QUARTERLY REPORT

December 2019

We're all in this together

When I succeeded Gary Ackerman as Executive Director of WPTF, my over-riding objective was to make sure we demonstrated that we are the WESTERN Power Trading Forum, not merely the "California" Power Trading Forum. As the largest electric market in the West, California will naturally command a significant amount of attention, but the entire Western interconnection is wrestling with transformational issues in the electric sphere and WPTF and its members need to be vigilant and involved.

To that point, WPTF had a roundtable in Seattle focusing on the efforts that the Pacific Northwest (PacNW) is making to deal with three big issues that elsewhere would be addressed through a regional market. Those issues are 1) market formation, 2) transmission planning, and 3) resource adequacy. How that part of the West manages these issues as separate efforts rather than under one organization is a source of curiosity. It may also be cause for concern – not only in the PacNW, but in California which must often rely on imports.

So here again, California demands our attention. It's a bit like the joke that Canadians have for living next to the United States: "When California sneezes, the West catches a cold."

Speaking of imports, California regulators decided in October to "clarify" a rule on resource adequacy (RA) products that caught the whole industry by surprise. Presumably concerned that RA imports are becoming more crucial as the internal generation mix transitions, the California Public Utilities Commission (CPUC) explained that it had always intended that RA imports self-schedule into the California Independent System Operator (CAISO) every hour of every day. Everybody who transacts in the market – as well as the CAISO itself – has always viewed the RA obligation merely to bid into the market but schedule and flow only once it has been indicated – through a CAISO market award – that the RA asset is needed. News that an RA import has a "must flow" requirement caught the market so unaware that it is causing many to scramble to adjust. Few parties are happy as commercial arrangements must be adjusted, prices for imports are likely to crash, congestion will increase, and more curtailments will happen within the CAISO. What's more, the CPUC has probably just pre-empted the jurisdiction of the Federal Energy Regulatory Commission (FERC).

There's plenty more going on as you will read in the following Quarterly Report, so buckle up. There is a need to stay engaged. We're all in this together.

Scott Miller

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Save the Date

2020 Winter General Meeting
February 20-21
Park Hyatt Aviara Resort
Carlsbad, California

Check the WPTF website for all the details

RESOURCE ADEQUACY (RA) COMMITTEE

Greg Klatt

Greg Klatt coordinates the [Resource Adequacy Committee](). Greg is a practicing attorney with over 20 years of energy industry experience. His practice focuses on state and federal regulation of the electric power and natural gas industries. He has represented clients in numerous ratemaking and rulemaking proceedings before the CPUC. He regularly advises energy companies regarding regulatory requirements applicable to their product and service offerings. He represents marketers and retailers in CPUC licensing, compliance and enforcement matters. He also commonly acts as regulatory counsel in energy-related transactional matters, including procurement contracting, resource development projects, repower projects, major asset acquisitions and related financing arrangements.

Greg received his J.D. from UC Berkeley's School of Law (Boalt Hall). He graduated magna cum laude with a B.A. in History from the University of San Francisco and is a lifetime member of the Alpha Sigma Nu honor society.

Where's We've Been

WPTF formed the RA Committee in October 2018 to provide its members with highly focused coverage of the CPUC RA program and related regulatory developments. The committee's actions are guided by the WPTF Board's RA policy statement, which among other things calls for the establishment of multi-year forward procurement requirements for all RA capacity (i.e., system, local and flexible capacity).

Over the past fourteen months, the committee's advocacy on behalf of WPTF members has largely concentrated on the development of a centralized RA procurement framework that ensure collective RA procurement deficiencies are cured with effective resources at a reasonable cost, promotes the retention of existing generation resources and the development of new resources that support California's clean energy goals, and accommodates increasing levels of customer migration. Over the same period, the committee has also engaged on several other program-critical issues, including changes to the CPUC's rules governing RA import contracts and the methodology used by the Commission's Energy Division staff to calculate the effective capacities of intermittent renewable resources.

In late June, the CPUC voted out its first decision implementing multi-year local RA requirements (for 2020-2022). The [decision]() also adopted the Energy Division's proposal, which WPTF supported, for calculating the Effective Load Carrying Capacity (ELCC) of intermittent resources. While the revised ELCC methodology is not perfect, it accounts for the impact of behind-the-meter solar photovoltaic resources and otherwise results in far more realistic ELCC values for solar and wind resources. The decision also directs the Energy Division to "convene a workshop on ELCC methodologies, in particular on the disaggregation into locational or technology factors, additional work to incorporate storage into the methodology during the remainder of 2019, and ELCC for combined resources." (More on that below.)

At the end of August, the California Community Choice Association (CalCCA), Calpine Corporation, the Independent Energy Producers Association, Middle River Power, San Diego Gas & Electric Company, Shell Energy North America and WPTF filed a [proposed settlement]() with the CPUC to establish a "residual" central buyer framework. From WPTF's perspective, the settlement's most important features are that it establishes three-year forward procurement requirements for system, flexible and local RA capacity, retains a bilateral market for LSE's to self-procure RA capacity to the extent they desire, and provides for the designation a Central Procurement Entity (CPE) to procure the capacity needed to cover any remaining ("residual") RA requirements. The settlement has the support of the CAISO, which actively participated in the negotiations leading to the settlement agreement but was precluded from being a signatory. The Commission is expected to issue a proposed decision addressing the proposed settlement by the end of the year.

In October, the CPUC issued a decision that purports to "affirm" the existing rules governing RA import contracts, including the "clarification" that "a non-resource-specific RA import is required to self-schedule into the CAISO markets consistent with the timeframe reflected in the governing contract." In practice, this means that import suppliers are required to either source from specified resources or self-schedule energy into the California System Operator (CAISO) energy markets as price takers as a condition for participation in California's system RA market. WPTF opposes the self-scheduling requirement, as it will likely suppress energy prices, reduce system flexibility and increase renewable curtailments. CalCCA, the CAISO and Powerex have filed applications for rehearing of the decision, challenging the lawfulness of the decision on procedural, statutory, constitutional, and jurisdictional grounds. In addition to filing responses in support of the rehearing requests, WPTF is prepared to seek relief at the federal level if necessary.

Where We're Headed

At its November 25, 2019 business meeting, the CPUC voted out an order instituting a new RA rulemaking (OIR). The purpose of the new RA proceeding is "to address the 2021 and 2022 RA compliance years, and consider any changes and refinements to the RA program, including consideration of larger structural changes that may be necessary to address increasing reliance on use-limited resources to meet reliability needs." The OIR further provides that "[i]ssues relating to a central procurement structure may be moved into this proceeding for further consideration as necessary." The issues identified in the OIR's preliminary scoping memo include:

- Inputs, processes and results of the Local and Flexible Capacity Requirements studies.
- Examination of the broader RA structure to address energy attributes or hourly capacity requirements
- Potential modifications to the maximum cumulative capacity (MCC) buckets to address increasing reliance on use-limited resources.
- Consideration of whether there is a benefit in expanding multi-year forward local RA requirements to system and/or flexible resources and how to address market power with multi-year requirements.
- Counting conventions and requirements for hydro resources, hybrid resources, third-party demand response resources (including load impact protocols and contract provisions), and potentially other resources.
- Marginal ELCC counting conventions for solar, wind and hybrid resources.

On December 3, 2019, parties filed comments on the OIR. WPTF's comments supported the OIR's preliminary determination that the new RA proceeding will consider multi-year requirements for system and flexible RA. In addition, WPTF urged the commission to consider the unbundling of flexible RA among the program refinements to be examined in the proceeding. A ruling finalizing the scope of issues to be addressed in the proceeding is expected in January 2020. Whatever that may be, 2020 will be another very busy year for the RA Committee.

CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC) COMMITTEE

Dan Douglass

Dan Douglass has directed WPTF's legal efforts since helping to cofound WPTF with Gary Ackerman in 1998. On behalf of WPTF, he has been extremely active at the California Public Utilities Commission and assists Ellen Wolfe, Caitlin Liotiris, and Carrie Bentley with WPTF matters at the Federal Energy Regulatory Commission (FERC).

His firm, Douglass & Liddell, specializes exclusively in energy law issues, providing regulatory and transactional counsel to generators, suppliers, and end-users in the electricity and natural gas markets. This work has included the formation and representation of several influential regulatory advocacy organizations in addition to WPTF.

Prior to Douglass & Liddell, Dan was a partner with the national firm of Arter & Hadden, where he headed the firm's California energy practice; he previously was General Counsel of LG&E Power and President of Cook Inlet Energy Supply. Dan also spent 15 years at Southern California Gas Company and its affiliates and worked on several international and domestic gas supply and storage issues during that time.

The CPUC's Focus on De-Energization as a Means to Combat Wildfire Issues

This year, the CPUC has been busily engaged on several fronts with regard to wildfires. Its primary focus has been on utility de-energization requirements, the IOUs' performance, and resulting investigations and sanctions. Given the political sensitivities attendant to shutting off power to tens of thousands of customers for days at a time, this focus is hardly surprising.

As background, in September of 2018, then Governor Brown approved Senate Bill (SB) 901. Among other things, SB 901 added new provisions to § 8386, requiring all California electric utilities to prepare and submit Wildfire Mitigation Plans that describe their plans to prevent, combat, and respond to wildfires affecting their service territories. Shortly thereafter, the CPUC opened rulemaking R.18-10-007 as a vehicle for the review and implementation of the electric IOUs' plans prior to commencement of the 2019 wildfire season. Section 8386(c)(6) requires the plans to include protocols for de-energizing portions of their distribution systems and § 8386(c)(7) requires the plans to include appropriate procedures for notifying customers who may be impacted by the de-energizations.

The De-Energization Tool:

In response to SB901, the CPUC issued rulemaking R.18-12-005 to examine its rules allowing electric utilities to de-energize power lines in case of dangerous conditions that threaten life or property. Earlier, the CPUC adopted de-energization rules in Resolution ESRB-8 Phase 1, which was built upon decision D.12-04-004.

In Phase 1, the CPUC examined and adopted Public Safety Power Shutoff (PSPS) guidelines, focusing primarily on notification, communication and outreach, in advance of the 2019 wildfire season. The rulemaking included a Staff Proposal on which parties provided feedback through a comment process. Phase 1 culminated in adoption of decision D.19-05-042 on May 31. The guidelines adopted in decision D.19-05-042, along with the guidelines previously adopted in Resolution ESRB-8, comprise the guidelines that are in effect governing the electric IOUs' PSPS programs.

Phase 2, which is yet to commence, is designed to enable the CPUC to examine issues that were outside the scope of Phase 1 and revisit some of the issues in Phase 1 that require additional development. They plan to base their analysis on proposals by the IOUs, staff proposals, comments on those proposals, and workshops. The CPUC's aim in Phase 2 is to produce comprehensive PSPS guidelines.

However, due to the uproar that has occurred with respect to the IOUs' implementation of PSPS events (primarily those by PG&E), a November 1 ALJ ruling gave parties notice that the current procedural schedule in the rulemaking has been suspended. The intent of the suspension is to provide time "so that the CPUC may focus its efforts on issues that are most critical in light of current wildfires and extensive Public Safety Power Shutoff (PSPS) events." It also provided that a new Scoping Memo will be issued shortly.

On November 12, the CPUC took PG&E to the figurative woodshed. The CPUC issued a ruling directing the utility to show cause as to why it should not be sanctioned for violation of P.U. Code Sections 451, decision D.19-05-042 and Resolution ESRB-8. In its ruling, the CPUC chastised PG&E for "failing to properly communicate with its customers, coordinate with local governments, and communicate with critical facilities and public safety partners," during the October 9 - 12, 2019 and October 23 - November 1, 2019, PSPS events. Among PG&E's failings, the following are cited:

1. PG&E's website was unavailable during most of the time of the PSPS event. This meant that customers and government agencies were unable to obtain information on the outage or other important data.
2. PG&E did not notify approximately 23,000 customers of the 729,000 customers, including approximately 500 medical baseline customers, of the PSPS event.
3. PG&E did not properly coordinate with local governments and tribal communities prior to and during the PSPS event.
4. PG&E did not plan how its PSPS event would affect key infrastructure throughout its service territory to identify where backup power would be necessary.

The ruling further stated that the "impact of PG&E's failure to effectively communicate with its customers and to properly coordinate with local governments demonstrate that its actions to implement the power shutoffs were ill-conceived, poorly planned, uncoordinated (both internally and externally) and ineffectively communicated." In other words, this is known as "sentence first, verdict afterwards."

The next day, there was a special meeting of the CPUC to vote out a new "Order Instituting Investigation on the CPUC's Own Motion on the October 2019 Public Safety Power Shutoff Events." I.19-11-013 will be an investigation to determine whether the California IOUs prioritized safety and complied with the CPUC's regulations and requirements with respect to their PSPS events in late 2019. The investigation will be a companion to rulemaking R.18-12-005 and will serve as a forum for taking evidence to evaluate both the effectiveness and impacts of all phases of the PSPS events.

The Effectiveness of PSPS

Given the mass inconvenience, complaints, and furor that the PSPS events caused – not to mention the fact that it did not avert a new wildfire that started in PG&E's service territory – it is difficult to regard PSPS as an effective wildfire mitigation tool. Perhaps this is simply due to the newness of the remedy. The IOUs may well perform more effectively in the future.

A major element of SB 901 is its provision that requires the CPUC to consider the financial status of an IOU and determine the maximum amount that can be paid without harming ratepayers or affecting an IOU's ability to provide service. SB 901 allows an IOU to securitize wildfire debt and impose a surcharge on customers. This mechanism is designed to help lessen the overall impact on ratepayers and keep IOUs financially stable. Effectively, it gives new meaning to the PSPS acronym – Profit Stability Power Shutoffs. As a result, it appears that de-energization is likely to remain a tool in the IOUs' arsenal – hopefully one that will be exercised with greater efficiency and selectivity.

CALIFORNIA LEGISLATIVE COMMITTEE

Jesus Arredondo

WPTF Legislative Committee consultant is Jesus Arredondo. Jesus is the principal and founder of Advantage Government Consulting LLC and has over 19 years of experience in media and government relations, including concentrated experience in energy policy. Prior to launching Advantage Consulting, Jesus worked as a senior advisor for two major public relations firms in the United States and Mexico. Jesus also served as a policy advisor to a major California transmission project, principal advisor on an education effort in California concerning natural gas and on a national education campaign concerning the FERC's push for standard market design. Before launching Advantage Consulting, Jesus was a bilingual spokesman for two California governors and served five years as director of regulatory and government affairs for a fortune 250 independent power producer and two years at the California Power Exchange, where he served as director of corporate communications.

Legislature is on Vacation, but PG&E Remains in the Crosshairs

It is the middle of December, and for the first time in 3 years, California is not – as of today – on fire. Having weathered nearly twenty Public Safety Power Shutoffs (PSPS) and a handful of big fires, we finally have the beginnings of a possible atmospheric river to quench the thirst of this parched state. Yet the narrative in energy policy and politics remains the same: PG&E is in the doghouse and they continue to drive the policy and media discussions on energy.

As of December 2, CalFire and the US Forest Service have reported 6,872 fires that have burned more than 253,000 acres this year. While the number of fires so far in 2019 is 800 more than in 2018, the acres burned this year represent only 30 percent of the acreage that burned in 2018. When comparing fire suppression costs, the 2019 fire season to date has cost roughly 1/6 of the cost of the 2018 season.

Notwithstanding all this, PG&E continues to battle through its bankruptcy proceeding. Ongoing investigations and legislative proposals are already promising further attempts to safeguard California against future fires, and to impose more regulatory changes on all energy service providers in the future. Welcome to the "new normal."

Legislative Hearing on PSPS Put IOUs on Hot Seat

In late November, just as PG&E and SCE were considering another round of PSPS, the Senate Energy, Utilities, and Communications Committee held an Oversight Hearing to discuss the current PSPS process. The hearing, which lasted over 5 hours and featured 25 speakers, directed most of the anger at PG&E.

In prepared testimony, PG&E CEO Bill Johnson said:

"We know our performance wasn't perfect," acknowledging website outages, confusing maps, jammed call centers and inadequate communication with state and local government. "We can and will and have to do better."

Despite this acknowledgement and pledge to improve, the rancor at the hearing was palpable. After all, just in November, more than 1 million people and businesses lost power during PG&E blackouts, which the utility says were necessary to prevent its equipment from sparking fires as hurricane-force winds swept through California.

Senator Scott Weiner:

"*We thought PG&E would use a scalpel in implementing these planned blackouts. Instead PG&E has chosen to use sledgehammer and then turn around and essentially tell the public, 'Sorry, suck it up, we'll fix it in 10 years.'"*

PG&E's Johnson in response:

"Repeatedly turning off power for millions of people in one of the most advanced economies in the world, even in the interest of safety, is not a sustainable solution to the wildfire threats we face."

Senator Mike McGuire:

"I think we're on our third strike for PG&E. Strike one was the San Bruno gas explosion that they tried to cover up and then they lied about it. Strike two was the 2017 and '18 wildfires. Strike three is the woefully inadequate response to these power shutoffs. We cannot nip around the edges; it's now time for this state to be able to have all options on the table. They failed us too many times."

Johnson said PG&E is working to reduce the blackout footprint by one-third by next year's wildfire season, even as the wildfire risk has dramatically increased.

Bankruptcy Machinations

In other PG&E news, Governor Newsom has been trying to get the utility to wrap up its bankruptcy quickly and said the proposed $13.5 billion settlement agreement with insurance companies threatens that goal. In the objection filed by the Governor's Office in the Bankruptcy Court this month, Newsom said:

"... seemingly incessant litigation and stalling tactics undertaken by the financial stakeholders... often at the expense of" wildfire victims "... offer little confidence" that the company and other stakeholders can resolve the bankruptcy "... on a schedule and in a manner that meets the expectations of California."

"In the event they cannot or will not do so, the state of California will present its own plan" to bring PG&E out of bankruptcy.

Meanwhile, attorneys for the insurance companies argued that their settlement with PG&E meets the legal threshold for the Bankruptcy Court to approve the deal and move the case forward. In order for PG&E to qualify for the financial backstop under AB 1054, the utility must exit its bankruptcy by June 30, 2020. The path forward for this process has several potential outcomes all with their own champions and critics. Where the process will ultimately lead is yet unknown.

Turning PG&E into a Public Utility?

As frustration about the implementation of PSPS, and angst about the glacial bankruptcy case and potential deal mount, it is understandable that talk turns to restructuring the utility. Senator Scott Wiener weighed in saying that discussions around restructuring PG&E must include an option to turn the utility into a public entity and that he would introduce legislation:

"PG&E's current model doesn't work. This company has been irresponsibly run for a long time, and it's time to refocus it. I don't know what the ultimate result will be, but I do think that public power needs to be part of the conversation."

PG&E, of course, has repeatedly pushed back in recent weeks against efforts to create a public utility or a customer co-op. Governor Newsom, however, has signaled he too could support turning PG&E into a public utility, warning the company to resolve its bankruptcy case and improve its grid quickly or face state intervention.

Some scholars, however, are skeptical of this path. CAISO Board Member Severin Borenstein said in an article for UC Berkley's Haas School that turning PG&E into a cooperative or a publicly owned utility will not necessarily be "the silver bullet that creates a more efficient, reliable, and safety-oriented electricity provider for Northern California." Instead, "it would at best be just the beginning of a long road to re-invent the utility." Borenstein argued investor-owned utilities would gladly spend ratepayer money to improve safety, but that "effective regulatory oversight" is necessary to make sure expenditures accomplish the intended aims. Yet, he asserts, the state has failed to provide the CPUC with adequate funding and staffing "for effective oversight." Frank Wolak, professor of economics at

Stanford University, also cautioned against the idea: "The big issue is, what are you going to do with the liabilities of PG&E? Very likely, you'll have to take those on or in some way deal with those."

The Bankruptcy Court will have to decide this messy situation – and the Legislature will surely add its two-cents worth when they return to work in January 2020.

2 Year Bills Coming Back in 2020 – Bills that failed passage in 2019 and are now a 2-year bills may return in January 2020 include the following:

- Senate Bill 772 (Bradford) would require the CAISO to procure between 1,000 MW and 2,400 MW of long duration bulk energy storage
- Assembly Bill 915 (Mayes) would move the RPS from the current 60% to 80% by December 31, 2038
- Senate Bill 549 (Hill) would subject PG&E electric rates to legislative approval
- AB 56 (Garcia) would establish a central statewide entity to procure electricity for all end-use retail customers in the state
- SB 350 (Hertzberg) would authorize the CPUC to develop a multiyear centralized resource adequacy mechanism
- AB 235 (Mayes) would afford PG&E an additional $20 billion in tax-exempt state issued bonds to help the utility with its wildfire claims

CALIFORNIA INDEPENDENT SYSTEM OPERATOR (CAISO) COMMITTEE

Carrie Bentley

Carrie Bentley is the co-founder and CEO of Gridwell Consulting and has over a decade experience in the energy industry across the ISO/RTO markets. Ms. Bentley currently provides analysis and strategic support on "all things California ISO," including transmission, interconnection, capacity, storage assets, and the energy markets. Prior to becoming a consultant, Ms. Bentley most recently had been acting as a lead market design and regulatory policy developer at the CAISO, leading design and stakeholder initiatives in critical areas such as flexible ramping, resource adequacy, and renewable integration. Prior to the CAISO, Ms. Bentley was a consultant for GDS Associates, an engineering and economics consulting firm where she specialized in power supply contracting, natural gas hedging, and energy market design for a large range of clients in ERCOT, PJM, MISO, and SPP.

CAISO Policy Plans and Budget

During the CAISO's call on its Three-Year Roadmap and 2020 Plan on December 2, staff identified myriad drivers leading to the need for a staggering 26 policy changes over the next three years. These drivers boil down to (1) current and expected high levels of renewables on the grid, (2) a significant decrease in capacity across the west, (3) the need to update market rules to accommodate Investment Tax Credit for storage and renewables, and (4) a desire to expand the day-ahead market across the footprint of the Western Electricity Coordinating Council (WECC). The CAISO has always been optimistic in its plans for policy changes, but the newly announced plan for the next three years is by far the most ambitious – and frankly unrealistic – in years. In this quarterly report, we provide a preview of the largest elements of the CAISO's plans.

Market Enhancements and Expansion Plan

The CAISO has branded a portion of its suite of planned initiatives as being to "evolve ISO markets." The plan is first to improve the real-time market by refining the CAISO's Flexible Ramping Product (FRP). Recall the intent of FRP is to account for real-time uncertainty; it is merely a constraint in real-time that ensures supply is able to meet a range of predicted demand forecasts rather than a single forecast quantity. The CAISO has just begun this initiative and is developing BPM and tariff changes for implementation this fall and next respectively.

Concurrent to this process, the CAISO will continue moving forward with the Day-Ahead Market Enhancements initiative. The new scope of this work is slightly scaled back from the original, very ambitious plan. The CAISO proposes to develop a DA imbalance product (formerly known as the DA FRP) and to co-optimize energy and imbalance reserves, while de-emphasizing the residual unit commitment process. Again, this is a completely new day-ahead market design that is untested and has never been done by any ISO, anywhere. The CAISO plans to implement it fall 2021.

As the CAISO develops this innovative DA market, they also will move forward with an Extended DA Market initiative. The CAISO's plan is for the policy and tariff to be ready by fall 2022 should any EIM entity want to participate. Expanding the day-ahead market to EIM entities includes an expansive set of changes to transmission reservation, congestion hedging, full-network model enhancements, carbon policies, governance, and more. Again, these are highly ambitious and unprecedented market design developments on a seemingly impossible timeline.

Finally, beginning in 2021, the CAISO will begin an initiative WPTF strongly supports and wishes the CAISO would prioritize – the Dispatch Enhancements initiative. In addition to some less exciting items about ramp rates and decremental market power, the CAISO appears to be taking up some policy changes long-sought by WPTF, including lowering the bid floor and exempting real-time exports from the transmission access charge.

Resource Adequacy Plan

Never fear, the CAISO has not forgotten that RA is a mess. The RA Enhancements initiative is still going forward with plans to implement its behemoth scope over the next three years (2020 – 2022). The CAISO proposes to increase RA import requirements, change system and flexible RA requirements, change the planned and forced outage process, restrict storage counting as local RA in certain areas, and create an additional check on monthly RA supply using different planning criteria than the original requirements. Essentially, the CAISO is proposing to change the entire RA program. Don't get too excited (or worried) though. Remember the CAISO put out their "Flexible Resource Adequacy Criteria and Must Offer Obligation 2" issue paper for a new flexible RA requirement in June 2015 and we are still waiting for a fully resolved straw proposal.

Energy Storage and Hybrid Plan

Both energy storage and hybrid rules will continue to be developed. This includes development of a methodology to calculate default energy bids for storage devices, and expansion of modeling functionality to include a state-of-charge parameter for non-generating resources and self-forecasting for hybrid resources. Generally, these initiatives hum along at a quick pace, so WPTF encourages active and constant participation. Also under consideration for hybrid resources is an interconnection rights constraint to ensure market awards and dispatches of co-located resources are within established interconnection injection limits. The CAISO must also develop default counting rules for hybrid resources (in the event the CPUC or local regulatory authority does not have rules) and establish must-offer obligations and RA Availability Incentive Mechanism rules for hybrids.

Wait, there is still more

The CAISO is still moving forward with an initiative that could adversely impact every resource, System Market Power Mitigation. In an ideal world, the recent CPUC IRP would mitigate the need for this initiative by requiring additional system capacity be built and procured, but it may be a case of too little, too late. The design for this will be extremely important. No other ISO dynamically checks and mitigates for system market power, and for good reasons. It is an extremely tricky process because inaccurate mitigation could prevent the CAISO from relying on imports it badly needs for reliability. This initiative is a top priority for WPTF and we do not support any implementation of a system market power mitigation process until the CAISO can demonstrate that there is sufficient existence of entities exerting system market power to make the benefits exceed the high, high costs.

There are even more initiatives – as I said, 26 – but these are the large ones. One notable TBD is the CAISO has existing Board of Governor-approved policy on generator dispatchability that is not set to be implemented until fall 2022. Importantly, this policy will give generators more flexibility to bid in start-up and minimum load costs. These rules took over four years to negotiate and get through the stakeholder process. It will be a shame if needed enhancements like these keep getting put off.

Transparency's Price Tag

Perhaps it is because the CAISO is facing so many challenges on so many fronts, but WPTF has observed a distinct decline in transparency not only on the rationale for certain decisions, but also the costs and benefits of their policies and strategic decisions. Lack of transparency is systemic across policy proposals, from the non-public expanded Day-Ahead

Market benefits study that was barely summarized to even the CAISO's own Board of Governors to the RA Enhancement's policy team not being able to get the CAISO's own generator outage data in a usable fashion.

Looking at the CAISO 2020 Fiscal Year budget report, WPTF believes transparency is only likely to degrade as the three-year road map and 2020 plan progress. Despite taking on copious new work, there is no new additional headcount budgeted in any department. While WPTF understands a desire to keep costs low, ambitious goals require larger budgets. Without additional resources, WPTF does not believe the CAISO's three-year plan is at all feasible, no matter the good intentions.

CARBON AND CLEAN ENERGY COMMITTEE

Clare Breidenich

Clare Breidenich coordinates WPTF's Carbon and Clean Energy Committee. Clare has over 18 years' experience on greenhouse gas regulation and policy. In addition to her work with WPTF, Clare has worked on international climate issues with the Environmental Protection Agency, the Department of State, and the United Nations Framework Convention on Climate Change secretariat. She has also served on the Washington State Governor's Climate Action Team and on a National Academy of Science's Committee on monitoring of greenhouse gas emissions.

Western States settle into carbon and clean-energy rulemaking

In Washington, the Department of Commerce (DOC) and the Utilities and Transportation Commission continue development of implementation rules under the Clean Energy Transformation Act (CETA) enacted in May. The agencies have announced members of the stakeholder workgroup mandated under the legislation to examine integration of the CETA with carbon and electricity markets. The workgroup, in which WPTF will be participating, will also consider compatibility of the CETA with a cap-and-trade program, issues related to rules for retail load met with electricity market purchases and EIM purchases, and the CETA's the prohibition on double-counting of non-power attributes associated with Renewable Energy Credits (RECs). The first meeting of the workgroup is scheduled for January 15.

Meanwhile, DOC has initiated work on implementation rules for consumer-owned utilities (COUs). While most of the issues under consideration will be relevant for COUs only, two issues of concern to electricity market participants more broadly have already popped up – one related to coal, the other to renewable generation.

The first concern identified is with the CETA requirement that utilities eliminate coal-fired resources from retail electricity by December 31, 2025. Echoing the resource-shuffling safe-harbor under the California cap-and-trade program, the CETA exempts unspecified transactions of less than one month in duration from the prohibition against coal-fired resources. It does not address longer-term transactions, however. Several environmental organizations are pushing DOC to interpret this requirement to mean that utilities' unspecified market purchases are not sourced from coal-fired resources. Furthermore, they advocate that DOC establish procedures for the demonstration of utility compliance with the rule.

In comments, WPTF argued that the expectation that utilities can control the source of electricity for unspecified contracts is unreasonable. A more practical requirement would be to have utilities attest that it did not intentionally purchase electricity sourced from a coal-fired resource when contracting for unspecified power.

The second issue stems from CETA's reference to "use of electricity from renewable and non-emitting resources" given the uncertainty about the definition of a bundled REC in the context of the CETA. The discussion to date has revolved around whether the CETA establishes a delivery standard that requires hourly matching of renewable and other non-emitting generation to load. Several of the proposals made by environmentalists and the reaction of DOC staff raise concerns about the impacts on wholesale electricity markets.

The CETA itself does not establish a delivery requirement for renewable or non-emitting resources. Rather, the Washington Energy Independence Act, which creates the state's RPS, provides that an eligible renewable resources must be located in the Pacific Northwest or that the electricity from the resource must be delivered into Washington state "on a real-time basis without shaping, storage or integration services." Suggestions that "use" of electricity from renewable and non-emitting resources means that the electricity must be delivered to an individual utility's distribution system or balancing area or requires hourly matching of generation and load is beyond the scope of the CETA.

Further, neither the CETA nor the Energy Independence Act define "bundled RECs"; indeed, the term "bundled REC" is never actually used. However, the legislation does define an unbundled REC as one "that is sold, delivered, or purchased separately from electricity." The distinction is critical. The legislation provides that up until 2045, unbundled RECs can comprise only 20% of non-emitting electricity utilities use for retail load, and none thereafter.

WPTF advocates for an interpretation of bundling that is consistent with California's RPS program. Specifically, we note that California's program considers RECs under both Product Content Category 1 (PCC1) and PCC2 as bundled, and that California's RPS does not require hourly matching of resources to load. We also argue for special consideration of renewable and non-emitting resources that are located outside of the Pacific Northwest and that participate in the EIM. Because of the important role the EIM has in facilitating the integration of renewable resources into the grid, renewable and other non-emitting resources bid into the EIM should be considered bundled under the CETA when contracted by a Washington utility.

Given the potential implication of the issues raised in these areas for the wholesale electricity markets, and the long timeline for development of the rules (June 2022), WPTF also recommends that DOC defer further work on these questions until the stakeholder workgroup on carbon and electricity markets has completed its work.

As we reported in the last newsletter, in California the Energy Commission, Public Utilities Commission and the Air Resources Board are preparing an interagency report to the legislature on implementation of the state's zero-carbon electricity policy (SB100). Although the mandate characterizes the report as a review, the agencies have indicated that they intend to use the SB100 report to "provide direction to electricity markets." In particular, they intend to use the report as a vehicle to articulate the attributes that they want to see in electricity technologies for a clean energy future and "to form consensus on interpretation of the statute." This policy-making aspect became clear in a recent technical workshop held on November 18. CARB is proposing two alternative interpretations of the phrase "eligible renewable resources and zero-carbon resources." The first, "RPS +", would consider all current California RPS resource types plus large hydroelectric, nuclear and natural gas generation with carbon capture as eligible under the SB100 standard. Under the alternative "No-combustion" scenario, natural gas generation would be excluded even when combined with carbon capture, as would RPS technologies such as biogas that utilize combustion. WPTF will watch this process closely as it moves forward.

In Oregon, the Department of Environmental Quality (DEQ) has walked back its proposed rules for reporting of greenhouse gas (GHG) emissions by the electricity sector that would align with the point of regulation under the failed cap-and-trade bill. The revised proposal retains new elements proposed in the previous draft to better align with California's program, such as requirements for specified sources and asset-controlling suppliers, but does not alter the entities required to report. DEQ also continues to press for third-party verification of GHG reports, despite concerns of many stakeholders that such verification is costly and unnecessary in the absence of a cap-and-trade program. DEQ plans to finalize its rule early next year.

WIDER WEST COMMITTEE (2WC)

Caitlin Liotiris

Caitlin Liotiris coordinates WPTF's Wider West Committee (2WC), which engages on market, policy, reliability and technical developments in the "wider West," generally outside of California. The 2WC is active in advocating for broader western energy markets, especially the EIM and other regional market expansion opportunities. The 2WC also follows important developments at Peak Reliability and the Western Electricity Coordinating Council. Caitlin has over a decade of experience in energy issues in the West and has spent most of those years actively engaged on market development efforts across the Western Interconnection footprint, including a major role in developing the policies for implementing the EIM. She is skilled in understanding and distilling the interaction of energy policy and energy market dynamics. In addition to her work with WPTF, Caitlin has worked on various energy policy and market related issues throughout the county. Caitlin is currently a member of Peak Reliability's Member Advisory Committee (MAC) and has also co-authored various reports exploring the benefits of proposed transmission facilities in the West.

Public Service Company of Colorado's Interconnection Queue Reform Proposal Accepted: Will this Solve the Interconnection Queue Conundrum?

For the last year and a half, the Wider West Committee (2WC) has been involved in a variety of generation interconnection queue-related forums. Generator interconnection is a somewhat arcane corner of our industry. However, anyone who has developed a project understands the importance of generator interconnection procedures, which must be undertaken before a new generator can connect to the grid. Across the country, in many Regional Transmission Organizations (RTOs), Independent System Operators (ISOs), and in areas not currently covered by an organized market, interconnection queue backlogs have been growing. We are now seeing study delays measured in years rather than months. These delays are hampering generation development and, for wind and solar projects seeking to take advantage of the federal Production Tax Credit or Investment Tax Credit, the delays have been especially problematic.

PacifiCorp's situation is a dramatic example of an interconnection queue backlog in the West. The utility, which serves customers across a six-state footprint, currently has more than 37,000 MW of interconnection requests in its queue. The utility's peak load, by comparison, totals only about 12,600 MW. Under PacifiCorp's current interconnection study assumptions, the amount of generation in-service in some local areas exceeds total system load, and the power-flow models simply cannot solve under these conditions. Consequently, PacifiCorp has deemed some interconnection requests "non-viable". Developers in the interconnection queue are frustrated; in some areas of the system, PacifiCorp has effectively halted its interconnection study efforts. PacifiCorp is currently working its way through a stakeholder process to implement interconnection queue reform, which many developers hope, if approved, will unclog the queue.

Until very recently, a similar situation existed for the interconnection queue of Public Service Company of Colorado (PSCo). PSCo first tried to address concerns with its interconnection queue in the spring of 2018, but FERC rejected several of its proposals. FERC frequently cited challenges with approving certain aspects of the proposals because PSCo is not an independent entity (such as an ISO or RTO). Despite these initial setbacks, PSCo continued working with stakeholders and ultimately filed the most recent proposal with FERC in September.

After a year and a half of stakeholder meetings, proposals, and filings, PSCo's latest comprehensive queue reform package was approved by FERC on December 4. PSCo's newly minted process has changed the interconnection process from a "first-come, first-served" serial study approach to a "first-ready, first-served" cluster study approach. Under this paradigm, projects that can demonstrate "readiness" to proceed towards construction are processed first. While PSCo will offer an informational study process to generators early in the development stage, in order to enter the definitive (binding) interconnection queue generators must demonstrate "readiness."

The readiness requirements increase as the cluster study progresses towards conclusion. But, initially, readiness can be demonstrated through an executed term sheet or Power Purchase Agreement (PPA), evidence of selection in a resource plan, a signed (unsuspended) provisional Large Generator Interconnection Agreement (LGIA), or by posting additional financial security (and being subject to higher withdrawal penalties if the project ultimately withdraws from the cluster). Moreover, PSCo has made signing an LGIA and then entering suspension riskier. Projects that sign an LGIA can enter suspension for up to three years. If the project ultimately does not reach commercial operation, however, the project will be subject to a withdrawal penalty of nine times its cluster study costs, which could be a significant expense. Thus, suspension rights will still exist in PSCo's revised queue process, but come with a higher risk than in the standard serial queue paradigm. All of these changes appear likely to "unclog" the interconnection queue and, hopefully, provide an improved process going forward.

The modifications PSCo has implemented are sure to inform the ongoing stakeholder process that PacifiCorp is conducting. Many aspects of PacifiCorp's proposed reform are similar to PSCo's, with increased requirements to enter the queue and substantial withdrawal penalties that escalate as the study process continues. Importantly, following comments and follow-up conversations by WPTF's 2WC, the latest proposal provides developers flexibility by not requiring that every project have a signed Power Purchase Agreement prior to completion of the study process. This critical change will yield flexibility in developing projects and in the timing of executing offtake agreements. PacifiCorp aims to file proposed tariff revisions by the end of the year, with hopes of having these reforms in place ahead of its next competitive solicitation for generation resources, which will begin in the middle of next year.

The "first-ready, first-served" queue reform approach, implemented by PSCo and proposed by PacifiCorp, will work best if implemented in conjunction with changes to utility procurement practices. Specifically, relaxing the requirements faced by generators to participate in competitive solicitations will better enable them to take advantage of this new queue regime. Under the standard "first-come, first-served" interconnection queue approach, some utility procurement solicitations have required the completion of interconnection studies or have required bidders to hold certain places in the queue. That was deemed necessary, in some instances, because the serial nature of the queue caused too much uncertainty for lower queued projects. By contrast, under a "first-ready, first-served" cluster study approach, interconnection studies should generally not be required for competitive solicitation participation.

In fact, PacifiCorp's procurement business unit has stated that, if PacifiCorp's revised interconnection queue approach is approved, the forthcoming PacifiCorp all-source RFP would not require bidders to have completed interconnection studies in order to bid. This anticipated change to procurement practices is expected to reduce the value of existing queue positions and enhance opportunities for projects to compete on economic efficiencies. This change is likely to frustrate developers who have heavily invested in queue positions over the years – and rightfully so. However, the change in procurement paradigms could ultimately provide substantial competitive benefits. Only time will tell if this revised approach provides the procurement benefits and eliminates interconnection queue clogging in the way many hope it will.

MEXICO COMMITTEE

Rajan Vig

The WPTF Mexico Committee Consultant is Rajan Vig. Rajan started his career in strategy consulting with FTSE 100 companies, working at WPP Group in London before working at private equity firm, Hamilton Bradshaw, where he began his consulting focus on commodities. He moved to Houston in 2014 to found an energy human capital consultancy within Sir Peter Ogden's portfolio, where he oversaw the build-out of commercial energy businesses across oil, gas and renewables into emerging markets across the Americas, specifically Mexico and the Southern Cone. Most recently, Rajan started and ran BioUrja Trading's office in Mexico City, managing the company's implementation across trading and origination in Mexico across fuels, gas and electricity. Rajan has a BA (Hons) in Modern Languages (Spanish & Italian with Portuguese) from the University of Manchester and an MSc in Latin American Studies (Economics & Politics) from Oxford University.

MORENA's First Year

On December 1, 2019, Mexico celebrated its first year under the governance of President Andrés Manuel Lopez Obrador, and his signature National Regeneration Movement, known as MORENA.

Over the last year, the country has experienced a number of complicated shifts in the energy space including lack of clarity across all three traditional sectors: power, gas and fuels. In the most recent quarter, we have seen more changes occur in the renewable energy space, development in the natural gas arena, and more liberal ideas regarding private investment.

Renewable Energy

Mexico, the world's 12th-largest emitter of greenhouse gases, has been seen a forward thinker on climate policy and sustainability in the past decade. There had been a real shift and sustained focus on developing wind and solar assets in the country before the advent of MORENA this time last year. The previous administrations played an active role in the United Nations Climate Change Conference, an event hosted in Mexico at the start of this decade, and were signatories to the Paris Agreement half a decade later.

Clean Energy Certificates

However, in late October, all those previous efforts were called into question when the Secretary of Energy and the AMLO cabinet decided to ruffle the feathers of pro-renewable lobbyists and companies. MORENA announced it was going to adapt the market rules for clean energy certificates, known as CELs. The rationale for creating the credits was to incent producers to adopt more renewable energy assets and help Mexico achieve its national climate goals. Those goals include increasing clean energy's share of the national energy market from 25 percent in 2018 to 35 percent in 2024 and 50 percent by 2050.

The change in the law means that the government will award these certificates only to projects that commenced operations after 2014. The recently announced rules make older producers, including the non-operating hydroelectric dams eligible to receive the incentives too. Beyond the obvious market interference, the changes further compromise Mexico's clean energy goals by effectively allowing the Federal Electricity Commission to utilize older energy production.

The changes to the clean energy certificates do not bode well for the government's commitment to the Paris Climate Agreement. By altering the rules, the Ministry of Energy dramatically changed the key policy mechanism designed to achieve the binding commitment of reaching 35 percent of all power consumed with clean energy sources by 2024.

Renewable Market Revolt

It did not take long for the largest wind and solar companies that had won projects in Mexico to revolt against the change of market rules put forth by the Secretariat of Energy (SENER) and the Energy Regulatory Commission (CRE). Consequently, a federal judge in Mexico City overturned the rule change within days. Critics of the rule change fear that if older government-supported assets are subject to accessing loans, newer projects will have a lower asset value and will undermine investment in clean energy. While the decision of the appeals court technically only guarantees the value of the credits for the company requesting the initial court order, the lower courts are likely to follow suit and analyze whether these rules can or should be implemented.

Fermaca/CFE agreement

In a huge win for gas pipeline companies and their users, the Federal Electricity Commission (CFE) announced that it had successfully renegotiated an agreement with the Mexican midstream company, Fermaca, in relation to two pipelines in late September. CFE has proclaimed that this agreement will provide the government with savings close to $672 million, and has extolled the news as a profound success for MORENA.

President Obrador added that these pipelines are the most important in the entire network, since they reliably provide gas for power generation to the areas of greatest consumption: the Bajío, West and Central regions of the country.

Pemex and Private Mark

In news that has surprised many in the energy industry, AMLO's government has surrendered the deep-water reserves solely for the private market. That means that Pemex will have no physical role or investment to play in the search for crude under the deep, dark depths of the Gulf of Mexico or other bodies of water surrounding Mexico.

To transfer this business to private companies, the national oil company would have to adopt one of the primary suggestions implemented by Pena Nieto's government and proposed at the start of the Energy Reform: oil tenders or strategic partnerships – essentially, farm-outs.

New Fuels Storage Policy

In conjunction with the deregulation of the fuel markets, SENER created the Public Policy on Minimum Stocks of Oil Products in August 2017. The policy obliges importers of refined products to maintain minimum inventories of gasoline, diesel and jet fuel in all regions of the country in order to reduce the risk of lack of supply and not to depend wholly on Pemex's infrastructure.

However, following a dramatic realization that markets have not developed as anticipated, SENER issued a change to the document to accommodate the current nature of the fuels market and the lack of infrastructure in the private sector. Only five storage terminals are in operation across the whole country, mainly due to a lack of clarity in real market pricing and clients willing to exit Pemex contracts and lock in private contracts for the long term.

Private Investment

Alfonso Romo, the Head of the Presidential Office, concluded during his speech at the Expansion Forum 2019 in September that other verticals within the energy sector that will remain in the hands of the private sector are gas production, petrochemicals, and electricity generation with alternative sources. Meanwhile, the federal government will be responsible for modernizing and operating existing hydroelectric facilities and refineries.

To be clear, the state will produce 54% of electricity for the nation and the private sector the remaining 46%, so that the public sector will maintain its presence and share in the market it has and "the private sector has all the freedom to choose the technology in order to produce more efficient sources of power."

"We have two clear objectives: to give the population the cheapest energy prices, and to have the most competitive industrial sector in the region," he concluded.