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April 28, 2017

The Honorable Chair and Members of the
Hawaii Public Utilities Commission
465 South King Street, First Floor
Kekuanaoa Building
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2014-0135 – GEMS Program Quarterly Report

The Hawaii Green Infrastructure Authority respectfully submits this Green Energy Market Securitization Program Quarterly Report for the period of January 1, 2017 to March 31, 2017. This report fulfills the requirement for Quarterly Reports as specified in Decision and Order No. 32318, filed on September 30, 2014 in Docket No. 2014-0135.

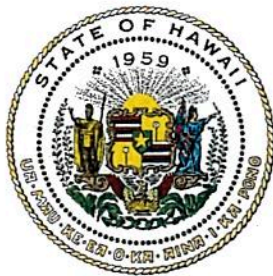
As always, should you have any questions or if I can be of assistance to you, please do not hesitate to contact me.

Sincerely,

Gwen S. Yamamoto Lau
Executive Director

Attachment
cc: Service List

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PUBLIC UTILITIES
COMMISSION



State of Hawaii

Department of Business, Economic Development, and Tourism

Hawaii Green Infrastructure Authority

GREEN ENERGY MARKET SECURITIZATION PROGRAM

QUARTERLY REPORT:

January 1, 2017 – March 31, 2017

REPORT TO THE
STATE OF HAWAII
PUBLIC UTILITIES COMMISSION
Pursuant to
Decision and Order No. 32318 filed in Docket No. 2014-0135

April 2017

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1 Introduction and Context

The Green Infrastructure Loan Program (a.k.a. the “Green Energy Market Securitization Program,” “GEMS Program” or “Program”) leverages public-private capital to deploy clean energy infrastructure that will contribute towards Hawaii’s pursuit of its statutory 100% clean energy goals by 2045 and to help consumers lower their energy costs. The GEMS Program is the result of Act 211, Session Laws of Hawaii 2013 (“Act 211”), which created the framework for establishing the GEMS Program, including its oversight, governance, and reporting processes. The Program is governed by the Hawaii Green Infrastructure Authority which consists of five members: The Director of Business, Economic Development, and Tourism, the Director of Finance, the Energy Program Administrator, and two members appointed by the Governor with the advice and consent of the Hawaii State Senate.

1.1 Procedural History and Reporting Requirements

The State of Hawaii Public Utilities Commission (“Commission” or “PUC”) issued Decision and Order No. 32318¹ (the “Program Order”), which approved the “Application of the Department of Business, Economic Development, and Tourism for an Order Approving the Green Infrastructure Loan Program,”² (“Application”) by the Hawaii Green Infrastructure Authority (“Authority” or “HGIA”).³ The Application requested, and the Program Order approved, the use of funds deposited in the Green Infrastructure Special Fund to establish and institute the GEMS Program, subject to the modifications described within the Program Order.⁴ In addition to complying with reporting requirements mandated by Act 211, the Authority proposed providing the Commission with Quarterly Reports which offer a snapshot of program activities as a part of the Application.⁵ The Commission approved the quarterly reporting proposal made by the Authority, adding additional requirements that arose during the docket process, including one from the Consumer Advocate⁶ that included requirements concerning the financing of utility-scale projects, when applicable.⁷

The Commission’s approval of the Quarterly Report process, with modifications, stated that Quarterly Reports must provide information on the progress of the GEMS Program development and include, at a minimum:

¹ Filed on September 30, 2014 in Docket No. 2014-0135

² Filed on June 6, 2014 in Docket No. 2014-0135

³ 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.

⁴ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 1.

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. 17.

⁶ “Consumer Advocate” refers to the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs of the State of Hawaii.

⁷ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 93.

- (1) All information proposed in [the] Application or as otherwise indicated by DBEDT in the course of this proceeding to be included in Quarterly Reports;
- (2) Summaries of all metrics approved pursuant to [the] Program Order, and as developed and approved through the metrics and data collection development process;
- (3) Accumulated year-to-date tallies of quantitative, and to the extent possible, non-quantitative metrics provided in preceding Quarterly Reports for the applicable annual reporting period;
- (4) Any additional information required by this Program Order to be included as part of one or more Quarterly Reports; and
- (5) Actuals to date as compared to the immediately preceding Annual Plan budget.⁸

In the Application, the Authority proposed Quarterly Reports include a snapshot of program activities, provide a financial summary, and address adjustments planned or made to the GEMS Program to accommodate market changes.⁹ The Authority submitted its first Quarterly Report for the period of October 1, 2014 to December 31, 2014 on January 30, 2015. More information about the procedural background for the GEMS Program can be found in the various filings in Docket No. 2014-0135 on the Commission's website: <http://dms.puc.hawaii.gov/dms/>.

1.2 Overview of Program Status and Market Outlook

The Authority's focus during the past quarter has been to continue to deploy capital under its Residential PV and Commercial PV Loan Products. The Authority also continued to work with its loan servicer and the HECO Companies on the on-bill repayment mechanism.

As we look around the broader national energy market, we remain encouraged that "Green Banks" operating under similar models to HGIA can play a vital role in expanding access to clean energy. Given the current dynamics in the Hawaii energy marketplace, we believe this role remains critically important.

2 Summary of Program Activities

The following is a summary of the activities that have occurred between January 1, 2017 and March 31, 2017.

2.1 Administration

The following activities pertain to the administration of the GEMS Program:

- **Program Notification No. 10.** On January 4, 2017 the Commission held an Informal Technical Conference ("Conference") at its Hearing Room. The Conference consisted of a brief overview of PN#10 by the Authority. After the presentation, the Commission, Consumer Advocate and other Parties were provided an opportunity to ask questions of the Authority. On January 30, 2017, the Commission issued Order No. 34368 terminating the Suspension of and Approving PN#10 subject to a \$3.0 million cap on deployments. On February 8, 2017, the Consumer Advocate ("CA") filed a Motion for Modification of Order No. 34368 requesting that the Commission impose additional

⁸ See "Decision and Order No. 32318," filed in Docket No. 2014-0135 on September 30, 2014, at p. 97.

⁹ 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. 17.

reporting and other requirements. On February 15, 2017, the Authority filed a Response in Opposition to the Consumer Advocate's Motion for Modification. On April 26, 2017, the Commission issued Order No. 34511¹⁰ denying the Division of Consumer Advocacy's Motion for Modification of Order No. 34368.

- **Board Meeting.** The Authority held a board meeting on January 27, 2017, at which it appointed Terrence Surles, Interim Administrator of the State Energy Office as Secretary of HGIA's board. The board also delegated duties and authority to Gwen Yamamoto Lau, who was appointed Executive Director on January 20, 2017. Lastly, the board approved committing up to \$9.6 million for the Molokai solar hot water project, pending Commission approval to finance residential energy efficiency and an OBR loan product, as well as the successful launch of an OBR mechanism.
- **Quarterly Report.** The Quarterly Report covering the period of October 1, 2016 to December 31, 2016 was filed with the Commission on January 31, 2017 in Docket No. 2014-0135.
- **Program Notification No. 11.** On January 31, 2017, the Authority submitted PN#11 to deploy capital to the Department of Education for energy efficiency retrofits. The Consumer Advocate filed comments on February 9, 2017 and the Commission issued an information request on February 13, 2017. The Authority responded to both on February 15, 2017. On February 22, 2017, the Commission issued Order No. 34421 approving PN#11 subject to a \$60.0 million cap on deployments.
- **Board Meeting.** The Authority held a board meeting on March 10, 2017, at which it approved HGIA's 2018 Annual Plan that was filed with the Commission on March 30, 2017 in Docket No. 2017-0135.

2.2 Status of Programs: Residential PV

At a glance (as of 3/31/17) from program inception:

	Applications Received	In Process ¹¹	Committed ¹²	Funded
# of loans	305	23	1,229	49
\$ value of loans	n/a	n/a	\$10,521,128	\$1,681,117

The Authority is continuing to work with its third party loan originator ("Originator") to make additional program enhancements, as follows:

- **Trust Properties.** On February 15, 2017, the Authority's loan originator began accepting loan applications for properties held in trust.
- **Progress Payments.** The Authority's Originator is developing a process to enable progress payments to be made to GEMS Approved Installers. Under the existing loan program, GEMS Approved Installers are paid in full after project installation is complete and confirmation of

¹⁰ See "Order No. 34511" filed in Docket No. 2014-0135 on April 26, 2017 for details.

¹¹ This category includes loan that being processed and/or pending additional information.

¹² Includes loans that have been approved with executed Loan Documents with solar systems in the process of being installed as well as \$9,600,000 committed to install 1,200 solar hot water systems on Molokai, pending Commission approval of HGIA financing residential energy efficiency and HGIA's OBR product. Each individual loan will need to meet the Authority's on-bill product requirements.

interconnection with the utility has been received. Progress payments will allow GEMS to be more competitive and aligned with industry standards.

While we expect these actions to favorably affect the pipeline and loan funding rates, the long-term growth prospects of the program remain limited by the broader market environment.

2.3 Status of Programs: Commercial PV

At a glance (as of 3/31/17) from program inception:

	Applications Received	In Process ¹³	Approved and Committed ¹⁴	Funded ¹⁵
# of loans	10	5	2	4
\$ value of loans	n/a	n/a	\$588,403	\$1,149,863

The Authority is continuing the education and marketing outreach of its new commercial loan products launched late last year to solar developers, nonprofits, small businesses and conventional lenders. It continues to receive ongoing inquiries for GEMS financing and is awaiting completed loan applications on a number of projects.

2.4 Status of Programs: Commercial Energy Efficiency

Metrus Energy, the Authority's approved capital partner for the Commercial Energy Efficiency Product, began marketing in July 2016. The sales cycle for these loans can be lengthy due to the considerable engineering work required on the part of the borrower and the size of the transaction(s). A project has been identified and Metrus is currently conducting its due diligence to determine financial feasibility.

Under HRS 269-96, relating to energy efficiency portfolio standards ("EEPS"), the Public Utilities Commission ("PUC") is responsible for establishing EEPS that will maximize cost-effective energy-efficiency programs and technologies. The EEPS requires that by 2030 annual energy savings amount to 30% of annual electricity sales statewide. Currently, one of "tools" the PUC is leveraging towards meeting this goal is rebates for energy efficiency measures. HGIA's understanding of the purpose of rebates is to serve as the "tipping point" which incents a consumer to purchase an energy efficiency measure, absent reasonable financing terms for the remaining purchase price, the rebate alone may not enable the ratepayer to implement the energy efficiency measure.

EnerNoc Utility Solutions Consulting Inc. prepared and presented the State of Hawaii Energy Efficiency Potential Study, Project #1448 (the "Study") 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**

¹³ The Authority is currently awaiting additional information from the applicant, underwriting the loan requested and/or awaiting legislative approval.

¹⁴ The Authority has approved the loan and is currently in the documentation process and/or the project is currently being installed.

¹⁵ May include loans that are partially funded. The remaining amount(s) to be funded are in the "Approved and Committed" category.

commercial sector (which includes Government) consumes over half of statewide electricity use, “[t]he majority of the statewide EE savings potential is found in the commercial sector.”

This study provides the energy efficiency potential in Hawaii’s market for both the commercial and residential sectors. Additionally, through its work under HRS 269-96 and with Hawaii Energy, HGIA realizes that the PUC is aware of the cost benefits of energy efficiency measures (in terms of both the potential reduction in energy consumption and utility savings). Therefore, in an effort to collectively work towards achieving the state’s EEPS goals, while streamlining the approval process, the Authority has requested Commission approval for a Commercial Energy Efficiency Loan Product: Project Sponsor and Direct in its 2018 Annual Plan.¹⁶

2.5 Status of Programs: Open Solicitation for Financing Arrangements

On July 14, 2016, the Authority established an Open Solicitation for Financing Arrangements process for proposals related to deployment of GEMS funds. This is consistent with best practice by Green Banks and similar State entities and provides a consistent, transparent approach to sourcing opportunities for capital deployment.

2.6 Status of Programs: Other Programs Under Development

On Bill Repayment (OBR)

The Authority continues to believe that OBR is a critical tool to enable green infrastructure financing for the underserved (i.e. renters and low to moderate-income households) and has been actively working with HECO and its Loan Servicer on the scope and deliverables required to implement the program on the IT and loan servicing levels.

On July 8, 2011, the Governor signed into law House Bill 1520 HD2, SD2, CD1 as Act 204 Session Laws of Hawaii 2011 directing the Commission to investigate an on-bill financing program for residential electric utility customers. Act 204 also authorized the Commission to implement the program by decision and order or by rules if the on-bill financing program was found to be viable.

Since then, the Commission and its on-bill financing working groups in both Docket No. 2011-0186 and Docket No. 2014-0129 have invested considerable time and resources, completing extensive research and work on the viability and proposed structure of an on-bill program over the last five years.

Through the work done in the dockets referenced above by Hawaii Energy and its working groups, the PUC has extensive information and data on the benefit of an on-bill repayment mechanism, the potential in Hawaii’s market for both the residential and schedule G ratepayers, and its related cost benefit. In an effort to streamline the approval process, the Authority has requested Commission approval for a Residential On-Bill Repayment Loan Product and a Commercial On-Bill Repayment Loan Product in its 2018 Annual Plan.¹⁷

¹⁶ See Hawaii Green Infrastructure Fiscal 2018 Annual Plan submitted in Docket No. 2014-0135 on March 30, 2017, Attachments D and E for details.

¹⁷ See Hawaii Green Infrastructure Fiscal 2018 Annual Plan submitted in Docket No. 2014-0135 on March 30, 2017, Attachments B and C for details.

PV plus Storage Financing

The Authority filed Program Notification No. 7 with the Commission on July 22, 2016 regarding deployment of capital for consumer PV with battery. On August 2, 2016, the Consumer Advocate filed comments requesting the Authority to provide further information regarding (1) modifications made to the existing Consumer PV program and their impact on the types of customers likely to receive GEMS Program financing; (2) the “public benefit” associated with the proposed Consumer PV with Battery program and who is likely to benefit; and (3) how the proposed Consumer PV product will expand access to financing for customers, particularly those who are underserved. On August 12, 2016, the Commission suspended Program Notification No. 7 pending the Authority’s response to comments from the Consumer Advocate (“CA”).

The Authority believes that its ability to finance storage is critical, especially given the limited interconnection options currently offered by the utility. The Authority is working closely with the CA’s office in developing a response to address its concerns. At the request of the CA, two revised Program Notifications will be submitted, separately addressing the consumer and commercial energy storage technology.

Government Agencies

While the Authority has tabled the re-submission of its suspended Program Notification No. 8 originally filed on July 25, 2016 to broaden the definition of Participant under the Commercial Energy Efficiency Program approved in Program Notification No. 5 to include all commercial entities until further notice, as indicated above, through the submission of Program Notification No. 11, it requested and was approved to finance energy efficiency for the Department of Education. The Authority awaits legislative approval to move forward on financing this project.

Residential Energy Efficiency

Especially for the already vulnerable low-income households, installing energy efficiency measures, such as ENERGY STAR® refrigerators or solar hot water heaters, are cost effective ways to lower energy costs. The suspension of the On-Bill Financing Program in Docket No. 2014-0129, within which Hawaii Energy was to provide financing for residential energy efficiency measures (“EEM”), has resulted in a continued gap for low-cost financing of EEM.

As previously mentioned above, the PUC is aware of the energy efficiency potential in Hawaii’s market for the residential sectors, as well as its benefit (in terms of both the potential reduction in energy consumption and utility savings for energy efficiency measures). In an effort to collectively work towards achieving the state’s EEPs goals, while streamlining the approval process, the Authority has requested Commission approval to finance Residential Energy Efficiency measures in its 2018 Annual Plan.¹⁸

¹⁸ See Hawaii Green Infrastructure Fiscal 2018 Annual Plan submitted in Docket No. 2014-0135 on March 30, 2017, Attachment A for details.

2.7 Additional Activities

The following are some of the activities that have occurred since the end of the quarter (March 31, 2017) and will be reported as activities in the next Quarterly Report:

- **Loan Closing.** On April 17, 2017, the Authority's closed a \$196,981 loan to install solar PV for a nonprofit on the Big Island.
- **Loans Funded.** As of April 14, 2017, the Authority funded six (6) additional Residential PV Loans aggregating \$157,787. Additionally, its Loan Originator has another twenty-five (25) residential PV loans approved and committed aggregating \$808,740.

3 Program Metrics

As required by the Program Order, the following Program Metrics are being provided for the current quarter, fiscal year-to-date and since program inception.

3.1 Energy and Environment Impact

	This Quarter: 1/1–3/31/17	FY2017 To-Date	Since Program Inception
Clean Energy Production of Projects Financed			
Installed Capacity (Actual kW)	387.4	826.6	927.2
Total Annual Production (Estimated kWh)	561,028	1,287,622	1,431,854
Total Project Production Over Lifetime of Installed PV (Projected kWh) (including 0.50% degradation)	10,703,238	24,565,129	27,316,773
Electricity Reductions from Energy Efficiency Projects Financed			
Cumulative Annual Electric Energy Saved (kWh)	0	0	0
Total Resource Benefit (kWh)	0	0	0
Petroleum Displaced by Clean Energy and Energy Efficiency Projects			
Total Petroleum Displaced/Saved (Clean Energy and Energy Efficiency Projects ¹⁹) (Estimated barrels)	344.6	790.8	879.4
Petroleum Displaced/Saved based on Annual Clean Energy Generation (Estimated barrels)	344.6	790.8	879.4
Petroleum Displaced Over Lifetime of Installed PV (Projected barrels)	6,573.7	15,087.3	16,777.3
Cumulative Annual Petroleum Saved (from efficiency)	0	0	0
Petroleum Saved from Total Resource Benefit of Efficiency Projects	0	0	0
Greenhouse Gas Avoided			
Total Greenhouse Gas Avoided ²⁰ (Clean Energy and Energy Efficiency Projects) (Est. metric tons CO ₂)	168.8	387.5	430.9
Greenhouse Gas Avoided from Clean Energy Annual Production (Estimated metric tons CO ₂)	168.8	387.5	430.9
Greenhouse Gas Avoided Over Lifetime of Installed PV (Projected metric tons CO ₂)	3,220.9	7,392.3	8,220.4

¹⁹ Reference unitjuggler.com for conversion metric.

²⁰ Reference eia.gov for conversion metrics.

	This Quarter: 1/1–3/31/17	FY2017 To-Date	Since Program Inception
Greenhouse Gas Avoided from Energy Efficiency	0	0	0
Greenhouse Gas Avoided over Lifetime of Energy Efficiency Project	0	0	0

3.2 Economic Development Impact

GEMS Capital (Cash Basis)	This Quarter: 1/1–3/31/17	FY2017 To-Date	Since Program Inception
GEMS Revenues	\$ 150,863	\$ 323,796	\$ 760,463
GEMS Administrative & Program Costs	\$ 132,701	\$ 422,376	\$2,190,940
GEMS Loans Funded	\$ 871,170	\$2,444,712	\$2,830,980

Projects Financed According to Technology Type/Category

Solar Photovoltaic Systems ²¹	18	41	53
Energy Storage	0	0	0
Lighting Upgrades	0	0	0
HVAC Upgrades	0	0	0
Mechanical Upgrades	0	0	0
Controls and Monitoring Devices	18	41	53
Energy/Water Nexus	0	0	0
Total No. of Projects	18	41	53
Indirect Economic Impact of Capital Deployed ²²	25.9	54.2	60.1

3.3 Market Expansion Impact

Residential PV Loan Program	This Quarter: 1/1–3/31/17	FY2017 To-Date	Since Program Inception
Total No. of GEMS Loans	16	37	49
Total No. of Loans Serving Underserved Market ²³	12	32	42

Status of Applications:

No. of Residential PV Applications Received	40	115	305
No. of Residential PV Applications In Process	23	n/a	n/a
No. of Residential PV Applications Declined	16	43	121
No. of Residential PV Applications Withdrawn ²⁴	3	39	84
No. of Residential PV Applications Loan Docs Accepted	29	n/a	n/a

Geographic Location

No. of Loans on Oahu	13	31	39
No. of Loans on Maui	2	5	9
No. of Loans on Molokai	0	0	0
No. of Loans on Lanai	0	0	0
No. of Loans on Hawaii	1	1	1

²¹ Including advanced inverters and smart modules.

²² Jobs created or retained, utilizing the SBA's metric of one job created or retained for every \$65,000 of total project cost.

²³ See AMI distribution.

²⁴ While previously Conditionally Approved, loans withdrawn during the quarter may have been pending from previous quarters.

Profile of Customers

This Quarter: 1/1–3/31/17	FY2017 To-Date	Since Program Inception
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Number of Customers By Customer FICO Credit Score

700 and above	9	14	17
675-699	0	10	15
650-674	3	6	8
620-649	3	5	7
600-619	1	2	2

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

Under \$15,000	0	0	0
\$15,000-\$24,999	0	0	0
\$25,000-\$34,999	1	1	1
\$35,000-\$49,999	0	1	2
\$50,000-\$74,999	0	7	8
\$75,000-\$99,999	3	10	16
\$100,000 and Above	12	18	22

Number of Customers by Area Median Income²⁵

<30% AMI (Extremely Low Income)	0	0	0
30% to <50% AMI (Very Low Income)	0	2	3
50% to <80% AMI (Low Income)	1	8	10
80% to <140% AMI (Moderate Income)	11	22	28
> 140% AMI	4	5	8

Commercial PV Loan Program

This Quarter: 1/1–3/31/17	FY2017 To-Date	Since Program Inception
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Total Number of GEMS Loans	2	4	4
No. of Nonprofits Participating in GEMS	2	2	2

Status of Applications:

No. of Commercial PV Applications Received	5	9	9
No. of Commercial PV Applications Approved	3	5	5
No. of Commercial PV Applications Declined	0	0	0
No. of Commercial PV Applications Withdrawn	0	0	0
No. of Commercial PV Applications Under Review	4	n/a	n/a
No. of Commercial EE Applications Received	1	1	1
No. of Commercial EE Applications Approved	0	0	0
No. of Commercial EE Applications Declined	0	0	0
No. of Commercial EE Applications Withdrawn	0	0	0
No. of Commercial EE Applications Under Review	1	n/a	n/a

Geographic Location

No. of Loans on Oahu	2	4	4
No. of Loans on Maui	0	0	0
No. of Loans on Molokai	0	0	0
No. of Loans on Lanai	0	0	0
No. of Loans on Hawaii	0	0	0

²⁵ Area Median Income as provided by the U.S. Department of Housing and Urban Development (HUD). <30% AMI = Extremely Low Income; 30% to <50% AMI = Very Low Income; 50% to <80% AMI = Low Income; 80% to < 140% AMI = Moderate Income.

	This Quarter: 1/1-3/31/17	FY2017 To-Date	Since Program Inception
Number of Small Businesses Participating in GEMS	0	0	0
Number of Small Businesses by Gross Receipts			
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	0
\$500,000-\$999,999	0	0	0
\$1,000,000-\$4,999,999	0	0	0
Above \$5,000,000	0	0	0
Number of Small Businesses by Average Number of Employees			
≤10 Employees	0	0	0
11-50 Employees	0	0	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	0
>1,000 Employees	0	0	0
Number of Rental Units Supported by GEMS	269	269	269
Number of Consumer Leases	0	0	0
Income Distribution of Consumer Leases (self-reported)			
Under \$15,000	0	0	0
\$15,000-\$24,999	0	0	0
\$25,000-\$34,999	0	0	0
\$35,000-\$49,999	0	0	0
\$50,000-\$74,999	0	0	0
\$75,000-\$99,999	0	0	0
\$100,000 and Above	0	0	0
Area Median Income²⁶ Distribution of Consumer Leases			
<30% AMI (Extremely Low Income)	0	0	0
30% to <50% AMI (Very Low Income)	0	0	0
50% to <80% AMI (Low Income)	0	0	0
80% to <140% AMI (Moderate Income)	0	0	0
> 140% AMI	0	0	0

²⁶ Area Median Income as provided by the U.S. Department of Housing and Urban Development (HUD). <30% AMI = Extremely Low Income; 30% to <50% AMI = Very Low Income; 50% to <80% AMI = Low Income; 80% to < 140% AMI = Moderate Income.

3.4 Cost Savings Impact

	This Quarter: 1/1–3/31/17	FY2017 To-Date	Since Program Inception
Aggregate Estimated Gross ²⁷ Electricity Cost Savings From Energy Production (life of system) (\$)	\$3,501,500	\$7,591,426	\$9,023,675
Aggregate Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer)	\$2,263,193	\$5,074,955	\$6,507,204
Aggregate Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial)	\$1,238,307	\$2,516,470	\$2,516,470
<i>Average</i> Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer)	\$141,450	\$137,161	\$132,800
<i>Average</i> Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial)	\$619,154	\$629,118	\$629,118
Aggregate Estimated Net ²⁸ Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer)	\$1,261,704	\$2,797,190	\$3,504,725
Aggregate Estimated Net Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial)	\$1,238,307	\$2,516,470	\$2,516,470
<i>Average</i> Estimated Net Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer)	\$78,857	\$75,600	\$71,525
<i>Average</i> Estimated Net Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial)	\$619,154	\$629,118	\$629,118
<i>Average</i> Estimated Electricity Cost Savings from Energy Efficiency (\$)	0	0	0
<i>Average</i> System Cost per Watt for All Consumers (PV) (\$)	\$4.03	\$4.02	\$3.99
<i>Average</i> System Cost per Watt for Underserved Consumers (PV) (\$)	\$3.92	\$3.99	\$3.96
<i>Average</i> System Size for All Consumers (PV) (kW)	9.1	8.8	8.7
<i>Average</i> System Size for Underserved Consumers (PV) (kW)	9.1	8.7	8.7
Project Cost per Watt for All Consumers – Energy Efficiency (\$)	0	0	0
<i>Average</i> Project Size for All Consumers – Energy Efficiency (kW)	0	0	0
Project Cost per Watt for Underserved Consumers – Energy Efficiency (\$)	0	0	0
<i>Average</i> Project Size for Underserved Consumers – Energy Efficiency (kW)	0	0	0

²⁷ Savings calculation includes tax credits and assumes a historical utility rate increase of 5.72% annually.

²⁸ Savings calculation includes tax credits and is net of loan payments required.

4 Financial Summary of Hawaii Green Infrastructure Authority

State of Hawaii – Hawaii Green Infrastructure Authority
FY 2017 – As of March 31, 2017

STATEMENT OF POSITION

Current Assets

Cash in Bank	\$ 140,623,858
Cash in Treasury	<u>1,067,402</u>
Total Current Assets	141,691,260

Non-Current Assets

GEMS Loans Receivable	<u>2,834,604</u>
Total Assets	\$ 144,525,864

Liabilities

Total Liabilities	<u>\$</u>
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Fund Balance

Fund Balance - State Treasury	\$ 1,067,402
Fund Balance - GEMS Program	<u>143,458,462</u>
Total Fund Balance	\$ 144,525,864
Total Liabilities & Fund Balance	\$ 144,525,864

STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES

PERIOD OF JULY 1, 2016 TO MARCH 31, 2017

Revenues

Investment Interest	\$ 276,049
Interest Income from Loans	47,653
Other Income	<u>94</u>
Total Revenues	\$ 323,796

Expenditures

Over (Under) Expenditures	<u>(422,376)</u>
	\$ (98,580)

Net Change in Fund Balance	\$ (98,580)
Fund Balance, Beginning of Period ²⁹	<u>144,624,444</u>
Fund Balance, Ending of Period	\$ 144,525,864

²⁹ A prior period adjustment aggregating \$386,268.71 was applied to the Fund Balance at 7/1/16 of \$144,661,025.67 to reclassify GEMS Loan Receivable that was originally recognized as Program Expense. Additionally, a prior year adjustment of \$657,793.58 was applied for prior year encumbrances.

5 Additional Reporting Requirements

5.1 Consumer Protection Policies

The Program Order directed the Authority to “provide full details of the GEMS Program consumer protection policies it develops to the [C]ommission with its quarterly reporting and Program Notifications”³⁰ and to “report the details of any failure on the part of any Deployment Partner to comply with these consumer protection policies to the [C]ommission, including the number of complaints and the steps taken to address such complaints, as part of the GEMS Program’s quarterly reporting and Annual Plan submission process”.³¹

The GEMS Program submitted its consumer protection policies in a Program Notification to the Commission on July 1, 2015.³²

No complaints have been received to date regarding GEMS Deployment Partners.

5.2 Utility-Scale Project Financing

The Program Order instructed the Authority to summarize and report information about utility-scale project financing during periods where utility-scale project financing is initiated and the project is operated.³³ The Authority has not initiated any utility-scale projects during the quarter and there are no utility-scale projects that have been financed or are currently being discussed.

5.3 Utility System Cost Information Update

The Program Order directed the Authority to “work with the HECO companies and the Consumer Advocate to determine the appropriate GEMS Program-related utility system cost information for reporting purposes, and to provide an update on the finalization of these utility system costs and impacts reporting requirements as part of DBEDT’s first Quarterly Report filing.”³⁴ Though “utility system cost” was not defined in the Program Order, the Consumer Advocate refers to these costs as costs “incurred as result of [distributed generation] PV or other clean energy projects financed by the GEMS [P]rogram.”³⁵ Subsequent to the issuance of the Program Order, the Authority, HECO and the Consumer Advocate met to identify ways to integrate data that is currently available with data that will be obtained through monitoring and other means to quantify and analyze potential utility system costs due to distributed generation. The Authority did not allocate any resources for this initiative over the last quarter. It will update the Commission on utility system cost information should discussions resume.

³⁰ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

³¹ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

³² See “Program Notification No. 4 for the Green Infrastructure Loan Program” filed in Docket No. 2014-0135 on July 1, 2015 at pp 4-5.

³³ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 60.

³⁴ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 95.

³⁵ See “Division of Consumer Advocacy’s Statement of Position,” filed in Docket No. 2014-0135 on August 7, 2014, at p. 14.

SERVICE LIST

Two copies of the foregoing: GEMS Program Quarterly Report in Docket No. 2014-0135, together with this Certificate of Service have been served to the following and at the following addresses:

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