BEFORE THE PUBLIC UTILITIES COMMISSION
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. 12 FOR
THE GREEN INFRASTRUCTURE LOAN PROGRAM,
ATTACHMENT A & B
AND
CERTIFICATE OF SERVICE

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PROGRAM NOTIFICATION NO. 12 FOR THE GREEN INFRASTRUCTURE LOAN PROGRAM

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

The Hawaii Green Infrastructure Authority of the State of Hawaii ("HGIA" or "Authority") 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 modifications described within the Program Order. Within the

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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.
2 See Program Order, at 1.
Application, a governance process was proposed for the GEMS Program that used mechanisms for updates or modifications from the approved 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, credit sources, funding, etc.); minimum lending, credit or investing criteria; and repayment mechanisms and processes. The Application stated that the Department of Business, Economic Development, and Tourism ("DBEDT") or the Authority 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 Commission.

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.

The Division of Consumer Advocacy ("Consumer Advocate" or "CA") recommended that DBEDT submit market assessments and cost-benefit analyses for the financing of technologies related to solar PV that will mitigate grid saturation prior to DBEDT's submission of a Program Notification and the Commission then directed DBEDT "to provide the information identified by the Consumer Advocate concerning market assessments and cost-benefit analyses for

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3 Paraphrased from HRS §269-170 and 269-171, as referenced in Application, at 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 Application, at 15.
6 See Program Order, at 84.
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 on the deployment of capital to the commercial sector for commercial energy efficiency ("EE") under the GEMS Commercial EE Loan Product: Project Sponsor\(^9\) and GEMS Commercial EE Loan Product: Direct\(^10\), consistent with the Authority’s 2018 Annual Plan submitted to the Commission\(^11\) and Exhibit 9 of the Application, as amended to include, amongst other technologies, commercial energy efficiency (LED systems, heating, ventilating, and air conditioning ("HVAC") and related systems).\(^12\) Commercial EE was proposed as an eligible technology in DBEDT’s Statement of Position\(^13\) and approved in the Program Order. Using GEMS capital for commercial EE is consistent with the core tenants of the GEMS Program since the use of GEMS funds for commercial EE will help to remove financing market barriers in the current commercial EE market, broaden access to EE and enable more ratepayers to reduce energy consumption and related costs.

To satisfy requirements for the financing of “approved non-Solar PV clean energy technology” stated above, the Authority is providing a market assessment for commercial EE financing and parameters around bill savings targets to serve as a cost-benefit analysis, as

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\(^8\) See Program Order, at 85.
\(^9\) See “Attachment A: GEMS Commercial EE Loan Product: Project Sponsor.”
\(^10\) See “Attachment B: GEMS Commercial EE Loan Product: Direct.”
consistent with the steps taken in the Application and Program Order to approve Solar PV as an eligible technology.

The Commission allows the Authority flexibility in allocating funds between customer types and did not restrict funding to the underserved\(^\text{14}\) so that the long-term viability of the GEMS Program is addressed.\(^\text{15}\) The Commission also did not oppose the Authority operating with flexibility in the finalization of details as long as sufficient oversight and reporting is established.\(^\text{16}\)

A. GEMS Commercial EE Loan Product

On July 15, 2015, the Authority requested approval of Program Notification No. 5 to deploy GEMS capital through a Deployment Partner that would, in turn, enter into efficiency services agreements ("ESAs") with customers for energy efficiency retrofit projects. As noted on HGIA’s Report for the Quarter Ended June 30, 2017,\(^\text{17}\) the sales cycle for the ESA’s can be lengthy due to the considerable engineering work required on the part of the borrower and the size of the transaction(s). Additionally, identifying eligible projects is difficult due to a disconnect between an ESA’s $1.0 million minimum project size requirement and GEMS financing restrictions that only authorizes the funds to be used for nonprofit or small business\(^\text{18}\) participants. As such, the Authority is requesting approval to provide direct financing for commercial EE installations.


\(^\text{18}\) Small Businesses are defined by the U.S. Small Business Administration’s Size Standards.
Commercial EE financed in the GEMS Program will be a form of leveraged debt with financing terms similar to the Commercial PV Loan Products: Project Sponsor and Direct. Deployment of GEMS capital will be through a term loan for purposes consistent with the GEMS program, as specified in this Program Notification Attachment A, GEMS Commercial EE Loan Product: Project Sponsor and Attachment B, GEMS Commercial EE Loan Product: Direct.

As with all GEMS loans and the GEMS portfolio, any commercial EE loan will be priced to ensure the costs and risks of lending are recovered while evidencing compliance with the parameters mentioned herein and in Attachments A and B. Additionally, these GEMS Commercial EE Loan products will be subject to the same reporting metrics as previous loan products and will require the ratepayer to receive specific minimum savings from the proposed installations.

The Authority assures the Commission that the underwriting guidelines for GEMS products are defined to protect GEMS participants and ratepayer capital. The Authority is responsible for the rapid deployment of bond proceeds in a way that assures repayment of GEMS funds. This requires GEMS products to be designed to competitively address financing gaps, while prudently accounting for credit risks. Ongoing flexibility will be necessary to allow for program adjustments based on product performance and continued evaluation of the GEMS Program.

Negotiation of terms for the deployment of funds will follow industry guidelines, as well as those established in Attachments A and B to ensure that the bond proceeds securitized through ratepayer fees are expended efficiently and prudently. The Commercial EE loan products are very similar to Commercial PV Loan Products, which has been bridging a financing gap in the market while collaborating with conventional lenders, enabling the Authority to attract and
leverage 52% in private capital and facilitate almost $34.0 million in solar PV projects for nonprofits, small businesses and multi-family rental projects over the past year.

B. Market Assessment

Market assessments will typically provide an organization with data to adequately assess the potential size of a [new] market to determine feasibility in investing time and resources to capture a portion of the market being assessed. For the purposes of this Program Notification, this market assessment is agnostic to specific manufacturers or brands of energy conservation measures ("ECM") and instead attempts to analyze the market for ECM financing.

EnerNoc Utility Solutions Consulting Inc. prepared and presented the State of Hawaii Energy Efficiency Potential Study, Project #1448 (the “Study”)\(^{19}\) to the Commission on January 15, 2014. The Study categorized Hawaii’s 2012 energy consumption into five sectors: residential (32%), military (11%), water/wastewater (4%), street lighting (.5%) and commercial (52%). According to the Study, the commercial sector consumes over half of statewide electricity use,\(^{20}\) “[t]he majority of the statewide EE savings potential is found in the commercial sector.”\(^{21}\) As such, this Program Notification targets commercial users which account for the largest statewide energy savings potential identified in the Study.

The Study differentiates between the “technical potential” and the “economic potential” for EE in Hawaii. Technical potential is the theoretical maximum of EE potential in the Hawaii market. Economic potential is the cost-effective portion of the technical potential. The Study assumes that all cost-effective measures are adopted by all applicable customers who would use

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\(^{20}\) See Study, Figure ES-2, at v.

\(^{21}\) See Study, Executive Summary, at xiii.
the measure to calculate the economic potential. Significant barriers exist in the commercial market that would limit the achievable economic potential. These Commercial EE Loan Products will help achieve the economic potential found in the Study by (i) removing cost barriers customers face in funding projects; (ii) lengthening the feasible payback period on projects; (iii) decreasing the minimum project size; and (iv) broadening the credit profile of customers eligible for EE financing, as follows:

i. Eligible entities often do not have excess cash reserves to pay for the cost of the ECM or are unable to obtain flexible, low-cost financing. Under the co-lending scenario, the Commercial EE loan product may be available for up to 100% of the cost of the EE improvements.

ii. The regulatory environment for federally insured financial institutions typically limit equipment loan terms to three to five years. The Commercial EE loan product enables a conventional financial institution to provide financing within its acceptable underwriting guidelines, while lengthening the payback period for the GEMS portion, thus creating favorable cash flow friendly blended rates and terms;

iii. Offering direct financing enables entities with a smaller project size\textsuperscript{22} to participate; and

iv. GEMS Commercial Loan product's co-lending structure helps mitigate risks for conventional lenders, enabling more entities to qualify.

\textsuperscript{22} Less than $1.0 million.
The HECO Companies\(^{23}\) have approximately 45,000 ratepayers in the “small” commercial category and 10,000 ratepayers in the “medium” commercial category. Within these 55,000 ratepayers are nonprofits, multi-family rental projects and small businesses. A core tenant of GEMS’ mission is to use its funds to assist underserved customers, such as nonprofits. According to the Hawaii Alliance of Nonprofit Organization’s ("HANO") 2013 report, there were 6,627 nonprofits in Hawaii, which are included in the commercial segment of the Study.

C. Cost-Benefit Analysis

The Authority will require a minimum savings, net of financing costs, for energy efficiency projects under the GEMS Program. As such, the Authority will only lend on projects that can provide the ratepayer with a projected reduction in annual electrical consumption (as measured in kWh/year) that meets this minimum savings requirement.

According to the Study\(^{24}\), under the commercial electricity consumption segment, 29% of the electricity consumed is for interior lighting and 29% is for cooling.

The following is a representative example of one ECM that could be financed for a nonprofit or a small business on Rate Schedule J and assumes the replacement of an old air conditioning unit with an energy efficiency air conditioner with a project cost of $75,000.

Under the Commercial EE Loan Product: Direct, the savings requirement is met when the utility bill after the ECM installation plus Bank and GEMS debt payments meet the minimum required savings when compared to the utility bill before the PV installation.

In this example, it is assumed that the ratepaying organization’s monthly energy cost on Rate Schedule J is approximately $3,000. The ratepaying organization obtains loans from its Bank

\(^{23}\) The HECO Companies are comprised of the Hawaiian Electric Company, Inc., Maui Electric, Ltd., and the Hawaii Electric Light Company, Inc.

\(^{24}\) See Study, Figure ES-62, at vii.
and GEMS to finance 100% of the total $75,000 project cost to install an energy efficient air conditioner, which reduces it energy consumption by 30%.

The term of the bank loan is five years, which is a typical term for equipment financing. The GEMS loan term is over the estimated useful life of the equipment, in this case, fifteen years. Over the term of the loans, the average annual loan payments for the combined Bank/GEMS loans aggregates $6,012. The first year’s savings is expected to be $3,607 or 10.02% (including the loan payments). The savings over the life of the system, including equipment degradation and historical utility rate increases aggregate $132,198 or 16.13%. This estimate does not include any positive impacts a reduction of energy consumption may have on the ratepayer’s demand charges nor does it include any Hawaii Energy rebates. Demand charge savings and Hawaii Energy rebates, if any, would be in addition to the estimated savings above. See matrix below for more details:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Utility Bill</td>
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<td>$2,100.00</td>
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<td>$0.00</td>
<td>$388.50</td>
<td>$4,662.00</td>
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<tr>
<td>GEMS Loan (Yr 1 to 5)</td>
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<td>$0.00</td>
<td>$210.92</td>
<td>$2,531.00</td>
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<tr>
<td>Total Bill+ Loan</td>
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<td>$36,000.00</td>
<td>$2,699.42</td>
<td>$32,393.00</td>
</tr>
<tr>
<td>$ Savings</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$300.58</td>
<td>$3,607.00</td>
</tr>
<tr>
<td>% Bill Savings</td>
<td>0.00%</td>
<td>0.00%</td>
<td>10.02%</td>
<td>10.02%</td>
</tr>
</tbody>
</table>

Beginning year 6, the bank loan will be paid off and the required monthly principal and interest payments of the GEMS loan will be $583 ($6,996 annually), further increasing the savings to the ratepaying organization.

Depending on the financing arrangement and/or ECM investment, the EE retrofit may be projected to result in overall, long-term cost savings, and HGIA shall make borrowers/participants aware of possible reduced savings or even increases in payments before longer run savings are realized.
As a comparison, without GEMS financing, the ratepaying organization would typically be required to put 25% to 30% cash down payment ($18,750 to $22,500) for conventional financing and its monthly payments would be $1,062 ($12,744 annually).

D. Alignment with the State's Energy Efficiency Portfolio Standard

The Authority will coordinate with Hawaii Energy, the Public Benefits Fund Administrator to ensure that resources are allocated efficiently in the pursuit of commercial EE projects.\(^{25}\) HGIA shall direct its Borrower to meet with the public benefits fee administrator prior to the launch of the project planning phase. The Borrower's proposed energy efficiency measure(s) shall meet or exceed the public benefits fee administrator's enhanced efficiency levels and requirements in order to be eligible for the Hawaii green infrastructure loan program. The Borrower shall work with the public benefits fee administrator throughout the entire project cycle to ensure energy efficiency is maximized. All supporting documentation required by the public benefits fee administrator shall be provided by the Borrower to ensure proper tracking towards the State's Energy Efficiency Portfolio Standard as specified in section 269-96, Hawaii Revised Statutes.

III. Subsequent Authority Action

Unless informed otherwise by the Commission, upon completion of the fifteen (15) business day-term of Program Notification, HGIA may implement the deployment of capital to finance

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\(^{25}\) The Public Benefits Fund (PBF) surcharge is assessed on residential and commercial customers of the Hawaiian Electric Companies. The residential customer class includes Rate Schedules R, TOU-R, TOU EV, and EV-R. The commercial customer class includes Rate Schedules G, J, DS, P, F, U, TOU-G, TOU-J, SS, EV-C. The underlying goal of the PBF is to procure electric energy savings from efficiency programs at a cost lower than that of avoided generation. Revenues collected from the Public Benefit Fund surcharge pay for the costs of the energy efficiency programs managed by the third-party administrator. Collection strategy results in a split based on revenue contributions by customer class: 45% Residential and 55% Commercial. The Hawaii Energy Program maintains incentive portfolios for both residential and commercial customer classes. Customer eligibility is differentiated by the type of electric service a customer receives.
commercial energy efficiency for nonprofits, small business and multi-family rental projects, as described under Attachment A and B of this notification. Any subsequent changes to the details described herein will be proposed through the GEMS Annual Plan.

Submitted this 9th day of March, 2018, in Honolulu, Hawaii

Gregg J. Kinkley
Deputy Attorney General for the Authority
CERTIFICATE OF SERVICE

I hereby certify that I have this date, in addition to filing an original and eight copies with the Commission, served one (1) or two (2) copies of the foregoing GEMS Program Notification, together with this Certificate of Service, by making personal service (P) or service by electronic mail (M), to the following and at the following addresses:

State of Hawaii (P)(8)
Public Utilities Commission
Department of Budget and Finance
465 S. King Street, #103
Honolulu, Hawaii 96813

Dean Nishina (P)(2)
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P.O. Box 541
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Daniel G. Brown (P)(2)
Manager-Regulatory Non-Rate Proceedings
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Hawaii Electric Light Company, Inc.
Maui Electric Company, Ltd.
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HAWAII GREEN INFRASTRUCTURE AUTHORITY

[Signature]
Gregg J. Kinkley
Deputy Attorney General
GEMS Financing Program

ATTACHMENT A
COMMERCIAL ENERGY EFFICIENCY ("EE") LOAN PRODUCT: PROJECT SPONSOR

Objective
To expand access and affordability of energy efficiency ("EE") retrofits for small businesses, non-profit entities and multi-family rental projects.

Eligible Technology
HVAC, Lighting (LED), thermal storage pumps, motors, building envelope, refrigeration, controls and monitoring devices, mechanical upgrades, other commercial EE technologies, and physical infrastructure to support commercial EE installations.

Allowable Uses
Under a co-lending scenario, financing may be available for up to 100% of the cost of the EE improvements.
Other financeable cost may include: financing cost; energy studies/assessments, required electrical upgrades to conform to building permits; electrical permits; required electrical upgrades; and other hard cost and structural improvements.

Capital Structure
Leverages public-private capital. In addition to HGIA financing, capital sources may include bank debt and/or Project Sponsor equity.

Term
Maximum term will dependent on the estimated useful life of the EE equipment being financed, not to exceed twenty (20) years.

Eligible Installers
GEMS will conduct due diligence on a case by case basis.

Collateral/Security
Required UCC-1 financing lien and security agreement over equipment financed.

Interest Rate
Not to exceed 7.50%, tiered based on global debt service coverage ratio.

Loan Amount
Minimum loan amount of $50,000 as established by GEMS. Exceptions may be granted.

Eligible Borrowers
Project Sponsors to include corporations, organizations, or individuals.

Eligible Participant
Nonprofit organizations, multi-family rental projects, and small businesses in the State of Hawaii, served by Hawaiian Electric Company or its affiliates. Small businesses are defined by the size standards set by the U.S. Small Business Administration (www.sba.gov/loans-grants/see-what-sba-offers/sba-loan-programs).

Eligible Properties
Fee simple or leasehold properties. Leasehold restrictions may apply.

Credit Criteria
The following credit assessments may apply to determine creditworthiness: financial statement and cash flow analysis; debt service coverage ratio; and utility bill assessment.

Savings Requirement
A minimum projected 10% energy savings is required. Savings dependent on system specifications and other factors. Actual bill savings may not be immediate and there may be possible increases in payments before longer term life of the system savings are realized.

Equipment
Equipment requirements must meet minimum standards as defined by the GEMS Program and Hawaii Energy.

On-Bill Repayment
On-bill repayment may be offered if available, as a repayment mechanism. However, this loan will remain the obligation of the Borrower.

Direct Bill Payment
Loan repayments will be directed to the GEMS loan servicer. ACH repayment may be offered.
GEMS | GEMS Financing Program

ATTACHMENT B:
COMMERCIAL ENERGY EFFICIENCY LOAN PRODUCT: DIRECT

Objective
To expand access and affordability of energy efficiency ("EE") retrofits for small businesses, non-profit entities and multi-family rental projects.

Eligible Technology
HVAC, Lighting (LED), thermal storage pumps, motors, building envelope, refrigeration, controls and monitoring devices, mechanical upgrades, other commercial EE technologies, and physical infrastructure to support commercial EE installations.

Allowable Uses
Under a co-lending scenario, financing may be available for up to 100% of the cost of the EE improvements.

Other financeable cost may include: financing cost; energy studies/assessments, required electrical upgrades to conform to building permits; electrical permits; required electrical upgrades; and other hard cost and structural improvements.

Capital Structure
Leverages public-private capital. In addition to HGIA financing, capital sources may include bank debt and/or borrower equity.

Term
Maximum term will dependent on the estimated useful life of the EE equipment being financed, not to exceed twenty (20) years.

Eligible Installers
GEMS will conduct due diligence on a case by case basis.

Collateral/Security
Required UCC-1 financing lien and security agreement over equipment financed.

Interest Rate
Not to exceed 7.50%, tiered based on debt service coverage ratio.

Loan Amount
Minimum loan amount of $50,000 as established by GEMS. Exceptions may be granted.

Eligible Borrower
Nonprofit organizations, multi-family rental projects, and small businesses in the State of Hawaii, served by Hawaii Electric Company or its affiliates. Small businesses are defined by the size standards set by the U.S. Small Business Administration (www.sba.gov/loans-grants/see-what-sba-offers/sba-loan-programs).

Eligible Properties
Fee simple or leasehold properties. Leasehold restrictions may apply.

Credit Criteria
The following credit assessments may apply to determine creditworthiness: financial statement and cash flow analysis; debt service coverage ratio; and utility bill assessment.

Savings Requirement
A minimum projected 10% energy savings is required. Savings dependent on system specifications and other factors. Actual bill savings may not be immediate and there may be possible increases in payments before longer term life of the system savings are realized.

Equipment
Equipment requirements must meet minimum standards as defined by the GEMS Program and Hawaii Energy.

On-Bill Repayment
On-bill repayment may be offered if available, as a repayment mechanism. However, this loan will remain the obligation of the Borrower.

Direct Bill Payment
Loan repayments will be directed to the GEMS loan servicer. ACH repayment may be offered.