



SELF-GENERATION
INCENTIVE PROGRAM

SGIP 4th Quarterly Workshop of 2023

December 15, 2023



Introduction



SELF-GENERATION
INCENTIVE PROGRAM

PROGRAM ADMINISTRATORS

SCE:

- Jim Stevenson
- Vicky Velazquez

SoCalGas:

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

CSE:

- Dema Tzamaras
- Melissa Cintron
- Shalene Watanabe-O'Toole

PG&E:

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



Introduction (continued)



SELF-GENERATION
INCENTIVE PROGRAM

AESC (Technical)

- Dara Salour
- Stephanie Raya

Verdant

- Brian McAuley

Energy Division (CPUC)

- Justin Galle
- Gabriel Petlin
- Fang Yu Hu



Teams Meeting



| Function | Teams Icon |
|--|------------|
| Controls | |
| Mute – <i>Remain muted unless called on</i> | |
| Raise Your Hand – <i>Wait until you are confirmed to speak on the chat or host</i> | |
| Type Your Question or Comment | |



Agenda



- Welcome and Introductions (CSE)
- Program Metrics (PG&E)
- Regulatory Updates (PG&E)
- Residential Storage Soft Target Cap (CSE)
- Inspection Sampling Protocol - Equipment Model Definition (SCG)
- Measurement & Evaluation - Data Collection Challenges (Verdant)





SELF-GENERATION
INCENTIVE PROGRAM

Program Metrics

Ron Moreno – PG&E



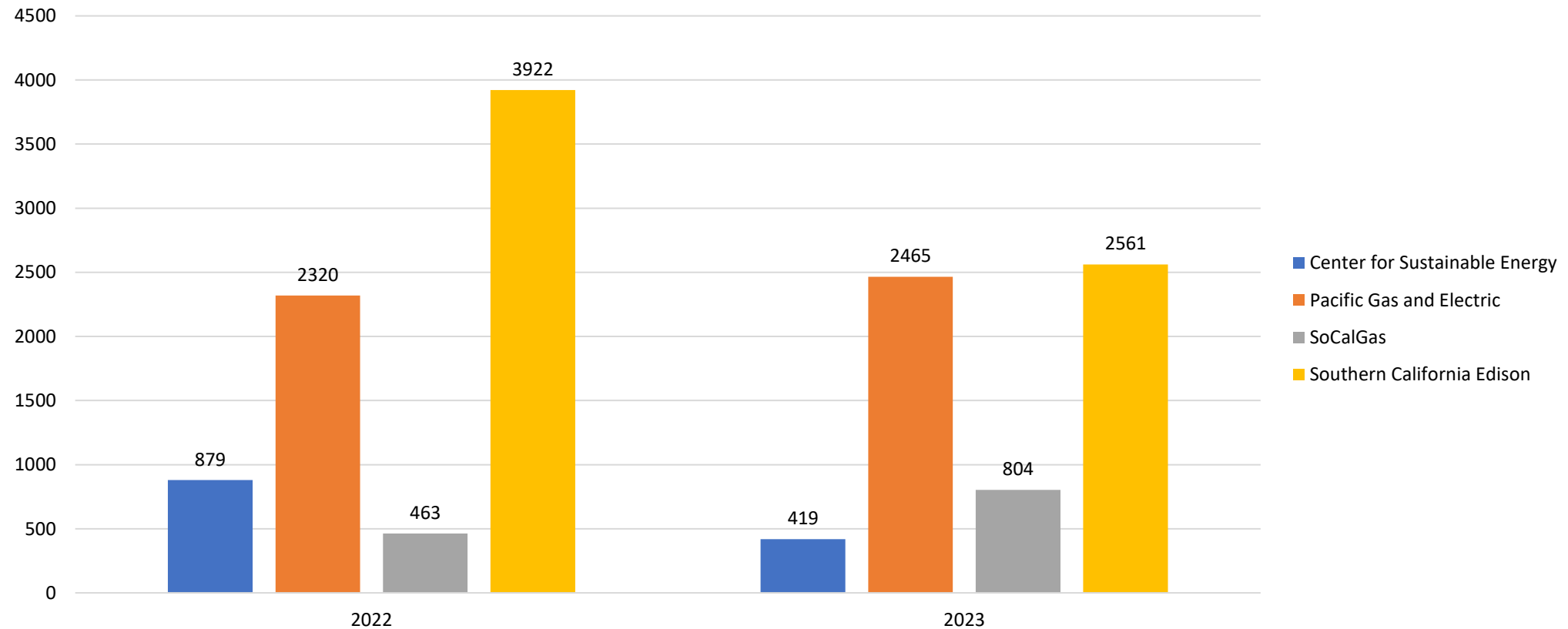
Program Metrics

Data: 2022 – December 8, 2023



SELF-GENERATION
INCENTIVE PROGRAM

Number of Applications Submitted by PA and Year



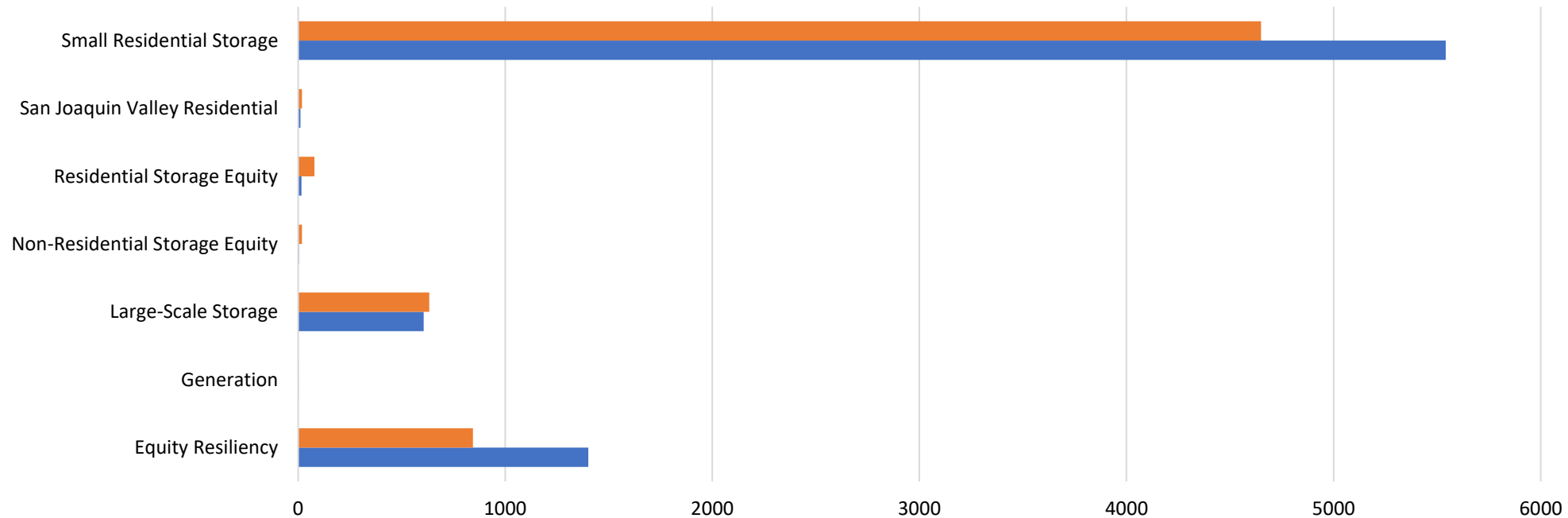
Program Metrics

Data: 2022 – December 8, 2023



SELF-GENERATION
INCENTIVE PROGRAM

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 | 845 | 3 | 634 | 19 | 79 | 19 | 4650 |
| 2022 | 1402 | 3 | 607 | 4 | 16 | 11 | 5541 |



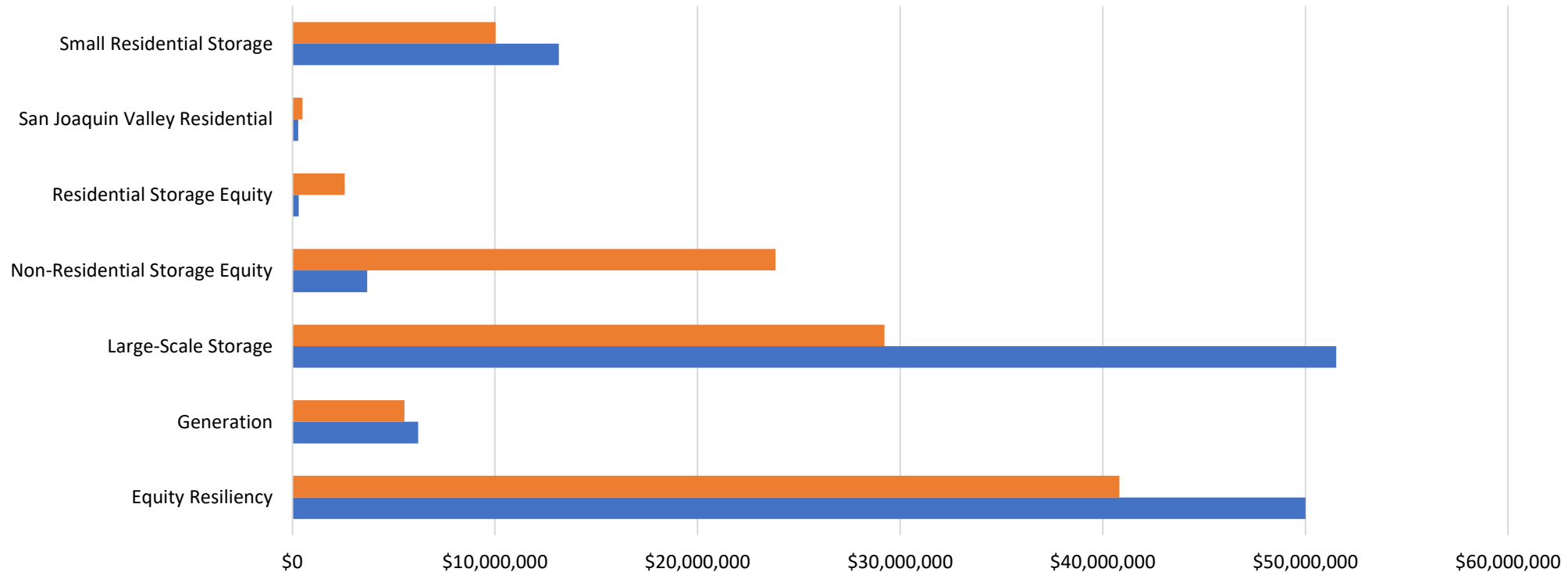
Program Metrics

Data: 2022 – December 8, 2023



SELF-GENERATION
INCENTIVE PROGRAM

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 | \$40,822,461 | \$5,530,320 | \$29,220,687 | \$23,847,605 | \$2,582,508 | \$501,600 | \$10,032,740 |
| 2022 | \$50,002,121 | \$6,203,500 | \$51,517,100 | \$3,694,825 | \$318,933 | \$290,400 | \$13,155,453 |



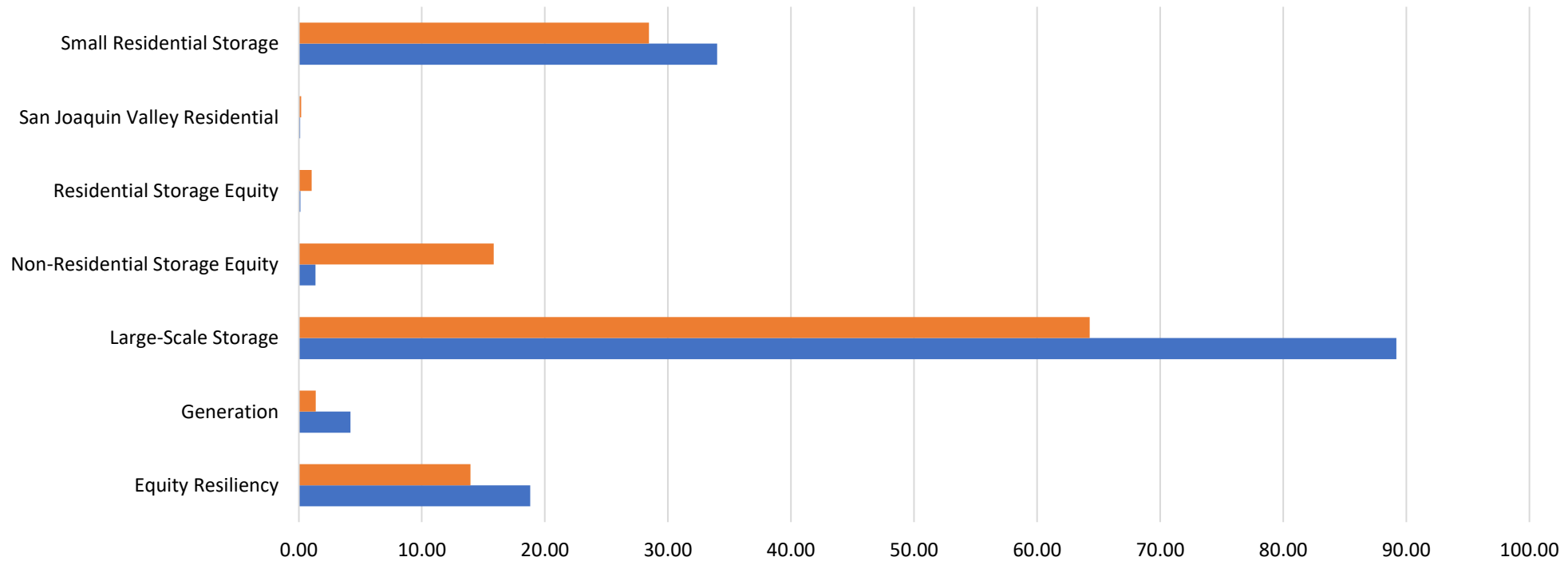
Program Metrics

Data: 2022 – December 8, 2023



SELF-GENERATION
INCENTIVE PROGRAM

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 | 13.95 | 1.38 | 64.28 | 15.83 | 1.05 | 0.19 | 28.45 |
| 2022 | 18.82 | 4.21 | 89.20 | 1.36 | 0.14 | 0.11 | 34.01 |



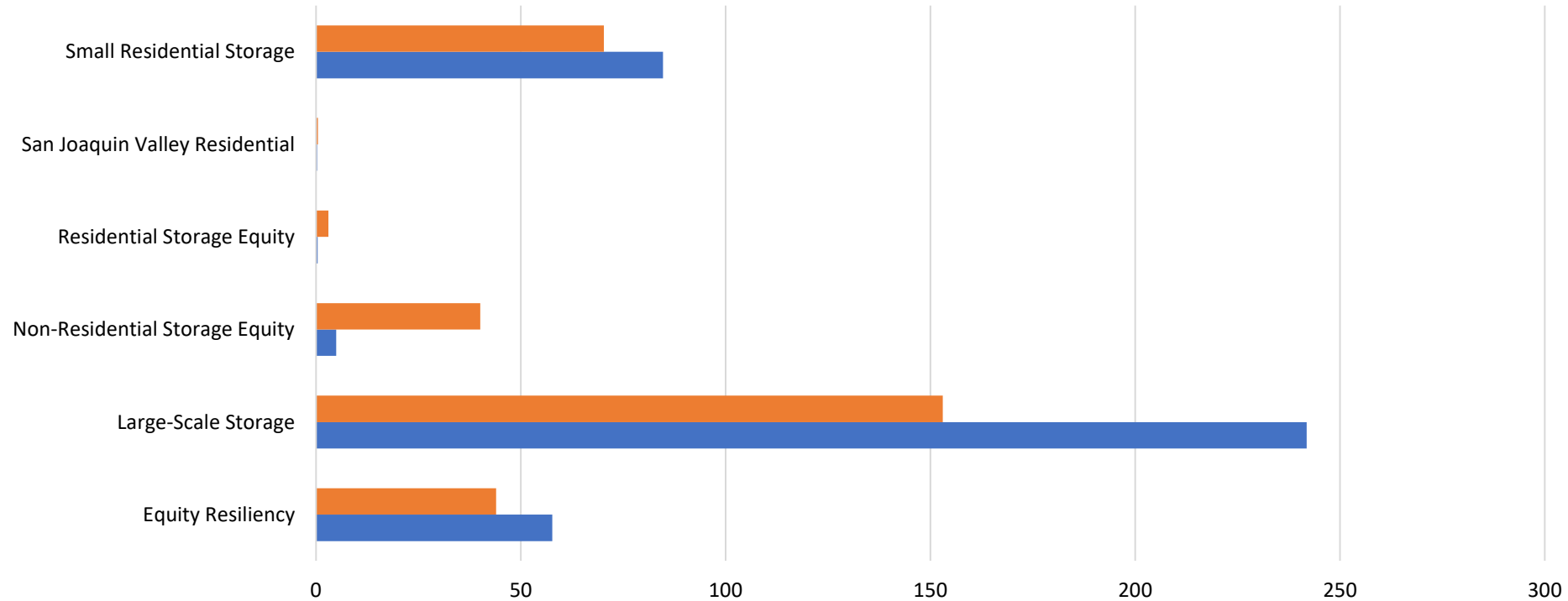
Program Metrics

Data: 2022 – December 8, 2023



SELF-GENERATION
INCENTIVE PROGRAM

Total Energy Capacity (MWh) by Budget Category



| | Equity Resiliency | Large-Scale Storage | Non-Residential Storage Equity | Residential Storage Equity | San Joaquin Valley Residential | Small Residential Storage |
|------|-------------------|---------------------|--------------------------------|----------------------------|--------------------------------|---------------------------|
| 2023 | 43.997868 | 153.058631 | 40.127514 | 3.057831 | 0.5016 | 70.286209 |
| 2022 | 57.702782 | 241.913977 | 4.9336 | 0.40063 | 0.2904 | 84.7570006 |



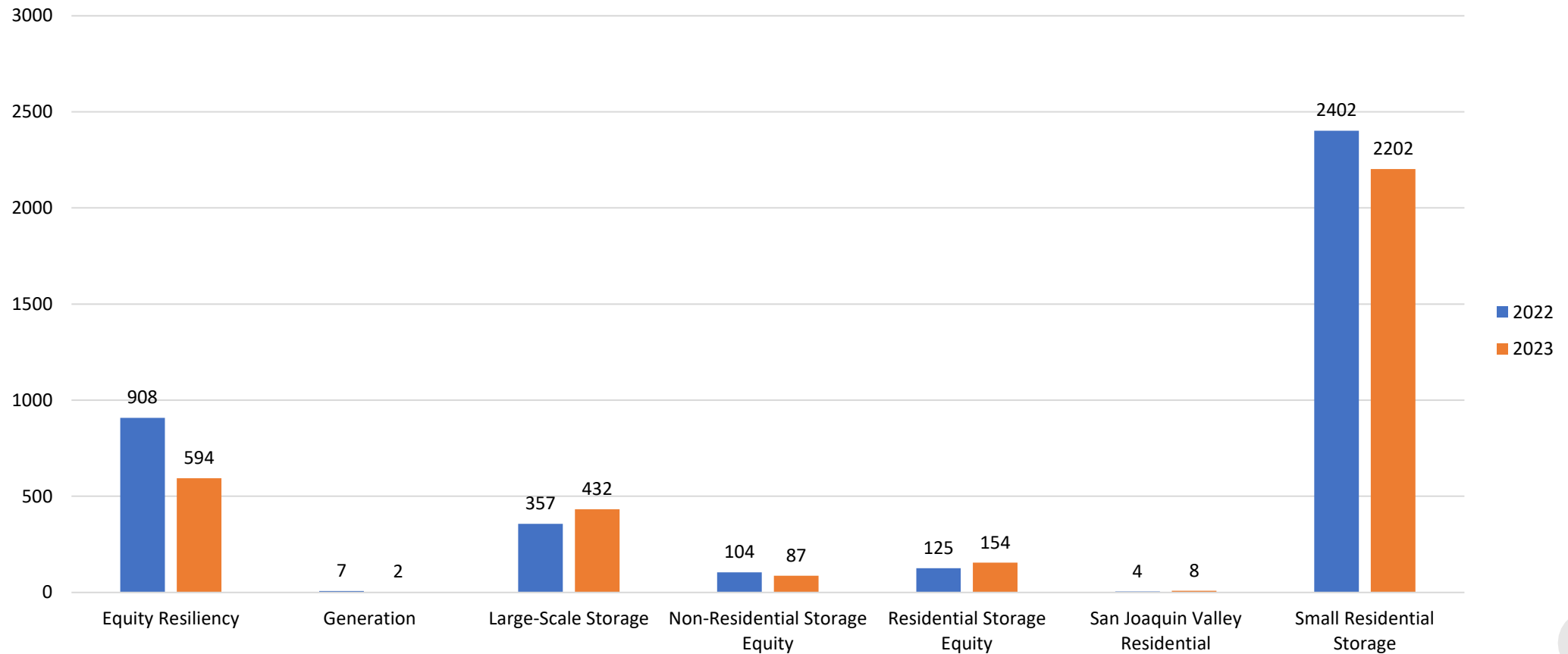
Program Metrics

Data: 2022 – December 8, 2023



SELF-GENERATION
INCENTIVE PROGRAM

Cancellations by Year



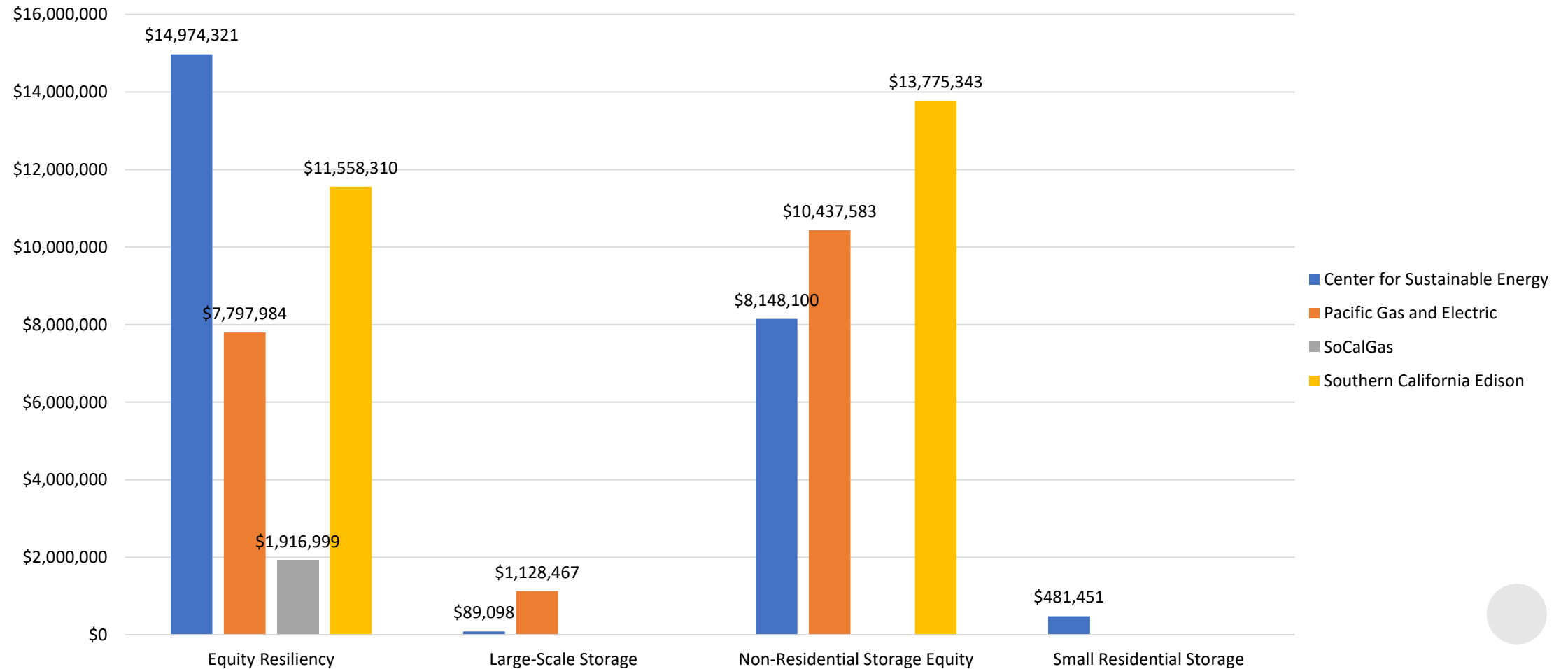
Program Metrics

Data: 2022 – December 8, 2023



SELF-GENERATION
INCENTIVE PROGRAM

Waitlist



Program Metrics

As of December 11, 2023



| Budget Category | CSE | SCE | SCG | PG&E |
|------------------------------------|----------|--------------|--------------|--------------|
| Large-Scale Storage | Waitlist | Step 5 | Step 5 | Waitlist |
| | | \$712,461 | \$1,122,688 | |
| Small Residential Storage | Waitlist | Step 7 | Step 7 | Step 7 |
| | | \$3,044,413 | \$1,649,694 | \$2,052,810 |
| Residential Storage Equity | Waitlist | Open | Open | Open |
| | | \$2,672,058 | \$940,424 | \$17,980,301 |
| Non-Residential Storage Equity | Waitlist | Waitlist | Open | Waitlist |
| | | | \$2,721,559 | |
| Equity Resiliency | Waitlist | Waitlist | Waitlist | Waitlist |
| | | | | |
| San Joaquin Valley Residential | | Open | | Open |
| | | \$4,193,600 | | \$48,800 |
| San Joaquin Valley Non-Residential | | Open | | Open |
| | | \$120,000 | | \$120,000 |
| Generation | Waitlist | Open | Open | Open |
| | | \$33,787,798 | \$11,688,395 | \$33,368,904 |

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

All CSE budgets are in a waitlist status pending resolution to their motion to fully fund the program

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

Program Metrics



Questions?





SELF-GENERATION
INCENTIVE PROGRAM

Regulatory Updates

Ron Moreno – PG&E



Regulatory Updates



Annual Budget Tier 1 Advice Letter

- Per Decision 21-13-031, the SGIP Program Administrators are required to file a Tier 1 Advice Letter no later than January 31st of each year.
- As part of the Advice Letter, the PAs are required to report on the status of all budget categories, including any forfeited funds and any accrued interest.
 - Starting on December 31, 2022, all accumulated interest will be allocated to the SGIP Equity Resiliency budget



Regulatory Updates



AB209 CPUC Setting Status Conference

On November 14, 2023, the CPUC held a Setting Status Conference. The focus of the Setting Status Conference was on two items:

1. The Center for Sustainable Energy's (CSE) motion filed on October 9, 2023, regarding its budget reconciliation with SDG&E on authorized budget amounts and carryover funding.
2. To hear from parties regarding the structure necessary to create a new statewide program administrator(s) for the Self-Generation Incentive Program (SGIP) that would serve customers of publicly owned utilities.

As part of the conference, the CPUC asked parties for feedback on a series of questions regarding a statewide program administrator for Public Owned Utility customers, with written comments due November 20, 2023.



Regulatory Updates



Advice Letter to Seek an Exception to Service Warranty and Fleet Requirement Obligations

- On October 20th, 2023, CSE, on behalf of the SGIP Program Administrators, filed a Tier 2 Advice Letter, to seek an exemption to the service warranty and fleet requirements for applications affected by the closure of Sullivan Solar Power of America, and the Chapter 7 bankruptcy of Zenernet LLC.
- On November 22, 2023, the CPUC approved the Advice Letter.
 - Applications are moving forward, as long as all other requirements have been met.



Regulatory Updates



PG&E Advice Letter to Seek an Exception for Customers Installing Non-Incentivized Equipment

- On August 22, 2023, PG&E filed a Tier 3 Advice Letter for an exception to the requirement that customers separately meter non-incentivized equipment
 - PG&E filed the Advice Letter as it felt that the language in the SGIP Handbook was ambiguous, and lead to developers installing non-incentivized equipment without metering the equipment, through no fault of their own.
 - The exception is only for applications submitted on or before April 17, 2023.
 - On November 30, 2023, the CPUC approved the Advice Letter



Regulatory Updates



Questions?





SELF-GENERATION
INCENTIVE PROGRAM

Residential Storage Soft Target Cap



Residential Storage Soft Target Cap



What is the Residential Storage “Soft Target” Cap?

- *2.1.1.1 Residential Storage “Soft Target”*

- The SGIP Residential Storage “Soft Target” was incorporated into the program in 2020 pursuant to Decision (D.)20-01-021.
- Decision (D.)20-01-021 ordered the Program Administrators to reserve 50% of the general market small residential budget for customers who meet the following criteria:
 - Live in Tier 3 or Tier 2 High Fire Threat Districts (HFTDs)

AND/OR

- Has had their electricity turned off during two or more discrete Public Safety Power Shutoff (PSPS) events

AND/OR

- Has experienced one PSPS event and one de-energization or power outage from an actual wildfire that occurred on or after January 1, 2017.



Residential Storage Soft Target Cap



What is the Purpose of the Soft Target?

- *2.1.1.1.1 Residential Storage “Soft Target”*
 - Assures incentive funding is available to residential customers who are most likely to benefit from resiliency services provided by storage.
 - Encourages storage developers to target residential customers that meet the HFTD, PSPS and wildfire criteria.



Residential Storage Soft Target Cap

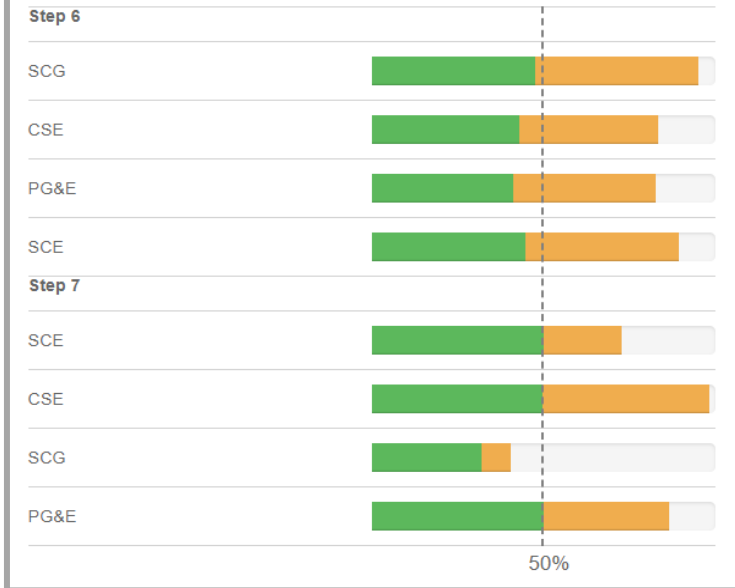


How Does the Residential Storage “Soft Target” Cap Work?

- 2.1.1.1.1 Residential Storage “Soft Target”
- https://www.selfgenca.com/home/program_metrics/
 - When a PA reaches their cap, 50% of the available funding in the general market small residential budget has been reserved by non-resiliency applications.
 - Once reached, the Program Administrator will pause acceptance of SGIP applications from residential customers who do not meet the outlined HFTD, PSPS or wildfire criteria.
 - Acceptance of applications will resume if attrition of applications that do not meet the HFTD, PSPS or wildfire criteria drop below 50% of the funding in that budget step.

Residential Storage Soft Target Cap

Acceptance will be paused for general market residential customers who do not live in a Tier 3 or Tier 2 HFTD, or who did not have their electricity turned off in two or more discrete PSPS events (referred to in this chart as non-resiliency), once reservation requests from such customers have reached 50 percent of that PAs available funds for each residential incentive step. This report includes pending applications submitted today.



Residential Storage Soft Target Cap



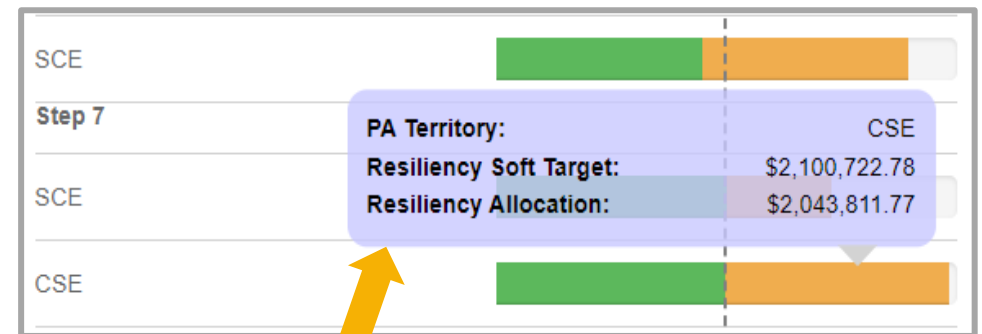
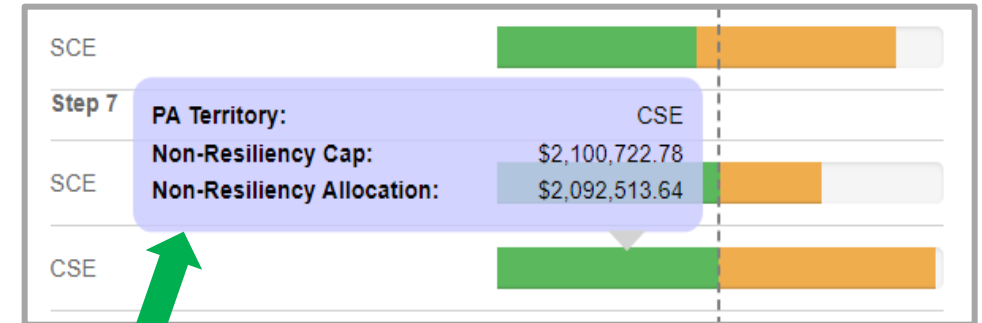
How to Determine Available Funding for the Soft Target

- https://www.selfgenca.com/home/program_metrics/
 - Available funding can be found on the Program Metrics page of the SGIP's website Selfgenca.com.
 - The report will display the non-resiliency cap, the resiliency soft target and their respective funding allocations.
 - Applicants should check the report frequently as funding fluctuates. Funding is provided to applications in the order they are received.

The Green Bar shows the Non-Resiliency Cap and Allocation

50%

The Orange Bar shows the Resiliency Soft Target and Allocation



Residential Storage Soft Target Cap



Frequently Asked Questions

1. What is a resiliency vs non resiliency application?
 - A resiliency application is an SGIP application that meets the following requirements:
 - Live in Tier 3 or Tier 2 High Fire Threat Districts (HFTDs);and/or
 - Has had their electricity turned off during two or more discrete Public Safety Power Shutoff (PSPS) events; and/or
 - Has experienced one PSPS event and one de-energization or power outage from an actual wildfire that occurred on or after January 1, 2017
 - A non-resiliency application does not meet the HFTD, PSPS, or wildfire requirements
2. When will funding become available again?
 - At this time, there is no additional funding expected for the general market residential incentive budget.
3. Why was my application rejected?
 - If a Program Administrator has reached their residential storage cap, the Administrator will pause the acceptance of non-resiliency applications. Acceptance of applications will resume if applications that do not meet the HFTD, PSPS or wildfire criteria drop below 50% of the funding in that budget step.



Regulatory Updates



Questions?





SELF-GENERATION
INCENTIVE PROGRAM

Inspection Sampling Protocol: “Equipment Model” Definition



Inspection Sampling Protocol: “Equipment Model” Definition



SELF-GENERATION
INCENTIVE PROGRAM

SGIP Field Inspection Sampling Protocol:

- The first **2** projects for each developer in both the residential and non-residential customer category will be physically inspected.
- After **2** successful on-site inspections:
 - **1 in 5 projects** may be randomly selected for an on-site inspection.
- After **6** total successful on-site inspections:
 - **1 in 15 projects** may be randomly selected for inspection.
- However, when a developer introduces a new *"equipment model"*, they have not previously installed, it will be inspected for at least **1** application.
 - Upon a successful inspection, the sampling cycle for that *"equipment model"* will resume where **1 in 5 projects** are inspected and so on.



Inspection Sampling Protocol: “Equipment Model” Definition



SELF-GENERATION
INCENTIVE PROGRAM

SGIP Field Inspection Sampling Protocol:

- **Current:**
 - Definition of "Equipment Model":
 - *"...the SGIP-incentivized battery pack, inverter, or other ancillary equipment that affects total system output and operation..."*
 - This definition does not consider developers installing highly configurable AES systems that have identical battery packs and inverters with varying equipment quantities.
 - Result:
 - Developers installing these highly configurable systems may not be reaping the benefits of the inspection sampling protocol.

Examples:

- Tesla Megapack products:
 - 147 unique configurations
- Sungrow PowerTitan series:
 - 164 unique configurations
- Fortress Power eSpire Mini series:
 - 8 unique configurations
- and More!

According to the SGIP Public Equipment List

Inspection Sampling Cycle:

1. After 2 successful on-site inspections:
 - a. 1 in 5 projects are inspected.
2. After 6 total successful on-site inspections:
 - a. 1 in 15 projects are inspected.

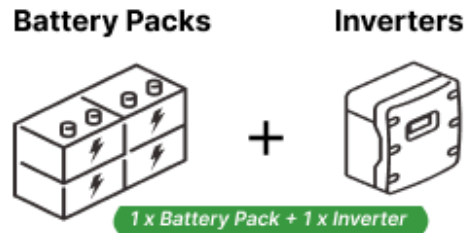


Inspection Sampling Protocol: “Equipment Model” Definition



SELF-GENERATION
INCENTIVE PROGRAM

Equipment Model #1



Equipment Model #2



Equipment Model #3



Inspection Sampling:

- **Current:**
 - Based on each equipment model.

Inspecting Sampling Cycle:

1. After **2** successful on-site inspections:
 - a. **1 in 5** projects are inspected.
2. After **6** total successful on-site inspections:
 - a. **1 in 15** projects are inspected.



Inspection Sampling Protocol: “Equipment Model” Definition



SELF-GENERATION
INCENTIVE PROGRAM

SGIP Field Inspection Sampling Protocol:

- **Proposal:**
 - Updating the "Equipment Model" definition to group highly configurable systems or series into **"Family Models"** that have identical equipment (battery packs & inverters) but varying quantities.
 - Inspection sampling would be based on these type of system's **"Family Model"** rather than its unique configuration.
 - *Note: The same sampling cycle from the inspection protocol will still be applied except sampling will be based on the system's family model rather than each unique configuration.*
 - Potential Benefits:
 - Expedite ICF Approval Timelines
 - Reduce Ratepayer Costs for Inspections

Inspecting Sampling Cycle:

1. After 2 successful on-site inspections:
 - a. 1 in 5 projects are inspected.
2. After 6 total successful on-site inspections:
 - a. 1 in 15 projects are inspected.



Inspection Sampling Protocol: “Equipment Model” Definition

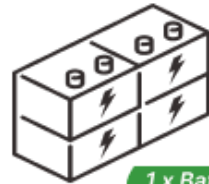


SELF-GENERATION
INCENTIVE PROGRAM

Family Model

Battery Packs

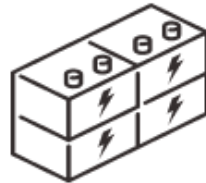
Inverters



+



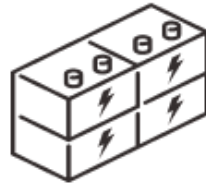
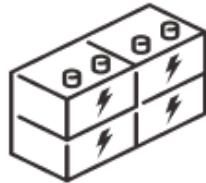
1 x Battery Pack + 1 x Inverter



+



2 x Battery Packs + 1 x Inverter



+



3 x Battery Packs + 2 x Inverters

Inspection Sampling:

- **Current:**
 - Based on each unique configuration.
- **Proposal:**
 - Based on the system's "Family Model".

Note: PAs will still be verifying the system's unique model in the application documentation.

Inspection Sampling Protocol: Changing “Equipment Model” Definition



SELF-GENERATION
INCENTIVE PROGRAM

Questions?





SELF-GENERATION
INCENTIVE PROGRAM

Measurement & Evaluation: Data Collection Challenges



SGIP MEASUREMENT AND EVALUATION

December 2023 SGIP Quarterly Workshop

PRESENTATION OBJECTIVES

- » Updates on M&E activities
- » Review of preliminary 2021-2022 storage impact evaluation results
- » Updated reporting timelines
 - Discussion of reasons for reporting delays
 - Next steps

2021-2022 SGIP POPULATION

» Program Count

- 1,355 nonresidential
- 35,426 residential

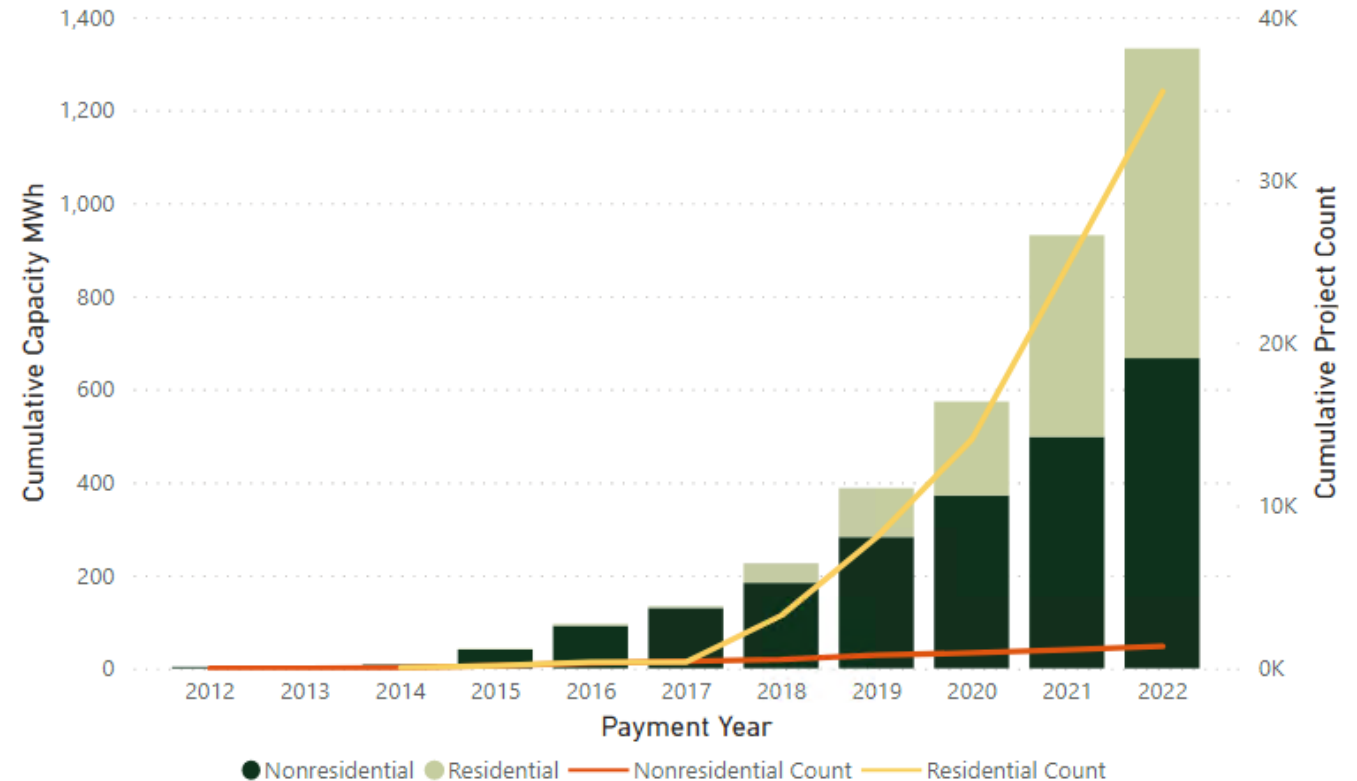
» Program Capacity

- 667 MWh nonresidential
- 666 MWh residential

» PV Attachment

- Non-res 34%
- Residential 97%

Cumulative Program Growth by Payment Year



RESIDENTIAL STORAGE UTILIZATION

Average Hourly Discharge (+) Charge (-) by Month (Weekdays only)

| 2021 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-----------|----|----|----|----|----|----|----|----|-----|------|------|------|------|-----|-----|----|----|-----|-----|----|----|----|----|----|
| January | | | | | | | | | -2% | -4% | -5% | -5% | -3% | -2% | | | 4% | 6% | 3% | 1% | 1% | 1% | | |
| February | | | | | | | | | -3% | -5% | -6% | -5% | -3% | -2% | | | 2% | 6% | 3% | 2% | 1% | 1% | 1% | 0% |
| March | | | | | | | 1% | | -4% | -7% | -8% | -6% | -4% | -2% | 1% | | 2% | 6% | 4% | 3% | 2% | 2% | 1% | 1% |
| April | 1% | 1% | 1% | 1% | 0% | 1% | 1% | | -4% | -8% | -9% | -7% | -4% | -2% | | | 2% | 6% | 4% | 3% | 3% | 2% | 2% | 1% |
| May | 1% | 1% | 0% | 0% | 0% | 0% | | | -2% | -6% | -10% | -11% | -7% | -4% | -2% | 0% | 2% | 8% | 7% | 5% | 3% | 2% | 2% | 1% |
| June | 1% | 1% | 0% | 0% | | | | | -2% | -7% | -12% | -12% | -8% | -3% | -2% | 1% | 5% | 10% | 7% | 5% | 3% | 2% | 2% | 1% |
| July | 1% | 0% | | | | | | | -2% | -6% | -11% | -12% | -9% | -4% | -2% | 1% | 4% | 8% | 9% | 6% | 3% | 2% | 1% | 1% |
| August | 1% | 0% | | | | | | | -1% | -5% | -10% | -12% | -10% | -6% | -3% | 1% | 2% | 6% | 12% | 8% | 4% | 2% | 1% | 1% |
| September | 1% | 0% | 0% | | | | | | -1% | -4% | -9% | -12% | -10% | -6% | -3% | 1% | 2% | 6% | 13% | 8% | 3% | 2% | 1% | 1% |
| October | 1% | 0% | 0% | | | | | | -3% | -7% | -9% | -9% | -6% | -3% | -1% | 0% | 1% | 5% | 9% | 6% | 3% | 2% | 1% | 1% |
| November | 0% | 0% | 0% | | | | | | -1% | -4% | -7% | -9% | -7% | -5% | -3% | 1% | 3% | 5% | 8% | 5% | 3% | 1% | 1% | 1% |
| December | | | | | | | | | -2% | -5% | -7% | -6% | -5% | -3% | | 1% | 3% | 4% | 7% | 4% | 2% | 1% | 1% | |
| 2022 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| January | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | -3% | -7% | -9% | -8% | -6% | -3% | | 0% | 5% | 5% | 8% | 5% | 3% | 1% | 1% | 0% |
| February | 1% | 0% | 0% | 0% | 0% | 0% | 0% | | -6% | -12% | -12% | -8% | -4% | -2% | 1% | 0% | 6% | 6% | 9% | 6% | 4% | 2% | 1% | 1% |
| March | 1% | 1% | 0% | 0% | 0% | 0% | 0% | | -6% | -11% | -13% | -10% | -6% | -3% | | 0% | 5% | 8% | 10% | 6% | 4% | 2% | 2% | 1% |
| April | 1% | 1% | 1% | 1% | 0% | 0% | 1% | | -6% | -12% | -15% | -10% | -5% | -2% | 1% | 0% | 4% | 8% | 11% | 6% | 3% | 2% | 2% | 1% |
| May | 1% | 1% | 1% | 1% | 1% | 1% | 0% | 0% | -2% | -8% | -13% | -15% | -8% | -4% | 0% | 0% | 4% | 8% | 12% | 6% | 3% | 3% | 2% | 2% |
| June | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | -3% | -9% | -15% | -17% | -10% | -3% | | 0% | 5% | 9% | 16% | 7% | 4% | 3% | 2% | 1% |
| July | 1% | 1% | 1% | 1% | 1% | 0% | 0% | 0% | -2% | -7% | -12% | -15% | -11% | -5% | -2% | 0% | 4% | 7% | 13% | 8% | 4% | 3% | 2% | 1% |
| August | 1% | 1% | 1% | 1% | 1% | 1% | 0% | | -6% | -12% | -15% | -11% | -5% | -2% | 1% | 0% | 3% | 6% | 12% | 8% | 4% | 3% | 2% | 1% |
| September | 1% | 1% | 0% | 0% | 0% | 0% | 0% | | -5% | -11% | -14% | -11% | -6% | -3% | 0% | 0% | 4% | 8% | 11% | 7% | 3% | 2% | 1% | 1% |
| October | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | -0% | -3% | -8% | -11% | -11% | -8% | -5% | 0% | 5% | 8% | 9% | 7% | 4% | 2% | 2% | 1% |
| November | 0% | 0% | 0% | 0% | 0% | 0% | 0% | | -5% | -9% | -10% | -8% | -5% | -3% | 0% | 0% | 5% | 7% | 8% | 5% | 3% | 2% | 1% | 1% |
| December | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | -1% | -3% | -7% | -9% | -7% | -5% | -3% | 0% | 6% | 7% | 8% | 4% | 2% | 1% | 0% | 0% |

NON-RESIDENTIAL STORAGE UTILIZATION (2021)

Average Hourly Discharge (+) Charge (-) by Month (Weekdays only)

No PV

| months | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-----------|-----|-----|-----|-----|-----|----|----|----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|-----|-----|-----|
| January | -4% | -3% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -1% | -1% | 0% | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 2% | 4% | -2% | -3% | -1% |
| February | -3% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -1% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 2% | 2% | 1% | 1% | -2% | -2% | -1% |
| March | -3% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | 0% | 0% | -1% | -1% | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | -1% | -1% | -1% |
| April | -3% | -2% | -1% | -1% | 0% | 0% | 1% | 0% | -1% | -1% | -1% | -1% | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | -2% | -2% | -1% |
| May | -3% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | -1% | -1% | -1% | 0% | 0% | 1% | 0% | 0% | 1% | 1% | 2% | 3% | 3% | -2% | -1% | 1% |
| June | -4% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | -1% | 0% | 0% | 0% | 2% | 0% | 0% | 2% | 2% | 1% | 1% | 2% | -2% | -3% | -2% |
| July | -4% | -2% | -2% | -1% | -1% | 0% | 0% | 0% | 0% | -1% | 0% | 0% | 0% | 2% | 0% | 0% | 1% | 2% | 1% | 2% | 2% | -2% | -2% | -2% |
| August | -4% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | -1% | 0% | 0% | 0% | 2% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | -2% | -2% | -2% |
| September | -3% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | -1% | -1% | 0% | 0% | 2% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | -2% | -2% | -1% |
| October | -3% | -2% | -1% | -1% | 0% | 0% | 0% | 1% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | -2% | -2% | 0% |
| November | -2% | -1% | -1% | -1% | 0% | 0% | 0% | 1% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | -1% | -2% | -1% |
| December | -2% | -1% | -1% | -1% | -1% | 0% | 0% | 1% | 0% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | -1% | -1% | -1% |

PV

| months | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-----------|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|-----|-----|
| January | -2% | -1% | -1% | -1% | 0% | 0% | 1% | 1% | -1% | -4% | -4% | -3% | -2% | -1% | -1% | 0% | 2% | 3% | 4% | 3% | 6% | 2% | -5% | -3% |
| February | -1% | -1% | -1% | -1% | 0% | 1% | 2% | 0% | -4% | -5% | -4% | -3% | -2% | -2% | -1% | 0% | 3% | 4% | 4% | 3% | 3% | 1% | -2% | -1% |
| March | -1% | -1% | -1% | -1% | 0% | 1% | 3% | 1% | -4% | -6% | -5% | -4% | -3% | -2% | -2% | -1% | 3% | 3% | 3% | 4% | 3% | 2% | 0% | -1% |
| April | -1% | -1% | -1% | -1% | 0% | 1% | 2% | 0% | -4% | -6% | -4% | -4% | -3% | -2% | -1% | -1% | 3% | 2% | 3% | 5% | 4% | 2% | 0% | 0% |
| May | -1% | -1% | -2% | -1% | 0% | 1% | 1% | -2% | -5% | -6% | -5% | -4% | -3% | -2% | -1% | -1% | 3% | 3% | 3% | 7% | 6% | 2% | -1% | -1% |
| June | -1% | -2% | -1% | -1% | -1% | 1% | 1% | -2% | -5% | -5% | -5% | -3% | -3% | -3% | -1% | -1% | 2% | 3% | 4% | 7% | 7% | 2% | -1% | -1% |
| July | -1% | -1% | -1% | -1% | -1% | 0% | 2% | -1% | -4% | -5% | -5% | -4% | -3% | -3% | -1% | -1% | 2% | 3% | 4% | 7% | 6% | 2% | -2% | -1% |
| August | -2% | -3% | -2% | -2% | -2% | 0% | 1% | 0% | -3% | -4% | -5% | -5% | -3% | -2% | -2% | -1% | 5% | 5% | 4% | 6% | 6% | 2% | -2% | -2% |
| September | -2% | -2% | -2% | -2% | -2% | 1% | 1% | 0% | -3% | -4% | -6% | -6% | -4% | -2% | -2% | -1% | 6% | 7% | 6% | 6% | 4% | 1% | -2% | -1% |
| October | -2% | -2% | -2% | -2% | -1% | 1% | 1% | 1% | -3% | -5% | -6% | -6% | -4% | -2% | -2% | -1% | 6% | 7% | 7% | 5% | 4% | 1% | -2% | -1% |
| November | -1% | -1% | -1% | -1% | 0% | 1% | 2% | 0% | -4% | -6% | -7% | -6% | -4% | -2% | -1% | 0% | 6% | 6% | 5% | 4% | 4% | 1% | -1% | -1% |
| December | -1% | -1% | -1% | -1% | -1% | 0% | 1% | 1% | -2% | -5% | -5% | -5% | -3% | -2% | -1% | 0% | 5% | 4% | 3% | 3% | 4% | 1% | -1% | -1% |

NON-RESIDENTIAL STORAGE UTILIZATION (2022)

Average Hourly Discharge (+) Charge (-) by Month (Weekdays only)

No PV

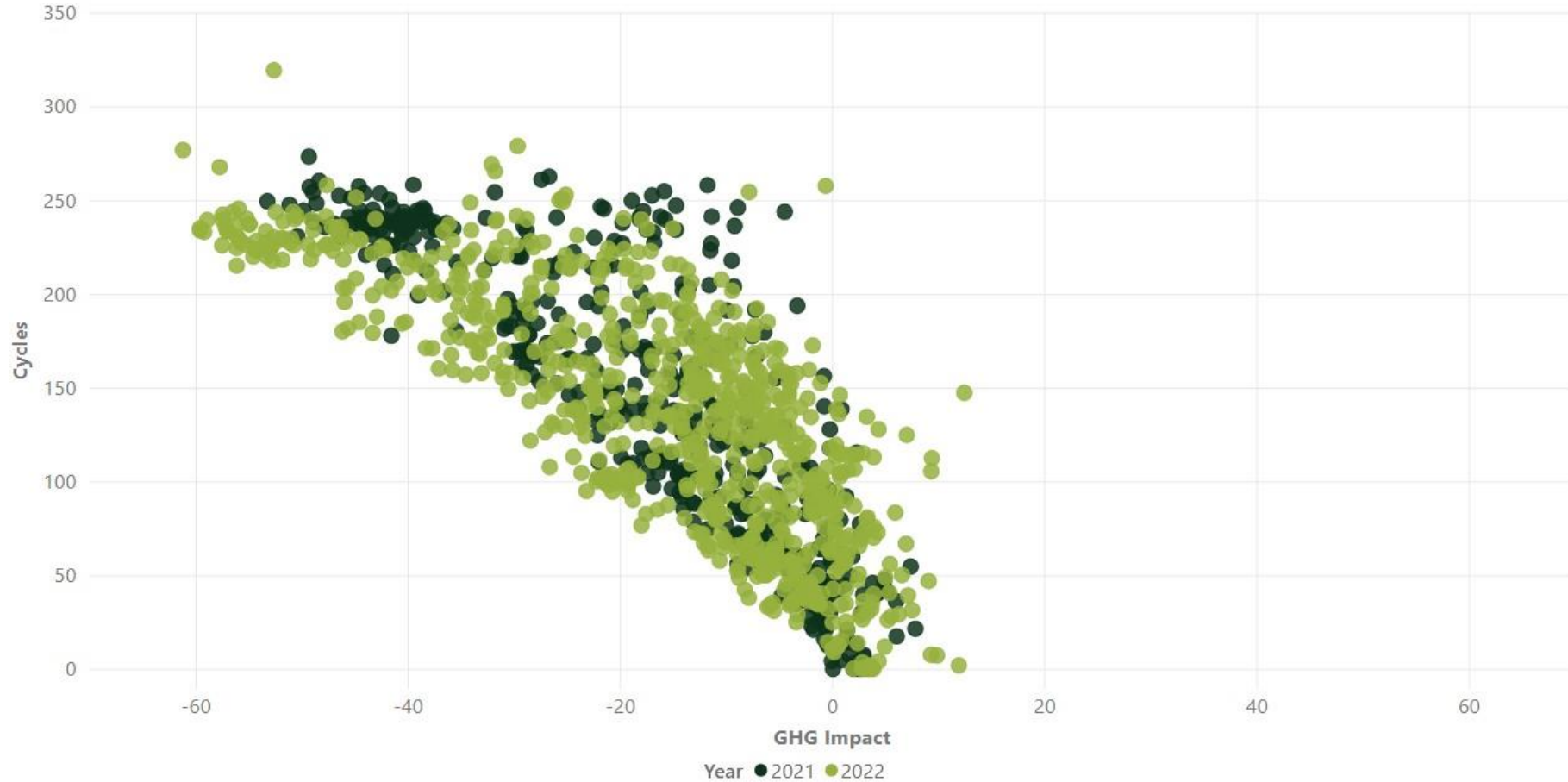
| months | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-----------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|-----|-----|-----|
| January | -2% | -1% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -1% | -1% | -1% | | | | | 1% | 1% | 1% | 1% | 2% | -2% | -2% | -1% |
| February | -2% | -1% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -1% | -1% | -1% | | | | | 1% | 1% | 1% | 1% | 2% | -2% | -1% | -1% |
| March | -2% | -1% | -1% | -1% | -1% | 0% | 0% | 1% | -1% | -1% | -1% | -1% | | | | | 1% | 1% | 1% | 2% | 2% | -2% | -1% | -1% |
| April | -2% | -1% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -2% | -2% | -1% | -1% | -1% | -1% | | 1% | 1% | 1% | 2% | 2% | -2% | -2% | -1% |
| May | -3% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -1% | -1% | -1% | -1% | | -1% | -1% | 1% | 1% | 1% | 2% | 2% | -2% | -2% | -2% |
| June | -3% | -2% | -2% | -1% | -1% | 0% | 0% | -1% | -1% | -1% | -1% | 0% | | -1% | 0% | 0% | 2% | 2% | 2% | 2% | 3% | -2% | -3% | -3% |
| July | -3% | -2% | -2% | -2% | -1% | -1% | 0% | -1% | -1% | -1% | -1% | -1% | 0% | | 0% | 0% | 2% | 2% | 2% | 2% | 3% | -2% | -2% | -2% |
| August | -3% | -2% | -2% | -2% | -1% | -1% | 0% | 0% | -1% | -1% | -1% | | | -1% | 0% | 0% | 2% | 2% | 2% | 2% | 2% | -2% | -2% | -2% |
| September | -3% | -2% | -2% | -2% | -1% | -1% | 0% | 0% | -1% | -1% | -1% | 0% | 0% | 0% | 0% | 0% | 2% | 2% | 2% | 2% | 2% | -2% | -2% | -2% |
| October | -2% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -1% | -1% | -1% | -1% | -1% | -1% | | 2% | 2% | 2% | 1% | 2% | -2% | -1% | -1% |
| November | -3% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | -1% | -1% | -1% | -1% | -1% | -1% | -1% | | 2% | 2% | 2% | 1% | 2% | -2% | -1% | -1% |
| December | -3% | -2% | -1% | -1% | -1% | -1% | 0% | 0% | -1% | -1% | -1% | -1% | -1% | -1% | -1% | | 2% | 2% | 2% | 2% | 2% | -1% | -1% | -1% |

PV

| months | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-----------|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|-----|-----|
| January | -1% | -1% | -1% | -0% | -0% | 0% | 2% | 2% | -2% | -6% | -7% | -6% | -5% | -3% | -2% | -1% | 5% | 6% | 5% | 4% | 4% | 1% | -1% | -0% |
| February | -1% | -1% | 0% | 0% | 0% | 0% | 2% | 1% | -4% | -7% | -7% | -7% | -5% | -3% | -3% | -1% | 4% | 6% | 6% | 5% | 5% | 1% | -1% | |
| March | -1% | -1% | -1% | -0% | 0% | 0% | 2% | 1% | -3% | -5% | -7% | -7% | -5% | -4% | -3% | -1% | 4% | 4% | 5% | 5% | 5% | 2% | | |
| April | -0% | -0% | -0% | -0% | 0% | 0% | 2% | 1% | -3% | -5% | -7% | -7% | -5% | -4% | -3% | -1% | 3% | 3% | 4% | 6% | 6% | 2% | | |
| May | -1% | -0% | -0% | -0% | 0% | 1% | 2% | 0% | -4% | -6% | -7% | -7% | -4% | -4% | -3% | -2% | 4% | 3% | 4% | 7% | 7% | 2% | -1% | |
| June | -2% | -2% | -1% | -1% | -0% | 1% | 1% | -2% | -4% | -6% | -6% | -5% | -4% | -3% | -2% | -1% | 5% | 4% | 5% | 7% | 7% | 2% | -1% | -1% |
| July | -1% | -1% | -2% | -1% | -1% | 0% | 1% | -2% | -4% | -5% | -6% | -6% | -4% | -3% | -2% | -1% | 4% | 4% | 5% | 8% | 7% | 3% | | -1% |
| August | -1% | -1% | -2% | -2% | -1% | 0% | 1% | -1% | -4% | -6% | -7% | -7% | -4% | -3% | -2% | -1% | 4% | 6% | 7% | 9% | 8% | 1% | -1% | -1% |
| September | -2% | -2% | -1% | -1% | -1% | 0% | 0% | 0% | -3% | -6% | -7% | -7% | -5% | -4% | -2% | -1% | 6% | 6% | 7% | 8% | 7% | 2% | -1% | -1% |
| October | -1% | -1% | -1% | -2% | -1% | 0% | 1% | 1% | -2% | -5% | -7% | -8% | -6% | -4% | -3% | -1% | 5% | 7% | 8% | 7% | 6% | 1% | -2% | -1% |
| November | -1% | -1% | -1% | -1% | -0% | 0% | 1% | 0% | -4% | -6% | -7% | -6% | -4% | -3% | -2% | -1% | 6% | 6% | 5% | 5% | 5% | 1% | -1% | |
| December | -1% | -1% | -1% | -0% | -1% | 0% | 1% | 1% | -3% | -6% | -7% | -6% | -4% | -2% | -1% | | 6% | 5% | 4% | 4% | 4% | 1% | -2% | |

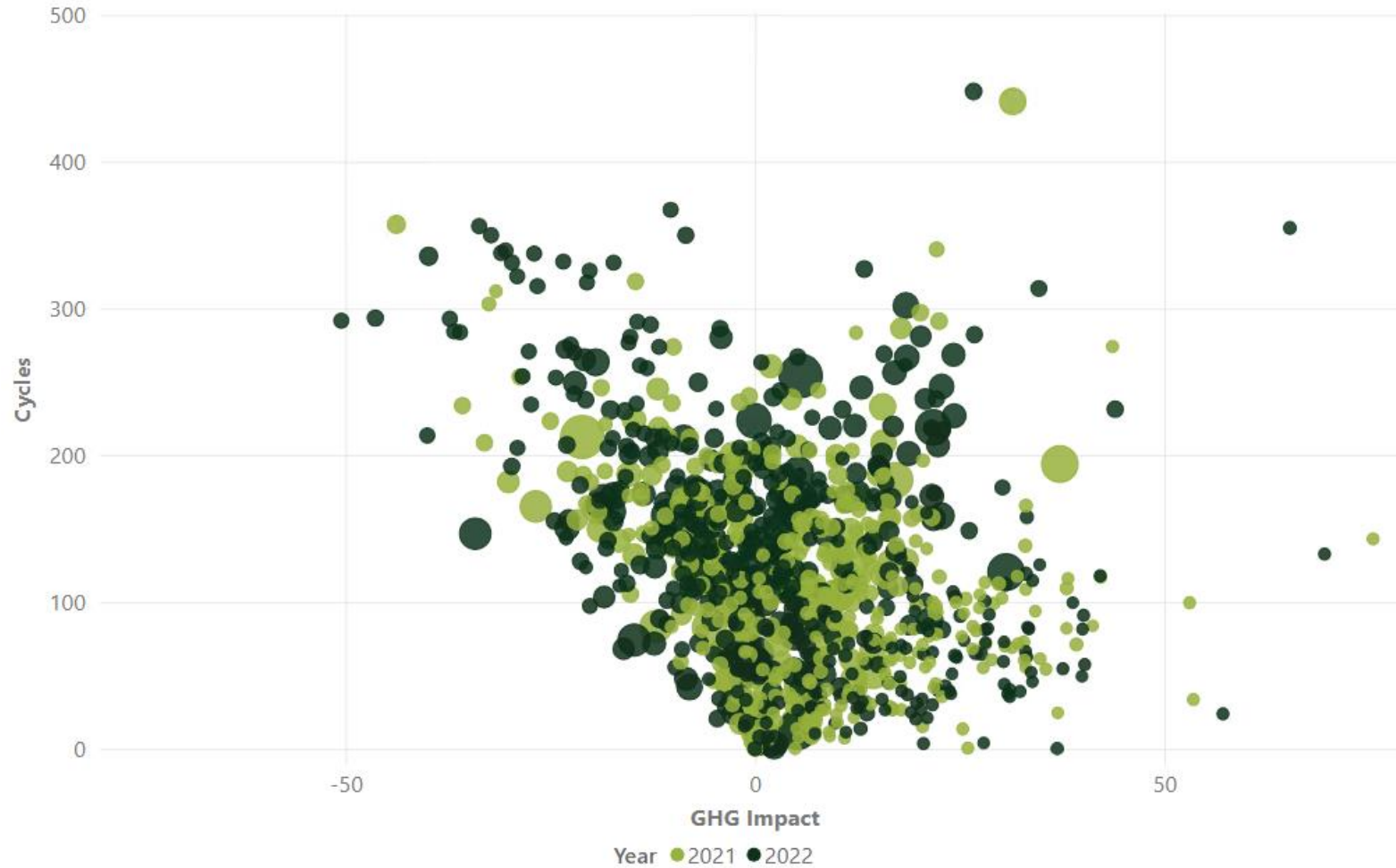
RESIDENTIAL GHG IMPACTS

Project Emissions reductions (-) increases (+) by Calendar Year



NON-RESIDENTIAL GHG IMPACTS

Project Emissions reductions (-) increases (+) by Calendar Year



UPDATED REPORTING TIMELINES

- » Impact evaluations help measure program's successes and opportunities for improvement
 - Can't do this without support from manufacturers, project developers, and installers
- » 2021-2022 Impact Evaluation Report supposed to be finalized 11/17/2023
 - Generation impacts are being finalized
 - Nonresidential storage impacts are being finalized
 - **Significant gaps in residential storage data have forced delays**
 - Powerwall (~70% of residential program composition) metered data significantly under-represented currently. Working to remedy this.
- » Optimistic a final report can be completed early Q1 of 2024 if remaining residential metered data is delivered before end of year



**THANK
YOU**

 **VERDANT**

Program Metrics



Questions?





California Public
Utilities Commission

Self-Generation Incentive Program M&E Data Collection

December 15, 2023

Energy Division



SGIP data collection needs

Verdant presented the issue of delayed data collection and pain points connecting SGIP applications to metered data.

SGIP is required to complete these evaluations by Commission Decision and use them as the basis to ensure adherence to program rules. The SGIP Handbook does include requirements for data provision, but targeted at Developers.

There are limited pathways within SGIP to effectively bridge how a Developer may submit the application and carry out project development, but the Manufacturer has the system data that the Evaluator needs.

Infractions within the SGIP Handbook

- "If a Developer does not provide information within requested timeframe, they will receive an infraction. Any Developer with more than two infractions are subject to a six-month suspension.
- For any new residential fleet that reports increased GHG emissions for two consecutive six-month periods, the Developer will be suspended for six months or until verified to be reducing GHG emissions, whichever is later. During which time, the Developer will also be required to bi-annually submit GHG emissions data for all projects in fleet until verified to be reducing GHG emissions.
- New Developers verified as having increased GHG emissions for submitting less than 90% of the meters of new fleet may be suspended for one year."

(pg. 106)

Alternative paths – seeking input

- Create an annual deadline for data submission – i.e. a June cutoff
 - To ensure timely reporting
- Add manufacturers to the 'participant' list in SGIP required to submit operational and performance data
 - To ensure comprehensive data submission
- Require developers to confirm registration of SGIP application code with manufacturer
 - To close the loop on confidential information sharing
- Add Manufacturer infractions alongside existing developer infractions
 - Infraction could include suspension from verified equipment lists or other participation in the program



SELF-GENERATION
INCENTIVE PROGRAM

Questions?





SELF-GENERATION
INCENTIVE PROGRAM

General Q & A





SELF-GENERATION
INCENTIVE PROGRAM

Thank You

