

BEFORE THE PUBLIC UTILITIES COMMISSIONS
OF THE STATE OF HAWAII

In the Matter of the Application of)

THE STATE OF HAWAII)
DEPARTMENT OF BUSINESS,)
ECONOMIC DEVELOPMENT,)
AND TOURISM)

Docket No. 2014-0135

For an Order Approving the Green)
Infrastructure Loan Program.)

**PROGRAM NOTIFICATION NO. 15 FOR
THE GREEN INFRASTRUCTURE LOAN PROGRAM
AND
CERTIFICATE OF SERVICE**

HOLLY T. SHIKADA
Attorney General of Hawaii

BRYAN C. YEE
GREGG J. KINKLEY
Deputy Attorney General
Department of the Attorney General
State of Hawaii
425 Queen Street
Honolulu, Hawaii 96813
Tel. 586-1180
Attorneys for the Hawaii Green
Infrastructure Authority

BEFORE THE PUBLIC UTILITIES COMMISSIONS
OF THE STATE OF HAWAII

In the Matter of the Application of)

THE STATE OF HAWAII)
DEPARTMENT OF BUSINESS,)
ECONOMIC DEVELOPMENT,)
AND TOURISM)

Docket No. 2014-0135

For an Order Approving the Green)
Infrastructure Loan Program.)

**PROGRAM NOTIFICATION NO. 15 FOR
THE GREEN INFRASTRUCTURE LOAN PROGRAM**

TO THE HONORABLE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII:

The Hawaii Green Infrastructure Authority (“HGIA” or “Authority”) of the State of Hawaii¹, submits this Program Notification through its Deputy Attorney General.

I. Background

Decision and Order No. 32318, filed on September 30, 2014 in Docket No. 2014-0135 (the “Program Order”) approved the “Application of the Department of Business, Economic Development, and Tourism for an Order Approving the Green Infrastructure Loan Program,” filed on June 6, 2014 (“Application”) for the use of funds deposited in the Green Infrastructure Special Fund to establish and institute the Green Infrastructure Loan Program (“GEMS Program”), subject to the

¹ HRS § 196-63 provides that until the Authority is duly constituted, the Department of Business, Economic Development, and Tourism of the State of Hawaii (DBEDT) may exercise all powers reserved to the Authority pursuant to HRS § 196-64, and shall perform all responsibilities of the Authority. As the Authority has now been duly constituted, the Authority assumes in its own right, pursuant to statute, all of the functions, powers, and obligations, including responsive or informational submissions in this Docket, which had heretofore been assigned to DBEDT.

modifications described within the Program Order.² Within the Application, a governance process was proposed for the GEMS Program that used mechanisms for updates to or modifications from the approved GEMS Program guidelines. In this process, Program notifications are used to provide additional details on GEMS Program guidelines. In this process Program Notifications are used to provide additional details on GEMS Program components including *project, program, financing, or other arrangements (clean energy technology, parties intended to benefit, loan program or other arrangements, and credit sources and funding), minimum lending, credit or investing criteria, and repayment mechanisms and processes.*³ The Application stated that DBEDT or the Authority⁴ will use Program Notifications to report and certify information on implementation of key GEMS Program components that are within the scope of the Program Order parameters and exhibits issued by the Public Utilities Commission ("Commission").⁵

The Program Order approved the Program Notification process with a modification requiring that the Authority file any GEMS Program Notification with the Commission no less than fifteen (15) business days prior to implementation instead of the proposed ten (10) days stated in the Application.⁶

The Division of Consumer Advocacy ("Consumer Advocate" or "CA") recommended that DBEDT submit market assessments and cost-benefit analysis for the financing of technologies related to solar PV that will mitigate grid saturation prior to DBEDT's submission of a Program

² See "Decision and Order No. 32318," filed in Docket No. 2014-0135 on September 30, 2014, at p. 1.

³ Paraphrased from HRS §269-170 and 269-171, as referenced in "Application of Department of Business, Economic Development, and Tourism; Verification; Exhibits; and Certificate of Service," filed in Docket No. 2014- 0135 on June 6, 2014 at p. 15. Emphasis added.

⁴ Prior to the Authority's establishment, DBEDT is authorized to exercise the Authority's powers and is required to effectuate the Authority's responsibilities (see HRS § 196-63). Accordingly, references to the "Authority" and "HGIA" in this Program Notification include DBEDT acting on behalf of the Authority, as explained in footnote 1 above.

⁵ See "Application of Department of Business, Economic Development, and Tourism; Verification; Exhibits; and Certificate of Service," filed in Docket No. 2014-0135 on June 6, 2014 at p. 15.

⁶ See "Decision and Order No. 32318," filed in Docket No. 2014-0135 on September 30, 2014, at p. 84.

Notification,⁷ and the Commission then directed DBEDT to “provide the information identified by the Consumer Advocate concerning market assessments and cost-benefit analyses for approved non-Solar PV clean energy technology with any Program Notification that is submitted to finance those technologies.”⁸

II. Program Notification

The purpose of this Program Notification is to provide additional information and request approval to modify and further enhance the Hawaii Green Infrastructure Authority’s Green Energy Money Saver (“GEM\$”) On-Bill Program. On April 20, 2018, the Commission issued Order No. 35415 “Conditionally Approving the Establishment and Implementation of an On-Bill Repayment Mechanism.” While the Authority’s loan servicer and the Hawaiian Electric Companies (“HECO”) were not expecting the programming and testing of the automated transmission of data between the two entities to be completed until late 2018 to early 2019, due to a 6 to 12-month lag between the receipt of a loan application and loan funding (after the energy improvement is installed), the Commission’s Order allowed HGIA to begin accepting GEM\$ applications on June 1, 2018.

On December 6, 2018, the Commission issued by Order No. 35918, “Approving the Establishment and Implementation of an On-Bill Repayment Mechanism and Associated Tariff”; and on April 8, 2019, the Authority and HECO submitted a Joint Filing to the Commission pursuant to Order No. 35918 informing the Commission that the on-bill repayment mechanism was ready for implementation. On that same day, Governor Ige announced the official launch of the GEM\$ On-Bill Program.

⁷ See “Division of Consumer Advocacy’s Statement of Position,” filed in Docket No. 2014-0135 on August 7, 2014, at p. 13.

⁸ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 85.

A. Modifications to the GEM\$ On-Bill Program

The GEM\$ On-Bill Program approved by the Commission on December 6, 2018, included an applicant eligibility requirement, which only allows applicants (ratepayers) who did not receive a disconnection notice over the past 12-month period, to be eligible for financing; a project eligibility requirement requiring each proposed installation to have a minimum estimated post-installation bill savings of at least 10%, inclusive of the loan payment; and additional program metrics to report. Currently, the Authority is required to provide updates on some 592 data/metrics on a quarterly basis.

However, due to the devastating economic impacts of the COVID-19 pandemic; a realization that “Bill Savings” limits eligibility based on the size of an individual ratepayer’s utility bill(s); and a review over the accuracy and/or relevance of the data being reported, approval of the following modifications is being requested to the existing GEM\$ On-Bill Program: (1) Allow ratepayers with disconnection notices to be eligible for the program, while instituting a tiered minimum savings requirements based on bill payment history; (2) Modify the “savings” calculation from bill savings to value of energy savings; and (3) Modify the reporting metrics to be more meaningful and relevant by eliminating data that are either pure assumptions or provide little value.

1. Applicant Eligibility Requirement. An analysis of GEM\$ applications received before the pandemic between June 1, 2018⁹ to February 28, 2020, found that 69.7% of the ratepayers applying for financing had disconnection notices, out of which 43.4% had four or less disconnection notices and 56.6% had five or more disconnection notices. In other words, even before the pandemic, when Hawaii’s economy was reportedly strong with one of the lowest unemployment rates in the

⁹ The date the Authority began accepting GEM\$ applications per Order 35415 Conditionally approving the establishment and implementation of an on-bill repayment mechanism filed on April 20, 2018 in docket 2014-0135.

nation at 2.2%, some 70% of our underserved ratepayers were not eligible for GEM\$ financing. Two short months later, in April 2020, following the “Stay at Home Order,” Hawaii’s unemployment rate jumped to the highest in the nation at 22.4%, and further exacerbated the challenges facing our underserved ratepayers with very little or no “financial safety net”¹⁰.

Instead of prohibiting ratepayers with disconnection notices from being eligible for the program, the Authority is requesting that all ratepayers, including ratepayers with disconnection notices, be allowed access to financing with minimum savings requirement based on a tiered system, as follows:

Modified Applicant Eligibility Requirements	
No. of Disconnection Notices	Tiered Estimated Savings Requirement
0	Budget Neutral: No savings required
1-4	Minimum 10% savings
5+	Minimum 15% savings

The COVID-19 pandemic disproportionately negatively impacted more low and moderate-income households than affluent households¹¹. As indicated in the Authority’s Quarterly Report for the period ended June 30, 2020, pre-COVID, approximately 42%¹² of Hawaii’s households were classified as Asset Limited, Income Constrained, Employed (“ALICE”). Due to the financial hardships disproportionately negatively impacting LMI households, a June 2020 report estimated that an additional 35,000 households (approximately 105,000 individuals)¹³ will be classified as ALICE by the end of 2021. The Aloha United Way’s ALICE

¹⁰ A financial safety net is a cushion of savings, insurance, and other assets that one can fall back on in case of an emergency. Whether it be an unexpected medical bill, a sudden home repair, or a family emergency, a financial safety net can help cover costs without going into debt, according to [bethebudget.com](https://www.bethebudget.com).

¹¹ “COVID-19 Pandemic Pinches Finances of America’s Lower- and Middle-Income Families”, Pew Research Center, April 20, 2022.

¹² <https://www.unitedforalice.org/hawaii>

¹³ “Aloha United Way Gives Dir. Report on Hawaii Poverty Line Amid Coronavirus Pandemic,” Pacific Business News, June 18, 2020.

2021 COVID Report validated the predictions and confirmed “that households below the ALICE Threshold fared significantly worse during the pandemic than those with higher incomes – as reported in surveys conducted between March 2020 and May 2021 by the U.S. Census, Federal Reserve Board, University of Southern California and United For ALICE”¹⁴. The Report further indicated that, “Even with government support in play, households below the ALICE Threshold reported higher levels of job loss, childcare struggles and health challenges than those earning an income that affords the basics, according to the report’s analysis. In addition, racial inequities are evident within the data. Those identifying as American Indian/Alaskan Native/Hawaiian/Pacific Islander (AIAN/H/PI) experienced the highest percentage of job loss among all reporting ethnic groups. The AIAN/H/PI below-ALICE Threshold Households also reported the highest presence of significant health issues by race and ethnicity. AIAN/H/PI households reported at 73% and when this number is combined with job loss, resulting lack of healthcare coverage and fragility in the wake of a pandemic, it is clear that Hawai‘i’s people have suffered greatly as a community.” Fortunately, the Commission issued a moratorium on disconnections through May 31, 2021, which enabled many families to maintain its account with the electric utility without negatively impacting its repayment history. However, when the moratorium was lifted, ratepayers who did not enroll in a payment plan or fell behind on their repayment plan, once again began receiving disconnection notices, eliminating the Authority’s ability to help those households that need help the most in lowering their electric utility cost. Without GEM\$ financing, many of these households have no other alternatives or options to lower their household expenses

¹⁴ “ALICE 2021 COVID Report”, Aloha United Way, October 2021.

and will remain victim to rising utility and other household expenses. To illustrate, the following is an email received from an applicant who installed a solar + storage system with GEM\$ financing last year:

Aloha Gwen,

Due to the COVID-19 pandemic, we have been looking at ways to reduce our household expenses, which is why we are interested in installing a Solar PV System.

I've inquired with my local credit unions and banks and they indicated that I do not meet the creditworthiness criteria, which has been a direct result of the adverse economic impact of COVID-19. As a result, I cannot qualify for a loan with these financial institutions.

As the GEMS program does not require a credit check, this program has become the only option I have to acquire a Solar PV System.

We have saved our Stimulus Checks from 2020 and 2021 to pay for the solar battery.

We feel so grateful and blessed that you are able to help make owning a Solar PV system a reality.

GEM\$ Participant

While the rising cost of oil is negatively impacting all ratepayers, it is disproportionately impacting LMI households which are paying significantly more of their earnings on energy costs. According to an article in a Marketplace newsletter, "Experts generally say that energy costs should only take up about 6% of a household's income. Right now, on average, middle-income families are spending twice that and low-income families are spending four times that, according to data from the National Energy Assistance Directors Association."¹⁵ Modifying the GEM\$ eligibility requirement to allow all ratepayers to participate will expand access to financing for underserved ratepayers who are not able to qualify for conventional

¹⁵ "Energy is getting more expensive. More middle-income families are struggling to pay," Marketplace, May 16, 2022.

bank and credit union financing. Additionally, by instituting a tiered estimated post-installation savings, whereby ratepayers who have been diligent in paying their electric utility bills as agreed, may be approved for budget neutral financing, where estimated savings are equal or more than the loan repayment; ratepayers with four or less disconnection notices over the past twelve-month period may be approved for financing with a minimum 10% estimated savings; and ratepayers with five or more disconnection notices over the past twelve-month period may be approved for financing with a minimum 15% estimated savings, providing for a higher net savings requirement for those households struggling to pay their utility and other household expenses.

2. Project Eligibility Requirements. In its application for GEM\$ program approval, the Authority requested a minimum estimated bill savings requirement for an eligible improvement to be approved for financing. However, over the course of underwriting a number of requests, the Authority has found that tying a minimum percentage savings to a utility bill limits eligibility, as obtaining the minimum required bill savings is highly dependent on the size of the utility bill relative to the energy reduction/production of the system being proposed. As many LMI households include a number of generations as well as multiple families, their utility bill is larger than average, making it especially difficult for solar hot water systems to qualify as the bill savings requirement are more punitive for ratepayers with larger bills.

The following is an example of two ratepayers applying to finance a solar hot water heater. In this example, only Family B would meet the minimum 10% bill savings requirement to install the solar hot water heater:

	Family A	Family B
Existing Average Monthly Energy Cost	\$700	\$400
Installation Cost, net of Hawaii Energy rebate	\$6,500	\$6,500
Monthly Loan Repayment	\$46	\$46
Estimated Monthly Energy Savings ¹⁶	\$101	\$101

Calculations Based on Bill Savings:	Family A	Family B
Average Monthly Utility Bill	\$ 700	\$ 400
Less: Estimated Energy Savings based on kWh reduction (101)	<u>(101)</u>	<u>(101)</u>
Post-Retrofit Estimated Utility Bill, based on kWh reduction	\$ 599	\$ 299
Plus: Monthly GEM\$ Program Charge	<u>46</u>	<u>46</u>
Post-Retrofit Estimated Utility Bill, net of Program Charge	\$ 645	\$ 345
% Estimated Bill Savings	7.8%	13.8%

However, if the % savings is based on the kWh produced or reduced, which would be the same based on the equipment being installed regardless of the size of the ratepayer's utility bill, rather than a percentage of a household's energy bill, which fluctuates from household to household, the Project Eligibility criteria would not only be more standardized, but it would also not "penalize" the very families we are trying to assist, the ones with higher energy consumption, to lower their utility cost, and both families would qualify for GEM\$ financing.

Calculations Based on Value of Energy Savings:	
Estimated Energy Savings based on kWh reduction	\$ (101)
Monthly GEM\$ Program Charge	<u>46</u>
Net Estimated Monthly Savings	\$ 55
% Estimated Energy Savings	54%

¹⁶ Based on energy reduction estimates provided by Hawaii Energy and current HECO effective rates.

3. Reporting Metrics. The Authority agrees that reporting data and metrics on a quarterly basis is important to demonstrate the impact GEMS financing is providing to underserved ratepayers. However, the Authority is requesting to eliminate the requirement to report data that are either based on assumptions or are not meaningful, as follows:

Marketing and Customer Service Activities:

Prospective Contractor Contacts	0	7	287
Prospective Residential Loan Contacts	186	868	6171
Prospective Consumer Lease Contacts	56	214	1112
Prospective Commercial Loan Contacts	2	14	1154
Existing Contractor Calls and Support	380	1700	1831
Existing Residential Participant/Borrower Servicing	64	239	679
Existing Commercial Participant/Borrower Servicing	68	265	1221

The original intent of the marketing metrics was to demonstrate that the Authority is actively marketing the financing program for fund deployment. However, in reality, it is impossible for staff to keep track of every single contractor, residential and commercial applicant, and existing servicing contacts made on a daily basis. This being the case, the Authority derived formulas based on the average estimated number of contacts for each category. As an example, for a new residential application, the formula is based on an average of 3.5 contacts during the course of the application process. The Authority will continue to report on the number of new applications received during the quarter, as well as the number of loans in process and funded, but since the “contact” data being reported are assumptions, the Authority is requesting approval to remove these “contact” metrics from the quarterly report.

Profile of Customers Financed: Number of Customers by Customer FICO

Credit Score

Profile of Customers Financed:

Number of Customers by Customer FICO Credit Score (11)

700 and above	-	0	149
675-699	-	0	50
650-674	-	0	32
620-649	-	0	18
600-619	-	0	9
Below 600	-	0	2

(11) Excludes on-bill applicants

With the launch of the Green Energy Money Saver On-Bill Program, the Authority no longer pulls credit reports to underwrite loans. The Authority is therefore requesting approval to remove the Number of Customers by Customer FICO Credit Score metric from the quarterly report.

Number of Customers by Income Distribution

Number of Customers by Income Distribution (self-reported by customers)

Under \$15,000	0	0	0
\$15,000-\$24,999	1	1	2
\$25,000-\$34,999	0	0	5
\$35,000-\$49,999	0	3	32
\$50,000-\$74,999	5	8	62
\$75,000-\$99,999	6	13	110
\$100,000 and above	20	46	302

Reporting household income without also reporting the number of household members being supported thereby can be misleading. Many GEMS applicants have household incomes in excess of \$100,000; however, because this income supports a large number of household members, these households are categorized as LMI, according to U.S. Department of Housing and Urban Development (HUD) metrics. The Authority will continue to report program participation based on HUD's Area Median Income, which is a more meaningful metric to determine if the household is classified as low and moderate-income. As such, the Authority is requesting

approval to remove the Number of Customers by Income Distribution metric from the quarterly report.

Number of Small Businesses by Gross Receipts and Number of Small Businesses by Average Number of Employees

Number of Small Businesses by Gross Receipts (14)

Up to \$9,999	0	0	0
\$10,000-\$24,999	0	0	0
\$25,000-\$99,999	0	0	0
\$100,000-\$499,999	0	0	1
\$500,000-\$999,999	0	0	2
\$1,000,000-\$4,999,999	0	0	2
Above \$5,000,000	0	1	0

Number of Small Businesses by Average Number of Employees (14)

10 Employees or less	0	0	0
11-50 Employees	1	1	0
51-100 Employees	0	0	0
101-250 Employees	0	0	0
251-500 Employees	0	0	0
501-1,000 Employees	0	0	2
>1,000 Employees	0	0	0

(14) Depending on the North American Industry Classification System (NAICS), the size determination is based on gross revenues or number of employees

To be eligible for GEMS financing, a business must meet the U.S. Small Business Administration (SBA) size standards. Depending on the industry, the SBA measures a business' size based on gross revenue or number of employees. However, taken in isolation, this data provides little meaning. The Authority will continue to screen business applications using SBA's size standard but requests approval to remove the Number of Small Businesses by Gross Receipts and Number of Small Businesses by Average Number of Employee metrics from the quarterly report.

Cost Savings Impact

Average System Cost per Watt for All Consumers (PV) (\$)	\$ 3.41	\$ 3.65	\$ 3.82
Average System Cost per Watt for Underserved Consumers (PV)	\$ 3.41	\$ 3.65	\$ 3.83
Average System Size for All Consumers (PV) (kW)	10.1	9.9	9.5
Average System Size for Underserved Consumers (PV) (kW)	10.1	9.9	9.5
Project Cost per kWh for All Consumers -- Energy Efficiency (\$) (17)	\$ -	\$ -	\$ 0.17
Average Project Size for All Consumers -- Energy Efficiency (kW)	n/a	n/a	n/a
Project Cost per kWh for Underserved Consumers -- Energy Efficiency (\$) (17)	\$ -	\$ -	\$ 0.17
Average Project Size for Underserved Consumers -- Energy Efficiency (kW)	n/a	n/a	n/a

(17) Calculated for all projects regardless of island

At its inception, the Authority believed that the distinction between all consumers financed and underserved consumers financed was to determine if there was a disparity between these two groups. However, as GEMS funds can only be used to finance underserved ratepayers, there is no difference in the data being reported in both categories.

Additionally, at inception, the Authority engaged WECC to originate its loans. In November 2017, the HGIA staff began originating, underwriting and processing loans under its direct loan product. On June 1, 2018, HGIA began accepting applications under the GEM\$ On-Bill financing program. As the portfolio becomes larger, it becomes increasingly more difficult and time consuming to accurately report the average system cost and size since program inception. As reporting averages for the most current quarter as well as the current fiscal year are manageable and the Authority will continue report those averages, HGIA is requesting approval to remove the Average System Cost per Watt for Underserved

Consumers, Average System Size for Underserved Consumers, and all averages “Since Program Inception” from the quarterly report.

B. Enhancements to the GEM\$ On-Bill Program

With Hawaii’s evolving energy needs, a variety of new programs and initiatives have been developed and have come into fruition over the past few years. Similarly, to meet the financing needs of the changing energy landscape, GEM\$ needs to evolve.

Additionally, due to the devastating economic impact the COVID-19 pandemic has had on LMI households, small businesses, and other underserved ratepayers, the risk profile to developers and private capital providers has increased. Increased risk decreases a developer or lender’s willingness to extend services to these ratepayers, and if services are extended, costs are proportionately increased to offset the perceived increased risk.

Fortunately, the Authority’s on-bill repayment mechanism is designed to mitigate risk, thereby enabling developers and private capital providers to expand accessibility at a reasonable cost. Approval of the following enhancements to the GEM\$ On-Bill Program are being requested: (1) finance community-based renewable energy (“CBRE”) projects; (2) expand the application of the on-bill repayment mechanism to CBRE projects, projects that enable ratepayers to participate in grid services or other utility programs with or without GEMS financing; (3) include non-utility expenses in the savings calculation to allow for adequate system sizing to account for additional electric vehicle (“EV”) charging load to facilitate the electrification of transportation; and (4) allow for the bundling of eligible improvements to meet the minimum savings requirement and encourage more commercial energy efficiency upgrades.

1. **Community-Based Renewable Energy Projects.** During its August 15, 2019, board meeting, based on recommendations from a Permitted Interaction Group (“PIG”) established by the board, HGIA approved the following changes, effective September 1, 2019, to its financing programs and notified the Public Utilities Commission with a letter filing¹⁷ on August 20, 2019:

- a. Affluent¹⁸ households were no longer eligible for financing utilizing loan capital from the Green Energy Market Securitization Bond.
- b. With some \$34.0 million in loan capital available at that time, the remaining funds were allocated as follows:

Category	% Allocation
Low and moderate-income (“LMI”) single family homeowners and renters	20%
Small Businesses ¹⁹	15%
Multi-Family Rental Projects	35%
Nonprofits	30%
Total	100%

During its discussions, the PIG recognized that GEMS financing and the GEM\$ on-bill repayment mechanism could be instrumental in facilitating the expansion of Community Based Renewable Energy (“CBRE”) for underserved ratepayers as a future initiative; however, as it was not yet approved by the Commission, no allocation of funds was set aside for CBRE projects. The PIG recommended that HGIA retain flexibility to adjust said allocations based on future market needs and demands.

¹⁷ Filed in Docket No. 2014-0135.

¹⁸ Defined as 140% or greater area median income per the U.S. Housing and Urban Development and Hawaii Housing, Finance and Development Corporation guidelines.

¹⁹ As defined by the U.S. Small Business Administration.

Due to deadlines for submitting Requests for Proposals (“RFP”) for the current phase of the Hawaiian Electric Company’s (“HECO”) CBRE program, the Authority received a request from a project seeking both GEMS financing and the utilization of the GEM\$ repayment mechanism. During its October 27, 2021 board meeting, the Authority found Ho‘ahu Energy Cooperative Molokai’s (“Ho‘ahu”) CBRE project, one of the few community-led, community-developed, community solar projects in the nation, located within a community with one of the highest energy costs and poverty levels in the State, to be the essence of the types of projects and communities that policy-makers envisioned the GEMS financing program to assist when Act 211 was enacted in 2013. As Ho‘ahu’s CBRE RFP required a letter of interest from lender(s) and equity partner(s), and due to the long lead time required before the project would be able to break ground, HGIA approved reserving \$7.5 million for the Ho‘ahu’s project, subject to Commission approval and formal HGIA loan approval. In order to accommodate this new CBRE category, the remaining funds were re-allocated as follows:

Category	% Allocation
Low and moderate-income (“LMI”) single family homeowners and renters	14%
Small Businesses ²⁰	7%
Multi-Family Rental Projects	23%
Nonprofits	34%
Community Based Renewable Energy	22%
Total	100%

During the underwriting and approval process, commercial lenders typically rely on the historical track-record [of a business] to ensure it demonstrates sufficient

²⁰ As defined by the U.S. Small Business Administration.

cash flow to repay a requested loan. Additionally, for new ventures and/or for growing companies, lenders typically require additional collateral (assets) and personal guarantees of the company's principals as secondary and tertiary sources of repayment. Having organized on January 29, 2021, Ho'ahu is a new organization without any historical track record. Additionally, as a single purpose entity (to own and operate the community solar project), it will not have any additional assets; and as a Cooperative, there are no principals to provide personal guarantees. As such, GEMS subordinate financing, coupled with the GEM\$ on-bill repayment mechanism, are critical for Ho'ahu to attract and leverage much needed private capital to develop the project.

If the Commission approves GEMS financing for Ho'ahu and other community solar projects, the loans would be structured in the same manner as other GEMS financed commercial projects, which leverages private capital in the form of equity and/or conventional debt.

Once the system is placed in service and the CBRE energy credits are placed on the CBRE Subscriber's electric utility bills, the Authority will simultaneously place the Subscriber's related cost (e.g., monthly subscription amount or loan payment if the ratepayer obtained financing to purchase an interest in the community solar project) in the form of a Program Charge on the Subscriber's electric utility bill. The net benefit will be reflected on the Subscriber's (ratepayer) utility bill to offset energy costs.

The Authority will apply the loan payment due from Ho'ahu or other CBRE projects against the aggregate monthly subscription (Program Charges) collected and

the excess, net of a nominal servicing fee, will be transmitted to the CBRE project. To date, the Authority has received inquiries from five additional community solar projects.

Some projects are replicating the “Ho‘ahu Coop” model and will likely require GEMS to play a significant role in the capital stack in order to attract private capital. Other projects may be able to obtain most of their financing from conventional lenders or private capital providers without much GEMS loan capital if the project’s off-takers are considered to be “low-risk,” or in other words, strong, creditworthy ratepayers. In tri-party conversations between a commercial lender, developer and HGIA, it was evident that the Bank’s appetite to lend to CBRE projects with LMI and other underserved subscribers is low, unless the CBRE project is able to utilize the GEM\$ on-bill repayment mechanism for subscription/energy cost collection, to mitigate credit risks.

Authorizing HGIA to finance community solar projects under its GEM\$ financing program will be a game-changer for community-developed/community-owned projects. It will also expand access and accessibility for LMI and other underserved ratepayers to other CBRE projects currently under development.

HECO designed and developed an interactive community solar portal for developers to onboard subscribers as well as input data (e.g. actual kWh production, ratepayer’s account information, and/or other relevant information) into the portal on a real-time basis, which automatically calculates the CBRE Credit to be included on the Subscriber/Ratepayer’s monthly utility bill.

While HGIA is able to place a Program Charge on the Subscriber's/Ratepayer's electric utility bill, the Program Charge is not currently able to change on a monthly basis, based on the actual kWh produced. Any changes in the Program Charge results in a prorated amount, depending on the amount and timing of the change. HECO and HGIA have preliminarily discussed the additional programming requirements needed to expand the application of the CBRE portal to also include the addition of HGIA's on-bill repayment mechanism to collect monthly subscriptions from enrolled Subscribers, based on the actual kWh produced.

Unlike cell phone plans that were originally offered in the 1980's, which required a contract tied to a minimum time commitment (e.g. 2 or 3-year plans), CBRE Subscribers may not be required to commit to a multi-year plan, giving them the flexibility to cancel their subscriptions at any time (subject to notice to the CBRE Developer). As a result, if HGIA is not able to receive the actual kWh production for the Subscribers on a "real time" monthly basis, HGIA will need to incorporate into the Program Charge, a "reserve" to offset accrued amounts still due and outstanding if the actual kWh production exceeds estimates. This reserve will be similar to an escrow account for real property taxes and insurance for residential mortgage loans, which are reconciled on an annual basis. CBRE Developers and HGIA will need to conduct an annual true-up of the aggregate Program Charges collected against the actual kWh production in order to estimate the Program Charge to be collected over the next 12-month period. Over-collections will be refunded and the Program Charge will be increased to account for under-collections. As such, authorizing HECO to invest in the additional programming required to electronically place Program

Charges for CBRE projects on the Subscriber's electric utility bill will eliminate the need for the LMI households and underserved ratepayers to have funds kept in a reserve, as well as decrease ongoing administrative costs for the CBRE Developers and HGIA, costs which will be absorbed by the Subscribers.

While ratepayers or subscribers financed with GEMS loan capital will still need to meet HGIA's underserved definition, by having to maintain two servicing processes, one for underserved ratepayers serviced by HGIA utilizing the on-bill repayment mechanism and a different servicing process for ratepayers that do not meet HGIA's "underserved" definition, it will be costly and confusing for the CBRE Developer. Therefore, HGIA is requesting approval to provide the CBRE Developers an option for HGIA to service all subscribers, regardless of income or size.

2. Expand the application of the on-bill repayment mechanism for projects not requiring HGIA financing. In order to enable more CBRE projects to include LMI and other underserved subscribers, while mitigating risks to facilitate private financing at reasonable rates and terms, the Authority is requesting approval to utilize the GEM\$ on-bill repayment mechanism in CBRE and other projects without GEMS financing. Examples of other projects could include leveraging the on-bill repayment mechanism for projects that enable ratepayers to participate in Grid Services or other utility programs. Except for the underserved criteria (since these projects will not be GEMS financed), the Authority will apply the same savings requirements for the use of the on-bill repayment mechanism for non-GEMS funded projects.

3. Include non-utility expense savings when determining "energy" savings. Along with the significant increases in electric utility rates, gas prices have also

sharply increased nationwide. “For Americans, recent dramatic surges in gas prices and rent have increased the cost of daily life at a quicker rate than wages.

Households with low incomes will likely be particularly affected by these changes.”²¹

Compounding the gas price increase for our underserved ratepayers, especially on Oahu, is longer commutes for many, who are typically driving older model, less efficient vehicles.

According to Compare.com, the least expensive electric vehicle is a Nissan Leaf²². According to TrueCar.com, the least expensive compact car is a Mitsubishi Mirage²³. The following is a side-by-side comparison on the cost of transportation between a Mitsubishi Mirage (compact gas car) and a Nissan Leaf (compact electric vehicle):

	Mitsubishi Mirage	Nissan Leaf
Fuel Capacity	9.2 Gallons	Up to 212 miles
Ave Cost of Fuel	\$5.29/Gallon (Honolulu) ²⁴	\$0.439020/kWh (Oahu) ²⁵
Miles Per Gallon or kWh	35 Miles Per Gallon	2.89 Miles per kWh ²⁶
Cost for Full Tank	\$48.67	\$32.20

Comparing the Transportation Cost for a Ratepayer who lives in Waianae and works in Honolulu		
Roundtrip between Waianae & Honolulu	32.1 miles one-way/ 64.2 miles round trip	
Fuel Cost for daily commute	\$9.70/day	\$9.75/day
Maintenance Cost ²⁷	10.1 cents per mile	6.1 cents per mile
Maintenance cost for daily commute	\$6.48/day	\$3.92/day
Total Transportation Cost/Day	\$16.18/day	\$13.67/day

²¹ “What Rising Gas and Rent Prices Mean for Families with Low Incomes”; Urban Wire, March 17, 2022.

²² [The Least Expensive Electric Car Money Can Buy | Compare.com.](#)

²³ [20 Cheapest Compact Cars for 2022 - TrueCar.](#)

²⁴ [Average Regular Gas Price Comparison in Hawaii \(gasbuddy.com\).](#)

²⁵ Mid-tier Residential rate schedule cost of kWh per HECO Effective Rate Summary as of 7/1/22 for Oahu.

²⁶ The average electric car kWh per 100 miles is 34.6 or 0.346 kWh per mile. [Average Electric Car kWh Per Mile \[Results From 231 EVs\] \(ccocostsavings.com\).](#)

²⁷ According to a study commissioned by the U.S. Department of Energy, as reported by Motor Trend, Inside Hook, June 22, 2021: [How Much Cheaper Is Maintenance for an Electric Car? - InsideHook.](#)

Based on the current kWh residential rate for Oahu, the actual fuel cost for an electric vehicle is approximately 5 cents per day more expensive than a gas vehicle. As a comparison, a year ago when the residential rate for Oahu was \$0.312090/kWh, the EV fuel cost for the daily commute would have been \$6.93/day. However, factoring in the maintenance cost, even with today's high cost for electricity, owning an electric vehicle would provide the ratepayer an approximate 15.5% savings. If a ratepayer was able to "power" the EV with solar, it would garner greater savings on the household's total energy expenses.

Unfortunately, HGIA's current underwriting is based on historical electricity consumption. As a result, it currently does not allow for "oversizing" a solar PV system to accommodate the additional load to charge electric vehicle(s). As such, we are requesting approval to include non-utility expenses, such as gas and maintenance, into the savings calculation to allow for adequate system sizing to account for additional electric vehicle ("EV") charging load to facilitate the electrification of transportation

4. Bundle retrofits to meet minimum savings requirements. In GEM\$ Program Manual submitted to the Commission, the Authority's original intent was for every eligible improvement to be able to stand-alone and achieve a minimum 10% estimated bill savings. However, we have found that especially for HVAC, it is extremely difficult to achieve the minimum savings required for approval. Additionally, in speaking with air conditioning contractors, it appears that even with the rebates offered by Hawaii Energy, many commercial ratepayers choose to install the least expensive (and typically least efficient) systems due to the cost. Bundling

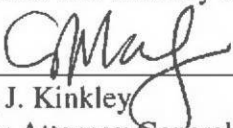
lighting or solar PV installations with energy efficiency installations could in aggregate achieve the minimum savings required to qualify for financing.

Accordingly, the Authority is requesting approval to bundle eligible improvements to meet the required minimum savings thresholds.

III. Subsequent Authority Action

Unless informed otherwise by the Commission, upon completion of the fifteen (15) business day term of the Program Notification, HGIA shall amend the existing Green Energy Money Saver On-Bill Program to allow ratepayers with disconnection notices to be eligible based on a tiered savings requirement; change the bill savings requirement to a reduction in energy costs based on kWh production/reduction; amend the reporting requirements, finance community solar projects, utilize the GEM\$ onbill repayment mechanism without GEMS financing, include non-utility savings in the savings calculation to size solar systems for additional EV charging load; and allow the bundling of energy efficiency and/or renewable energy retrofits to meet the savings requirement. Any subsequent changes to the details described herein will be proposed through the GEMS Annual Plan.

Submitted this 12th day of August 2022.



Gregg J. Kinkley
Deputy Attorney General for the Authority

SERVICE LIST

An electronic copy of the GEMS Quarterly Report for Program Notification 15 has been filed in Docket No. 2014-0135, together with this Certificate of Service, in addition to the following, at the following addresses:

State of Hawaii (electronic)
Public Utilities Commission
465 S. King Street
Honolulu, HI 96813
Puc@hawaii.gov

Dean Nishina (electronic)
Executive Director
Department of Commerce and Consumer Affairs
Division of Consumer Advocacy
P.O. Box 541
Honolulu, HI 96809
dnishina@dcca.hawaii.gov
consumeradvocate@dcca.hawaii.gov

Robert Mould
Executive Director
Hawaii Solar Energy Association
P.O. Box 37070
Honolulu, HI 96837
rmould@hsea.org

Kevin M. Katsura (electronic)
Manager – Regulatory Non-Rate Proceedings
Hawaiian Electric Company, Inc.
Hawaii Electric Light Company, Inc.
Maui Electric Company, Ltd.
P.O. Box 2750
Honolulu, HI 96840-0001
kevin.katsura@hawaiianelectric.com

Melissa Miyashiro
Executive Director
Blue Planet Foundation
55 Merchant Street, 17th Floor
Honolulu, HI 96813
melissa@blueplanetfoundation.org

Dated: August 12, 2022
Honolulu, Hawaii

FILED

2022 Aug 12 AM 09:27

PUBLIC UTILITIES
COMMISSION

The foregoing document was electronically filed with the State of Hawaii Public Utilities Commission's Document Management System (DMS).