Combined Energy Resource Planning & Procurement Actions July 2021			
Responsible Entity	**Actions**	**Milestone(s)**	**Status**
CPUC	**Emergency Reliability Rulemaking (R.20-11-003).** This proceeding was initiated to establish policies, processes, and rules to ensure reliable electric service in California in the event of an extreme weather event in 2021. ▪ In a February 11, 2021 decision (D.21-02-028), the CPUC directed the state's three large investor-owned utilities (IOUs) to seek contracts for additional supply-side capacity. The IOUs filed Advice Letters seeking approval for approximately 564 MW by summer 2021. The CPUC approved those contracts on March 18. ▪ On March 25, 2021, the CPUC approved and directed (D.21-03-056) the IOUs to take multiple actions to avert the potential need for rotating outages in the summers of 2021 and 2022, including launching a new statewide Emergency Load Reduction Program (ELRP) pilot, modifying the IOUs' existing demand response and Critical Peak Pricing programs, funding a new statewide Flex Alert paid-media campaign, and authorizing additional capacity procurement to meet an increased planning reserve margin of 17.5 percent. The CPUC adopted clarifying guidance regarding the ELRP day-of trigger in a June 24th decision. ▪ On April 6th, the IOUs facilitated a public workshop with CCAs to discuss Critical Peak Pricing programs and alternative load shedding programs for Summer 2021. ▪ On June 14th, a ruling was issued allowing for a refresh of additional party proposals that could be adopted in time for summer 2022. Party opening and reply testimony are due July 7th and 21st, respectively.	Approve IOU Advice Letters by mid-March 2021 CPUC vote on proposed decision on March 25, 2021 IOU procurement and program implementation	Completed Completed In progress

	More information on R.20-11-003 is available at: https://www.cpuc.ca.gov/summerreadiness/		
CPUC	**Project Progress Tracking**. The CPUC is tracking progress on generation and battery storage projects that are currently under construction in California to ensure there are no CPUC-related regulatory barriers that would prevent them from being completed by their targeted online dates. Whenever a delay or potential delay is identified, the CPUC is working with other agencies, load serving entities, project developers, and/or local officials to help resolve it as soon as possible. ▪ In November 2020, the CPUC prepared an analysis and slide deck on new resources in development across multiple proceedings, available at: https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442466860 ▪ In July 2021, the CPUC will issue a ruling sharing an aggregation of the data collected from Integrated Resource Plans filed by load-serving entities (LSEs) in September 2020. The will data include information on existing, development, and planned resources. ▪ The CPUC is also tracking progress against the 3,300 MW NQC (Net Qualifying Capacity) procurement ordered in D.19-11-016. On February 1, 2021, LSEs that elected to self-provide their procurement obligation submitted reports to the CPUC on the status of their projects. CPUC staff is working to quality control and analyze this data. In these updates, LSEs confidentially provided detailed information regarding the cause of any delays and plans for remediation. In Q2 of 2021, the CPUC will use the data from the February 2021 filings to determine whether any of the projects under D.19-11-016 have suffered delays or failure that necessitate	Issue ruling on IRP LSE data aggregation by July 2021 Issue staff report on backstop procurement by July 2021	In progress In progress

	the need for backstop procurement. CPUC staff expects to issue a report on the February 1st compliance filings by July 2021.		
CPUC	**Improve Load Scheduling Accuracy** – The CPUC is exploring technical solutions that may be needed to allow its jurisdictional IOUs to provide customer usage data to community choice aggregators (CCAs) and energy service providers (ESPs) more frequently to improve load scheduling accuracy. Based on initial conversations with IOUs and CCAs, it appears that more timely access to customer usage data may not be necessary for day-ahead load forecasting in the CAISO markets. The CPUC is still gathering information from load-scheduling coordinators who work with CCAs to better understand whether and how they use this data.	Ongoing conversations with IOUs, CCAs, ESPs, scheduling coordinators, and the CAISO	In progress
CPUC	**Replacement Resources for Diablo Canyon** – In 2020, the CPUC directed all CPUC-jurisdictional LSEs to submit Integrated Resource Plans that include procurement of their share of replacement power for the retirement of the Diablo Canyon Nuclear Power Plant. On February 22, 2021, the CPUC issued a ruling in the IRP proceeding seeking feedback on mid-term reliability analysis and proposed procurement requirements for LSEs. The ruling recommended that the CPUC order procurement of 7,500 MW of new net qualifying capacity to come online in the years 2023–2025. The CPUC hosted a workshop on this ruling to facilitate dialogue with stakeholders ahead of the party comment deadline. On June 24, the CPUC ordered its jurisdictional LSEs to procure 11,500 MW NQC of new resources to address mid-term reliability needs for years 2023-2026 (D.21-06-035).	Issue ruling Issue Proposed Decision (and Alternate Proposed Decision) Final Decision in June 2021	Completed Completed Completed
CPUC	**Resource Adequacy (RA) Rulemaking (R.19-11-009)** – The CPUC hosted several workshops in February 2021 on reliability proposals/topics including planning reserve margin, import rules, hybrid resource qualifying capacity rules, demand response qualifying capacity rules, changes to the RA penalty structure, and larger structural changes to the RA framework. On	Issue Proposed Decision in May 2021	Completed

	June 25, 2021, the CPUC adopted local capacity requirements for 2022-2024 and flexible capacity requirements for 2022 applicable to CPUC-jurisdictional LSEs, as well as other refinements to the RA program. A proposed decision was issued on June 10th to restructure the RA framework to focus planning efforts across all hours of the day, in effort to resolve net load peak concerns.	Final Decision in June 2021 Final Decision in July 2021	Completed In progress
CPUC	**Integrated Resource Planning (IRP) Procurement Framework** – The CPUC hosted a workshop in December 2020 on a proposal regarding how the CPUC would order procurement to complement the procurement by LSEs in response to the planning track activities of IRP and various CPUC procurement programs. This proposed framework is intended to provide a conceptual foundation for all future procurement informed by the IRP process. The February 22, 2021 ruling on mid-term reliability referred to above seeks feedback from stakeholders on "phase one" of the proposed framework, i.e., that relating to procurement in the current cycle of IRP. D.21-06-035 described above operationalizes some of the features of the framework. The development of the Preferred System Plan later in 2021 presents the next opportunity within the IRP process for stakeholder engagement and procurement action by the CPUC.	Review party comments Issue ruling in Q3 2021	Completed In progress
CPUC, CAISO	**Flex Alert public Awareness Campaign** – Following approval of funding in the Emergency Reliability Rulemaking (R.20-11-003), the CPUC has been working with the CAISO and the selected vendor to refresh and strengthen the voluntary, consumer energy conservation program. ▪ A soft rollout of the campaign began in mid-June with social media promotion, with the full campaign expected to launch in late July. ▪ Advertisements will be strategically placed to reach households throughout the state and stress the importance of conservation. Advertisements will contain strategies – such as pre-cooling homes and businesses – to conserve energy and minimize discomfort.	Mid-June - launch	In progress

	▪ We are encouraging everyone to sign up for Flex Alert notifications at FlexAlert.org, which will send out alerts by text or email. ▪ A second contract is augmenting the first one so as to add additional resources and reach more Californians to conserve energy at critical moments. ▪ The CPUC is coordinating with the state's utilities and a non-profit data analytics provider, as well as the marketing contractor, to maximize the reach of the Flex Alert campaign. ▪ The CAISO launched a text function that allows consumers to get Flex Alerts via text, providing more convenience to the consumer and to potentially increase participation in conservation. ▪ The CAISO launched an API code that allows home automated thermostat companies to signal their customers when conservation is needed. This feature, which is now active, is expected to make it more convenient for consumers to participate in conservation efforts. ▪ The CAISO will soon be launching an improved Flex Alert registration system to increase visibility of conservation participation throughout the state. When a call is made for conservation, the system surveys registrants on their plans for participation and how others in their area are responding.		
CPUC, CEC, CAISO	**Capacity Procurement Mechanism (CPM) solicitation** – Due to a combination of earlier-than-expected extreme heat throughout California and the West, diminished hydroelectric availability, and changes and uncertainties in the resource stack, the CPUC and CEC made a recommendation to the CAISO to leverage its backstop procurement authority for securing additional resources to help meet the anticipated demand during the months of August and September this year. To that end, the CAISO issued a CPM solicitation via market notice on July 1 requesting that providers willing to accept such designations notify the CAISO as soon as possible. The CAISO has issued two notices of CPM designations for July, totaling just over 600 MWs, which were posted on Friday, July 9, and Tuesday, July 13. The CAISO will be re-issuing a		In progress

	solicitation notice for August and September. The CPM is a tool the CAISO has successfully used before and resulted in quick responses from providers.		
CAISO	**Summer Loads and Resources Assessment** – On May 12, the CAISO released its annual summer assessment evaluating the expected supply and demand, to help prepare for the hot weather months of June through September. This year's assessment projects the energy grid will have more capacity to meet demand in 2021 than it did in 2020, a critical element for averting rotating power outages, such as those that occurred last August. However, extreme weather events that extend across the West could still pose a problem for reliability during the later months of the summer. The CAISO held numerous briefings for interested parties, including a public stakeholder call on May 24, to discuss the findings and provide details about the CAISO's extensive summer readiness efforts.		Completed on May 12, 2021
CAISO	**Summer 2021 Readiness Leadership Roundtable** – On April 15, the CAISO hosted a discussion with leaders from utilities and organizations with whom the CAISO has a direct operational relationship. The focus was to review the lessons learned from last summer's west-wide heat wave and rotating outages in California; to outline the work being done in response to the Final Root Cause Analysis; and to determine if there are additional individual or collective actions that can be taken to further support reliable operations this summer. Participants detailed steps they are taking to fortify grid operations since last summer. A common understanding of challenges and risks was established, as well as a commitment to deeper collaboration and coordination given the interconnected nature of the Western grid, particularly the interdependency of shared resources in tight supply conditions.		Completed on April 15, 2021

CAISO	**Operational Exercise** – On April 21, CAISO operations hosted a "tabletop exercise" with adjacent balancing authorities to test preparedness and communication procedures for a range of potential scenarios prior to the approaching summer weather. Additional exercises will be scheduled.		Completed on April 21, 2021
CAISO	**Market Enhancements for Summer 2021 Readiness** – The CAISO Board of Governors and FERC approved the first package of market enhancements to prepare for this upcoming summer. The package consisted of (1) incentives for suppliers to submit import schedules in the hour ahead scheduling process during tight market conditions; (2) reliability demand response resource dispatch and real-time pricing enhancements; (3) energy imbalance market coordination and resource sufficiency test modifications; (4) pricing enhancements during tight system conditions; and (5) targeted generation interconnection process improvements.	Approved by the CAISO Board of Governors March 24, 2021 Approved by FERC May 25, 2021	Completed on June 15, 2021
CAISO	**Load, export and wheeling priorities** – On April 21, the CAISO Board of Governors approved additional market enhancements that refine the prioritization of energy imports, exports, and transfers through the CAISO's balancing authority area. These changes consist of how exports cleared in the day-ahead residual commitment process are prioritized relative to CAISO load in the real-time market, enhancing requirements for designating non-resource adequacy capacity backing high priority export schedules, and market prioritization of wheel-through self-schedules.	Approved by the CAISO Board of Governors April 21, 2021 Approved by FERC June 25, 2021	Implement ation July 2021
CAISO	**Operating Procedure 4420 Modifications** – The CAISO developed criteria that will allow the use of firm load to meet the North American Electric Reliability Corporation (NERC)-required contingency reserves and the dispatch of procured spinning reserve resources. This will allow the CAISO to minimize, if not avoid, the shedding of firm load during periods of resource deficiency. On May 27, these criteria were incorporated into the CAISO Operating Procedure 4420 Alerts, Warnings, and Emergencies.		Completed on May 27, 2021

	Note, on April 15, FERC approved modification to WECC- BAL-002-WECC-3 permanently approving modification to the Reliability Standard.		
CAISO, CEC	**Increased Coordination with Non-CPUC-jurisdictional Entities Regarding Additional Procurement** – The CAISO has completed its outreach to understand the procurement positions of non-CPUC-jurisdictional entities and concerns, if any, for summer 2021. Thus far, non-CPUC jurisdictional entities surveyed have *de minimis* levels of solar penetration and largely rely on dispatchable renewables and hydro. Nonetheless, a limited number of non-CPUC local regulatory authorities have voluntarily increased their planning reserve margins or components thereof in preparation for summer.	Conducted outreach to non-CPUC jurisdictional entities	In progress
CAISO	**Further Analysis of Proxy Demand Response (PDR) and Reliability Demand Response Resource (RDRR) Performance** – Starting this summer, the CAISO is implementing baseline adjustments through targeted controlled group methodology changes and changes to the adjustment factors used in the baseline calculations as permitted under the CAISO tariff. This process will allow for more accurate assessment of demand response load reduction during extreme events. Baseline improvement tracks instituted for the summer include: Track 1 – Exploring use of comparison/control group methodology • Contracted with Recurve to conduct analysis on viability of accessing a control group by all Demand Response Providers and use of comparison methodology used in Department of Energy pilot • Began summer 2021 with evaluation for long-term solution Track 2 – Establishing process/criteria for approved use of load adjustment factors outside of the min/max caps for summer 2021 • Based on current tariff authority, the CAISO is allowing use of alternate load adjustment factor cap ratio from May – October	Track 1 – Fifteen participants have expressed willingness to provide data for use in the evaluation Track 2 – Three DRPs have been approved for its use	In progress

	2021 upon request and approval, prior to the beginning of the month requested		
CAISO	**Credits Against Resource Adequacy Obligations** – The CAISO continues to work with the CPUC, local regulatory authorities, and stakeholders to resolve issues around resources credited against resource adequacy requirements. On July 1, the CAISO and the three-large investor-owned utilities submitted documentation requested by the CPUC to consider an alternative counting methodology that could ultimately lead to reducing credits against the 2022 resource adequacy obligations. Any changes at the CPUC will need to be adopted by early September 2021.	Next hearing of the CAISO Executive Appeals Committee to discuss credits is scheduled for August 4, 2021	In progress
CAISO	**Resource Adequacy Market Rule Enhancements** – The CAISO Board of Governors and FERC approved the first phase of the resource adequacy enhancements initiative that included enhancements for this summer. Phase 1 of the initiative consisted of three changes: 1) refinements to the existing planned outage process; 2) a minimum state of charge requirement for storage resources; and 3) backstop procurement authority for local energy sufficiency.	Approved by the CAISO Board of Governors March 24, 2021 Approved by FERC May 28, 2021	First phase completed June 2021
CAISO	**Hybrid and Co-located Storage Resource Enhancement** – On November 18, the CAISO Board of Governors approved the second phase of policies to support and enable the use of hybrid and co-located resources, which comprise a significant portion of the new capacity expected to be online by summer 2021. The Federal Energy Regulatory Commission approved the first phase of this effort and the CAISO implemented these changes on December 1. The second phase of this effort will be implemented in Spring 2022. On December 17, the CAISO Board of Governors approved a methodology for calculating cost-based bids to which storage resources may be	First phase completed on December 17, 2020 Second phase to be implemented Spring 2022	In progress

	mitigated. This enhances the CAISO's ability to efficiently dispatch storage resources through its market.		
CAISO	**Energy Storage Initiative** – On April 28, the CAISO launched an initiative to explore market reforms to integrate large amounts of commercial-scale battery storage onto the grid over the next few years. The CAISO is projecting quadruple the amount of battery storage on its system from late last year to this summer. At the end of 2020, the CAISO had about 250 MW of storage resources -- primarily 4-hour batteries -- connected to the grid. It currently has about 500 MW on its system and expects to have a total of 2,000 MW by August 1. This growth requires changes in the CAISO market to allow storage to be competitive and to fairly compensate developers and operators. The market changes would create a test case in the first such critical mass adoption of storage technology. A working group is planned for July 26.		In progress
CAISO	**Reliability Must-run (RMR) Designation to Preserve Grid Reliability in 2021** – In addition to the 250 MW power plant approved as a Reliability Must Run (RMR) resource by the CAISO Board of Governors in December 2020, the Board voted on March 24 to designate a 34.5 MW power plant as a system RMR resource to help ensure the reliable operation of the transmission system in 2021 and prevent its imminent retirement. The CAISO's analysis concluded that the capacity provided by the RMR designation is necessary to maintain system-wide reliability needs and meet NERC and WECC operational standards, especially during the summer evenings.		Completed on March 24, 2021
CEC	**CEC 2020 CA Electricity Demand Update** – The CEC adopted the California Energy Demand 2020-2030 Forecast Update at its January 25 business meeting. This update to the previously adopted electricity demand forecast incorporates an additional year of historical data, more recent economic and demographic outlooks, and revised vehicle electrification, self-generation and battery storage forecasts. It also includes revised hourly and monthly peak electricity demand for the	Volume III (demand forecast) of the 2020 IEPR was adopted at the March 17, 2021	Completed

	CAISO control area, as well as annual peak forecasts for 1-in-2, 1-in-5, 1-in-10 and 1-in-20 weather scenarios. Additionally, as part of the 2020 IEPR, staff conducted an exploratory analysis which found that 1-in-30 temperature conditions would lead to, on average, a 1.1 percent increase in peak load beyond what would be expected for a 1-in-20 temperature event.	CEC Business Meeting.	
CEC	**Electric Program Investment Charge (EPIC) Reliability Research and Development** – CEC has invested $80M over the last six years to develop technologies to support demand flexibility. Of this amount, three new CEC awards (totaling $6.2M) are anticipated to result in 25MW of flexible demand capacity from commercial and residential customers and 18MW from irrigation pumping load shift this summer alone.	Awarded Grants	Completed
CEC, CPUC	**Efficiency Improvements to the Natural Gas Powerplant Fleet** – On December 2, the CEC, in collaboration with the CPUC, and in coordination with the CAISO, hosted a workshop to highlight to electricity stakeholders a range of options for incremental upgrades at existing natural gas power plants to increase their capacities to help address potential generation supply concerns for Summer 2021 and beyond. The workshop highlighted several projects that add up to 100 MW of additional capacity that could be available for Summer 2021. Since the workshop, the CPUC's Expedited Procurement proceeding provided a contracting opportunity for these resources, and over 100 MW of these resources have been approved by the CPUC to date. CEC's STEP Division is currently reviewing and approving petitions for 136 MW of incremental efficiency upgrades at seven powerplants and another 11.5 MW of equipment upgrades from battery energy storage systems. Up to 123.5 MW are expected to be available by the start of Summer 2021. At the June 25, 2021 Business Meeting, the CEC commissioners approved upgrades to the final two power plant projects, which should be	The CPUC's Expedited Procurement proceeding provided a contracting opportunity for these resources. Over 100 MW of these resources have been approved by the CPUC to date. The CEC has reviewed and approved multiple requests for software and	In progress

	operational by mid-July. With these two projects, the total additional power coming online this summer is 124.5 MW. Another 11.5 MW of additional power should be online as a result of a CEC staff approval for a battery energy storage system equipment upgrade.	equipment improvements for these projects, and additional requests are expected prior to summer.	
CEC, CPUC, CAISO	**Summer 2021 Contingency Plan –** The CEC, CPUC, and CAISO are drafting the summer contingency plan, as recommended in the Root Cause Analysis. The plan describes the roles and responsibilities for each entity and describes coordination activities.	Draft under development and available July	In progress
CEC, CPUC, CAISO	**Integrated Energy Policy Report Workshop – Summer 2021 Reliability –** The CEC, CPUC, and CASIO hosted a joint IEPR workshop. The workshop provided an overview of CEC and CAISO analysis of summer reliability conditions and actions being taken to ensure reliability for Summer 2021. In addition to updates from CEC, CPUC, and CAISO, partnering entities, such as the California Department of Water Resources, Los Angeles Department of Water and Power, Northern California Power Agency, and Balancing Authority of Northern California provided overviews of their efforts to support reliability in the state in 2020 and their activities to support summer 2021 reliability. The CEC, CPUC, and CAISO hosted a second joint IEPR workshop on July 8 and 9. Day 1 addressed hydro power and drought, imports, demand response, and mid-term reliability. Day 2 addressed the relationship between natural gas and electric systems as it relates to summer and winter reliability.	May 4 Workshop July 8-9 Workshop	Completed Completed
All	**Demand Response Round Table** – The CAISO, CEC and CPUC held a second Demand Response Round Table with industry stakeholders to		Completed on March 16, 2021

	discuss strategies to maximize the potential of demand response in the short and long term.		