Peninsula Clean Energy Board of Directors Regular Meeting

June 22, 2023

6:30 p.m.

Agenda

- Call to Order / Roll Call
- Public Comment (for items not on the Agenda)
  - Please note, send any chats to Board Clerk, Nelly Wogberg
- Action to set the Agenda and Approve Consent Items 1-2
  - Consent - Public Comment
- Regular Agenda
- Adjournment

Chair Report (Discussion)

CEO Report (Discussion)

Topics to be Covered Tonight

- Staffing Update
- Credit Ratings Update
- Legislative Update
- EV Ready Updates
- Annual NEM Payouts
- Upcoming Meetings
- Some words from Jan

Staffing Updates: New Hires

- Lauren Mathisen, Power Resources Specialist, who started on June 16

Staffing Updates: Summer Interns

- Carlos Capell, Load Forecasting
- Zachary Meyer, Buildings Electrification
- Sophia Young, Electric Vehicles
- Hubert Nguyen, Data Analysis
- Jasper Liu, Data Analysis
- Emilia Groupp, Energy Equity
- Lauren Dineen, Power Supply Contracts

Staffing Updates

Currently posted on PCE website:

- Power Resources Analyst/Specialist
- Account Services Specialist
- Senior Program Manager, Local Power Resources
- Chief Financial Officer / Director of Finance and Administration

Credit Ratings Update

- PCE has earned a credit rating of A- from S&P

Legislative Update

- SB 537 (Becker) to amend Brown Act – PCE is sponsor
- State Budget

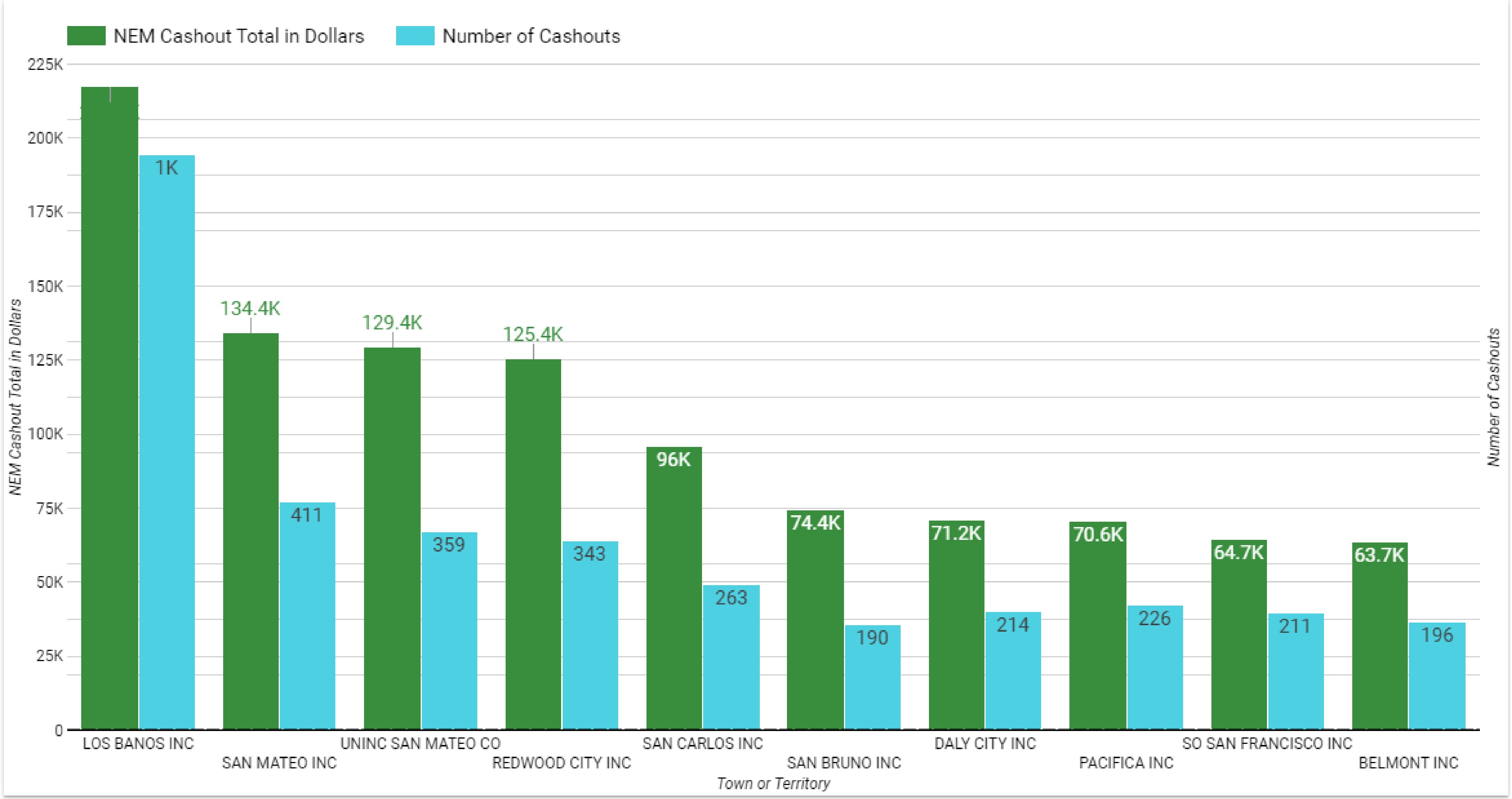
EV Ready Updates

- 433 EV charging ports have been installed
- 91 projects have secured rebate funding from PCE and are actively in progress now
- 200+ properties are receiving technical assistance
- ~2/3 of our technical assistance sites are at apartment/condo properties
- Average cost to install a charger in our program is ~$4,000, a fraction of the cost of other state and IOU programs

A recent EV Ready example from a rental apartment property project in San Mateo

- 10 Level 2 chargers installed, with power management
- Total installation cost was $3,000 per charger
- Installed by Metro Electric (IBEW member, FYI)
- The project received both technical assistance and rebate funding from PCE

Annual NEM Payouts 2023



Average and Total Annual NEM Payouts 2023

Customer Class	Average Payout Amount	Total
Commercial	$2,095.13	$129,897.85
Residential	$292.72	$1,302,884.06

Total NEM Payouts in 2023: $1,432,781.91

Upcoming Meetings

-
- Executive Committee:
    - July 10 at 10:00 a.m. (In-person and zoom)
- Citizens Advisory Committee:
    - July 13 at 6:30 p.m. (In-person and zoom)
- Board of Directors:
    - July 27 at 6:30 p.m. (In-person and zoom)

And now some words from Jan …

. . . to the Peninsula Clean Energy Board of Directors. And thank you for this wonderful opportunity and for your support these 7 years!

CAC Report

Recognition of Chief Executive Officer, Jan Pepper Upon Retirement

FY 2023-2024
(July 1, 2023 – June 30, 2024)

Budget Review

Revised Draft

Recommendation/Resolution

RESOLUTION THAT THE BOARD OF DIRECTORS APPROVE THE FISCAL YEAR 2023-2024 BUDGET WITH TOTAL OPERATING EXPENSES NOT TO EXCEED $350,657,317

Schedule – Budget Review and Approval

- ~~May 16, 2023 – Review Initial Draft Budget with Audit & Finance Committee~~
- ~~May 25, 2023 – Review Initial Draft Budget with Board of Directors~~
- ~~June 12, 2023 – Review Revised Draft Budget with Audit & Finance Committee~~
- ~~June 12, 2023 – Review Revised Draft Budget with Executive Committee~~
- June 22, 2023 – Approve Final Budget by Board of Directors

Revisions Since Initial Draft Budget

- Update to year-end FY23 forecast reflecting April 2023 financial results
- Minor adjustments to Programs Budget
- Modification to assumptions of Gov PV prepayment for conservatism
- Minor modifications to Days Cash on Hand calculation

Draft Budget FY2023-2024 – Key Assumptions (Page 1 of 2)

Revenues

- PG&E Generation Rates – Slight decline in rates for next 4 years
  - January 1, 2024 – Increase 1%

- PCIA Rates – Continuing decrease in rates as of January 1, 2024
  - January 1, 2024
    - San Mateo – Drop to $0.00 from already low rate
    - Los Banos – Drop to $0.00 from already low rate
  - After 2024
    - Significant increases for next 4 years, near to rates of 2022, but still not approaching rates of 2021

- Customer Rates to PCE – Relatively flat for next 3 years, then lower in 2027 and 2028 (but still well above low year of 2021)

Draft Budget FY2023-2024 – Key Assumptions (Page 2 of 2)

Cost of Energy –

- Budgeted at $311 million - Increase of $39 million (14%) over FY23 forecast
- Overall budget includes 2 conservatism contingencies
  - Energy Cost Volatility = $15 million/year
  - 100% Renewable on 99% Time-Coincidence Basis Project Delays = $56 million over 5 years; $770K in FY24
- Total cost is 9% higher than FY23 forecast without conservatism adders

Non-expense Capital Outflows/Inflows

- Solar and Storage on Public Buildings
  - Capital Outlay and Investment Tax Credit
    - Phase 1 - $7.4 million outflow in FY24; $2.2 million ITC inflow in FY26
    - Phase 2 - $43.0 million in FY25; $15.0 million ITC inflow in FY27
  - Repayment based on usage over 20-year period
- Ongoing On-Bill Finance Programs

Revised Draft Budget (FY23 Forecast and FY24 Budget)
Summary View

	Fiscal Year			Fiscal Year
	2023	2023	2023	2024
	Budget	Forecast	Variance - Fav/(Unf)	Revised Draft Budget
Total Operating Revenues	**367,783,691**	**432,684,817**	**64,901,127**	**474,624,034**
Total Operating Expenses	**294,429,488**	**297,075,405**	**(2,645,917)**	**350,657,317**
Operating Income (Loss)	**73,354,203**	**135,609,412**	**62,255,209**	**123,966,717**
NON-OPERATING REVENUES (EXP.)				
Total Nonoperating Income/(Expense)	600,000	3,033,812	2,433,812	645,192
CHANGE IN NET POSITION	**73,954,203**	**138,643,224**	**64,689,022**	**124,611,909**
Net Position at the beginning of period	174,211,272	167,670,734	(6,540,538)	300,430,872
Net Position at the end of period	**248,165,475**	**306,313,958**	**58,148,484**	**425,042,781**
Total Cash & Cash Equivalents (after Net Program Outflows)		**262,859,728**		**377,161,637**
Unrestricted Cash Days on Hand		**323**		**393**

FY24 Budget Approval: Total Operating Expenses

Revised Draft Budget (FY23 Forecast and FY24 Budget)
Detailed View

	Fiscal Year			Fiscal Year
	2023	2023	2023	2024
	Budget	Forecast	Variance - Fav/(Unf)	Revised Draft Budget
OPERATING REVENUES				
Electricity Sales, net	364,961,141	429,685,416	64,724,275	471,670,872
Green electricity premium	2,822,550	2,999,401	176,851	2,953,162
Total Operating Revenues	**367,783,691**	**432,684,817**	**64,901,127**	**474,624,034**
OPERATING EXPENSES				
Cost of energy	264,208,440	270,221,267	(6,012,827)	311,261,389
Staff compensation	8,583,221	7,939,828	643,393	10,922,801
Data Manager	3,600,000	3,583,331	16,669	3,871,152
Service Fees - PG&E	1,350,000	1,309,818	40,182	1,400,000
Consultants & Professional Services	1,431,813	1,001,289	430,524	1,788,491
Legal	1,474,000	1,299,487	174,513	1,574,558
Communications and Noticing	2,686,208	1,409,113	1,277,095	2,850,940
General and Administrative	2,359,806	2,286,167	73,639	4,027,236
Community Energy Programs	8,640,000	7,946,237	693,763	12,726,000
Depreciation	96,000	78,870	17,130	234,750
Total Operating Expenses	**294,429,488**	**297,075,405**	**(2,645,917)**	**350,657,317**
Operating Income (Loss)	**73,354,203**	**135,609,412**	**62,255,209**	**123,966,717**
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Net Position at the beginning of period	174,211,272	167,670,734	(6,540,538)	300,430,872
Net Position at the end of period	**248,165,475**	**306,313,958**	**58,148,484**	**425,042,781**
Total Cash & Cash Equivalents (after Net Program Outflows)		**262,859,728**		**377,161,637**
Unrestricted Cash Days on Hand		**323**		**393**

FY24 Budget Approval: Total Operating Expenses

Revised Draft Budget FY2024-2028 – 5-year Outlook

Summary View - Impact of Gov PV Programs on Cash Position

	Fiscal Year				
	2024	2025	2026	2027	2028
	Revised Draft Budget	Forecast (FY)	Forecast (FY)	Forecast (FY)	Forecast (FY)
Total Operating Revenues	**474,624,034**	**487,194,674**	**485,715,240**	**455,048,558**	**405,882,856**
Total Operating Expenses	**350,657,317**	**433,407,562**	**438,723,088**	**406,769,676**	**396,572,285**
Operating Income (Loss)	**123,966,717**	**53,787,112**	**46,992,152**	**48,278,882**	**9,310,571**
Total Nonoperating Income/(Expense)	645,192	673,580	703,218	734,160	766,463
CHANGE IN NET POSITION	**124,611,909**	**54,460,692**	**47,695,370**	**49,013,041**	**10,077,033**
Total Cash & Cash Equivalents (before Net Program Outflows)	387,561,637	431,717,729	433,514,223	481,834,456	503,275,113
Net Program Outflows	(10,400,000)	(46,000,000)	(800,000)	12,000,000	(2,250,000)
Total Cash & Cash Equivalents (after Net Program Outflows)	**377,161,637**	**385,717,729**	**432,714,223**	**493,834,456**	**501,025,113**
Unrestricted Cash Days on Hand	**393**	**326**	**362**	**446**	**464**

Revised Draft Budget FY2024-2028 – 5-year Outlook

Summary View

	2024 Revised Draft Budget	2025 Forecast (FY)	2026 Forecast (FY)	2027 Forecast (FY)	2028 Forecast (FY)
OPERATING REVENUES					
Electricity Sales, net	471,670,872	484,233,036	482,737,236	452,054,000	402,863,671
Green electricity premium	2,953,162	2,961,637	2,978,004	2,994,557	3,019,185
Total Operating Revenues	**474,624,034**	**487,194,674**	**485,715,240**	**455,048,558**	**405,882,856**
OPERATING EXPENSES					
Cost of energy	311,261,389	383,611,464	382,474,223	344,299,885	329,946,422
Staff compensation	10,922,801	11,578,169	12,272,859	13,009,231	13,789,784
Data Manager	3,871,152	4,103,421	4,349,626	4,610,604	4,887,240
Service Fees - PG&E	1,400,000	1,484,000	1,573,040	1,667,422	1,767,468
Consultants & Professional Services	1,788,491	1,091,949	1,119,665	1,168,642	1,199,674
Legal	1,574,558	1,633,099	1,707,767	1,786,843	1,870,626
Communications and Noticing	2,850,940	2,964,912	3,048,580	3,134,757	3,223,520
General and Administrative	4,027,236	3,748,298	3,929,634	4,121,293	4,336,551
Community Energy Programs	12,726,000	22,130,000	25,781,000	30,355,000	32,935,000
Depreciation	234,750	1,062,250	2,466,694	2,616,000	2,616,000
Total Operating Expenses	**350,657,317**	**433,407,562**	**438,723,088**	**406,769,676**	**396,572,285**
Operating Income (Loss)	**123,966,717**	**53,787,112**	**46,992,152**	**48,278,882**	**9,310,571**
Total Nonoperating Income/(Expense)	645,192	673,580	703,218	734,160	766,463
CHANGE IN NET POSITION	**124,611,909**	**54,460,692**	**47,695,370**	**49,013,041**	**10,077,033**
Net Position at the beginning of period	300,430,872	425,132,781	479,688,873	527,485,368	576,605,600
Net Position at the end of period	**425,042,781**	**479,593,473**	**527,384,244**	**576,498,409**	**586,682,634**
Total Cash & Cash Equivalents (after Net Program Outflows)	**377,161,637**	**385,717,729**	**432,714,223**	**493,834,456**	**501,025,113**
Unrestricted Cash Days on Hand	**393**	**326**	**362**	**446**	**464**

Recommendation/Resolution

RESOLUTION THAT THE BOARD OF DIRECTORS APPROVE THE FISCAL YEAR 2023-2024 BUDGET WITH TOTAL OPERATING EXPENSES NOT TO EXCEED $350,657,317

PENINSULA CLEAN ENERGY

24/7 Renewable Energy

Achieving 99% Time-coincident Renewable Target by 2027

June 22, 2023

Presentation Outline

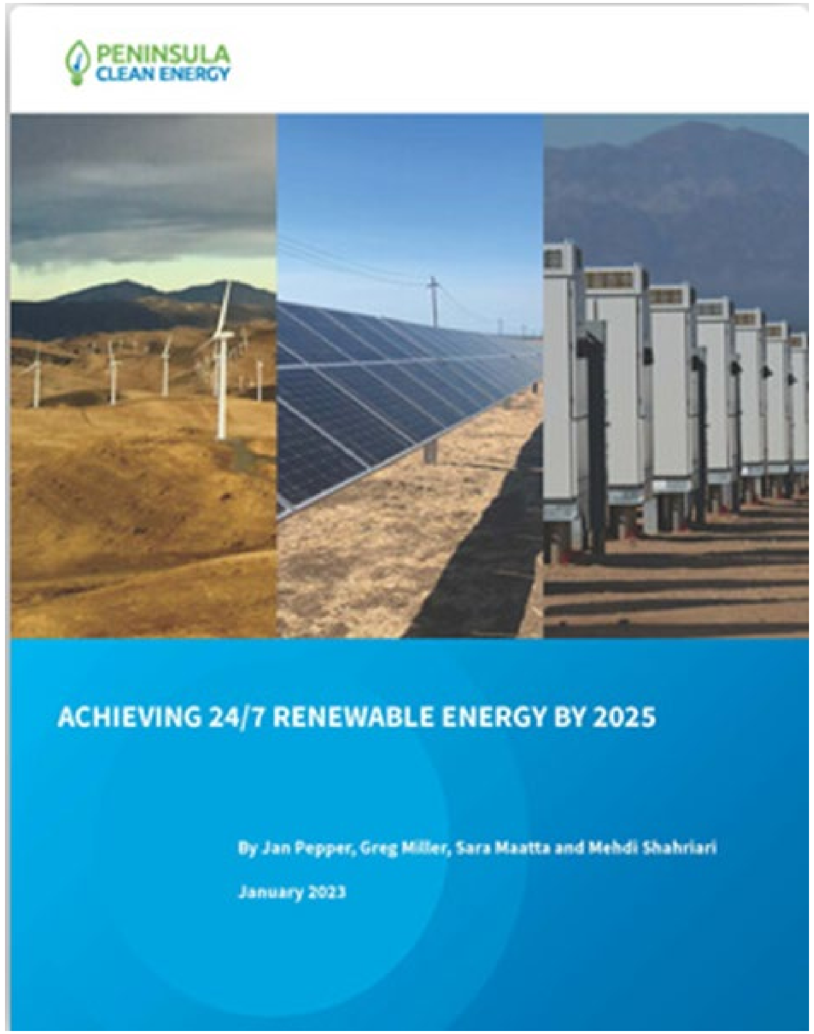
- Background
- Timing of the 24/7 Goal
- Recommendation

Background

Background: 24/7 Renewable by 2025

- In November 2022, the Board of Directors adopted staff's recommendation* on delivering 100% renewable energy annually on a 99% time-coincident basis by 2025.

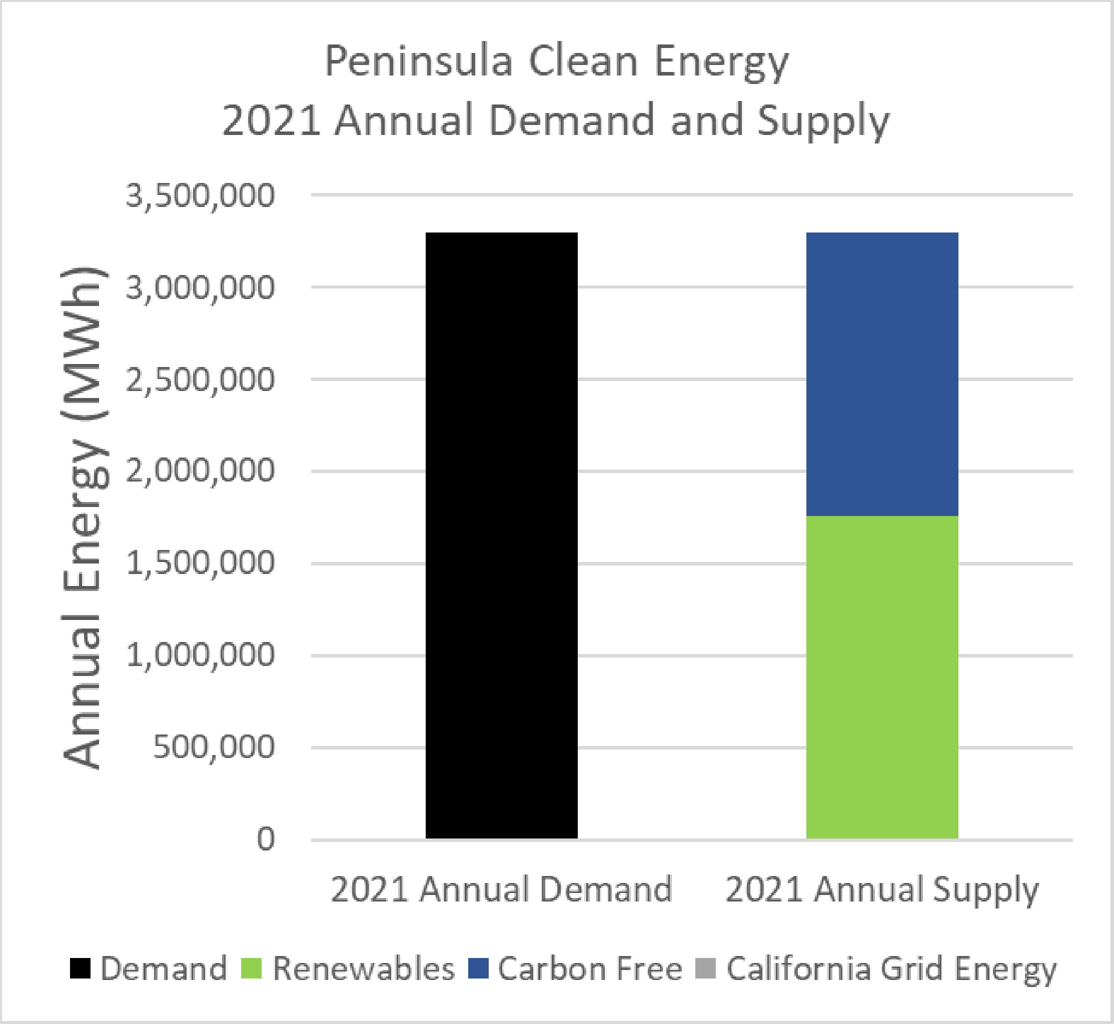
*This recommendation was based on mid-2022 market conditions.



Current Status

- We currently purchase enough renewable and carbon-free supplies to meet 100% of our customers' demand ***in the same year***

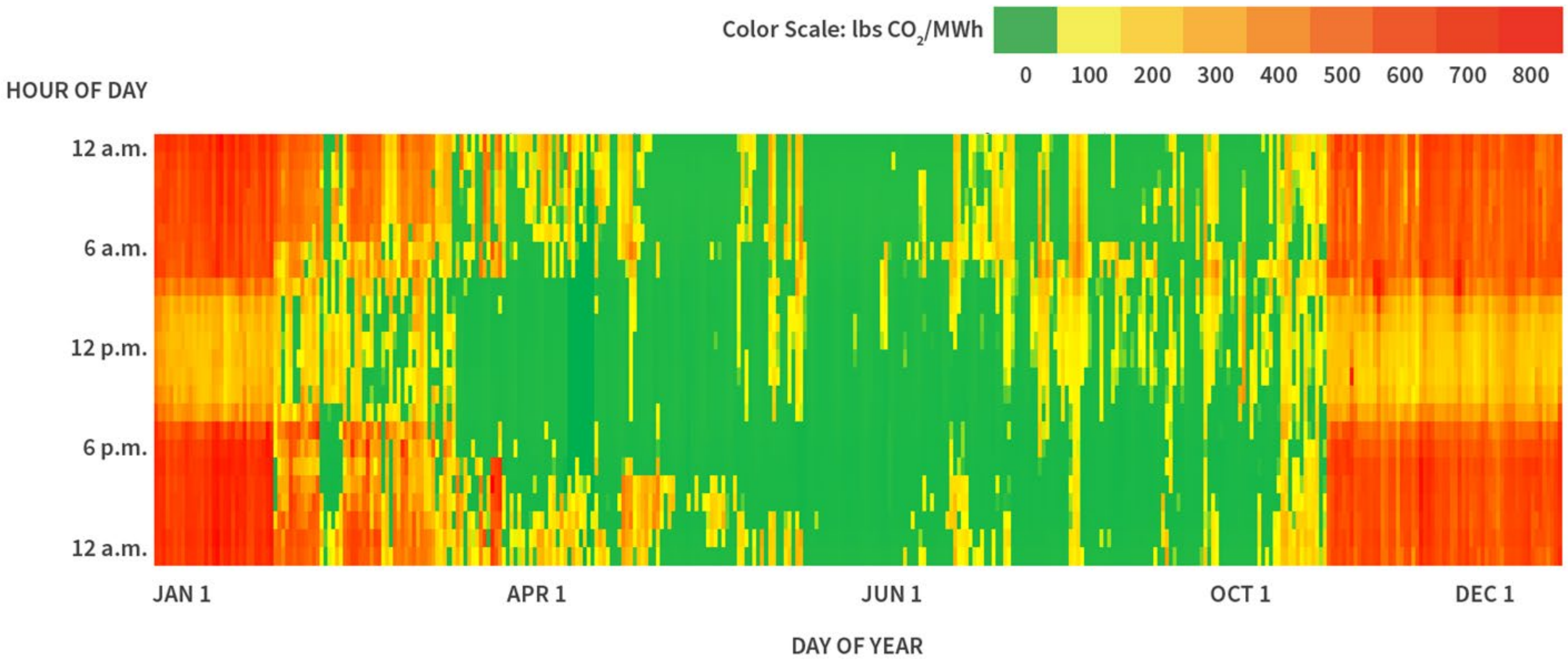
- This **annual** framework:
  - Is the current industry standard
  - Does not show whether supply and demand matched on an hourly basis



Annual v. Hourly Matching

- Our goal is to match our electricity supply to customer load on an hourly basis
  - We will not be relying on system power (gas plants) and can maximally reduce GHG emissions from our electricity supply
  - We will not credit ourselves for oversupply in some hours

2021 Peninsula Clean Energy 24/7 Emissions Footprint



Benefits of 24/7

- Time-coincident renewable procurement strategy could reduce the risk exposure to volatile market prices

- Procuring time-coincident renewable energy results in several benefits to society:
  - Reduce emissions on the grid
  - Improve grid operations

Renewable v. Carbon-Free

Supply Resource	Renewable*	Carbon-free**
Solar PV	X	X
Wind	X	X
Geothermal	X	Certain types
Small Hydro (<30MW)	X	X
Biomass	X	
Large Hydro		X
Nuclear		X

*Renewable: electricity generated from a resource that is naturally replenished as it is used

**Carbon-free: electricity generated without emitting carbon dioxide or other greenhouse gases into the atmosphere

- Large Hydro is carbon-free but:
  - Not considered renewable under California RPS due to its other environmental impacts
  - No new (additional) capacity available
  - No long-term contracting opportunities
  - Delivery subject to hydro conditions & operational constraints (i.e. Use-Limited Resource)
  - Not dependable to meet the time-coincident goal

Timing of the 24/7 Goal

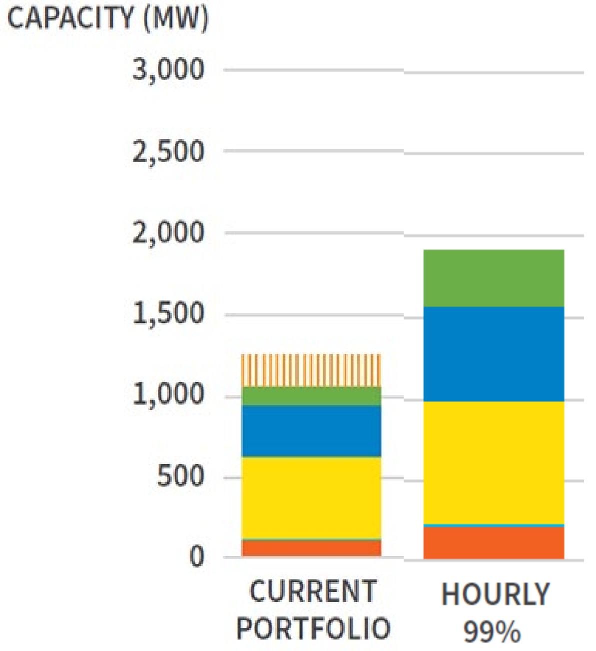
Challenges in Achieving the 2025 Target

- Delays in resource development have resulted in fewer resources available to deliver renewable energy to PCE by 2025.

  <u>Contributing Factors:</u>
  - Global Supply Chain Disruption
  - Labor Shortage
  - Rising Financing Costs
  - Interconnection Delays

- Short-term contracts with existing renewable resources are unavailable.

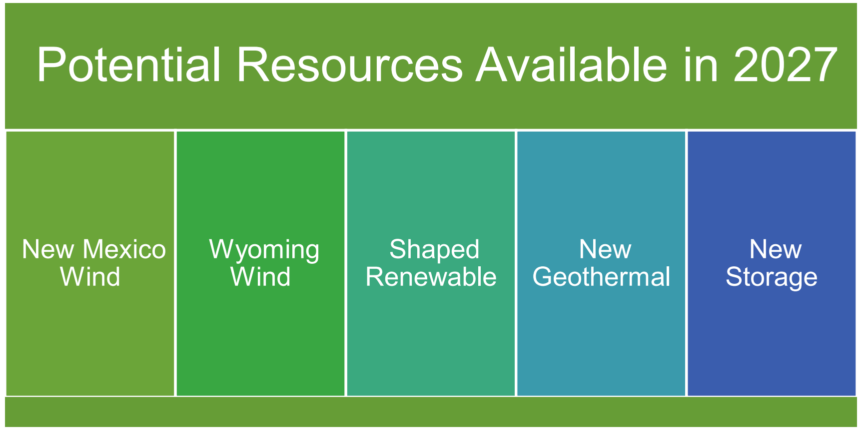
Achieving the goal in 2025 or 2026, given the limited resources that are expected to be available and online, would be infeasible.



Short-term renewables capacity	196	–
Storage	116	351
Onshore wind	320	586
Solar	502	751
Small hydro	12	16
Geothermal	84	187
TOTAL	1,230	1,891

Resources Available in 2027

- Staff has been updating the 24/7 modeling with information from the 2023 RFOs and bilateral reach-outs to counterparties and focused on studying the possibility of achieving the 24/7 goal by 2027.



Benefits for Shifting the Goal

- Shifting the 24/7 goal target year from 2025 to 2027 has the following benefits:
  - Opportunity to contract a more diverse set of resources
  - Opportunity to avoid excessive over-procurement
  - Opportunity to reduce long-term cost and risk exposure
  - Opportunity to build a more optimal resource portfolio

Recommendation

Recommendation to Board of Directors

Update Peninsula Clean Energy's Strategic Plan Priority to:

1. Deliver 100% renewable energy annually by 2025, and
2. Deliver 100% renewable energy annually on a 99% time-coincident basis by 2027.

* Staff will continue to monitor and evaluate the opportunity of achieving the 99% time-coincident goal by 2027, and promptly communicate any changes to the Board of Directors.

Thank you!

A sustainable world with
clean energy for everyone.

Item 8: Authorize Power Purchase Agreement with SunZia Wind PowerCo LLC

June 22, 2023

Recommendation

Approve Resolution Delegating Authority to Chief Executive Officer to Execute Power Purchase Agreement, and any necessary ancillary documents, including potential Replacement PPA(s) with the same terms and conditions as the agreement presented to the Board except for any necessary administrative changes, with SunZia Wind PowerCo LLC or an affiliate of SunZia Wind PowerCo LLC, with a Power Delivery Term of 15 years starting at the Commercial Operation Date on or about September 30, 2026, in an amount not to exceed $858 million.

Agenda

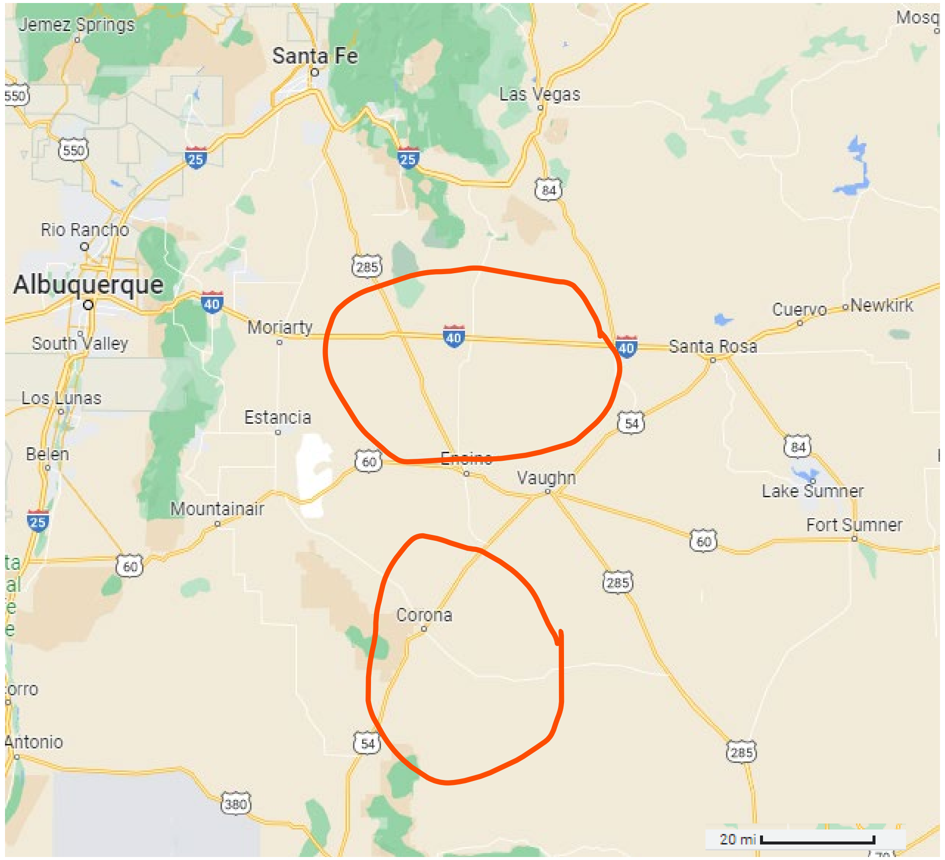
1. Project Overview
2. Expected Operations and Fit in Portfolio
3. Fit with Strategic Plan
4. Recommendations

Project Overview

SunZia Wind – Project Overview

Project Owner	SunZia Wind PowerCo LLC
Developer	Pattern Energy Group LP
Location	Lincoln, Torrance, and Guadalupe Counties, New Mexico
Technology	Wind
Capacity	3,515 MW (Total Project)
PCE Share	220 MW
Annual Generation	694,477 MWh (36% capacity factor) (Represents 13% of PCE's load)
Term	15 years
Commercial Operation Date	September 30, 2026
Project Site	>1,000 sq mi of private and state-owned land

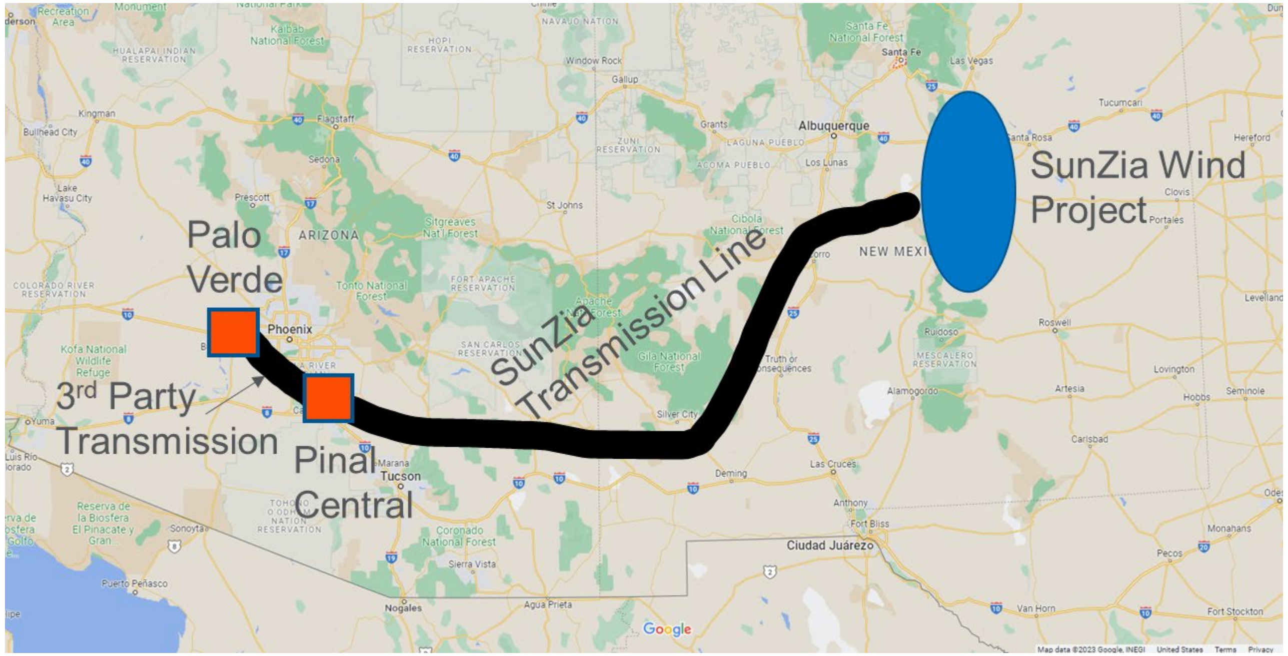
SunZia Wind Project Vicinity Map



SunZia Wind – Transmission to CAISO

Delivery Point	Palo Verde, AZ (considered to be "in-CAISO")
Interconnection Provider	SunZia Transmission (to be built by Pattern)
Other Transmission Providers (3rd Party Transmission)	Existing infrastructure owned by Salt River Project, Tucson Electric Power, Western Area Power Administration, Arizona Public Service

SunZia Wind Transmission to CAISO



Contract Structure

- Pay for all energy produced by our 220 MW share at a fixed $/MWh rate, no escalation
- Contract term: 15 years
- Peninsula Clean Energy will receive energy and RECs from our share of the facility
- Peninsula Clean Energy can receive Resource Adequacy (RA) from SunZia if we obtain sufficient Import Allocation Rights (IARs) from CAISO
  - There is a standard process for PCE to apply for IARs, and we are confident we will be able to acquire at least a moderate amount
- Pattern will be the Scheduling Coordinator

Replacement PPA

- In order to facilitate the financing of the project, Pattern requires the ability to bifurcate or transition the project to an Affiliate.
- This would be implemented via a Replacement PPA, which would update the Seller to be an Affiliate of SunZia Wind PowerCo LLC.
- The Replacement PPA would have the same terms and conditions as those in the original agreement presented tonight, except for those administrative changes necessary to effectuate the separation or transition.
- The Replacement PPA needs to be pre-approved by the Board during the approval of the original PPA.
- Staff will immediately inform the Board if a Replacement PPA has been requested by Pattern.

Workforce

- Pattern will pay New Mexico prevailing wage;
- Pattern's contractors are required to provide health and other applicable benefits to labor performing work on the project;
- Pattern and its EPC contractor are currently finalizing the overall labor plan with International Brotherhood of Electrical Workers (IBEW) on the SunZia Transmission project, and once completed, approximately 350 IBEW jobs will be created during peak construction periods.

Community Support for SunZia Transmission

- The following organizations have issued public letters of support for the SunZia Transmission Project:

New Mexico Building and Construction Trades Council	BluRok Farm	New Mexico Social Justice and Equity Institute
International Brotherhood of Electrical Workers	CommunityShare	New Mexico Office of Military Base planning and Support
Santa Fe Chamber of Commerce	El Pasto Electric Company	Rural Education Advancement Program
Albuquerque Charter Academy	Estancia Valley Economic Development Association	Roswell-Chaves Economic Development Corporation
Project Roots Arizona	Indigenous Lifeways	Southwest Black Ranchers
Arizona Solar Energy Industries Association	Prosperity Works	New Mexico and El Paso Region Interfaith Power and Light
Arizona Technology Council	Middle Rio Grande Economic Development Association	Valencia Renewables

Environmental Review Process

- Staff worked with environmental non-profits to develop a system for evaluating the environmental impact of projects.
- Staff studied the geospatial footprint of the project to evaluate whether the project is located in a restricted or high conflict area for renewable energy development:
  - Protected areas at the federal, state, regional, local level (e.g. County-designated conservation areas, BLM Areas of Critical Environmental Concern, critical habitat for listed species, national, state, county parks, etc.).
  - Identified and mapped important habitat and habitat linkages, especially for threatened and endangered species (either state or federally listed).

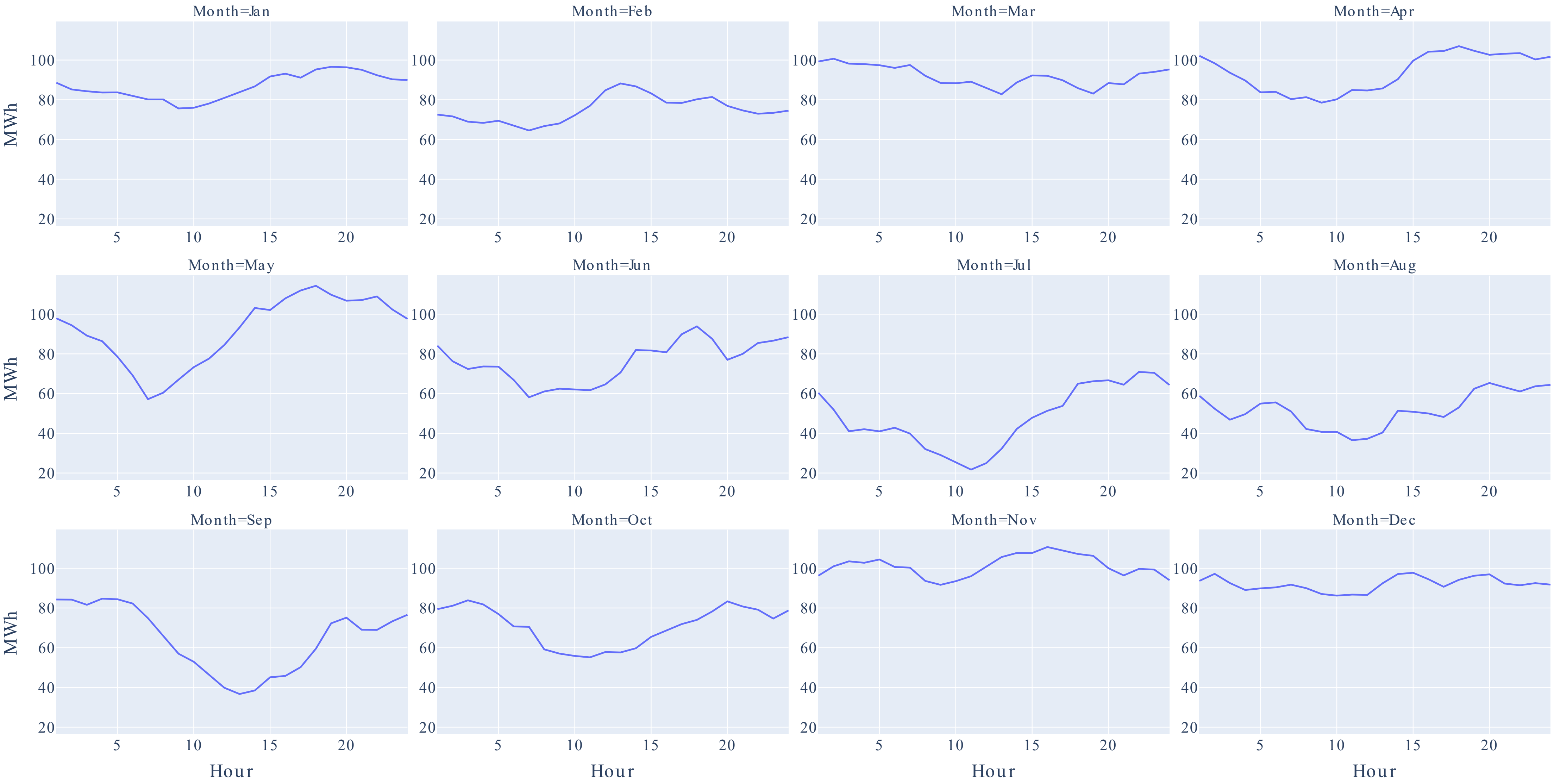
USGS PAD-US: https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/protected-areas
RETI: https://reti.databasin.org/

Environmental Review Results

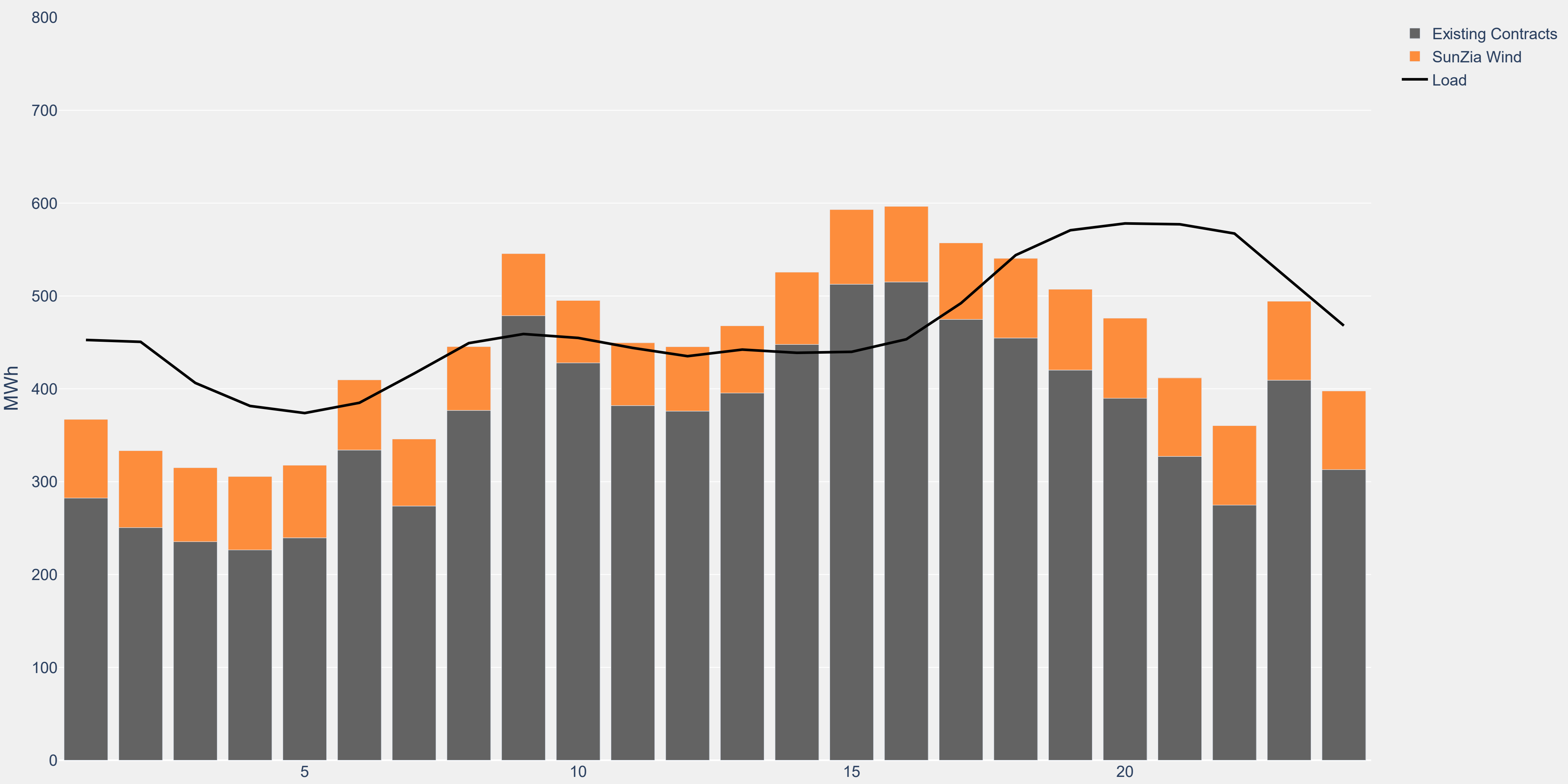
- The SunZia project is not located in a protected area based on the USGS Protected Areas Database (PAD-US)
- Bureau of Land Management land use approval for the project (Record of Decision) was issued in May 2023

Expected Operations and Fit In Portfolio

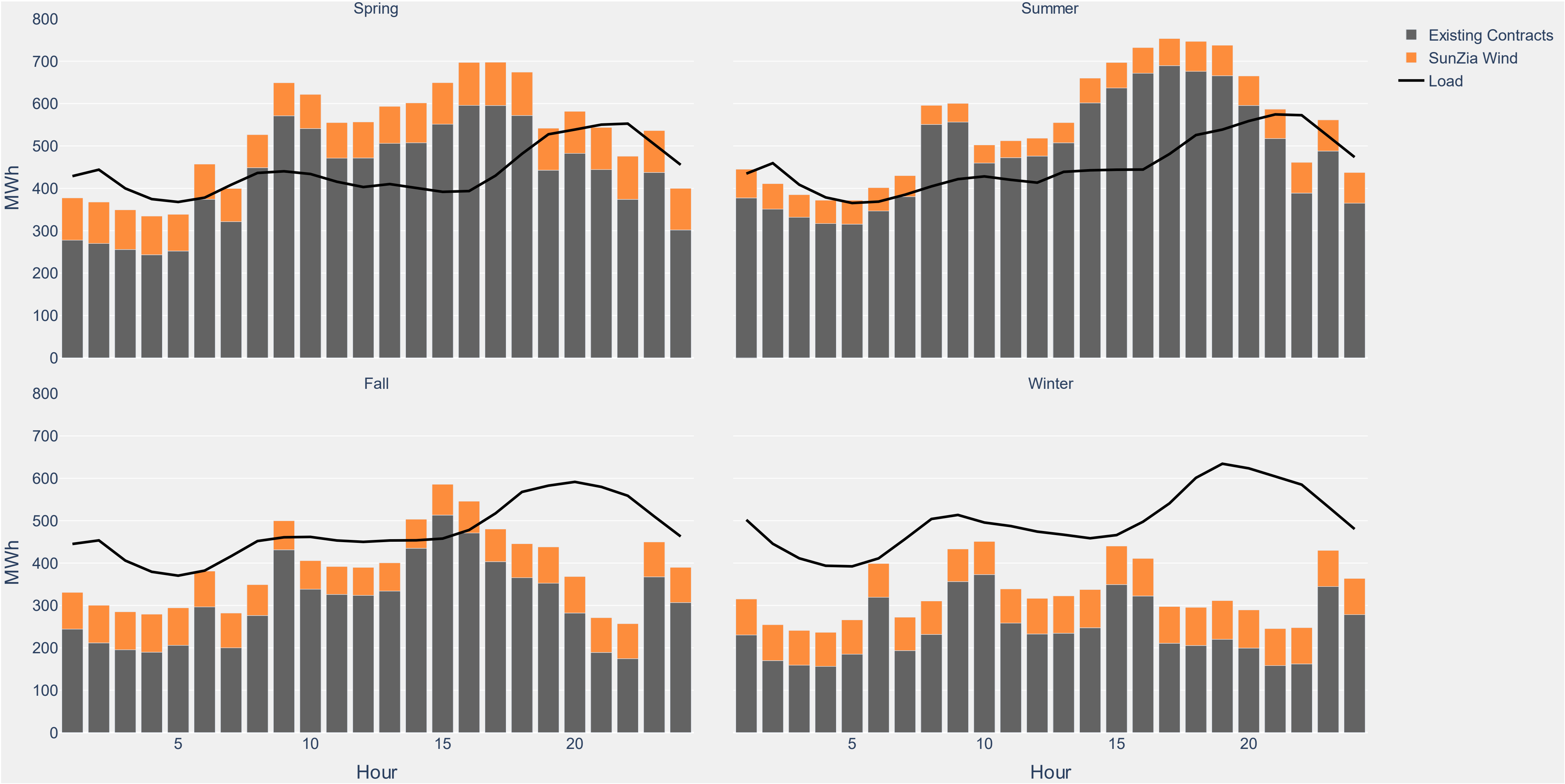
Expected Month-Hour Profiles (2027)



Contribution to Portfolio - Annual (2027)



Contribution to Portfolio - Seasonal (2027)



Fit with Strategic Plan

Fit with Strategic Plan

- Priority 1: Design a power portfolio that is sourced by 100% renewable energy by 2025 and that aligns supply and consumer demand on a 24x7 basis by 2027
- Power Resources Goal 2: Secure sufficient, low-cost, clean sources of electricity that achieve Peninsula Clean Energy's priorities while ensuring reliability and meeting regulatory mandates
    - Objective B: Procure power resources to meet regulatory mandates and internal priorities at affordable cost

Value of Out-of-state Wind to our 24/7 Goal

- Out-of-state wind has become increasingly important to meeting our 100% renewable target with diminishing availability of in-state wind resources;
- Including out-of-state wind in our portfolio significantly reduces the cost and overprocurement of implementing our 24/7 goal;
- Out-of-state wind provides an excellent complement to California solar, by providing higher amounts of energy in winter and overnight periods;
- Very few out-of-state wind projects are available to Peninsula Clean Energy, and most come online later than SunZia Wind and are more expensive.

Recommendation

Recommendation

Approve Resolution Delegating Authority to Chief Executive Officer to Execute Power Purchase Agreement, and any necessary ancillary documents, including potential Replacement PPA(s) with the same terms and conditions as the agreement presented to the Board except for any necessary administrative changes, with SunZia Wind PowerCo LLC or an affiliate of SunZia Wind PowerCo LLC, with a Power Delivery Term of 15 years starting at the Commercial Operation Date on or about September 30, 2026, in an amount not to exceed $858 million.

Approval of Appointment of Shawn E. Marshall as Chief Executive Officer (CEO) and an Agreement for her Service as CEO for the Term of July 1, 2023 to June 30, 2026 in an Amount Not-to-Exceed $400,000 annually

PENINSULA CLEAN ENERGY

Electricity Grid Regionalization and AB 538

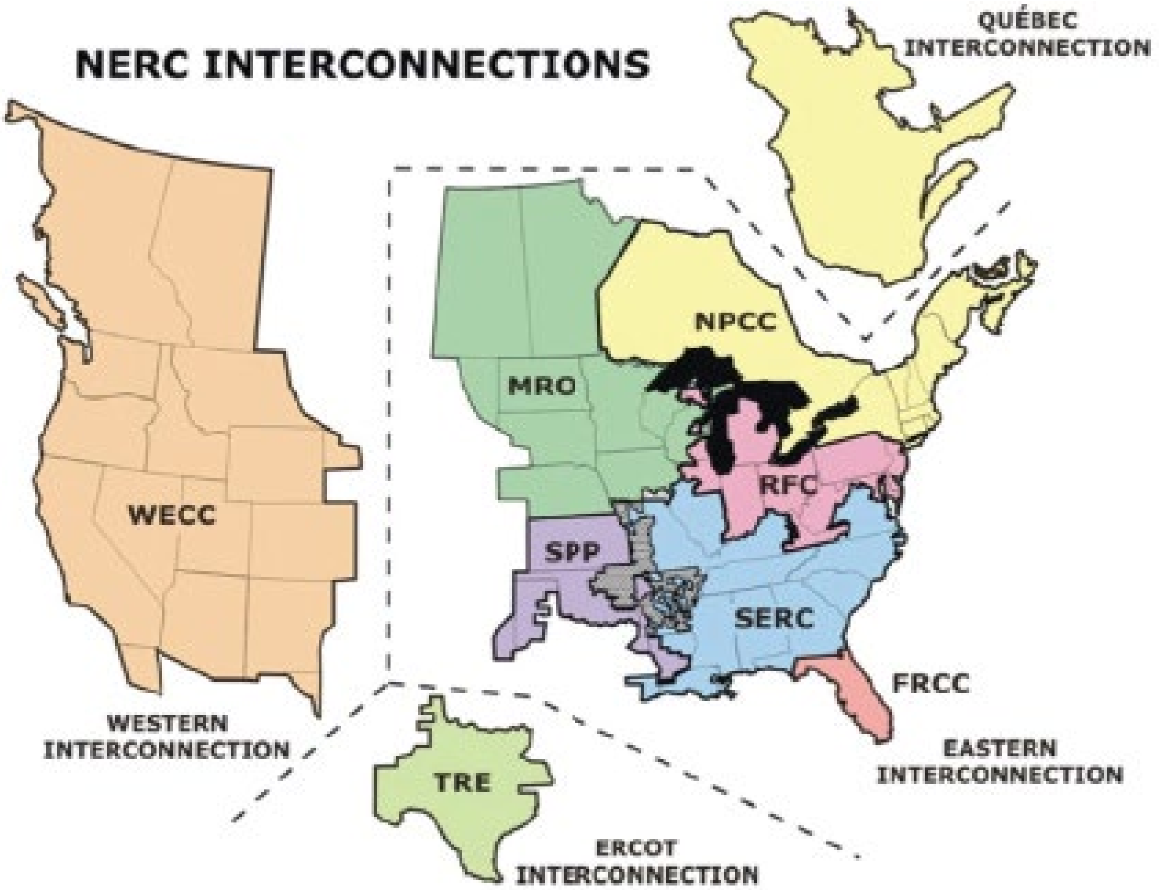
June 12, 2023

Summary

- The California Legislature is considering a bill that would enable the State’s grid operator (CAISO) to expand to other states
- This is a significant policy question that the State has previously considered
- Key stakeholders are split on how the State should approach this issue
- Staff is seeking feedback from the Board on how PCE should approach this issue

The U.S. Power Grid and California

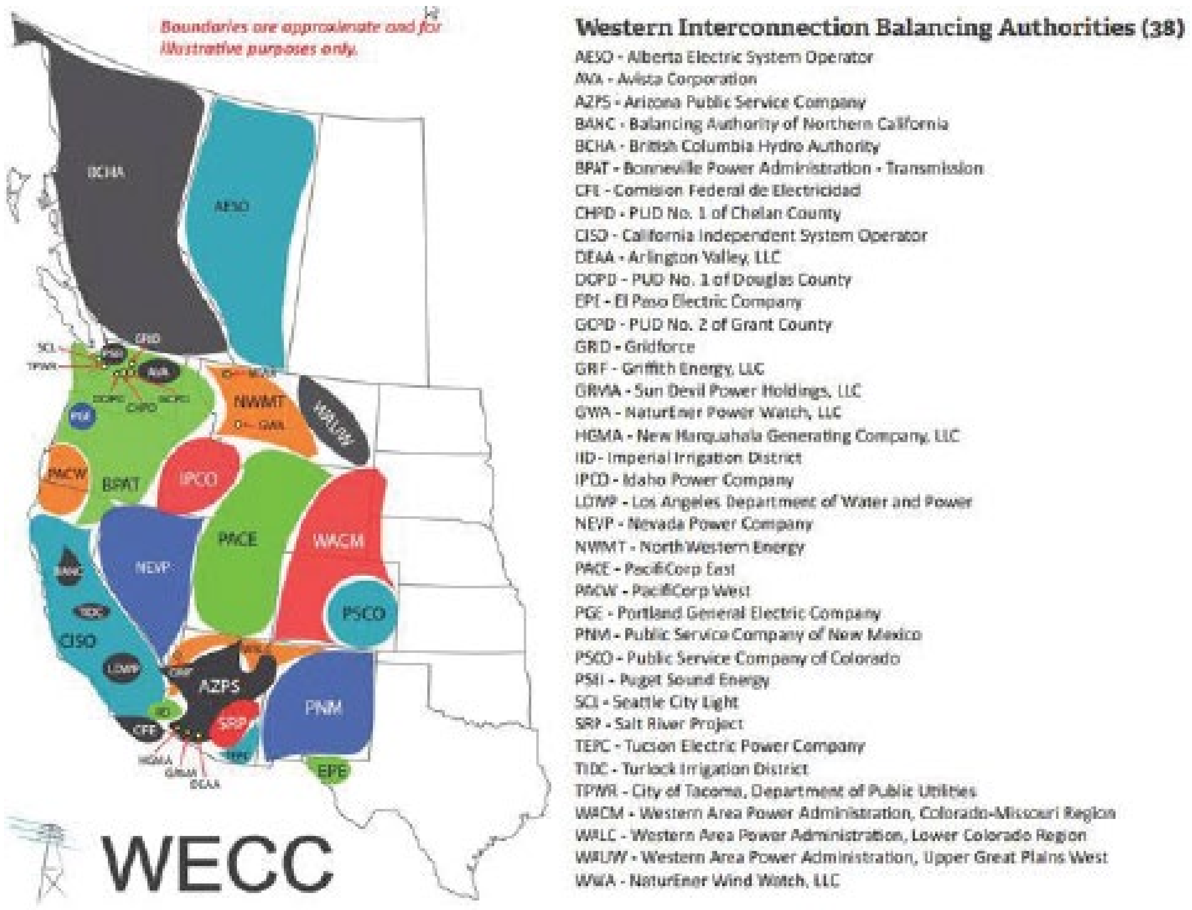
- The U.S. power grid consists of the bulk power system, high-voltage transmission equipment, and the lower-voltage distribution system.
- It is broken into 3 independent grids.
  - **The Western Interconnect,** which includes 38 separate balancing authorities, including CAISO.
  - **The Eastern Interconnect,** which includes 36 balancing authorities
  - The Electric Reliability Council of **Texas** (ERCOT)
- The Western Interconnect is overseen by the Western Electric Coordinating Council (WECC)



1. https://www.tanc.us/understanding-transmission/the-western-us-power-system/

Electric System Operations

- The actual operations of the electric system are managed by balancing authorities (BA), which manage the supply and demand of energy across their territory, and transfer of electricity with other BAs.
- There are 38 BAs within the WECC, representing about 20% of all generation capacity in the U.S. and Canada.
- BAs are regulated by both the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC).

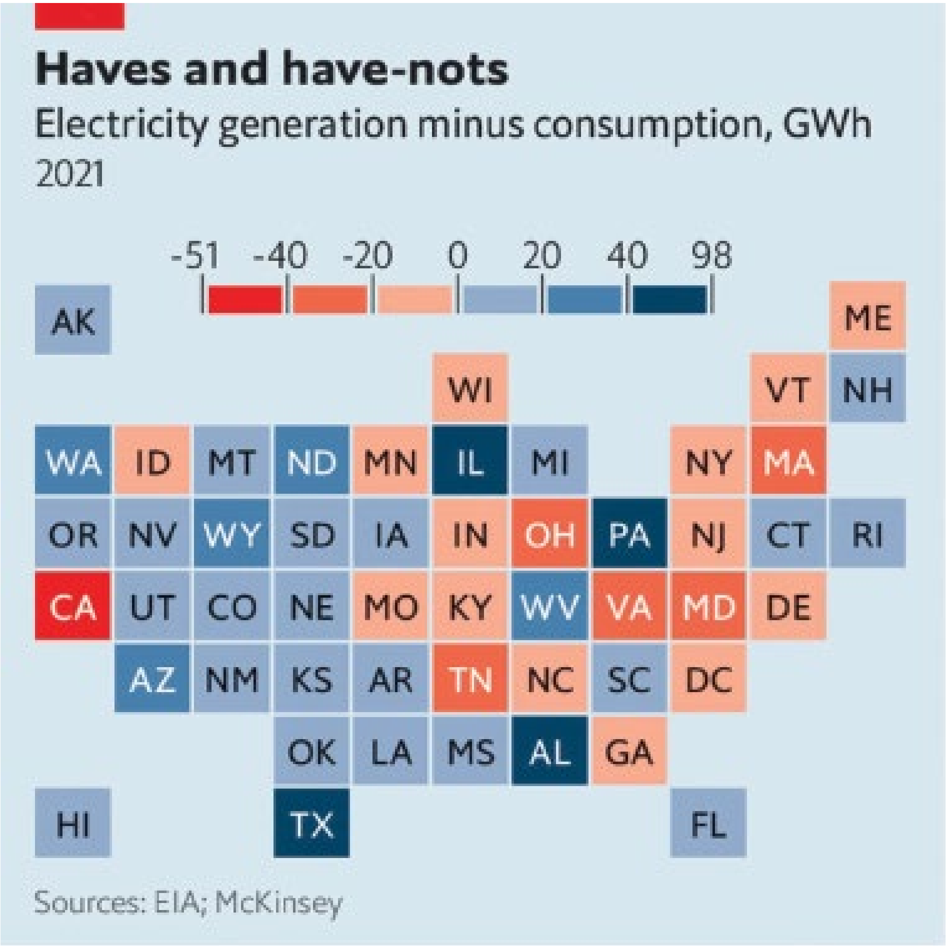


CAISO Today

- **Overview:** The CAISO is both a BA and regional transmission operator that manages the flow of electricity across the high-voltage bulk power system that makes up 80% of California's and a small part of Nevada's electric grid.
- **Governance:** CAISO is regulated by both the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC).
  - Unlike other RTOs, the CAISO's 5-person governing board is appointed by the California Governor and confirmed by the Senate
- **Interstate Markets:** CAISO operates 2 markets that involve multiple states and participants:
  - WEIM: The Western Energy Imbalance Market (WEIM), a real-time bulk power trading market that involves 19 voluntary participants (and more coming) across 10 western states
  - EDAM: Building on the success of WEIM, the extended day-ahead market (EDAM) is a voluntary day-ahead electricity market that CAISO will launch in early 2024
- Both market programs are designed to deliver economic, environmental, and reliability benefits to participants by increasing regional coordination

The Need to Revisit Regionalization

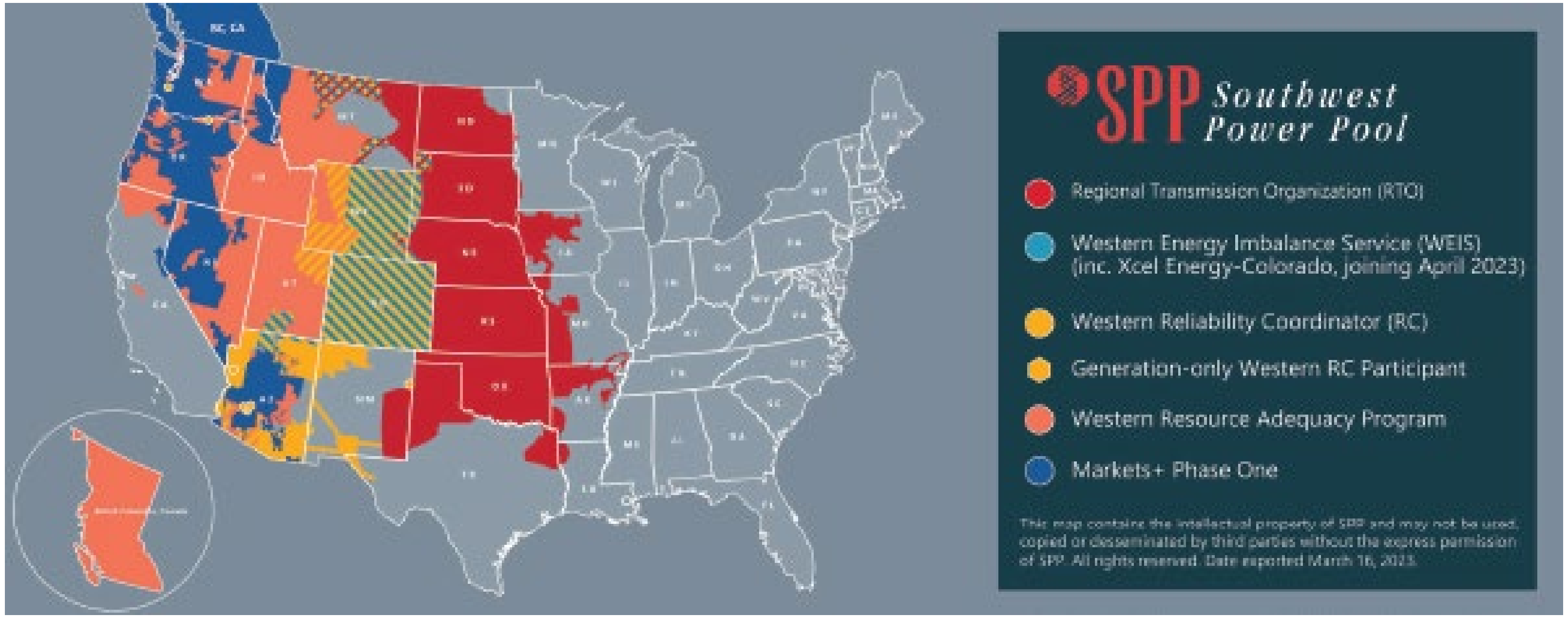
- California has set ambitious climate goals to reach 100% clean energy by 2045. CPUC's integrated resource planning analysis shows that the grid would need an additional 86 GWs, more than double what is currently on the grid.
- California needs to import electricity to meet its Resource Adequacy requirements, and to meet the demand of extreme summer heat events.
- There are doubts as to whether California can build the new 86 GW of resources it needs fast enough inside California to both meet climate goals and reliability needs if the supply of imports begins to decline.



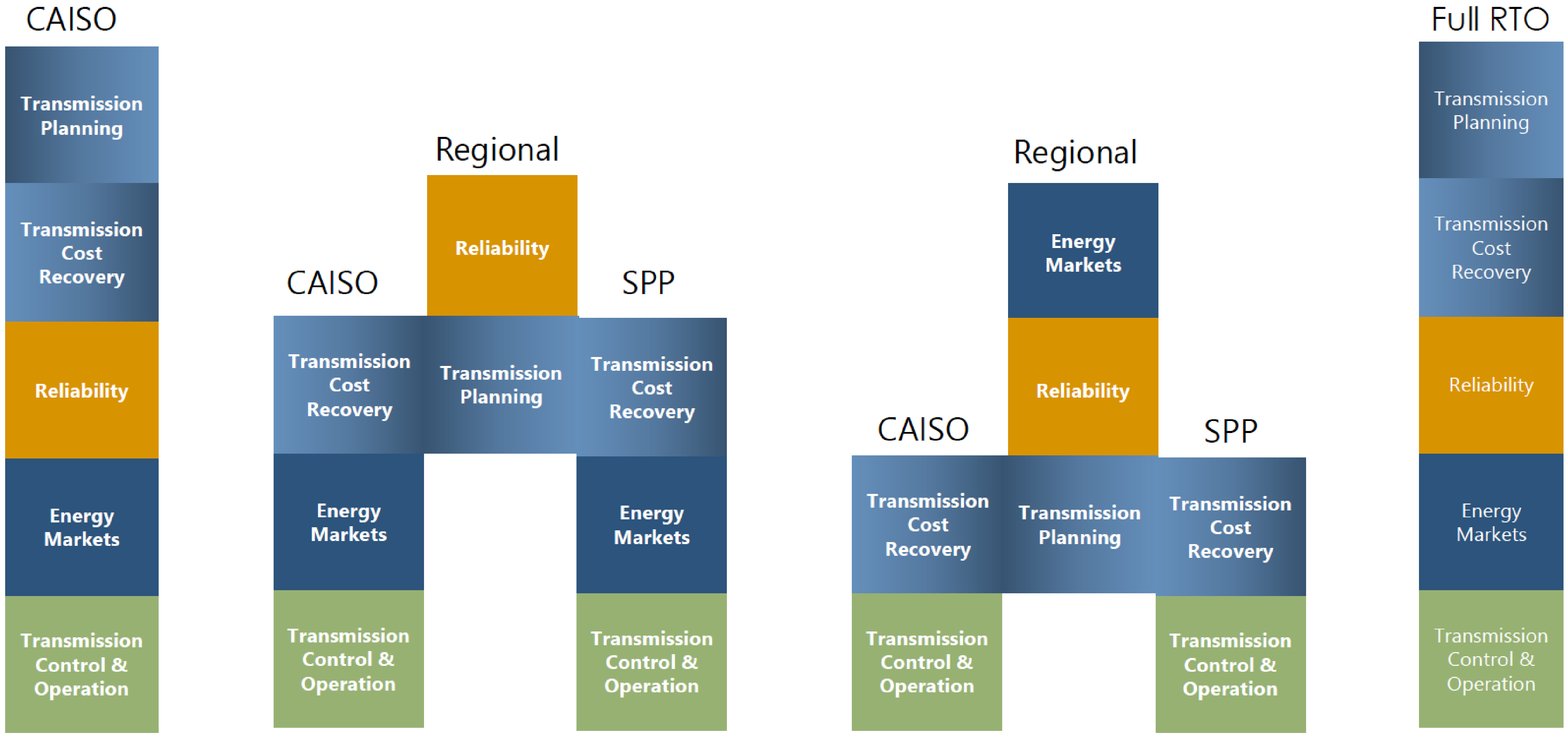
The Economist

The Need to Revisit Regionalization, continued

- An existing RTO, the Southwest Power Pool (SPP), is asking Western States to join their new market, called Markets+, similar to CAISO's WEIM and EDAM. Unlike WEIM and EDAM, Markets+ will be operated by a governance board that is not appointed by a specific state or participant.
- Many WEIM participants have already made commitments to leave WEIM for Markets+, jeopardizing resources available to WEIM and CAISO.
- Supporters of regionalization have raised concerns that if California doesn't expand to an RTO, resources across Western states will become less and less available to California.



How Could Regionalization Be Structured?



Arguments in Support of Regionalization

- **Improved reliability:** Better coordination on Resource Adequacy by pooling generation resources across a larger region
- **Accelerated decarbonization:** Easier to match variable demand and renewable generation across the region; less curtailment of wind and solar resources
- **Improved transmission planning:** Streamlining the process of long-term resource planning
- **Cost reduction:** Reduce transmission congestion costs, streamlining the cost of RA/operating reserve to maintain reliability, more efficient use of renewables are estimated to save $379 Million to $574 million annually for California electricity customers, approx. 4.5% of total annual costs

Key Supporters

Environmental

Arguments Against Regionalization

- **Loss of state control:** A regional board of directors will likely be less accountable to California ratepayers and California's environmental and energy policy goals. California will likely only have one vote whereas California's load is much larger than other Western states
- **Federal oversight:** FERC may have greater oversight over California policies that express preferences for renewable or carbon-free resources and is more subject to national politics and policies
- **Job Creation:** More projects may be built outside of California and California LSEs may purchase more of those resources
- **State-level decarbonization:** While more states have adopted renewable/carbon-free electricity goals, fossil fuel resources will still be more abundant across the west and therefore may be imported into California more easily

Key Opponents

Environmental

AB 538: Regionalization Process

Enable the transition of the CAISO to a regional transmission operator with independent governance. Process:

- Introduced by Asm. Holden, it is possibly a 2-year bill
- CAISO develops and submits a governance proposal to the CEC to meet specific governance requirements (next slide)
- CEC, in consultation with CPUC and CARB, reviews the governance proposal and holds at least 5 public hearings (plus additional verification between agencies)
- Legislature reviews and provides feedback on the structure
- CAISO implements a governance structure, if there is intention from non-participating transmission owners to join and the FERC has approved any changes to CAISO tariff that are necessary. Open to transmission owners, retails sellers, POUs
- Additional checks and balances to ensure compliance with FERC requirements, CEC, CAISO, and the Secretary of State

AB 538: Regionalization Process

Governance requirements include:

- Governance by a western states' committee with an equal number of representatives from each state. California rep is appointed by Governor and confirmed by Senate
- Open meeting standards consistent with Bagley-Keene Act plus public access to records
- Maintaining state authority over state matters related to procurement policy, resource planning, and resource or transmission siting within the state, including setting resource adequacy standards, and prohibiting the operation of a centralized capacity market
- Ensuring the dispatch of resources appropriately reflects the costs for resources to comply with California's climate policies
- Establishing a clear structure for state regulators to provide guidance to the organization
- Enabling participation of demand response, storage, and distributed energy resources
- Maintaining California's renewable portfolio standard compliance requirements that favor in-state renewable energy development over out-of-state development

Questions and Discussion

Adjournment