

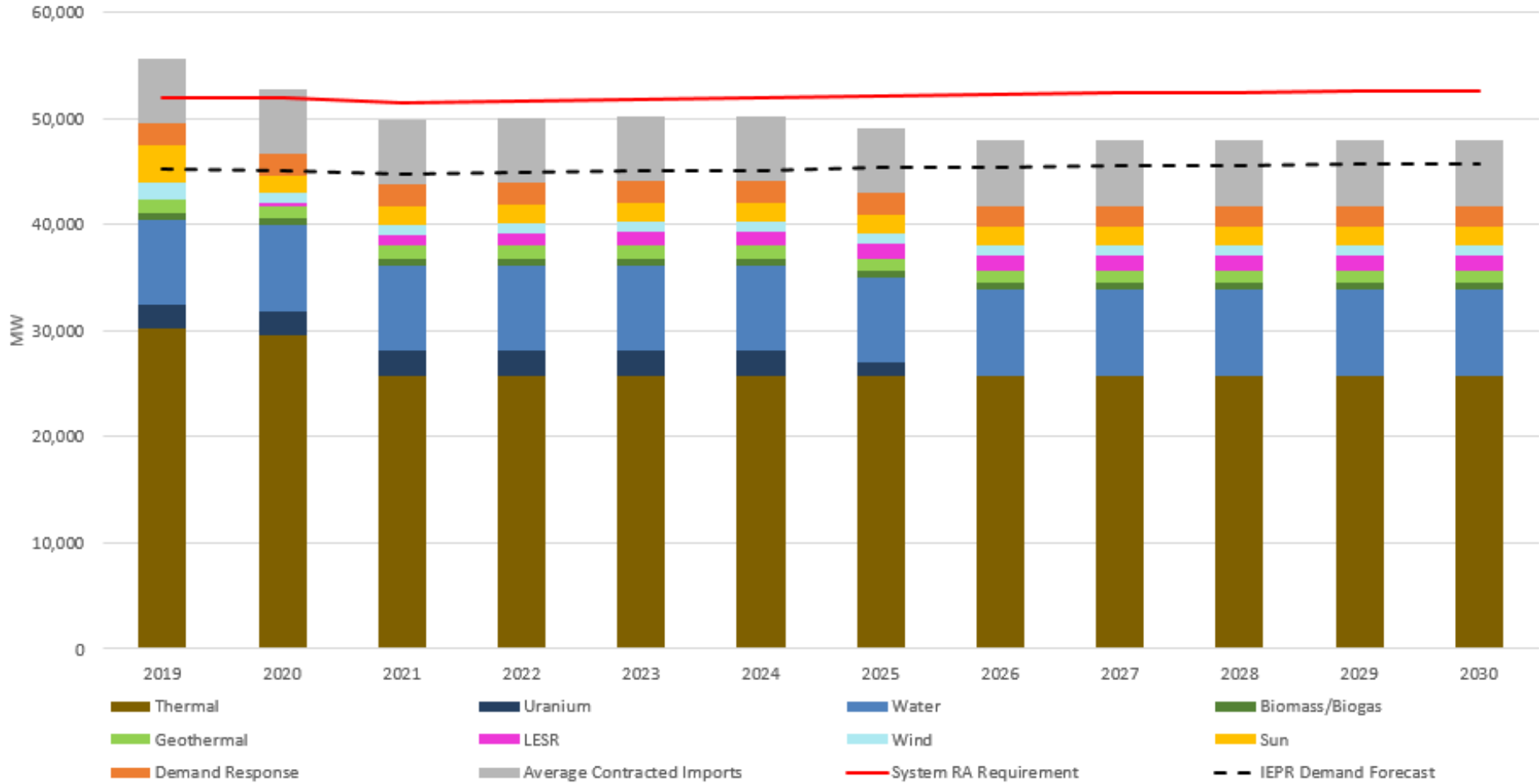
***Draft Recommended Compliance Date Extensions
for Alamitos, Huntington Beach, Ormond Beach,
and Redondo Beach Generating Stations***

***Interagency Working Group
January 23, 2020***

August 2019 SACCWIS Recommendation

- SACCWIS recommends extending the OTC Policy compliance date for Alamitos Units 3, 4, and 5 by two years or more, but no longer than necessary, to ensure local grid reliability and help improve system-wide grid reliability.
- SACCWIS intends to provide a recommendation to the State Water Board in late 2019 to extend the OTC Policy compliance date by two or more years, but no longer than necessary, for Alamitos Units 3, 4, and 5 and some portion of the 2,579 MW of capacity generated by Huntington Beach, Ormond Beach, and Redondo Beach generating stations to ensure system-wide grid reliability. This recommendation will be based on additional analysis that considers air and water permitting requirements, capabilities of the existing OTC resources (including the potential to meet multiple Resource Adequacy needs or to provide various electrical services to CAISO), further analysis and stakeholder input in the CPUC IRP proceeding, and other relevant information.

Available Capacity (September)



Imports Needed (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Imports Needed (MW)	2,548	5,270	7,785	7,763	7,768	7,858	9,194	10,446	10,626	10,678	10,750	10,851

Source: CPUC staff.

CPUC and CAISO Capacity Need Findings

- CAISO 2021 Limited Local Capacity Study
 - 476 MW to 816 MW needed for local reliability needs in Western Los Angeles Basin under sensitivity scenarios
- CPUC IRP Proceeding Decision (D.)19-11-016
 - Ordered Load Serving entities to procure 3,300 MW of incremental capacity to meet potential resource shortfall resulting from:
 - Changes to adopted Effective Load Carrying Capability (ELCC) factors
 - Peak load shifts: later in day and August to September
 - Uncertainty of imports available to meet RA needs in future
 - Some earlier than expected retirements
 - Recommended phased OTC compliance date extensions needed as “bridge” to provide time for new procurement to come online

CPUC Integrated Resource Plan Proceeding

11/2019 Decision (D.)19-11-016:

- Commercial Online Dates for 3,300 MW of incremental resources phased as follows:
 - 50% by August 2021
 - 75% by August 2022
 - 100% by August 2023
- OTC Compliance Date Extension Recommendations
 - Alamitos 3, 4, 5: up to 3 years (through 2023)
 - Huntington Beach 2: up to 3 years (through 2023)
 - Redondo Beach 5, 6, 8: up to 2 years (through 2022)
 - Ormond 1 and 2: up to 1 year (through 2021)
- Incremental resource procurement and phased OTC facility retirements are intended to balance reliability need with CPUC commitment to retiring OTCs / community concerns

Capacity Need for System Reliability

Year	Projected Shortfall (MW)	Percent new Procurement	MW needed from OTC power plants
2021	4,400	50% = 1,650 MW	4,400 – 1,650 = 2,750 MW
2022	4,700	75% = 2,475 MW	4,700 – 2,475 = 2,225 MW
2023	4,700	100% = 3,300 MW	4,700 – 3,300 = 1,400 MW

Available MW from OTC power plants:

Generating Station	Capacity in MW
Alamitos (Units 3, 4, 5)	1,166
Huntington Beach (Unit 2)	226
Ormond Beach (Units 1, 2)	1,491
Redondo Beach (Units 5, 6, 8)	848
TOTAL	3,731

Alternatives for SACCWIS Consideration (1/2)

Alternative 1: No action

Alternative 2: Extend OTC compliance dates for all power plants for three years until December 31, **2023**

Alternative 3: Extend OTC compliance dates for all power plants with phased compliance dates

- Alamitos Units 3, 4, 5 and Huntington Beach Unit 2 for three years through **2023**
- Redondo Beach Units 5, 6, and 8 for two years through **2022**
- Ormond Beach Units 1 and 2 for one year through **2021**

Alternative 4: Extend OTC compliance dates for all power plants with phased compliance dates modified from Alternative 3

- Alamitos Units 3, 4, 5 and Huntington Beach Unit 2 for three years through **2023**
- Redondo Beach Units 5, 6, and 8 for one year through **2021**
- Ormond Beach Units 1 and 2 for three years through **2023**

Alternatives for SACCWIS Consideration (2/2)

Alt #	Description	OTC MW in 2021	OTC MW in 2022	OTC MW in 2023
	MW needed from OTC power plants	2,750	2,225	1,400
1	No Action	0	0	0
2	All four power plants for 3 years	3,731	3,731	3,731
3	CPUC D.19-11-016: Ormond - 1 year; Redondo - 2 years; Alamitos and Huntington Beach - 3 years	3,731	2,240	1,392
4	Redondo - 1 year; Ormond, Alamitos and Huntington Beach - 3 years	3,731	2,883	2,883

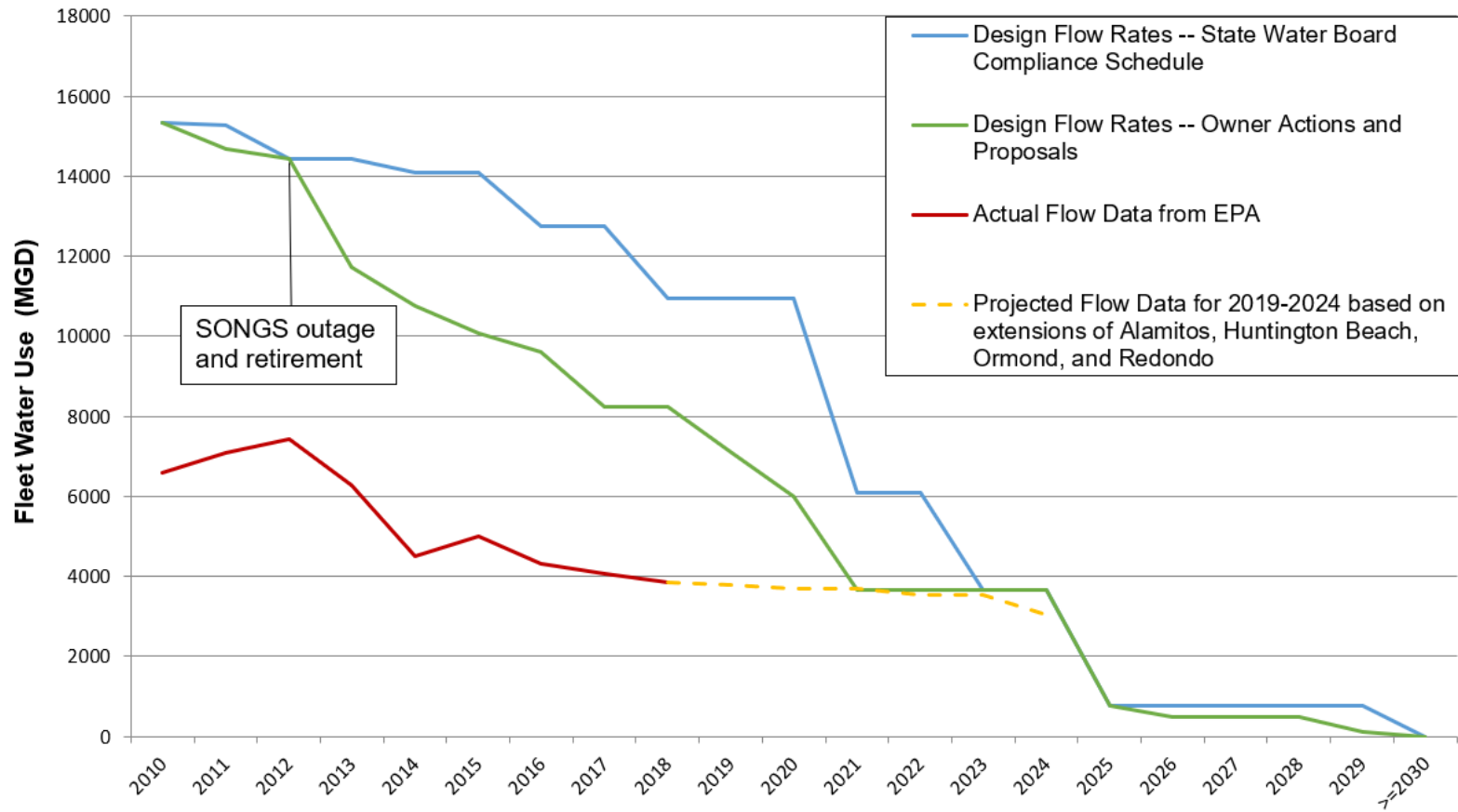
Recommendation and Timeline

- Recommendation: **Alternative 4**
- Timeline
 - **Winter to Summer 2020:**
 - State Water Board staff prepare draft staff report and proposed OTC Policy amendment.
 - AES submits applications to South Coast AQMD to modify Title V permits and update boiler retirement plans for Alamitos Unit 3 and Huntington Beach Unit 2. Permit modifications are required for operation beyond 12/31/20 and generally take 6-12 months to complete.
 - **Late Summer 2020:** State Water Board staff presents proposed OTC Policy amendment to the State Water Board at a joint hearing and consideration of adoption meeting.
 - **Fall 2020 Forward**
 - If approved, OTC Policy amendment goes to Office of Administrative Law for approval.
 - Los Angeles Regional Water Board and Santa Ana Regional Water Board amend National Pollutant Discharge Elimination System (NPDES) permits, Time Schedule Orders (TSO), and other relevant regulatory documents.

QUESTIONS?

BACKUP

Projected Ocean Water Flow Rates with Extension of OTCs in Alternative 4



Source: CEC and State Water Board Staff, Updated January 22, 2020.

Assumptions:

- Projected water usage based on 2018 data.
- Alamos 3-5, Huntington Beach 2, and Ormond Beach 1 and 2 stay online through 2023.
- Redondo Beach 5, 6, and 8 stay online through 2021.
- Moss Landing has “zero” water usage after 2020 compliance, though it is pursuing Track 2, and there will be some water usage.

Recent OTC Capacity Factors

CAISO Balancing Authority Area Facilities and Units	Annual Capacity Factors				
	2014	2015	2016	2017	2018
Alamitos 1	1.40%	3.00%	2.00%	2.70%	2.09%
Alamitos 2	5.40%	6.10%	3.40%	4.17%	5.71%
Alamitos 3	16.60%	10.80%	10.40%	6.67%	10.13%
Alamitos 4	18.70%	7.00%	9.90%	8.78%	9.60%
Alamitos 5	1.70%	3.40%	1.90%	3.06%	2.93%
Alamitos 6	4.50%	6.20%	2.70%	4.23%	3.58%
Huntington Beach 1	22.30%	19.00%	13.30%	12.69%	9.84%
Huntington Beach 2	26.20%	19.40%	12.40%	9.03%	6.99%
Moss Landing 1	39.20%	35.50%	24.60%	24.73%	44.64%
Moss Landing 2	47.00%	37.00%	26.10%	24.83%	43.46%
Ormond Beach 1	0.80%	2.50%	0.70%	1.64%	1.31%
Ormond Beach 2	2.40%	3.20%	0.80%	1.75%	1.28%
Redondo Beach 5	2.30%	3.50%	1.40%	2.52%	2.04%
Redondo Beach 6	2.10%	4.20%	3.10%	4.18%	1.67%
Redondo Beach 7	0.90%	4.50%	4.00%	5.36%	2.16%
Redondo Beach 8	3.30%	3.90%	1.70%	3.99%	2.79%

Source: California Energy Commission, Quarterly Fuel and Energy Report, December 2018.
 Yellow highlighting represents OTC units that would be available for extension.