Self-Generation Incentive Program (SGIP)

Quarterly Workshop

Friday, March 15, 2019 PG&E's Pacific Energy Center, San Francisco, California

Hosted by Pacific Gas & Electric Company (PG&E), SoCalGas, Southern California Edison (SCE), and Center for Sustainable Energy (CSE)









SoCalGas: Jason Legner, Laura Crump, Adrian Martinez

CSE: Rebecca Feuerlicht, Andi Woodall, John Woolsey

SCE: Jim Stevenson

PG&E: Brian Bishop, Ron Moreno

Energy Solutions: Andrea Vas, Jason Huffine









Agenda

- Welcome and Introductions PG&E
- Safety and Housekeeping PG&E
- Program Adoption Data SoCalGas
- Application Streamlining Advice Letter SCE
- Application Streamlining Petition For Modification SoCalGas
- CA Manufacturer Update CSE
- Virtual Inspections PG&E
- Database Update Energy Solutions
- Equipment Verification Worksheet -- CSE
- Q&A / Contractor & Stakeholder Engagement All









Safety & Housekeeping

Safety

- CPR Trained?
- Earthquake duck and cover
- AED
- Emergency Exits

Housekeeping

- Bathrooms
- Garbage, recycling
- Beverages









Self-Generation Incentive Program Statistics (as of 3/11/19)

Launched in 2001 the SGIP is the longest running generation incentive program in the country. Since inception SGIP has supported the deployment of behind the meter distributed generation technologies through the collection and management of rate payer funds:

Technology	Incentives Paid to-date	MW Deployed	
Generation	\$819,279,436.80	658.9 MW	
Storage	\$120,940,283.90	119.7 MW	

*Includes current payment in process projects

Promoting 778.6 MW of distributed generation technologies through incentive payments totaling over \$940M.





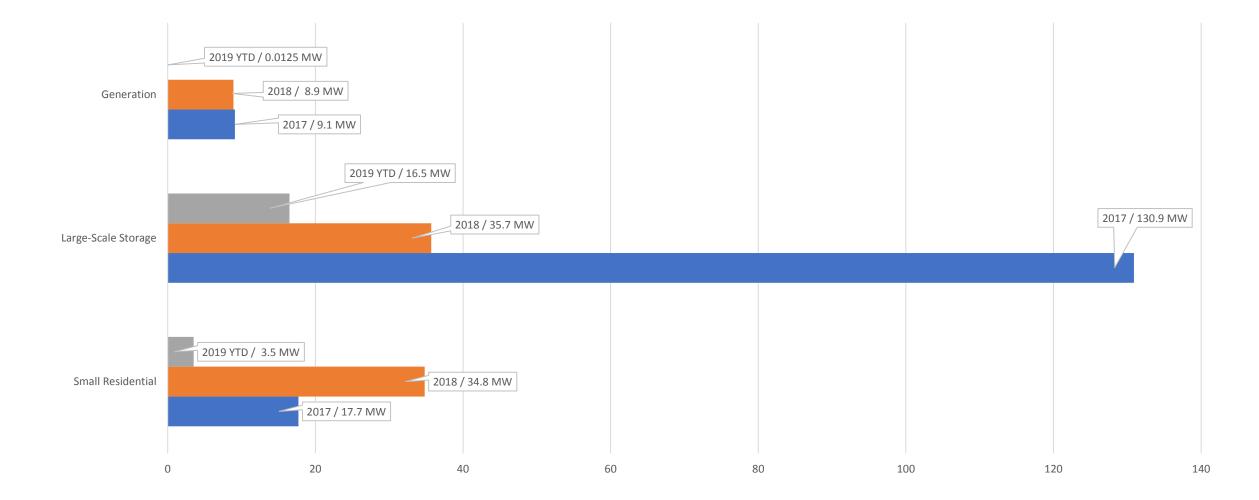




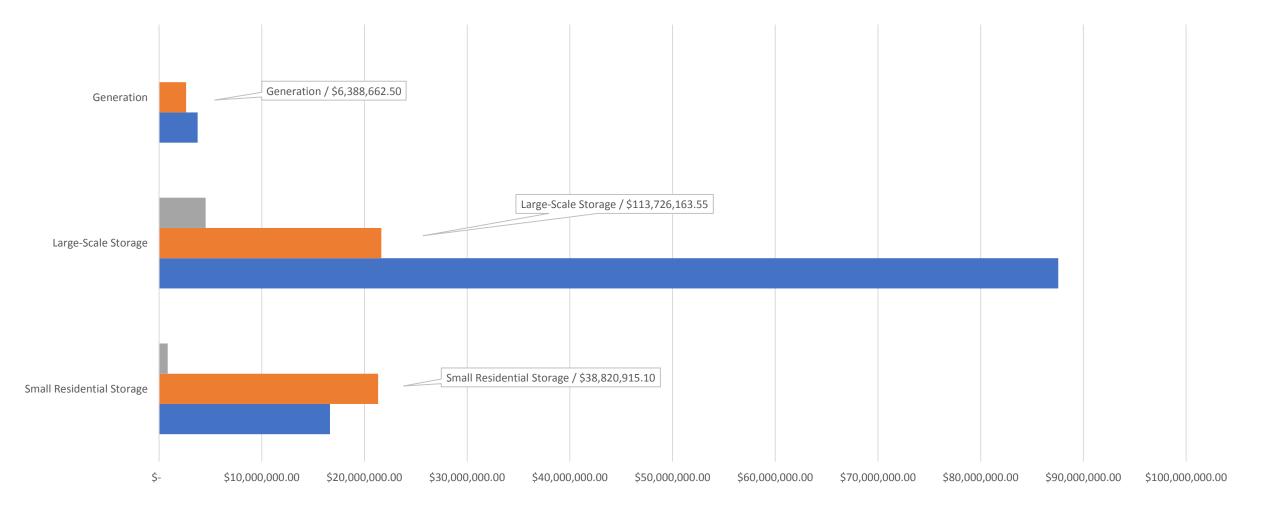
Incentive Step Tracker by Program Territory (as of 3/13/19)

	La	arge Scale Storage		
	CSE	SCE	SCG	PG&E
Step Status	Open	Open	Open	Open
Active Step	3	3	3	2
Available Funds	\$13,748,865.29	\$37,624,982.81	\$8,093,078.89	\$22,548,167.49
	Smal	Il Residential Storage		
	CSE	SCE	SCG	PG&E
Step Status	Waitlist	Open	Open	Open
Active Step	5	4	3	4
Available Funds	\$1,022.18	\$1,606,968.39	\$250,228.98	\$893,880.06
	Resic	dential Storage Equity		
	CSE	SCE	SCG	PG&E
Step Status	Open	Open	Open	Will Open Soon
Active Step	3	3	3	3
Available Funds	\$405,924.66	\$1,184,407.18	\$276,147.64	\$1,227,909.39
	Non-Re	sidential Storage Equity		
	CSE	SCE	SCG	PG&E
Step Status	Open	Open	Open	Will Open Soon
Active Step	3	3	3	3
Available Funds	\$3,653,321.99	\$10,948,233.85	\$2,485,328.76	\$11,051,184.57
		Generation		
	CSE	SCE	SCG	PG&E
Step Status	Open	Open	Open	Open
Active Step	1	1	1	1
Available Funds	\$4,612,305.12	\$6,480,041.91	\$837,660.39	\$18,010,242.15

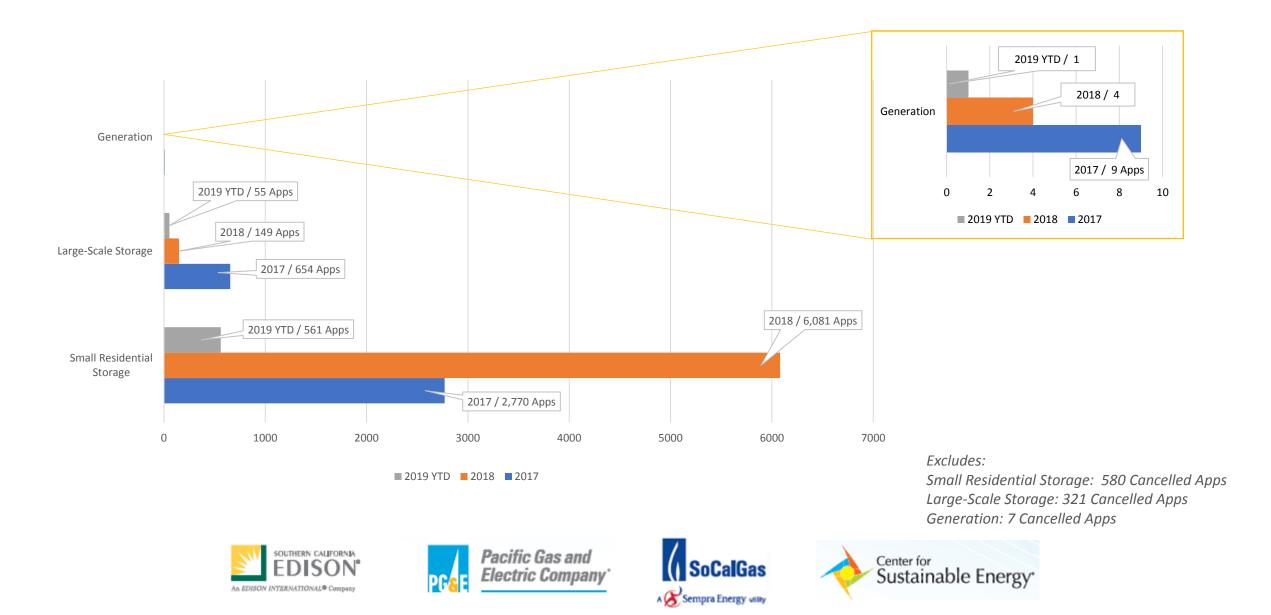
SGIP: Capacity (Applied/Installed) by Program Year (Data as of 03/11/2019)



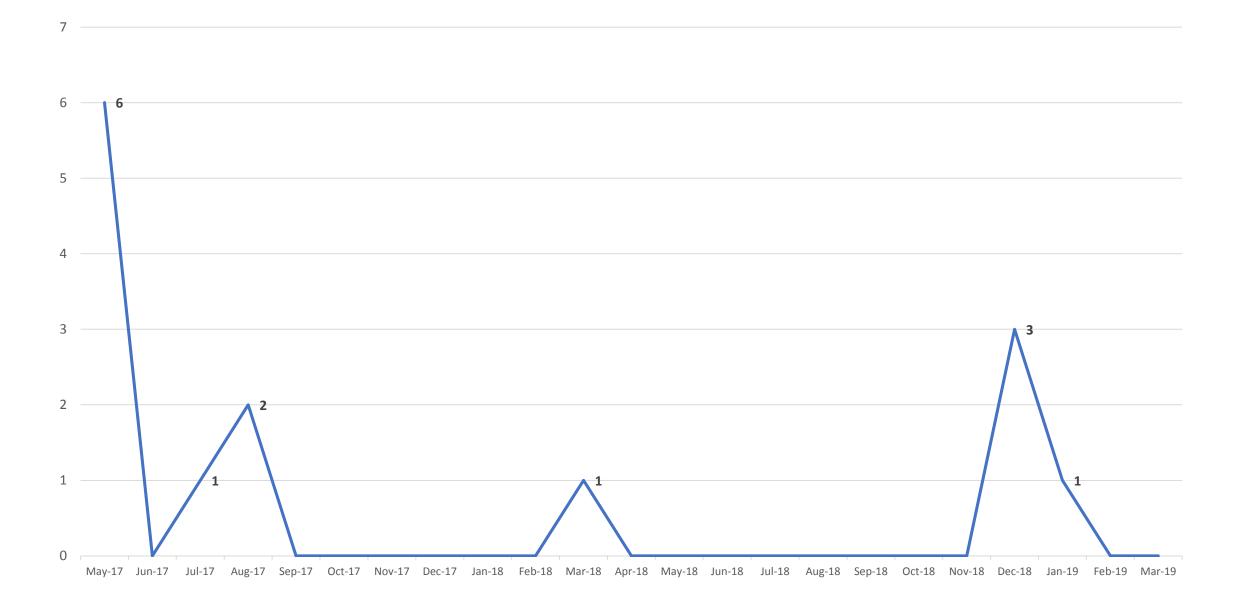
SGIP: Incentives (Reserved/Paid) by Program Year (Data as of 03/11/2019)



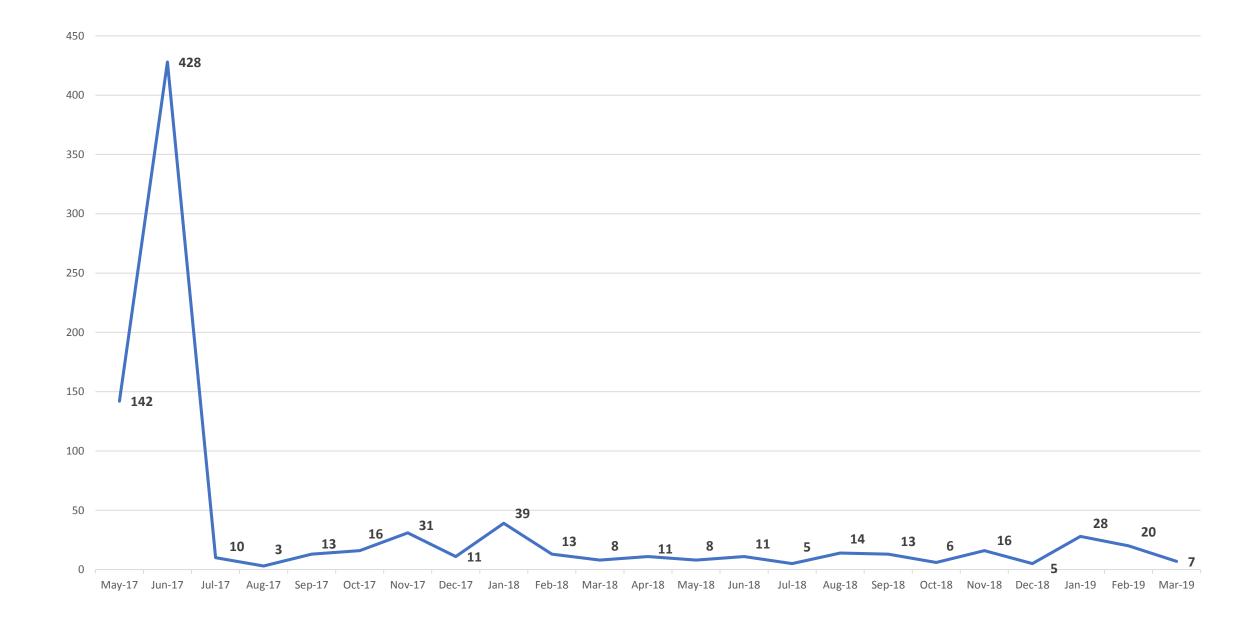
SGIP: Number of Applications by Program Year (as of 03/11/2019)



Statewide Trends (Applications)- GENERATION (Data as of 03/11/2019)

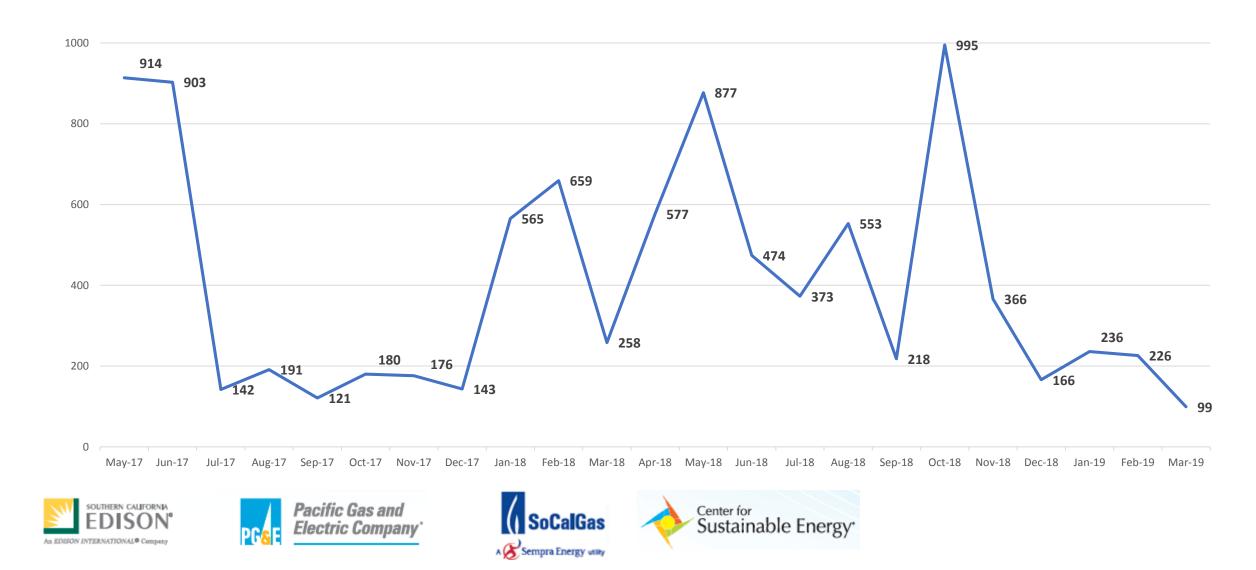


Statewide Trends (Applications) - LARGE SCALE STORAGE (Data as of 03/11/2019)

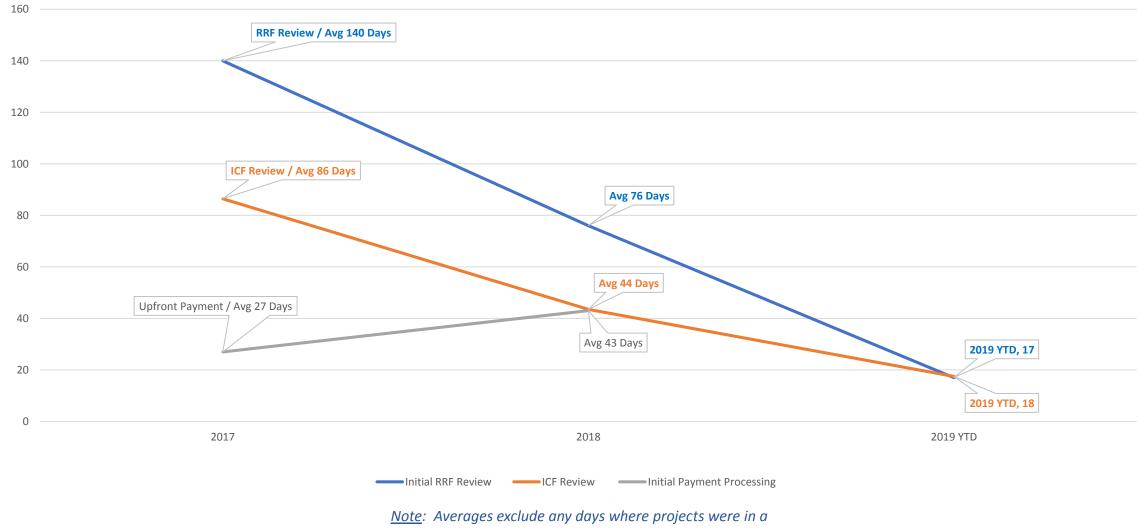


Statewide Trends (Applications)- RESIDENTIAL STORAGE (Data as of 03/11/2019)

1200



SGIP: PA Processing Times 2017 to-date (Data as of 03/11/2019)



"suspended" status pending participant response

- SGIP PAs held the Q3 2018 quarterly workshop to discuss the SGIP application process and solicit feedback from participants and stakeholders.
- Based on this feedback, the SGIP Working Group (WG) have identified a number of application requirements that could be streamlined or eliminated to improve the operational efficiency of the Program.
- The SGIP PAs submitted as Advice Letter to propose modifications to the SGIP Handbook to improve and streamline the SGIP application process, reduce SGIP administration costs, and provide clarifying amendments.
- Advice letter was filed on March 11, 2019.
 - ≻20 day protest period
 - Effective date 30 calendar days from date of submittal









SGIP EQUIPMENT LIST

- ➢SGIP energy storage equipment list could aid in streamlining and simplifying the application process.
- ➢ To institute this change, a public equipment list will require the authorization of equipment manufacturers to release information.
- May include the following information for their systems: 1) Manufacturer Name; 2) Model ID; 3) Storage Capacity (kWh AC or DC), 4) Rated Capacity (kW); 5) Discharge Duration; 6) Inverter Continuous Power Output; and 7) CEC Inverter Efficiency
- Equipment that has been technically reviewed and accepted by the PAs and authorized for release by the manufacturer will be included on the public list.
- Systems not previously reviewed, this will trigger a statewide technical review of the equipment to be considered for the public equipment list as part of the initial RRF Technical Review.
- Publicly available the SGIP energy storage equipment list will provide a better customer experience and improve administrative efficiency.









MODIFY ENERGY STORAGE COMPONENT SPECIFICATION REQUIREMENT

- Currently Manufacturer equipment specifications for all major components of the system are required to be submitted at Reservation Request (RRF).
- ➢ If the proposed SGIP equipment list is approved, then to further streamline the Reservation Request application process, it will not be necessary to upload manufacturer specifications of equipment already reviewed by the Technical Working Group and included in the public list of equipment.
- ➢ If a project's equipment has not yet been reviewed by the SGIP Technical Working Group, or the manufacturer has not authorized release of the information as part of the public SGIP energy storage equipment list, then the energy storage and related component specifications will continue to be required to be provided as part of the project's RRF package.









• ALLOW FOR VIRTUAL INSPECTIONS – RESIDENTIAL PROJECTS

- Allows for virtual inspections to capture information needed to confirm a project is installed according to program requirements.
- \succ If a virtual inspection process is authorized:
 - *An inspector will not be required to visit the site
 - The virtual inspection will be conducted by either the Host Customer, System Owner, Applicant, or Developer of the project and provide a video and photos of the site.
 - Eligibility for virtual inspections will be based on the revised Energy Storage Post-Installation Inspection and Discharge Testing Protocol, and requirements for execution will be based on the revised Field Inspection Sampling Protocol.
 - PAs will create detailed how-to documentation and/or examples to support this process, which will be maintained on the SGIP website (www.selfgenca.com)
- Regardless of these changes to the Field Inspection Protocol, the PAs retain the right to perform a physical on-site inspection for any and all projects requesting an incentive.









• REMOVE REQUIREMENT FOR COPY OF CHECK SUBMITTED WITH APPLICATION

Currently Applicants are required to upload a copy of their application fee check at the time of SGIP RRF submittal.

- Because the Applicant must submit their application fee check within seven (7) calendar days of assignment to an incentive step, the SGIP PAs have found that requiring a copy of the application fee check with the RRF documentation is unnecessarily burdensome for applicants and PAs.
- Removal of this requirement will streamline the process for applicants, as well as reduce review and processing time for the PAs.
- ➢Application fee deadlines will remain unchanged, and the application fee check must still be mailed within seven (7) days of the RRF documentation being accepted and the application assigned to an incentive step.









• RESIDENTIAL CUSTOMER OPT-OUT OF NON-CRITICAL EMAIL COMMUNICATIONS

Host Customer is the exclusive incentive reservation holder.

- Applicant is designated as the person or entity that is responsible for completing and submitting the SGIP Application and typically serves as the main point of contact for the SGIP PA throughout the application process.
- Host Customer may not find it necessary to receive all communications where the application process is managed by the Applicant.
- For residential projects, oftentimes the Applicant resolves requests related to missing information and/or any clarifying information without requiring additional input from the Host Customer.
- At RRF, the Host Customer will have an "opt-out" option to avoid receiving non-critical project information emails.
- >A list of non-critical and critical communications on the SGIP website (selfgenca.com)
- Host Customer will always receive "critical" communications, which are communications pertinent to the active status of their project reservation and/or other significant changes to their reservation.









INCLUDE PROJECT COST AFFIDAVIT AND PROJECT COST BREAKDOWN IN THE INCENTIVE CLAIM FORM

Currently each document is required to be completed and uploaded to the SGIP database as part of the Incentive Claim Form (ICF).

- ➤A new panel will be added in the database to allow the Applicant to enter the eligible project cost breakdown during the Incentive Claim Process.
- The total cost values as well as affidavit language would be consolidated into the existing ICF.
- Signature on the ICF would attest the total project costs.
- Eliminating the separate Project Cost Affidavit and Project Cost Breakdown Worksheet documents and incorporating the information into the existing ICF framework will reduce the number of required documents and signature requirements from the Host Customer/System Owner/Applicant and streamline the PA review process.









REMOVE REQUIREMENT FOR 3RD PARTY AUTHORIZATION TO RECEIVE CUSTOMER INFORMATION FORM FOR SYSTEMS ≤ 10kW

- Third party PA does not have access to utility customer account information needed to verify SGIP eligibility criteria, such as peak demand data for system sizing verification.
- ➢An Authorization to Receive Customer Information (LOA) is required as part of the Reservation Request documentation for each project.
- There is usually no need to obtain the LOA form or access historical customer electric consumption and demand data for systems equal to or less than 10 kW that are not subject to system sizing restrictions.
- ➢ PAs retain the ability to request this form on a project-level basis if certain utility account information is needed (*i.e.*, tariff verification and customer site/meter ID verification, etc.).









• REQUIRE THE FINAL MONITORING SCHEMATIC FOR ALL PROJECTS

- ➢A Final Monitoring Schematic is a detailed single line diagram that is required to be submitted at the Incentive Claim stage for projects that are 30 kW or larger and/or for projects paired with and charging 75% from an on-site renewable generator.
- The PAs have found this to be a key document in supporting the engineering review process as it minimizes the need for repeat communications with the Applicant/Host Customer(s) for project information.
- The Final Monitoring Schematic submitted for all projects, regardless of system size or whether they are paired with an on-site renewable generator will enable a more accurate engineering review process with reduced customer touchpoints for clarification.









• EXTENDING THE APPLICATION FEE REFUNDABLE PERIOD FOR 3-STEP PROJECTS

- Application fees are refundable upon completion and verification of the installed SGIP project.
- Currently, for 3-step applications, application fees are non-refundable if the application is cancelled after a Conditional Reservation is issued. (Confirmed Reservation is issued after approval of PPM).
- ➢ For 2-step applications, there is no PPM process, and application fees become nonrefundable after a Confirmed Reservation has been issued.
- With this change, application fees become non-refundable once a Confirmed Reservation is issued for 3-step applications, consistent with the process for 2-step applications.









• CORRECT THE LANGUAGE FOR PDP AUDITS

- The SGIP PAs have the right to perform random audits of a Performance Data Provider (PDP) to ensure accuracy of the data provided.
- The current Handbook language states that the PA will perform random audits of PDP data
- > The intent of this language is to allow the PAs the option to audit a PDP.
- ➢ This will update Section 7.1.5 of the 2017 SGIP Handbook to clarify that the PAs have the option to perform these audits on both a random basis and when there is a reason to question the accuracy of data submissions.









Petition For Modification Streamlining Program

Petition For Modification – Background

- PAs were directed by CPUC to hold quarterly workshops
- Streamlining suggestions for SGIP from industry was collected at the 2018 3rd Quarter SGIP Workshop and reviewed and scoped by PAs
- Items that affected a decision had to filed as a PFM
- Expected filing before end of Q1 2019

Petition For Modification – Items to be filed

1) Remove Application Fee for Residential Projects

- Residential project only
- PA's have noticed growing administrative burden for processing App Fee checks and increased project timelines due to delays related to processing App Fees
- Expedite application review and reduce administrative cost in association of processing these app fee checks

2) Remove Requirement to Submit Building Permit for Energy Storage Projects

- Only applies to Energy Storage projects in IOU territories -- All other projects not in this category will still need to submit permit
- Interconnection already collects building permit upfront and this has become duplicative document in IOUs
- Reduce number of uploads required and reduce administrative cost associated with reviewing

Petition For Modification – Items to be filed

3) Remove Requirement to Submit Copy of Energy Efficiency Audit (EEA)

- All project types
- PAs are no longer required to enforce any EE requirements for SGIP and believe it should no longer be a required document
- Reduce number of uploads required and reduce administrative cost associated with reviewing

SGIP CA Manufacturer Adder Update









CPUC Decision 16-06-055 amended the California Supplier Adder, which provides a 20% incremental adder to the applicable SGIP incentive rate for projects in which the equipment used is manufactured in California. The adder was renamed the California Manufacturer Adder and requires the following qualification:

 An SGIP project is eligible for the California Manufacturer Adder if at least 50% of its capital equipment value is supplied by one California manufacturer.

The SGIP PAs revised the SGIP Handbook to comply with the Decision:

3.1.3.2 Project Equipment Verification

Storage Medium
was interpreted by
the PAs and the
consultant
contracted to
conduct the CA
Manufacturer
reviews (AESC) as
the smallest
functional unit:
battery cell.

Equipment is deemed to be manufactured in California if at least 50% of the value of the capital equipment has been made in a dedicated production line by an approved California Manufacturer. For the purposes of determining eligibility, the SGIP recognizes the following equipment types:

Generation	Energy Storage
Generator/Prime Mover	Storage medium (i.e. battery)
Ancillary equipment	Inverter
	Controller

3.1.3.3 How to Determine Value

Value is based on the capital cost of a single equipment type as listed above. The California Manufacturer supplying capital equipment component(s) with the largest cost percentage is the one whose California credentials will be considered. The largest cost percentage is the total value of the eligible capital equipment.

20% Adder eligibility:

At RRF and PPM Stage:

 At least 50% of equipment costs attributed to one or more CA Manufacturer that is Approved or Pending Approval.

AT ICF:

 At least 50% of equipment costs attributed to SGIP-Approved CA Manufacturer(s)

Project Finance

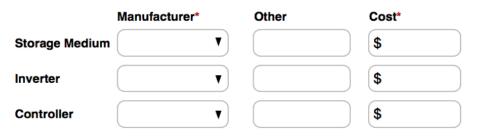


Claiming Eligibility for 20% California Manufacturer Adder?*

To receive the adder, at least 50% of equipment costs must be attributed to an approved SGIP CA manufacturer. The eligible manufacturer must be approved by the ICF stage to retain the adder.

• Yes • No

Equipment Cost Breakdown



Are you, or any affiliated entity, taking an Investment Tax Credit (ITC) for this project?*

ITC as a % of Total Eligible Project Costs *

• Yes • No

Other Incentives Received for this Project



(+) Add Other Incentives (Up to 4)

NOTES

Please refer to the <u>SGIP Handbook</u> for the calculation of Total Eligible Project Cost.

Provide a breakdown of the costs for capital equipment. List all generator/storage equipment, inverter, controller, and ancillary equipment. If you are claiming the CA Manufacturer adder, reference the List of Approved <u>CA Manufacturers</u>. You may select Pending Approval – Other from the Manufacturer dropdown if you believe the manufacturer will be approved by ICF stage.

Report all incentives received from other sources for this project. Categorize those incentives based on whether they were funded from IOU Ratepayer, Non-IOU Ratepayer, or non-ratepayer sources. Refer to the SGIP Handbook for requirements on reporting Other Incentive Sources.

侖

The revised rule resulted in very few energy storage providers being deemed eligible for the adder due to importation of battery cells to California. After discussions with stakeholders regarding the manufacturing process for energy storage units, the Program Administrators filed a Petition for Modification to amend for the adder with the following revisions:

- Allow eligibility for the California Manufacturer Adder if at least 50% of the project's capital equipment value is supplied by <u>one or more</u> California manufacturers
- Replace the Controller as a qualified component with Balance of System for better alignment with the intent of the adder to "ensure the vast majority of value creation occurs in California" (D.16-06-055)
- Create specific definitions for the qualified components

SGIP Handbook Section 3.1.3.2 Revision:

Generation	Energy Storage
Generator/Prime Mover	Storage Medium (i.e. Battery)
Ancillary Equipment	Inverter
	ControllerBalance of System (BOS)

Balance of System, or BOS, is defined as the additional equipment, *i.e.* enclosure or container, monitors and controls, thermal management, and fire suppression, required to operate the Energy Storage system safely and reliably.

<u>A battery energy storage system is a fully integrated system that includes all the BOS, inverters</u> and Storage Medium as a single piece of equipment. The California Solar & Storage Association (CALSSA) provided comments to the Petition for Modification that included the following points:

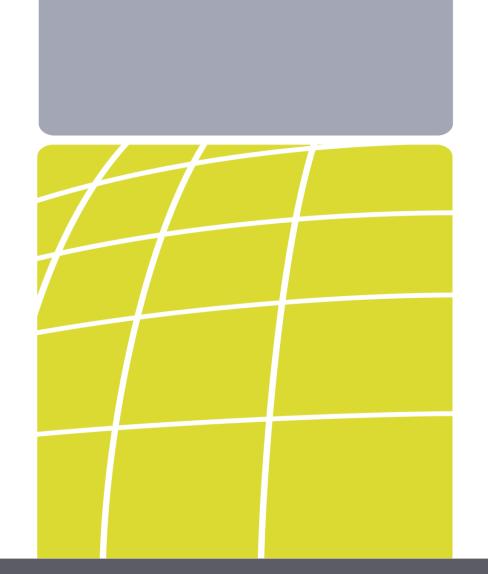
- Lithium battery cell manufacturing is no longer present in California but the manufacturing of the functional battery unit is conducted in the state
- The manufacturing effort of combining individual battery cells into packs and then battery devices is significant and should qualify for the California Manufacturer Adder

CPUC Decision 19-02-006 granted the petition with the following direction:

- The Program Administrators will define and evaluate "energy storage medium" as inclusive of the battery cells, wiring, racks, and other equipment that together form an operable battery unit
- A project can be comprised of multiple CA Manufacturers that can contribute to the 50% capital value threshold.

Next Steps:

- The Program Administrators will file an Advice Letter to adopt the changes in the SGIP Handbook no later than April 2, 2019. Once approved, review of applications will commence.
- SGIP CA Manufacturer Applications may be downloaded here: <u>https://www.selfgenca.com/documents/ca_manufacturer/application</u>. Applications should be emailed to: <u>selfgen@pge.com</u>





Virtual Inspection Presentation

SGIP Quarterly Workshop March 15, 2019

1 – Who may conduct a Virtual Inspection?



A virtual post installation inspection may be conducted by the:

- Host Customer
- System Owner
- Applicant or
- Developer of the project

2 – When may the Virtual Inspection be conducted?



The Virtual Inspection may be completed on any day after the Permission to Operate (PTO) has been issued by the utility's interconnection department.

3 – What will Virtual Inspections Consist of?



Virtual Post Installation Inspections must consist of:

- A continuous video of the project site, battery and other electrical equipment and
- Individual geotagged photos of the project site, battery and other electrical equipment associated with the energy storage system.
 - While taking photos the location settings of the camera should be in the ON position so that each photo will have a location tag attached to it which will be verified by the PAs.

4 – What information must the video and geotagged photos include?



Videos and geotagged photos must include:

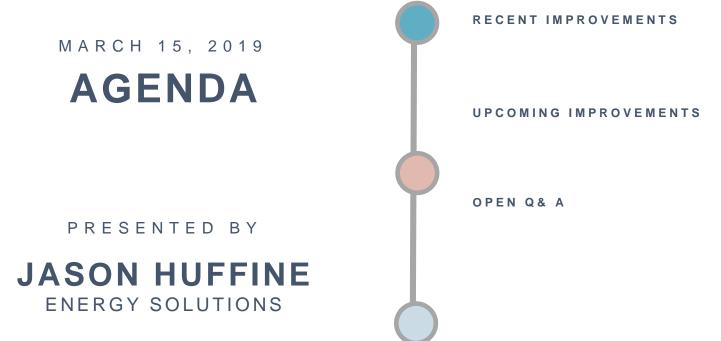
- Street view of the house or building with the address number clearly visible
- Overall layout of the system.
 - If the entire system is not in one place the video and photographs must capture the overall layout of each subsystem, followed up by close-up of each piece of equipment in that subsystem
- Nameplate confirming make and model of the battery
- Nameplate confirming make and model of the inverter (if applicable)
- Serial number of the battery
- Serial number of the inverter
- Equipment display panels showing power, energy, or battery charge status
- Equipment display panels showing power and/or energy for solar PV (if applicable)
- Exterior view of all electrical panels and a view of the inside of each panel.
 - This should include any subpanels, backup loads panels, protected loads panels and main service panel)
- Utility smart meter with the meter ID clearly visible

5 – Thank You!



<u>For Questions Please Contact</u> Dara Salour dsalour@aesc-inc.com (925) 200-0499

SGIP ONLINE DATABASE UPDATE

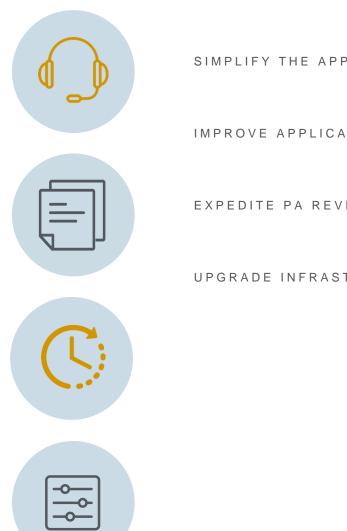






RECENT IMPROVEMENTS

IMPROVEMENT GOALS



SIMPLIFY THE APPLICATION PROCESS

IMPROVE APPLICATION QUALITY

EXPEDITE PA REVIEW TIME

UPGRADE INFRASTRUCTURE



IMPROVEMENT OUTCOMES



APPLICANT SELF-REGISTRATION

ALLOW RENAMING OF AD HOC DOC TITLES



INSPECTION STATISTICS REPORT FOR PAS



IMPROVEMENT OUTCOMES



APPLICANT SELF-REGISTRATION

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INSPECTION STATISTICS REPORT FOR PAS



IMPROVEMENT OUTCOMES



APPLICANT SELF-REGISTRATION

ALLOW RENAMING OF AD HOC DOC TITLES



INSPECTION STATISTICS REPORT FOR PAS



UPCOMING IMPROVEMENTS



REDESIGNED RESOURCES PAGE & FAQ

PROGRAM STREAMLINING:



- ⊘ APPROVED EQUIPMENT LIST
- UPDATED DOCUMENT REQUIREMENTS
- HOST CUSTOMER EMAIL PREFERENCES
- PROJECT COST AFFIDAVIT IN ICF







REDESIGNED RESOURCES PAGE & FAQ

PROGRAM STREAMLINING:



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REDESIGNED RESOURCES PAGE & FAQ

PROGRAM STREAMLINING



- **APPROVED EQUIPMENT LIST**
- **O** UPDATED DOCUMENT REQUIREMENTS
- **HOST CUSTOMER EMAIL PREFERENCES**
- **PROJECT COST AFFIDAVIT IN ICF**







REDESIGNED RESOURCES PAGE & FAQ

PROGRAM STREAMLINING:



- ⊘ APPROVED EQUIPMENT LIST
- UPDATED DOCUMENT REQUIREMENTS
- HOST CUSTOMER EMAIL PREFERENCES
- PROJECT COST AFFIDAVIT IN ICF





QUESTIONS & ANSWERS

THANK YOU

HUFFINE@ENERGY-SOLUTION.COM

Equipment Verification Worksheet

New Equipment Verification Worksheet

Consistent, repeatable documentation for verification of new integrated and paired systems

March 14, 2019

John Woolsey, PE, Senior Engineer

Why use a new worksheet?

- Consistency of equipment verification.
- Consistency of documentation.
- Repeatable process simplifies training of new reviewers when needed.
- Clear expectations for applicants.

Why ask applicants for this?

- Developers and manufacturers know their product best.
- Applicants can answer the questions and reference the appropriate specifications for the reviewing engineer.
- Gives the applicants visibility into the verification process and a more proactive role in it.

What are we seeing today?

- Walk-through of current version of New Equipment Verification worksheet.
- Explanation of how simple logic triggers will guide applicants through the worksheet and will be given a preliminary "Pass" or "Fail" pending engineering review.
- Example of completed worksheet with completion of engineering review.

Q&A / Contractor & Stakeholder Engagement