

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

Docket No. 2014-0135

**PROGRAM NOTIFICATION No. 5 FOR
THE GREEN INFRASTRUCTURE LOAN PROGRAM,
ATTACHMENTS A, B, C, AND D
AND
CERTIFICATE OF SERVICE**

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PUBLIC UTILITIES
COMMISSION

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**PROGRAM NOTIFICATION No. 5 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

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.

Program”), subject to the 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 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 analyses 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 on the deployment of capital to the commercial sector for commercial energy efficiency (“EE”), as aligned with the Annual Plan submitted to the Commission⁹ and Exhibit 9 of the Application as amended in the Annual Plan,¹⁰ attached here as Attachment D. Commercial EE was proposed as an eligible technology in DBEDT’s Statement of Position¹¹ and approved in the Program Order.¹² 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 financing market, broaden access to EE and enable more ratepayers to reduce their energy 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

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.

⁹ See “Annual Plan Fiscal Year 2016: July 1, 2015-June 30, 2016,” filed in Docket No. 2014-0135 on March 31, 2015, herein referred to as “Annual Plan,” at p. 15-16.

¹⁰ See Annual Plan at Attachment 2.

¹¹ See “The State of Hawaii Department of Business Economic Development and Tourism’s Statement of Position on its Request for a Program Order: and Certificate of Service,” filed in Docket No. 2014-0135 on August 7, 2014, at p. 6.

¹² See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 46.

consistent with the steps taken in the Application and Program Order to approve Solar PV as an eligible technology.

A. GEMS Commercial EE Loan Information

Commercial EE financed in the GEMS Program will be a form of leveraged debt, through a Deployment Partner(s)¹³ that will enter into efficiency services agreements (“ESAs”) with customers for energy efficiency retrofit projects. Structurally, deployment of GEMS capital will be through a loan to a Deployment Partner for approved purposes (specified in this Program Notification Attachment A), rather than a loan through a Deployment Partner to an individual. The Deployment Partner(s) is also contributing equity to the financing for projects. Under this structure, which was provided to the Commission as Exhibit 11 of the Application, the Deployment Partner faces the construction, equipment, and repayment risk before the Authority, while the Authority still retains control over which projects the Deployment Partner uses GEMS capital to finance. The Deployment Partner also holds the title to all project assets.

Capital Deployment Financing Structure for Commercial EE Product:



¹³ “Deployment Partners” are financial and/or energy industry institutions working with the Authority to facilitate GEMS Program financing

Any GEMS Commercial EE financing will be allocated out of funds for “Other Projects” in the GEMS Annual Plan.¹⁴ As with all GEMS loans and the GEMS portfolio, any commercial EE loans will be priced to ensure the costs and risks of lending are compensated with the repayments while evidencing compliance with the cost-benefit analysis parameters mentioned herein and in Attachment A.

The benefit of this specific structure for customers is that they will gain access to an industry-accepted form of EE financing that guarantees savings and/or equipment performance. Specifically, ESAs allow for business customers to keep upgrades off of their balance sheets since the equipment is owned by an external party and the service payments are less than the energy savings from the project. ESAs use a pay-for-performance structure, similar to a traditional power purchase agreement. If a project does not produce measurable and verifiable energy savings, the customer owes nothing.

Implementation Information – Selection of Deployment Partner(s) through which Commercial EE projects will be funded will follow Attachment B, which is a modification of Exhibit 10 of the Application to be applicable for EE Deployment Partners. Contracts and agreements with Deployment Partners will be done through a negotiation of terms to ensure that GEMS capital is expended efficiently and prudently. The energy efficiency projects will be reviewed for compliance with Attachment A: Commercial Energy Efficiency Project Deployment Guidelines before providing GEMS capital for the project.

Reporting Information – The GEMS Program Metrics will be modified to include reporting for EE-related metrics that will inform the Commission of GEMS Program progress. Similar to the process completed to establish the existing GEMS metrics, the Authority will collaborate

¹⁴ See “Annual Plan Fiscal Year 2016: July 1, 2015-June 30, 2016,” filed in Docket No. 2014-0135 on March 31, 2015, at p. 11.

with docket parties and submit proposed metrics to the Commission prior to the launch of this product.

Repayment Mechanisms and Processes – Because of the nature of the GEMS Program’s role in providing debt for commercial EE projects, the repayment of the loan will not be directly from the participants benefitting from the energy conservation measure (“ECM”). Rather, the customers will enter into ESAs with a GEMS Deployment Partner who will be collecting a portion of the energy savings from customers and providing the necessary repayment of GEMS funds. All repayments from electricity utility customers will be accepted in accordance with the ESA entered into by the customer. The repayment of the GEMS capital is through the Deployment Partners. Repayment of GEMS capital will be accepted in accordance with the negotiated agreement between the Deployment Partner and the Authority.

The nature of the Commercial Energy Efficiency Project Deployment Guidelines prevents small commercial customers (in rate schedule G) from participating in the GEMS Program under this deployment structure. Specifically, small businesses are unlikely to have energy bills large enough to allow for projects larger than \$1,000,000 to be financed with electricity savings. Because the current on-bill mechanism is limited to rate schedules R and G (with or without time-of-use rates), the repayment of GEMS capital will be through the direct billing of the Deployment Partner, and may in the future be on the utility bill if such an option becomes available.

Development and Finalization of Terms – The Authority assures the Commission that the terms 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 that any GEMS product be designed in a way that

encourages uptake by the underserved market, including providing attractive terms, while accounting for risks associated with lending to those who were unable to receive financing previously. The Authority anticipates ongoing flexibility is necessary to allow for program adjustments based on product performance and evaluation of the GEMS Program.

B. Market Assessment

The Authority does not have expertise on the technical specifications of ECMs. Rather, the Authority is providing financing for equipment through a Deployment Partner that meets the requirements set forth by the Authority for Deployment Partners and for commercial EE projects. The GEMS Program is a financing initiative that increases access to clean energy through market-driven public-private partnerships. Energy efficiency in the GEMS Program aims at expanding the access to ESAs for a part of the commercial market that was not easily able to access financing. This market assessment is agnostic to specific ECMs and instead attempts to analyze the market for access to financing for ECMs.

EnerNoc Utility Solutions Consulting Inc. prepared and presented the STATE OF HAWAII ENERGY EFFICIENCY POTENTIAL STUDY FINAL, Project #1448 (the “Study”)¹⁵ to the Commission on January 15, 2014. The Study divides the Hawaii energy market into five sectors: residential, military, water/ wastewater, street lighting and commercial. According to the Study, the commercial sector makes up 52% of statewide electricity use;¹⁶ and [t]he majority of the statewide EE savings potential is found in the commercial sector”.¹⁷ The efficiency services

¹⁵ The Study can be found at: http://puc.hawaii.gov/wp-content/uploads/2013/04/State_of_HI_Potential_Study_Final.pdf

¹⁶ See Figure ES-2 in the Study on p. v.

¹⁷ See Study, Executive Summary, page xiii.

contract structure 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 the measure to calculate the economic potential. Significant barriers exist in the commercial market that would limit the achievable economic potential. The efficiency services contract structure offered by the Deployment Partner will help to achieve the economic potential found in the Study. This is accomplished by (i) removing first-cost barriers customers face in funding projects, (ii) lengthening the feasible payback period on projects and (iii) broadening the credit profile of customers eligible for EE financing.

- i. If underserved, capital-constrained entities use their own capital or balance sheet to do EE upgrades at all, they will focus on ECMs with short payback periods of two years or less. This leaves many valuable ECMs untouched and unavailable to the majority of the underserved market in Hawaii. By using an ESA, these underserved customers will be able to complete deeper, more holistic retrofits of their facilities.
- ii. If actual market conditions limit financing to measures that have a maximum acceptable payback period of three to five years, an ESA deployed with the support of GEMS will double or triple that payback period (e.g., to 10-15 years), thereby increasing total achievable savings. The GEMS Program is offering financing on terms longer than the 10 years which has been the longest tenor offered by private debt providers. Since GEMS is offering 15 or 20 year terms, this will likely lead to projects that are one-and-a-

half times to twice as large as they would be if limited to a 10 year term. The longer tenor will lead to more savings over time which will pay for deeper, more holistic EE retrofits than could be achieved without the GEMS-supported program. This will help Hawaii maximize the level of realized savings estimated in the Study. When the financing term is limited to 10 years, the types of ECMs that can be deployed are limited to those with paybacks of 6 or 7 years or less. But when the combined GEMS and Deployment Partner financing is used for terms of 15-20 years, then projects with an average payback of up to 15 years can be implemented. Thus, the GEMS financing will enlarge the scope and savings of EE retrofit projects and ECMs that are feasible.

- iii. By leveraging GEMS financing, a Deployment Partner will be able to serve customers who are not acceptable credit risks to private lenders (absent the GEMS offering, efficiency service agreements are typically limited to a maximum 10-year term for customers that: a) are “rated” by a major credit agency (Moody’s, S&P, etc) and b) have a credit rating of BB+/Ba1 or higher). This ESA structure, in concert with GEMS, will also help overcome customer credit-related challenges. Specifically, this can be utilized to fund projects for building owners/customers that otherwise might not receive a traditional bank loan for EE. By partnering with a Deployment Partner who puts its own capital at risk in conjunction with GEMS funds, GEMS will be able to expand the number of customers who can be helped under this GEMS Program.

A core tenant of GEMS mission is to use its funds to assist underserved customers.

Nonprofit organizations fall into the “commercial” sector described above in the Study. These underserved nonprofits are a significant sector of the EE potential in Hawaii. The Hawaii

Alliance of Nonprofit Organizations' 2011 Hawaii Nonprofit Sector Report¹⁸ identifies 7,777 nonprofits in Hawaii. Of these, 3,687 nonprofits had gross receipts of \$25,000 or more, signifying that they have significant activity levels and are therefore the ones likely to benefit most from EE upgrades to their facilities. Hospitals and higher education institutions are typically the non-profits that spend the most on energy and will be good targets for this GEMS Program. The ESA structure will enable hospitals, and other non-profits, to implement EE upgrades without capital expense—customers only pay for realized savings once the EE upgrades are installed and the project is fully operational.

C. Cost-Benefit Analysis

The Authority requires that participants receive immediate monetary benefits from the financing of ECMs under the GEMS Program. To accomplish this, the GEMS Program will target projects that can provide participants with an ESA rate that meets minimum savings requirements compared to their current (baseline) utility rates (see amended Exhibit 13, Attachment C). This means that participants will: (a) improve their bottom line by receiving a reduction in their annual energy bill, (b) capture the non-energy benefits of ECMs as discussed below, and (c) avoid the capital outlay required to fund efficiency improvements. Actual savings metrics will also be reported as part of the GEMS Program Metrics. In order to ensure that energy savings levels persist throughout the ESA term, project development will take into account ongoing expenses needed to replace assets with useful lives shorter than the ESA term. In particular, lighting projects will make allocations for estimated re-lamping during the ESA term.

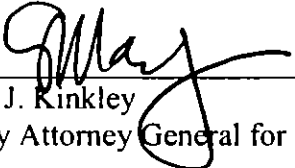
¹⁸ This report can be found at: http://hano-hawaii.org/newhano/images/pdf_files/hi_sector_rpt.pdf

The Authority also recognizes that customers will have the option to purchase EE assets by making a fair market value ("FMV") buyout payment at the end of the ESA term, if the ESA allows for a this type of buyout. The evaluation of the financing for ESA projects will consider buyout costs. If customers elect to exercise their FMV purchase option, they will receive 100% of energy savings going forward from the date of their purchase. Multiple benefits beyond energy savings are also offered when employing an ESA such as: operational improvements, increased productivity, health and wellness, and more reliable energy delivery. Additional, non-monetized benefits include greenhouse gas reductions and positive press for customers. With longer term financing like that offered through the GEMS Program, the amount invested could have been increased, resulting in more energy savings over the life of the project.

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 commercial energy efficiency. Any subsequent changes to the details described herein will be proposed through the GEMS Annual Plan.

Submitted this 15th day of July, 2015, in Honolulu, Hawaii.



Gregg J. Kinkley
Deputy Attorney General for the Authority



GEMS Financing Program

ATTACHMENT A: GEMS Commercial EE Project Deployment Guidelines

GEMS Commercial Energy Efficiency Projects should expand access and affordability of energy efficiency for commercial entities (nonprofits and small businesses) that do not have cash available or cannot access financing for energy efficiency.

Eligible Technologies	HVAC, Lighting (LED, CFL), Controls and monitoring devices, and Mechanical upgrades, Other Commercial EE.
Allowable Uses	Financing is available for up to 100% of equipment costs. Other financeable cost may include: financing cost; required electrical upgrades to conform to building permits; electrical permits; and other hard cost and structural improvements.
Term	No more than twenty (20) year fixed rate, fully amortizing.
Interest Rate	Not to exceed 9.999%, tiered based on debt service coverage ratio. All debt service coverage ratios will be considered.
Loan Amount	Minimum loan amount of \$1,000,000 as established by GEMS. Exceptions may be granted.
Eligible Participants	Nonprofit organizations and small businesses in the State of Hawaii served by Hawaiian Electric Company or its affiliates (collectively referred to as HECO or the Utility Company). Small Businesses are defined by the standards set by the U.S. Small Business Administration (https://www.sba.gov/content/summary-size-standards-industry-sector)
Eligible Properties	Fee Simple or leasehold properties. Leasehold restrictions may apply.
Credit Criteria	The following credit assessments may apply: financial statement and cash flow assessment, debt service coverage ratio and utility bill assessment.
Savings Requirements	Energy savings required. Savings dependent on system specifications, loan qualification, use of storage, on-bill, and other factors.
Installed Cost	Maximum installed cost restrictions as determined by GEMS.
Project Design	Project design is dependent on past usage, and must produce energy savings, though exceptions may be allowed after review.

ATTACHMENT B: EXHIBIT 10--ADDENDUM: DEPLOYMENT PARTNER ELIGIBILITY CRITERIA CATEGORIES FOR ENERGY EFFICIENCY

Capital Partner Guidelines for Energy Efficiency Deployment Partners

Criteria	Description
Financial Stability	Must have combined capital stock, surplus and undivided profits of at least \$[1,000,000], or total assets in excess of [\$5,000,000] or cash on hand in excess of [\$1,000,000]. Institution must also provide documentation indicating financial stability including, but not limited to, audited financials, description of ownership structure, detailed operating history, etc.
Compliance with Applicable Laws	Must be legally organized, qualified to do business, and authorized to market, originate, underwrite, and/or service energy efficiency financing solutions in the State of Hawaii
Experience with Similar Programs or Products	Must demonstrate previous experience in marketing, originating, underwriting, and/or servicing the same or similar financing solutions contemplated by the Program and/or have experience deploying funds under the same or similar program(s)
Capability to Serve the Energy Efficiency Market	Preference for institutions that have demonstrated the capability and commitment to serving the Hawaii energy efficiency market
Reporting and Controls	Must have internal controls to safeguard against fraud or malfeasance and to ensure compliance with all accounting, regulatory, compliance and other applicable rules and laws. Must be able to meet the reporting requirements of the Program including project and loan performance
Insurance	Must have all customary insurance policies in place including liability insurance (e.g., general, fiduciary, lender), workers compensation, and property insurance

Must Use Energy Service Companies that Meet the Following Guidelines*

Criteria	Description
Financial Stability	At least 3 years in business and is financially viable as evidenced with financial statements
Customer Service and Reputation	Demonstrated satisfactory customer relationships and reputation verified with Better Business Bureau Ratings, and customer and supplier references
Quality Product and Workmanship	Demonstrated track record for quality installations and good system performance
License, Insurance and Bonding	Contractor has required license, and sufficient insurance coverage, including energy savings insurance as needed
Contractor Participation Agreement	Willingness to comply with program requirements and terms, including providing long-term performance guarantees on a percentage of the expected annual savings on a project.

*Installers listed on the Energy Savings Performance Contracting Statewide list created by the State Procurement Office annually will automatically be approved to participate in Commercial EE project deployment

**Confidential Information Deleted Pursuant to
Protective Order No. 32142**

**ATTACHMENT C: EXHIBIT 13—AMENDED: GEMS PROGRAM GUIDELINES
[REDACTED]**

ATTACHMENT D: EXHIBIT 9 – ELIGIBLE CLEAN ENERGY TECHNOLOGIES

List of eligible clean energy technologies.

Eligible Technologies

- Solar Photovoltaic Systems including PV-Related Technologies
 - Advanced Inverters
 - Smart Modules
 - Monitoring Devices
 - Other Technologies that Support Solar Photovoltaic System Interconnection
 - Physical Infrastructure to Support Solar Photovoltaic Installations
- Energy Storage
- Utility Grid Modernization Technologies¹
- Utility Renewable Integration Technologies¹
- Commercial Energy Efficiency¹
- Technologies that Incorporate a Water-Energy Nexus, Including Sewage and Waste Water Treatment²
- Heating, Ventilating, and Air Conditioning (“HVAC”)²
- LED Systems²

¹ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 46 and approved at p. 48.

² See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 48

CERTIFICATE OF SERVICE

I hereby certify that I have this date, in addition to filing an original and three 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:

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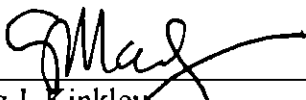
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Dated: Honolulu, Hawaii, July 15, 2015.

HAWAII GREEN INFRASTRUCTURE
AUTHORITY



Gregg J. Kinkley
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