



Workstream 1 LSE Showing and Compliance Tools RA Reform Workshop

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California Public Utilities Commission (CPUC)

CPUC Energy Division

Electric Market Design Branch

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Overview

- Master Resource Database: Recap, Revised Approach
- LSE Load Forecast: Recap
- LSE Allocation Tabs
 - CAM, RMR, DR
 - Load Forecast, Flexible and Local
- LSE Compliance Materials Automation Project



Master Resource Database- update

- Recap: On 8/3 staff put forward three options- party feedback suggested option 3 would be the most efficient path
 - “Energy Division: Staff would populate the data with known fields and then send it out to LSEs or generator distribution lists to populate the remaining fields that are not verifiable using CAISO subpoena data”
- Internal discussions with CAISO on the option 3
 - Confidentiality concerns with some of the master resource data base fields
 - Consequently, CAISO needs affirmation from both Scheduling Coordinators and Generator Owners on data release
 - New affirmation process would need to be created, staffed and maintained to ensure good legal standing



Revised Approach to Populate Database

- Steps:

1. Populate Resource master database with public info and default values
 - Master gen. capability list, NQC List, local sub area list, CAISO grid gen. queue, other public info
 - Use default values for other fields (all batteries will be assumed to be 4 hours, runtime will be = 4 hours times August NQC, storage efficiency will be set at conservative value 0.8, first and last hour available assumed to be 1 and 24 for most resources)
 - For hybrid we listed our generic sub-IDs to reflect resource configuration (source: grid configuration queue and NQC notes)
 2. Post list on CPUC website and send to service list asking generators to respond to the list with any corrections (similar to current NQC list process)
 3. Incorporate generator feedback
 4. Compare list to CAISO master file
 5. If data does not match, contact generator directly (use SC contact info or other means) to get correction
- Initial draft list will be posted prior to Q1 2023 decision and then again, after a Q1 decision is voted out. The second request will include any new fields (or changes) not included in the draft list.



Master Resource Database- Public Sources of Data

- California ISO Generator interconnection [public queue report](#)
- [CAISO](#) and [CPUC](#) NQC List
- OASIS- [Master Control Area Generator Capability List](#)
- [CAISO Sub-area Local Resource List](#)



24 Hour Load Forecast – Recap/Status

- Decision (D.)22-06-050 directed Energy Division to conduct a dry run load forecast, in coordination with the California Energy Commission (CEC) to evaluate load forecasting issues under the 24-hour RA framework.
- At 8/3/2022 workshop CEC provided an overview of the adopted load forecast process
- On 8/5/2022 Energy Division sent CPUC-jurisdictional Load Serving Entities (LSEs) a 24-hour load forecast data request.
- LSEs were requested to populate and return a template to Energy Division and the CEC by August 29, 2022. The template has been posted to the RA compliance web page - [Resource Adequacy Compliance Materials \(ca.gov\)](https://www.cpuc.ca.gov/Resource-Adequacy-Compliance-Materials).
- Next Steps:
 - CEC forecast adjustment process
 - Share initial results in Sept./October



LSE Allocation Database

- Recap: 8/3/22 Workshop
 - Should CAM allocations be resource level or allocated by hourly slice? Feedback supported resource level over hourly.
 - To ensure that energy sufficiency requirements associated with CAM storage are equitably allocated staff proposed that energy sufficiency credit/debits be allocated to IOUs/ESPs/CCAs. No immediate feedback during workshop.
- Staff proposal:
 - Allocate CAM/RMR and DR at resource level or aggregated resource level. Other allocations may be provided in database format.
 - Allocate using monthly peak load share (consistent with CP-12 allocation for CAM)
 - CAM allocations for storage resources include energy sufficiency debits/credits.



LSE Allocation Tab

A	B	C	D	E	F	G	H	I	J	K	O	P	Q	R	S	T
TAC	Month	Hour	Submitted Forecast (MW)	Coincidence Adjustment	Coincident Peak Forecast (MW)	LSE Specific Total (MW)	copkadj with lseadj	ee/lmdr adjustment	Adjusted with LMDR (MW)	Pro Rata Adjustment	Final YA Adjusted Forecast (MW)	Load Migration (MW)	Flex RAR Category 1	Flex RAR Category 2	Flex RAR Category 3	Local RAR SDG&E Only
PGE	1	1	990.8	-29.724	961.076	0	961.076	0	961.076	9.61076	970.69	0	1	1	1	0
PGE	1	2	935.2	-28.056	907.144	0	907.144	0	961.076	9.07144	916.22	0	1	1	1	0
PGE	1	3	891.6	-26.748	864.852	0	864.852	0	961.076	8.64852	873.50	0	1	1	1	0
PGE	1	4	887.4	-26.622	860.778	0	860.778	0	961.076	8.60778	869.39	0	1	1	1	0
PGE	1	5	916.4	-27.492	888.908	0	888.908	0	961.076	8.88908	897.80	0	1	1	1	0
PGE	1	6	998	-29.94	968.06	0	968.06	0	961.076	9.6806	977.74	0	1	1	1	0
PGE	1	7	1180.2	-35.406	1144.794	0	1144.794	0	961.076	11.44794	1,156.24	0	1	1	1	0
PGE	1	8	1287	-38.61	1248.39	0	1248.39	0	961.076	12.4839	1,260.87	0	1	1	1	0
PGE	1	9	1231.8	-36.954	1194.846	0	1194.846	0	961.076	11.94846	1,206.79	0	1	1	1	0
PGE	1	10	1133.4	-34.002	1099.398	0	1099.398	0	961.076	10.99398	1,110.39	0	1	1	1	0
PGE	1	11	1067.5	-32.025	1035.475	1051.00713	2086.48213	0	961.076	20.86482125	2,107.35	0	1	1	1	0
PGE	1	12	1000	-30	970	984.55	1954.55	0	961.076	19.5455	1,974.10	0	1	1	1	0
PGE	1	13	959.5	-28.785	930.715	944.675725	1875.39073	0	961.076	18.75390725	1,894.14	0	1	1	1	0
PGE	1	14	964.1	-28.923	935.177	949.204655	1884.38166	0	961.076	18.84381655	1,903.23	0	1	1	1	0
PGE	1	15	1010.7	-30.321	980.379	995.084685	1975.46369	0	961.076	19.75463685	1,995.22	0	1	1	1	0
PGE	1	16	1096.7	-32.901	1063.799	1079.75599	2143.55499	-10.71777493	961.076	21.3283721	2,154.17	0	1	1	1	0
PGE	1	17	1217.7	-36.531	1181.169	1198.88654	2380.05554	-11.90027768	961.076	23.68155257	2,391.84	0	1	1	1	0
PGE	1	18	1392.9	-41.787	1351.113	1371.3797	2722.4927	-13.61246348	961.076	27.08880232	2,735.97	0	1	1	1	0
PGE	1	19	1458.1	-43.743	1414.357	1435.57236	2849.92936	-14.24964678	961.076	28.35679708	2,864.04	0	1	1	1	0
PGE	1	20	1430	-42.9	1387.1	1407.9065	2795.0065	-13.9750325	961.076	27.81031468	2,808.84	0	1	1	1	0
PGE	1	21	1367.4	-41.022	1326.378	0	1326.378	0	961.076	13.26378	1,339.64	0	1	1	1	0



LSE CAM, RMR, DR Allocation by Resource-Level Tab

2023 LSE CAM Allocation by Resource

*Structured off of Master Resource Database tab

TAC	Allocation Type (CAM, RMR, DR)	Scheduling Resource ID	Technology	Status	Expected Online Date	Local Capacity Area	Sub Local Area	Flex Category	CAM Allocation Effective Date	Capacity End Date	NDC (MW)	Maximum Daily Run Hours	Storage Maximum Daily MWh	First Available Hour (HE)	Last Available Hour (HE)
SCE	CAM	CHINO 2 APEBT1	LESR	Online	-	LA Basin	-	3	12/31/2016	12/30/2026			-	1	24
SCE	CAM	SANTGO 2 MABBT1	LESR	Online	-	LA Basin	-	1	10/1/2017	12/31/2026			-	1	24
SCE	CAM	CHINO 6 CIMGEN	NATURAL GAS	Online	-	LA Basin	-	-	7/1/2018	3/11/2025			-	1	24
SCE	CAM	ELSEGN 2 UN1011	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	ELSEGN 2 UN2021	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG1	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG2	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG3	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG4	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG5	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG6	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG7	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	SENTNL 2 CTG8	NATURAL GAS	Online	-	LA Basin	-	1	8/1/2013	7/31/2023			-	1	24
SCE	CAM	WALCRK 2 CTG1	NATURAL GAS	Online	-	LA Basin	-	1	6/1/2013	5/31/2023			-	1	24
SCE	CAM	WALCRK 2 CTG2	NATURAL GAS	Online	-	LA Basin	-	1	6/1/2013	5/31/2023			-	1	24
SCE	CAM	WALCRK 2 CTG3	NATURAL GAS	Online	-	LA Basin	-	1	6/1/2013	5/31/2023			-	1	24
SCE	CAM	WALCRK 2 CTG4	NATURAL GAS	Online	-	LA Basin	-	1	6/1/2013	5/31/2023			-	1	24
SCE	CAM	WALCRK 2 CTG5	NATURAL GAS	Online	-	LA Basin	-	1	6/1/2013	5/31/2023			-	1	24
SCE	CAM	BARRE 6 PEAKER	NATURAL GAS	Online	-	LA Basin	-	1	7/19/2007	UOG			-	1	24
SCE	CAM	CENTER 6 PEAKER	NATURAL GAS	Online	-	LA Basin	-	1	7/20/2007	UOG			-	1	24
SCE	CAM	ETIWND 6 GRPLND	NATURAL GAS	Online	-	LA Basin	-	1	7/17/2007	UOG			-	1	24
SCE	CAM	MNDALY 6 MCGRTH	NATURAL GAS	Online	-	Big Creek-Ventu	-	1	8/1/2009	UOG			-	1	24
SCE	CAM	MIRLOM 6 PEAKER	NATURAL GAS	Online	-	LA Basin	-	1	7/19/2007	UOG			-	1	24
SCE	CAM	MIRLOM 2 MLBTA	LESR	Online	-	LA Basin	-	1	7/1/2017	6/30/2027			-	1	24



Future RA Implementation Goals

- RA compliance today is currently verified using excel templates that utilize formulas and macros to determine annual and monthly compliance.
- Current efforts to streamline this process have been made on the backside using python code which is currently being tested to ensure accurate outcomes.
- No work on the interface - LSEs still rely on excel formulas in templates and need to input compliance allocations.
- Implementation of the 24-hour slice will make this compliance showings more complicated to validate and there could be more room for error.



LSE Compliance Tools Automation Project

- Goal: Design an external facing application with a user interface where 40+ Load Serving Entities (LSEs) could submit monthly compliance data to an interface where they can upload data, see requirements, and if requirements are being met prior to submittal.
- Benefits: Could reduce the potential for compliance errors if LSEs were using the same information as the CPUC for compliance. In time, would reduce administrative complexity.
- Progress: Data gathering efforts - How other internal CPUC programs and agencies (CAISO and CEC) programs are using external facing applications. Researching project needs and identifying barriers.
- Timeline: Goal would be to have something functional and tested for RA compliance Year 2025.
- Next Steps: Continue to develop project design efforts internally, gather party input on how compliance can be streamlined and prioritized to achieve the goal.