



Hawaii Green  
Infrastructure Authority

# Residential Program

*Hawai'i Green Infrastructure Authority*

# HGIA – Hawai‘i’s Green Bank

*Mission: Making clean energy accessible and affordable to “underserved” ratepayers*

- State Agency constituted in 2014, attached to the Department of Business, Economic Development & Tourism (DBEDT)
- Administers the **Green Energy Money \$aver (GEM\$)** Program, an innovative financing program for homeowners, landlords and renters
- HGIA financing programs include:
  - Residential Energy Efficiency & PV
  - Commercial Energy Efficiency & PV
  - State Energy Efficiency
  - HI-CAP
  - On Deck – C-PACER

# How does GEM\$ work?

## **GEM\$ On-Bill Repayment Program**

- No credit evaluation required: Not a loan
- Oversized systems NOT allowed
  - Savings based on historical consumption, as such oversized system are not able to meet bill savings requirement
- Obligation tied to the utility meter (not a person)
- Immediate estimated bill savings (tiered 5%, 10% or 15%) required
- Payments conveniently made on your monthly electric utility bill
- Interest rate of 5.50% fixed for 20 years. Amortization based on occupancy type.
- Customers electricity may be disconnected due to non-payment

## **Third Party Owned Systems**

- For Energy Efficiency installations, Contractor must be a Hawaii Clean Energy Ally and the EE must be on Hawaii Energy's approved list for both on-bill and third-party owned, as applicable
- Landlords/Investors are considered "Borrowers" and undergo traditional underwriting and loan execution
- Investor PPAs allow an Offtaker to assume debt, to purchase the system, maximizing energy savings
- 20% estimated immediate bill savings required

## **Benefits:**

- ✓ **Fixed Interest Rates**
- ✓ **Encourage leveraging GEMS funds with bank financing**
- ✓ **Up to 100% Financing – No Money Down**
- ✓ **Up to 20-Year Terms**
- ✓ **No Prepayment Penalties**

# GEM\$ Applications Process



## **STEP 1: PARTICIPANT ELIGIBILITY**

- Low and moderate income households
- Utility account for at least 6 months



## **STEP 2: PROJECT ELIGIBILITY**

- Energy Improvement (EI) must be on the Approved EI List
- Post-installation, the EI must provide an estimated minimum tiered utility bill savings of 5%, 10% or 15%



## **STEP 3: Execute Program Documents**



## **STEP 4: Notice to Proceed Letter**



## **BEGIN INSTALLATION**


**STEP 1 APPROVAL:  
IS MY CUSTOMER  
ELIGIBLE FOR  
GEM\$?**

# Requirements

- Low and moderate income: less than 140% of US Department of Housing & Urban Development (HUD) Area Median Income
- Number of disconnection notices determines minimum estimated saving threshold requirement

# Disconnection Notices	Tiered Estimated Bill Savings Requirement
0	Minimum <b>5%</b> Savings
1 – 4	Minimum <b>10%</b> Savings
5+	Minimum <b>15%</b> Savings

- Estimated post-installation utility bill including loan repayment must be 5, 10, or 15% below current bill
  - Estimated with 12 months of historical data
  - Applicants with at least 6 months of historical data may be accepted


**HONOLULU COUNTY INCOME SCHEDULE BY FAMILY SIZE**
2023

THE FOLLOWING TABLE PRESENTS INCOME LIMITS BY FAMILY SIZE AND BY PERCENTAGES OF THE VERY LOW INCOME LEVELS ESTABLISHED BY HUD. THESE INCOME LIMITS SERVE AS GUIDELINES TO ESTABLISH SALES/RENTAL PREFERENCES.

		LIMITS BY FAMILY SIZE							
MEDIAN \$113,300		1 PERSON	2 PERSON	3 PERSON	4 PERSON	5 PERSON	6 PERSON	7 PERSON	8 PERSON
Adjustments for family size		0.7000	0.8000	0.9000	1.0000	1.0800	1.1600	1.2400	1.3200
% of Income	10%	\$9,170	\$10,480	\$11,790	\$13,100	\$14,150	\$15,200	\$16,250	\$17,300
	20%	\$18,340	\$20,960	\$23,580	\$26,200	\$28,300	\$30,400	\$32,500	\$34,600
	30%	\$27,510	\$31,440	\$35,370	\$39,300	\$42,450	\$45,600	\$48,750	\$51,900
	40%	\$36,680	\$41,920	\$47,160	\$52,400	\$56,600	\$60,800	\$65,000	\$69,200
	50%	\$45,850	\$52,400	\$58,950	\$65,500	\$70,750	\$76,000	\$81,250	\$86,500
	60%	\$55,020	\$62,880	\$70,740	\$78,600	\$84,900	\$91,200	\$97,500	\$103,800
	70%	\$64,190	\$73,360	\$82,530	\$91,700	\$99,050	\$106,400	\$113,750	\$121,100
	80%	\$73,360	\$83,840	\$94,320	\$104,800	\$113,200	\$121,600	\$130,000	\$138,400
	90%	\$82,530	\$94,320	\$106,110	\$117,900	\$127,350	\$136,800	\$146,250	\$155,700
	100%	\$91,700	\$104,800	\$117,900	\$131,000	\$141,500	\$152,000	\$162,500	\$173,000
	110%	\$100,870	\$115,280	\$129,690	\$144,100	\$155,650	\$167,200	\$178,750	\$190,300
120%	\$110,040	\$125,760	\$141,480	\$157,200	\$169,800	\$182,400	\$195,000	\$207,600	
130%	\$119,210	\$136,240	\$153,270	\$170,300	\$183,950	\$197,600	\$211,250	\$224,900	
140%	\$128,380	\$146,720	\$165,060	\$183,400	\$198,100	\$212,800	\$227,500	\$242,200	

The U.S. Department of Housing and Urban Development (HUD) sets income limits that determine the eligibility of applicants for its assisted housing programs. HUD typically uses the Very Low Income Limit (VLIL) as the basis for deriving other income limits. The VLIL is calculated by taking the 4-person income limit equal to 50% of the estimated median family income (based on the U.S. Census Bureau's ACS housing costs are unusually high in certain areas where rental programs, the 80% households at other

HHFDC uses the HUD income level is calculated at income levels are calculated

NOTE: This chart is provide

ACCOUNT SUMMARY		MESSAGES	
(See Bill Detail section for more information)			
Service Period	12/28/17 - 01/26/18	<p><b>Are you prepared for hurricane season? Refer to our Handbook for Emergency Preparedness, online at <a href="http://www.hawaiianelectric.com/prepare">www.hawaiianelectric.com/prepare</a>, or call 543-7511 for a free copy.</b></p>	
Previous Balance	\$174.03		
Payments	\$0.00		
<b>OUTSTANDING BALANCE</b>	<b>\$174.03</b>		
Current Charges	\$176.14		
<b>Current Charges Due 06/22/2019</b>	<b>\$176.14</b>		
<b>TOTAL AMOUNT DUE - PAID BY BANK</b>	<b>\$350.17</b>		

BILL PERIOD					
METER#	REGISTER	R Residential Service SMN	CURRENT READING	PREVIOUS READING	DIFFERENCE
MPX00640714	KWH		18,034.00	17,526.00	508.00

USAGE PROFILE						
ELECTRIC USAGE PROFILE FOR METER MPX00640714						
DATE	KWH	AMOUNT	DAYS	KWH/DAY	\$/DAY	
01/26/18	508	\$126.14	30	16.93	4.20	
12/27/17	509	\$124.03	30	16.97	4.13	
11/27/17	543	\$131.05	32	16.97	4.10	
10/26/17	509	\$122.29	30	16.97	4.08	
09/26/17	543	\$131.30	32	16.97	4.10	
08/25/17	492	\$118.54	29	16.97	4.09	
07/27/17	509	\$124.25	30	16.97	4.14	
06/27/17	526	\$128.74	31	16.97	4.15	



# Contractor Checklist

- Use our contractor checklist as a guide
- Customer application
  - <https://hawaiigems2020.my.site.com/s/>
  - Application, authorization to release information, privacy notice
- Customer must upload Utility Bill, Government ID, Long-Form Trust (as applicable), DHHL Lease (as applicable), EV registration & vehicle inspection (as applicable)

**GEMS**  
Hawaii Green Infrastructure Authority  
PO Box 2258, Honolulu, HI 96804  
DocID: gems@hawaii.gov | 808-587-3868

**Contractor Checklist for Residential On-Bill Program Installations**

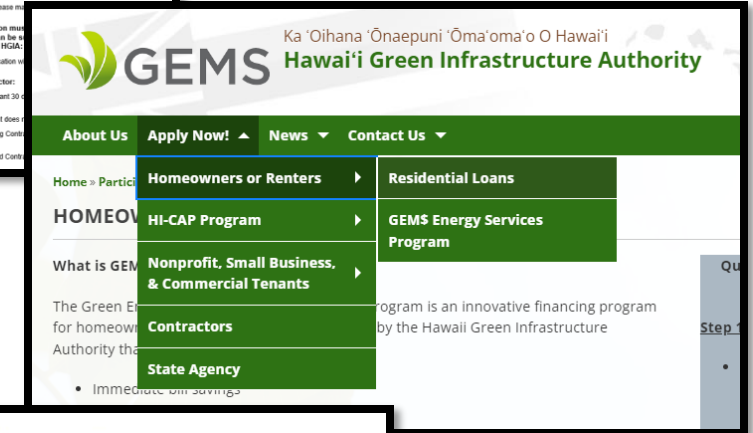
**Applicant Information:** The Applicant is the person or persons on the Hawaiian Electric Company Utility Account.  
Applicant(s): \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone & Email: \_\_\_\_\_

**Step 1: Applicant (Rate payer) Eligibility**  
Items required from Applicant(s) or Contractor to HGIA:

- Completed and signed GEMS Homeowner OR Renter Application
- Completed and signed Utility Authorization form
- Copy of Driver's License or valid Government Issued I.D.
- Most recent utility bill (must be current on payments and have at least 6 months history)
- Copy of original DHHL lease or other ground lease (if applicable)
- Copy of Trust (if title to property is held in a Trust)
- Trust Review Fee (per Trust) of \$167.54. Please mail to Infrastructure Authority.

If applicant is a renter, the following information must be provided (landlord), however, this information can be provided a Step 1 Eligibility pre-approval from HGIA:

- Completed and signed Landlord GEMS Application with return and personal financial statement.
- Missing Information Letter (providing applicant 30 days to complete application) OR
- Adverse Action Letter to Applicant (applicant does not meet requirements) OR
- Conditional Approval Letter to Applicant and Contractor



**GEMS**  
Hawaii Green Infrastructure Authority

**AUTHORIZATION FOR RELEASE OF INFORMATION**  
Hawai'i Green Energy Savings On-Bill Program (Eligibility and Ongoing Participation)

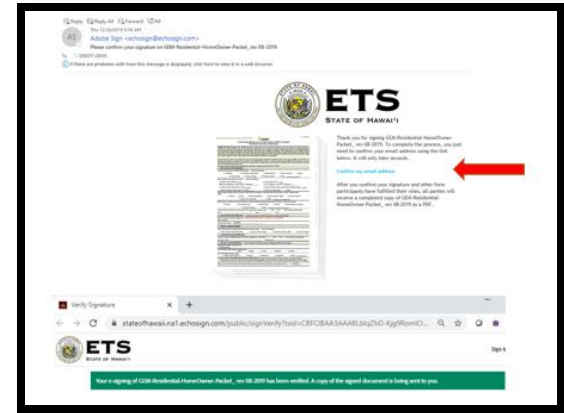
Customer Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Service Address: \_\_\_\_\_  
Utility (Select one):  Hawaiian Electric  Maui Electric  Hawaii Electric Light

I am applying to participate in the Hawaii Green Infrastructure Authority's (HGIA) Green Energy Savings On-Bill Program (Program). As part of the Program, HGIA needs access to my utility bill information to determine my eligibility for the program. I understand that my utility bill information is confidential and I authorize HGIA to use my utility bill information for the purposes of determining my eligibility for the program. I understand that my utility bill information will be used to determine my eligibility for the program and to determine my participation in the program. I understand that my utility bill information will be used to determine my participation in the program and to determine my participation in the program.

**FACTS:** The Hawaii Green Infrastructure Authority (HGIA) is a public agency created by the Hawaii State Legislature. HGIA is a public agency created by the Hawaii State Legislature. HGIA is a public agency created by the Hawaii State Legislature.

# Step 1 Eligibility

- After customer applies via GEM\$ website and confirms email, Step 1 Eligibility decision sent to customer and contractor within a week



- Approval letter: valid for 30 days for you to submit project information



- Request for Additional Information: 30 days





**STEP 2 APPROVAL:  
IS THIS PROJECT  
ELIGIBLE FOR  
GEM\$?**

# Project Requirements

- Estimated minimum tiered bill savings, including financing costs
- Eligible Energy Improvement (EI):
  - Residential Installations:
    - Solar PV Systems
    - Solar Thermal Water Heaters
    - Solar PV Water Heaters
    - Heat Pump Water Heaters
    - Energy Storage Systems
  - As applicable, PV Systems may be sized to accommodate new EV Load
  - EI projects may be bundled to meet Tiered Bill Savings Requirement

**\*Oversized systems not allowed**

## Step 2: Project Eligibility

Items required from Homeowner or Landlord and/or Contractor to HGIA:

For Solar PV Installations:

- Executed Sales Contract or Addendum signed by contractor and Property Owner(s) to include:
  - System Cost: \$\_\_\_\_\_ (may not exceed \$4.50/Watt)
  - System Size: \_\_\_\_\_ kW
  - Inverter Size: \_\_\_\_\_ kW
  - Estimated Year 1 Production: \_\_\_\_\_ kWh (may not exceed annual historical kWh consumption from utility bill)
  - Equipment description (# panels, # inverters, make, model, monitoring equipment, etc.)
  - 10-year Workmanship Warranty
  - 20-year Manufacturer's Warranty
- Conditional Utility Interconnection Approval
- NREL PV Watts Calculator (<https://pvwatts.nrel.gov/>) Printout
- PV Watts Calculator Certification completed and executed by the Contractor (include an explanation if the tolerance exceeds +/- 10%).
- For NEM+, provide the following information on the existing solar PV system:
  - Year solar PV system installed: \_\_\_\_\_
  - System Size: \_\_\_\_\_ kW

For Solar Thermal and Solar PV Hot Water Heaters:

- Determine if Homeowner or Landlord will utilize Hawaii Energy rebate to buy-down the cost of the installation or buy down their GEM\$ interest rate.
  - Apply rebate to Installation Cost.
    - Copy of completed Hawaii Energy Rebate Application with Work Order # \_\_\_\_\_
  - Apply rebate to GEM\$ Interest Rate
- Executed Sales Contract or Addendum signed by contractor and Property Owner(s) to include:
  - 1-year Workmanship Warranty
  - 10-year Manufacturer's Warranty on Solar Hot Water panels and collectors
  - 6-year Manufacturer's Warranty on Hot Water Tank
  - Equipment description (panels, tank size, etc.)



# Step 2 Solar PV Project Documents

- Executed PV sales contract which includes the following:
  - System cost (cost of the PV system, excluding batteries, may not exceed \$4.50 per watt)
  - Battery cost if an energy storage system is included
  - Any discounts or down payments
  - System size
  - Equipment description and applicable warranties
- Conditional Utility Interconnection Approval indicating which Interconnection Program you will be applying for
- Estimated kWh production in Year 1:
  - PV Watts Calculator printout from the NREL website:  
<https://pvwatts.nrel.gov/>
  - PV Watts Certification comparing estimated Year 1 production to NREL's estimate
    - Variances greater than 10% must be provided on PV Watts Certification form found on your contractor portal
- Up to 20% of other costs may be financed (roof repair, meters upgrade, etc.) but additional costs will be factored in determining the required bill savings



The screenshot shows the PVWatts Calculator results page. The location is set to "2788 Pacific Heights road honolulu". The results are as follows:

Month	Solar Radiation (kWh / m <sup>2</sup> / day)	AC Energy (kWh)	Value (\$)
January	5.08	1,074	377
February	5.32	1,045	367
March	5.71	1,218	428
April	5.98	1,215	426
May	5.96	1,274	447
June	6.18	1,268	445
July	6.09	1,294	454
August	6.40	1,356	476
September	6.42	1,297	455
October	5.71	1,215	426
November	4.86	1,002	352
December	4.77	1,014	356
<b>Annual</b>	<b>5.71</b>	<b>14,272</b>	<b>\$ 5,009</b>

Annual production: 14,271 kWh/Year\*

# Step 2 Solar Hot Water Documents

- Executed contract detailing cost, tank size, equipment description and all applicable warranties
- Customers have options on how to use the Hawaii Energy rebate
  - If applied to the cost of the system, documentation must be provided showing Hawaii Energy Solar Hot Water work order number has been issued,
  - If used to buy-down the interest rate on the loan, HGIA will submit the necessary paperwork to Hawaii Energy



**Hawai'i Energy**

**PARTICIPATING LENDERS**

**Hot water, Cool rates**



Hawaii Green  
Infrastructure Authority

# Application Approval

- **Criteria met** → Approval
- **Insufficient savings** → Denial Letter or Deny-Counter-Offer Letter



- \* Post-approval changes (size, interconnection, production, etc.) → approval is **VOID** → re-analysis by HGIA → re-issued approval or denial



**GEM\$ PROGRAM  
DOCUMENTS, NTP,  
AND FUNDING**




# Final Approval Letter & Program Docs

After approval, customer receives:

- Final approval letter
- Participant Agreement
- Request for Insurance Authorization
- System Monitoring Authorization
- Purchase Money Mortgage Documents for land court property, if applicable
- Certification of Trust, if applicable
- Attestation to Purchase EV, if applicable

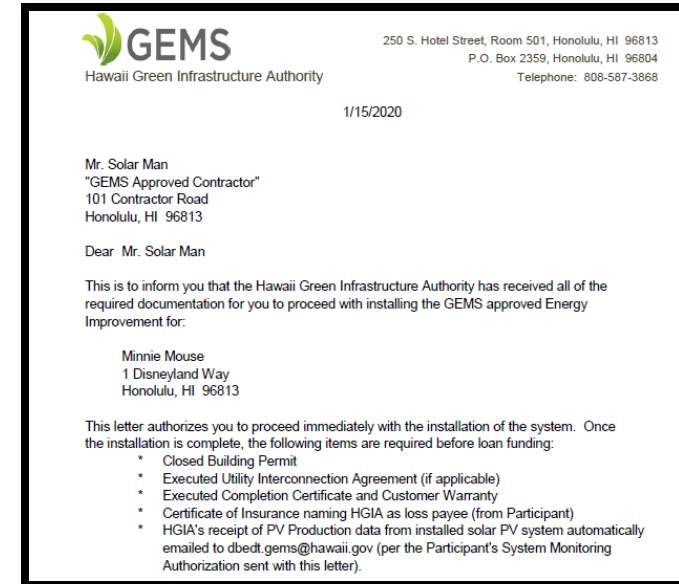


		HAWAII GREEN INFRASTRUCTURE AUTHORITY	
<b>GREEN ENERGY MONEY SAVER ("GEMS") ON-BILL PROGRAM</b> <b><u>PARTICIPANT AGREEMENT</u></b> (Residential Homeowner)			
Participant Name(s):			
Mailing Address:			
Service Address:			
Phone Number (1):		Phone Number (2):	
Email (1):		Email (2):	
Utility Account #:		Premises No.:	
Property Owner(s):			
Property Owner(s):			
Property Owner(s):			
Property Owner(s):			
Contractor Name:			
Contact Name:			
Phone:			
Email:			
<small>This Participant Agreement (Residential Homeowner) (this "Agreement"), while executed on the date indicated below on the signature page, is effective (the "Effective Date") as of _____, 20____, between the Hawaii Green Infrastructure Authority, an instrumentality of the State of Hawaii ("HGIA") and _____ (the "Participant(s)"). The Effective Date is the date HGIA pays my Contractor in full, on my behalf, for the complete installation of</small>			

# Final Approval Letter & Program Docs

## Upon receipt of executed program docs, Notice To Proceed (NTP) sent to contractor

- Includes authorization for HGIA monitoring
- You will have six months to complete installation (or until expiration date of conditional utility interconnection approval)
- Please note that GEM\$ will not finance projects that are already energized
- **Progress Payment** (if 50/50 progress payment option previously elected)
  - Requires approved building permit and homeowner's certificate of insurance



# Final Funding

## Upon project completion:

- Closed building permit
- Final utility interconnection approval with Permission to Operate
- Final Executed Sales Contract
- Completion Certificate signed by an authorized signer for your company and your customer
  - GEM\$ obligation amount and the contract price – this needs to match the Final Approval Letter
- As applicable, either:
  - HGIA system monitoring access for installed solar PV system
  - OR Hawaii Energy Rebate form for solar hot water installations

# Solar Hot Water

## Hawaii Energy Rebate-Interest Buy Down Program:

- Projects must be eligible for Hawaii Energy Rebates and the customer has the option of using the Rebate to lower the cost of the system, or to buy down their interest rate.

# Mahalo!

## Hawaii Green Infrastructure Authority (HGIA)

- E-mail: [dbedt.greenbank@hawaii.gov](mailto:dbedt.greenbank@hawaii.gov)
- Telephone: 808-587-3868
- Mailing Address: P. O. Box 2359, Honolulu, HI 96804
- Street Address: 250 S. Hotel St., #501, Honolulu, HI 96813