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Briefing on Multi-Year RA, R.17-09-020

June 20, 2018

Resource Adequacy and Procurement Oversight Section

Energy Division

California Public Utilities Commission

Agenda

- Background and History
- Structural Changes and Emerging Issues
  - Once Through Cooling Retirements & Replacements
  - Growth in Community Choice Aggregators
  - Less Forward Contracting
  - Local Waiver Deficiencies
  - Backstop Procurement (RMR and CPM)
- Resource Adequacy (R.17-09-020)
  - Track 1 Proposed Decision
  - Track 2 Schedule

Background and History

- **Joint Reliability Proceeding (R.14-02-001) opened to:**
  - **Consider policy proposals to refine California's existing reliability framework for electric procurement**
  - **Ensure that California's electric reliability framework continues to adapt as needed to meet the changing requirements of the grid**
- **Closed pending development of a permanent flexible product D.16-01-033**
  - **"The RA proceeding has the permanent flexible capacity issue scoped, and that effort needs to be finalized before a two- or three-year RA requirement can be determined."**
  - **Ordered Energy Division to gather and disseminate information regarding the expected electric resource availability and the forward contracting of such resources, and to make that information available to the public (OP 4)**
- **Issues moved into the CPUC's RA proceeding, R.14-10-010**

Background and History

- **Decision (D).17-06-027 at p.18:**

  "Since we are not adopting a durable FCR program at this time (which, according to the Scoping Memo in this proceeding, is a prerequisite for a multi-year RA requirement), we do not adopt a multi-year RA requirement here…In future RA proceedings the Commission may re-examine whether a durable FCR program should continue to be a prerequisite to adoption of a multi-year RA requirement."

- **January 18, 2018 Scoping Memo (R.17-09-020) scopes Track 1 to include "Top priority modifications to the RA program" which included:**

  RA program reforms necessary to maintain reliability while reducing potentially costly backstop procurement. These may be addressed via staff and party proposals, and may include central buyers, a multi-year procurement framework for Local RA (and associated cost allocation), as well as other proposals to address out-of-market procurement and increase transparency;

Structural Changes and Emerging Issues

- Integrating greater numbers of intermittent renewable resources
- Retiring or repowering significant amount of resources that utilize Once Through Cooling (OTC) technology
- Rapid Community Choice Aggregator (CCA) expansion
- Recent increase in CAISO backstop procurement
- Year ahead local deficiencies waivers filed

OTC Retirements and Replacements

Resource Name	Capacity (MW)	Location	Offline Date
Encina Units 2-5	844	San Diego	12/31/2018
Alamitos Units 1, 2, 6	844	LA Basin	12/31/2019
Alamitos Units 3-5	1,165	LA Basin	12/31/2020
Huntington Beach Unit 1	225	LA Basin	12/31/2019
Huntington Beach Unit 2	225	LA Basin	12/31/2020
Redondo Beach Unit 7	343	LA Basin	10/31/2019
Redondo Beach Units 5, 6, 8	577	LA Basin	12/31/2020
Moss Landing Units 1-2	1,020	Bay Area	12/31/2020
Ormond Beach 1-2	1,516	Big-Creek/Ventura	12/31/2020 (Retirement requested for end of 2018)
Mandalay 1-2	430	Big-Creek/Ventura	12/31/2020 (Retired in 2/2018)
Total	**7,189**		

Resource Name	Capacity (MW)	Location	Commercial Online Date	Contract Duration (yr)
Alamitos Energy Center	640	LA Basin	2020	20
Alamitos Energy Storage	100	LA Basin	2021	20
Barre Wellhead	98	LA Basin	2020	20
Carlsbad Energy Center	500	San Diego	2018	20
Huntington Beach Energy Center	644	LA Basin	2020	20
Pio Pico Energy Center	300	San Diego	2017	25
Total	**2,282**			

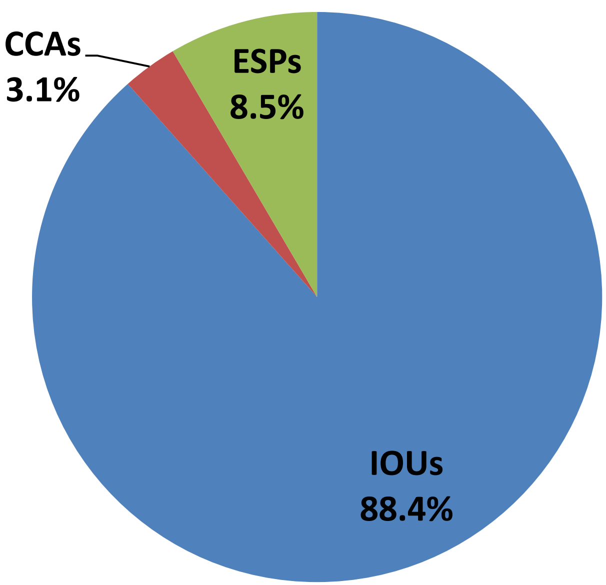
CPUC-Jurisdictional LSEs in the CAISO

(based on July 2018 RA filings)

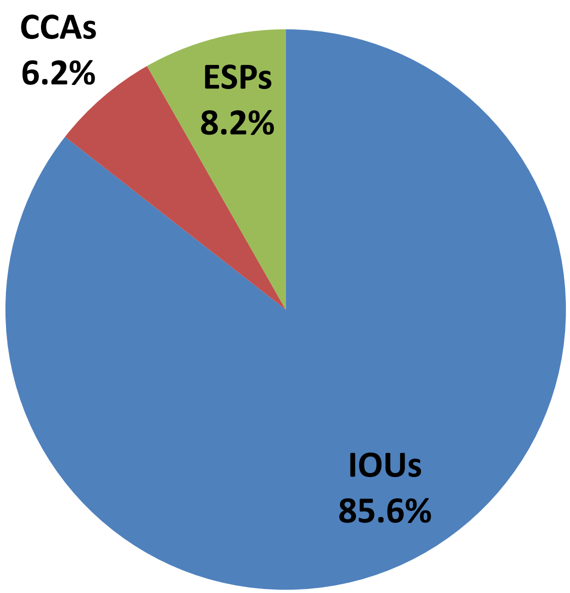
- **CPUC-jurisdictional LSEs serve about 90% of load in CAISO**
- **Currently 39 LSEs**
  - **3 Investor Owned Utilities (IOUs)**
  - **20 Community Choice Aggregators (CCAs)**
  - **16 Electric Service Providers (ESPs)**

Emerging Issues- Growth in CCAs
(CPUC Jurisdictional LSE Breakdown)

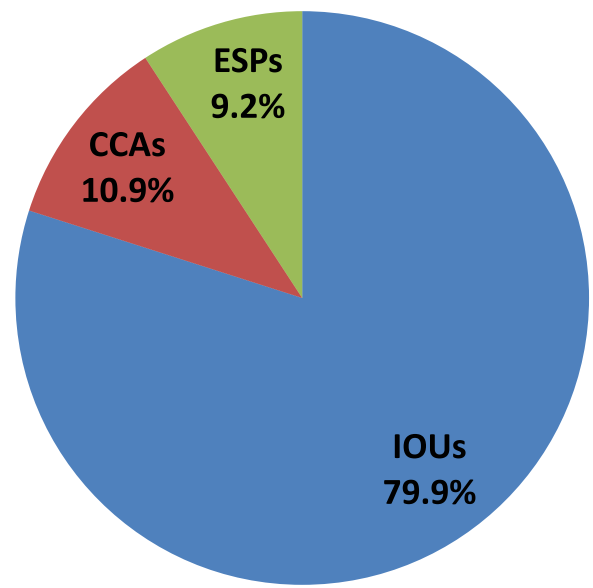
In 2008, there were a total of 15 LSEs serving load (3 IOUs, 12 ESPs). This number has climbed to 39 LSEs for the 2018 compliance year (3 IOUs, 20 CCAs, 16 ESPs). In the last year CCAs have grown rapidly, from 8 in 2017 to 20 in 2018



2017 YA Load Shares (October 2016)

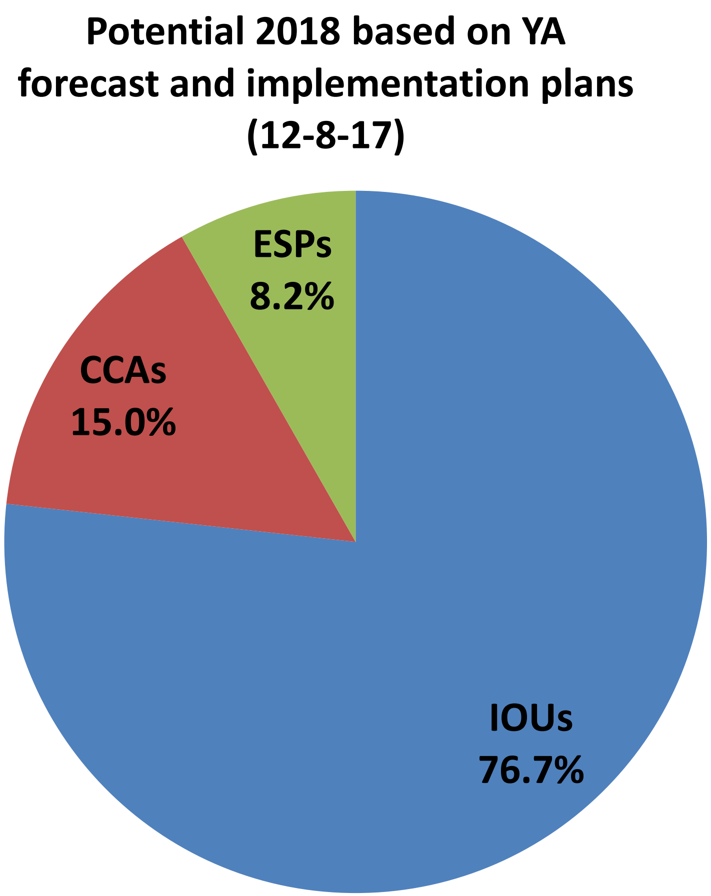


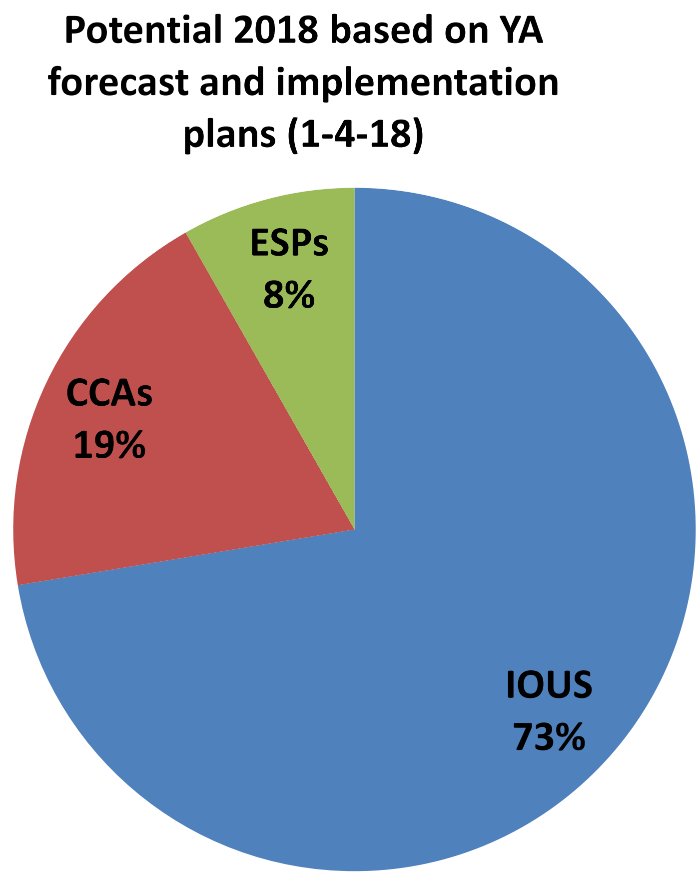
2018 CEC YA Load forecast (October 2017)



Based on revised August Forecast (March 2018)

CCA Load Growth and Uncertainty





Emerging Issues- Less Forward Procurement

- The 2014 *JRP track 1 staff report* (May 2014 snapshot) indicated that 95% of August 2015 system requirements had been procured and 85% of August 2016 system requirements.
- The recent contract analysis (April 2017 snapshot) indicates that 75% of August 2018 system requirements had been procured and 69% of Aug. 2019 system requirements. This include the effects of ELCC which is ~5 % points.
- Staff concludes that there has been a ~15% decrease in forward procurement activity since 2014 excluding the effects of ELCC.

Emerging Issues-Trends in Local Procurement by LSE type

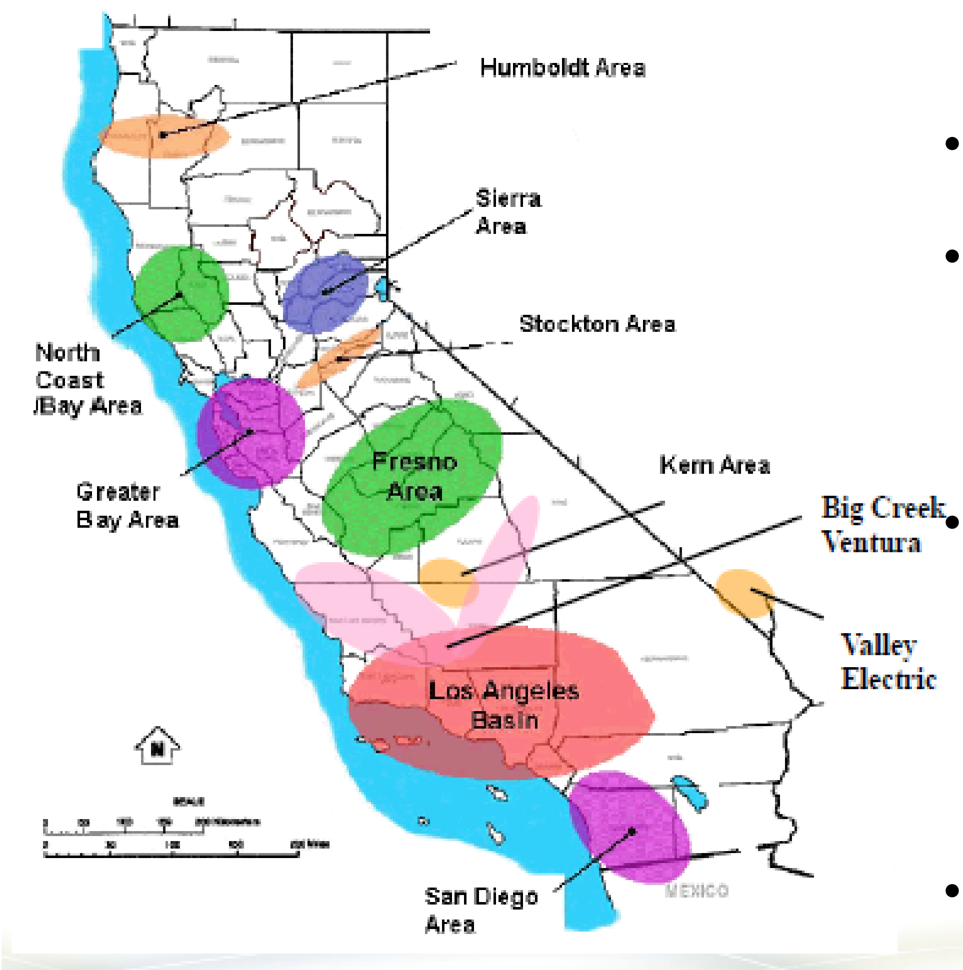
- **Percentage of total local RA requirements under contract by LSE type:**

Table 2: Total Resources Contracted as a Percentage of Total Forecast Local Requirement, by LSE type (August)

	2017	2018	2019	2020	2021	2022
IOU	96.15%	68.64%	69.91%	54.38%	48.82%	44.49%
CCA	3.19%	0.42%	1.06%	1.03%	1.31%	1.27%
ESP	7.33%	0.11%	0.12%	0.15%	0.16%	0.15%
Central Procurement (CAM)	28.48%	26.36%	24.87%	30.71%	28.14%	26.50%
TOTAL	**135.15%**	**95.53%**	**95.96%**	**86.27%**	**78.43%**	**72.42%**

- **CCA and ESP procurement for 2017 roughly matches the load ratio shares of each LSE type for that period**
- **Proportional drop in procurement one year out is greater for CCAs and ESPs than for IOUs**
- **This suggest CCAs and ESPs are engaging in a lower level of long term local procurement for their existing load.**

Local Capacity Requirements (LCR)



- CAISO performs an annual LCR study, based on a 1-in-10 weather year and a N-1-1 contingency
- Total of **45 sub local areas make up 10 Local areas.**
- **CPUC aggregates six local areas** (Sierra, Fresno, Humboldt, North Coast, Stockton, and Kern) into one called "PG&E Other Areas" **to address market power.**
- The five local areas requirements (Bay Area, Other PG&E Areas, LA Basin, Big Creek-Ventura, and San Diego) are allocated to LSEs based on CPUC-jurisdictional load share in each TAC area. Annual compliance is based on these allocations
- Local true-up performed once mid-year to account for load migration.

History- RA program
Local Capacity Requirements (cont.)

- CAISO validates annual and monthly LSE local requirements by TAC area (3 areas)
- CAISO bases annual local Capacity Procurement Mechanism (CPM) decisions and RMR need analysis on sub-local requirements/needs, as seen this year

Local Areas	# of Sub-Areas	2018 Resources Total (MW)	2018 LCR Need Total (MW)	2018 LCR Need/ Resource Total	2022 Resources Total (MW)	2022 LCR Need Total (MW)	2022 LCR Need/ Resource Total
Humboldt	**1**	210	169	**80%**	210	169	**80%**
North Coast/North Bay	**3**	869	634	**73%**	869	440	**51%**
Sierra	**8**	2,125	2,113	**99%**	2,125	1,967	**93%**
Stockton	**4**	605	719	**119%**	605	702	**116%**
Greater Bay	**6**	7,103	5,160	**73%**	6,879	5,315	**77%**
Greater Fresno	**6**	3,579	2,081	**58%**	3,579	1,860	**52%**
Kern	**2**	566	453	**80%**	566	123	**22%**
LA Basin	**3**	10,735	7,525	**70%**	8,138	6,022	**74%**
Big Creek/Ventura	**5**	5,657	2,321	**41%**	3,860	2,597	**67%**
San Diego/Imperial Valley	**7**	4,915	4,032	**82%**	4,572	4,643	**102%**

Emerging Issues- Local Reliability Concerns

- CPUC has a local waiver process to mitigate market power. The trigger price is $40 kW/year.
- Prior to the 2018 year ahead RA showings LSE had only ever filed two local waivers.
- For 2018, of the 27 LSEs that filed year RA filings, 11 filed waiver requests (in aggregate the requests cover 270 MW of local deficiencies).

Emerging Issues- Growth in Backstop Procurement

(Costs of backstop compared to bilateral contracts)

CPM Unit designated for 2018	MW	CPM Price ($kW-month)
Moss Landing Unit 2	510	$6.19 for 490 MW $6.31 for 20 MW
Encina Unit 4	272	$6.31
Encina Unit 5	273	$6.31

RMR Unit designated for 2018	August 2018 NQC value (MW)	Potential Cost of RMR contract ($kW-month)
Metcalf	580	~$7.56
Yuba City	47.6	~$6.20
Feather River	47.6	~$6.20

Capacity Prices by Local Area, 2016-2020	85% of MW at or below ($/kW-month)
LA Basin	$3.65
Big Creek/Ventura	$4.34
Bay Area	$3.00
Other PG&E Area	$2.50
San Diego-IV	$4.33
CAISO System	$3.00

RA Proposed Decision Track 1

- Key issues addressed in the decision include multi-year resource adequacy requirements, a central buyer for resource adequacy and issues related to load migration from utilities to community choice aggregators.

RA Proposed Decision

Multi-Year Local RA Requirements

<u>Duration and Percentages</u>

- Concludes that implementation of a 3-5 year local multi-year RA requirement should be initiated for 2020.
- Finds that a 100% local procurement requirement for the first two years is appropriate.
- For year three (and beyond if adopted) parties are directed to propose percentages based on historical levels of sufficient procurement.

RA Proposed Decision

Multi-Year Local RA Requirements

<u>Central Buyer</u>

- Parties are directed to include implementable central buyer structures in their Track 2 proposals.
- All central buyer structures must address how they would balance economic procurement criteria with other essential state policies, such as greenhouse gas emissions reductions targets and consideration of impacts on disadvantaged communities.
- A strong preference is given to a single central buyer or a central buyer for each transmission access charge (TAC) area.
- Proposals with more than one procurement agent per TAC (two buyers) need to address: 1.) equitable allocation of costs to all customers and ensure cost-effective, 2.) efficient and coordinated procurement for each local and sub-local area within the TAC.

May 22nd RA Proposed Decision

Multi-Year Local RA Requirements

<u>Short Term Solution for 2019</u>

- The Ormond Beach and Ellwood generators have announced their retirements, but CAISO has determined that they are necessary for local reliability in 2019.
- Southern California Edison (SCE) is authorized to contract with these generators and allocate the costs to all customers.
- Similarly, if any other needed generators submit retirement notices, the utilities are authorized to contract with them for 2019 and possibly longer.

R.17-09-020 Track 2 Schedule and Scope

Concurrent Testimony and Energy Division Proposals	July 10
Workshop	Mid-July
Responsive Testimony	August 8
Evidentiary Hearings	Late August
Opening Briefs	September 19
Reply Briefs	October 5
Proposed Decision	Q4 2018

Thank you!
For Additional Information:

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