11 SMART group meeting, Peak Vancouver office
- 25 Peak MAC webinar/conference call

NOVEMBER

- 13-14 Peak Board, MAC and Board committee meetings
Embassy Suites, Portland Airport

DECEMBER

- 13 Peak MAC webinar/conference call

FEBRUARY 2019

- 5-6 Peak Board, MAC and committee meetings, location TBD