

SGIP 2nd Quarterly Workshop of 2021

Date: June 18, 2021









Introduction



Program Administrators

- Southern California Edison
 - Jim Stevenson, Vicky Velazquez, Adriana Sepulveda, Jaclyn Ha
- PG&E:
 - Ron Moreno, Ozzie Guzman
- SoCalGas
 - Jason Legner, Adrian Martinez, Laura Diaz
- Center for Sustainable Energy
 - Andi Woodall









Introduction



- Alternative Energy Systems Consulting (AESC)
 - Dara Salour
- Energy Solutions
 - David Zhang
- CPUC Energy Division:
 - Asal Esfahani









Details & Cadence



- Attendees will be muted.
- Use raise hand option if you would like to comment.
- Type in chat for any questions, comments.
- Ideas and Notes will be tracked during the meeting.

Agenda



- Program Metrics
- Regulatory Updates
- Database Updates
- Streamlining Report
- Equipment Approval Process









Program Metrics



Program Metrics





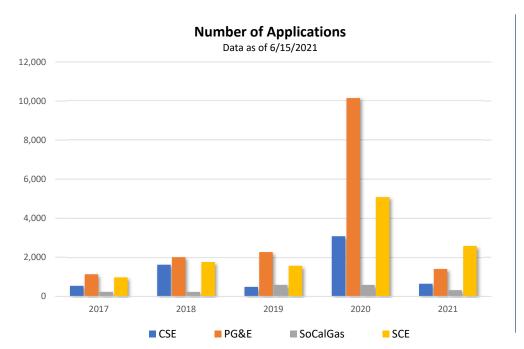


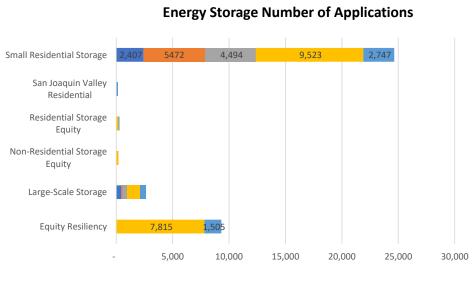


Number of Applications by Program Year and PA

(Data as of 6/15<u>/2021</u>







Total: 37,185









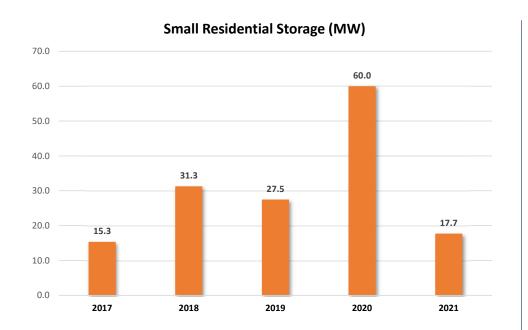
■ 2017 **■** 2018 **■** 2019 **■** 2020 **■** 2021

6

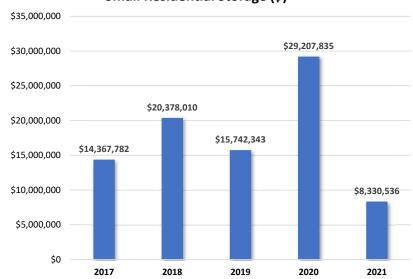
Small Residential Storage

Capacity and Incentive Dollars by Program Year (Data as of 6/15/2021)









Total: \$88,206,506

CSE, SCE and PG&E have reached the 50% Residential Storage Soft Target Cap for Step 6



Total: 151.8 MW



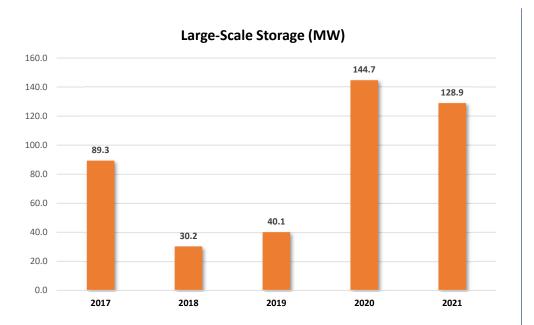




Large-Scale Storage

Capacity and Incentive Dollars by Program Year (Data as of 6/15/2021)



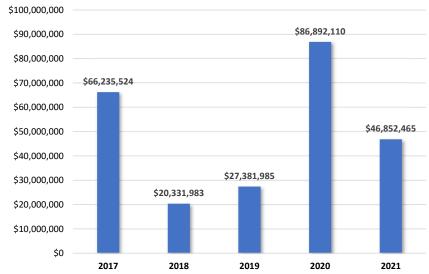


Total: 433.2 MW





Large-Scale Storage (\$)



Total: \$247,694,066

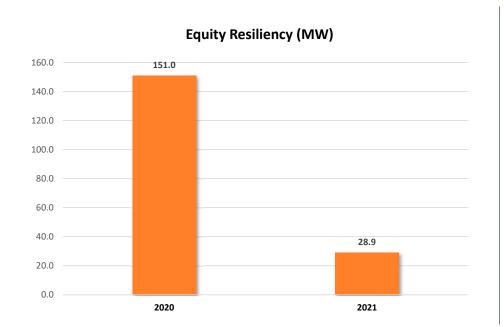




Equity Resiliency Storage Capacity and Incentive Dollars by Program Year (Data as of 6/15/2021)



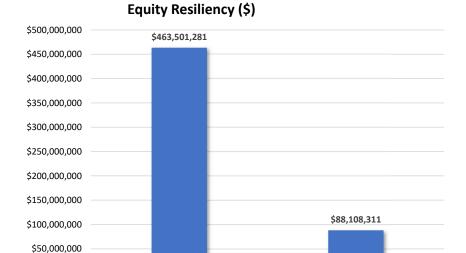
2021



Total: 179.9 MW







Total: \$551,609,592



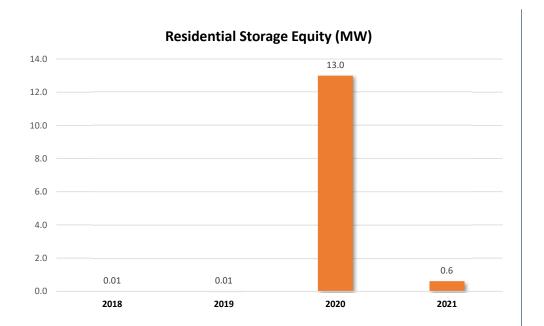
\$0



2020

Residential Storage Equity Capacity and Incentive Dollars by Program Year (Data as of 6/15/2021)



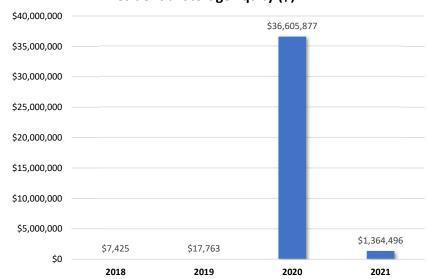


Total: 13.6 MW





Residential Storage Equity (\$)



Total: \$37,995,561



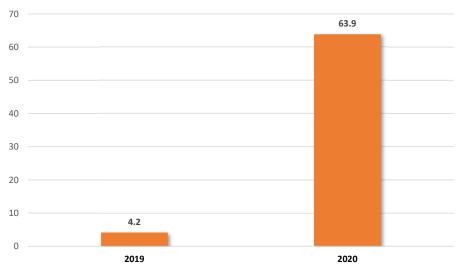




Non-Residential Storage Equity Capacity and Incentive Dollars by Program Year (Data as of 6/15/2021)



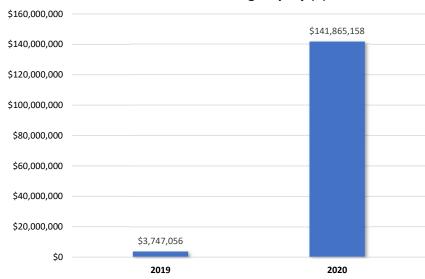
Non-Residential Storage Equity (MW)



Total: 68.0 MW



Non-Residential Storage Equity (\$)



Total: \$145,612,214





San Joaquin Valley Residential (SCE & PGE Only) Capacity and Incentive Dollars by Program Year (Data as of 6/15/2021)



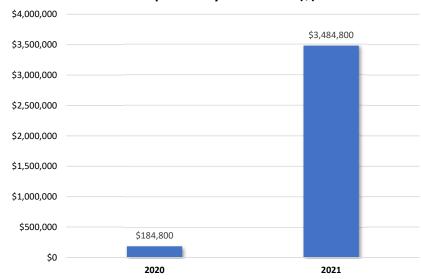
San Joaquin Valley Residential (MW) 1.5 1.32 0.5 0.07 2020 2021

Total: 1.39 MW









Total: \$3,669,600





Current Budget Step and Remaining Funding

Data as of 6/16/2021)



Budget Category	CSE	SCE	SCG	PG&E	
Large-Scale Storage	Step 3 (Open)	Step 3 (Open)	Step 3 (Open)	Step 4 (Open)	
	Open	Open	Open	Open	
	\$0.35/Wh	\$0.35/Wh	\$0.35/Wh	\$0.30/Wh	
with ITC	\$0.25/Wh	\$0.25/Wh	\$0.25/Wh	\$0.22/Wh	
Available Funds	\$8,427,642	\$15,065,516	\$10,421,365	\$11,764,410	
Small Residential Storage	Step 6	Step 6	Step 6	Step 6	
	Open	Open	Open	Open	
	\$0.20/Wh	\$0.20/Wh	\$0.20/Wh	\$0.20/Wh	
Available Funds	\$267,914	\$2,910,661	\$1,698,717	\$903,019	
Residential Storage Equity	Step 5	Step 5	Step 5	Step 5	
<u> </u>	Waitlist	Open	Open	Waitlist	
	\$0.85/Wh	\$0.85/Wh	\$0.85/Wh	\$0.85/Wh	
Available Funds	\$528,400	\$247,505	\$1,315,662	\$78,627	
Non-Residential Storage Equity	Step 5	Step 5	Step 5	Step 5	
	Waitlist	Waitlist	Waitlist	Waitlist	
	\$0.85/Wh	\$0.85/Wh	\$0.85/Wh	\$0.85/Wh	
Available Funds	\$337,827.75	\$934,550.96	\$1,203,257.39	\$9,175,936.58	
Equity Resiliency	Step 5	Step 5	Step 5	Step 5	
	Waitlist	Open	Open	Waitlist	
	\$1.00/Wh	\$1.00/Wh	\$1.00/Wh	\$1.00/Wh	
Available Funds	\$28,595	\$18,884,303	\$43,391,640	\$184,859	
San Joaquin Valley Residential & Non-Resi	idential (PG&E and SCE Only)	Step 5		Step 5	
<u>, </u>	,	Open		Open	
		\$1.00/Wh		\$1.00/Wh	
Available Funds		4,880,000 Res / \$120,000 Non-Res		1,210,400 Res / \$120,000 Non-R	
Generation	Step 3	Step 3	Step 3	Step 3	
	Open	Open	Open	Open	
	\$2.00/W	\$2.00/W	\$2.00/W	\$2.00/W	
Available Funds	\$14,850,942	\$28,594,369	\$10,066,767	\$40,437,640	

CSE, SCE and PG&E have reached the 50% Residential Storage Soft Target Cap for Small Residential Storage Step 6

Current budget levels can be found at: https://www.selfgenca.com/home/program metrics/



Regulatory Updates











April 30, 2021

"Self-Generation Incentive Program (SGIP) Process Streamlining Report"

Filed by SCE

Regulatory Background

Residential Application Process Streamlining

Non-Residential Application Process Streamlining

Multifamily Application Process Streamlining











ADMINISTRATIVE LAW JUDGE'S RULING PROVIDING PROPOSAL, REQUESTING COMMENT, AND UPDATING PROCEDURAL SCHEDULE

Covering the Heat Pump Water Heater Staff Proposal

Rulemaking 20-05-012 Issued 4/16/2021 ALJ Cathleen Fogel

- May 19th, 2021 Budget Filing; Each PA filed an updated summary of SGIP budgets including the categories included in 1/31/20 Tier 1 Advice Letters and all additional categories including Forfeited App Fees, Total Interest and Revenue Collections.
- June 3rd, 2021 Heat Pump Water Heater (HPWH) Staff Proposal; Opening Comments filed by Parties
- June 8th, 2021 HPWH Reply Comments filed by Parties
- Proposed Decision; possibly August September 2021 per the Ruling











Self-Generation Incentive Program (SGIP) 2021-2025 Measurement and Evaluation Plan

Rulemaking 20-05-012 Issued 05/24/2021 ALJ Cathleen Fogel

Studies to measure and evaluate components of the SGIP Program.

Includes:

- Biannual review of the performance of each PA
- Biannual Program-Wide Impact Evaluations
- Biannual Energy Storage Market Assessment report





New Changes:

- Biannual Program Performance and Process Evaluations
- Market Assessment Studies for Generation and HPWH Technologies







PROGRAM REQUIREMENTS AND OTHER MATTERS

Rulemaking 20-05-012 Issued 6/3/2021 Issued by the 5 CPUC Commissioners

- Un-paused Renewable Gen projects using capture/use/destroy baseline
- Limits directed biofuels to those using biofuel produced in CA; customer attestations; same stds as Sec. 379.6
- No ICE projects allowed in counties listed as severe or extreme non-attainment areas in USEPA Green Book
- Biogas fuel used in on-site ICE must meet 96% methane gas quality std; self-certify; other inspection rules











DECISION REVISING SELF-GENERATION INCENTIVE PROGRAM RENEWABLE GENERATION TECHNOLOGY PROGRAM REQUIREMENTS AND OTHER MATTERS (CONT.)

Rulemaking 20-05-012 Issued 6/3/2021 Issued by the 5 CPUC Commissioners

- New reporting, attestations, and audit protocols; periodic no-warning spot-checks. New warning/infraction rules.
- Environmental attributes: HC owns; attestations; PAs propose new methods, docs & audit rules
- New HB language about app fees, wind projects (incl. <80 ft. hub height)
- ERB and GM resiliency adder eligibility expanded to 1 PSPS + 1 de-energization due to fire
- New MBL rules; multi-tenant commercial bldgs. Ineligible for EB/ERB; VNEM projects stay active until June 30, 2023
- PAs to share outage info w/ Devs; propose actions if evaluations show incr. in GHGs from ICE or DBG projects.
- PAs MUST FILE TIER 2 ADVICE LETTER in 90 days.









Database Updates



Database Updates









Project Cost Breakdown



ICF Project Finance Panel

Project Costs Total Eligible Project Costs (TEPC) * \$ 23,320.80 Project Cost Breakdown * (+) Add/Edit Project Cost Breakdown

Project Cost Affidavit

By signing this Incentive Claim Form, the Host Customer and System Owner (if different then the "Host Customer"), with respect to the self-generation project identified in this application, which is partially funded by the Self-Generation Incentive Program ("SGIP"), certify and declare under penalty of perjury under the laws of the State of California that each of the statements in the paragraphs below are complete, true and correct.

ICF Print Form

The System Owner and Host Customer executed a Reservation Request Form ("RRF") that references the SELF-GENERATION INCENTIVE PROGRAM CONTRACT ("Contract"), which in turn references the Project Cost Affidavit. Pursuant to the SGIP Contract, Section 3.0, the System Owner and Host Customer attest that the statement in the following paragraphs are true:

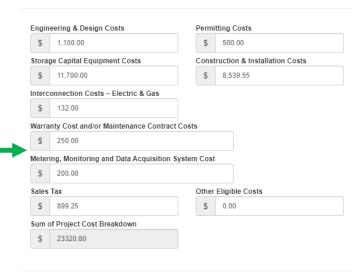
- At the time the incentive payment is made, System Owner is the owner of the self-generation or energy storage unit(s) that comprise the Project and all the statements below are true and correct:
- System Owner incurred all Eligible Project Costs referenced within this application;
- Project is operating as intended according to the Contract;
- There are no post-sale agreements or agreements which go into effect after the initial sale is made that allow the seller or installer to use the selfeneration or energy storage unit(s), which comprise the Project, in a sales or promotion campaign; and
- Eligible Project Costs are paid for in full except for an amount, which does not exceed the amount of incentive funding to be provided by the Contract.











Select Next to save the changes temporarily. You will still need to click on Save at the bottom of the Project Finance panel to save the changes. Select Cancel to revert your changes to the last time you saved the panel.







GHG PBI Requirements for Storage



For new non-residential storage projects, regardless of size, submitted since April 1, 2020:

- The annual RTE requirement is eliminated.
- Cycling requirement for new projects is 104/year
- Reduce GHGs a minimum of 5 kilograms of CO2 per rated energy capacity (kg/kWh) annually to recoup full payment.
- A project's annual PBI payment be reduced by one dollar per kg (\$1,000 per ton) of CO2 under the five kg/kWh reduction requirement, up to 100% of the Expected Annual PBI Payment.
- PBI payment deductions are permanently forfeited and returned to the SGIP incentive budget









GHG Calculation Process Steps



Grid Regions emissions data are imported from WattTime.

The emissions data, in conjunction with PBI data, is used to calculate project GHG impacts.

GHG Released, GHG Avoided, and Net GHG are reported within the application.

PBI incentives are adjusted based on the delta from expected GHG reduction

Calculation for the annual GHG reduction expectation:

Annual Expected GHG Reduction (kg) = $-5 \frac{kg}{kWh} * Total Energy Storage Capacity (kWh)$

Calculation of annual net GHG offset by system:

Annual Net GHG Offset $(kg) = Total\ GHG\ Released - Total\ GHG\ Avoided$ Where,

$$Total\ GHG\ Released\ (kg) = \sum Energy\ Stored\ (kWh)*MOER(\frac{kg}{kWh})$$

Total GHG Avoided
$$(kg) = \sum Energy \, Discharged \, (kWh) * MOER(\frac{kg}{kWh})$$

Calculation for the annual GHG penalty on the PBI payment of storage applications:

PBI Payment Penalty Impact (\$) = \$1.00 * If (< 0, (Annual Expected GHG Reduction – Annual Net GHG Offset))









Example GHG Calculation



Time	Emissions MOER Data (kg/kWh)	Energy Stored (kWh)	Energy Discharged (kWh)	GHG Released (kg)	GHG Avoided (kg)	Net GHG (kg)
6:15pm	0.3 kg/kWh	3 kWh	-	0.9 kg	-	0.9 kg
6:30pm	0.4 kg/kWh	2 kWh	-	0.8 kg	-	0.8 kg
6:45pm	0.5 kg/kWh	-	2 kWh	-	1.0 kg	-1.0 kg
7:00pm	0.5 kg/kWh	-	3 kWh	-	1.5 kg	-1.5 kg
Total GHG impact from 6pm – 7pm						



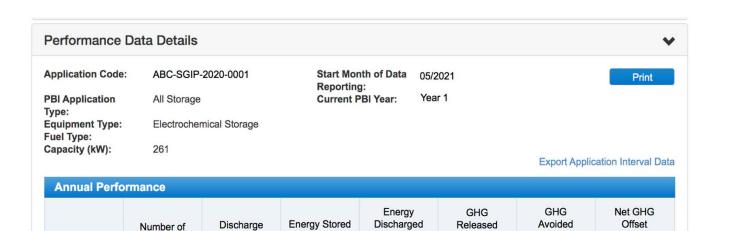






GHG Impacts in the Performance Data Details Panel





(kWh AC)

54,288

(kgCO2)

(kWh AC)

 Reported on Both the Annual and Monthly Performance Tables



Events

Cycles

104

Expected³

Year 1 Year 2

Year 3 Year 4





(kgCO2)

(kgCO2)

-2,610



GHG Impacts in the PBI Payment Calculator



Project Information

522 kWh * 5kg/kWh = **2,610kg** Expected Annual Reduction

Annual GHG Penalty

2,610kg - 2190kg = 420kg * \$1/kg = **\$420** Penalty in Year 1













Streamlining Report











Residential Topics (PGE)



Residential Application Streamlining Report Six Key Topics:

- Final Building Permit
- Utility Bill and Proof of Authorization to Interconnect
- AHJ Grid Islanding Plan
- Customer Resiliency Attestation
- SGIP Handbook
- Workshops & Trainings











Final Building Permit

The signed final building permit ensures the system was installed up to codes and standards of the local permitting jurisdiction. It is submitted as part of the interconnection package <u>and</u> the SGIP ICF package. Also serves as a backup to the AHJ Grid Islanding Plan in case the AHJ doesn't stamp plans.

Initial proposal: Remove the permit submission from the ICF package.

Resolution: No action on this subject is planned. Still to be used as a backup to the AHJ Grid Islanding Plan











Utility Bill and Proof of Authorization

PG&E can utilize its internal databases to verify utility bill documentation related to billing and authorization to interconnect and proposes that Developers not have to submit it in PG&E territory. Not all PAs can do this.

Initial Proposal: Allow the documents to be optional as part of the RRF in **PG&E** territory only.

Resolution: PG&E to file an Advice Letter to change the language in the SGIP Handbook.











AHJ Grid Islanding Plan

The AHJ Grid Islanding Plan is intended to verify the appropriate jurisdiction approves that energy storage systems can island from the grid during outages.

Initial Proposal: File a PFM of D.19-09-027 to change this requirement.

Resolution: No action on this subject is planned. Need to ensure that the system is capable of grid islanding











Customer Resiliency Attestation (CRA)

D.20-01-021 requires developers to provide an estimate of how long a project's fully charged battery will support load during an outage, and an attestation from the customer that they received the information prior to signing the contract. The CRA is difficult to fill out correctly, causing suspensions and delays.

Initial Proposal: Change questions in the CRA to allow generic responses but this would require a PFM of D.19-09-027 which asked for a level of detail.

Resolution: A more feasible near-term solution of producing an applicant guide with easy-to-follow instructions. PAs will work on this guide.











SGIP Handbook

The SGIP Handbook has been revised many times lately and over the past several years due to complex program changes and new requirements. It needs to be revised and improved.

Initial proposal: PAs could revise it on their own or consider a 3rd-party to do it.

Resolution: The PAs are still deliberating the benefits of PA-driven Handbook revision versus hiring a 3rd-party. Plan is to release a streamlined Handbook later this year.











Workshops and Trainings

The SGIP has grown and changed in many ways over the past few years. Concurrently, the number of participating developers has grown. There is a need for more workshops and trainings to support that growth and to reduce the amount and frequency of suspensions due to lack of familiarity with rules.

Initial proposal: Develop new resources and offer workshops and trainings to enhance developer's knowledge of program rules and application processes.

Resolution: PAs will work with industry to develop topics and content for trainings as well as the best modes for communicating this information.











Multifamily Topics (CSE)

Multifamily Update



#1: Virtual Net Energy Metering and Resiliency

- In process
- PAs have direction on how to handle projects until a resolution with the VNEM tariff is determined

#2: Multifamily Systems Interconnected under a Nonresidential Tariff

- In process
- PAs filed AL with recommendation, pending disposition from CPUC

#1: Virtual Net Energy Metering and Resiliency



Issue(s):

• Existing rules for VNEM tariffs may prohibit SGIP projects from providing resiliency benefits in accordance with the program. Thus, it is unclear if project interconnected under VNEM are eligible for resiliency incentives because they may be prohibited from serving on-site load during a de-energization event.

- This item is out of scope of SGIP administration and requires guidance from the CPUC on how to proceed with VNEM projects seeking resiliency incentives.
- CPUC Decision 21-06-005 requires that a developer demonstrate at the time of application 1) the applicable utility's VNEM tariff allows installed storage to serve onsite load; and 2) the applicant intends to use a switching and isolating technology arrangement allowed under Rule 21 to provide for discharging the battery to serve on-site load and island.
- The Decision also orders the PAs to allow projects involving VNEM to remain in the reservation system until any disputes involving the VNEM tariff are resolved or until June 30, 2023, whichever comes first.

#2: Multifamily Systems Interconnected under a Non-residential Tariff



Issue(s):

The PAs filed a Joint Advice Letter (CSE AL 110, et al.) recommending that BTM multifamily energy storage projects comply with the SGIP GHG and operating rules based on their primary use, defined by the Host Customer sector and associated utility tariff, which was approved by the CPUC. The corresponding Handbook abbreviated the adopted rules, resulting in confusion about how these rules would apply to multifamily projects interconnecting under a non-residential tariff.

Next Step(s):

The PAs filed a Joint Advice Letter (CSE AL 125-E, et al.) on April 13, 2021 to further clarify the language in the Handbook consistent with the CPUC's June 29, 2020 Non-Standard Disposition Letter. CSE AL 125-E is currently pending disposition by the CPUC.



Non-Residential Topics (SoCalGas)

Non-Residential Update



#1: Remove PPM Signature

- In process
- Requires Energy Solutions development
- Handbook modification needed – Advice Letter

#2: PBI Process Enhancement

- In development
- Requires Energy Solutions development
- Handbook modifications unlikely (TBD)

#3: Publish Educational Resources

- In development
- PAs to work on content to post on database

#4: Program Eligibility Clarifications

- In development
- Include in Educational Resources OR Handbook modification needed – Advice Letter

#5: Publish Equipment Review Process

- In process
- PAs to develop public document
- No Handbook or Regulatory changes needed
- AESC will present process overview

Topic #1: Remove PPM Signature – IN PROCESS



Issue(s):

 PPM signature should not be required for projects
 → if no change

Recommendation(s):

- Submit contract at 90 days (or 240 days for public entities)
- Move EEA
 Attestation to RRF

- PAs working with Energy Solutions to determine if any unintended impacts and scope out functionality with Specs
- Minimal changes to Handbook

Topic #2: PBI Process Enhancement – IN DEVELOPMENT



Issue(s):

- Trouble uploading data for various application scenarios
- Export functionality of PBI data

Recommendation(s):

- Bulk upload for multiple months, applications, and meter and application interval files
- Overall PBI Report Export functionality

- Energy Solutions to develop Specs
- PAs to determine if Handbook edits needed (unlikely)

Topic #3: Publish Educational Resources – IN DEVELOPMENT



Issue(s):

- How to fill out 2step and 3-step application
- How to fill out a CRA

Recommendation(s):

- Create a comprehensive document outlining process and timelines
- Create an FAQ resource document

- PAs to develop
 "How To" and FAQ
 documents
- Post documents on selfgenca.com

Topic #4: Program Eligibility Clarifications— IN DEVELOPMENT



Issue(s):

- Demonstrate HC serves at least 50% of census tract
- Demonstrate proof of tax status (unable to get documentation from IRS)
- Showing proof of critical facility
- Any other needed clarifications?

Recommendation(s):

 Clarify or provide additional examples of supporting documents into Handbook

- PAs to allocate resources to help clarify eligibility
- Determine when Handbook can be updated
 - Advice Letter

Topic #5: Publish Equipment Review Process – IN PROCESS



Issue(s):

 Unclear for stakeholders on the current process for reviewing equipment specs for approval

Recommendation(s):

 Create a comprehensive document outlining current process with timelines

- AESC will present overview of process
- PAs to finalize resource document and post on selfgenca.com

Equipment Approval Process



Equipment Approval Process



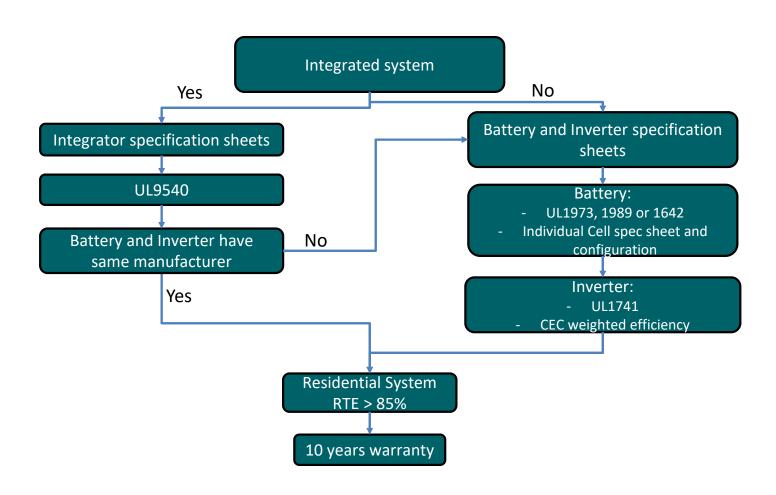






New Equipment Review Document Requirements

- Receivables from the applicant:
 - Component specification sheets (battery, inverter and/or integrated system)
 - UL certificates (Battery: UL1973, 1642, 1989; Inverter: UI1741; Integrator: UL9540)
 - Completed NEV workbook
 - Factory discharge test data if available*



Discharge Data Review Document Requirements

- ◆ Receivables from the applicant:
 - Factory or Field Discharge test results
 - Supporting information such as:
 - Make and Model of the system tested
 - ◆ Test location
 - Metering information, etc.

Discharge Data Review Criteria for Approval

Discharge duration within the same 2 hrs time slot as SGIP approved value (i.e. 0-2, 2-4 or 4-6 hrs) Average discharge kW capacity = $\left(\frac{Total\ kWh}{Discharge\ Duration\ (Hrs)}\right)$ is within the same 0-30 kW or >=30 kW capacity as the SGIP approved value Battery SOC remaining <= 5% Total kWh–SGIP Approved kWh $\times 100$ <=5% SGIP Approved kWh Note: If the last criterion is not met, the system will be de-rated. Applicant will be given 1** more chance for submitting a new

factory test

Equipment Review and Discharge Data Review Process Flow

Blue arrows: flow

direction

Dotted red: deadlines

If no response

received: 1-week notice

to applicant of pending cancellation. AESC to

inform PAs

AESC Program Manager receives application

AESC Program
Coordinator assigns the review to a reviewer

Reviewer to update the appropriate status tracker on box.com

Reviewer to follow up with applicant – Incomplete forms or missing documents

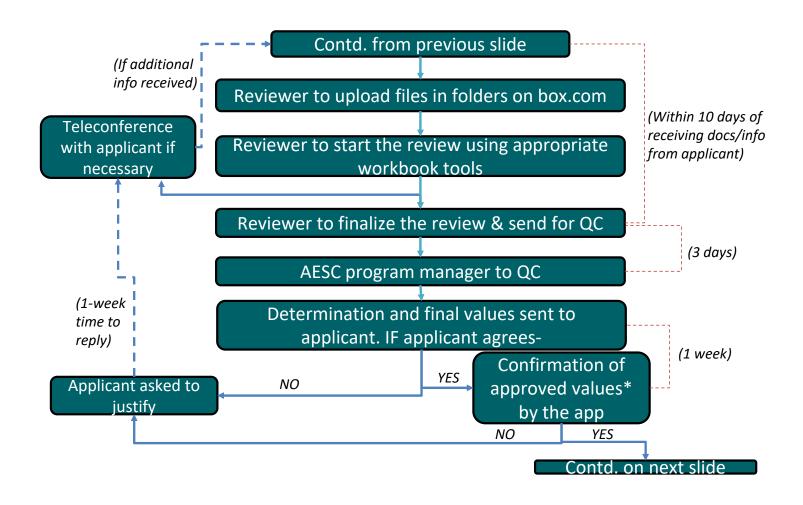
Complete forms, application forms &/Or missing info received from the applicant

Contd. on next slide

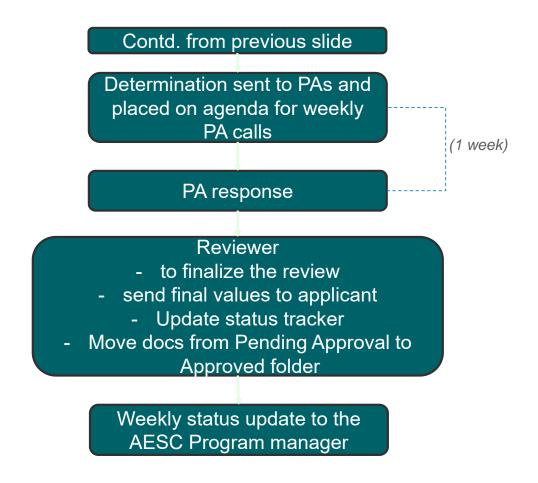
(5 days)

(10 days)

Equipment Review and Discharge Data Review Process Flow (cont.)



Equipment Review and Discharge Data Review Process Flow (cont.)



SGIP 2021 Q2 Public Workshop



Q & A









SGIP 2021 Q2 Public Workshop



Thank You

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