



24/7 Renewable Energy

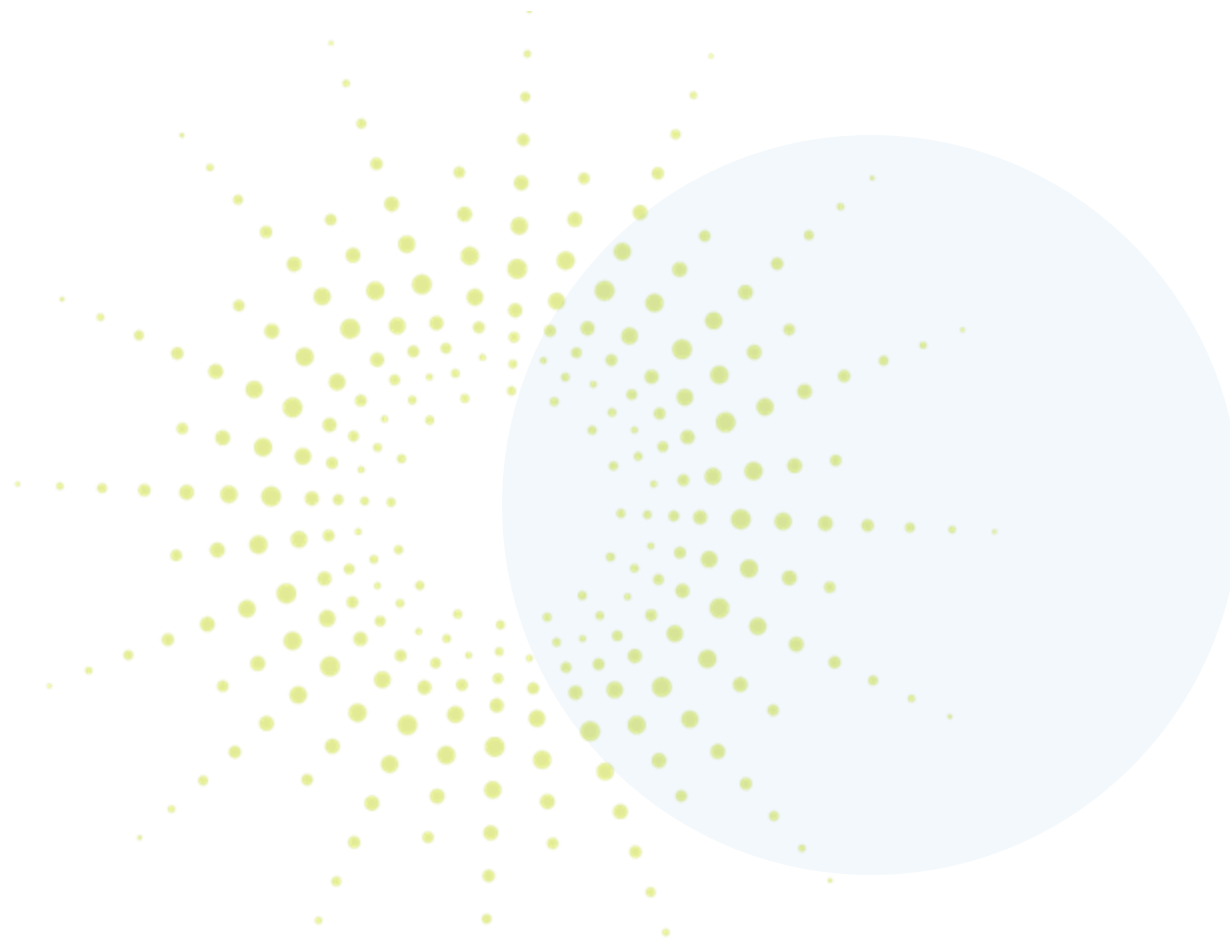
Achieving 99% Time-coincident Renewable Target by 2027

Citizens Advisory Committee Meeting
August 10, 2023

Presentation Outline

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

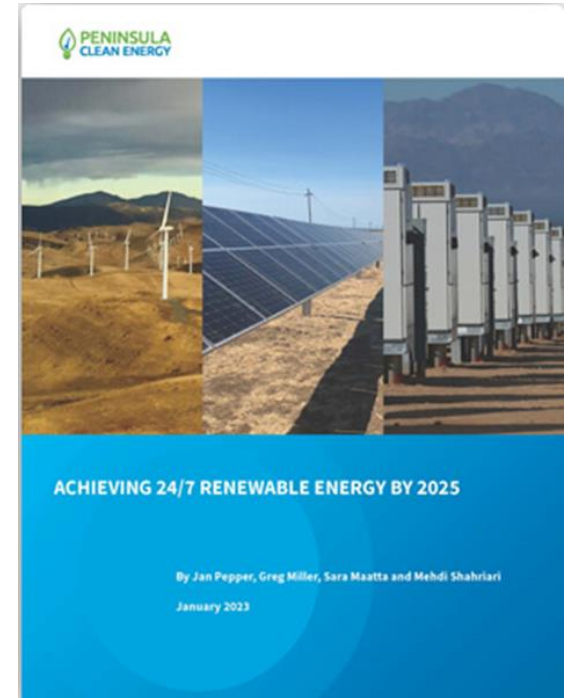
Background



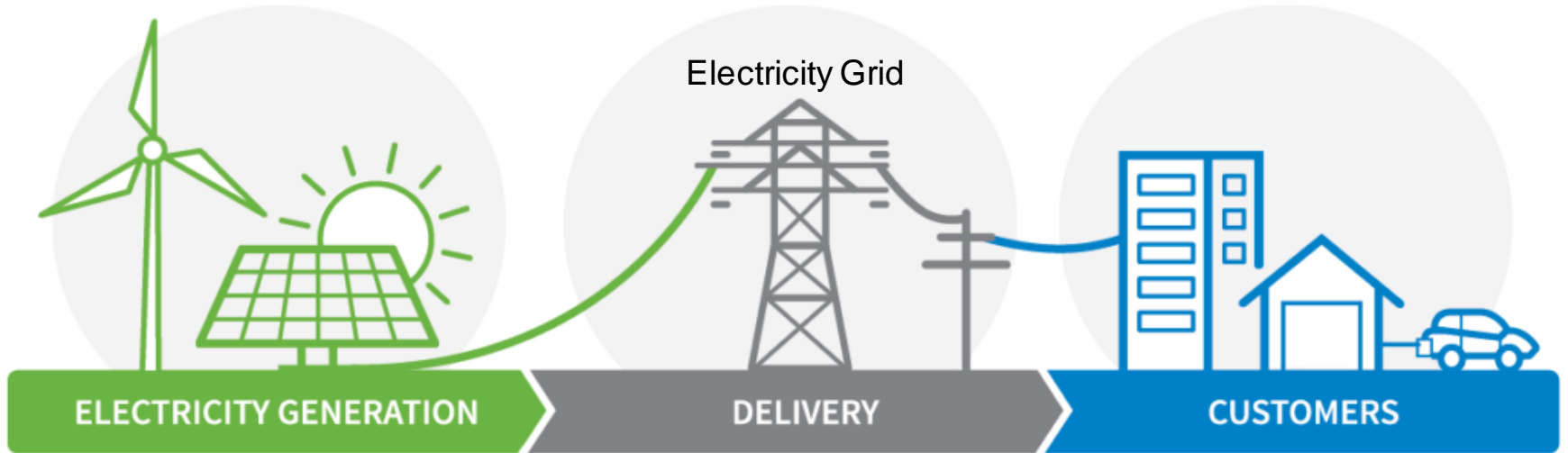
Background: 24/7 Renewable by 2025

- 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.
- Peninsula Clean Energy has been updating its model with the most up-to-date information and has focused on studying the possibility of achieving the 24/7 goal by 2027.

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



How it works: Peninsula Clean Energy and the Electricity Grid



Peninsula Clean Energy
delivers energy supply to
the California electricity grid

The electricity grid
transmits and
distributes electricity
throughout California

Our customers
receive the energy
from the grid

Renewable v. Carbon-Free

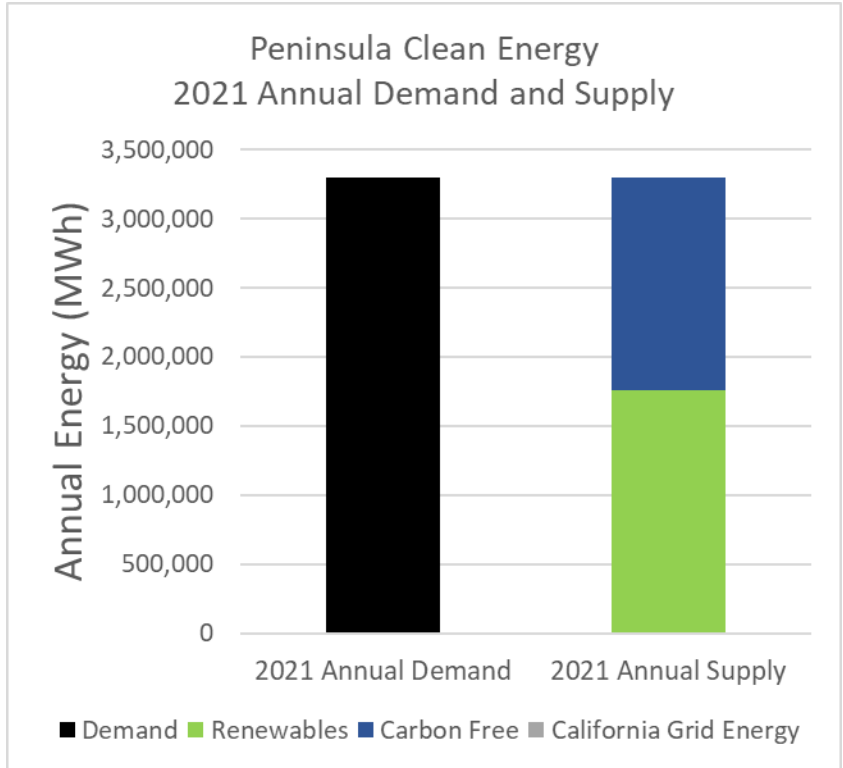
Supply Resource	Renewable*	Carbon-free**
Solar PV	X	X
Wind	X	X
Geothermal	X	Certain types
Small Hydro (<30MW)	X	X
Biomass	X	
Large Hydro		X
Nuclear		X

*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

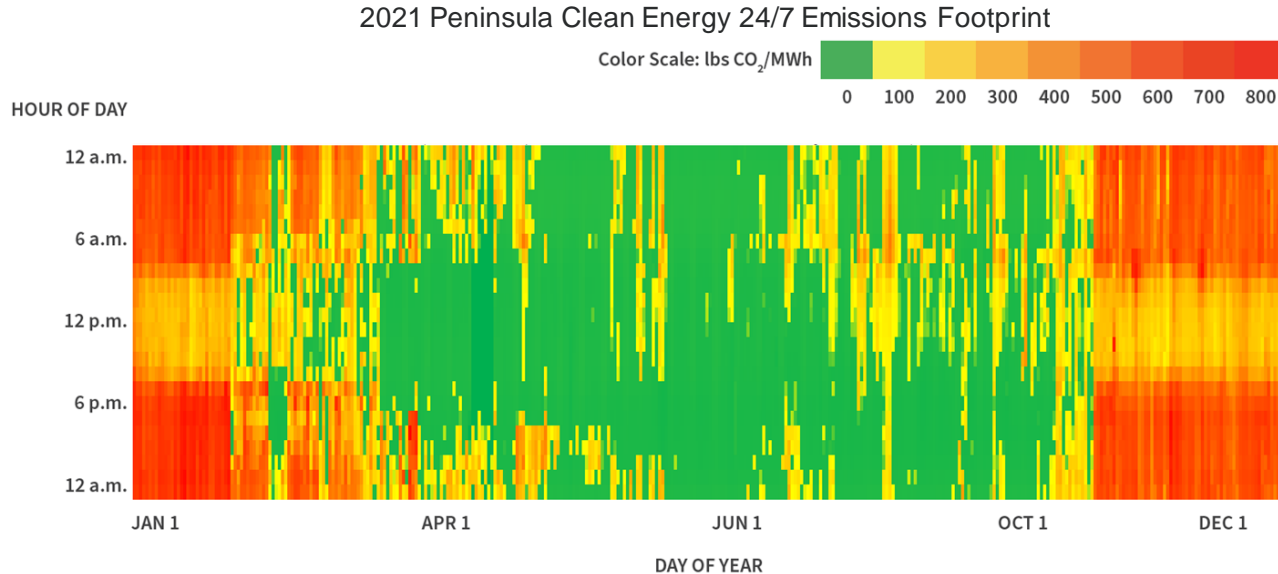
Current Status

- 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

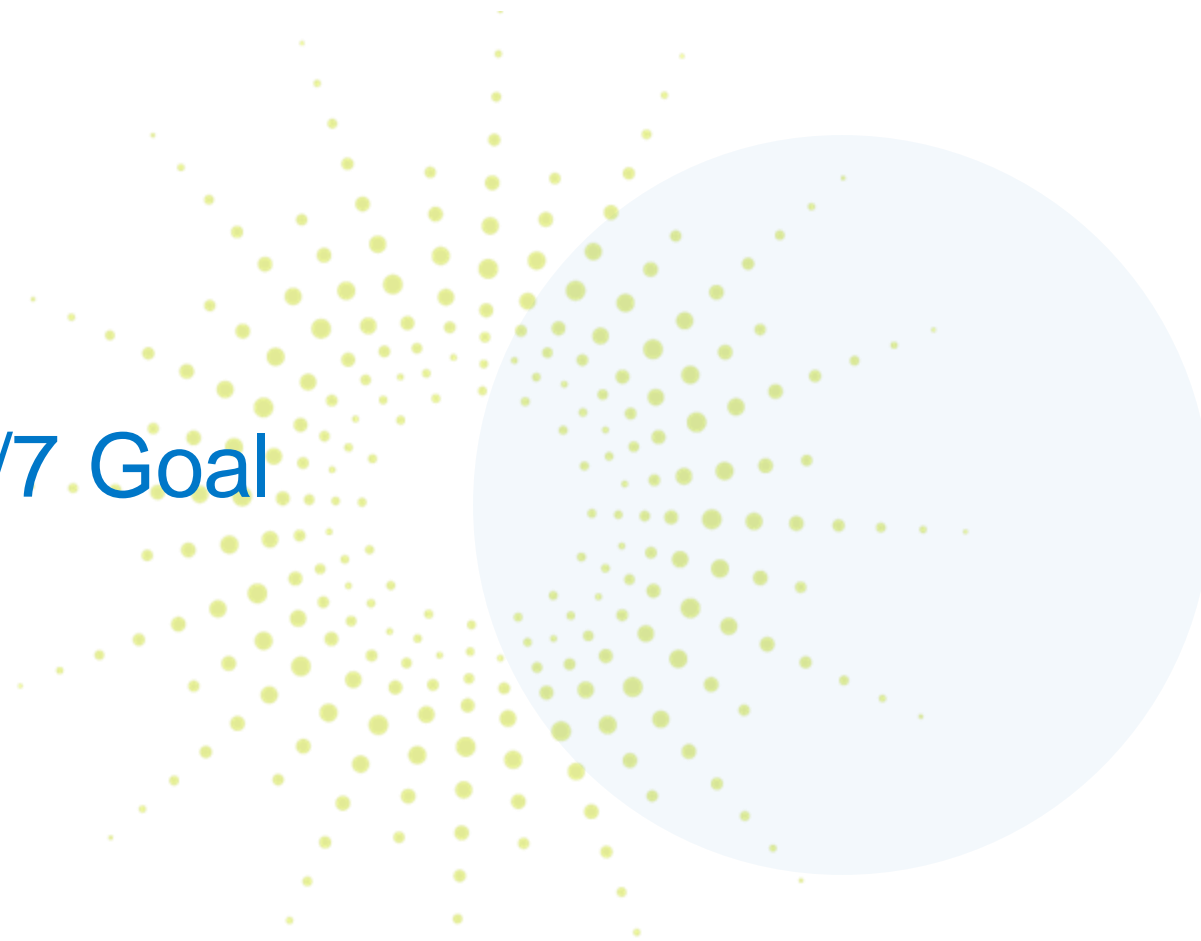
- Our goal is to match our electricity supply to customer load on an hourly basis
 - We will not be relying on system power (gas plants) and can maximally reduce GHG emissions from our electricity supply
 - We will not credit ourselves for oversupply in some hours



Benefits of 24/7

- Time-coincident renewable procurement strategy could reduce the risk exposure to volatile market prices
- Procuring time-coincident renewable energy will reduce PCE's emission footprint

Timing of the 24/7 Goal



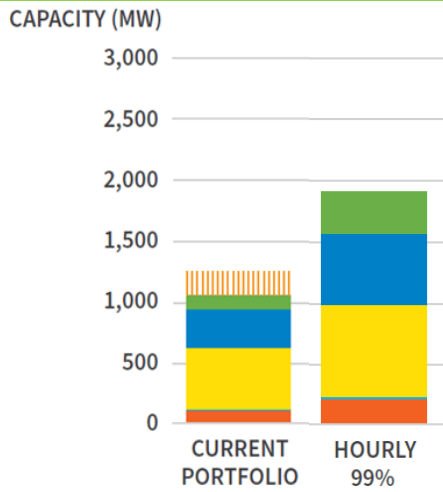
Challenges in Achieving the 2025 Target

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

Contributing Factors:

- 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

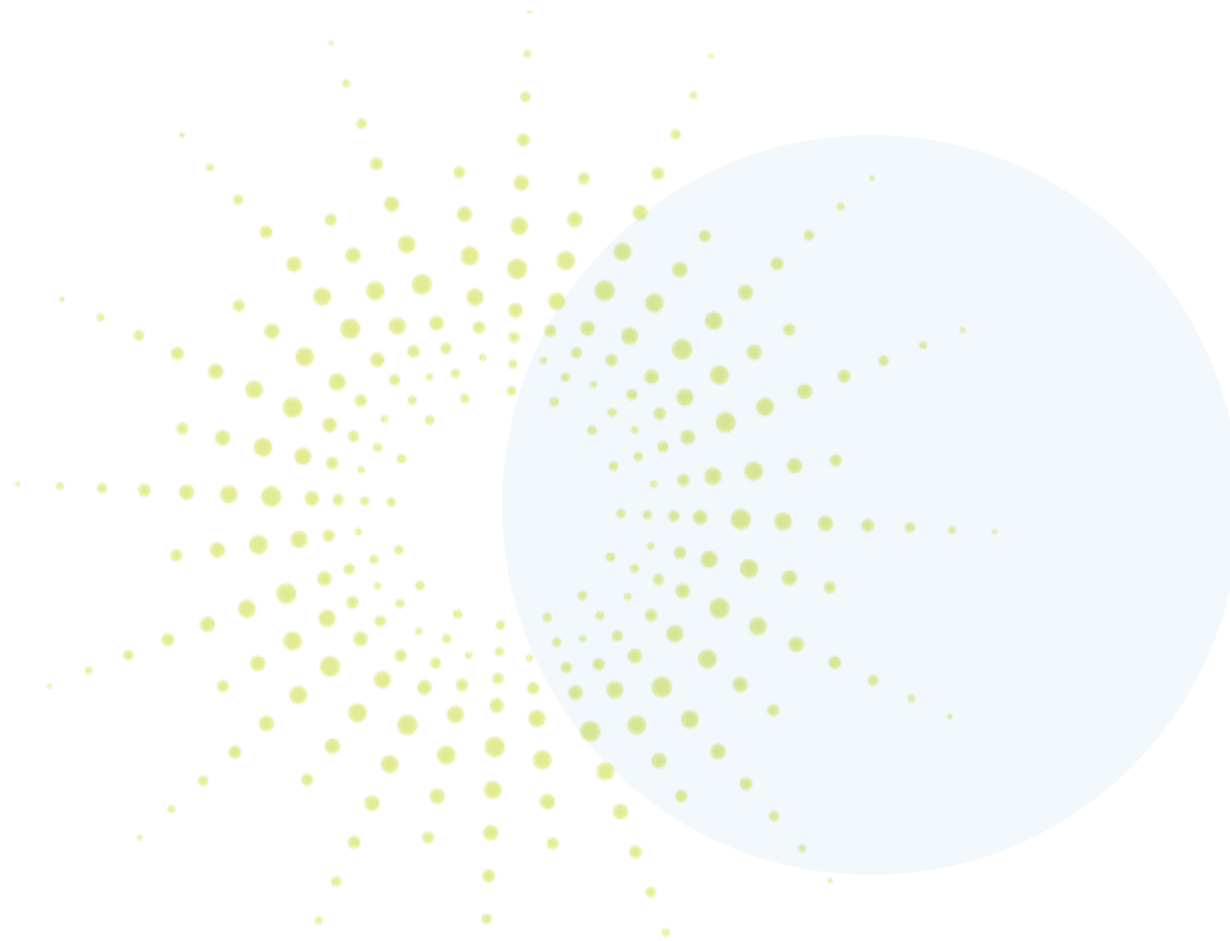
- Staff has been updating the 24/7 modeling with information from the 2023 RFOs and bilateral reach-outs to counterparties and focused on studying the possibility of achieving the 24/7 goal by 2027.



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

Summary



Updated Strategic Priority

In June 2023, Board approved to update the strategic 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.

