



# Board of Directors

Regular Meeting

April 25, 2024

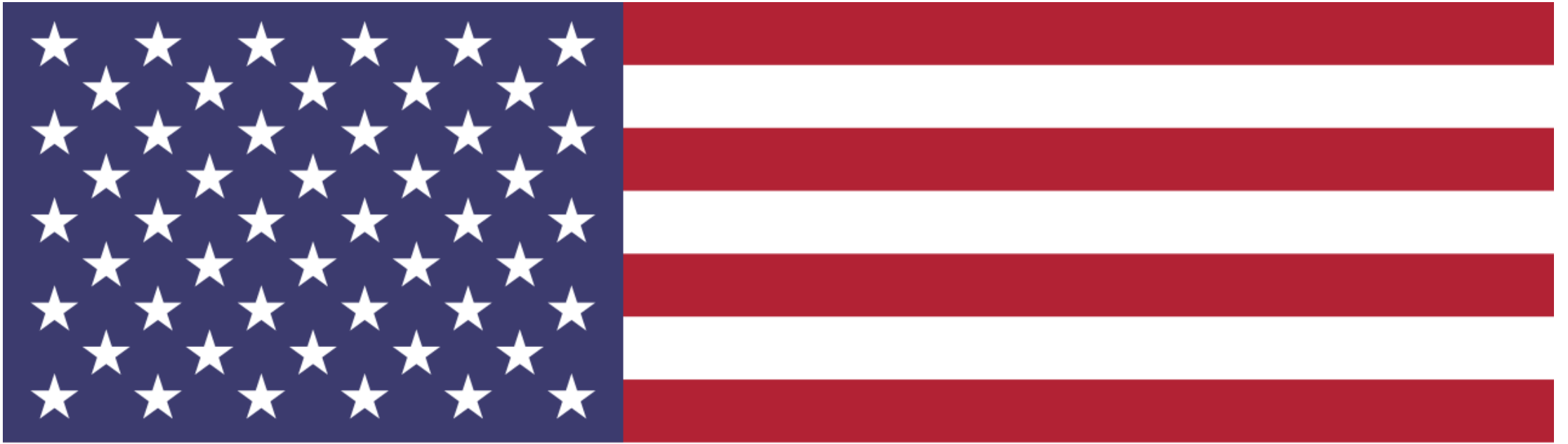


An aerial photograph of ocean waves, showing white foam and deep blue-green water. A large white diagonal shape, resembling a stylized arrow or a large 'X', is overlaid on the image, pointing from the top-left towards the bottom-right. The text is centered within this white area.

# **Welcome & Call to Order**

The image features a central white diagonal arrow pointing from the top-left towards the bottom-right. The background is an aerial view of ocean waves, with the left side of the arrow showing white foam and the right side showing deeper teal water. The text 'Roll Call' is centered within the white arrow.

# Roll Call



The image features a central white triangle pointing to the right, which serves as a background for the text. The rest of the image is filled with an aerial view of ocean waves crashing on a beach, showing white foam and deep blue-green water. The composition is split diagonally by the white triangle.

# **Land Acknowledgement**

# Warm Welcome to our New Hires!




**Maricela Hernandez**

Clerk of the Board



**Items to  
be Added,  
Withdrawn  
or  
Reordered  
on the  
Agenda**

The background features an aerial view of ocean waves in shades of teal and blue. A large white diagonal arrow points from the top-left towards the bottom-right, framing the text.

**Public  
Comment  
for Items  
NOT  
on the  
Agenda**



# Consent Agenda

1. Approve March 28, 2024, Meeting Minutes
2. Receive and File Treasurer's Report for Period Ending February 29, 2024
3. Receive and File Update on Programs
4. Receive and File Update on Power Services
5. Receive and File Update on Human Resources
6. Receive and File Update on Customer Operations
7. Receive and File Update on Marketing, Public Relations, and Local Government Affairs
8. Receive and File Community Advisory Committee Monthly Report
9. Receive and File Update on Regulatory and Legislative Affairs
10. Approve Sixth Amendment to Professional Services Agreement with NewGen Strategies and Solutions
11. Adopt Resolution Appointing an SDCP Secretary
12. Approve Fifth Amendment to Professional Services Agreement with Brentech Inc. for up to \$316,680 for Computer and IT-Related Services through June 30, 2024

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# **Public Comment for Consent Agenda**

# Regular Meeting Agenda

**13. Update on Vehicle-Grid Integration Strategy Overview**

**14. Quarterly Report on Community Advisory Committee**

**15. Approve First Amendment to the EEI Transaction Confirmation for Modified CAM Resource Adequacy between SDCP and SDG&E**

**16. Approve Amended and Restated Power Purchase Agreement (PPA) with Pelicans Jaw Solar, LLC**

# Item 13

## Update on Vehicle-Grid Integration Strategy Overview

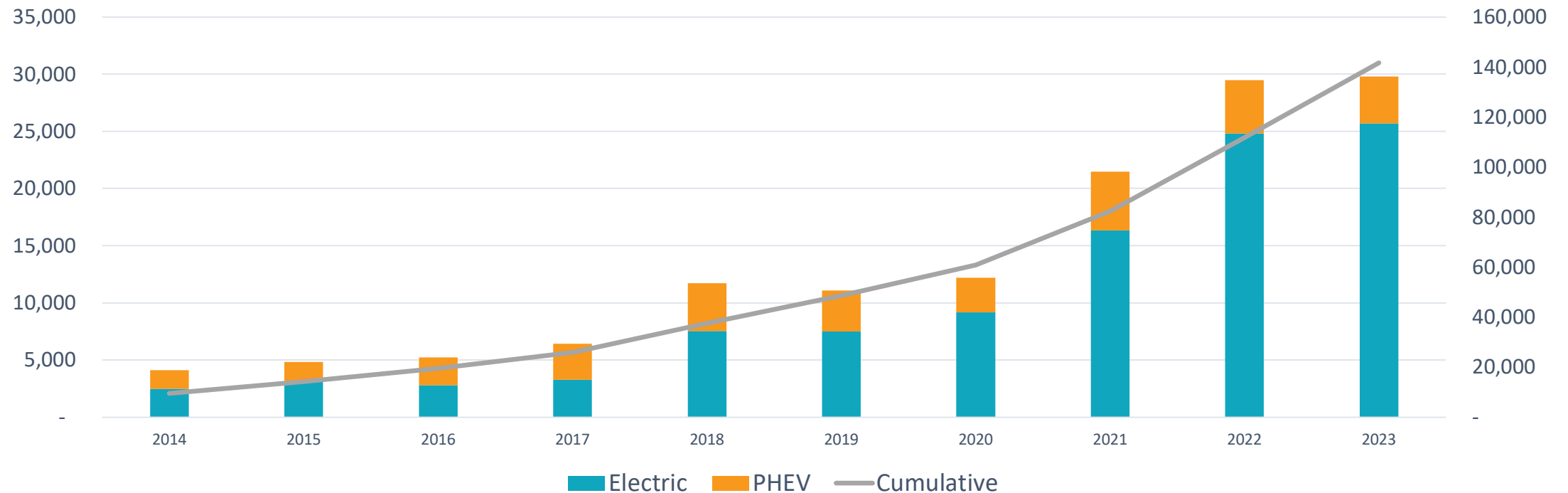
### **Recommendation:**

Receive and File Vehicle-Grid Integration Strategy  
Overview.

# Executive Summary

- California is undergoing a rapid transition to electric vehicles (EVs), presenting both opportunities and challenges to grid management.
- San Diego County is at the forefront of EV adoption, offering a compelling case study for exploring managed charging options and grid integration strategies.
- This presentation:
  - Discuss vehicle-grid integration strategies and grid optimization use cases as an extension of the Flexible Load Strategy
  - Provide a recommended strategy and roadmap for VGI at SDCP

# EV Market Characterization in San Diego County



Source: California Energy Commission. (2023, April). Light-Duty Vehicle Population in California. Retrieved from <https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics/light-duty-vehicle>

# Regulatory Framework

[Senate Bill \(SB\) 676](#) (2019) required the CPUC to establish strategies and quantifiable metrics to maximize the use of feasible and cost-effective electric vehicle grid integration (VGI) by 2030.

Per the Decision, **VGI is defined** as:

“Electric vehicle grid integration means any method of altering the time, charging level, or location at which grid-connected light-duty electric vehicles, medium-duty electric vehicles, heavy-duty electric vehicles, off- road electric vehicles, or off-road electric equipment charge or discharge, in a manner that **optimizes plug-in electric vehicle or equipment interaction with the electrical grid** and provides net benefits to ratepayers by doing any of the following:

- Increasing electrical grid asset utilization and operational flexibility
- Avoiding otherwise necessary distribution infrastructure upgrades and supporting resiliency
- Integrating renewable energy resources
- Reducing the cost of electricity supply
- Offering reliability services consistent with the resource adequacy requirements established by Section 380 or the Independent System Operator tariff.”

# VGI Categories

## V2B & V2H

Vehicle-to-building integration, under which an EV may provide power directly to a home or building.

## Unmanaged Charging

Vehicle charging is performed solely by the customer.

## V2G

Vehicle-to-grid bidirectional charging and discharging, under which EVs may discharge onto the grid in addition to characteristics offered by V1G.

## V1G

Vehicle charging is managed to respond to grid requirements to improve reliability and reduce costs. This includes pricing signals (TOU and DR) and active control of vehicle charging.

TECHNOLOGY

Unmanaged Charging

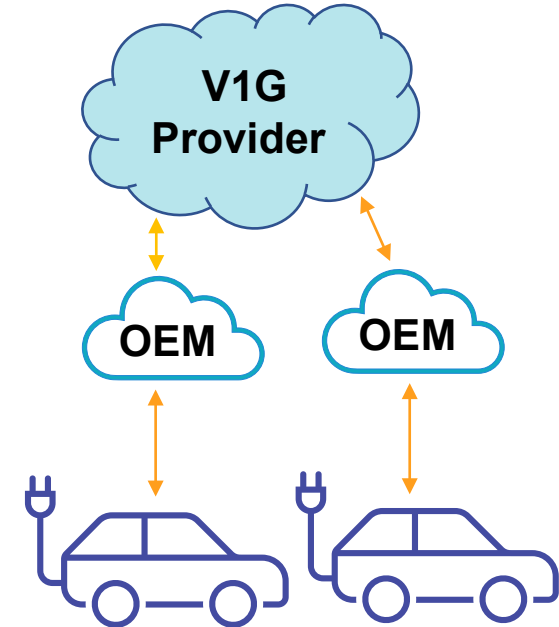


# V1G – Managed EV Charging

## V1G Explained

V1G focuses on of when kWh are delivered to the EV battery by leveraging intelligent management of EV charging based on grid needs and/or electricity pricing, focusing on reducing costs and optimizing grid load.

- May involve charging primarily during off-peak hours or dynamically adjusting charging rates in response to real-time grid conditions.
- Does **not** involve sending power back from the EV to the grid.



# V1G Opportunities

## Participant Bill Savings

- Optimize EV charging schedule around time-of-use rates
- Provide summary of charging history and alignment with low-cost periods

## Energy Procurement

- Reduce on-peak usage through targeted daily load shifting
- Increase consumption during low/negative pricing events using chemical/thermal storage
- Manage usage in real time to align load with forecasted/hedged position

## Resource Adequacy (RA)

- Reduce demand and RA obligation through daily load shifting
- Monetize customer capacity through California Independent System Operator (CAISO) market integrated programs

# Pilot Programs – Customer API Access

## Peninsula Clean Energy

### Objectives

- Reduce overall daily peak loads and maximize for daytime solar
- Reduce customer bills
- Test customer reactions to different incentive types

### Strategy

- Leverages OEM cloud-based telematics for charge scheduling
- Assesses load shift through rate modification and TOU design



### Quick Stats

- ~700 customers recruited

### Customer Journey

- High retention
- Program participants used less energy overall
- \$100 one-time incentive most effective, \$12.50 customer bill savings per month

# Pilot Programs – Direct OEM API

## Pacific Gas & Electric

### Objectives

- Improve grid resiliency
- Optimize charging around low cost and low carbon periods
- Increase EV driver preparedness in PSPS impacted communities

### Strategy

- Leverages OEM cloud-based telematics for charge scheduling
- Assesses customer preferences, utility rates, and electricity grid needs



### Quick Stats

- ~3,500 customers recruited

### Customer Journey

- Invited customers in eligible zip codes
- Received a recommended charging schedule with access to a personalized dashboard that will show optimal charging times
- Text alerts to prepare for PSPS events
- \$50 incentive for joining and up to \$100 more for continued participation

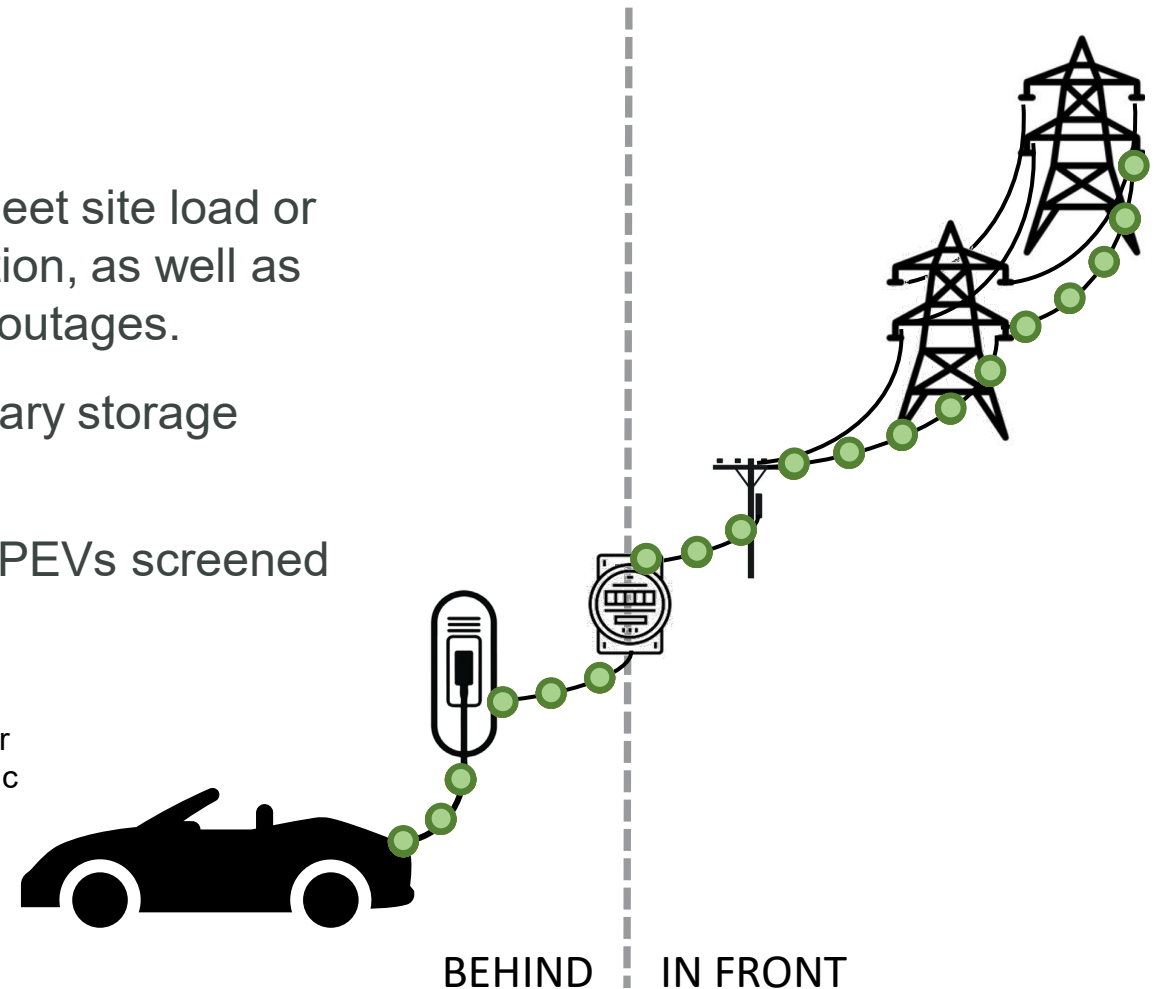
# V2X – Bidirectional EV Charging

## V2X Explained

V2X allows for power to flow from the battery to meet site load or grid needs. This allows EVs to support grid operation, as well as act as resilience assets for customers during grid outages.

- Existing EV storage is **5x** the amount of stationary storage currently on the grid (25 GWh in 2023)<sup>1</sup>
- Interconnection requirements for V2G capable PEVs screened as “generating resources” under [Rule 21](#).

<sup>1</sup>With a sales-weighted average battery size of 60 kilowatt-hours (kWh) for light-duty EVs, ([source](#)) the United States’ (U.S.) 2.1 million battery electric vehicles (BEVs) represent approximately **126 Gigawatt-hours** (GWh) in storage capacity ([source](#)).



# V2X Configurations

## V2H/V2B

**Description:** EV provides supplementary power to a building while connected to or disconnected from the grid.

**Benefits:** Saves customers money by reducing the customer's peak demand from the utility and/or is used to provide backup power to a building during blackouts.

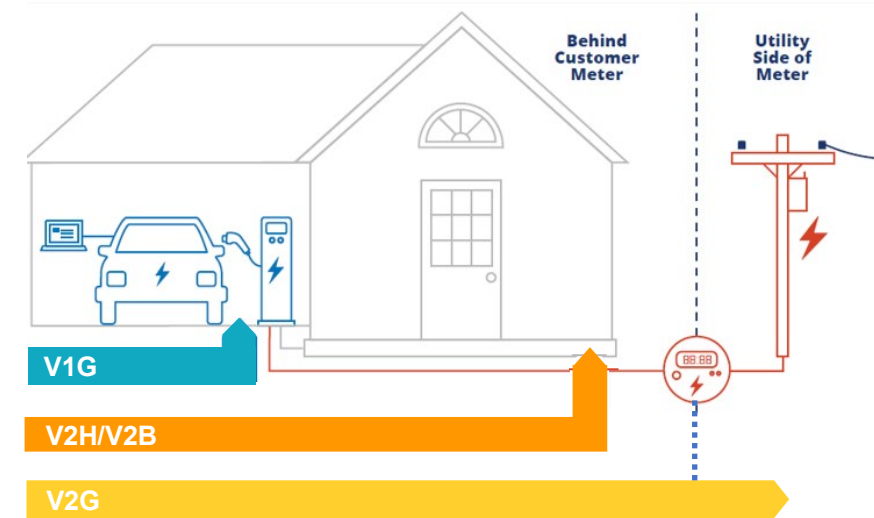
**Limitations:** Can operate as grid isolated or parallel, non-exporting. Interconnection agreements are required if set up for parallel operation.

## V2G

**Description:** EV operates as grid resource, allowing charge and discharge, supporting various grid services.

**Benefits:** Reduces net load during system and distribution peak hours to lower customer bills and operational costs.

**Limitations:** Interconnection required and many of the use cases/value streams are not compensated for under current markets/rules.



**V1G:** Interconnection *not* required.

**V2H/V2B:** Requires interconnection agreement.

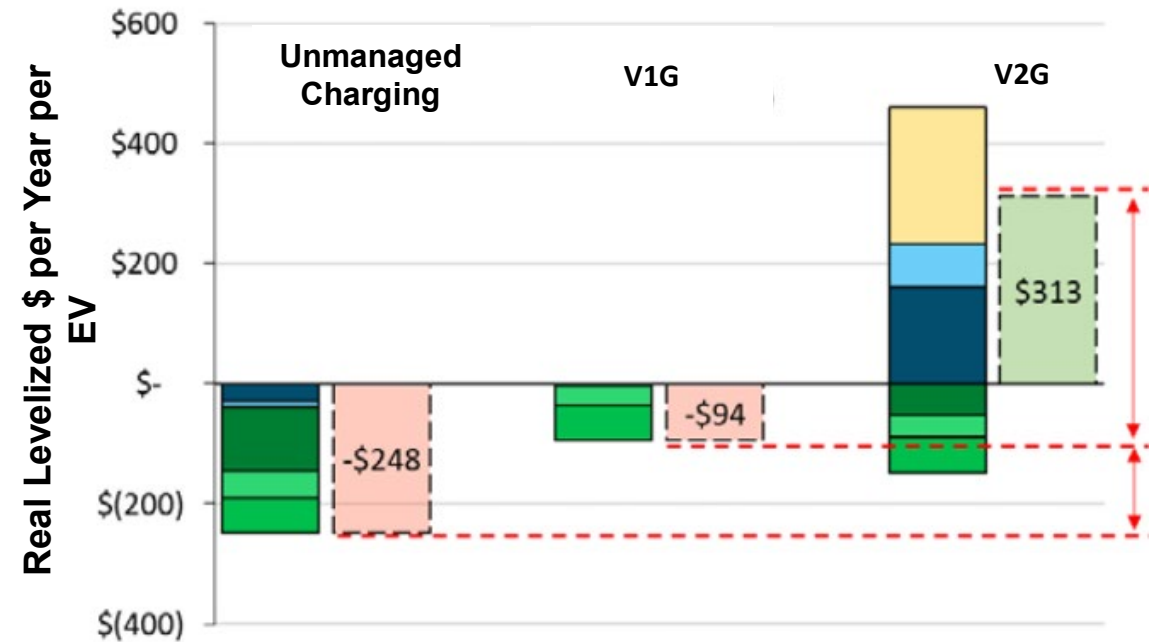
**V2G:** Requires interconnection agreement.

# Bidirectional Charging Applications

Application	Description	V2H/B	V2G
<b>Peak Shaving</b>	Discharge vehicle batteries to support real-time usage without dispatching to grid.	X	X
<b>Grid Export</b>	Discharge vehicle batteries across the meter to provide grid services.		X
<b>Grid-tied Non-export</b>	Discharge vehicle batteries behind the meter (V2H & V2B) to meet site load.	X	
<b>Islanded Operations</b>	Discharge vehicle batteries to meet site load when grid is down.	X	
<b>Renewable Integration</b>	Charge and discharge vehicle batteries in coordination with intermittent renewable generation.	X	X
<b>Energy Arbitrage</b>	Charge and discharge vehicle batteries based on market signals/price differentials.	X	X

# VGI Value Streams

SDCP	SDG&E	ISO
<b>Generation Energy &amp; Capacity:</b> Estimate of hourly wholesale value of energy and the costs of building new generation capacity to meet system peak loads	<b>Distribution Capacity:</b> The costs of expanding distribution capacity to meet peak loads	<b>Ancillary Services:</b> The marginal costs of providing transmissions, system operations and reserves for grid reliability
<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #006633; margin-right: 5px;"></span> System Energy Cost</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #00CC66; margin-right: 5px;"></span> CO2 Cost</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #00FF00; margin-right: 5px;"></span> RPS Cost</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #003366; margin-right: 5px;"></span> Resource Adequacy</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; margin-right: 5px;"></span> Distribution Capacity</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; margin-right: 5px;"></span> Ancillary Services Revenue</li> </ul>





# VGI Roadmap Overview

## V1G Charge Management Strategies

- **Scale:** Pilot scale enrollment of hundreds of customers.
- **Customer Centric:** Optimize based on rate schedule and customer preference (e.g. set points, vehicle departure times, nomination capacity)
- **Operationally Efficient:** Dispatch to maximize retail-wholesale spread and minimize RA

## V2X Bidirectional Charging

- **Scale:** Demonstration scale enrollment of tens of customers.
- **Grid and Customer Value:** Discharge when RA/Energy value exceeds round trip efficiency losses and T&D costs
- **Resiliency:** Operate to minimize impacts during customer outages
- **Leveraged Funding:** Coordinate with CEC awardees



# VGI Roadmap Timeline

	2024				2025			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Market Assessment	█							
Pilot Planning		█						
Procurement Process			█					
Implementation				◆ Customer Enrollment	█			

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# **Public Comment for Item 13**

# Item 13

## Update on Vehicle-Grid Integration Strategy Overview

### **Recommendation:**

Receive and File Vehicle-Grid Integration Strategy  
Overview.

# Item 14

## Quarterly Report on Community Advisory Committee

### Recommendation:

Receive and file the Quarterly Report on the Community Advisory Committee.

# Quarterly Report on Community Advisory Committee

January 2024 through March 2024

## Key Highlights

- 2024 CAC Ad-Hoc Committees:
  - Community Grants
  - Power100
- CAC did not meet in March



### Community Advisory Committee Roster

Member Agency	Name	Appointed	Current Term	Term Ends <i>June</i>
San Diego	<i>Upcoming Vacancy</i>			
	Matthew Vasilakis (Chair)	April 2020	Second	2026
Chula Vista	Anthony Sclafani	July 2022	First	2025
	<i>Vacant</i>			
La Mesa	Lauren Cazares (Secretary)	March 2023	First	2025
	David Harris (Vice-Chair)	April 2020	Second	2026
Encinitas	Gary L. Jahns	April 2020	Second	2025
	Tara Hammond	April 2020	Second	2026
Imperial Beach	<i>Vacant</i>			
	Ilian Sandoval	November 2023	First	2026
County of San Diego (unincorporated)	Peter Andersen	February 2022	First	2025
	<i>Vacant</i>			
National City	Aida Castañeda	February 2022	First	2025
	Lawrence Emerson	February 2022	Second	2026

Terms end at the end of every June. Members are subject two, three-year consecutive terms. They are also subject to CAC Policies and Procedures. Odd seats are outlined in orange.



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# **Public Comment for Item 14**

# Item 14

## Quarterly Report on Community Advisory Committee

### Recommendation:

Receive and file the Quarterly Report on the Community Advisory Committee.



# Item 15

## Approve First Amendment to the EEI Transaction Confirmation for Modified CAM Resource Adequacy between SDCP and SDG&E

### Recommendation:

Approve the First Amendment to the EEI Transaction Confirmation for Modified CAM Resource Adequacy between SDCP and SDG&E and authorize the CEO to execute the agreement in substantially similar form.

# Modified CAM Amendment

## Background:

- CPUC Decision 19-11-016 (IRP Proceeding) ordered procurement of 3300 MW of System Resource Adequacy (RA)
  - LSEs allocated procurement responsibility based on load-share
  - SDCP was not yet serving load
- CPUC Decision 22-05-015 required SDG&E to sell SDCP its share of resources
  - SDCP and SDG&E disagreed about the appropriate calculation methodology
  - SDCP agreed to SDG&E's methodology in the interest of complying timely with DD.22-05-015, resulting in original MCAM transaction (SDCP Board approved June 2022)
  - SDCP and CEA filed a PFM to clarify the load-share calculation methodology
- CPUC Decision 23-12-014 granted PFM and offered non-IOU LSEs the opportunity to amend MCAM purchase transactions

# Modified CAM Amendment

## Proposed Transaction:

- SDCP to buy its load share of SDG&E's D.19-011-016 contracted capacity
  - **Amendment increases SDCP load share from ~34% to ~57% effective January 2025**
- SDG&E's total obligation is 293 MW, required to be online by 2023
  - **SDCP's share expected to increase from ~109 MW to ~182 MW**
- Contract Start: Sept 1, 2022
- Term: Through expiration of SDG&E's upstream contracts
- Price: CPUC Market Price Benchmark for RA
- Resources: Various energy storage, renewable energy, and natural gas

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# **Public Comment for Item 15**

# Item 15

## Approve First Amendment to the EEI Transaction Confirmation for Modified CAM Resource Adequacy between SDCP and SDG&E

### Recommendation:

Approve the First Amendment to the EEI Transaction Confirmation for Modified CAM Resource Adequacy between SDCP and SDG&E and authorize the CEO to execute the agreement in substantially similar form.

# Item 16

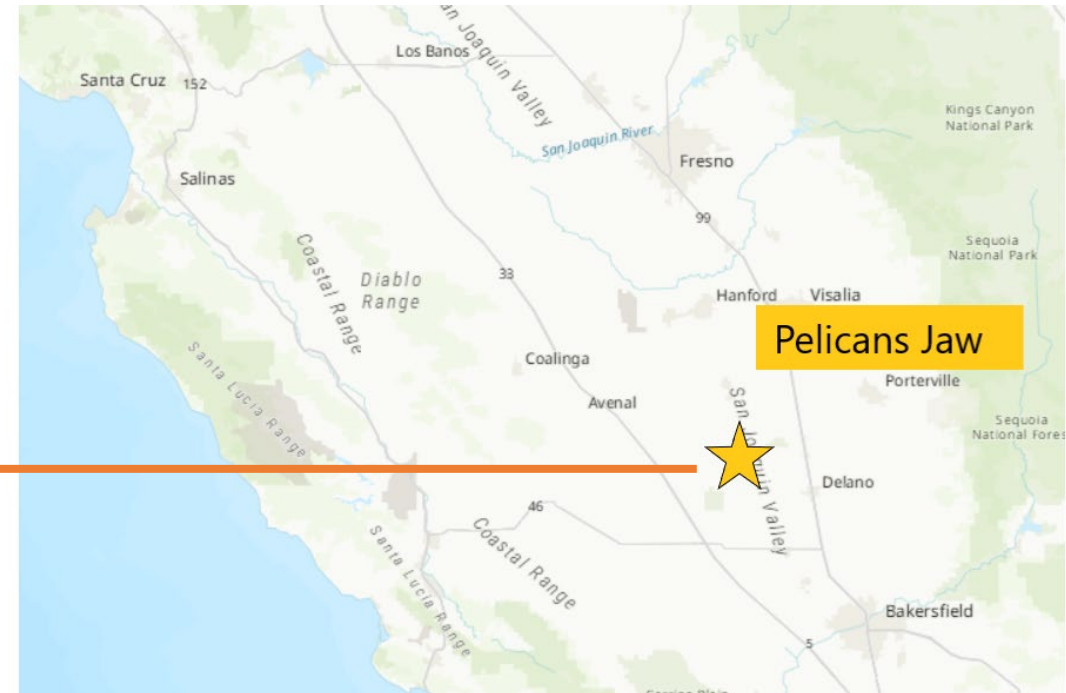
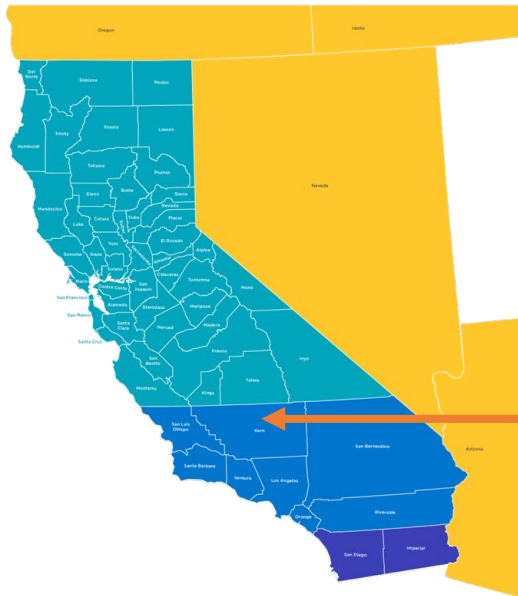
## Approve Amended and Restated Power Purchase Agreement (PPA) with Pelicans Jaw Solar, LLC

### Recommendation:

Approve a 15-year Amended and Restated Renewable Power Purchase Agreement with Pelicans Jaw Solar, LLC for a 440 MW solar photovoltaic electric (PV) generation facility and 238.5 MW (4-hour) Battery Energy System Storage (BESS) facility.

# Pelicans Jaw: Project Summary

- 440 MW PV and 238.5/954 MWh (4-hour) lithium-ion battery
- Location: Kern County



# History

- This project came through a competitive solicitation SDCP issued in early 2023. The project was shortlisted by SDCP's energy contract working group.
- SDCP's board of directors approved a PPA for 226 MW PV and 118/472 MWh (4-hour) lithium-ion battery at the January 2024 board meeting.
- Additional volume from the project became available and staff discussed with the energy contract working group. Upon approval to move forward with negotiations, staff reached terms mutually agreeable to both parties.
- This A&R PPA seeks to add 214 MW PV and 120.5/482 MWh (4-hour) lithium-ion battery capacity to the previously approved PPA.



# Pelicans Jaw: Key Terms

- **Product:** RPS, capacity and ancillary services
- **Pricing:** Fixed for a 15-year term
- **Timeline:** Guaranteed Commercial Operation Date is April 1, 2027
- SDCP receives financial compensation for failure to meet certain performance requirements including but not limited to achieving certain development milestones and meeting guaranteed efficiency rates over the delivery term.

# Pelicans Jaw: Staff Analysis

- The Pelicans Jaw project will contribute to SDCP's 100% renewable by 2035 target, providing over 1,200,000 MWh of renewable energy per year, in addition to energy management and capacity benefits from battery energy storage.
- With commercial operations commencing in 2027, Pelicans Jaw would help fulfill SDCP's Mid-Term Reliability requirements under CPUC D.21-06-025.
- Pricing is competitive with comparable product offerings received from SDCP's recent RFPs. The long-term purchase of energy, RPS attributes, and capacity will provide SDCP with significant value and cost certainty over the term of this PPA.
- With the additional volume, staff was able to reduce the Renewable Rate and Storage Rate, to lower costs for SDCP rate payers
- SBE is a California-based solar and storage developer, owning and operating 1.4 GWac of solar projects in US, including 450 MWac of solar projects operating in California with 3 GWac of solar and 4.8 GWac of storage in its California pipeline, including the Pelicans Jaw project.

# Pelicans Jaw: Workforce Development and Community Benefits

- The project will provide **800 construction jobs** and 6-8 permanent jobs.
- The project has a fully executed **Project Labor Agreement** with:
  - Operating Engineers Local 12 – San Diego, CA
  - Southwest Regional Council of Carpenters – Los Angeles, CA
  - Southern California District Council of Laborers and its affiliated Local Union 220 – Bakersfield, CA
  - IBEW Local 428 – Bakersfield, CA
  - IBEW Local Union 47 – Diamond Bar CA
  - Ironworkers Locals 416 and 433 – Norwalk, CA & City of Industry, CA
- The project has committed **\$500,000** to a community benefit fund to benefit SDCP customers.

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# **Public Comment for Item 16**

# Item 16

## Approve Amended and Restated Power Purchase Agreement (PPA) with Pelicans Jaw Solar, LLC

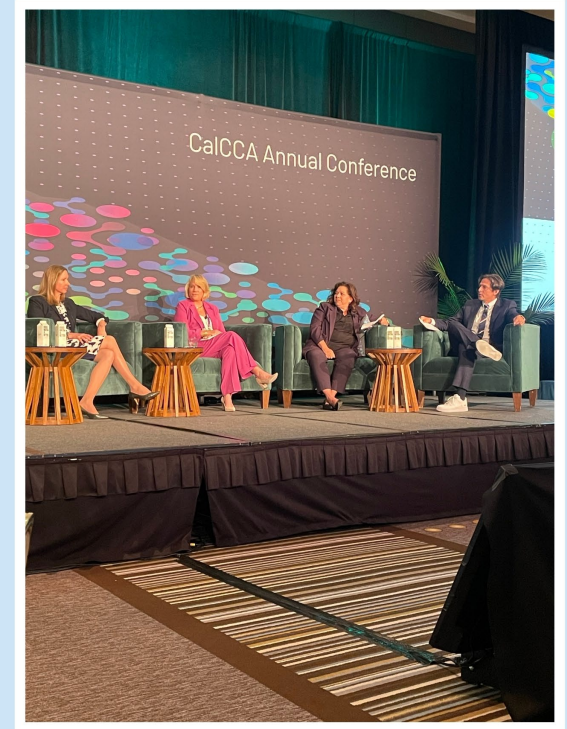
### Recommendation:

Approve a 15-year Amended and Restated Renewable Power Purchase Agreement with Pelicans Jaw Solar, LLC for a 440 MW solar photovoltaic electric (PV) generation facility and 238.5 MW (4-hour) Battery Energy System Storage (BESS) facility.

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# **Report by Chief Executive Officer**

# CalCCA Conference



# Celebrating Earth Day!



San Diego Community Power

3,087 followers

1d • 🌐

Happy Earth Day from your San Diego Community Power team! Today, we celebrate the Earth and learn how we can protect the planet and preserve natural resources. At San Diego Community Power, we're working hard to bring more [#renewableenergy](#) to our local communities – on Earth Day and every day. [#HappyEarthDay](#), San Diego!





## Three simple things you can do to make a difference this Earth Day:

1

### Strike the lights

Flip the switch as you leave the room. It will save energy and money, just like that. It's like turning two...without throwing a baseball in the house.

2

### Pitch it in the bin

Food in landfill is a huge source of methane (which heats the atmosphere ~100x more than CO2.) But there's an easy solve: get the scraps to the green compost bin.

3

### Drive a double

The next time you're stuck on the 5, take a look at how many people are driving by themselves. Carpooling—or biking /walking, as we all could use the steps—reduces emissions and traffic.



# We're Hiring!

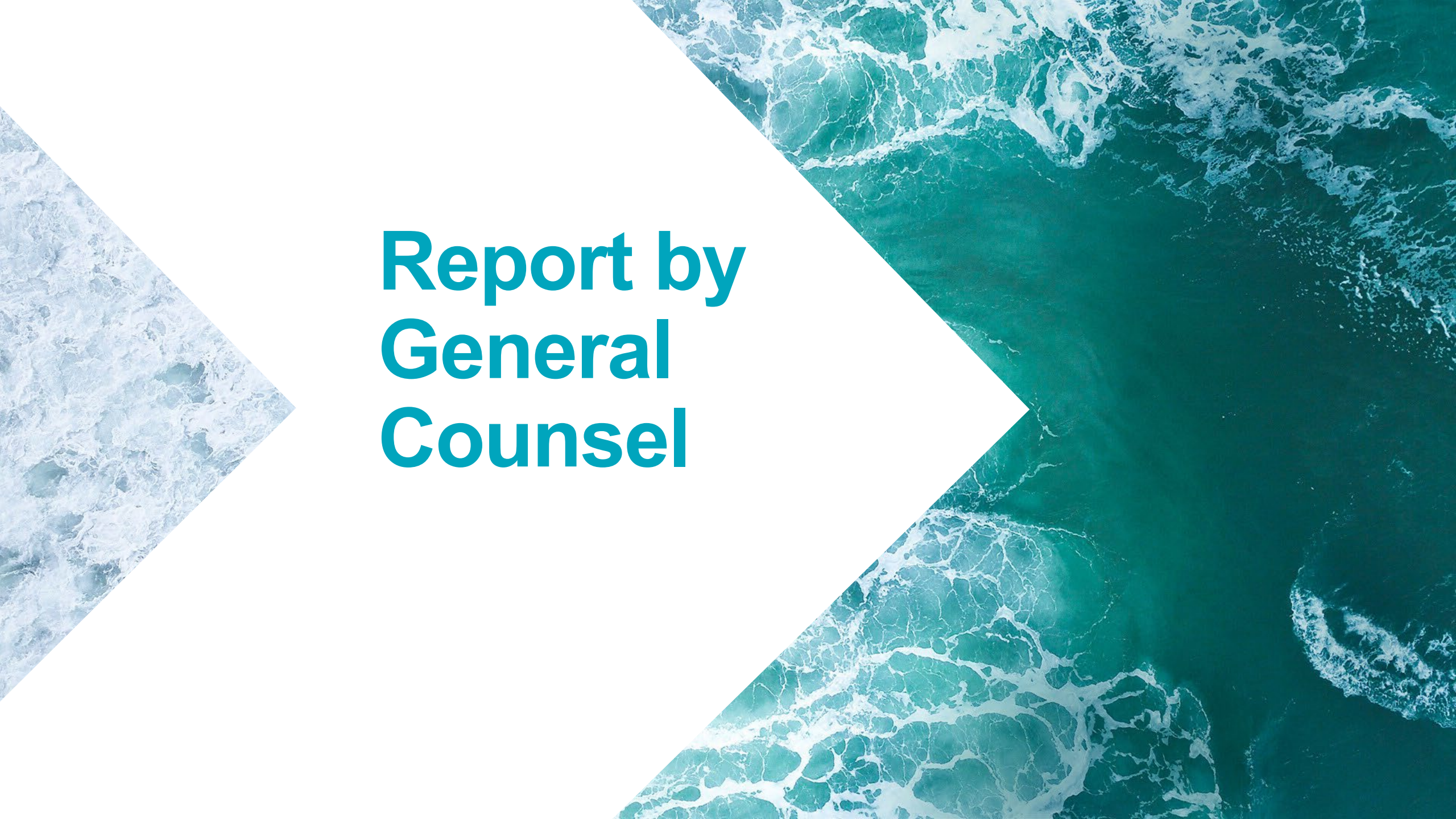
A close-up photograph of two hands shaking in a firm grip. The hand on the left is wearing a light-colored sleeve, and the hand on the right is wearing a white dress shirt sleeve. The background is a soft, out-of-focus light blue.

## **Interview Stage:**

- **Community Engagement Associate**
- **Settlements Analyst**
- **(Senior) Strategic Policy Manager**
- **Project Operations and Proposal Manager**

## **Open:**

- **Marketing Manager**

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# Report by General Counsel

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# Director Comments



**Adjournment**



# Next Regular Board of Directors Meeting

May 24, 2024

