

# Preview of 2022-2023 CPUC Integrated Resource Plan Results

Citizens Advisory Committee October 13, 2022

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# (Preview of Board Recommendation)

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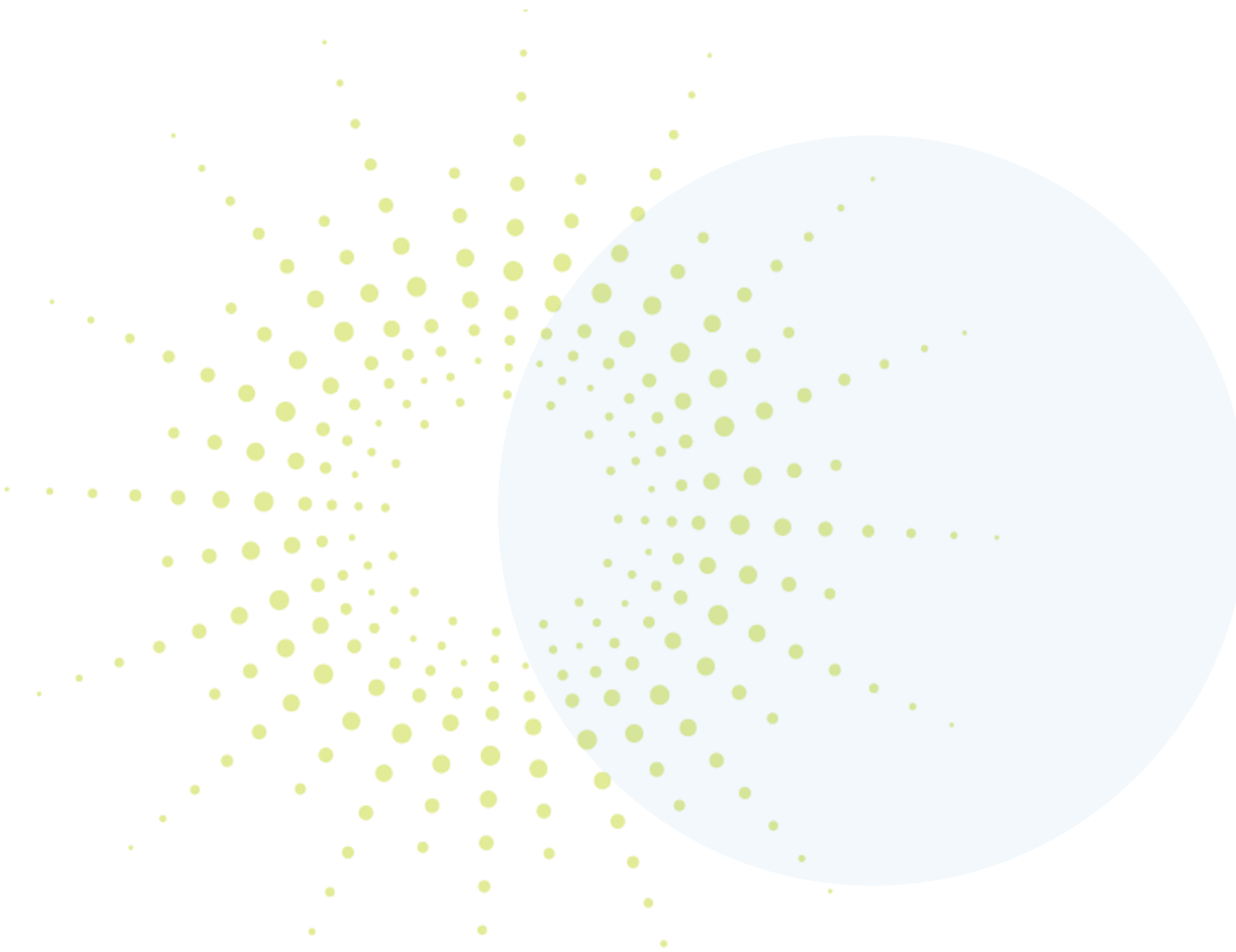
Approve the results of the 2022-2023 Integrated Resource Plan analysis and submission of results as presented by staff, or in a form substantially similar to that presented by staff, and delegate authority the CEO to prepare and submit the final narrative and data templates to the CPUC by November 1, 2022

# Agenda

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1. Background
2. 2022-2023 IRP Filing Requirements
3. How Does the IRP Differ from Our 24x7 Analysis and Planning?
4. Community Outreach
5. Modeling Approach
6. Modeling Results
7. Action Plan
8. Submission Requirements
9. Questions for the Citizen's Advisory Committee

# Background



# Regulatory Background

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- The Integrated Resource Plan is the “umbrella” planning proceeding to consider all of CPUC’s electric procurement policies and programs and ensure California electric supply is:
  - Safe
  - Reliable
  - Affordable

# Regulatory Background: GHG Emissions

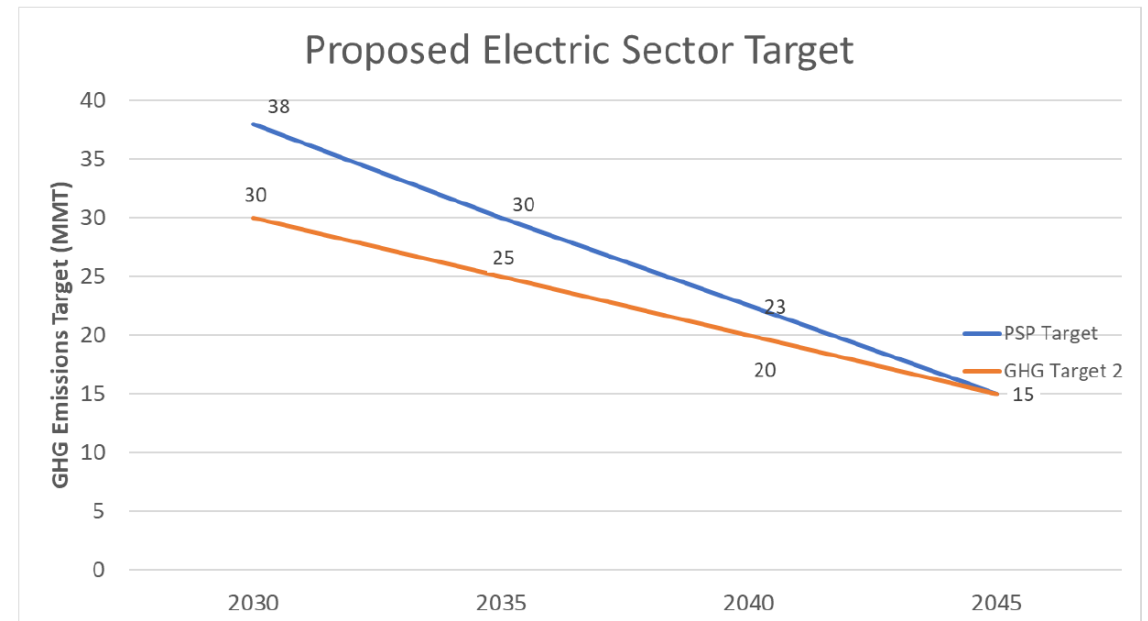
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- The IRP implements SB350 (2015) and SB100 (2018)
- SB 350:
  - Set the Renewable Portfolio Standard (RPS) to 50% by 2030
- SB 100:
  - Accelerated the RPS to 50% by 2025 and 60% by 2030
  - Mandated a zero-carbon goal for all retail electricity by 2045

# Regulatory Background: GHG Emissions

- 2022 IRP is using state-wide planning targets of 30MMT and 25MMT in 2035<sup>1</sup>
  - Joint Agency Report on SB100 (2021)<sup>1</sup> indicates that ~15MMT remain in 2045 due to biofuels and emissions outside the scope of SB100
  - Peninsula Clean Energy has opposed using the 15 MMT target in 2045: we support a 5 MMT target

	2030 State-wide Emissions goal	2035 State-wide Emissions Goal
30 MMT Scenario	38 MMT	30 MMT
25 MMT Scenario	30 MMT	25 MMT



1. <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M451/K412/451412947.PDF>

# Peninsula Clean Energy Assigned GHG Emissions Targets

- Peninsula Clean Energy’s share of GHG Emissions targets

	2030 State-wide Emissions Goal	2035 State-wide Emissions Goal		2030 Peninsula Clean Energy Share of Emissions Goal	2035 Peninsula Clean Energy Share of Emissions Goal
30 MMT Scenario	38 MMT	30 MMT	30 MMT Scenario	0.530 MMT	0.417 MMT
25 MMT Scenario	30 MMT	25 MMT	25 MMT Scenario	0.400 MMT	0.333 MMT
A single portfolio may meet both requirements, if it meets or exceeds the 25 MMT scenario targets			A single portfolio may meet both requirements, if it meets or exceeds the 25 MMT scenario targets		



# Timing of the CPUC IRP Process

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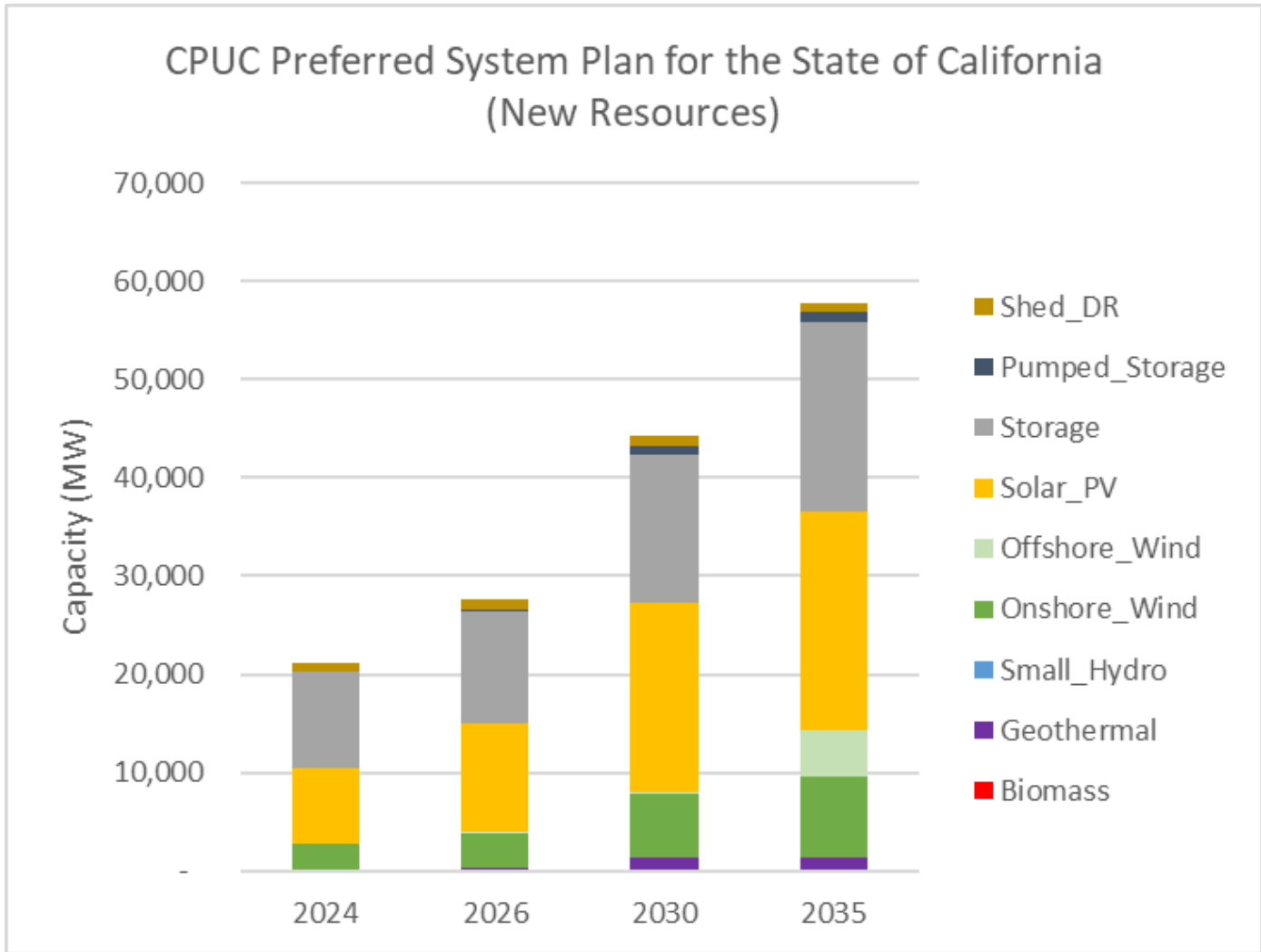
- The CPUC IRP Process is a 2-year process
  - First year: LSEs submit IRPs to CPUC
  - Second year: CPUC aggregates individual IRPs and conducts production cost modeling and a reliability assessment to develop a Preferred System Plan
- Initial reporting year was 2018, the second reporting year was 2020
- Reporting for the current cycle (2022-2023) is due November 1, 2022

# CPUC Preferred System Plan 2021

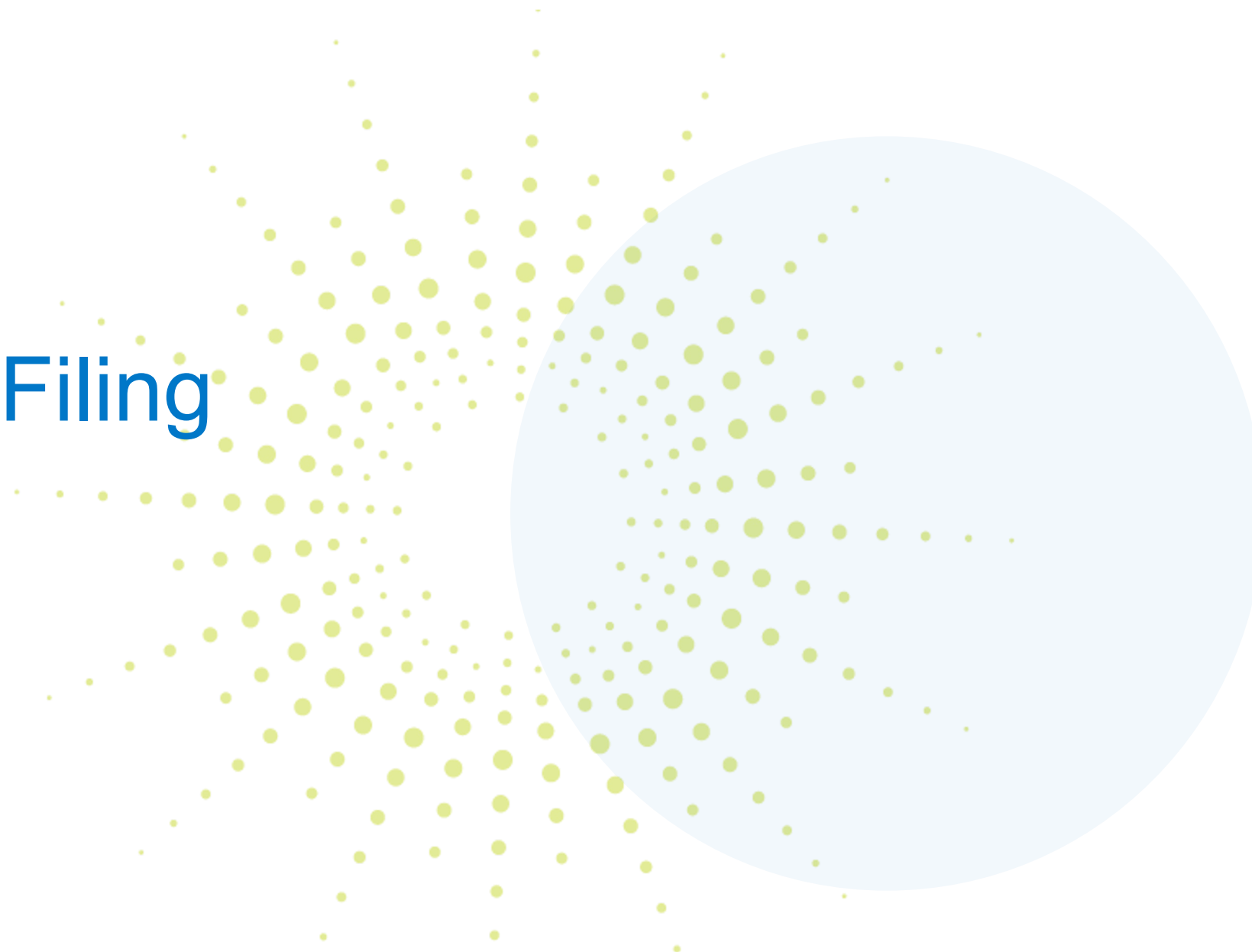
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- Identifies the portfolio of resources required for all CPUC-regulated LSEs across California to
  - Meet GHG reduction goals
  - At least cost
  - While ensuring electric service reliability

# CPUC Preferred System Plan 2021



# 2022-2023 IRP Filing Requirements



# 2022-2023 Filing Requirements, cont.

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- Conforming portfolios:
  - Use the CPUC-assigned load and peak load forecasts
  - Meet or exceed the emissions targets
  - Meet or exceed the LSE's reliability need in all years of the planning horizon
  - Use other assumptions consistent with CPUC's modeling
  - All filing documents must be complete
  - Plans must be consistent with all state goals

How Does the IRP Differ from  
Our 24x7 Analysis and  
Planning?

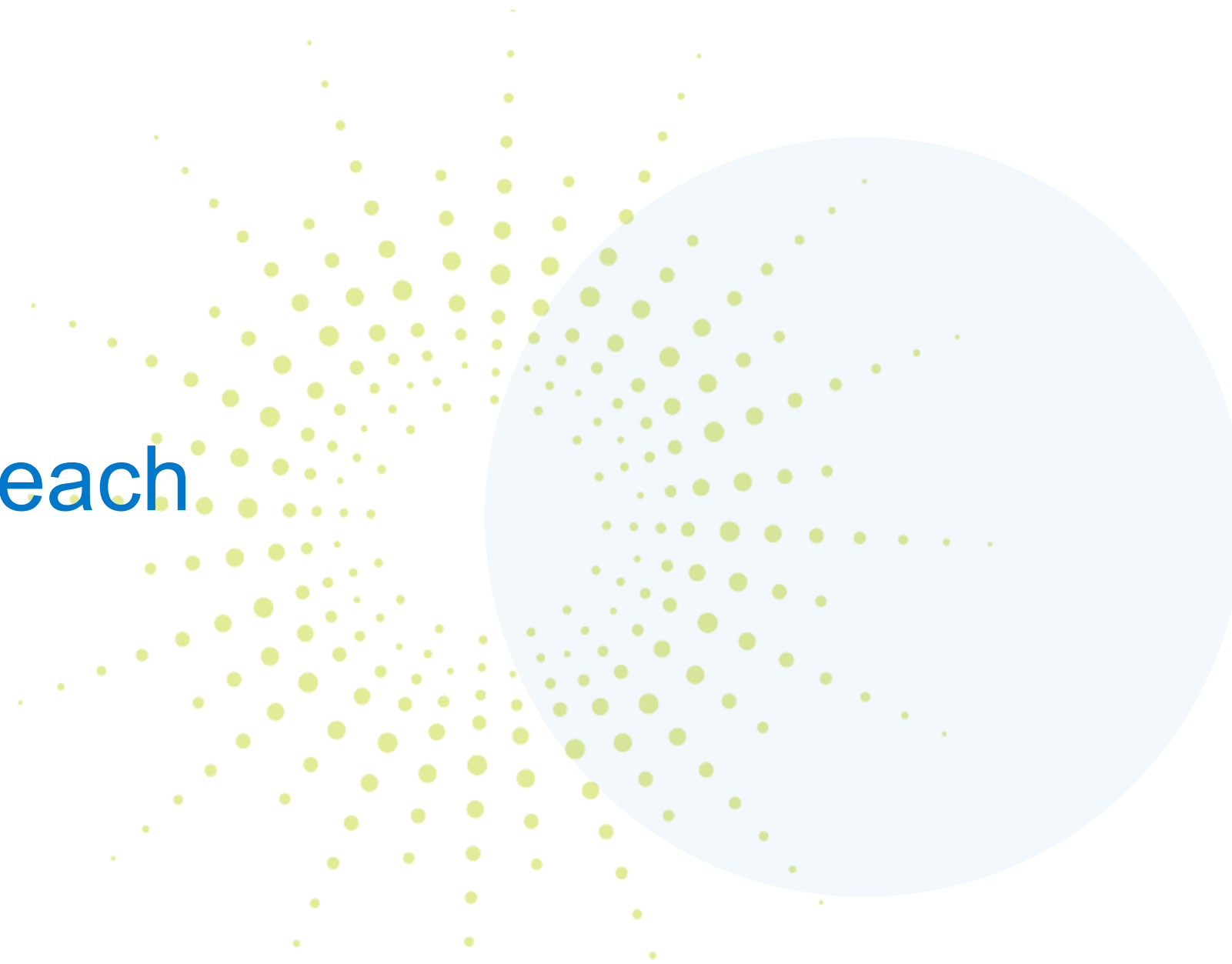


# CPUC IRP vs 24x7 Analysis

- The CPUC IRP process requires us to use specific assumptions that we do not think are realistic for our service territory or our portfolio
- We believe our 24x7 results more accurately reflect our portfolio planning, but the IRP is generally indicative of our planning

Modeling Assumption	2022-2023 CPUC IRP Required Assumption	24x7 Analysis Assumption
Load Forecast	CPUC-assigned volumes	Internally-developed forecast volumes
EV Adoption	Moderate	High
BTM Solar Adoption	High	Low to Moderate
Building Electrification	Low	Not explicitly modeled
Resource Adequacy Rules	Customized rules developed for the IRP process	Current RA market rules, with forecast for future years

# Community Outreach



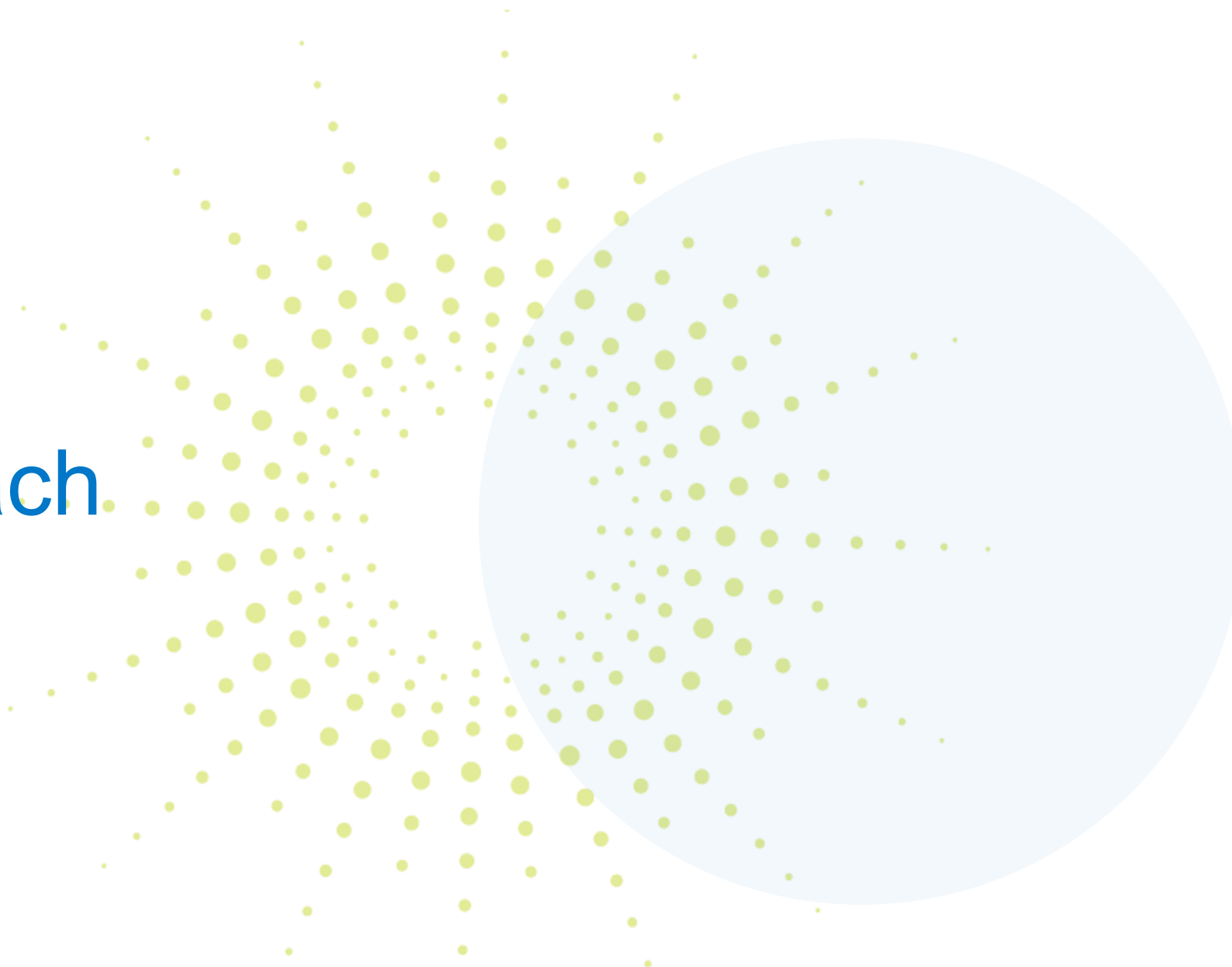


# Community Outreach

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- Citizens Advisory Committee, July 2022
  - Discussed filing requirements and modeling approach
- Executive Committee, October 12, 2022
  - Reviewed final IRP results
- Citizens Advisory Committee, October 13, 2022
  - Reviewed final IRP results and solicited feedback from the community

# Modeling Approach



# Peninsula Clean Energy Modeling Approach

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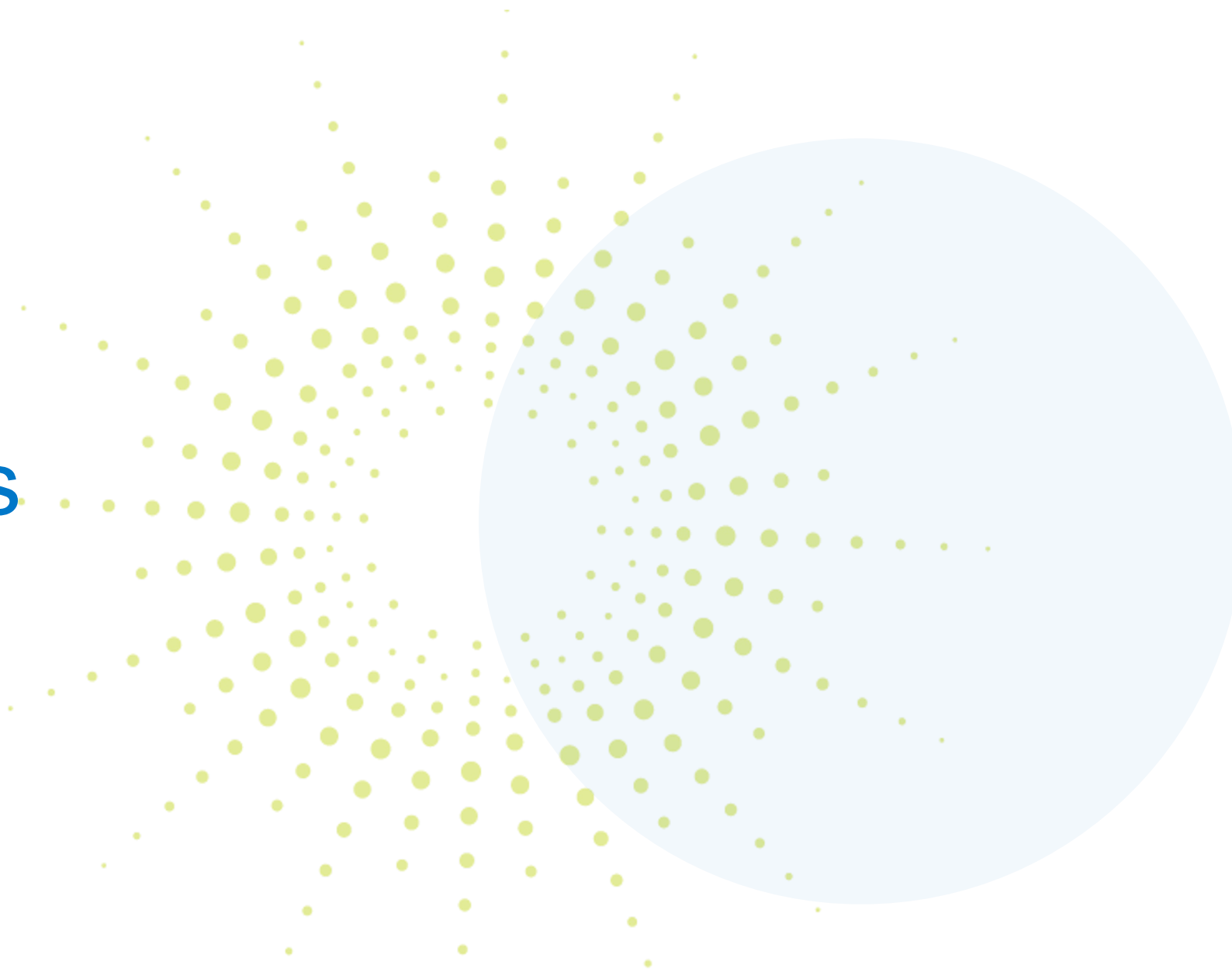
- Develop a single conforming portfolio to meet both 30MMT and 25MMT scenarios
  - Target 100% renewable on an annual basis
  - Target our 24x7 renewable goal at 95% hourly on a planning basis
    - More conservative implementation than the 99% hourly recommendation
    - Assume 75% resale of excess RA and RECs
- Perform all modeling, portfolio selection, and data template preparation internally

# Peninsula Clean Energy Modeling Approach, cont.

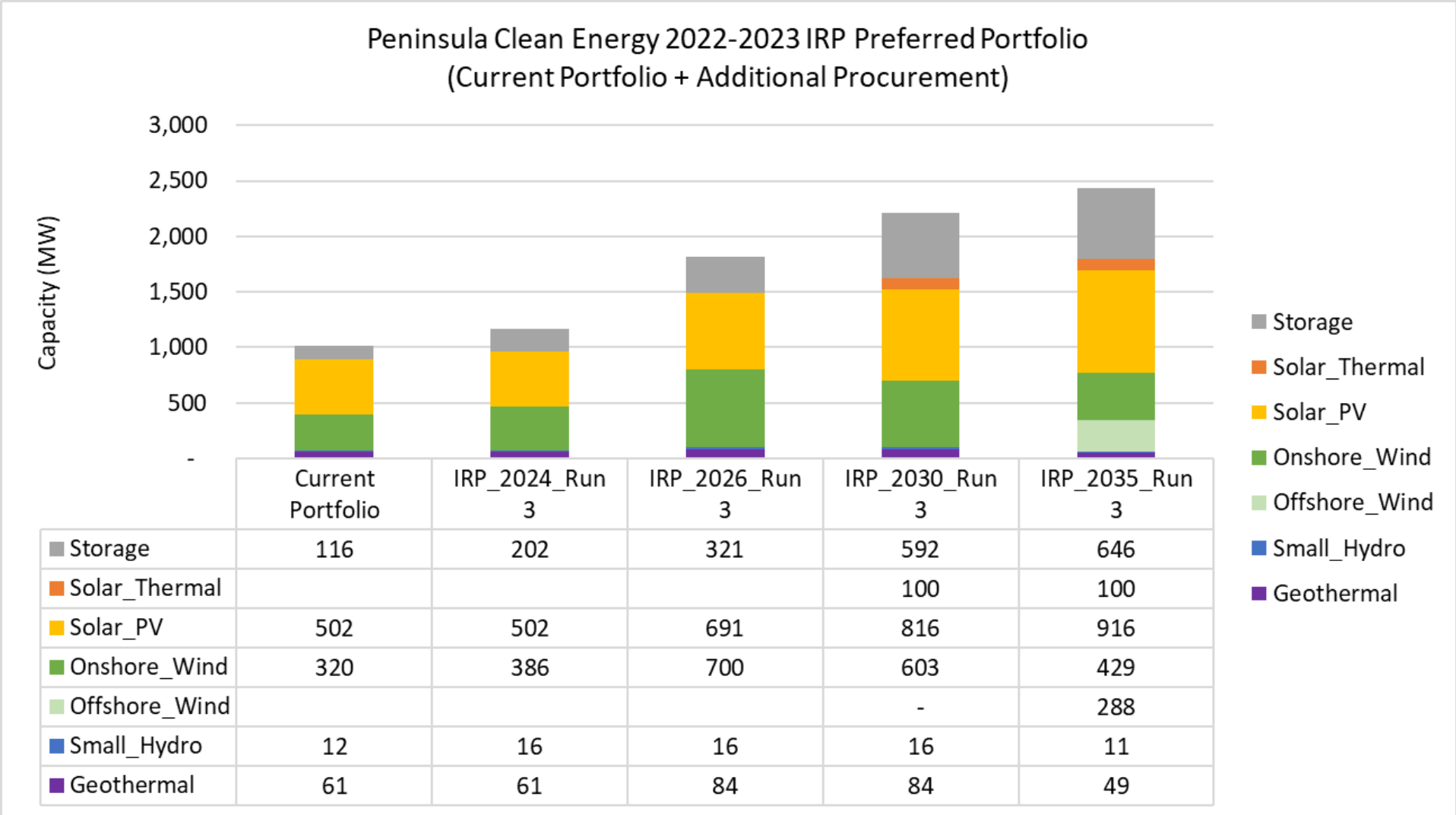
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- Step 1: Deterministic Resource Selection in the MATCH model
  - Select the cost-optimal portfolio that meets our goals for each year
- Step 2: Stochastic Portfolio Analysis in PowerSimm
  - Evaluate the performance of the selected portfolios under a variety of possible weather patterns and market prices
  - Provides estimates on the range of likely outcomes

# Modeling Results



# Peninsula Clean Energy 2022-2023 IRP Preferred Portfolio



# GHG Reduction Metrics

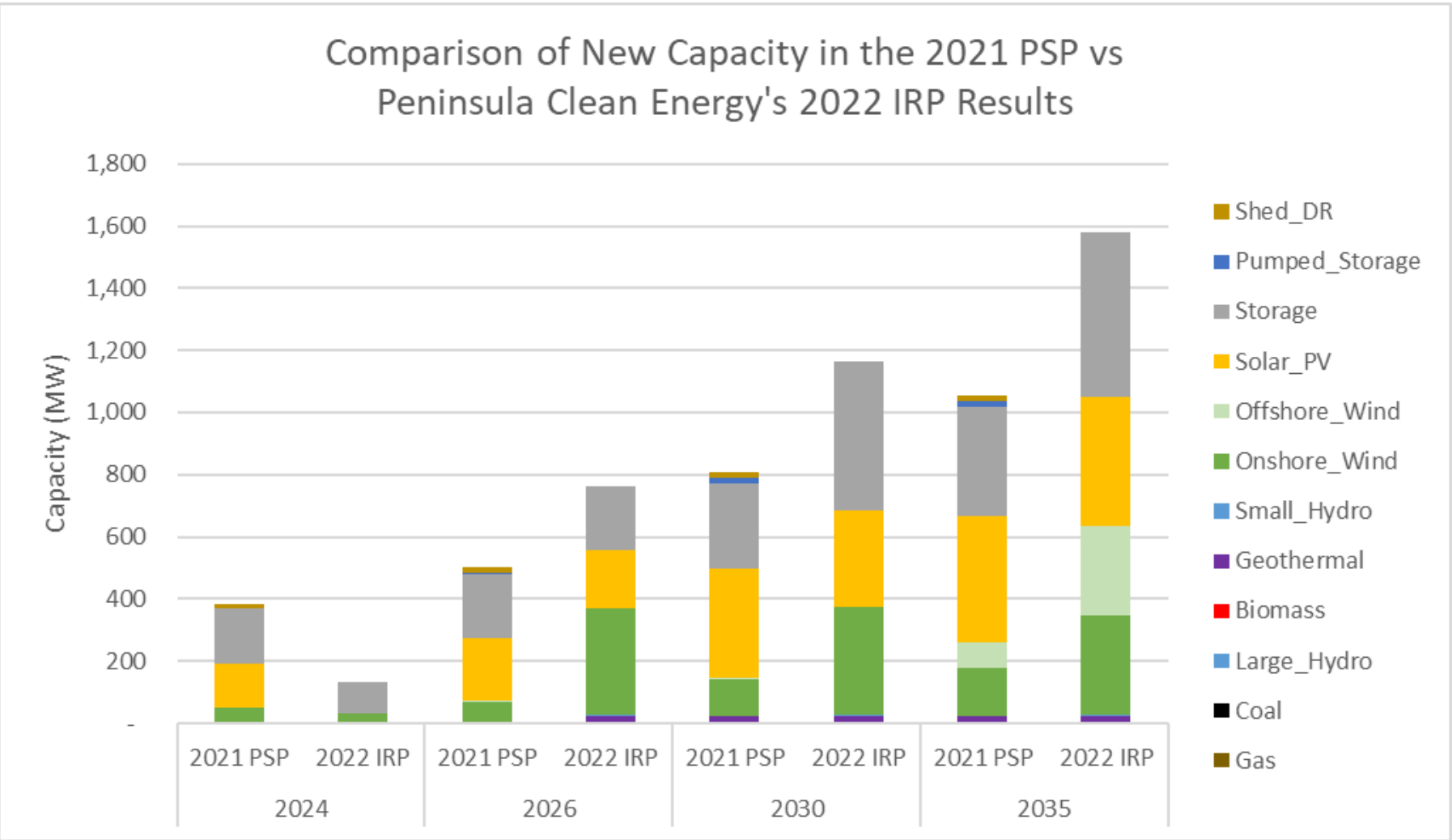
- Peninsula Clean Energy’s Preferred Portfolio for the 2022-2023 IRP performs better than our share of state-wide emissions targets in both the 30 MMT and the 25 MMT Scenarios.

	2030 Peninsula Clean Energy Share of Emissions goal	2035 Peninsula Clean Energy Share of Emissions Goal
30 MMT Scenario Goal	0.530 MMT	0.417 MMT
25 MMT Scenario Goal	0.400 MMT	0.333 MMT
<b>Peninsula Clean Energy Selected Portfolio</b>	<b>0.053 MMT</b>	<b>0.003 MMT</b>

**Preliminary Results**

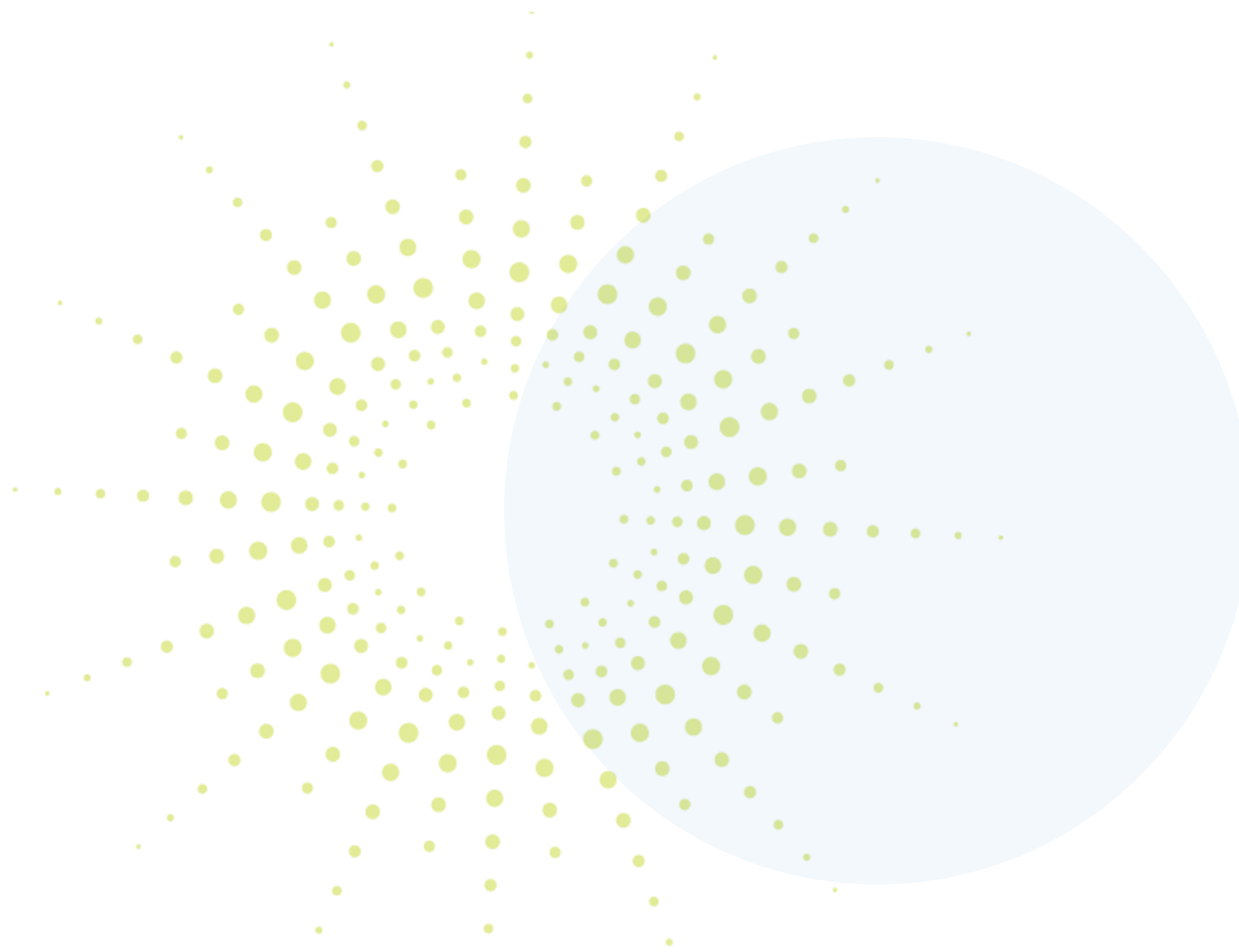
A single portfolio may meet both requirements, if it meets or exceeds the 25 MMT scenario targets

# Comparison to Peninsula Clean Energy's Load Share of 2021 Preferred System Plan





# Action Plan



# Action Plan

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- Procure resources in accordance with the IRP, considering Peninsula Clean Energy's policies:
  - Inclusive and Sustainable Workforce Policy
  - Resource Adequacy Procurement Policy (no RA from coal facilities)
  - Renewable Energy Credits Procurement Policy (no unbundled RECs)
  - Strategic Portfolio Diversity Targets
- Continue to support and implement programs to implement:
  - Load shaping
  - Building electrification
  - Transportation electrification

# Submission Requirements



# Submission Requirements

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- Required submission:
  - Narrative template
  - Resource Data Template (RDT)
  - Clean Power System Calculator (CSP)
- Confidentiality
  - Market sensitive information will remain confidential
  - We will submit confidential and public (redacted) versions of all documents
- Public Access
  - We will post public (redacted) versions of our entire submission on our website

# Community Discussion



# Questions for the Citizen's Advisory Committee on Integrated Resource Plan

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- Feedback on modeling approach
- Feedback on selected resource portfolio
- Feedback on action plan