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Subject: Informal Comments of the Office of Ratepayer Advocates on *Draft California Customer Choice: An Evaluation of Regulatory Framework Options for an Evolving Electricity Market*.

INTRODUCTION

The Office of Ratepayer Advocates (ORA) submits these comments on the draft white paper *California Customer Choice: An Evaluation of Regulatory Framework Options for an Evolving Electricity Market*,¹ which was prepared by California Public Utilities Commission (CPUC or Commission) staff and sent to the service lists for the numerous CPUC proceedings that are impacted by the issues identified in the document.

ORA supports customer choice and the Commission's efforts to ensure that the electricity market can function with increasing numbers of market participants. However, it is important that in the pursuit of choice, we do not sacrifice reliability, affordability, and fulfillment of environmental goals. Following the energy crisis of 2000-2001, the Commission put in place a number of policies designed to prevent another such crisis, such as the Resource Adequacy (RA) program and the 15% planning reserve margin. Additionally, the Commission has reviewed and authorized the investor-owned utilities' (IOUs' or utilities') procurement choices through the Long-Term Procurement Planning Proceeding² (now the Integrated Resource Planning [IRP] Proceeding), the Energy Resource Recovery Account (ERRA) Forecast and Compliance Applications, the Renewable Portfolio Standard (RPS) proceeding, and submission of Applications and

¹ *California Customer Choice: An Evaluation of Regulatory Framework Options for an Evolving Electricity Market*, served on May 3, 2018, amended May 17, 2018 to correct errors and omissions. The draft white paper is also referred to herein by the shorter title of "Green Book."

² Including the IOUs' Bundled Procurement Plans.

tier-three-Advice Letters (AL). In short, since the energy crisis, the new model has been working, but may need to evolve to address future changes.

The rapid growth of Community Choice Aggregation (CCA) has demonstrated that Californians want choice. ORA recommends that throughout this process, the Commission and all parties remain cognizant of the importance of electric system reliability and affordability of electric services, and take caution before implementing any policies that could impair reliability, result in costly over-procurement, or conflict with environmental goals.

RESPONSES TO QUESTIONS POSED

1. How does California continue its course as a global leader in achieving deep decarbonization as regulated utilities provide electricity to fewer Californians?

a. How are the utilities compensated for providing the essential infrastructure to achieve these policies?

Utilities are compensated fairly for the infrastructure investments they make. If a utility invests in an infrastructure project, it uses its own funds to finance the capital expenditure. In order to recover costs from ratepayers, the expenditure and associated costs must be requested from, and approved, by the Commission. Once that infrastructure is used and useful³ (i.e., placed in service), the utility can begin recovering costs and return from ratepayers. The revenue requirement is the total amount of money a utility collects from customers to pay all operating and capital costs, including a return on investment.

On an annual basis, the utility recovers depreciation expenses associated with the project (typically, the cost divided by the asset life), as well as any tax expenses associated with the investment. In addition, the utility recovers the annual expenses, if any, needed to operate and maintain the capital investment. The utility also receives an annual return on its investment, which is the net plant in rate base multiplied by the rate of return on rate base (cost of capital), where net plant = original investment - accumulated depreciation reserve. The result is that the actual dollar return on investment diminishes as each year goes by, since the net plant is lower every year as the accumulated depreciation reserve increases. This ratemaking treatment applies to all types of utility plant investment.

³ Pacific Gas and Electric Company (PG&E), *Resource: An Encyclopedia of Energy Utility Terms, Second Edition*, 1992, p. 467.

2. What are the essential grid operations to make sure California's lights stay on?

The electrical grid in California is composed of distinct transmission and distribution systems, which are both essential to deliver electricity to customers.

Transmission

The California Independent System Operator (CAISO) operates the bulk transmission system (generally 200 kilovolts [kV] and above), which delivers bulk power produced by larger generators at high voltages primarily across long distances. Operating the transmission system requires the CAISO to balance supply and demand between generators and load centers. A key part of operating the transmission system is dispatching available energy through the transmission connected generators to meet electrical demands, while also managing congestion on the transmission system. The CAISO is responsible for planning to meet new challenges that threaten the reliability and/or resilience of the bulk transmission system, and does the following:

- Conducts annual, seasonal, and on-going reliability assessments to comply with national and regional reliability standards set by the North America Electric Reliability Corporation (NERC), Western Electricity Coordination Council (WECC), and the CAISO.⁴ The CAISO also coordinates reliability assessments of natural gas providers' facilities through WECC to identify potential issues that might affect the grid and electric service.⁵
 - Complies with the CAISO-specific reliability and planning standards, which involves assessing and preparing for potential adverse operating conditions including, but not limited to, wildfires, earthquakes, flooding, tsunamis, geomagnetic disturbances, and extreme weather conditions.⁶

⁴ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 7, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

⁵ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 19, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

⁶ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 27, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

- Leads an annual open and transparent stakeholder bulk transmission planning process (TPP) that identifies reliability issues and recommends solutions to meet applicable reliability criteria.⁷ During each TPP, the CAISO:
 - Coordinates with the California Energy Commission (CEC), CPUC, the Governor’s office, the State Water Resources Control Board, the Air Resources Board, generation and transmission owners, load serving entities (LSEs), and other balancing authorities to formulate demand forecasts and identify any issues regarding upcoming operating conditions.⁸
 - Considers the supply and demand conditions across the entire CAISO balancing authority area.²
 - Uses production simulation tools and data to assess the supply and demand outlook on an hourly basis. In particular, the CAISO assesses hydropower conditions and monitors snowpack, rainfall, and reservoir capacity levels.¹⁰
 - Through seasonal reliability assessments, the CAISO considers conditions affecting the upcoming season¹¹ and special events or circumstances (e.g. the 2017 solar eclipse). In response to the 2017 solar eclipse, the CAISO positioned large hydropower units for rapid response to account for potential loss of solar resource outputs during the eclipse.¹²

⁷ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 1, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

⁸ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 31-33, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

² CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 19, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

¹⁰ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 19, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

¹¹ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 19-20, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

¹² CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 29, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

- Conducts economic and public policy project studies to determine if additional projects are needed.¹³
 - The objective of economic studies and projects is to cost effectively meet local reliability needs.¹⁴ These economic studies inform future CPUC consideration of resource development in local areas.
 - The objective of public policy studies and projects is to meet specific state or federal requirements such as compliance with the California RPS targets or the Federal Clean Power Plan or other similar policies.¹⁵
- Conducts special studies regarding current, emerging, and anticipated conditions and challenges performed within and/or outside of the TPP,¹⁶ such as impacts of early retirement of gas generation and/or generation needed for reliability,¹⁷ increasing the number of variable energy resources on the grid, and frequency response challenges.¹⁸ In recent years, the CAISO has performed numerous new TPP special studies to assess the impact of the changing resource mix on the system. These include renewable integration studies regarding the use of renewable resources

¹³ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 34-35, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

¹⁴ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 8-9, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf; and CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 151-152, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

¹⁵ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 15, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

¹⁶ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 14 and 22, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

¹⁷ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 284-286, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

¹⁸ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 295-304, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

to operate the grid reliably,¹⁹ and the benefits of bulk storage.²⁰

- Conducts annual flexible capacity assessments and local capacity requirement (LCR) studies to determine system flexible capacity needs and capacity needs in local capacity areas, for the upcoming year and informational studies considering the next five years. The studies looking out one year assist with determining LSEs' annual resource adequacy (RA) requirements that meet the CAISO's expected capacity and operational needs for the upcoming year. Every other year the CAISO performs informational studies looking out ten years. The CAISO also conducts studies and assessments to determine whether changing conditions on the system requires changes to the method(s) used to determine RA requirements.²¹
- Utilizes its existing backstop procurement mechanisms to procure resources that the CAISO needs for reliability if LSEs do not already procure them for RA.²² The CAISO is currently pursuing changes to the Capacity Procurement Mechanism (CPM) and Reliability Must-Run (RMR) contracts to address issues with implementation of both mechanisms.²³
- Participates as a party in the CPUC's RA proceeding to help inform the CPUC's adoption of changes to RA requirements. For example, the CAISO is developing a proposal to change the

¹⁹ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 24-25, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

²⁰ CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 287-294, available at http://www.caiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

²¹ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 20, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

²² CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 7, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

²³ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 138-142, available at https://www.caiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

flexible RA capacity framework that it will submit to the CPUC for adoption.²⁴

- Recommends mechanisms to restore the system in the event of an outage.²⁵ For example, the CAISO has an approved restoration plan and Black Start program if one or more areas of the Bulk Electric System experiences a widespread outage.²⁶
- Coordinates a comprehensive bulk transmission maintenance audit.²⁷
- Works with state agencies and other stakeholders to respond to unexpected events (e.g., Aliso Canyon, San Onofre Nuclear Generating Station closure).²⁸

ORA recommends that all CAISO participating transmission owners comply with the CPUC's recent request to review transmission maintenance projects in a transparent public process similar to the CAISO TPP, and to comply with the forthcoming CPUC transmission maintenance guidelines.²⁹

Distribution

The distribution system delivers power to loads from substations that receive high voltage power from the transmission system and transforms the power to lower voltage prior to

²⁴ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 145-147, available at https://www.aiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

²⁵ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 41, available at https://www.aiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

²⁶ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 146, available at https://www.aiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

²⁷ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 7, available at https://www.aiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

²⁸ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 16-18, available at https://www.aiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

²⁹ CPUC Self-Approved Projects in the CAISO Area: What We Know and Where We Go from Here Presentation, [Federal Energy Regulatory Commission (FERC)] Technical Conference Regarding Local Transmission Planning in the CAISO Control Area, FERC Docket No. AD18-12-000, May 1, 2018, slide 8, available <https://www.ferc.gov/CalendarFiles/20180510125105-Bone,%20CPUC.pdf>.

delivery to customers. The distribution system must be managed to safely provide reliable energy services to all distribution customers, regardless of their status as a customer of a CCA or interconnection with onsite generators or energy storage.

Distribution system grid operations include planning, construction, maintenance, and operations of distribution facilities and equipment. Distribution planning includes forecasting load, identifying grid needs, and developing maintenance and construction plans to meet forecasted loads using transformers, overhead and underground line conductors, circuit breakers, switches, and distributed energy resources (DER) solutions. The distribution system is managed to ensure that distribution equipment is not overloaded, which can start fires, creates potential unsafe situations, and can damage utility distribution equipment. Customers are provided electric service with voltages within the ranges specified by utility Electric Rule 2³⁰ using capacitors, voltage regulators, conductors, and load tap changers. Reliability and resiliency are managed using circuit breakers and relays, reclosers, switches, sectionalizers, fault interrupters, detection and control equipment, and associated data systems. Distribution management also involves the connection of new service accounts and the interconnection of customer-owned DERs.

a. Who has the requirement to perform the necessary functions?

Transmission

The CAISO controls the bulk transmission system, which is maintained by Participating Transmission Owners (PTOs). For the bulk transmission system, the CAISO has primary responsibility to address reliability and resilience-related challenges on the electrical grid under the oversight of the Federal Energy Regulatory Commission (FERC).

To perform these functions, the CAISO: (1) collaborates with state agencies, including the CPUC, and LSEs in technical assessments to identify the respective risks to natural gas and electric reliability; (2) evaluates the costs and benefits of a range of reliability solutions, including solutions that utilize alternative energy resources; (3) identifies mitigation measures to address the range of possible events to maintain reliability; and

³⁰ PG&E Tariff Electric Rule No. 2 Description of Service, available at https://www.pge.com/tariffs/tm2/pdf/ELEC_RULES_2.pdf; Southern California Edison Company (SCE) Tariff, Rule 2 Description of Service, available at <https://www.sce.com/nr/sc3/tm2/pdf/rule2.pdf>; San Diego Gas & Electric Company (SDG&E) Tariff, Rule 2 Description of Service, available at https://www.sdge.com/sites/default/files/elec_elec-rules_erule2.pdf.

(4) presents its evaluations and proposed mitigation measures to stakeholders in public meetings through the CAISO TPP.^{31,32}

Distribution

The IOUs construct and manage the electric distribution systems, including construction, routine maintenance, and emergency repairs managed in accordance with the CPUC adopted Electric Rules in the utility's tariffs. For example, the utility's Electric Rules relevant to distribution management include the utility's Electric Rule 2, which governs the specifications of electrical service such as the voltage range; utility's Electric Rule 15,³³ which governs service line extensions; and utility's Electric Rule 21,³⁴ which governs the process for interconnecting electric generating facilities. CPUC General Order (GO) 95³⁵ and GO 128³⁶ govern the design, construction, and maintenance of overhead and underground electrical supply systems that are within the jurisdiction of the CPUC.

b. Who establishes the rules and has enforcement authority?

Transmission

FERC has enforcement authority over the bulk transmission system that the CAISO manages. The CAISO's TPP and its related reliability assessments and coordination

³¹ CAISO Comments on Grid Resilience in Regional Transmission Organizations and Independent System Operations, filed in AD18-7-000, p. 150-151, available at https://www.aiso.com/Documents/Mar9_2018_Comments-GridResilience_AD18-7.pdf.

³² CAISO 2017-2018 Transmission Plan, March 22, 2018, p. 12, available at http://www.aiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

³³ PG&E Tariff, Electric Rule No. 15 Distribution Line Extensions, available at https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_15.pdf; SCE Tariff, Rule 15 Distribution Line Extensions, available at <https://www.sce.com/NR/sc3/tm2/pdf/Rule15.pdf>; SDG&E Tariff, Rule 15 Distribution Line Extensions, available at https://www.sdge.com/sites/default/files/elec_elec-rules_erule15.pdf.

³⁴ PG&E Tariff, Electric Rule No. 21 Generating Facility Interconnections, available at https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_21.pdf; SCE Tariff, Rule 21 Generating Facility Interconnections, available at https://www.sce.com/NR/sc3/tm2/pdf/Rule21_1.pdf; SDG&E Tariff, Rule 21 Generating Facility Interconnections, available at https://www.sdge.com/sites/default/files/elec_elec-rules_erule21.pdf.

³⁵ CPUC General Order No. 95, Rules for Overhead Electric Line Construction, available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M212/K523/212523993.pdf>.

³⁶ CPUC General Order No. 128, Rules for Construction of Underground Electric Supply and Communication Systems, available at http://docs.cpuc.ca.gov/PUBLISHED/GENERAL_ORDER/52591.htm.

activities with other parties including neighboring balancing authority areas are required under FERC Orders 888,³⁷ 890,³⁸ and 1000.³⁹

Distribution

The CPUC has enforcement authority over the IOUs, which manage the distribution systems in accordance with rules established by the CPUC.

c. What does it cost and who pays?

Transmission

All customers pay for new high- and low-voltage transmission costs including capital and operation and maintenance transmission costs through the high-voltage (HV) and low-voltage (LV) transmission access charge (TAC) based on their usage of the transmission system. The allocation of the high-voltage and low-voltage transmission costs is different however. The HV transmission costs are shared among the PTOs within the CAISO footprint, and as a result are socialized. The current HV TAC rate for all PTOs within the CAISO footprint is \$11.78 per megawatt hour (MWh).⁴⁰ In contrast, the LV transmission costs are shared among a PTO with customers, and as a result the low-voltage cost varies across the CAISO footprint. The following are the LV TAC charges for the major California IOUs:

³⁷ FERC Order 888 Docket Numbers RM95-8-000 & RM94-7-001, April 24, 1996, Section 425, items 1-10, available at <https://www.ferc.gov/legal/maj-ord-reg/land-docs/rm95-8-00w.txt>.

³⁸ FERC Order 890 Docket Numbers RM 05-17-000 & RM05-25-000, February 16, 2007, sections 426, 435, 437, planning principle sections: coordination sections 444-451-454; openness sections 455 & 460; transparency sections 461 & 471-479; information exchange sections 480 & 486-488; comparability sections 489 & 494-495; dispute resolution sections 496 & 501-503; regional participation sections 504 & 523-528; economic planning studies sections 529 & 542-551; cost allocation for new projects sections 552 & 557-561; independent third party coordination sections 562 & 567-568; state commission participation sections 569 & 574-575; flexibility in implementation sections 576 & 582; recovery of planning costs sections 583 & 586; open season for joint ownership of transmission sections 587 & 593-594; level of detail sections 600 & 602; specific studies beyond reliability and congestion sections 595 & 599.

³⁹ FERC Order 1000 Docket Number RM10-23-000, regional transmission planning principles sections 118-119 & 146-147; consideration of transmission needs driven by public policy requirements sections 166-168 & 203-224; reliability compliance obligation of transmission developers section 342; interregional transmission coordination sections 345 & 368-373; interregional transmission coordination requirements sections 374-376 & 393-404; geographic scope of interregional transmission coordination sections 405 & 415-421; implementation of interregional transmission coordination sections 435-450; data exchange section 454; transparency section 458; stakeholder participation sections 455 & 465-467.

⁴⁰ CAISO March 1, 2018 TAC Rates Based on Filed Annual TRR/TRBA and Load Data, April 9, 2018, (CAISO April 2018 Transmission Rates), p. 1.

- \$10.81 per MWh for PG&E customers⁴¹
- \$0.31 per MWh for SCE customers⁴²
- \$13.90 per MWh for SDG&E customers⁴³

The LV-TAC for SCE is less than the LV-TAC rates for PG&E and SDG&E because certain costs from 115 kV and 166 kV transmission facilities within the SCE territory are included in the distribution rates as some of SCE's transmission facilities provide distribution functions.⁴⁴

The annual costs to maintain the reliability of the bulk transmission system have been on a downward trend for the last five years due to declining load attributed to growth in DERs and increased energy efficiency measures, and the capacity and extent of existing bulk transmission infrastructure.⁴⁵ To illustrate, the 2017-2018 CAISO TPP approved 13 transmission projects with an estimated cost of approximately \$182.3 million to maintain bulk transmission system reliability,⁴⁶ whereas the 2013-2014 CAISO TTP approved 28 transmission projects with an estimated cost of approximately \$1.70 billion.^{47, 48}

Distribution

The costs to manage distribution grid operations are recovered by the IOUs in their General Rate Case (GRC) applications. The GRCs authorize recovery of costs in rates, typically for three-year periods. In their most recent GRCs, the IOUs were authorized to

⁴¹ CAISO April 2018 Transmission Rates, p. 2.

⁴² CAISO April 2018 Transmission Rates, p. 2.

⁴³ CAISO April 2018 Transmission Rates, p. 2.

⁴⁴ FERC Order on Local Distribution Determination, Docket No. RC15-1-000, section 33.

⁴⁵ CAISO Introduction and Overview Draft 2017-2018 Transmission Plan and Transmission Project Approval Recommendations (2017-2018 Transmission Planning Process Stakeholder Meeting Presentation), February 8, 2018, slide 6.

⁴⁶ CAISO TPP 2017-2018, p. 2.

⁴⁷ CAISO TPP 2013-2014, p. 8.

⁴⁸ CAISO TPP 2016-2017, p. 10. The 2015-2016 CAISO TPP approved 2 transmission projects with an estimated cost of approximately \$24 million. CAISO TPP 2015-2016, p. 2. The 2015-2016 CAISO TPP approved 14 projects with an estimated cost of approximately \$288 million. CAISO TPP 2014-2015, p. 2. The 2014-2015 CAISO TPP approved seven transmission projects with an estimated cost of approximately \$352 million.

recover the following revenues from their customers for 2017 activities related to electric distribution grid operations:

- SCE 2015 GRC – Approximately \$4.7 billion for 2017.⁴⁹
- SDG&E 2016 GRC – Approximately \$1.3 billion for 2017.⁵⁰
- PG&E 2017 GRC – Approximately \$4.2 billion for 2017.⁵¹

These revenue amounts include recovery of expenses associated with operations and maintenance, taxes, depreciation, various expenses allocated to the electric distribution function (e.g., customer services, administrative and general), as well as the return on investment for capital projects.

Distribution system costs are allocated across all distribution customers based on each customer class's marginal cost of service and share of cost drivers, such as the number of new customers and peak demand impacts.

3. Can California provide investment and operational certainty to address reliability and resiliency, especially in the face of catastrophic events that impact the electric sector such as the 2017 wildfires?

- a. *With so many decision-makers entering into the market to provide electrical supply, how do we ensure coordination to provide all the energy needs for reliability purposes?*

California can ensure coordination of energy procurement to meet all reliability needs through continued collaboration between the CAISO, the CEC, and the CPUC's IRP and RA proceedings. The CPUC has adopted a repeating two-year IRP cycle in which it will address long term planning for all LSEs "which operate within the service territories and whose customers utilize transmission and distribution services of the IOUs."⁵² The modeling conducted in the IRP will include the evaluation of reliability constraints, and the results of the IRP will be forwarded to the CAISO for use in its TPP to ensure coordinated planning to maintain reliability.⁵³

⁴⁹ Decision (D.) 15-11-021.

⁵⁰ D.16-06-054. SDG&E's revenue requirement was escalated by the adopted post-test year revenue percentage increase.

⁵¹ D.17-05-013.

⁵² D.18-02-018, p. 14.

⁵³ D.18-02-018, p. 3.

The CPUC will continue to utilize the CEC load forecasts to develop short-term system RA requirements. The CAISO will also continue to determine short-term reliability needs for all LSEs in the CAISO's balancing authority area through its local capacity requirements technical study and flexible capacity needs assessment. As new LSEs enter the market, they must meet all system, local, and flexible RA requirements, thereby ensuring that all LSEs procure sufficient capacity to meet reliability needs. As discussed below, the CAISO also has the authority to assess RA showings and to procure backstop resources to address any potential deficiencies. The CPUC and the CAISO can also work together to identify specific resources necessary to maintain reliability, and the CPUC can coordinate procurement and cost allocation of such resources to minimize backstop procurement from the CAISO. The current CPUC RA proceeding will address this type of coordinated procurement.⁵⁴

- b. Who will provide backstop procurement for resource adequacy if there are shortages of power needs identified in planning and a disaggregated set of electricity purchasers who cannot fill the need?*

The CPUC will assess RA showings and impose any necessary penalties on deficient LSEs⁵⁵ in its jurisdiction, but the CAISO determines if it needs to procure backstop RA to address reliability needs in its territory. Currently, the CAISO has the tariff authority to procure backstop resources for RA through the CPM and RMR contracting.⁵⁶ The CPM can be used to address deficiencies in RA resource procurement, sudden reliability or operational needs, etc. The RMR contract can be used to procure a resource that would otherwise retire but is found to be needed for reliability. Even as more LSEs develop, all LSEs must procure resources to meet RA requirements, but if the CAISO determines the need to procure specific backstop resources, it has the authority to do so.

- c. Who will coordinate supply and operations during local events where resources must come from outside the region?*

⁵⁴ *Current Trends in California's Resource Adequacy Program Energy Division Working Draft Staff Proposal*, February 16, 2018, pp. 51-59; issued in R.17-09-020.

⁵⁵ Public Utilities Code Section 380(k) defines LSEs for purposes of the CPUC's RA oversight as including IOUs (electrical corporations), CCAs, and electric service (direct access) providers. Public Utilities Code Section 454.52(a)(1) uses that definition for the Commission's oversight over the IRP process.

⁵⁶ FERC approves all CAISO Tariff provisions. Section 40.2.1 of the CAISO Tariff includes requirements for CPUC LSEs, while Section 40.2.2 of the CAISO tariff includes requirements for Non-CPUC Load Serving Entities. CAISO Tariff Section 41 governs RMR contracts, while Section 43 governs CPM procurement.

What is the responsibility of non-utility electricity suppliers to help meet unexpected contingencies?

ORA interprets this question as referring to supply and operations of energy resources and local/sub-local regions as defined by the CAISO. The CAISO is responsible for coordinating and delivering energy across its footprint through the energy market, no matter which LSE is responsible for procuring energy for the local or sub-local area customers. If additional resources are needed to provide energy, the CAISO would procure those backstop resources and allocate the costs to LSEs within its footprint as appropriate. Depending on the type of contingency, the CAISO would work with the PTO or the Distribution Utility to resolve the contingency.

The non-utility electricity supplier should coordinate with the CAISO to develop communications with customers to inform them of contingencies and to persuade them to reduce load in such events. The non-utility LSEs have unique methods for directly communicating with customers so they and the CAISO should adopt procedures for such communications during contingencies.

- d. *What role do non-utility providers play to ensure adequate responses to catastrophic and emergency events?*

A catastrophic event, such as a wildfire, threatens electric infrastructure.

Currently, non-utility providers such as CCAs own minimal electric infrastructure. In general, CCAs utilize the IOUs' electric infrastructure for transmission and distribution purposes. All customers that use the IOUs' transmission and distribution infrastructure pay for those services.

If the electric infrastructure is damaged due to a catastrophic event, a portion of the cost of rebuilding the infrastructure is allocated, through various cost recovery mechanisms determined by the CPUC, to all applicable customers, including CCA customers.

Reliable service shall be ensured in case of catastrophic or emergency events.

Commission General Order (GO) 166, Standards for Operation, Reliability, and Safety During Emergencies and Disasters,⁵⁷ set up mutual assistance agreements among IOUs to provide emergency response support. Similar mutual assistance agreements could be

⁵⁷ CPUC General Order No. 166, Standards for Operation, Reliability, and Safety During Emergencies and Disasters, available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M209/K451/209451792.pdf>.

considered for non-utility providers to offer assistance to IOUs or other non-utility providers, and vice-versa.

When a non-utility provider fails to provide power to its customers, it should be required to take appropriate measures to notify its customers. These measures should mirror the power outage notification requirements already in place for the IOUs.⁵⁸ In addition, the Commission's RA program requires the procurement of enough electric supply to meet forecasted demand plus a reserve margin in the following year, including local area reliability needs. The RA requirements help ensure adequate power supply during emergency events and mitigate potential damage associated with power outages. The CAISO's tariffs presently include provisions to backstop resources in case of such an event.⁵⁹ Non-utility providers are also subject to these requirements.⁶⁰

4. Are there adequate protections for all customers with the wider choices created by Direct Access, CCAs, and behind-the-meter installations?

Behind-the-Meter Installations

The Commission is developing protections for customers with wider choices created by behind-the-meter (BTM) installations. ORA's *Opening Comments on ALJ's Ruling Seeking Comment on Consumer Protection and Related Issues*, filed in R.14-07-002, noted that there are sufficient regulations in place to address common consumer protection matters.⁶¹ ORA recommended that the Commission ensure that existing resources⁶² and avenues for redress are readily accessible to all customers. Vendors should also provide clear information via an information packet to all prospective

⁵⁸ For example, in D.12-04-024, the Commission stated that "San Diego Gas & Electric Company (SDG&E) shall take appropriate and feasible steps to provide notice and mitigation to its customers whenever SDG&E shuts off power pursuant to its statutory authority."

⁵⁹ Capacity Procurement Mechanism designations at CAISO Tariffs 43A.2.1-2.3, available at https://www.caiso.com/Documents/Section43A_CapacityProcurementMechanism_asof_Mar16_2018.pdf

⁶⁰ RA requirements are codified in Public Utilities (PU) Code Section (Sec.) 380. The applicability of RA to local area reliability is stated at <http://www.cpuc.ca.gov/ra/>. The Commission confirmed applicability of RA requirements to CCAs in Resolution E-4907.

⁶¹ ORA Opening Comments on ALJ Ruling Seeking Comment on Consumer Protection and Related Issues, January 14, 2017, pp. 7-8; filed in R.14-07-002.

⁶² Some existing state regulations include the Unfair Competition Law (Business and Professions Code [BPC] § 17200), the False Advertising Act (BPC § 17500), the Consumer Legal Remedies Act (Civil Code §§ 1750-1784), and the Home Improvement Sales Persons Code (BPC §§ 7150-7168). SEIA and CALSEIA presentation. (NEM Consumer Protections workshop, October 20, 2016, available at <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442451313>.)

customers.⁶³ In addition, ORA recommended providing consumer protection information on existing resources and avenues for redress on the GoSolarCalifornia website, the CPUC website, and solar provider websites.

ORA's Reply Comments supported PG&E's and SCE's recommendation to establish a list of contractors authorized to participate in the Net Energy Metering (NEM) program, and to revoke that authorization when contractors violate the Commission's consumer protections.⁶⁴ The Commission has not yet issued a final decision for this stage of the proceeding.

Community Choice Aggregators

CCA customers have different consumer protections than customers of IOUs. CCAs are controlled by elected officials and, therefore, CCAs have a strong incentive not to participate in deceptive or fraudulent practices in their dealings with customers. Protections for CCA customers exist through the built-in checks and balances of the electoral process, since those same customers could vote the elected officials operating the CCAs out of office. In the event a consumer could not resolve a complaint against his or her CCA, the customer would need to seek assistance from a state or local entity with jurisdiction over the CCA.

- a. *Should there be a state entity that provides basic customer protections to customers of services that are either behind-the-meter or served by entities not historically under the jurisdiction of the CPUC?*

The Commission is currently exploring this issue in R.14-07-002 in the context of solar energy system providers and NEM customers. ORA is actively participating in this proceeding to identify other protections.

- b. *Who will ensure that customers have access to power service if a lightly or unregulated electric power provider fails?*

The provider of last resort. See response to Question 5.

⁶³ D.16-01-044, which adopted a NEM successor tariff, directed Energy Division staff to develop a uniform information packet for customers interested in installing NEM-eligible systems.

⁶⁴ ORA Reply Comments on ALJ Ruling Seeking Comment on Consumer Protection and Related Issues, January 14, 2017, pp. 1-2; filed in R.14-07-002.

- c. What protects customers who are not interested in choice, elect not to engage, unwittingly make the wrong decision, or might otherwise be left behind?*

Existing law provides protections for customers who are not interested in CCA participation, elect not to engage, or unwittingly make the wrong decision. With respect to CCA participation, PU Code Sec. 366.2(c)(2) requires CCAs to inform customers of their right to opt-out of a CCA program. PU Code Sec. 366.2(c)(13) provides customers who unwittingly make the wrong decision to participate in a CCA an opt-out period of 60 days from the date of enrollment without penalty or reentry fees.

Moreover, PU Code Sec. 366.2(a)(4) states that the implementation of a CCA program “shall not result in a shifting of costs between the customers of the [CCA] and the bundled service customers of an electric corporation” (customers who elect not to engage in community choice aggregation).

5. What is the role of the investor-owned utilities in the new regulatory construct?

IOUs have an obligation to serve customers in their service territory,⁶⁵ and are the identified provider of last resort in their service territory.⁶⁶ ORA interprets “the new regulatory construct” in this question to mean the existing hybrid energy market in which IOUs maintain responsibility for the distribution system, transmission assets are operated by the CAISO, and wholesale power is largely acquired through purchase power agreements.

Ratepayers that continue to be served by IOUs should not be exposed to higher costs or greater risks in the event that an IOU is forced to step in as the provider of last resort if a CCA fails to meet its obligations. At least one utility has requested that the Commission clarify the parameters of “provider of last resort” under the current circumstances in which many customers have left their incumbent IOU.⁶⁷ While the Commission explored

⁶⁵ D.02-10-062, issued in R.01-01-024, in Order Instituting Rulemaking to Establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development, Conclusion of Law 2, p. 72 (“Consistent with Pub. Util. Code Sections 451, 761, 762, 768, 770 and proposed 454.5(a), the utilities have an obligation to serve.” [Emphasis added.]

⁶⁶ D.04-01-050, Interim Opinion issued in Rulemaking 01-10-024, Order Instituting Rulemaking to Establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development, p. 56.

⁶⁷ D.15-10-031 issued in R 13-12-010 Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans, p. 52.

aspects of this topic in R.03-10-003,⁶⁸ ORA recommends a workshop in which IOUs, CCAs, and other stakeholders consider the implications of various scenarios in which customers must return to IOU service because their CCA is no longer willing or able to provide service.

ORA also recommends that the Commission consider how to avoid dramatic shifts in generation costs. This scenario could occur if customers switch back and forth between providers after generation procurement requirements have been met. Although PU Code Sec. 366.2(c)(12) allows CCA customers to opt out of the CCA and return to the IOU within 60 days, or two billing cycles, after the customer has enrolled in the CCA, it is silent regarding customers that opt out of the CCA after more than 60 days or two billing cycles.

- a. *Under all visions of the future, the IOUs continue to provide transmission, distribution, and other grid services. What are the requirements to maintain these systems?*

The Green Book explicitly states that customer choice models are not extended to the “poles and wires distributing electricity.”⁶⁹ ORA agrees that no policies contemplated in the Green Book presume any changes to the current practice of the CAISO and IOUs providing transmission, distribution, and other grid services. ORA’s response regarding requirements to maintain the transmission and distribution systems are provided in response to Question 2.

- b. *How will these utilities be compensated for building the necessary infrastructure and operating the grid?*

As the construction and operation of the transmission and distribution grids are not expected to be impacted by the customer choice models contemplated by the Green Book, there is no reason to conclude that the procedures for compensating utilities for grid services should be radically different than they are today. Please refer to ORA’s summary of how utilities are currently compensated for providing grid services in response to Question 2.

6. Regulated utilities were required by laws, like the Renewables Portfolio Standard, to enter into long-term contracts. If

⁶⁸ The Commission has issued D.08-05-022, Decision Establishing Reentry Fees and Financial Security Requirements for Community Choice Aggregators, which establishes a bond that will cover the administrative fees associated with CCA customers involuntarily returning to bundled service in the event of a CCA going out of business.

⁶⁹ Green Book, p. 25.

customers increasingly buy electricity from non-utility sources, what happens to the contracts that the regulated entities executed?

- a. *Who will execute the long-term contracts that can be used to finance construction of new facilities going forward?*

Pursuant to Senate Bill (SB) 350, long-term contracting requirements for the RPS in 2021 and beyond necessitate that 65% of a retail seller's⁷⁰ renewable procurement requirement must be procured through contracts with a term of ten years or more.⁷¹ The CPUC determined that all long-term contracts that otherwise comply with RPS requirements may be used for compliance regardless of the date they were signed.⁷² .

Resource procurement by a coalition of LSEs could allow the financing of new facilities by allocating the costs and benefits equitably and proportionally between two or more

⁷⁰ Public Utilities Code Section 399.12 (j) "Retail seller" means an entity engaged in the retail sale of electricity to end-use customers located within the state, including any of the following:

(1) An electrical corporation, as defined in Section 218.

(2) A community choice aggregator. A community choice aggregator shall participate in the renewables portfolio standard program subject to the same terms and conditions applicable to an electrical corporation.

(3) An electric service provider, as defined in Section 218.3. The electric service provider shall be subject to the same terms and conditions applicable to an electrical corporation pursuant to this article. This paragraph does not impair a contract entered into between an electric service provider and a retail customer prior to the suspension of direct access by the commission pursuant to Section 80110 of the Water Code.

(4) "Retail seller" does not include any of the following:

(A) A corporation or person employing cogeneration technology or producing electricity consistent with subdivision (b) of Section 218.

(B) The Department of Water Resources acting in its capacity pursuant to Division 27 (commencing with Section 80000) of the Water Code.

(C) A local publicly owned electric utility.

(k) "WECC" means the Western Electricity Coordinating Council of the North American Electric Reliability Corporation, or a successor to the corporation.

⁷¹ Under the current RPS, in order to count procurement from short-term renewable contracts towards RPS requirements, a retail seller must also procure long-term renewable contracts at a quantity of at least 0.25% of its total retail sales requirement from the previous RPS compliance period. For the current rules, see D.12-06-038, Ordering Paragraph 15, p. 98. For the 2021 requirements, see D.17-06-026, pp. 9-10.

⁷² D. 17-06-026, p. 17.

LSEs working together. In the CPUC's current RA rulemaking, the Energy Division⁷³ and ORA⁷⁴ have proposed frameworks for how this may enable the retention of necessary resources and procurement of new resources. PG&E and East Bay Community Energy (EBCE) have also embarked on an innovative collaboration to procure new resources to replace a petroleum-based generator in Oakland.⁷⁵ Such cooperation could also enable the long-term procurement of resources vital to local RA needs, sharing the costs of necessary resources while avoiding a costly backstop measure.

As discussed in response to Question 3, the IRP will coordinate long term procurement of resources, including potential joint procurement of new resources.⁷⁶

- b. *Should the incumbent electric utilities be allowed to compete with other market participants, or should they be limited to offering a platform for other electricity suppliers?*

The deregulation of the California energy market sought to lower energy costs through increased competition. Removing the IOUs as an active market participant in the purchasing and generation of energy would be a step backward from introducing market competition and the associated economic benefits of a diverse selection of both buyers and sellers of energy.

ORA, therefore, recommends allowing incumbent electric utilities to continue to compete with other market participants, subject to the applicable rules and procedures outlined in the Code of Conduct adopted by the Commission in D.12-12-036, pursuant to SB 790 (Leno). The Code of Conduct rules and enforcement mechanisms provide CCAs with the opportunity to compete on a fair and equal basis with other LSEs, and prevent utilities from using their position or market power to gain unfair advantages.⁷⁷

⁷³ Energy Division Staff, *Current Trends in California's Resource Adequacy Program*, February 16, 2018, pp. 51-59, available at <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442457193>.

⁷⁴ ORA Track 1 Proposals, February 16, 2018 for R.17-09-020, available at <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=211794936>.

⁷⁵ This project is called the Oakland Clean Energy Initiative and seeks 20-45 MW of clean energy. See PG&E's press release, available at https://www.pge.com/en/about/newsroom/newsdetails/index.page?title=20180413_request_for_offers_lau_nches_for_oakland_clean_energy_initiative; and EBCE's informational item, available at https://ebce.org/wp-content/uploads/Item-7-EBCE-Oakland-Clean-Energy-Initiative-RFO_Complete_FINAL.pdf.

⁷⁶ The IRP process has already acknowledged that procurement of renewable integration resources and RPS standards are within the regulatory jurisdiction of the CPUC, not individual LSEs. See D.18-02-018, p. 26.

⁷⁷ D.12-12-036, p. 6.

The incumbent utilities have also proven to be important actors in meeting California and CPUC energy goals. Their procurement of large-scale and pilot resources to meet state renewable, energy efficiency, and storage goals has reduced California's greenhouse gas emissions. The incumbent utilities also have market experience and financial capability to make large investments in emerging technologies crucial to the procurement and development of clean resources.

Respectfully submitted,

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