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April 29, 2020

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 FY2021 Annual Plan

The Hawaii Green Infrastructure Authority respectfully submits this Green Energy Market Securitization Program Quarterly Report for the Quarter Ended March 31, 2020. This report fulfills the requirement for the Annual Plan 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 January 1, 2020 to March 31, 2020 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: Honolulu, Hawaii, April 29, 2020.



State of Hawaii

Hawaii Green Infrastructure Authority

GREEN ENERGY MARKET SECURITIZATION PROGRAM

QUARTERLY REPORT:

January 1, 2020 – March 31, 2020

REPORT TO THE
STATE OF HAWAII
PUBLIC UTILITIES COMMISSION
Pursuant to

Decision and Order No. 32318 filed in Docket No. 2014-0135

April 2020

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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;
- (2) Summaries of all metrics approved pursuant to [the] Program Order, and as developed and approved through the metrics and data collection development process;

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.

- (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 March 31, 2020, \$79.7 million of the GEMS loan funds have been committed, leaving \$48.6 million available to lend. Of these remaining amounts, \$8.4 million are available under the State Revolving Loan Fund and \$40.2 million are available for all other eligible segments.

Unused commitments aggregating \$9.6 million in the Residential and Nonprofit categories expired on December 31, 2019 and were made available on January 1, 2020 for any eligible applicant.

Under the State Revolving Fund, payments of principal aggregating \$1.0 million was applied to the outstanding loan balance and became available to re-lend to other state agencies. Please refer to Status of Programs, sections 2.2 and 2.3 for additional information.

Additional GEMS Program highlights, as of March 31, 2020, are as follows:

Excess Operational Revenues over Expenditures – YTD FY20 ¹⁰	\$2,373,620
Jobs Created / Retained Since Inception	1,062
State of Hawaii Tax Revenues Generated Since Inception	\$12,897,511
Total Estimated kWh Production / Reduction Over Lifetime Since Inception	790,383,275
Total Petroleum Displaced Over Lifetime (Estimated Barrels)	485,280
Total Greenhouse Gas Avoided Over Lifetime (Estimated Metric Tons CO ₂)	237,717
% Underserved Residential Households Served ¹¹	78.0%

For the nine-month period ending March 31, 2020, the Authority posted Excess Operational Revenues over Operational Expenditures aggregating over \$2.3 million prior to the repayment of interest and principal collected to the Commission, aggregating some \$1.78 million. 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 and unrealized gains or losses on investments.

¹¹ Underserved defined as low and moderate-income households. Minimum target for Underserved = 51%.

2. Summary of Program Activities

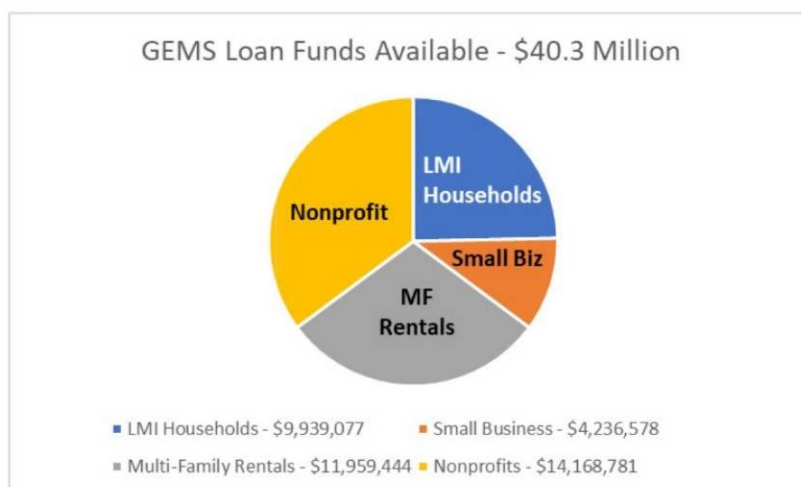
The following is a summary of the activities that have occurred between January 1, 2020 and March 31, 2020.

2.1 Administration

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

- **Response**. The Authority filed a Response to the Commission's Information Requests dated December 23, 2019 on January 17, 2020 in Docket No. 2014-0135.
- **Board Meeting**. The Authority held a board meeting on January 24, 2020, during which it approved HGIA's Quarterly Report for the period ended December 31, 2019.
- **Quarterly Report**. The Quarterly Report covering the period of October 1, 2019 to December 31, 2019 was filed with the Commission on January 27, 2020 in Docket No. 2014-0135.
- **Board Meeting**. The Authority held a board meeting on March 27, 2020, during which it approved an emergency postponement of loan payments and a temporary moratorium on collection activities to provide relief to GEMS borrowers due to the negative economic impact of the COVID-19 pandemic and HGIA's Fiscal 2021 Annual Plan.
- **HGIA's Temporary COVID-19 Assistance**. On March 27, 2020, the Authority submitted HGIA's Resolution on Temporary COVID-19 Assistance to inform the PUC of its intended actions. Said Resolution was filed on March 31, 2020 in Docket No. 2014-0135.
- **PUC Acknowledgement**. The Commission acknowledged the Authority's COVID-19 related plans and confirmed that these actions are consistent with the Commission's interest in encouraging new proposals that can help residents and businesses better manage their utility bills during this emergency via a letter filed on March 31, 2020 in Docket No. 2014-0135.

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 pie chart reflecting the amount of loan funds available as of March 31, 2020:



During the quarter, \$603,000 in loans were approved and committed for low and moderate-income ("LMI") households, however, a \$5.0 million commitment to leverage a \$10.0 million consumer lease

facility expired and was made available to any eligible LMI applicant. Similarly, a commitment for \$4.6 million for nonprofit solar PV installations expired and became available within the nonprofit category.

During the quarter, the Authority initiated the following projects:

- Outsource Accounting & Bookkeeping Services. A third-party CPA firm began preparing HGIA's monthly financial statements beginning February 2020.
- Third-Party Review. The third-party review by the Division of Financial Institutions, which was scheduled to begin on March 30, 2020, was postponed until the Governor's Stay-at-Home order is lifted.

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 3/31/20):

HGIA Originated (Effective 11/9/17)	Applications Received	In Process¹²	Committed¹³	Funded
# of loans	147	4	3	52
\$ value of loans	n/a	n/a	\$96,500	\$1,835,284

2.2.3 Residential PV - Consumer Leases

At a glance (as of 3/31/20):

Consumer Leases (Effective 5/1/17)	Applications Received	In Process¹⁴	Committed¹⁵	Funded¹⁶
# of leases	130	10	10	64
\$ value of loans	n/a	n/a	\$45,176	\$1,811,352

¹² This category includes loan that being processed and/or pending additional information.

¹³ Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

¹⁴ This category includes requests being processed and/or pending additional information.

¹⁵ 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.

¹⁶ 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 3/31/20):

Residential PV OBR (Effective 6/1/18)	Applications Received	In Process¹⁷	Committed¹⁸	Funded
# of OBO	481	50	72	45
\$ value of OBO	n/a	n/a	\$1,834,689	\$1,107,835

2.2.5 Residential PV – On-Bill Lease Fund

At a glance (as of 3/31/20):

OBR Leases (Effective 6/1/18)	Applications Received	In Process¹⁹	Committed²⁰	Funded²¹
# of OBO	43	3	11	21
\$ value of loans	n/a	n/a	\$235,495	\$711,839
			3,804,017 ²²	

A commitment to finance solar leases for eligible low and moderate-income households for a borrower expired on December 31, 2019. On January 1, 2020, the unused amount of \$5.0 million was removed from the “Committed” category and made available to any eligible applicant.

2.2.6 Residential EE – On-Bill

At a glance (as of 3/31/20):

Residential EE OBR (Effective 6/1/18)	Applications Received	In Process²³	Committed²⁴	Funded
# of OBO	123	4	1	12
\$ value of OBO	n/a	n/a	\$2,550	\$81,160

Delinquent Status for the entire Residential Loan Portfolio as of March 31, 2020:

Loan Balance	Current	%	31 – 60 Days*	%	61 – 90 Days*	%	91+ Days	%
\$5,899,760	\$5,715,945	93.9%	\$130,062	2.2%	\$53,753	0.9%	\$0.00	0.0%
No.: 202	196	97.0%	4	2.0%	2	1.0%	0	0.0%

¹⁷ This category includes loans that are being processed and/or pending additional information.

¹⁸ Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

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.

Of the delinquent borrowers, four loans aggregating \$130,062, past due 31 to 60 days, and two loans aggregating \$53,753, past due 61 to 90 days, were all direct bill. Up until March 27, 2020, the Authority continued its collection efforts for these loans.

2.3 Status of Programs: Commercial Portfolio

2.3.1 Commercial PV – Direct

At a glance (as of 3/31/20):

Commercial PV (Effective 11/2016)	Applications Received	In Process²⁵	Committed²⁶	Funded²⁷
# of loans	35	2	12	25
\$ value of loans	n/a	n/a	\$2,554,256	\$15,845,534

A commitment to finance solar projects expired on December 31, 2019. On January 1, 2020, the unused amount aggregating \$4.63 million was removed from the “Committed” category and made available to any eligible applicant.

2.3.2 Commercial PV – On-Bill

At a glance (as of 3/31/20):

Commercial PV OBR (Effective 6/1/18)	Applications Received	In Process²⁸	Committed²⁹	Funded³⁰
# of OBO	22	4	3	6
\$ value of OBO	n/a	n/a	\$763,431	\$2,535,832

2.3.3 Commercial EE – On-Bill

At a glance (as of 3/31/20):

Commercial EE OBR (Effective 6/1/18)	Applications Received	In Process³¹	Committed³²	Funded
# of OBO	3	1	0	0
\$ value of OBO	n/a	n/a	\$0.00	\$0.00

²⁵ The Authority is currently awaiting additional information from the applicant and/or underwriting the loan requested.

²⁶ These loans have been approved and are currently in the documentation process and/or the projects are currently under development.

²⁷ May include loans that are partially funded. The remaining amount(s) to be funded are in the “Committed” category.

²⁸ This category includes loans that are being processed and/or pending additional information.

²⁹ Includes loans that have been approved with executed Loan Documents and solar systems in the process of being installed.

³⁰ While not included in the Commercial EE – OBR counts so not to double count the applications, one solar PV project also included solar thermal.

³¹ This category includes loan that being processed and/or pending additional information.

³² 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 3/31/20):

Commercial EE (Effective 4/2/18)	Applications Received	In Process	Committed ³³	Funded ^{34,35}
# of loans	2	1	0	0
\$ value of loans	n/a	n/a	\$0.00	\$0.00

Delinquent Status as of March 31, 2020 for the entire commercial loan portfolio:

Loan Balance	Current	%	31 – 60 Days	%	61 – 90 Days	%	91+ Days	%
\$20,510,441	\$20,510,441	100.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
No.: 46 ³⁶	46	100.0%	0	0.0%	0	0.0%	0	0.0%

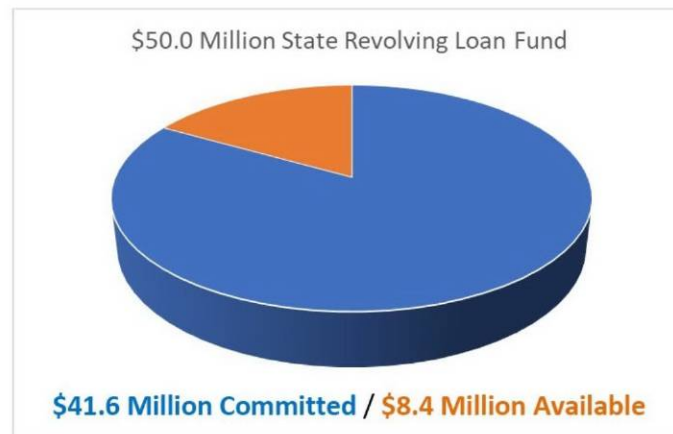
As of March 31, 2020, all commercial loans were being paid as agreed.

2.3.5 State Energy Efficiency Revolving Line of Credit

At a glance (as of 3/31/20) from program inception:

	Applications Received	In Process	Committed ³⁷	Funded ³⁸
# of loans	4	2	2	2
\$ value of loans	n/a	n/a	\$11,978,417	\$34,001,711

During the quarter, the Department of Education made a loan payment, increasing the funding available under the State Revolving Loan Fund to \$8.4 million. The Authority is currently processing two applications aggregating \$6.6 million in energy efficiency retrofits.



³³ Loan funds will be advanced based on achievement of milestone progress payment criteria by Contractors.

³⁴ Partially funded loan. The remaining amount(s) to be funded are in the "Committed" category.

³⁵ While not accounted for under Commercial EE - Direct so not to double count the applications, two solar PV projects also included solar thermal installations.

³⁶ 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.

³⁷ Loan funds will be advanced based on achievement of milestone progress payment criteria by Contractors.

³⁸ Partially funded loan. The remaining amount(s) to be funded are in the "Committed" category.

Delinquent Status as of March 31, 2020:

Loan Balance	Current	%	31 – 60 Days	%	61 – 90 Days	%	91+ Days	%
\$29,656,360	\$29,656,360	100.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
No.: 2	2	100.0%	0	0.0%	0	0.0%	0	0.0%

2.4 Status of Programs: Miscellaneous

Energy Service Company (“ESCO”) Financing

In July 2016, Metrus Energy was approved as a capital partner for the Commercial Energy Efficiency Product, however, to date, has not originated any GEMS financed project.

The Authority is currently working with another ESCO on a commercial energy efficiency project for a state agency.

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. HGIA did not receive any requests during the quarter.

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 given the remaining interconnection options offered by the Hawaiian Electric Companies requiring energy storage. 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).

	1/1 to 3/31/20	FY20 to Date	Since 6/1/18
GEM\$ Marketing and Program Outreach ³⁹	5	24	68
Prospective Contractor Contacts ⁴⁰	30	70	260
Prospective Residential Loan Contacts ⁴¹	845	3297	4688
Prospective Consumer Lease Contacts ⁴²	166	466	844
Prospective Commercial Loan Contacts ⁴³	0	264	1100
Existing Contractor Calls and Support ⁴⁴	15	45	110
Existing Residential Participant/Borrower Servicing ⁴⁵	60	180	380
Existing Commercial Participant/Borrower Servicing ⁴⁶	64	183	761
Contractor Complaint Resolution ⁴⁷	0	0	1
Participant/Customer Complaint Resolution ⁴⁸	1	3	6
Other ⁴⁹	0	0	0

During the quarter, the Pacific Business News published an article on GEMS loan deferrals; the Authority made two (2) presentations to ratepayers in a multi-family project regarding on-bill financing and the Authority was a panelist in a Congressional Briefing sponsored by the Environmental and Energy Study Institute in Washington D.C. on *“Financing Climate Mitigation and Resilience: Lessons from Hawaii”*.

2.7 Additional Activities

The following are activities that have occurred since the end of the quarter (March 31, 2020) and will be reported as activities in the next Quarterly Report:

- **Annual Plan.** The Fiscal 2021 Annual Plan was e-filed with the Commission on April 2, 2020 in Docket No. 2014-0135.

³⁹ This metric will report the number of outbound or Authority originated business development related events, activities and communications by actual event. It also includes GEMS related articles, interviews, presentations, etc.

⁴⁰ This metric will report the number of contacts, inquiries or meetings it takes to become a GEMS Approved Contractor.

⁴¹ This metric will report the number of contacts or inquiries for applicants to the GEM\$ residential program.

⁴² This metric will report the number of contacts or inquiries for applicants to the GEM\$ lease program.

⁴³ This metric will report the number of contacts or inquiries for applicants to the GEM\$ commercial program.

⁴⁴ This metric will report the number of service related contacts made with GEMS Approved Contractors not specific to a particular application. Contacts include but are not limited to program updates, presentations, subsequent training, annual review process, etc.

⁴⁵ This metric will report the number of contacts made with existing Participants, Landlords or Borrowers requiring post-funding servicing. Contacts include but are not limited to collection efforts, address changes, payment inquiries, etc.

⁴⁶ This metric will report the number of contacts made with existing commercial borrowers requiring post funding or partial funding servicing. Contacts include but are not limited to collection efforts, monthly invoices, meetings, etc.

⁴⁷ This metric will report the number of Contractor originated complaint resolution situations.

⁴⁸ This metric will report the number of Participant/Borrower originated complaint resolution situations.

⁴⁹ Miscellaneous contacts and activities not included above.

- **Automating Underwriting Process.** To increase efficiencies and reduce errors in the manual calculation of metrics, HGIA commenced its automation project.
- **Emergency Postponement of Loan Payments.** Per the approved emergency postponement of loan payments, in alignment with the Governor's supplemental proclamation to assist borrowers due to the negative economic impact of the COVID-19 pandemic, the Authority sent Deferral Agreements to all borrowers providing enabling them to opt-in to the loan deferrals.
- **Plan to Repay Public Benefits Fund.** With the Authority deferring loan repayments for six months and extending the maturity of said loans, the impact to the Public Benefits Fund is a six-month delay in loan repayment collection. Once the deferral period ends, the borrowers will again be responsible for monthly loan repayments on their respective loans. To mitigate repayment risk, borrowers accepting the six-month deferral options have agreed to migrate the commencement of their loan repayment on-bill.
- **Solar Hot Water Solicitation.** With many residential ratepayers experiencing a hike in their utility bills due to the Stay-at-Home order, the Authority and Hawaii Energy are working on a solar hot water solicitation in May to help LMI households save money, while providing a much needed boost to the solar contracting industry.

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	1/1-3/31/20	FY20 To Date	Since Program Inception
Installed Capacity (Actual kW)	169	1,647	9,649
Total Yr 1 Production (Estimated kWh)	265,427	2,882,137	14,754,391
Total Project Production over Lifetime of Installed PV (Projected kWh, including 0.05% degradation)	4,834,291	36,951,506	255,642,208

Electricity Reductions from Energy Efficiency Projects Financed

Total Yr 1 kWh Reduction (Energy Efficiency)	8,545	282,280	35,606,087
Total kWh Reduction Over Lifetime of Installed EE	163,021	4,845,406	534,741,067

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

Total Petroleum Displaced/Saved over Lifetime (Estimated barrels)	2,915	25,517	485,280
Petroleum Displaced based on Yr 1 Clean Energy Generation (Estimated barrels)	163	1,770	9,062
Petroleum Displaced Over Lifetime of Installed PV (Estimated barrels)	2,815	22,541	156,742
Cumulative Annual Petroleum Saved from Yr 1 Efficiency Projects*	5.2	173	21,868
Petroleum Saved of Lifetime of Efficiency Projects	100.1	2,976	328,425

(1) Reference unitjuggler.com for conversion metrics

Greenhouse Gas Avoided (2)	1/1-3/31/20	FY20 To Date	Since Program Inception
Total Greenhouse Gas Avoided (2) Over Lifetime (Clean Energy and Energy Efficiency Projects) (Est. metric tons CO ₂)	1,428	12,502	237,717
Greenhouse Gas Avoided from Clean Energy Yr 1 Production (Est. metric tons CO ₂)	80	868	4,441
Greenhouse Gas Avoided Over Lifetime of Installed PV (Projected metric tons CO ₂)	1,379	11,044	76,799
Greenhouse Gas Avoided from Yr 1 Energy Efficiency*	3	85	10,714
Greenhouse Gas Avoided over lifetime of Energy Efficiency Project*	49	1,458	160,918

(2) Reference eia.gov for conversion metrics

3.2 Economic Development Impact	1/1 – 3/31/20	FY20 To Date	Since Program Inception
GEMS Revenues (Cash Basis)	\$900,545	\$3,167,827	\$10,917,602
GEMS Administrative & Program Costs (Cash Basis) (1)	\$249,504	\$810,364	\$5,275,863
GEMS Loans Funded	\$3,205,663	\$21,858,396	\$62,905,627
Indirect Economic Impact - Jobs Created/Retained (2)	10	93	1,062
State of Hawaii Tax Revenues Generated (3)	\$117,130	\$1,158,674	\$12,897,511

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

(2) 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 and \$101,550.09/job for 2019.

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

3.3 Market Expansion Impact

Projects Financed According to Technology Type/Category

Solar Photovoltaic	21	66	626
Energy Storage (1)	12	31	93
Lighting Upgrades (2)	0	0	965,000
HVAC Upgrades*	0	0	324
Mechanical Upgrades	0	0	0
Controls and Monitoring Devices	20	567	1,408
Energy/Water Nexus (3)	3	122	207
Total No. of Projects	56	786	967,658

(1) HGIA has financed PV+Storage projects for both the residential and commercial portfolio, however, the Energy Storage Systems are not being financed with GEMS funds.

(2) DOE Project: Interior and exterior LEDs.

(3) Includes solar water heating.

Residential Loan Program	1/1-3/31/20	FY20 To Date	Since Program Inception
Total Number of PV Loans, Direct	1	5	192
Total Number of PV Leases, Direct	0	0	64
Total Number of GEM\$ OBOs for PV (Loans)	14	39	45
Owner Occupied OBOs	14	39	45
Renter OBOs	0	0	0
Total Number of GEM\$ OBOs for PV (Leases)	6	12	21
Total Number of GEM\$ OBOs for EE (SWH)	3	8	12
Owner Occupied OBOs	3	8	12
Renter OBOs	0	0	0
Total Number of GEM\$ OBOs	23	59	69
Number PV Loans/Leases/OBOs Serving Underserved Market (1)	12	34	243
Number EE Loans/Leases/OBOs Serving Underserved Market (1)	2	6	10
% Loans/Leases Serving Underserved Market	58%	63%	78%

(1) 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	4	12	147
No. of Residential PV Applications in Process	4	N/A	N/A
No. of Residential PV Applications Declined	2	3	54
No. of Residential PV Applications Withdrawn/Expired	2	5	33
No. of Residential PV Applications Loan Docs Accepted	1	N/A	N/A

Status of Applications (Leases - all Leases):

No. of Residential PV Applications Received	3	23	173
No. of Residential PV Applications in Process	13	N/A	N/A
No. of Residential PV Applications Declined	0	1	2
No. of Residential PV Applications Withdrawn/Expired	20	45	67
No. of Residential PV Applications Notice to Proceed	0	N/A	N/A

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

No. of Residential GEM\$ Applications Received	64	301	604
No. of Residential GEM\$ Applications in Process	54	N/A	N/A
No. of Residential GEM\$ Applications Declined	11	73	157
No. of Residential GEM\$ Applications Withdrawn/Expired	65	201	266
No. of Residential GEM\$ Applications OBO Accepted	15	N/A	N/A

Geographic Location of Financing Products

Oahu	9	30	276
Maui	10	24	36
Molokai	0	0	2
Lanai	0	0	0
Hawaii	5	10	20

Profile of Customers Financed:

Number of Customers by Customer FICO Credit Score (2)

700 and above	1	3	146
675-699	0	2	49
650-674	0	0	29
620-649	0	0	18
600-619	0	0	9
Below 600	0	0	2

(2) Excludes on-bill applicants and 3 leases prepaid in full

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	4
\$35,000-\$49,999	3	4	21
\$50,000-\$74,999	0	4	38
\$75,000-\$99,999	6	14	74
\$100,000 and above	15	42	196

Number of Customers by Area Median Income (1)

<30% AMI (Extremely Low Income)	0	0	5
30% to <50% AMI (Very Low Income)	1	4	33
50% to <80% AMI (Low Income)	6	14	64
80% to <140% AMI (Moderate Income)	7	22	150
>140% AMI	10	24	82

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

Commercial Loan Program	1/1-3/31/20	FY20 To Date	Since Program Inception
Total Number of GEMS PV Loans	0	4	25
Total Number of GEMS EE Loans	0	1	2
Total Number of GEM\$ OBOs, PV	0	3	6
Owner-User	0	2	2
Commercial Tenant	0	0	0
Total Number of GEM\$ OBOs, EE	0	0	0
Owner-User	0	0	0
Commercial Tenant	0	0	0
Number of Nonprofits Participating in GEMS	0	4	17
Number of Small Businesses Participating in GEMS	0	2	7
Number of Rental Units Supported by GEMS	0	198	1074

Geographic Location of Loans (1)

Oahu	0	6	20
Maui	0	0	5
Molokai	0	1	1
Lanai	0	0	0
Hawaii	0	0	5

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

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	1
\$500,000-\$999,999	0	0	1
\$1,000,000-\$4,999,999	0	1	2
Above \$5,000,000	0	0	0

Number of Small Businesses by Average Number of Employees*

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

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

3.4 Cost Savings Impact

	1/1-3/31/20	FY20 To Date	Since Program Inception
Aggregate , Estimated, Gross* Electricity Cost Savings (\$)			
from Energy Production and Reduction	\$2,318,660	\$22,957,568	\$284,111,677
from Energy Production (Consumer)	\$2,254,429	\$6,107,405	\$40,268,153
from Energy Production (Commercial)	\$-	\$15,141,973	\$83,150,652
from Energy Efficiency (Consumer)	\$64,231	\$174,551	\$244,643
from Energy Efficiency (Commercial)	\$-	\$1,533,819	\$160,448,409
Average , Estimated, Gross* Electricity Cost Savings (\$)			
from Energy Production (Consumer)	\$107,354	\$109,058	\$114,955
from Energy Production (Commercial)	\$-	\$1,892,747	\$2,598,458
from Energy Efficiency (Consumer)	\$21,410	\$21,819	\$20,387
from Energy Efficiency (Commercial)	\$-	\$1,533,819	\$53,482,803

* Gross savings calculation for the life of the system assumes a historical utility rate increase of 5.72% annually

	1/1-3/31/20	FY20 To Date	Since Program Inception
Aggregate, Estimated, Net** Electricity Cost Savings (\$)			
from Energy Production (Consumer)	\$1,155,666	\$3,448,662	\$23,138,822
from Energy Production (Commercial)	\$-	\$7,215,210	\$46,300,753
from Energy Efficiency (Consumer)	\$33,427	\$89,409	\$121,891
from Energy Efficiency (Commercial)*	\$-	\$1,169,281	\$113,683,871
Average, Estimated, Net** Electricity Cost Savings (\$)			
from Energy Production (Consumer)	\$55,032	\$61,583	\$71,637
from Energy Production (Commercial)	\$-	\$901,901	\$1,446,899
from Energy Efficiency (Consumer)	\$11,142	\$11,176	\$10,158
from Energy Efficiency (Commercial)	\$-	\$584,641	\$28,420,968

**Net savings calculations include tax credits, assume historical utility rate increase of 5.72% annually and are net of loan payments required

Average System Cost per Watt for All Consumers (PV) (\$)	\$4.19	\$3.98	\$4.03
Average System Cost per Watt for Underserved Consumers (PV)	\$4.22	\$4.00	\$4.04
Average System Size for All Consumers (PV) (kW)	8.0	8.8	9.1
Average System Size for Underserved Consumers (PV) (kW)	7.6	8.6	9.0
Project Cost per kWh for All Consumers -- Energy Efficiency (\$)*	\$0.18	\$0.17	\$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 (\$)*	\$0.14	\$0.16	\$0.16
Average Project Size for Underserved Consumers -- Energy Efficiency (kW)	n/a	n/a	n/a

* Calculated for all projects regardless of island

4 Financial Summary of Hawaii Green Infrastructure Authority

Hawaii Green Infrastructure Authority Balance Sheet As of March 31, 2020

ASSETS

Current Assets

Cash in Bank Total	\$	10,053,170
Cash in Treasury		1,060,886
Total Cash	\$	11,114,056
Investments*		84,193,802
Total Cash and Investments	\$	95,307,858

Interest Receivable	\$	-
Other Receivables		26,681
Total Receivables	\$	26,681

Noncurrent Assets

GEMS Loans Receivable	\$	56,221,198
GEMS Loans Receivable - Treasury		0
Allowance for Loan Losses		(141,981)
Other Noncurrent Assets		(2,170)
Total Noncurrent Assets	\$	56,077,046

Total Assets	\$	151,411,585
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LIABILITIES AND EQUITY

Liabilities

Current Liabilities

Accounts Payable - PUC	\$	3,553,044
Accrued Expenses		91,202
Other Current Liabilities		172,154
Total Current Liabilities	\$	3,816,400

Total Noncurrent Liabilities	\$	0
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Total Liabilities	\$	3,816,400
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Fund Balance, Beginning 12/31/19 (From last quarterly report)	\$	147,045,812
Net Income (loss) for the Quarter 1/1/20-3/31/20		549,374
Fund Balance, Ending	\$	147,595,186

Fund Balance, Beginning 7/1/19 audited	\$	147,163,979
Net Income (loss) fiscal year-to-date		431,207
Fund Balance, Ending	\$	147,595,186

TOTAL LIABILITIES AND FUND BALANCE	\$	151,411,585
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Other Receivables of \$26,681 are funds that have been recorded, but not yet transferred between accounts.

Although the Authority, to date, has not suffered any losses, Allowance for Loan Losses is a new category added in accordance with GAAP. Other Noncurrent Assets are unfunded amounts reserved for future maintenance costs.

Accounts Payable – PUC in excess of \$3.5 million represents principal and interest repaid on loans, of which \$1.8 million has been repaid during FY20 and \$1.7 million was repaid during FY19.

Accrued Expenses of \$91,202 are accumulated sick leave, vacation pay, etc. representing accruals required GAAP from HGIA's audit for the fiscal year ended June 30, 2019.

Other Current Liabilities of \$172,000 include prepaid loan repayments and 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: January 1, 2020 to March 31, 2020

Revenues from Operations

Investment Interest	\$	501,872
Interest Income on Loans		374,071
Other Income		24,602
Total Revenues from Operations	\$	900,545

Operational Expenditures

Salaries and Benefits	\$	190,077
Office and Administrative Expenses		2,635
Bank Fees		32,467
Program Expenses		24,326
Total Operational Expenditures	\$	249,504

Revenues Over (Under) Expenditures	\$	651,041
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Payments to PUC/PBF

PUC Repayment - Principal	\$	207,080
PUC Repayment - Interest		318,064
Total PUC Repayment	\$	525,143

Bad Debt Expense	\$	141,981
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Unrealized Gains (Losses)		565,458
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Net Change in Fund Balance	\$	549,374
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Fund Balance

Beginning of Period, Audited	\$	147,045,812
End of Period	\$	147,595,186

Other Income consists of fees collected from various program activities.

As per the Authority's FY2021 Annual Plan, two new expense categories have been added in the financials, (1) Bank Fees and (2) Bad Debt Expenses.

Bank and investment fees comprise approximately 13% or \$32,500 of Operational Expenditures during the quarter, however, the higher yield being earned on investments earned more than offsets the higher fees being assessed.

As indicated above, while the Authority has not yet suffered any loan losses, in accordance with GAAP, an allowance for loan loss has been established and the offsetting entry is Bad Debt Expense on the income statement.

The following is a 9-month, fiscal year to date Statement of Revenue and Expenditures.

Hawaii Green Infrastructure Authority
Revenues and Expenditures
For the Nine-Month Period: July 1, 2019 to March 31, 2020

Revenues from Operations

Investment Interest	\$	2,116,534
Interest Income on Loans		977,553
Other Income		89,897
Total Revenues from Operations	\$	3,183,984

Operational Expenditures

Salaries and Benefits	\$	568,306
Office and Administrative Expenses		7,906
Bank Fees		104,924
Program Expenses		129,228
Total Operational Expenditures	\$	810,364

Revenues Over (Under) Expenditures	\$	2,373,620
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Payments to PUC/PBF

PUC Repayment - Principal	\$	896,396
PUC Repayment - Interest		888,569
Total PUC Repayment	\$	1,784,965

Bad Debt Expense	\$	141,981
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Unrealized Gains (Losses)		(15,467)
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Net Change in Fund Balance	\$	431,207
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Fund Balance

Beginning of Period, Audited	\$	147,163,979
End of Period	\$	147,595,186

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”⁵⁰ 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”.⁵¹

The GEMS Program submitted its consumer protection policies in a Program Notification to the Commission on July 1, 2015.⁵² 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.⁵³

The Authority has not initiated any utility-scale projects during the quarter, however, 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.”⁵⁴ 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.”⁵⁵

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.

⁵⁰ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

⁵¹ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

⁵² 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.

⁵³ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 60.

⁵⁴ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 95.

⁵⁵ See “Division of Consumer Advocacy’s Statement of Position,” filed in Docket No. 2014-0135 on August 7, 2014, at p. 14.

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