



SELF-GENERATION
INCENTIVE PROGRAM

SGIP 2nd Quarterly Workshop of 2023

Date: June 28, 2023



Agenda



Estimated Time	Presenter	Topic
9:00 am - 9:10 am	Jim Stevenson - SCE	Introduction
9:10 am - 9:20 am	Ron Moreno - PG&E	Program Metrics
9:20 am - 9:30 am	Jason Legner - SCG	Regulatory Updates
9:30 am - 9:45 am	Melissa Cintron - CSE	SGIP Handbook Streamline Update
9:45 am - 10:30 am	Brian McAuley - Verdant	M&E Update
10:30 am - 10:45 am	Break	
10:45 am - 11:45 am	Justin Galle - CPUC Energy Division	AB 209 Implementation Discussion
11:45 am - 12:00 am	Q&A	



Introduction



- **Program Administrators**

- **PG&E**

- Brian Bishop, Ron Moreno, Ozzy Guzman, Jacklin Campos-Perez

- **Southern California Edison**

- Jim Stevenson, Vicky Velazquez

- **SoCalGas**

- Jason Legner, Adrian Martinez, Laura Diaz, Sandi Linares-Plimpton, Jan Santos, Ashley Pezikian

- **Center for Sustainable Energy**

- Vanessa Melvin-Gunn, Melissa Cintron, Shalene Watanabe-O'Toole



Introduction



- **Energy Division**
 - Gabriel Petlin, Justin Galle, Fang Yu Hu
- **AESC**
 - Dara Salour, Stephanie Raya
- **Energy Solutions**
 - Kelsey Albers, Alejandro Prieto, Katie Freitag
- **Verdant**
 - William Marin, Brian McAuley



Details & Cadence



- Attendees will be muted
- Questions and comments can be:
 - typed into the chat,
 - asked verbally after raised hand, or
 - emailed to FangYu.Hu@cpuc.ca.gov (to remain anonymous)
- Ideas and notes will be tracked during the meeting
- This is the 2nd Quarterly Workshop of 2023

Program Metrics



Program Metrics

PG&E



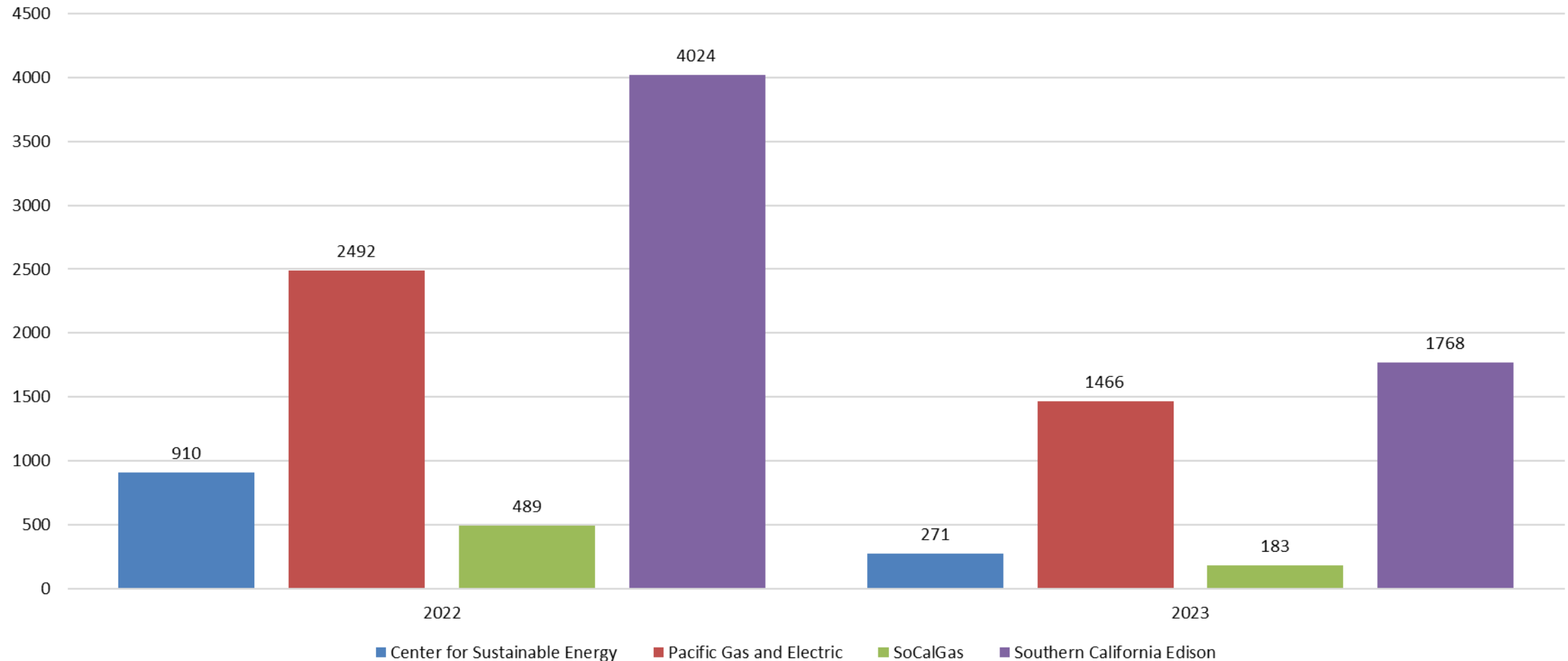
Program Metrics

Data 2022 – June 20, 2023



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Number of Applications Submitted by PA and Year



Does not include cancellations and waitlist projects

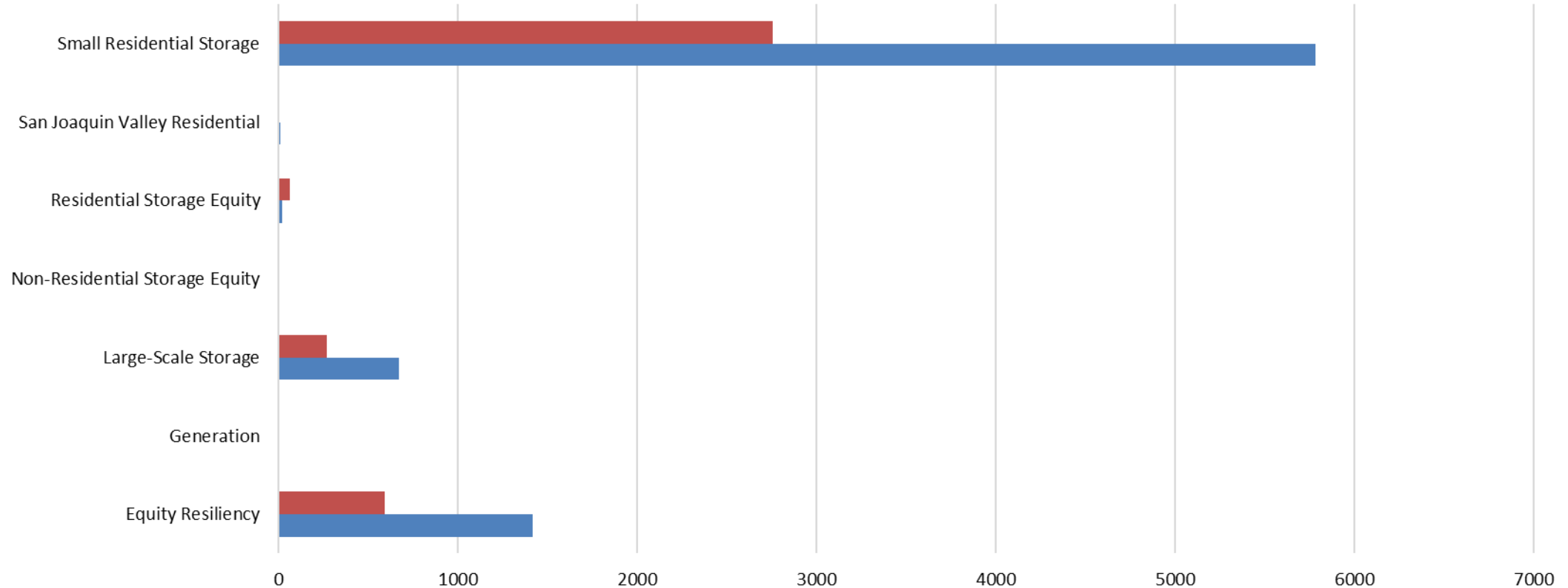
Program Metrics

Data 2022 – June 20, 2023



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Number of Applications by Budget Category and Year



	Equity Resiliency	Generation	Large-Scale Storage	Non-Residential Storage Equity	Residential Storage Equity	San Joaquin Valley Residential	Small Residential Storage
■ 2023	592	3	269	4	61	1	2758
■ 2022	1417	3	673	7	21	10	5784

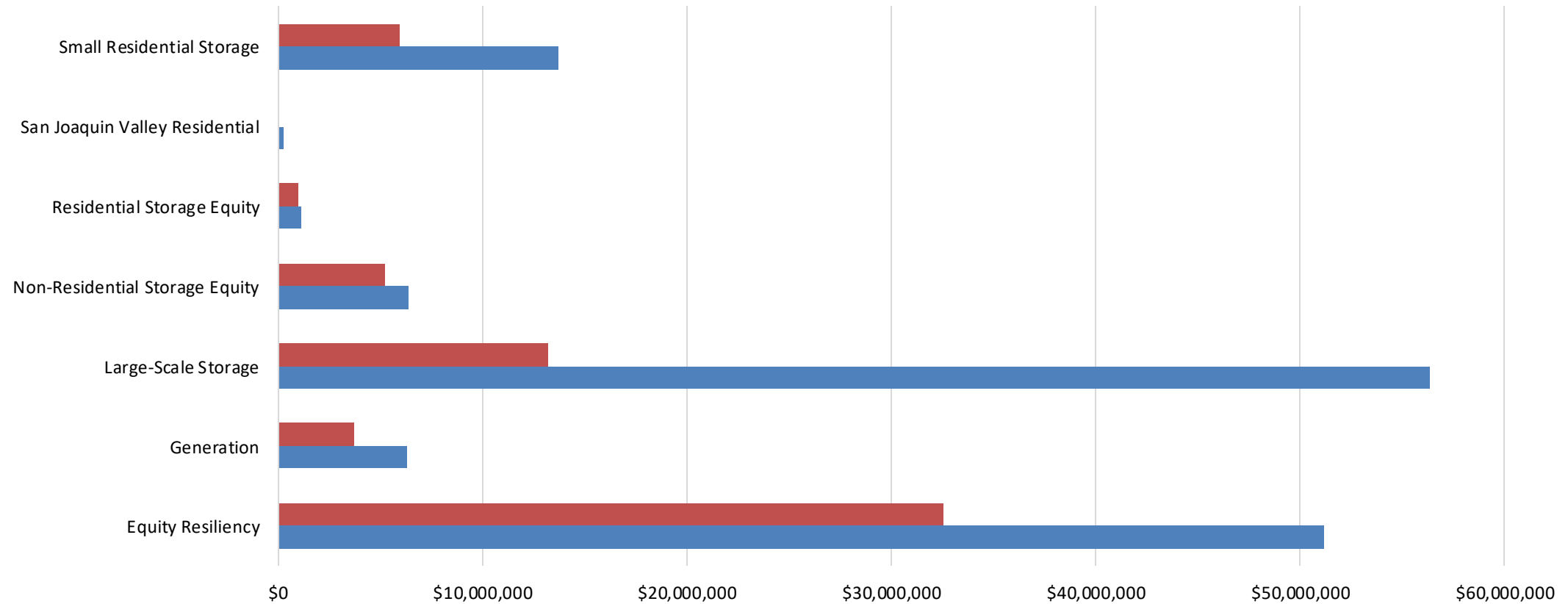
Program Metrics

Data 2022 – June 20, 2023



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Total Incentive Dollars by Budget Category



	Equity Resiliency	Generation	Large-Scale Storage	Non-Residential Storage Equity	Residential Storage Equity	San Joaquin Valley Residential	Small Residential Storage
■ 2023	\$32,555,743	\$3,726,069	\$13,219,742	\$5,246,294	\$988,955	\$26,400	\$5,923,722
■ 2022	\$51,154,139	\$6,313,221	\$56,350,141	\$6,361,696	\$1,133,307	\$264,000	\$13,712,140

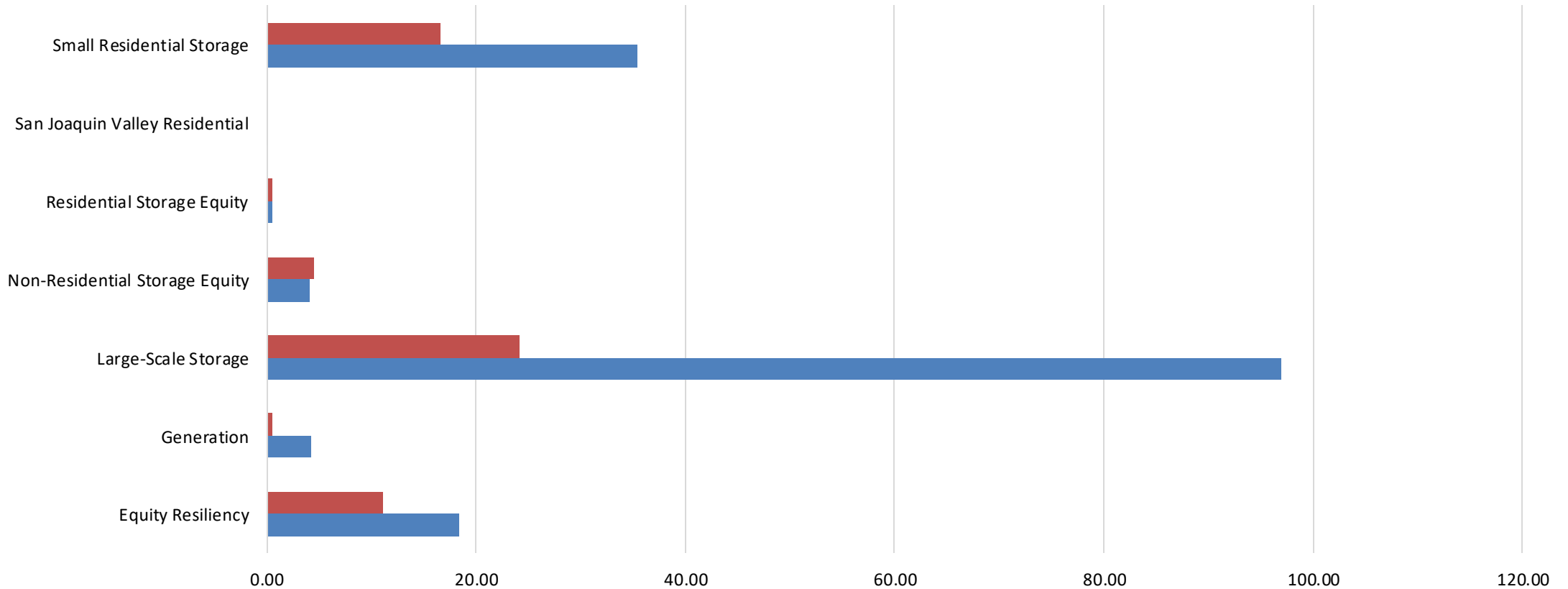
Program Metrics

Data 2022 – June 20, 2023



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Total Rated Capacity (MW) by Budget Category



	Equity Resiliency	Generation	Large-Scale Storage	Non-Residential Storage Equity	Residential Storage Equity	San Joaquin Valley Residential	Small Residential Storage
2023	11.03	0.47	24.19	4.54	0.49	0.01	16.61
2022	18.35	4.21	96.92	4.15	0.49	0.10	35.45

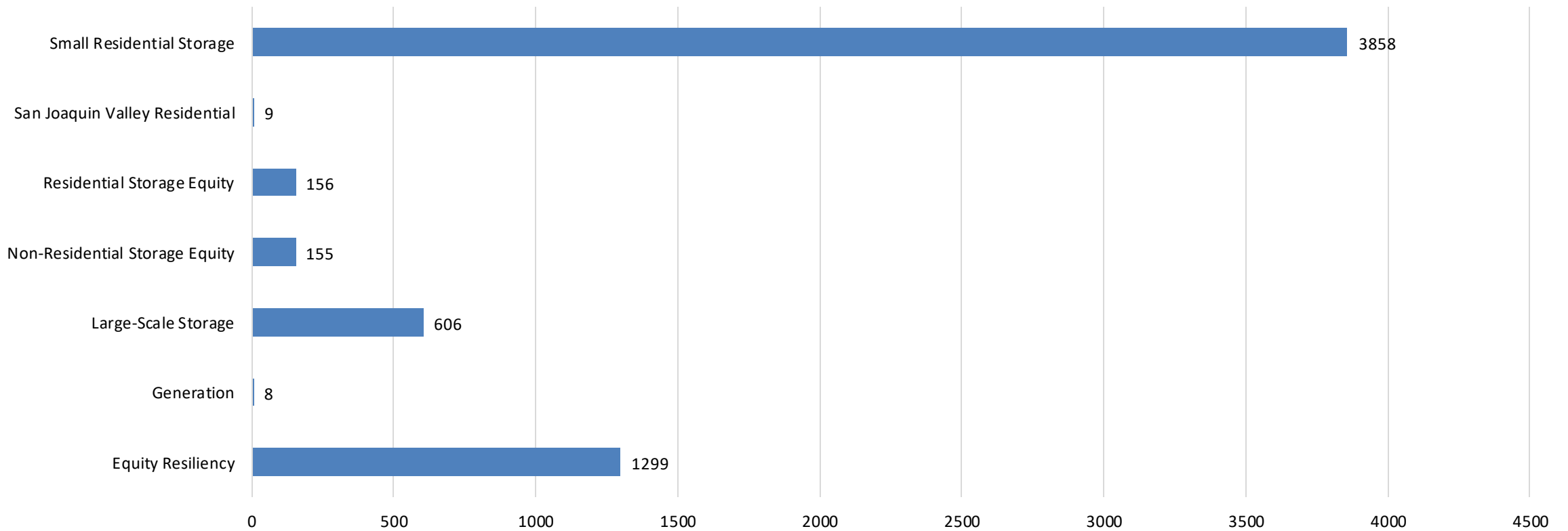
Program Metrics

Data 2022 – June 20, 2023



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Cumulative Cancellations for 2022 & 2023



	Equity Resiliency	Generation	Large-Scale Storage	Non-Residential Storage Equity	Residential Storage Equity	San Joaquin Valley Residential	Small Residential Storage
■ Total	1299	8	606	155	156	9	3858

Program Metrics

As of June 20, 2023



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Budget Category	CSE	SCE	SCG	PG&E
Large-Scale Storage	Step 4	Waitlist	Open	Step 5
	\$9,592,079		\$154,385	\$4,482,247
Small Residential Storage	Step 7	Step 7	Step 6	Step 7
	\$226,600	\$4,049,730	\$20,786	\$2,684,802
Residential Storage Equity	Open	Open	Open	Open
	\$2,887,472	\$2,658,254	\$1,113,563	\$6,272,315
Non-Residential Storage Equity	Waitlist	Waitlist	Open	Waitlist
			\$4,847,088	
Equity Resiliency	Waitlist	Waitlist	Open	Waitlist
			\$232,821	
San Joaquin Valley Residential		Open		Waitlist
		\$4,642,400		
San Joaquin Valley Non-Residential		Open		Open
		\$120,000		\$120,000
Generation	Open	Open	Open	Open
	\$14,507,136	\$33,787,798	\$11,597,405	\$36,923,890

SCG has reached the 50% Residential Storage Soft Target Cap for Small Residential Step 6

SCE, CSE, and PG&E have reached the 50% Residential Storage Soft Target Cap for Small Residential Step 7

When additional funding is provided in a given budget category, applications on a waitlist will be awarded funding in the order they were received

https://www.selfgenca.com/home/program_metrics/



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Questions?





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Regulatory Updates

SoCalGas



Regulatory Items



- **Program Updates**

- Petersen Dean (PD) Bankruptcy Decision
 - Tier 1 Advice Letter - Handbook Modifications
- Streamlining Handbook Tier 2 Advice Letter

- **Miscellaneous**

- Order Extending Statutory Deadline
- PG&E Motion on SGIP Administrative Costs



Petersen Dean Bankruptcy



• **Petersen Dean Bankruptcy Decision (D.) 23-04-045**

- On 4/27/23 the CPUC granted the PAs' Petition for Modification (PFM) of:
 - D.11-09-015 & D.15-06-002 – allowing additional time for customers to comply with ICF documentation requirements
 - D.11-09-015 – allowing customers to proceed in absence of a service warranty
 - D.19-08-001 – allowing an exemption of developer fleet obligations
- Immediate relief was granted to customers impacted by the recent Petersen Dean bankruptcy and identified a process for similar situations in the future.
- Tier 1 Advice Letter to Implementing Handbook Updates is expected to be filed this month.



Petersen Dean Bankruptcy



Relief for existing Petersen Dean customers

- Effective immediately, these customers are granted additional time (90 days) to submit ICF documentation
- PAs are not required to enforce service warranty and developer GHG non-compliance requirements for these projects

Relief for future impacted customers (Upon CPUC Approval)

- PAs are to submit future requests for via Tier 2 Advice Letter:
 - Additional 90 days for customers to complete required documentation
 - Waive PA enforcement of service warranty and developer GHG non-compliance requirements

Streamlining Handbook AL



- **Streamlining Handbook Tier 2 AL**

- Submitted by the PAs on 4/21/23
- Streamlining efforts include improve navigability, increase accessibility of weblinks, & provide additional context or clarification of existing program rules
- Pending Commission Disposition



Extending Statutory Deadline



- **Miscellaneous Items**

- **D.23-05-015 Order Extending Statutory Deadline for SGIP Rulemaking (R.) 20-05-012**

- Extended the statutory deadline again in this proceeding from May 28, 2023, until May 28, 2025, due to current items still in process and new AB 209 impacting SGIP

- **PG&E Motion Regarding SGIP Administrative Costs filed on 5/8/23**

- Requested for PG&E to establish a memorandum account to record administrative costs incurred for SGIP that exceed authorized administrative budgets approved in D.20-01-021, and to permit PG&E to request cost recovery in a future application.
- Pending CPUC decision





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SGIP Handbook Streamline Update

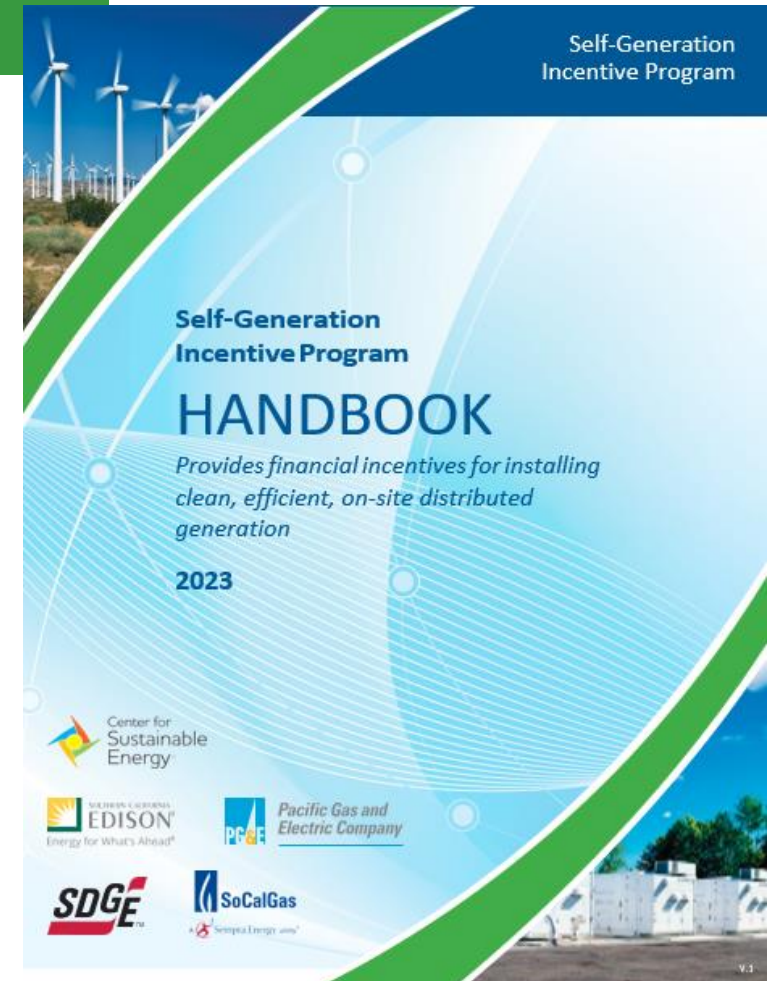
CSE

Handbook Streamlining



Overview

- The Program Administrators worked to streamline the Handbook throughout 2022.
- Improve Handbook readability & comprehension by clarifying policies & eligibility requirements.
- Streamlining was completed and the Handbook was submitted for review in late Q1 of 2023.
- Program Administrators are currently awaiting final approval to release the streamlined Handbook.



Handbook Streamlining



Handbook Updates

- Revised Layout of Handbook for Easier Navigation
- Deleted Redundant and Outdated Content
- Consolidated Dense Sections of Text into Tables
- Updated Web Links and Improved Accessibility of Hyperlinks
- Language Changes Within the SGIP Handbook
 - Adjusted Language for Consistency
- Language Additions to the SGIP Handbook
 - New Footnotes
 - Eligibility Clarifications
 - Additional Chapters

Program Equipment Requirements
Section 5: → Section 4

Residential Equity Resiliency Eligibility
Section 3.1.1.3 → 4.1.1.3

Table 5.4.2: Proof of Project Milestone Requirements

Required Materials (3-Step Projects)
1. Online Proof of Project Milestone Form (All Projects)
2. Copy of RFP or equivalent after 90 days (Public Entity Projects Only)
3. Copy of Executed Contract or Agreement for Installation (All Projects) <ul style="list-style-type: none">• Includes Required Warranty Documentation



Handbook Streamlining



Handbook Updates Cont.

- Notable Updates
 - Participant Sections
 - Program Participant Eligibility – Emphasize Current Licensing Requirements
 - Program Data Providers – Overview and Clarification of PDP's Role
 - Streamlined Document Requirements for SCE Territory
 - Removal of PTO Documentation Requirement during ICF
 - Removal of Building Permit Documentation during ICF
- Program Administrators to Include Additional Program Updates Made Prior to the Handbook Advice Letter's Approval



Handbook Streamlining- Timeline



Program Administrators are Awaiting Final Approval

Action Items	Completion Date
Handbook Streamlining Completed	April 18 th , 2023
Advice Letter Filing Date	April 21 st , 2023
Previous Protest Period	April 21 st – May 11 th , 2023
Program Administrator Follow Up	TBD
Final Handbook Advice Letter Approval	TBD

Once Approved Program Administrators and AESC to Integrate Updates into Upcoming Online Handbook





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Questions?



SGIP MEASUREMENT AND EVALUATION

June 2023 SGIP Quarterly Workshop

PRESENTATION OBJECTIVES

- » SGIP evaluation reports
 - Published and soon-to-be published
- » Overview of current studies
- » 2021-2022 SGIP storage* composition and discuss initial findings from research underway
- » Data Collection Issues

*This presentation will only cover SGIP energy storage technologies.
Research for SGIP incentivized generation technologies is also ongoing.

SGIP EVALUATION REPORTS

- » Recently published studies: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/self-generation-incentive-program/self-generation-incentive-program-evaluation-reports>
 - RFU Report No. 31
 - RFU Report No. 30
 - 2020 SGIP Biogas Generation Market Assessment and Cost-Effectiveness Report
 - 2021 Market Assessment Study
 - 2020 SGIP Energy Storage Impact Evaluation

- » Under review
 - 2018-2019 SGIP Impact Evaluation
 - 2020 SGIP Program Administrator Performance Evaluation

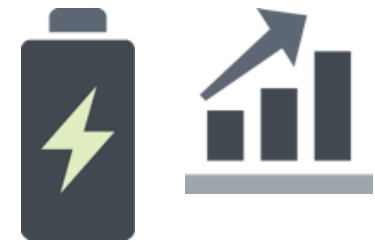
OVERVIEW OF CURRENT RESEARCH ACTIVITIES



**Renewable Fuel Use
Reports**



**Program
Administrator
Performance
Assessments and
Process Evaluation**



**Annual Impact
Evaluation Reports**

RENEWABLE FUEL USE REPORTS

- » Verify compliance with SGIP minimum renewable fuel use requirements
- » Summarize projects using renewable fuel by fuel source, generation type, etc.
- » RFU Report No. 31 - completed
- » RFU Report No. 32 due 9/15/2023
- » Collaborative effort with PAs to investigate noncompliance

PA PERFORMANCE ASSESSMENT

- » Assess the helpfulness, timeliness, and responsiveness of PAs
 - Provide recommendations for improvement
- » Combined 2021-2022 PA Performance Assessment due 8/11/2023
- » Single data collection effort (i.e., surveys, interviews) to cover both years
- » Applicant surveys will go out next week
 - You may receive a survey and we'd appreciate your responses

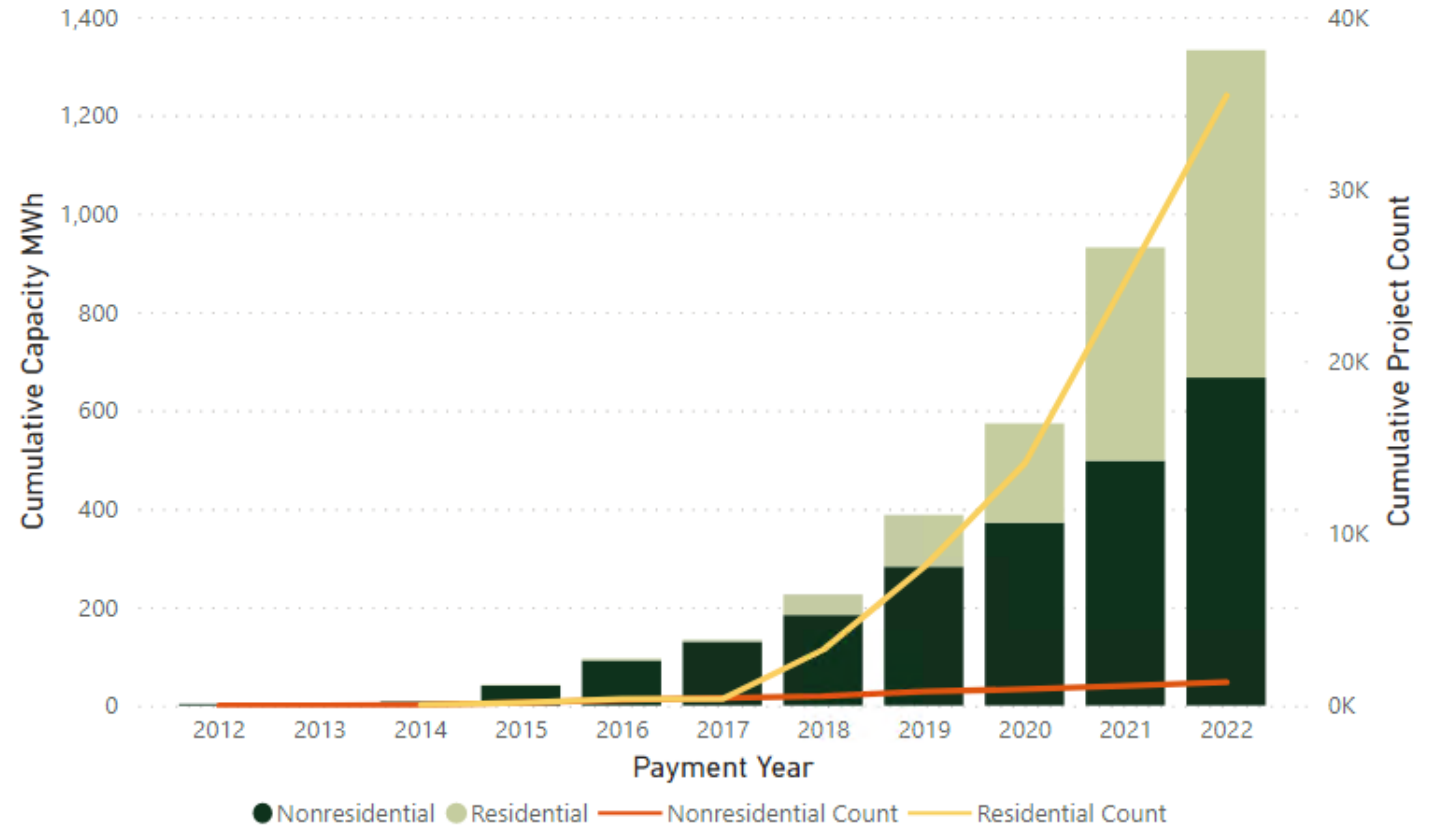
PROGRAM IMPACT EVALUATIONS

- » Quantify the customer, environmental, and grid benefits of SGIP rebated technologies
- » Combined 2021-2022 program impact evaluation report due November 17, 2023
 - 2020 Generation Program Impacts to be provided as a separate mini-study
- » Requires significant metered data collection across multiple sectors
 - **This is where support from OEMs, project developers, and installers is critical to the success and timely delivery of the impact evaluation**
- » Anticipate increased stakeholder engagement:
 - Verdant will host a webinar to solicit feedback on the draft report once it's finalized

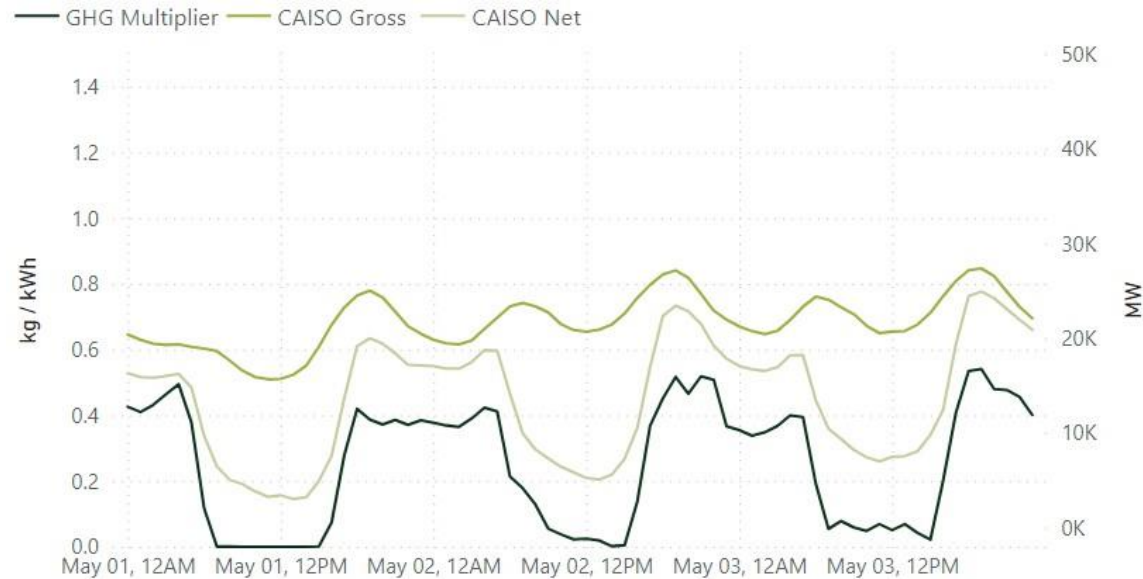
2021-2022 ENERGY STORAGE POPULATION

- » Program Count
 - 1,355 nonresidential
 - 35,426 residential
- » Program Capacity
 - 667 MWh nonresidential
 - 666 MWh residential
- » Incentives paid since last impact evaluation completed (CY2020)
 - 22,000 projects paid
 - 759 MWh paid

Cumulative Program Growth by Payment Year

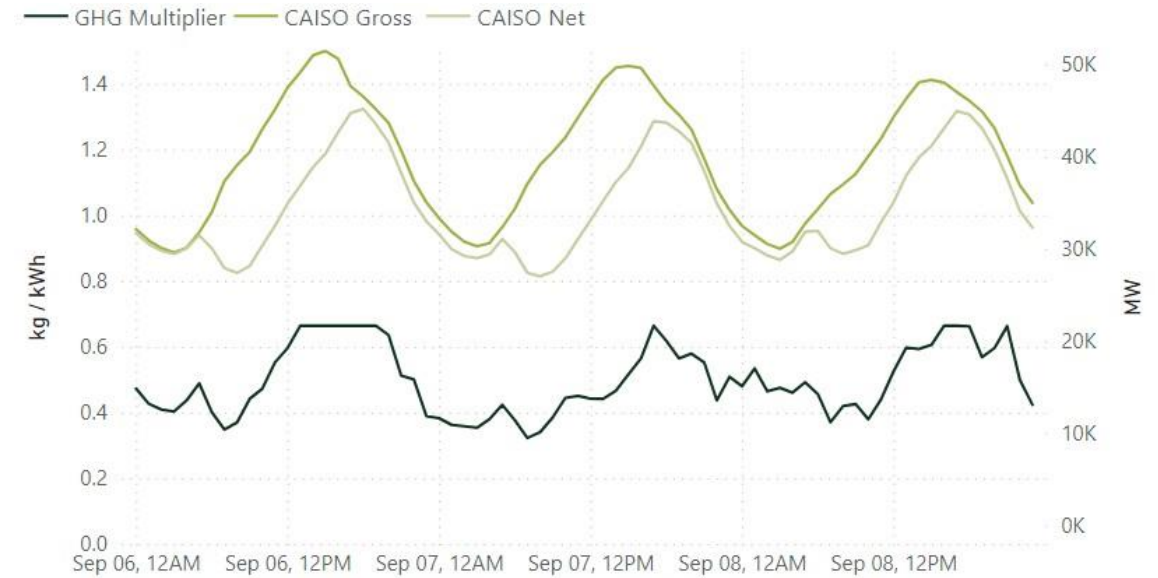


CAISO PEAK LOAD AND MARGINAL EMISSIONS



» Typical spring days

- Coincidental gross and net peak load
- Considerable renewable contribution on the margin



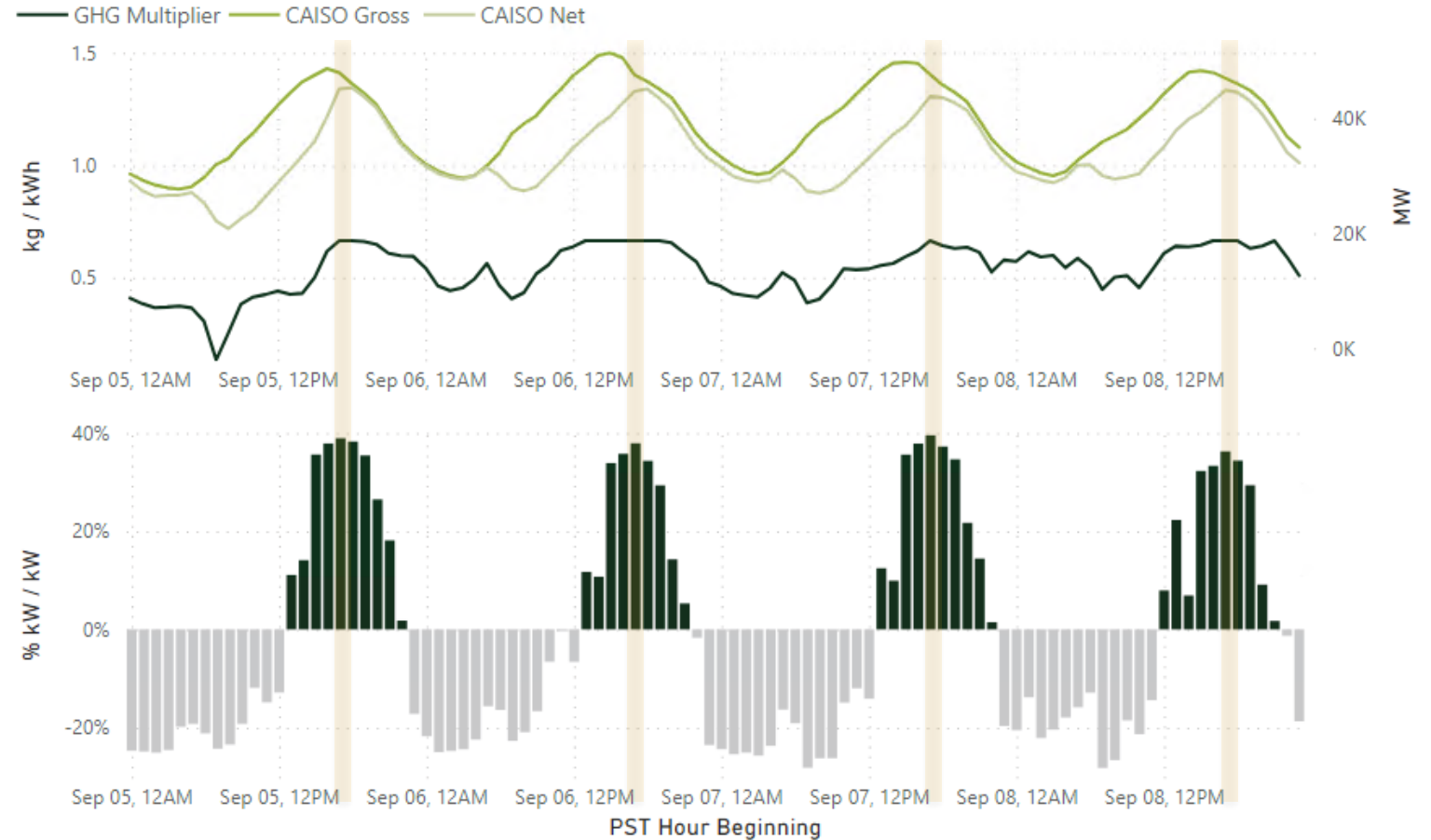
» Grid constrained days

- Net peak ~ 3 hours after gross peak
- Average emissions and peak emissions higher than in spring

STORAGE BEHAVIOR DURING GRID CONSTRAINTS

Grocery Stores

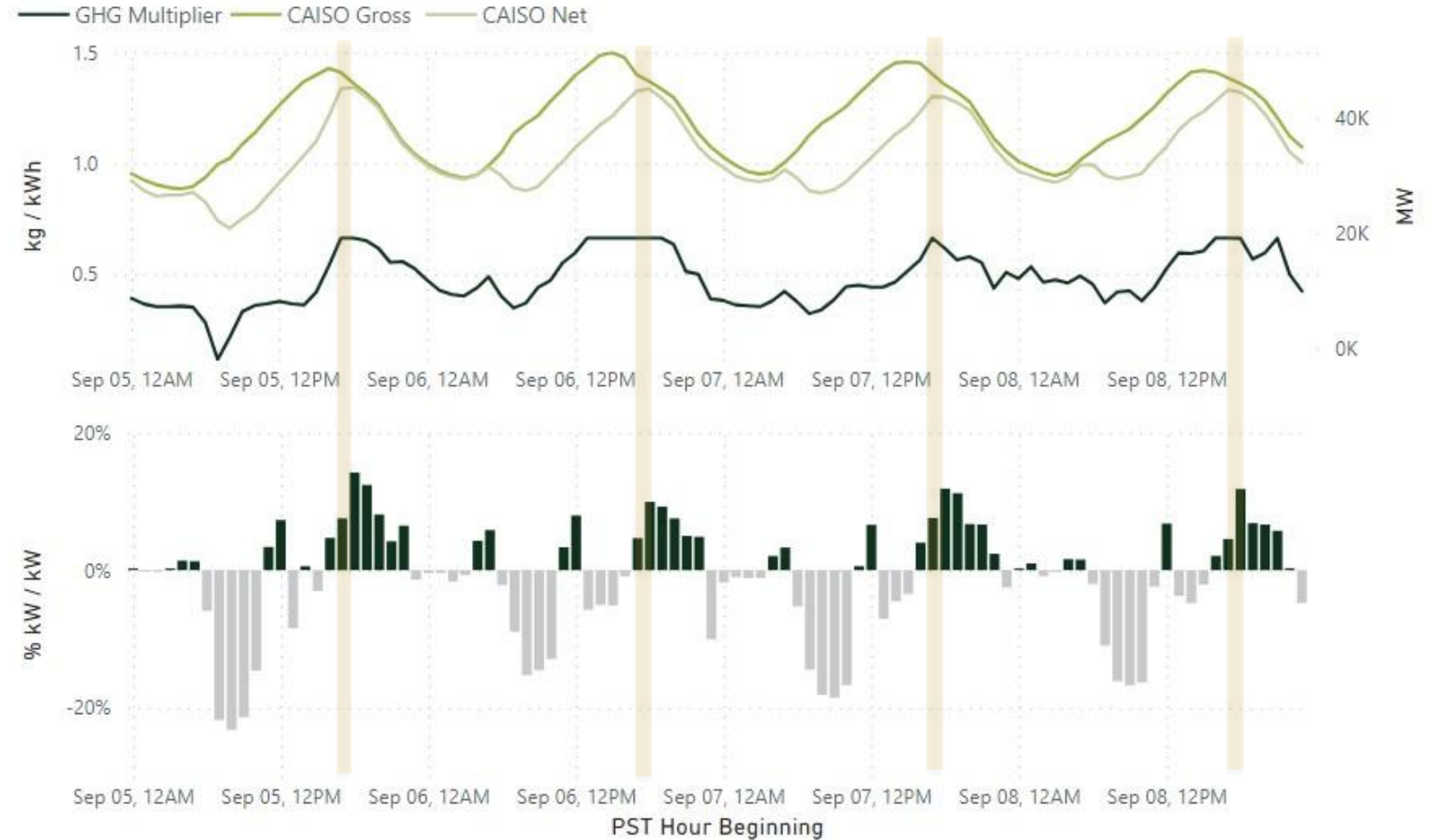
- » Evidence of charging after on-peak period (light gray)
- » Discharging begins ~ 2 pm through 10 pm (dark gray)
- » Peak hourly discharge ~ 40% of capacity (kW)
- » Long duration batteries



STORAGE BEHAVIOR DURING GRID CONSTRAINTS

Primary and Secondary Schools

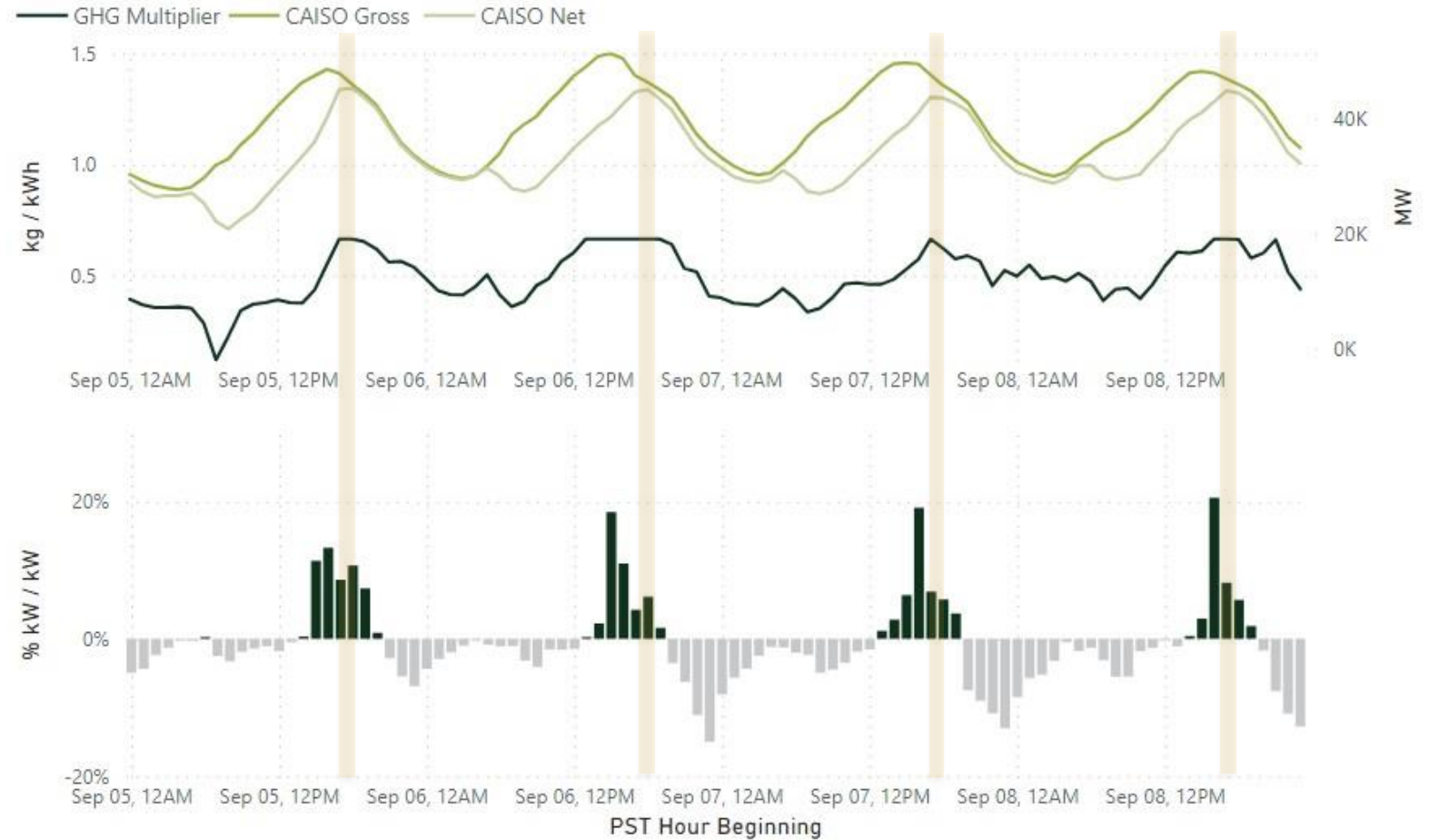
- » Evidence of charging from solar (light gray)
- » On-site solar generation coincident to bulk grid solar generation & lower marginal emissions
- » Discharging begins *after* gross peak and during net peak (5 – 6 pm PDT) (dark gray)
- » Peak hourly discharge ~ 15% of capacity (kW)



STORAGE BEHAVIOR DURING GRID CONSTRAINTS

Retail

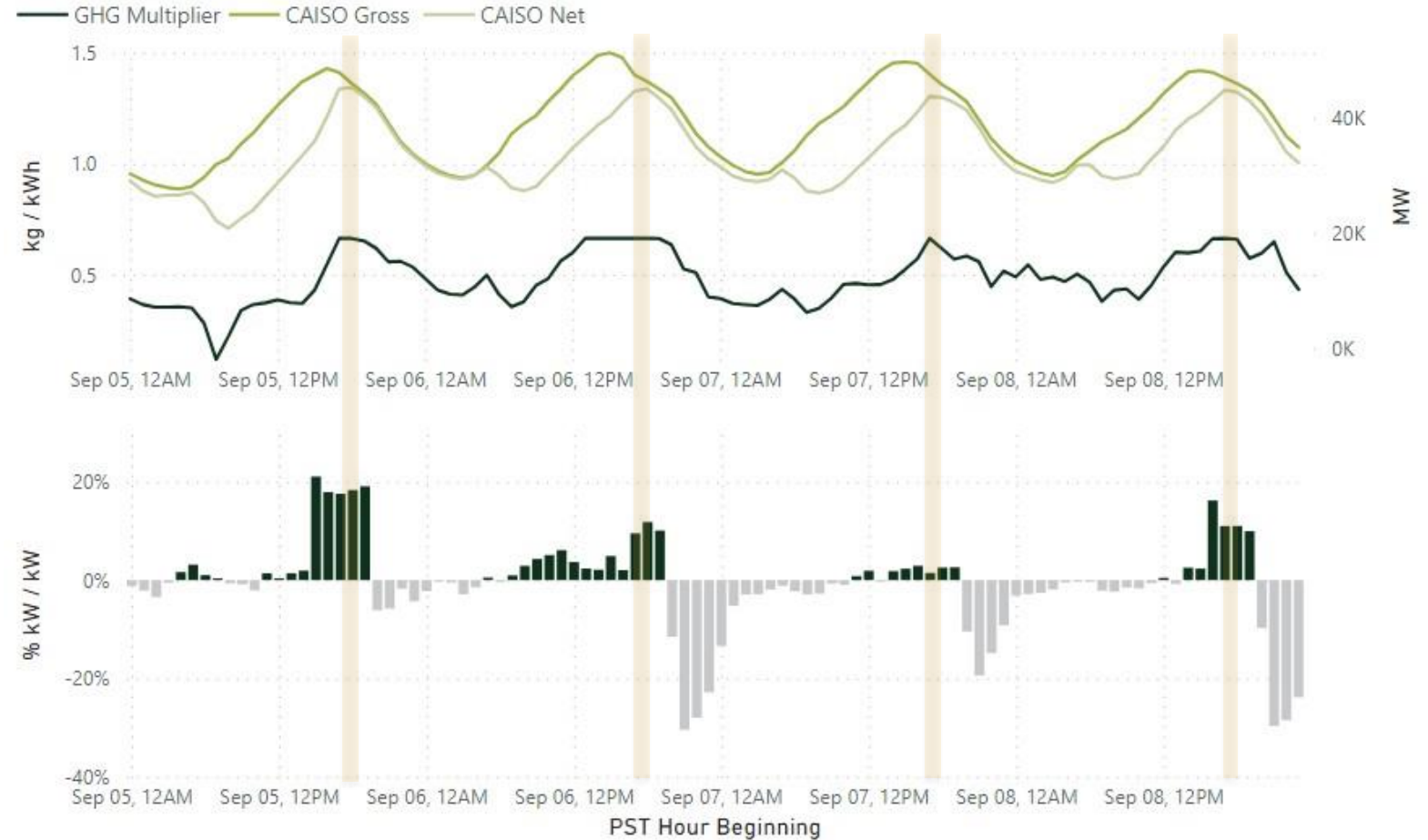
- » Evidence of charging from solar and after on-peak period (light gray)
- » Discharging coincident to on-peak period (4 – 9 pm) (dark gray)
- » Peak discharge roughly 20% of capacity (kW)



STORAGE BEHAVIOR DURING GRID CONSTRAINTS

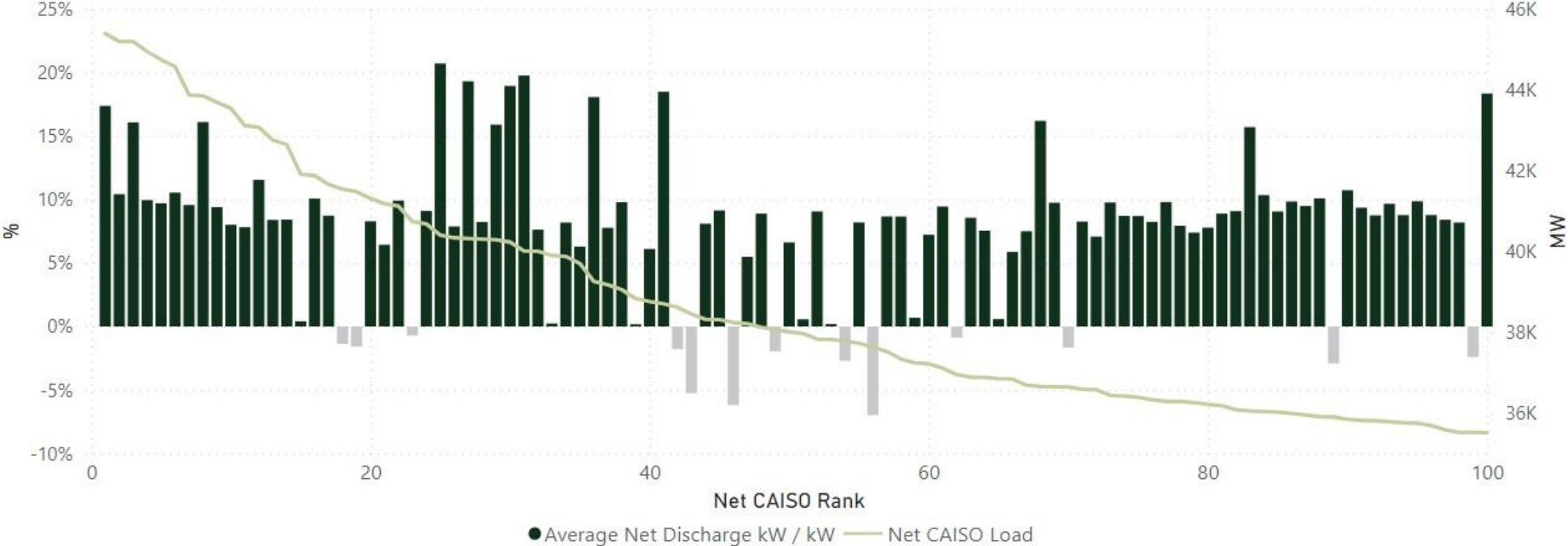
Offices

- » Evidence of charging after on-peak period (light gray)
- » Discharging throughout entirety of the day (dark gray)
- » Peak discharge roughly 20% of capacity (kW)



BEHAVIOR DURING 2022 TOP NET CAISO HOURS

Nonresidential Sector



INITIAL OBSERVATIONS

Nonresidential

- » Performance metrics – RTE, CF, and cycling – in line with previous evaluations
- » Increased storage utilization during on-peak and grid constrained hours
 - Likely due to increased attachment rates with solar PV
 - Likely due to increased share of longer duration batteries
- » Increased utilization during these periods are driving GHG emissions down (a positive)
 - Charging from on-site solar coincident to lower grid-scale emissions
 - Targeted discharge during on-peak hours align with higher grid scale emissions (especially during net peak hours)
 - Currently investigating the impact of the GHG signal on compliance and performance

INITIAL OBSERVATIONS

Residential

- » Far more OEMs, developers, and installers than in previous years
- » Primary use cases remain:
 - PV self-consumption for all systems paired with solar
 - Discharge to maintain zero net load (even outside on-peak bill period)
 - Discharge only during on-peak (TOU arbitrage)
 - Discharge to export during on-peak period
- » Early indications suggest similar performance – utilization and efficiency – to previous years
- » PSPS outage data has been processed
 - Verdant will begin combining outage data, and AMI metered data with metered storage once these data are received from program participants
- » Much work is still needed to assess residential sector impacts...

DATA COLLECTION UPDATE

Issues collecting data for M&E purposes

- » Data collection requirements referenced in the SGIP Handbook (**emphasis added**)
 - Section 7.4 Measurement and Evaluation (M&E) Activities
 - "As a **condition of receiving incentive payments under the SGIP, System Owners and Host Customers** agree to provide full **access to Site and system equipment and participate in Measurement and Evaluation (M&E) activities** as required by the CPUC for five-years."
 - "...**collection and transfer of data from installed system monitoring equipment**, whether installed by Host Customer, System Owner, a third party, or the PA."
 - Section 9.1.7 Residential GHG Emissions Compliance
 - "**Developers must also provide the PAs and SGIP evaluator with documentation on participating customers' systems upon request.** Failure to do so shall be considered an infraction."
 - "**PAs may issue infractions for any new residential developer that does not provide the information requested by the PAs or the SGIP Impact Evaluator in the timeframe requested** and to suspend any developer with two infractions for this reason for applying for new incentives for a period of six months."



THANK YOU

 VERDANT



California Public
Utilities Commission

AB 209 Discussion Self-Generation Incentive Program

June 28, 2023

Justin Galle, Energy Division



Agenda

AB 209 funding and FY 23-24 CA State Budget

Refresh on ACR questions issued in October 2022

AB 209 implementation topics for informal discussion

Upcoming CPUC Decision

Q&A

*the goal of this session is informal stakeholder
feedback on potential SGIP policy changes*

AB 209 Funding and the FY 23-24 State Budget

- AB 209 (Sept 2022) amends Public Utilities Code Section 379.6 and adds Section 379.10 to **guide legislatively appropriated state General Fund monies into solar and storage incentives through the SGIP for California residential customers.**
- June 15 [SB 101 Budget Act of 2023](#) adopted by California Legislature:
 - Allocated \$280 million to the CPUC in FY 23-24 for low-income California residential customers
 - Final budget bill waiting signature by Governor
 - 2023-24: \$280 million
- May [budget subcommittee report](#): "...\$125 million in 2024 and \$225 million in 2025 with budget bill language allowing a reservation list"
 - Future FY allocations will be dependent on future budget bills adopted by CA Legislature
 - Possible future allocation:
 - 2024-25: \$125 million
 - 2025-26: \$225 million

CPUC Assigned Commissioner's Ruling (ACR) issued October 2022

38 ruling questions under the following issue areas:

1. Residential Low-Income Eligibility Criteria Across SGIP Budget Categories
2. Paying for Upfront System Costs
3. Improving Participation of Tribal Customers
4. Equity Resiliency Budget Category
5. Incentive levels for General Market Customers
6. Operational Requirements for SGIP and AB 209 Projects
7. Program Structure for AB 209 Funds
8. Other SGIP Program Changes

Informal group discussion on AB 209 Implementation

- Updated allocation of budget for low-income residential solar and storage
- Marketing, education, and outreach funds
- SGIP solar incentive considerations
- SGIP alignment with existing low-income solar programs
- Measurement and evaluation
- Open floor discussion

Allocation of updated budget for low-income residential solar and storage

- 2023-24: \$280 million
 - 2024-25: \$125 million
 - 2025-26: \$225 million
-
- How should the revised budget allocation proposal impact the upcoming CPUC Decision?
 - Should any SGIP application rules be modified due to the timed release of the funds by fiscal year?

Marketing, Education, and Outreach funds

AB 209 directs the Commission to make the new SGIP funds available to all eligible residential customers of California, including POU customers. This expands the program substantially. Parties already submitted comments in the Oct ACR on whether new SGIP PAs should be established.

Another potential option would be for marketing, education, and outreach funds to be designated to POUs, other load-serving entities, or other organizations, while the existing PAs execute administrative functions such as receiving and processing applications.

- Should a portion of the AB 209 budget be dedicated to ME&O of POU and other non-IOU customers? If so, what portion would be appropriate?
- Should a separate entity conduct ME&O to POU and non-IOU customers? If so, what type of entity should perform that role?

SGIP solar incentive

The Solar on Multifamily Affordable Housing (SOMAH) and Disadvantaged Communities Single-Family Solar Homes (DAC-SASH) programs currently provide equity customers with incentives for solar installation.

- In what ways should the SGIP solar incentive program structure be modeled on SOMAH and/or DAC-SASH? In what ways should SGIP and SGIP solar incentives differ? While responding, consider program requirements such as:
 - a. Eligible project costs (including ‘professional services’ such as shade tree removal or other services that are required to bring a house up to solar-ready standards);
 - b. PV system requirements (including interconnection, performance monitoring and reporting services);
 - c. Warranty and permanency requirements;
 - d. Installation and inspection standards;
- One specific element that both SOMAH and DAC-SASH rely on is the Expected Performance Based Buydown (EPBB) methodology to determine capacity-based incentives for qualifying solar energy systems. The EPBB incentive is paid based on verified solar energy system characteristics such as system size, shading, and orientation.

SGIP solar incentive

The federal tax credit established by the Inflation Reduction Act (IRA) for solar and energy storage installations covers 30% of eligible costs and is transferable. When the IRA tax credit is combined with the SGIP incentive, more low-income customers and projects could benefit because the SGIP budget could contribute to more installations.

- How should the SGIP incentive be designed to best leverage the IRA tax credit and ensure that eligible customers can benefit from the tax credit?
- Should 30% of eligible project costs always be deducted when calculating the SGIP incentive to account for the IRA tax credit being utilized, or should applicants be able to self-proclaim the tax credit value that they expect to receive?

SGIP solar incentive

Some applicants for SGIP incentives will be installing solar PV for the first time and will be required to enroll in the Net Billing Tariff, established in CPUC Decision 22-12-0563. However, some customers may have existing solar PV systems and will be applying for energy storage incentives from SGIP. These existing solar customers may have submitted interconnection applications prior to April 15, 2023 and be enrolled in Net Energy Metering 1.0 or 2.0. In response to the ACR from October 2022, some parties commented or replied that existing NEM 1.0 and 2.0 customers be required to transition to the Net Billing Tariff in order to receive SGIP incentives.

- If an IOU customer with an existing solar system that currently takes service on either NEM 1.0 or 2.0 receives any SGIP incentive for any budget category, should that customer be required to migrate to the Net Billing Tariff?

SGIP solar incentive

Third-party ownership of solar systems is common. The existing SGIP rules allow the host customer to be different than the system owner.

- Do the current SGIP Handbook rules need to be modified to effectively accommodate third-party owned solar systems?
- Considering solar power purchase agreements (PPAs) and/or leased systems, should the ownership type (host customer owned vs. third-party owned) impact the SGIP solar incentive value as well as storage incentive value?
- Would the utilization or transfer of the IRA tax credit be impacted by whether the system is owned by a host customer or a third-party?

SGIP solar incentive

Some parties commented that costs for solar system installations should be itemized at a detailed level so that the PAs can better verify reasonable contracts and improve Measurement and Evaluation and market cost studies.

- To what level of detail should the solar system costs (e.g., module price, inverter price, and residual balance of system and soft costs) be broken down in SGIP incentive applications?

SGIP solar incentive

There may be a substantial number of existing solar systems which require new inverters, and these costs are not eligible for incentives under DAC-SASH or SOMAH.

- Should inverters for existing solar systems be an eligible cost under the new SGIP solar incentive for low-income customers? If so, what rules around inverter replacement should be incorporated into the SGIP Handbook?

SGIP alignment with existing low-income programs

The new SGIP solar incentive and existing energy storage offerings for low-income customers will be available simultaneously with the existing solar incentives from SOMAH and DAC-SASH. It is crucial to have a streamlined and coordinated program delivery for these clean energy opportunities.

- What modifications or changes are necessary for the SGIP Handbook to align SGIP with the DAC-SASH and SOMAH programs to enable cohesive program delivery and reduce redundancies (for contractors and customers alike)?
- How should SGIP be designed so as not to create inefficient overlap among one or more of these programs, including in marketing, education, and outreach?

Upcoming CPUC Decision in R.20-05-012 SGIP Proceeding

- Energy Division is working to provide support to enable a Decision to be adopted as soon as reasonable
 - Proposed Decision will be mailed, with another opportunity for comments and replies
 - Final Decision adopted roughly one month later
 - Schedule and timeline of Decision is made by the Commission and not ED
- There will be also be a timeline after Decision adoption for PAs to update the SGIP database, handbook, and other operational changes needed before incentive application opens



Additional Slides

About the Self-Generation Incentive Program (SGIP)

- Established in 2001, provides financial incentives for the installation of eligible **behind-the-meter (BTM) distributed generation and energy storage technologies** that meet all or a portion of a customer's electricity needs
- Over the years, the program focus has transitioned from **peak-load reduction** to **greenhouse gas (GHG) reductions** and **resiliency** as climate change has moved to the forefront of statewide public policy.
- Decision (D.) 17-10-004 established the **SGIP Equity Budget** to provide funding for behind-the-meter storage for **low-income and disadvantaged Californians**.
- D.19-09-027 established the **Equity Resiliency Budget** to provide critical resiliency needs to Californians living in areas heavily impacted by **wildfires** who are **medically vulnerable, low-income, or disadvantaged**.
- D.20-01-021 authorized collection of ratepayer funds totaling \$1.66 billion per year from 2020 to 2024 pursuant to SB 700 (Wiener, 2018). This decision increased the financial incentive budget for **energy storage technologies to 88% of total SGIP funding**.

Program Overview

- Four Program Administrators
 - PG&E, SCE, SoCalGas, and Center for Sustainable Energy (on behalf of SDG&E)
- More than **1.23 GW of capacity installed across nearly 33,450 projects** since 2001
 - Anticipating additional 0.51 GW of capacity from the 14,000 projects currently in progress
- Total Collections for period **2020 – 2024 is \$813.4 million**
 - Energy Storage Technologies receive 88% of funding
 - Equity Resiliency Budget – 63%
 - Large-Scale Storage – 10%
 - Small Residential Storage – 7%
 - Heat Pump Water Heaters – 5%
 - Residential Equity – 3%
 - Generation Technologies receive 12% of funding (non-renewable fuels not allowed as of 2020)
- Some budgets have an **incentive step structure with incentive levels decreasing** as the budget is spent, others have a **fixed incentive level**
- Ongoing implementation in proceeding **R.20-05-012**

Current Available Funds (as of 6/22/23)

	Large Scale Storage	Small Residential Storage	Residential Storage Equity	Non-Residential Storage Equity	Equity Resiliency	Renewable Generation
Total Budget	\$317,764,452.62	\$122,443,386.25	\$40,269,036.80	\$180,165,600.42	\$671,434,941.51	\$132,838,564.28
Pending Reservations	\$15,108,542.37	\$705,522.94	\$23,468,864.25	\$33,886,163.01	\$19,148,522.67	\$2,651,564.00
Reserved	\$139,733,019.29	\$14,043,368.71	\$3,719,478.19	\$124,788,964.14	\$292,270,015.99	\$13,771,900.00
PBI In Process	\$7,180,431.47	\$0	\$0	\$4,929,616.12	\$55,435,029.80	\$7,937,459.14
Paid	\$155,863,443.95	\$98,166,874.89	\$194,649.00	\$7,609,642.78	\$304,534,260.22	\$11,661,410.68
Remaining Available	\$14,239,878.48	\$9,527,619.71	\$12,886,045.36	\$8,951,214.37	\$47,112.83	\$96,816,230.46

Context for Low Income AB 209 Funding

Low Participation Level Currently

1. **Outreach:** Low percentage of SGIP participants that are deemed low-income (1.7%). Developers are not targeting this sector and/or low-income customers are unaware of the program.
2. **Solar Pairing:** When selling batteries, developers seek out homeowners who already own solar or are planning to have solar installed. Without an existing solar installation batteries are much less valuable to the customer and harder to sell. This is related to access to financing.
3. **Competition from Other Sectors/Budget Categories:** Higher incentive level of the Equity Resiliency Budget (\$1.00/Wh) crowds out interest from developers to seek projects in the Equity Budget (\$0.85/Wh). Participating in Medical Baseline Program is an easier path to eligibility.
4. **Access to Financing:** Majority of projects require the host customer to pay the developer up front and the host customer is given the rebate once the application has been processed.

Low Completion Rate

1. **Onerous Document Requirements:** Onerous relative to the Medical Baseline eligibility pathway in the Equity Resiliency Budget, which has been used for more than 60% of the incentives.
 - Currently requires **both** income verification (i.e., proof that household income is 80 percent or less of area median income) **and** proof of sales restriction **or** an equity sharing agreement.

SGIP Storage Budget Category Descriptions

Equity resiliency (ERB) – up to \$1.00/Wh.

- Residential households and nonresidential critical facilities located in Tier 2 and Tier 3 High Fire Threat Districts (HFTDs) or customers experiencing two or more Public Safety Power Shutoff (PSPS) events.
- Secondary criteria include medical baseline, electric well pump, participation in DAC solar programs, low income, critical needs for residential customers

Large-Scale Storage – \$0.50 to \$0.18/Wh. Resiliency adder for qualified nonresidential customers.

- Any residential or nonresidential projects greater than 10 kW. --> currently at ~\$0.20 mostly

Legacy Pre-2017 – prior to current program structure. Incentives were paid per watt.

- Any residential or nonresidential project applying to the program prior to 2017 (mostly standalone nonresidential systems)

Nonresidential Storage Equity – \$0.85 / Wh.

- Open to local, state, or tribal government agencies, educational institutions, non-profit organizations or small businesses.

Residential Storage Equity – \$0.85 / Wh.

- Open to single-family low-income housing or multi-family low-income housing, regardless of project size.

San Joaquin Valley Residential – no set incentive.

- Residential or nonresidential projects located in 11 San Joaquin Valley disadvantaged communities

Small Residential Storage – \$0.50 to \$0.15 / Wh. --> currently at ~\$0.15 mostly

- Any residential project less than or equal to 10 kW.

Constraints on SGIP (P.U. Code 379.6)

- Eligibility for incentives under SGIP shall be limited to DERs that the CPUC, in consultation with CARB, will achieve reductions in emissions of GHGs pursuant to the California Global Warming Act of 2006 (b)(1)
- The CPUC shall update the factor for avoided GHG emissions (on or before July 1, 2015) based on GHG emissions from electricity sales in the SGIP PAs' service areas and current estimates of GHG emissions over the useful life of the distributed energy resource including consideration of the effects of the California RPS. (b)(2)
- Minimum system efficiency shall be determined either by calculating electrical and process heat efficiency as set forth in Section 216.6, or by calculating overall electrical efficiency. (d)
- Eligibility for incentives under SGIP shall be limited to DERs that the CPUC determines meets all of the following (e)
 1. The distributed energy resource technology shifts onsite energy use to off-peak time periods or reduces demand from the grid by offsetting some or all of the customer's onsite energy load, including, but not limited to, peak electric load.
 2. The distributed energy resource technology is commercially available.
 3. The distributed energy resource technology safely utilizes the existing transmission and distribution system.
 4. The distributed energy resource technology improves air quality by reducing criteria air pollutants.

Constraints on SGIP (P.U. Code 379.6) Cont.,

- Recipients of the SGIP funds shall provide relevant data to the CPUC and CARB, upon request, and shall be subject to onsite inspection to verify equipment operation and performance, including capacity, thermal output, and usage to verify criteria air pollutant and GHG emissions performance. (f)
- In administering the SGIP, the CPUC shall determine a capacity factor for each distributed generation system energy resource technology in the program. (g)
- The CPUC shall consider the relative amount and the cost of GHG emissions reductions, peak demand reductions, system reliability benefits, and other measurable factors when allocating program funds between eligible technologies. (h)(1)
- In administering the SGIP, the CPUC shall provide an additional incentive of 20 percent from existing program funds for the installation of eligible distributed generation resources manufactured in California. (j)
- The costs of the program adopted and implemented pursuant to this section shall not be recovered from customers participating in the California Alternate Rates for Energy (CARE) program. (k)
- On and after January 1, 2020, generation technologies using nonrenewable fuels shall not be eligible for incentives under the SGIP. (m)

Constraints on SGIP (P.U. Code 379.10)

(a) The commission shall use funds appropriated by the Legislature for the purpose of providing incentives to eligible residential customers, including those receiving service from a local publicly owned electric utility, as defined pursuant to Section 224.3, who install behind-the-meter energy storage systems or solar photovoltaic systems paired with energy storage systems

(b) The commission shall consider requiring customers installing solar photovoltaic systems paired with energy storage systems or new energy storage systems under this section and served on a standard contract or tariff pursuant Section 2827.1 to participate in a demand response or peak load reduction program offered through the customer's load-serving entity, including market-integrated supply-side demand response programs, to reduce net peak demand.



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Q & A





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Thank You

