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October 28, 2021

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 from July 1, 2021 to September 30, 2021. This report fulfills the requirement for the Quarterly Report 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

SERVICE LIST

An electronic copy of the GEMS Quarterly Report for July 1, 2021 to September 30, 2021 has been filed in Docket No. 2014-0135, together with this Certificate of Service, in addition to the following, at the following addresses:

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Dated: October 28 2021
Honolulu, Hawaii



**State of Hawaii
Hawaii Green Infrastructure Authority**

GREEN ENERGY MARKET SECURITIZATION PROGRAM

QUARTERLY REPORT:

July 1, 2021 – September 30, 2021

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

October 2021

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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 while helping ratepayers 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 Chief Energy Officer (fka 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”) for 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) All information proposed in [the] Application or as otherwise indicated by DBEDT in the course of this proceeding to be included in Quarterly Reports;

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.

- (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 to 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

During the quarter, the Authority continued to approve, commit and deploy capital under its various loan programs. As of September 30, 2021, \$90.3 million of the GEMS loan funds have been committed, leaving approximately \$38.1 million available to lend. Of these remaining amounts, some \$4.3 million is available under the State Revolving Loan Fund and \$33.8 million are available for all other eligible segments.

Additional GEMS Program highlights, as of September 30, 2021, are as follows:

Excess Operational Revenues over Expenditures – YTD FY22 ¹⁰	\$257,033
Jobs Created / Retained Since Inception	1,259
State of Hawaii Tax Revenues Generated Since Inception	\$15,145,693
Economic Multiplier Impact	\$253,630,259
Total Estimated kWh Production / Reduction Over Lifetime Since Inception	888,922,876
Total Petroleum Displaced Over Lifetime (Estimated Barrels)	545,800
Total Greenhouse Gas Avoided Over Lifetime (Estimated Metric Tons CO2)	267,370
% Underserved Residential Households Served	80.0%

For the three-month period ending September 30, 2021, the Authority posted Excess Operational Revenues over Operational Expenditures aggregating some \$257,000 prior to the repayment of interest and principal collected to the Commission, aggregating over \$806,000. Please refer to the Financial Summary in Section 4 for details on the financial results for the current quarter.

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.

¹⁰ Excess Operational Revenue over Expenditures are before loan repayments returned to the PUC per Order No. 34930 Amending Decision and Order No. 32318 By Changing the Priority uses of GEMS Program Loan Repayments, bad debt expense and unrealized gains or losses on investments.

2. Summary of Program Activities

The following is a summary of the activities that have occurred between July 1, 2021 and September 30, 2021.

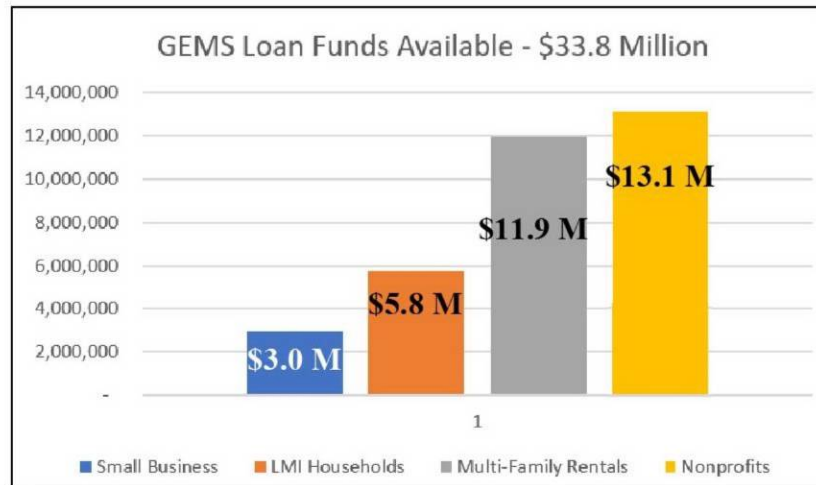
2.1 Administration

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

- **Program Notification No. 14.** The Authority filed Program Notification No. 14, requesting Commission approval to expand the use of the \$50.0 million State Revolving Loan Fund to also finance options to purchase on existing Power Purchase Agreements, and utilize said energy savings to finance Electric Vehicle (“EV”) charging stations and EVs, on July 21, 2021 in Docket No. 2014-0135.
- **USDA’s Rural Energy Savings Program.** On July 27, 2021, per the requirements of the Code of Federal Regulations, a letter notifying USDA of HGIA’s intent to apply for a \$20.0 million loan under its Rural Energy Savings Program (“RESP”) was submitted. If the Authority meets preliminary program guidelines, the USDA will issue a formal Invitation to Proceed where a complete loan package must be submitted. If approved, USDA funds may be used to finance the installation of energy efficiency, renewable energy and energy storage systems for eligible rural households, small businesses, schools, municipalities and nonprofits.
- **Letter from the Consumer Advocate.** The Consumer Advocate filed comments to Program Notification No. 14 on August 5, 2021 in Docket No. 2014-0135.
- **Response from HGIA.** The Authority filed a response to the Consumer Advocate’s August 5, 2021 comments regarding Program Notification No. 14 on August 6, 2021 in Docket No. 2014-0135.
- **Order No. 37904.** On August 10, 2021, the Commission issued Order No. 37904 establishing a procedural schedule to review Program Notification No. 14 in Docket No. 2014-0135.
- **Board Meeting.** The Authority held a board meeting on August 16, 2021, during which it approved HGIA’s Quarterly Report for the period ended June 30, 2021.
- **Quarterly Report.** The Quarterly Report covering the period of April 1, 2021 to June 30, 2021 was filed with the Commission on August 17, 2021 in Docket No. 2014-0135.
- **Information Request.** On August 18, 2021, the Commission filed Information Requests regarding Program Notification No. 14 in Docket No. 2014-0135.
- **Information Request.** On August 19, 2021, the Consumer Advocate filed Information Requests regarding Program Notification No. 14 in Docket No. 2014-0135.
- **Response to Information Requests.** On August 27, 2021, the Authority filed its response to the Information Requests regarding Program Notification No. 14 from the Commission in Docket No. 2014-0135.
- **Response to Information Requests.** On August 27, 2021, the Authority filed its response to the Information Requests regarding Program Notification No. 14 from the Commission in Docket No. 2014-0135.
- **Statement of Position.** On September 10, 2021, the Consumer Advocate filed its statement of position on Program Notification No. 14 in Docket No. 2014-0135.

- **Statement of Position.** On September 10, 2021, the Hawaiian Electric Companies filed a letter of support regarding Program Notification No. 14 in Docket No. 2014-0135.
- **Invitation to Proceed.** On September 16, 2021, the Rural Utilities Service of the USDA informed the Authority that it has received and reviewed its letter of intent and is willing to consider a RESP loan application in the amount of \$20,000,000 and invited the Authority to submit a complete loan application by December 15, 2021.

With the allocation of remaining loan funds, effective September 1, 2019, HGIA's Board felt it important to provide visibility on the funds available per segment on an ongoing basis. As such, below is a graph reflecting the amount of loan funds available as of September 30, 2021:



With the passage of Act 107, SLH 2021, HGIA is applying for Federal funds from the USDA. If successful, eligible borrowers for this additional funding source include consumers, small businesses, utilities, nonprofit organizations, municipalities and state agencies.

In order to facilitate a community-led community solar project on Molokai, an island with one of the highest electricity and poverty rates in the State, a recommendation to set-aside \$7.5 million in GEMS funding and re-allocate \$2.5 million and \$5.0 million in available funds under the LMI Household and Multi-family categories, respectively, for this new category, will be brought to HGIA's board for consideration.

During the quarter, HGIA continued to assist sister agency, HTDC, with due diligence and outreach, to design a portfolio of tools to assist Hawaii's businesses under the State Small Business Credit Initiative, funded by the American Rescue Plan, in which Hawaii expects to receive a minimum of \$56.0 million.

Additionally, HGIA collaborated with DBEDT, NELHA, HTDC, the University of Hawaii's MBDA Business Center and the Department of Agriculture in submitting an Economic Development Administration ("EDA") Build Back Better Regional Challenge grant application on Hawaii's Blue Ocean Economic Cluster.

2.2 Status of Programs: Residential Portfolio

2.2.1 Residential PV – WECC Originated

WECC Originated (From 6/2015 to 11/2017)	Applications Received	In Process	Committed	Funded
# of loans	427	0	0	140
\$ value of loans	n/a	n/a	\$0	\$4,836,268

HGIA terminated its contract with WECC on December 31, 2017 and is no longer purchasing loans originated by WECC.

2.2.2 Residential PV – Direct

At a glance (as of 9/30/21):

HGIA Originated (Effective 11/9/17)	Applications Received	In Process¹¹	Committed¹²	Funded
# of loans	155	0	0	58
\$ value of loans	n/a	n/a	\$0	\$1,991,224

With the pandemic disconnection moratorium in place, most applicants were able to qualify for the on-bill program. However, the Authority expects more applicants to once again apply for the direct financing product as disconnection notices have resumed.

2.2.3 Residential PV - Consumer Leases

At a glance (as of 9/30/21):

Consumer Leases (Effective 5/1/17)	Applications Received	In Process¹³	Committed¹⁴	Funded¹⁵
# of leases	128	0	0	64
\$ value of loans	n/a	n/a	\$0.00	\$1,823,450

Per Order No. 34368, the amount remaining under the cap is \$1.2 million.

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

¹² Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

¹³ This category includes requests being processed and/or pending additional information.

¹⁴ Includes projects that have been approved and solar systems in the process of being installed. May include loans that are partially funded. The amount(s) funded are in the "Funded" category.

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

2.2.4 Residential PV - On-Bill

At a glance (as of 9/30/21):

Residential PV OBR (Effective 6/1/18)	Applications Received	In Process¹⁶	Committed¹⁷	Funded¹⁸
# of OBO	791	69	82	152
\$ value of OBO	n/a	n/a	\$2,259,415	\$4,173,565

During the quarter, sixty-one (61) new on-bill applications were received and there are currently one hundred fifty-one (151) on-bill applications in process.

2.2.5 Residential PV – On-Bill Lease Fund

At a glance (as of 9/30/21):

OBR Leases (Effective 6/1/18)	Applications Received	In Process¹⁹	Committed²⁰	Funded²¹
# of OBO	68	8	3	28
\$ value of loans	n/a	n/a	\$64,407	\$958,207
			2,944,659 ²²	

During the quarter, eight (8) on-bill consumer lease applications were received and there are currently eleven (11) on-bill consumer lease applications in process.

2.2.6 Residential EE – On-Bill

At a glance (as of 9/30/21):

Residential EE OBR (Effective 6/1/18)	Applications Received	In Process²³	Committed²⁴	Funded
# of OBO	158	1	3	15
\$ value of OBO	n/a	n/a	\$14,314	\$95,179

During the quarter, three (3) on-bill energy efficiency applications were received and there are currently four (4) applications in process.

With the end of the disconnection moratorium, coupled with future Federal funding transitioning from a “rescue” objective to an “economic development” objective, the Authority

¹⁶ This category includes loans that are being processed and/or pending additional information.

¹⁷ Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

¹⁸ Partially funded loans are counted as Funded, however, the value of the loan only includes the funded portion of the loan. The unfunded portion is included in the Committed

¹⁹ This category includes requests being processed and/or pending additional information.

²⁰ Includes projects that have been approved and solar systems in the process of being installed. May include loans that are partially funded. The amount(s) funded are in the “Funded” category.

²¹ May include loans that are partially funded. The remaining amount(s) to be funded are in the “Committed” category.

²² GEMS funds committed to borrowers in the process of originating consumer PV+ Storage leases.

²³ This category includes loan that being processed and/or pending additional information.

²⁴ Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

will be submitting a request to the Commission to modify the GEM\$ On-Bill Program to allow for more flexibility to further assist our vulnerable households in reducing their energy costs.

At the same time, it will be requesting modifications to the metrics being tracked to reduce the volume of data reported while providing more meaningful analysis.

Delinquent Status for the entire Residential Loan Portfolio as of September 30, 2021:

Loan Balance	Current	%	31 – 60 Days*	%	61 – 90 Days*	%	91+ Days	%
\$7,845,209	\$7,181,742	91.5%	\$347,344	4.4%	\$75,117	1.0%	\$241,006	3.1%
No.: 290	266	91.7%	13	4.5%	3	1.0%	8	2.8%

With the end of the utility disconnection moratorium on May 31, 2021, beginning June 1, 2021, the Authority has resumed its collection responsibilities on direct billed loans. As of September 30, 2021, all residential direct billed loans were current.

As of September 30, 2021, 8.3% (an increase from 7.1% at 6/30/21) of the Authority's residential on-bill portfolio was past due and consisted of twenty-four (as compared to twenty at 6/30/21) loans aggregating \$663,467 (as compared to \$590,562 at 6/30/21).

However, a closer review of the loans revealed that all thirteen (13) of the loans in the 31-60 day past due category was delinquent due to the timing of the utility's bill cycle. All payments have subsequently been made.

One loan more than 91 days past due with a current balance of \$30,013 is delinquent due to an input error in the loan servicing system which prevented a Program Charge from being placed on the bill. This loan, however, is scheduled to be paid off on or around November 19, 2021.

Out of the remaining ten loans more than 61 days past due, all are making payments, except for one with a balance of \$26,344.82 (last payment was made in December 2020), however the utility is continuing to work with the ratepayer.

There are also two borrowers who have declared Chapter 13 (Reorganization) bankruptcy and one loan with a first mortgage in foreclosure, however all three of these loans are being paid as agreed.

2.3 Status of Programs: Commercial Portfolio

2.3.1 Commercial PV – Direct

At a glance (as of 9/30/21):

Commercial PV (Effective 11/2016)	Applications Received ²⁵	In Process ²⁶	Committed ²⁷	Funded ²⁸
# of loans	47	0	4	35
\$ value of loans	n/a	n/a	\$1,504,764	\$19,033,616

2.3.2 Commercial PV – On-Bill

At a glance (as of 9/30/21):

Commercial PV OBR (Effective 6/1/18)	Applications Received ²⁹	In Process ³⁰	Committed ³¹	Funded ³²
# of OBO	40	6	8	5
\$ value of OBO	n/a	n/a	\$1,339,220	\$3,498,062

2.3.3 Commercial EE – On-Bill

At a glance (as of 9/30/21):

Commercial EE OBR (Effective 6/1/18)	Applications Received	In Process ³³	Committed ³⁴	Funded
# of OBO	4	1	0	0
\$ value of OBO	n/a	n/a	\$0.00	\$0.00

²⁵ Includes applications for direct consumer leases, however funding and other metrics for said leases are reported under the Residential portfolio.

²⁶ The Authority is currently awaiting additional information from the applicant and/or underwriting the loan requested.

²⁷ These loans have been approved and are currently in the documentation process and/or the projects are currently under development.

²⁸ May include loans that are partially funded. The remaining amount(s) to be funded are in the “Committed” category.

²⁹ Includes applications for on-bill consumer leases, however funding and other metrics for said leases are reported under the Residential portfolio

³⁰ This category includes loans that are being processed and/or pending additional information.

³¹ Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

³² While not included in the Commercial EE – OBR counts so not to double count the applications, one solar PV project also included solar thermal.

³³ This category includes loan that being processed and/or pending additional information.

³⁴ Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

2.3.4 Commercial EE – Direct

At a glance (as of 9/30/21):

Commercial EE (Effective 4/2/18)	Applications Received	In Process	Committed ³⁵	Funded ³⁶³⁷
# of loans	2	0	0	0
\$ value of loans	n/a	n/a	\$0.00	\$0.00

Delinquent Status as of September 30, 2021 for the entire commercial loan portfolio:

Loan Balance	Current	%	31 – 60 Days	%	61 – 90 Days	%	91+ Days	%
\$20,201,917	\$20,201,917	100.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
No.: 50 ³⁸	50	100.0%	0	0.0%	0	0.0%	0	0.0%

As of September 30, 2021, all commercial loans were being paid as agreed.

2.3.5 State Revolving Loan Fund

Per Commission Order No. 38001 issued on October 5, 2021, the Authority provides the following additional information regarding the State Revolving Loan Fund:

State Revolving Loan Fund as of September 30, 2021

# Loans	\$ Value Loans	Principal Repaid	Funds Available
4	\$52,404,498	\$(6,676,262)	\$4,271,764

Energy Efficiency

	Applications Received	In Process	Committed ³⁹	Funded ⁴⁰
# of loans	4	0	4	4
\$ value of loans	n/a	n/a	\$10,415,304	\$41,989,194

³⁵ Loan funds will be advanced based on achievement of milestone progress payment criteria by Contractors.

³⁶ Partially funded loan. The remaining amount(s) to be funded are in the "Committed" category.

³⁷ While not accounted for under Commercial EE - Direct so not to double count the applications, two solar PV projects also included solar thermal installations.

³⁸ Although individual metrics for consumer leases are reported under the Residential Portfolio, advances for consumer leases are actually commercial loans. As such, these loans are included in the Commercial Portfolio for delinquency reporting purposes.

³⁹ Loan funds will be advanced based on achievement of milestone progress payment criteria by Contractors.

⁴⁰ Partially funded loan. The remaining amount(s) to be funded are in the "Committed" category.

PPA Purchase Options

	Applications Received	In Process	Committed⁴¹	Funded⁴²
# of loans	0	0	0	0
\$ value of loans	n/a	n/a	\$0.00	\$0.00

Electric Vehicle Charging Stations

	Applications Received	In Process	Committed⁴³	Funded⁴⁴
# of loans	0	0	0	0
\$ value of loans	n/a	n/a	\$0.00	\$0.00

# EV Charging Stations	# Ports	Manufacturer	Level (2 or 3)	Location

Electric Vehicles

	Applications Received	In Process	Committed⁴⁵	Funded⁴⁶
# of loans	0	0	0	0
\$ value of loans	n/a	n/a	\$0.00	\$0.00

# EVs	Manufacturer	Type (Battery EV; hybrid, etc.)

Delinquent Status as of September 30, 2021 for the State Revolving Loan Fund:

Loan Balance	Current	%	31 – 60 Days	%	61 – 90 Days	%	91+ Days	%
\$35,312,932	\$35,312,932	100.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
No.: 4	4	100.0%	0	0.0%	0	0.0%	0	0.0%

As of September 30, 2021, all state loans were being paid as agreed.

2.4 Status of Programs: Miscellaneous

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. While, to date, the Authority has not received any proposals, in partnership with

⁴¹ Loan funds will be advanced based on achievement of milestone progress payment criteria by Contractors.

⁴² Partially funded loan. The remaining amount(s) to be funded are in the "Committed" category.

⁴³ Loan funds will be advanced based on achievement of milestone progress payment criteria by Contractors.

⁴⁴ Partially funded loan. The remaining amount(s) to be funded are in the "Committed" category.

⁴⁵ Loan funds will be advanced based on achievement of milestone progress payment criteria by Contractors.

⁴⁶ Partially funded loan. The remaining amount(s) to be funded are in the "Committed" category.

sister agency, HTDC's SSBCI funds, Solicitations will again be requested, which may spur interest in potential clean energy projects.

2.5 Status of Programs: Other Programs Under Development

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 in light of the new Battery Bonus program launched last month. In alignment with its Annual Plan, the Authority will be submitting a Program Notification to request Commission approval to finance PV + Storage.

2.6 Marketing and Customer Service Activities

The following table estimates the activities of the Authority's staff in marketing and customer service for the past quarter (since June 1, 2018).

	7/1/21 - 9/30/21	FY22 To Date	Since 6/1/18
GEM\$ Marketing and Program Outreach Events and Activities	4	4	74
Prospective Contractor Contacts	0	6	286
Prospective Residential Loan Contacts	217	217	5520
Prospective Consumer Lease Contacts	28	28	926
Prospective Commercial Loan Contacts	10	10	1150
Existing Contractor Calls and Support	385	385	516
Existing Residential Participant/Borrower Servicing	58	58	498
Existing Commercial Participant/Borrower Servicing	60	60	1016
Contractor Complaint Resolution	0	0	1
Participant/Customer Complaint Resolution	0	0	6
Other-Deferral contacts	2	2	908

During the quarter, the Authority participated in a CESA Solar Justice and a NCSP State Convening Increasing Equitable Access to Community Solar webinars.

Additionally, the HGIA and the GEM\$ program were mentioned in the National Governor's Association's State Energy Efficiency Policy in a New Era: A Toolkit for Governors (August 2021) and the Fletcher School/Tufts University, Center for International Environment & Resource Policy, and Climate Policy Lab's Green Bank Policy Brief (August 2021).

The Authority continues to participate in HECO's quarterly Low and Moderate-Income Customer Advisory Meetings as well as the bi-weekly Energy Equity Hui convenings, led by the City's Office of Climate Change, Sustainability and Resiliency, Hawaii Energy and other energy and community stakeholders.

2.7 Additional Activities

The following are activities that have occurred since the end of the quarter September 30, 2021 and will be reported as activities in the next Quarterly Report:

- **Order No. 38001.** On October 5, 2021, the Commission issued Order No. 38001 approving Program Notification No. 14 with the conditions stated in Program Notification No. 13 that (1) the deployment of funds may not exceed the amount currently authorized by the Legislature for the State Revolving Fund; (2) any interest paid pursuant to loan repayments made under Program Notification No. 14 must be applied toward the replenishment of the Public Benefits Fee before the payment of GEMS Program administrative costs and may not be used to replenish or grow the capital available under the revolving line of credit until the Public Benefits Fee has been fully replenished; and (3) the Authority provide specific additional information⁴⁷.

3 Program Metrics

In accordance with the Program Order, the following Program Metrics are being provided for the current quarter, fiscal year-to-date and since program inception. For metrics related to program activities, please see Section 2 of this report.

3.1 Energy and Environment Impact

Clean Energy Production of Projects Financed	7/1/21 - 9/30/21	FY22 To Date	Since Program Inception
Installed Capacity (Actual kW)	983	983	11,961
Total Yr 1 Production (Estimated kWh)	1,550,658	1,550,658	18,237,934
Total Project Production over Lifetime of Installed PV (Projected kWh, including 0.05% degradation)	29,383,844	29,383,844	321,901,511

Electricity Reductions from Energy Efficiency Projects Financed			
Total Yr 1 kWh Reduction (Energy Efficiency)	0	0	38,693,672
Total kWh Reduction Over Lifetime of Installed EE	0	0	567,021,365

⁴⁷ Please refer to the additional information provided under Section 2.3.5 State Revolving Loan Fund.

Petroleum Displaced by Clean Energy and Energy Efficiency Projects (1)

Total Petroleum Displaced/Saved over Lifetime (Estimated barrels)	18,047	18,047	545,800
Petroleum Displaced based on Yr 1 Clean Energy Generation (Estimated barrels)	952	952	11,201
Petroleum Displaced Over Lifetime of Installed PV (Estimated barrels)	18,047	18,047	197,438
Cumulative Annual Petroleum Saved from Yr 1 Efficiency Projects	0.0	0	23,764
Petroleum Saved of Lifetime of Efficiency Projects	0.0	0	348,251

(1) Reference unitjuggler.com for conversion metric

Greenhouse Gas Avoided (2)

Total Greenhouse Gas Avoided (2) Over Lifetime (Clean Energy and Energy Efficiency Projects) (Est. metric tons CO ₂)	8,842	8,842	267,370
Greenhouse Gas Avoided from Clean Energy Yr 1 Production (Est. metric tons CO ₂)	467	467	5,490
Greenhouse Gas Avoided Over Lifetime of Installed PV (Projected metric tons CO ₂)	8,842	8,842	96,738
Greenhouse Gas Avoided from Yr 1 Energy Efficiency	0	0	11,644
Greenhouse Gas Avoided over lifetime of Energy Efficiency Project	0	0	170,632

(2) Reference eia.gov for conversion metrics.

3.2 Economic Development Impact

	7/1/21 - 9/30/21	FY22 To Date	Since Program Inception
GEMS Revenues (Cash Basis)	\$ 461,888	\$ 461,888	\$ 13,953,763
GEMS Administrative & Program Costs (Cash Basis) (3)	\$ 204,855	\$ 204,855	\$ 6,656,702
GEMS Loans Funded	\$ 1,348,756	\$ 1,348,756	\$ 76,419,258
Indirect Economic Impact - Jobs Created/Retained (4)	\$ 49	\$ 49	\$ 1,259
State of Hawaii Tax Revenues Generated (5)	\$ 509,736	\$ 509,736	\$ 15,145,693
Economic Multiplier Impact (6)	\$ 8,536,059	\$ 8,536,059	\$ 253,630,259

(3) Does not include principal and interest repaid to the PUC.

(4) Jobs created or retained is calculated using the State's metric of \$88,165.25/job for 2015; \$91,345.19/job for 2016; \$94,633.63/job for 2017; \$98,034.06/job for 2018; \$101,550.09/job for 2019; \$105,185.44/job in 2020; and \$92,044/job in 2021.

(5) State taxes generated is calculated as \$0.126 per dollar of investment.

(6) Multiplier Impact calculated as \$2.11 per dollar of investment.

3.3 Market Expansion Impact

Projects Financed According to Technology Type/Category	7/1/21 - 9/30/21	FY22 To Date	Since Program Inception
Solar Photovoltaic (7)	21	21	757
Energy Storage	0	0	137
Lighting Upgrades (8)	0	0	965,037
HVAC Upgrades (8)	0	0	2,325
Mechanical Upgrades	0	0	1
Controls and Monitoring Devices	15	15	1,574
Energy/Water Nexus (9)	0	0	210
Total No. of Projects	36	36	970,041

(7) Including advanced inverters and smart modules

(8) State Energy Efficiency Projects

(9) Includes solar water heating

Residential Loan Program	7/1/21 - 9/30/21	FY22 To Date	Since Program Inception
Total Number of PV Loans, Direct	0	-	198
Total Number of PV Leases, Direct	0	-	64
Total Number of GEM\$ OBOs for PV (Loans)	15	15	151
Owner Occupied OBOs	15	15	150
Renter OBOs	0	0	1
Total Number of GEM\$ OBOs for PV (Leases)	0	0	29
Total Number of GEM\$ OBOs for EE (SWH)	0	0	15
Owner Occupied OBOs	0	0	15
Renter OBOs	0	0	0
Total Number of GEM\$ OBOs	15	15	195
Number PV Loans/Leases/OBOs Serving Underserved Market (10)	15	15	354
Number EE Loans/Leases/OBOs Serving Underserved Market (10)	0	-	13
% Loans/Leases Serving Underserved Market	100%	100%	80%

(10) See AMI Distribution

Status of Applications (WECC):

No. of Residential PV Applications Received	0	0	427
No. of Residential PV Applications in Process	0	N/A	N/A
No. of Residential PV Applications Declined	0	0	160
No. of Residential PV Applications Withdrawn/Expired	0	0	127
No. of Residential PV Applications Loan Docs Accepted	0	N/A	N/A

Status of Applications (Direct):

No. of Residential PV Applications Received	0	4	154
No. of Residential PV Applications in Process	0	N/A	N/A
No. of Residential PV Applications Declined	0	3	58

No. of Residential PV Applications Withdrawn/Expired	0	0	37
No. of Residential PV Applications Loan Docs Accepted	0	N/A	N/A

Status of Applications (Leases - all Leases):

No. of Residential PV Applications Received	8	8	196
No. of Residential PV Applications in Process	8	N/A	N/A
No. of Residential PV Applications Declined	0	0	7
No. of Residential PV Applications Withdrawn/Expired	0	0	83
No. of Residential PV Applications Notice to Proceed	3	N/A	N/A

Status of Applications (GEM\$ OBR-PV and EE):

No. of Residential GEM\$ Applications Received	62	62	950
No. of Residential GEM\$ Applications in Process	70	N/A	N/A
No. of Residential GEM\$ Applications Declined	6	6	219
No. of Residential GEM\$ Applications Withdrawn/Expired	18	18	410
No. of Residential GEM\$ Applications OBO Accepted	70	N/A	N/A

Geographic Location of Financing Products

Oahu	14	14	377
Maui	1	1	50
Molokai	0	0	2
Lanai	0	0	0
Hawaii	0	0	28

Profile of Customers Financed:

Number of Customers by Customer FICO Credit Score (11)

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

(11) Excludes on-bill applicants

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

Under \$15,000	0	0	0
\$15,000-\$24,999	0	0	1
\$25,000-\$34,999	0	0	5
\$35,000-\$49,999	1	1	30
\$50,000-\$74,999	0	0	54
\$75,000-\$99,999	1	1	98
\$100,000 and above	13	13	269

Number of Customers by Area Median Income (12)

<30% AMI (Extremely Low Income)	1	1	8
30% to <50% AMI (Very Low Income)	0	0	42
50% to <80% AMI (Low Income)	3	3	110
80% to <140% AMI (Moderate Income)	11	11	206
>140% AMI	0	0	91

(12) Area Median Income as provided by the U.S. Department of Housing and Urban Development (HUD)

Commercial Loan Program	7/1/21 - 9/30/21	FY22 To Date	Since Program Inception
Total Number of GEMS PV Loans	1	1	29
Total Number of GEMS EE Loans	0	0	4
Total Number of GEMS OBOs, PV	3	3	12
Owner-User	3	3	12
Commercial Tenant	0	0	0
Total Number of GEMS OBOs, EE	0	0	0
Owner-User	0	0	0
Commercial Tenant	0	0	0
Number of Nonprofits Participating in GEMS	3	3	21
Number of Small Businesses Participating in GEMS	1	1	8
Number of Rental Units Supported by GEMS	0	0	1082

Geographic Location of Loans (13)

Oahu	2	2	31
Maui	1	1	6
Molokai	0	0	1
Lanai	0	0	0
Hawaii	1	1	7

(13) DOE loan benefits 241 public schools statewide (except Kauai)

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	1	1	0

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

10 Employees or less	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	2
>1,000 Employees	0	0	0

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

3.4 Cost Savings Impact

Aggregate, Estimated, Gross (15) Electricity Cost Savings (\$)	7/1/21 - 9/30/21	FY22 To Date	Since Program Inception
from Energy Production and Reduction	\$ 8,781,857	\$ 8,781,857	\$317,752,751
from Energy Production (Consumer)	\$ 1,336,127	\$ 1,336,127	\$ 53,302,016
from Energy Production (Commercial)	\$ 7,445,731	\$ 7,445,731	\$ 93,544,023
from Energy Efficiency (Consumer)	\$ -	\$ -	\$ 286,782
from Energy Efficiency (Commercial)	\$ -	\$ -	\$170,619,931

Average, Estimated, Gross (15) Electricity Cost Savings (\$)

from Energy Production (Consumer)	\$ 89,075	\$ 89,075	\$ 141,011
from Energy Production (Commercial)	\$ 1,861,433	\$ 1,861,433	\$ 2,281,562
from Energy Efficiency (Consumer)	\$ -	\$ -	\$ 19,119
from Energy Efficiency (Commercial)	\$ -	\$ -	\$ 42,654,983

(15) Gross savings calculation for the life of the system assumes a historical utility rate increase per island

Aggregate, Estimated, Net (16) Electricity Cost Savings (\$)

from Energy Production (Consumer)	\$ 1,030,852	\$ 1,030,852	\$ 30,884,708
from Energy Production (Commercial)	\$ 2,709,443	\$ 2,709,443	\$ 50,217,738
from Energy Efficiency (Consumer)	\$ -	\$ -	\$ 140,384
from Energy Efficiency (Commercial)*	\$ -	\$ -	\$ 115,544,468

Average, Estimated, Net (16) Electricity Cost Savings (\$)

from Energy Production (Consumer)	\$ 68,723	\$ 68,723	\$ 81,706
from Energy Production (Commercial)	\$ 677,361	\$ 677,361	\$ 1,224,823
from Energy Efficiency (Consumer)	\$ -	\$ -	\$ 9,359
from Energy Efficiency (Commercial)	\$ -	\$ -	\$ 28,886,117

(16) Net savings calculations include tax credits, assume historical utility rate increase per island and are net of loan payments required

Average System Cost per Watt for All Consumers (PV) (\$)	\$ 3.68	\$ 3.68	\$ 3.80
Average System Cost per Watt for Underserved Consumers (PV)	\$ 3.68	\$ 3.68	\$ 3.80
Average System Size for All Consumers (PV) (kW)	8.5	8.5	8.8
Average System Size for Underserved Consumers (PV) (kW)	8.5	8.5	8.8
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

4 Financial Summary of Hawaii Green Infrastructure Authority
Hawaii Green Infrastructure Authority
Balance Sheet
As of September 30, 2021

ASSETS

Current Assets

Cash in Bank Total	\$ 45,848,125
Cash in Treasury	1,978,147
Total Cash	\$ 47,826,272
Investments	31,352,158
Total Cash and Investments	\$ 79,178,430
Prepaid Expenses	10,308
Other Receivables	95,503
Total Current Assets	\$ 79,284,241

Noncurrent Assets

GEMS Loans Receivable	\$ 65,131,350
GEMS Loans Receivable - Treasury	-
Loan Portal Development - Net of accumulated amortization	176,813
Allowance for Loan Losses	(149,559)
Other Noncurrent Assets	(1,500)
Total Noncurrent Assets	\$ 65,157,104

Total Assets

\$ 144,441,345

LIABILITIES AND EQUITY

Liabilities

Current Liabilities

Accounts Payable	\$ -
Accounts Payable - PUC	806,156
Accrued Expenses	-
Other Current Liabilities	56,871

Total Current Liabilities **\$ 863,027**

Total Noncurrent Liabilities **\$ -**

Total Liabilities **\$ 863,027**

Fund Balance, Beginning 6/30/21 (From last quarterly report) **\$ 144,191,240**

Adjustment to accrue FYE 6/30/21 additional expenses (7,490)

Net Income (loss) for the Quarter 7/1/21-9/30/21 (605,432)

Fund Balance, Ending **\$ 143,578,318**

Fund Balance, Beginning 7/1/21 Unaudited **\$ 144,183,750**

Net Income (loss) fiscal year-to-date (605,432)

Fund Balance, Ending **\$ 143,578,318**

TOTAL LIABILITIES AND FUND BALANCE **\$ 144,441,345**

Loan Portal Development represents that capitalized costs incurred for the Authority's automated loan application portal.

Other Receivables are funds that have been recorded, but not yet transferred between accounts.

Other Noncurrent Assets are unfunded amounts borrowers have opted to reserve for future solar hot water maintenance costs.

Accounts Payable – PUC represents principal and interest repaid on loans.

Other Current Liabilities include funds for outside capital sources, unapplied cash (cash that is received by our Loan Servicer, but not yet applied to a loan payment), and contract obligations for specific purposes.

Hawaii Green Infrastructure Authority
Revenues and Expenditures
For the Quarter: July 1, 2021 to September 30, 2021

Revenues from Operations		
Investment Interest	\$	80,659
Interest Income on Loans		354,572
Other Income		26,657
Total Revenues from Operations	\$	461,888
Operational Expenditures		
Salaries and Benefits	\$	161,623
Office and Administrative Expenses		604
Bank Fees		12,845
Program Expenses		29,783
Total Operational Expenditures	\$	204,855
Revenues Over (Under) Expenditures	\$	257,033
Payments to PUC/PBF		
PUC Repayment - Principal	\$	451,584
PUC Repayment - Interest		354,572
Total PUC Repayment	\$	806,156
Bad Debt Expense	\$	(573)
Unrealized Gains (Losses)	\$	(56,882)
Net Change in Fund Balance	\$	(605,432)
Fund Balance		
Beginning of Period, Unaudited	\$	144,183,750
End of Period	\$	143,578,318

Other Income consists of fees collected from various program activities.

Unrealized Gains (Losses) are point in time “gains” or “losses” based on the market value of the investment portfolio.

Bad debt expense is for future uncollectable accounts.

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”⁴⁸ 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”.⁴⁹

The GEMS Program submitted its consumer protection policies in a Program Notification to the Commission on July 1, 2015.⁵⁰ 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.⁵¹ While the Authority has not initiated any utility-scale projects, due to the interest in leveraging the GEM\$ on-bill repayment mechanism to enable more LMI and hard to reach ratepayers to participate in Community Solar, the Authority is designing a GEM\$ for CBRE Program, which will be submitted to the Commission for approval.

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.”⁵² 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.”⁵³

⁴⁸ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

⁴⁹ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

⁵⁰ 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.

⁵¹ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 60.

⁵² See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 95.

⁵³ See “Division of Consumer Advocacy’s Statement of Position,” filed in Docket No. 2014-0135 on August 7, 2014, at p. 14.

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. HGIA will update the Commission on utility system cost information should discussions resume.

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COMMISSION

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