



Executive Committee Meeting

October 12, 2022



Agenda

- Call to Order / Roll Call
- Public Comment (for items not on the Agenda)
- Action to set the Agenda and Approve Consent Items
 - Public Comment
- Regular Agenda
- Committee Members Reports
- Adjourn

Chair Report

Item 3



CEO Report

Item 4



Staffing Updates

Open Positions:


- Director of Power Resources
- Strategic Accounts Manager
- Marketing Communications Specialist / Senior Specialist

Other Updates

- CalCCA Board Retreat Oct 13-14
- Quarterly All-Staff In-Person Meeting on October 18
- Noted in Friday newsletter - PG&E formation of Pacific Generation – responses due to CPUC on Oct 31

Debrief of the September 22, 2022 Board Retreat (Discussion)

Item 5



Preview of 2022-2023 CPUC Integrated Resource Plan Results

Item 6

Sara Maatta

Senior Analyst, Power Resources

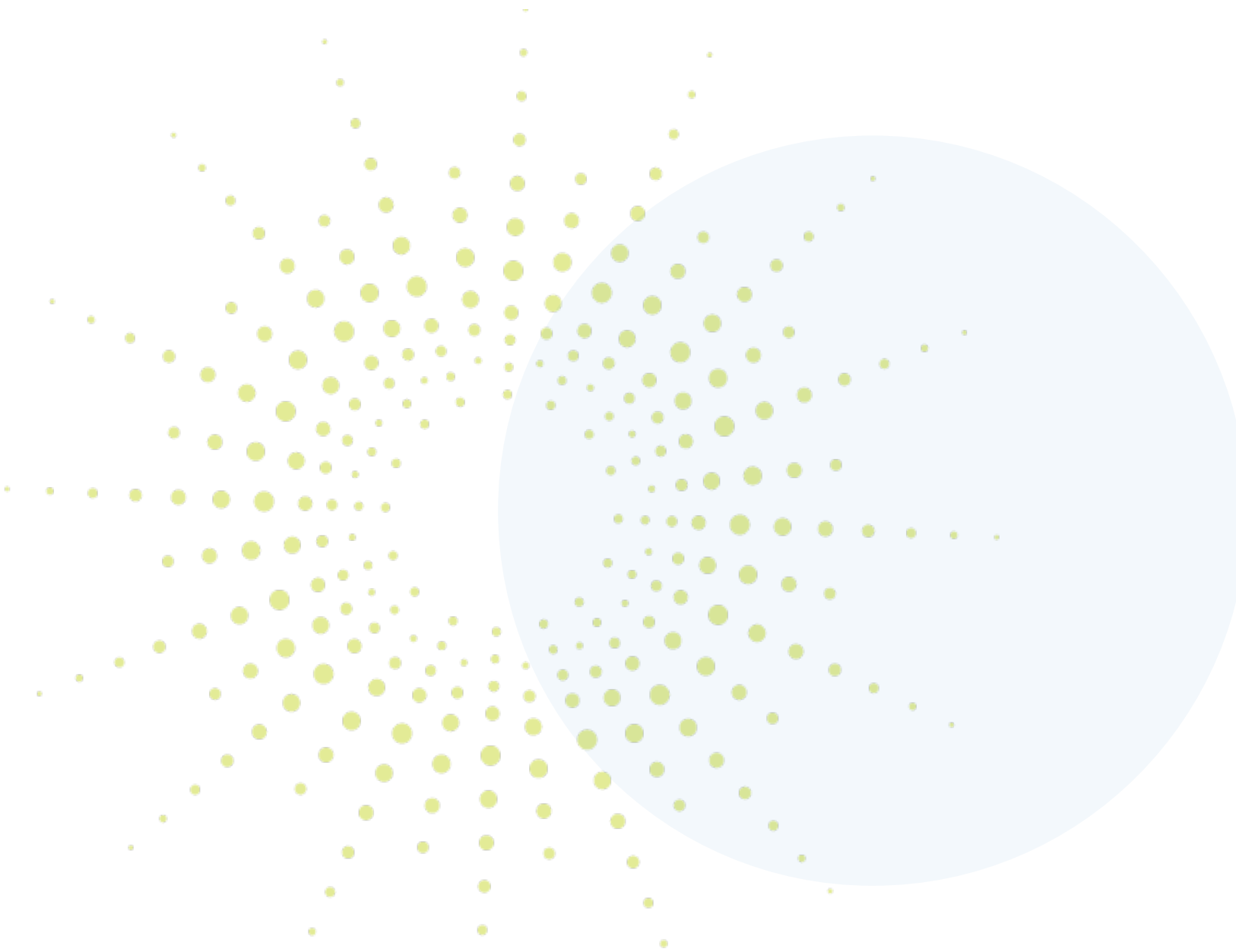
(Preview of Board Recommendation)

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

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. Submission Requirements
8. Recommendation

Background



Regulatory Background

- 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

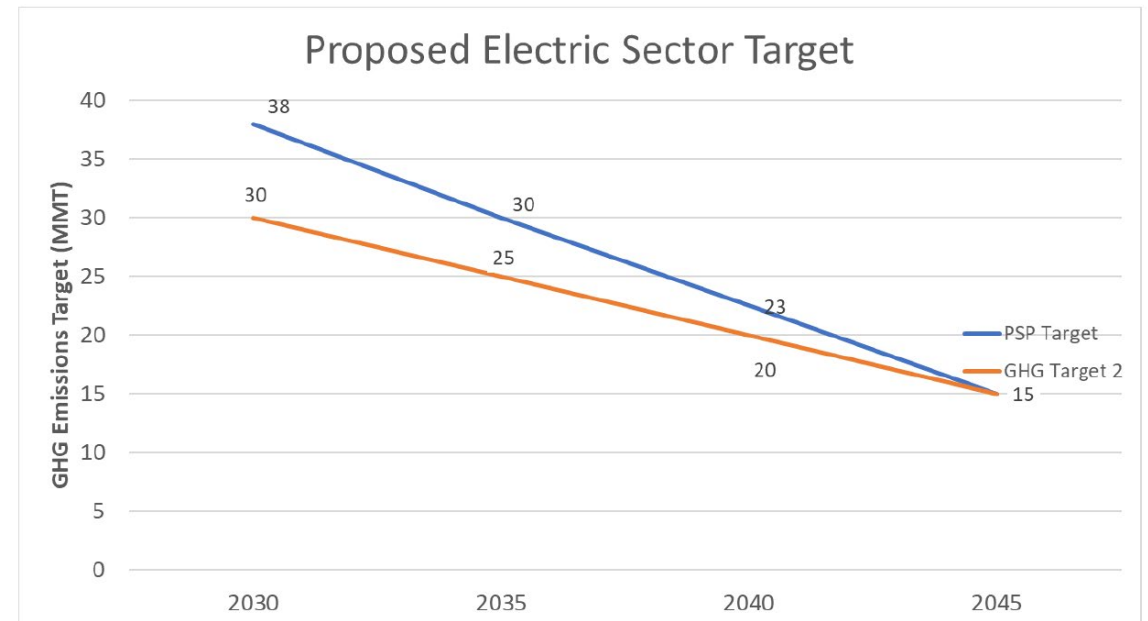
Regulatory Background: GHG Emissions

- The IRP implements SB350 (2015) and SB100 (2018)
- SB 350 increased the Renewable Portfolio Standard (RPS) from 33% by 2020 to 50% by 2030
- SB 100 mandated a zero-carbon goal for all retail electricity by 2045, and accelerated the RPS to 50% by 2025 and 60% by 2030

Regulatory Background: GHG Emissions

- 2022 IRP is using state-wide planning targets of 30MMT and 25MMT in 2035¹
 - Joint Agency Report on SB100 (2021)¹ 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		

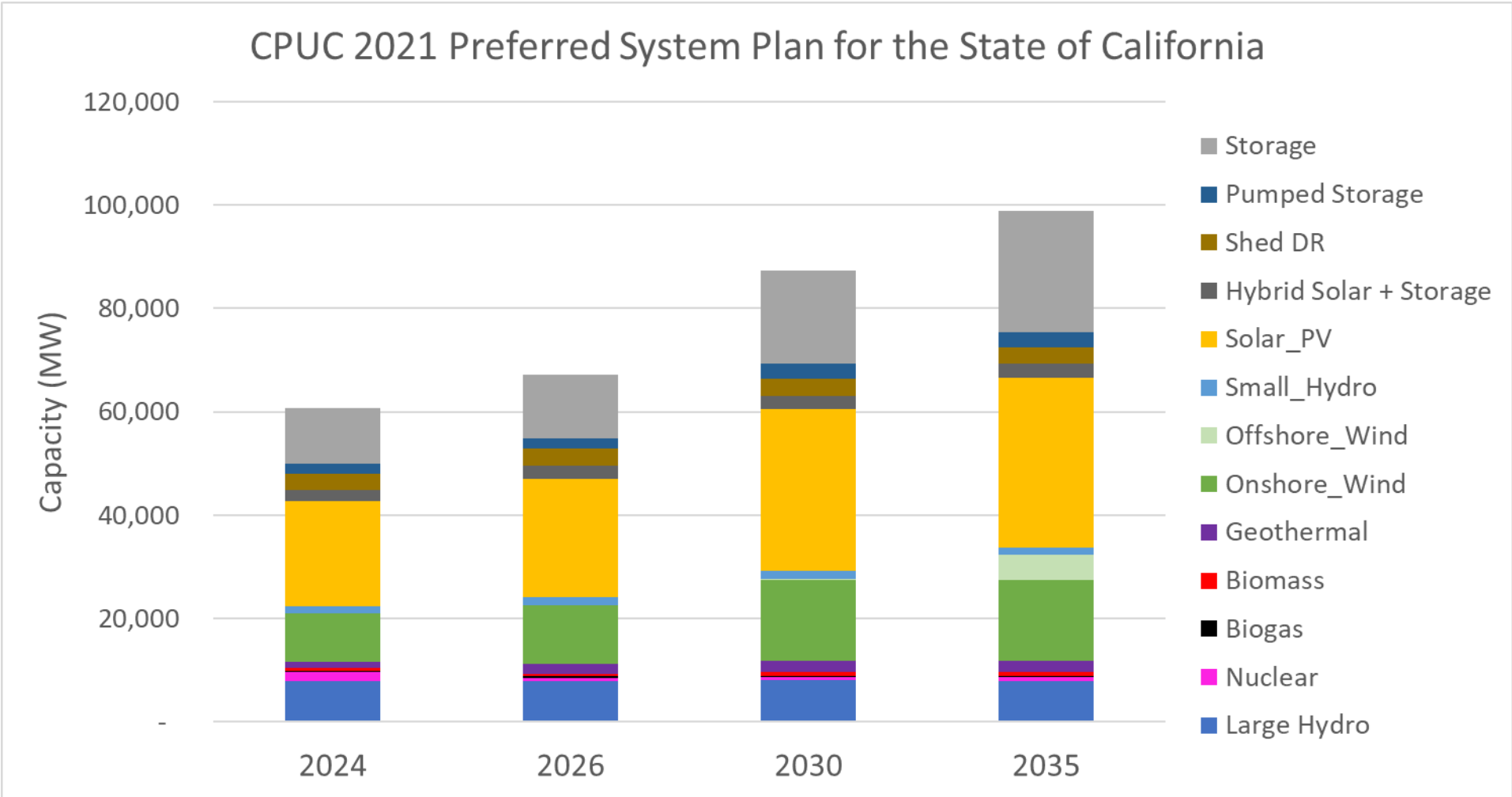
Timing of the CPUC IRP Process

- 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

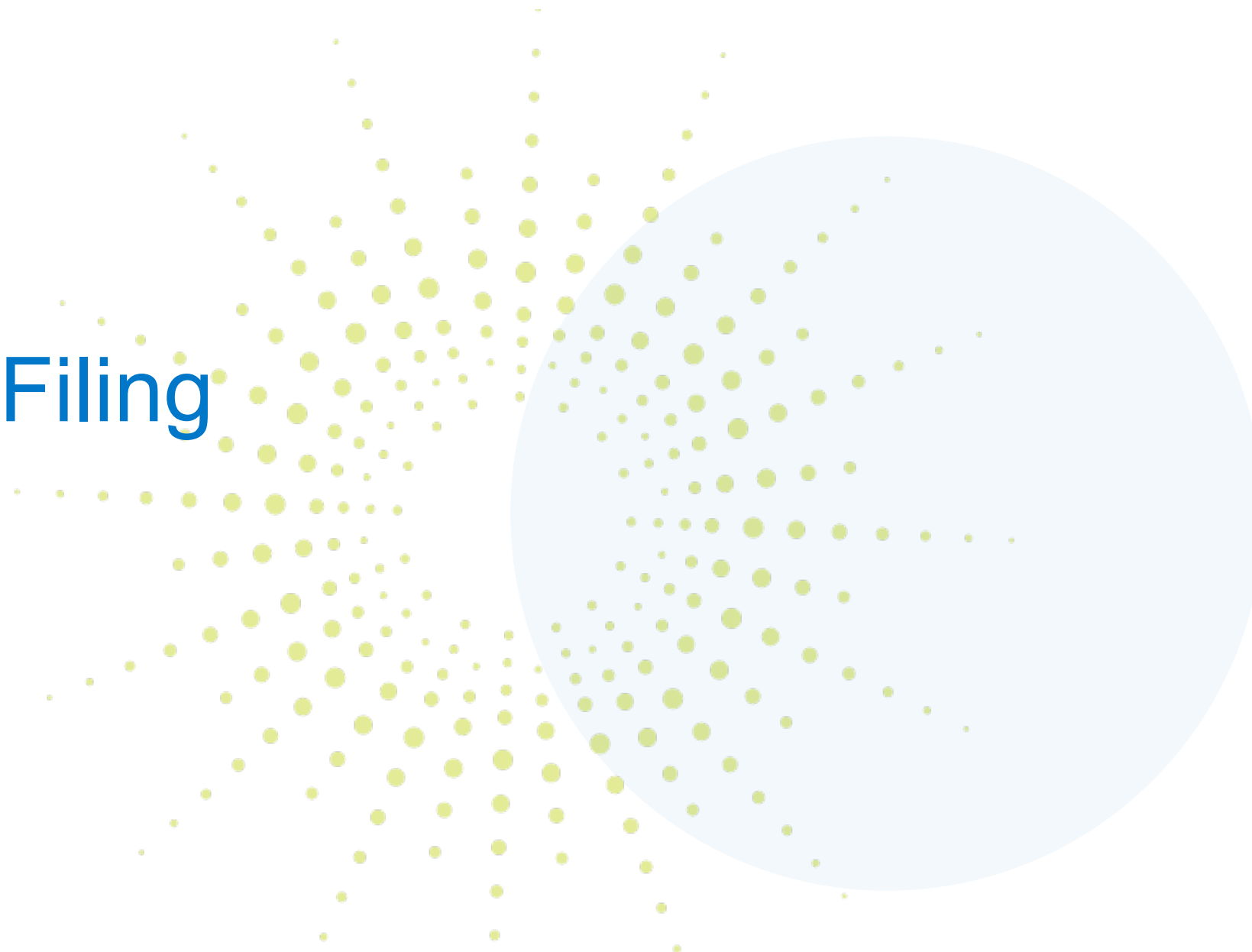
CPUC Preferred System Plan 2021

- 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.

- Conforming portfolios:
 - Use the CPUC-assigned load and peak load forecasts
 - May use custom load shape assumptions as long as the total annual volume equals the assigned volume
 - Meet or exceed the emissions targets
 - Meet or exceed the LSE's reliability need in all years of the planning horizon
 - Use assumptions consistent with CPUC's 2021 Preferred System Plan and RESOLVE modeling
 - May use custom renewable profiles and storage dispatch assumptions
 - May use custom resource cost assumptions
 - 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?

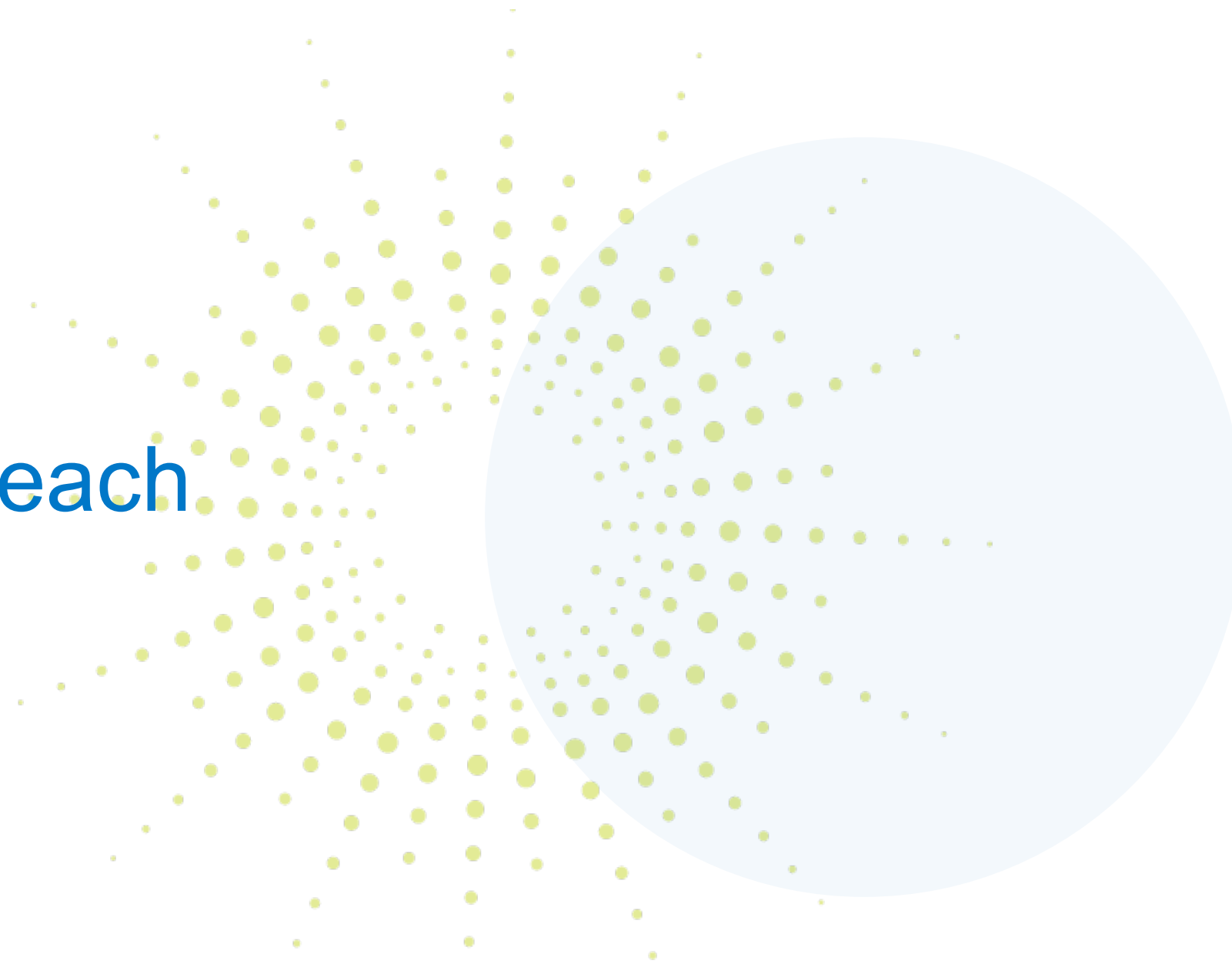


CPUC IRP vs 24x7 Analysis

- The CPUC IRP process requires us to use specific assumptions that we do not think are realistic for our service territory or our portfolio
- The CPUC IRP requires analysis of specific years (2024, 2026, 2030, and 2035)
- 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
Planning Year	2024, 2026, 2030, and 2035	2025 and 2026-2028
Resources Considered	Offers in recent RFOs and generic resources	Offers in recent RFOs

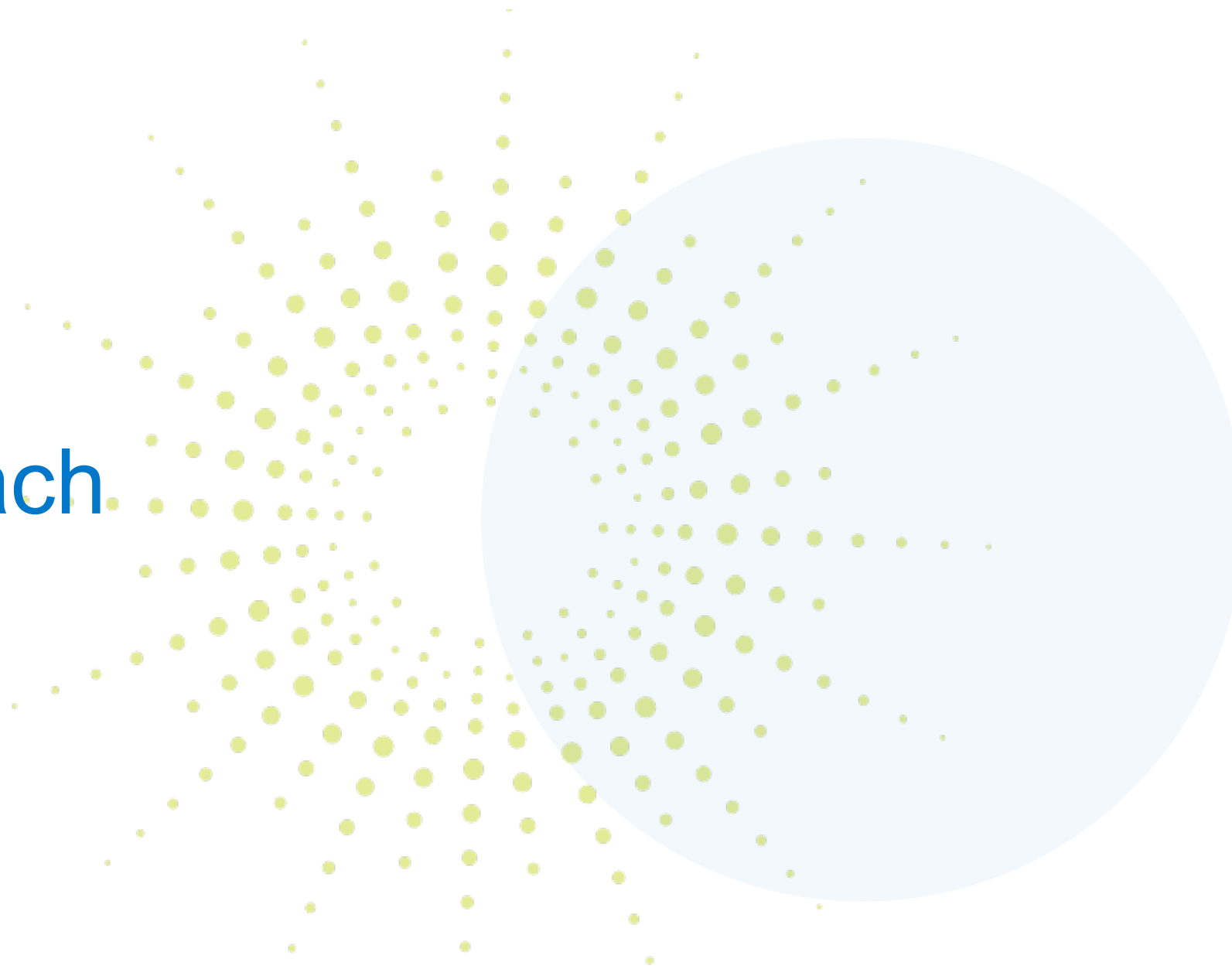
Community Outreach



Community Outreach

- 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



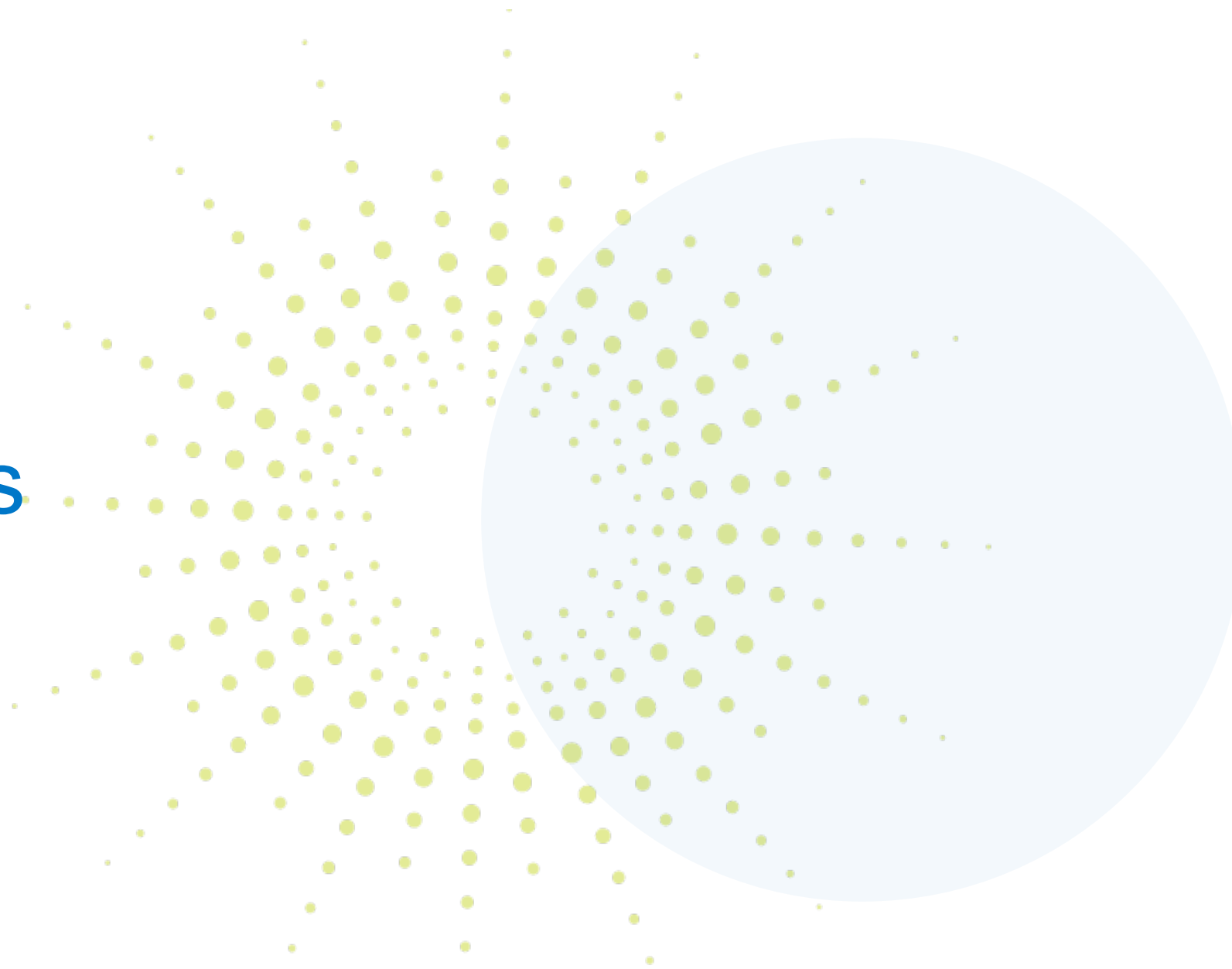
Peninsula Clean Energy Modeling Approach

- 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

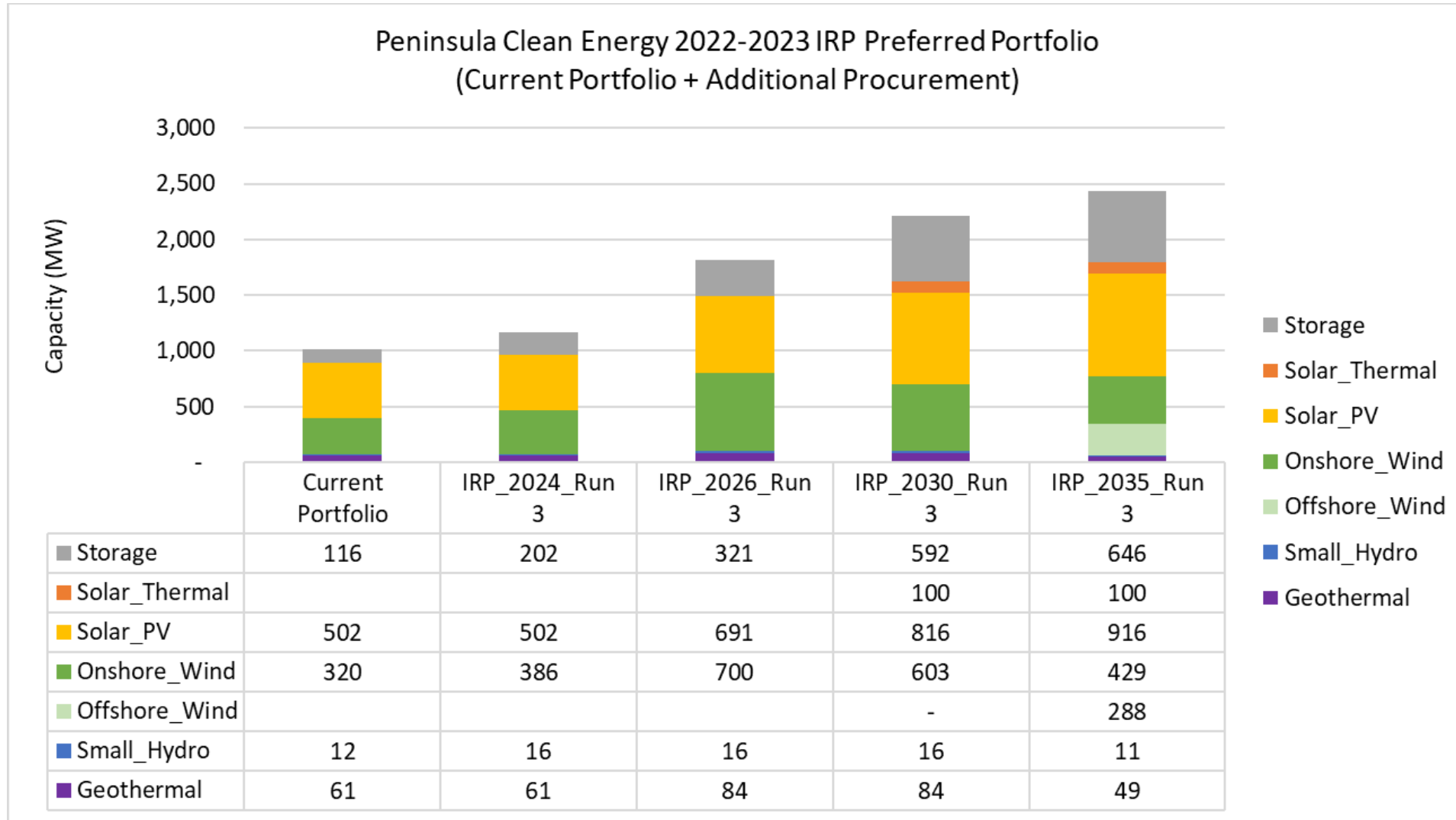
Peninsula Clean Energy Modeling Approach, cont.

- **Step 1: Deterministic Resource Selection in the MATCH model**
 - Select the cost-optimal portfolio that meets our goals for each year
 - Deterministic analysis that assumes a single set of assumptions, and determines a single outcome
- **Step 2: Stochastic Portfolio Analysis in PowerSimm**
 - Evaluate the performance of the selected portfolios under a variety of possible weather patterns and market prices
 - Stochastic analysis runs many simulations with varied inputs and 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
Peninsula Clean Energy Selected Portfolio	0.053 MMT	0.003 MMT

Preliminary Results

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

Reliability Metrics: Peak Load (Confidential)

- Peninsula Clean Energy meets its peak load needs

	2024	2026	2030	2035
Assigned Peak Load				
NQC of Selected Portfolio				
Reliability Evaluation	Meets Peak Load Needs	Meets Peak Load Needs	Meets Peak Load Needs	Meets Peak Load Needs

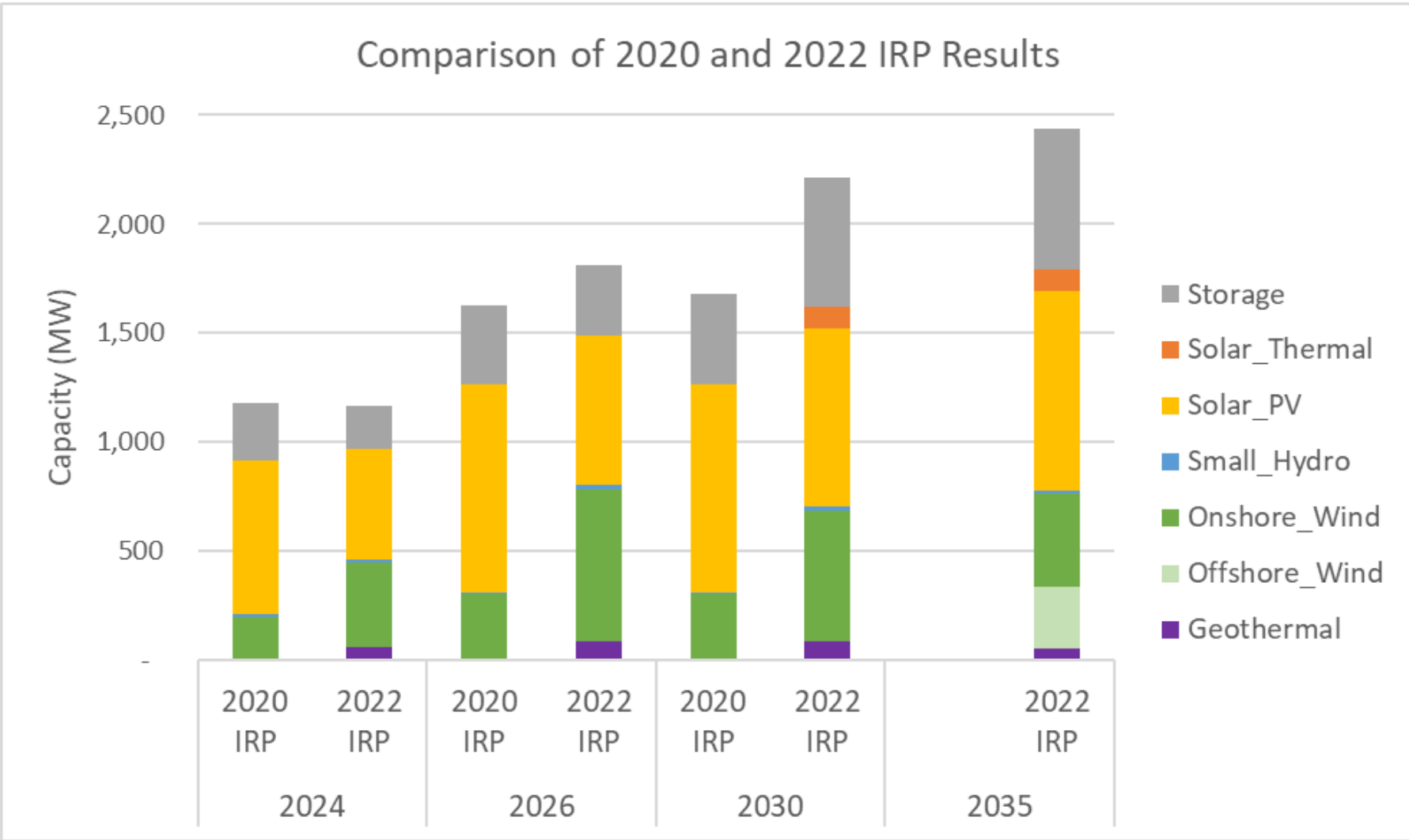
Reliability Metrics: 24-hr load vs supply

- This is a voluntary analysis performed by Peninsula Clean Energy to inform our planning for our 24x7 analysis and the new 24-hr slice of day RA framework

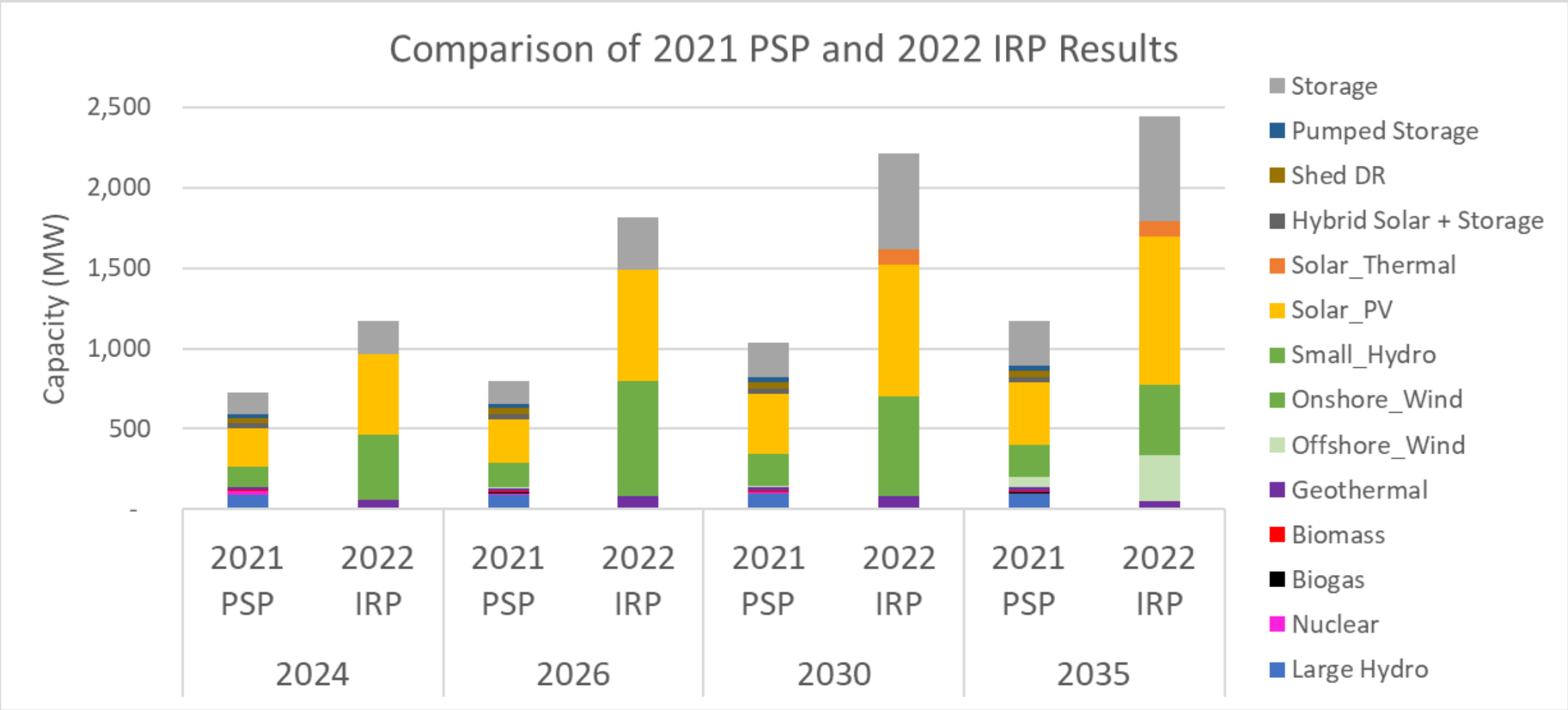
2035 Net System Power (% of load)												
Hour	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	30%	16%	7%	0%	0%	0%	1%	8%	21%	7%	38%	42%
2	28%	20%	11%	0%	0%	1%	6%	15%	31%	17%	37%	33%
3	24%	19%	11%	0%	0%	0%	6%	15%	30%	13%	30%	27%
4	23%	17%	4%	0%	0%	0%	0%	10%	11%	6%	24%	23%
5	18%	7%	0%	-1%	-3%	-3%	0%	2%	1%	0%	22%	22%
6	7%	0%	-2%	-10%	-14%	-13%	-2%	1%	0%	0%	7%	8%
7	2%	0%	-2%	-12%	-24%	-29%	-22%	-13%	-4%	-1%	2%	4%
8	10%	3%	-13%	-28%	-35%	-37%	-13%	-7%	-18%	-11%	-2%	22%
9	-3%	-12%	-28%	-40%	-37%	-21%	-12%	-8%	-5%	-6%	-16%	-1%
10	-7%	-24%	-27%	-34%	-30%	-33%	-24%	-16%	-11%	-7%	-9%	-3%
11	4%	-19%	-30%	-46%	-59%	-58%	-41%	-32%	-21%	-16%	-2%	5%
12	4%	-9%	-34%	-69%	-91%	-86%	-90%	-82%	-33%	-15%	-3%	14%
13	4%	-10%	-32%	-51%	-63%	-84%	-79%	-64%	-47%	-29%	-4%	16%
14	2%	-15%	-53%	-79%	-108%	-102%	-84%	-68%	-57%	-52%	-13%	8%
15	-6%	-17%	-93%	-150%	-142%	-120%	-95%	-75%	-62%	-69%	-26%	-2%
16	-11%	-28%	-86%	-169%	-167%	-146%	-114%	-85%	-63%	-50%	-11%	-1%
17	7%	-8%	-41%	-95%	-89%	-82%	-71%	-54%	-32%	-15%	0%	17%
18	0%	0%	-7%	-26%	-43%	-50%	-45%	-29%	-10%	-8%	0%	0%
19	0%	-2%	-8%	-16%	-18%	-30%	-27%	-12%	0%	-2%	0%	2%
20	0%	0%	-7%	-16%	-17%	-15%	-9%	0%	0%	0%	4%	5%
21	0%	0%	-4%	-13%	-13%	-12%	-2%	0%	0%	0%	1%	2%
22	5%	0%	-1%	0%	-1%	-1%	0%	2%	2%	2%	8%	24%
23	32%	15%	0%	0%	0%	0%	1%	3%	5%	3%	36%	44%
24	25%	8%	1%	0%	0%	0%	1%	5%	6%	3%	35%	36%

Preliminary Results

Comparison to 2020 IRP Preferred Portfolio



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



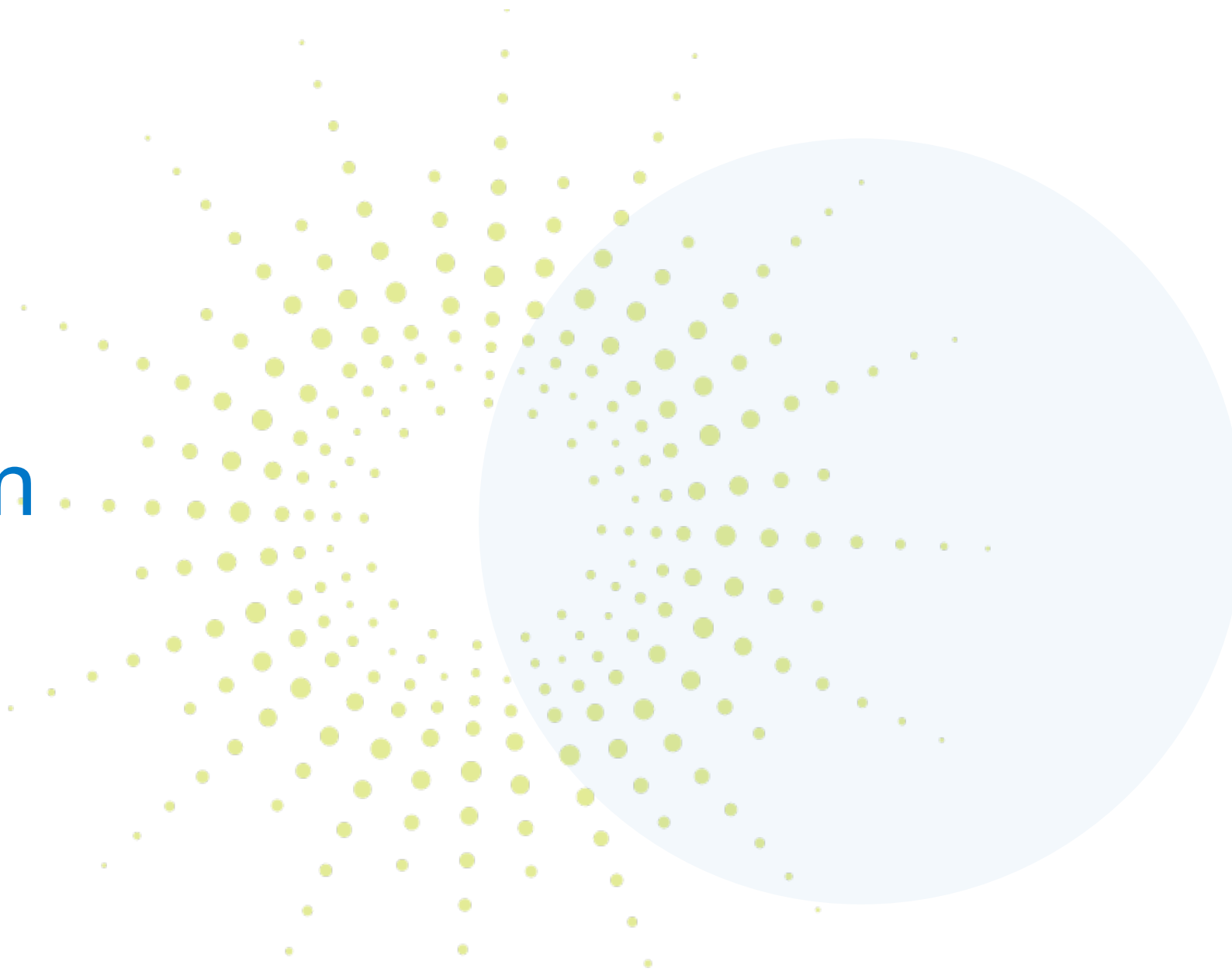
Submission Requirements

The background features a large, light blue circle on the right side. To its left is a cluster of numerous small, yellow-green dots of varying sizes, some overlapping the circle's edge. The overall aesthetic is clean and modern.

Submission Requirements

- 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

Recommendation



(Preview of Board Recommendation)

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

Executive Committee Feedback

- Suggestions for level of detail for board presentation?

Update on GovPV Solar + Storage Program

Item 7

October 12, 2022



Agenda

1. Overall update on pilot progress
2. Inflation Reduction Act (IRA) & “Direct Pay”
3. Engineer, Procure, Construct (EPC) contracting update
4. Overview of EPC agreement and coming Board approval request
5. Overview of Customer Power Purchase Agreement (PPA)
6. Project Timeline

Overall Update

- Completed RFP for equipment procurement, installation, and maintenance
- Continuing PPA negotiations with 13 municipalities with objective of establishing one standard PPA
- Determined preferred contracting approach and developed financial model to determine customer PPA pricing
- Exploring "Direct Pay" approach presented by the Inflation Reduction Act (IRA) to receive tax credits directly

Inflation Reduction Act (IRA) and Direct Pay

- Increases federal Investment Tax Credit (ITC) to 30% (from 26%) and removes stepdown in 2023
- Allows for 'Direct Pay' – qualifying tax-exempt organizations can directly claim the ITC without requiring a tax equity partner
 - Potentially eliminates need for a tax equity partner (and splitting the ITC with that partner)
 - Improves the PPA price that PCE can offer customers if PCE finances systems directly
 - Conducted due diligence with external federal tax counsel to confirm that PCE does qualify
- PCE will proceed with the Direct Pay option

Installation Procurement Update

- Scope of contractor role
 - Procurement of equipment
 - Installation and commissioning
 - Operations and Maintenance (O&M)
 - Equipment warranties and warranty service
- Selected Intermountain Electric Company (IME) in competitive RFP
 - Union labor
 - Local, headquartered in PCE territory (San Carlos)
 - Excellent reputation as confirmed by multiple reference checks
- Currently negotiating EPC contract
 - EPC contract form created by PCE
 - No obstacles of concern identified at this time

EPC Contract – Key Details

- Pricing received for solar systems which we expect to be viable for project
 - Slightly higher pricing for American-made vs foreign-made modules
 - Battery pricing is under review. Requires more iteration with customers
 - Will move forward with solar projects while continuing to explore battery viability
- PCE to own and operate resources
- Milestone based payments through Commercial Operation Date (COD)
- Warranties: 25 years modules, 15 years inverters, 1 year labor
- Operations and Maintenance (O&M) contract
- Equipment performance (solar production) guarantee
- Negotiations underway; plan to present for approval at November Board meeting, expect slight additional budget authorization for contingencies

Customer PPA Update

- One PPA contract for all cities
- Sent PPA draft (Terms and Conditions only) to all 13 jurisdictions in July. Received all comments by end of August.
- Created new unified draft to return – currently under internal review
- When costs are finalized, we will provide PPA pricing for solar systems.
 - At that point, cities make go/no-go decision based on if they determine there are net financial and/or community benefits in moving forward.
- Battery projects (4 sites with batteries) will need some further iteration with customers
 - Will proceed with solar first. Battery systems can follow and would be an addendum to the Customer PPA.

Key Customer PPA Details

- \$/kWh price with 0% escalation
- 20-year initial term with option for up to 2 additional 5-year terms or customer buyout at end of initial term
- Portfolio-based price determination with facility-specific adjustments to account for additional cost of carport solar
- PPA rate will provide immediate savings; benefit increases if utility rates increase (PPA rate will stay flat)
- Performance guarantee (matched to EPC performance guarantee)
- PCE provides O&M

Projected Timeline

Date	Project Status
October 2022	Interconnection applications submitted to PG&E
Nov - Dec 2022	Execution of EPC contract & execution of all PPAs with cities that are moving forward
Dec – May 2023	EPC site walkdowns, design diligence, permit applications
Dec – Apr 2023	Iteration with customers on batteries (4 sites) and, if moving forward, addendum to PPA agreement
May 2023	Completion of EPC walkdowns, final site design packages, and receipt of required permits
September 2023	Equipment procured and construction started
December 2023	Target completion at all sites

- **We are most concerned about PG&E interconnection process and potential for delays**
 - Process is a “black box” and PG&E can easily delay regardless of any published timelines
 - Expect a rush of applications from others also looking to get ahead of NEM3

Discussion on Return to In-Person Meetings (Discussion)

Item 8

Committee Members' Reports

Item 9