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March 29, 2018

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

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PUBLIC UTILITIES
COMMISSION

Dear Commissioners:

Subject: Docket No. 2014-0135 – GEMS Annual Plan

The Hawaii Green Infrastructure Authority respectfully submits this Green Energy Market Securitization Program Annual Plan for the Fiscal Year 2019: July 1, 2018 to June 30, 2019. 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

Two copies of the foregoing: GEMS Program FY 2019 Annual Plan 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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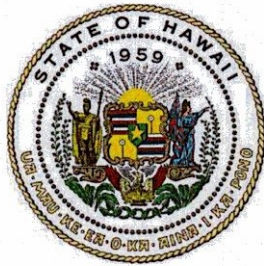
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State of Hawaii

Department of Business, Economic Development & Tourism

Hawaii Green Infrastructure Authority

ANNUAL PLAN

Fiscal Year 2019: JULY 1, 2018 – JUNE 30, 2019

REPORT TO THE
STATE OF HAWAII
PUBLIC UTILITIES COMMISSION

Pursuant to:

Hawaii Revised Statutes §196-64(b)

and

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

MARCH 2018

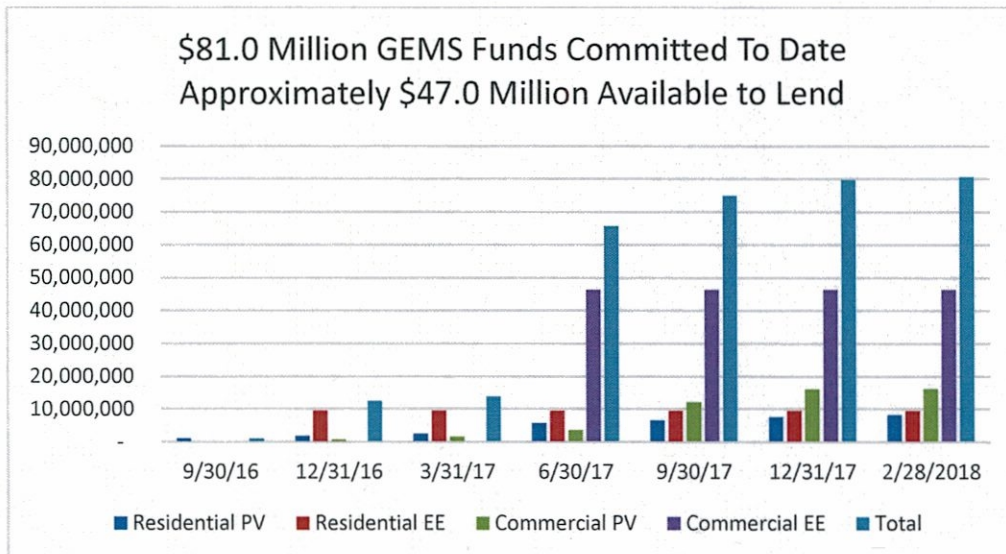
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1 Executive Summary

Purpose. The Hawaii Green Infrastructure Authority (“HGIA” or “Authority”) was created by the Legislature to make clean energy investments accessible and affordable to Hawaii’s consumers, with a portion¹ of its funds to benefit underserved communities, low and moderate-income households, renters, and non-profits. HGIA, through the GEMS program, was capitalized through an innovative market-driven financing mechanism to improve access to green infrastructure to advance the State’s Energy Efficiency Portfolio Standards (“EEPS”) as well as its goal of achieving 100% Renewable Portfolio Standard (“RPS”) in the electricity sector by 2045.

Progress. Significant progress has been achieved over the past year as the Authority continued to approve, commit and deploy capital under its Residential PV, Consumer Lease, Commercial PV and Commercial Energy Efficiency (e.g. Department of Education) loan products. As of February 28, 2018, approximately \$81.0 million or 55.5% of GEMS funds have been committed, leaving approximately \$47.0 million available to lend.



Another significant milestone achieved is the Authority’s operational profitability as it posted a \$953,000 Excess Revenues over Expenditures for the eight-month period ended February 28, 2018.

Opportunities. Financing opportunities identified for this upcoming year includes the Green Energy Money Saver (“GEM\$”) On-Bill Program; direct Commercial Energy Efficiency, PV + Storage, Community Based Solar, grid stabilization (i.e. non-export technologies, advanced inverters, etc.) and grid resilience loan products.

With GEMS funds being actively committed and deployed throughout the year, coupled with the additional financing opportunities identified above, developers and stakeholders have been

¹ Per Decision and Order 32318 filed in Docket No. 2014-0135, 51% of the loans funded should benefit the “Underserved” defined as renters, nonprofits and low and moderate-income households.

urging the Authority to start seeking additional funding sources and loan capital to enable it to continue its lending programs and further diversify HGIA's loan products.

Capital for Energy Innovation. In response to the Federal government's decision to withdraw the United States from the Paris Agreement, seventeen states, including Hawaii formed the United States Climate Alliance ("Alliance"), a bipartisan coalition committed to reducing greenhouse gas emissions consistent with the goals of the Paris Agreement. The Alliance identified six workstreams, one of which is "**Clean Energy Finance**" to build upon the success of established finance tools and Green Banks to work together on finance related opportunities as trillions will need to be invested in clean energy, critical infrastructure and climate change mitigation.

GEMS funding is uniquely positioned, as Hawaii's Green Bank, to have significant, positive impact in the coming years. As a market-based program, it is critical for GEMS to remain flexible and open to innovation in the rapidly evolving energy industry. As a public finance authority that uses limited public dollars to leverage private investment in clean energy, the Authority seeks to accelerate clean energy market growth while making energy cheaper and cleaner for consumers, driving job creation, and preserving taxpayer dollars. The Authority's goal is to use the GEMS funds to offer financing that attracts private investment, enabling a wider reach with each public dollar and the exponential potential for greater impacts by **recycling, re-investing and re-lending that same public dollar**.

For Fiscal Year ("FY") 2019, the Authority plans to deploy \$25.0 million in funds through its commercial (nonprofit, multi-family rental projects and small business) PV and PV plus storage products, residential PV and PV plus storage products, commercial energy efficiency products and on-bill repayment products. The GEMS On-Bill Program will enable renters to convert to clean energy and better accommodate the unique financial challenges of low-income households. With an administration budget of \$1.0 million, equivalent to only 4% of the projected deployment amount, the Authority continues its prudent stewardship of the GEMS fund. We remain confident that the program can be instrumental in achieving the State's energy sustainability.

2 Introduction and Background

The GEMS Program leverages public and 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. Act 211 Session Laws of Hawaii 2013 ("Act 211"), created the framework for establishing the GEMS Program, including its oversight, governance, and reporting processes. The Program is governed by the Hawaii Public Utilities Commission in Docket No. 2014-0135 and the five-member Hawaii Green Infrastructure Authority, consisting of 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.

As a part of Act 211, the Authority was established to fulfill specific duties, responsibilities and requirements.² As part of its statutory requirements, “the [A]uthority shall submit to the [Commission] an annual plan for review and approval no later than ninety days prior to the start of each fiscal year. The annual plan submitted by the [A]uthority shall include the [A]uthority’s projected operational budget for the succeeding fiscal year.”³ The Authority therefore submits this Fiscal 2019 Annual Plan, which covers the period from July 1, 2018 to June 30, 2019 (“Annual Plan”).

2.1 Introduction and Procedural History

The Commission issued and filed Decision and Order No. 32318 on September 30, 2014 in Docket No. 2014-0135 (the “Program Order”) that approved the “Application of the Department of Business, Economic Development, and Tourism for an Order Approving the Green Infrastructure Loan Program,” filed by the Authority (“Application”) on June 6, 2014.⁴ The Program Order approved the use of funds deposited in the Green Infrastructure Special Fund⁵ to establish and institute the GEMS Program, subject to the modifications described within the order.⁶

As stated in the Application and paraphrased from the Preamble of Act 211, the key objectives of the GEMS Program are to:

1. Address financing market barriers to increase the installation of clean energy projects and infrastructure to meet the State’s clean energy goals, including the RPS and EEPS Standards;
2. Democratize clean energy by expanding access and affordability of renewable energy and energy efficiency projects for identified underserved markets, while expanding the market generally;
3. Enable more ratepayers to reduce their energy use and energy costs by helping them finance clean energy improvements;
4. Partner with and support existing market entities in the clean energy and financing sector to ensure the GEMS Program can bridge market gaps and facilitate a sustainable and efficient private sector market; and

² Hawaii Revised Statutes (“HRS”) §196-63 to §196-64.

³ HRS §196-64(b).

⁴ 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.

⁵ Concurrently with the proceedings in Docket No. 2014-0135, the Commission also examined the financing structure for the issuance of the GEMS bonds in Docket No. 2014-0134 and issued Decision and Order No. 32281, the “Financing Order”, that approved the Green Infrastructure Fee that was securitized for the issuance of \$150,000,000 in Green Energy Market Securitization Series 2014-A Bonds on November 13, 2014. The GEMS bond sale proceeds were deposited into the Green Infrastructure Special Fund.

⁶ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 1 and restated on p. 33.

5. Balance the aforementioned goals and objectives with repayment risk to achieve an appropriate rate of return and build a sustainable financing program.

2.2 Annual Plan Requirements

The Application submitted by the Authority further defined the Annual Plan as containing “information on the budget, operations, and financial plans for the coming fiscal year.”⁷ The Program Order then placed requirements on the contents of the Annual Plan in addition to the statutory plan requirements in HRS §196-64(b) and the description in the Application. Specifically, the Program Order states the importance of administrative cost controls, concluding that it is part of the goal to use capital as efficiently as possible and directs the Authority to submit these as a part of its initial Annual Plan.⁸ The Program Order also requires that the Authority include:

1. Summaries of all Quarterly Report information provided over the Annual Plan reporting period.⁹ The Quarterly Reports also contain information required for the Annual Plan, such as:
 - a. Information on the use of GEMS funds for utility-scale projects and specifics that need to be reported in the event that GEMS funds are used for utility-scale projects.¹⁰
 - b. A report of 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”.¹¹
 - c. Information on utility system costs resulting from GEMS Program-funded projects.¹²
2. “[D]etailed consideration and discussion of how the green infrastructure [HGIA] proposes to finance will be successfully integrated into the grid, and how such infrastructure will continue to support the ongoing transformation of the State’s electric systems over time.”¹³
3. Summarized “[final] details of both the direct billing and On-bill Mechanism to be used in the GEMS Program”.¹⁴

The Annual Plan is also a means by which the Commission may approve additional GEMS Program elements.¹⁵ In this Annual Plan, the Authority is not seeking approval for any additional GEMS Program elements.

⁷ See “Application of the Department of Business, Economic Development, and Tourism for an Order Approving the Green Infrastructure Loan Program,” filed in Docket No. 2014-0135 on June 6, 2014, at p. 17.

⁸ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 39.

⁹ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 95.

¹⁰ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 59-60.

¹¹ Consumer protection policies must be developed by the Authority. See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 65-66.

¹² See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 97.

¹³ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 50.

¹⁴ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 71.

¹⁵ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 92, though “program elements” are not defined, the Program Order refers to “program elements” on p. 42).

3 Summary of Activities

3.1 Quarterly Report Summary

Since the filing of its last Annual Plan for Fiscal Year 2018 in March 2017, the Authority has submitted four Quarterly Reports to the Commission:

1. Quarterly Report: January 1, 2017 to March 31, 2017;
2. Quarterly Report: April 1, 2017 to June 30, 2017;
3. Quarterly Report: July 1, 2017 to September 30, 2017; and
4. Quarterly Report: October 1, 2017 to December 31, 2017

During the reporting period, the GEMS Program continued funding loans and expanding its product mix. The following is a summary of the activities reported in the Quarterly Reports and filed with the Commission during the 2017 calendar year.

3.1.1 Summary of Administration Activities

The following administrative activities were reported in the Quarterly Reports. Additional activities that occurred after December 31, 2017 are reported in Section 3.2 and will be included in the next GEMS Quarterly Report for the quarter ending March 31, 2018.

- **Board Meetings.** The Authority held the following board meetings during the reporting period:
 - 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.
 - 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.
 - April 21, 2017, at which it approved HGIA's Quarterly Report for the period ended March 31, 2017.
 - June 29, 2017, at which it approved a \$46.4 million loan to the Department of Education.
 - July 26, 2017, at which it approved HGIA's Quarterly Report for the period ended June 30, 2017.
 - August 14, 2017, at which it elected officers for the new fiscal year, as follows: Jeff Mikulina, Vice Chair and Carilyn Shon, Secretary. The Board also approved changes to its Bylaws and updated its lending authority provisions.
 - October 23, 2017, at which it approved HGIA's Quarterly Report for the period ended September 30, 2017.

- December 8, 2017, at which it approved HGIA's 2017 Report to the Governor and Legislature as well as enhancements to the Residential Loan Program and participating contractor eligibility criteria. The board also accepted HGIA's 2017 Audit report for the fiscal year ended June 30, 2017, and approved changes to the Residential PV Loan Product, including an enhanced underwriting options, authorizing progress payments with an interest only option for six months and a corresponding 19.5-year amortization, and revising the criteria to qualify as a GEMS Approved Installer to better match the requirements of Hawaii Energy's Participating Contractor program.

3.1.2 *Summary of Program Development and Implementation*

The following program development and implementation activities were reported in the Quarterly Reports. Additional actions that occurred after December 31, 2017 are reported in Section 3.2 and will be included in the next GEMS Quarterly Report for the quarter ending March 31, 2018.

- **Metrics Reporting** – Quarterly reporting metrics were expanded to include information on securitized consumer leases made under Program Notification Number 10.¹⁶
- **Docket Filings & Activity** – Activity in Docket No. 2014-0135 during the reporting period included the following:
 - Program Notification No. 10 ("PN10"). 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 which, 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 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. 34511 denying the Division of Consumer Advocacy's Motion for Modification of Order No. 34368.
 - Program Notification No. 11 ("PN#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

¹⁶ See "Program Notification No. 10," filed in Docket No. 2014-0135 on November 28, 2016.

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.

- Motion for Modification. The Authority filed a Motion for Modification of Decision and Order No. 32318 on the Application of the State of Hawaii Department of Business, Economic Development, and Tourism to eliminate the Program Notification and Program Modification Provisions with the Commission on July 21, 2017 in Docket No. 2014-0135.
- Stipulation for a Proposed Pilot Program. A Stipulation for a proposed pilot program to replace the Program Notification/Modification Process was filed with the Commission on August 31, 2017 in Docket No. 2014-0135 by the Authority, Division of Consumer Advocacy, Hawaii Solar Energy Association, Blue Planet Foundation and Hawaiian Electric Company, Inc.
- Order No. 34864. On October 12, 2017, the Commission filed Order No. 34864 denying the Authority's Motion for Modification and declining to suspend the Program Notification/Modification process as requested by the Stipulation filed on August 31, 2017.
- Changing the Priority of Uses of GEMS Program Loan Repayments. On October 26, 2017, the Commission filed Order No. 34930 Amending Decision and Order No. 32318 By Changing the Priority of Uses of GEMS Program Loan Repayments in Docket No. 2014-0135. This Order amends the order of the loan repayments received to be applied first toward the replenishment of the reduced Public Benefits Fee collections before the payment of GEMS Program administrative costs.

Kahauiki Village. On October 5, 2017, the Authority submitted a request for Commission approval to finance Kahauiki Village, an innovative solution to providing permanent housing for low-income families, upon proper underwriting and loan approvals, during the design, development and construction phase even though the project may not be grid-tied, with the understanding that the project will eventually be connected to the grid. On October 10, 2017, the Commission filed Order No. 34861 allowing the Authority to finance said project, upon proper underwriting and loan approvals. The Order further requires the Authority to file, within sixty (60) days of the filing date of the Order, the final, executed Utility Connection Agreement ("Agreement") between HGIA, Kahauiki Village Development LLC, and the Borrower. Additionally, HGIA shall file a notification letter with the Commission when the Project is interconnected to

HECO's¹⁷ grid. If HECO is unable to interconnect the Project by March 31, 2018, HGIA shall file a report with the Commission, detailing the Project's interconnection progress, starting on Monday, April 2, 2018, and continuing monthly, on the first Monday of the month, until such time as the Project is interconnected. On December 8, 2017, the Authority filed a letter informing the Commission that the Borrower transferred its loan request to a different bank and the new bank was not able to meet the December 10th deadline to file the Agreement. With the Commission's leave, the Authority informed the Commission that it will file said Agreement by January 22, 2018.

- Status Update and Request for Guidance on the On-Bill Repayment Mechanism. On November 24, 2017, the Hawaiian Electric Companies ("Companies") filed a Status Update and Request for Guidance on the On-Bill Repayment Mechanism in Docket No. 2014-0135, to seek Commission guidance on the Companies' last four remaining issues.

HGIA Response to the Companies' Status Update. On December 4, 2017, the Authority filed its Response to the Companies' Status Update and Request for Guidance.

- **Residential PV Loan Product** – Loans under the residential PV loan product continues to be deployed with funding aggregating over \$3.8 million at February 28, 2018. The following are product enhancements completed during the reporting period:
 - Trust Properties. On February 15, 2017, the Authority's loan originator began accepting loan applications for properties held in trust.
 - Termination of WECC Contract. In an effort to further control costs while providing more flexibility, improved customer service and increased marketing efforts with GEMS' Approved Installers, the Authority began accepting direct loan applications on November 9, 2017 and terminated its contract with the Wisconsin Energy Conservation Corporation ("WECC"), its residential loan originator effective December 31, 2017. When the Authority contracted with WECC in 2015, it expected to purchase \$50.0 million in residential PV loans from this deployment partner. However, due to unforeseen challenges, including a significant time zone difference and unfamiliar circumstances unique (i.e. properties held in trust, Department of Hawaiian Homeland leases, progress payments, interconnections that are not Net Energy Metering, etc.) to Hawaii, the Authority felt that the residential loan program would be better served by bringing loan origination and underwriting in-house.
 - Progress Payments. With the origination and funding of residential loans now being done by the Authority, Approved Installers have the flexibility to choose a progress payment option.

¹⁷ HECO is the Hawaiian Electric Company, Inc.

- **Consumer PV Lease Product** – Following the approval of Program Notification No. 10, the Authority launched its Consumer PV Lease product. As of February 28, 2018, twenty-two (22) individual leases aggregating \$977,000 in total project costs, of which GEMS will provide some \$405,000 or 41.5% in financing, were given a notice to proceed and are currently in the process of being installed.
- **Commercial PV Loan Product** - The market continues to respond positively to the Program's commercial loan products. An important distinction between the Residential and Commercial loan portfolios is the commercial product leverages private investments (via conventional bank financing and/or borrower's equity). As of February 28, 2018, \$16.3 million (or 48%) in GEMS funds are facilitating almost \$34.0 million in total projects for nonprofits, small businesses and multi-family rental projects.
- **Commercial Energy Efficiency Loan Products**
 - **Department of Education.** With the Governor signing Act 057 (2017 SLH) and the Commission's approval of Program Notification No. 11, the Authority approved a \$46.4 million loan to the Department of Education ("DOE") to finance energy efficiency measures. Although the DOE initially planned to utilize the \$46.4 million to only retrofit LED lights throughout the 241 DOE facilities eligible for GEMS funding, by adopting innovative strategies, the DOE will be able to implement deeper retrofits to include other energy efficiency measures, such as replacing old, inefficient air conditioners. While the project initially estimated that the DOE would reduce electricity costs by \$8.0 million annually, new estimates indicate that the DOE's energy savings will exceed \$10.5 million per year.
- **On-Bill Repayment** (OBR) - In May 2016, the Commission suspended its efforts to establish and implement an on-bill financing program in Docket No. 2014-0129. The order also directed the HECO Companies to work directly with the Authority to design and implement an on-bill repayment mechanism for the exclusive use of HGIA.

The Authority agrees that OBR is a critical tool to enable green infrastructure financing for the underserved (i.e. renters and low and moderate-income households) and approved an OBR Implementation budget on December 9, 2016 for the extensive IT programming and testing work necessary for this project.

The Authority has been working diligently with the Hawaiian Electric Companies and its Loan Servicer to finalize the Green Energy Money Saver ("GEM\$") On-Bill Program.

- **Government Agencies** - On February 22, 2017, the Commission issued Order No. 34421 approving PN#11 subject to a \$60.0 million cap on deployments made to the DOE and in July 2017, the Authority issued a \$46.4 million loan to the DOE to install commercial energy efficiency measures.

3.2 Additional Activities

The following activities represent a summary of some of the activities that have occurred since the last Quarterly Report and which have therefore not yet been reported to the Commission. These items will appear in the Authority's next quarterly report due to the Commission on April 30, 2018, covering the activities from January 1, 2018 through March 31, 2018.

- Board Meeting. The Authority held a board meeting on January 26, 2018, at which it approved HGIA's quarterly report for the period ended December 31, 2017.
- Order No. 35185. On January 5, 2018, the Commission issued Order 35185 providing clear guidance to the Hawaiian Electric Companies' Status Update and Request for Guidance on the On-Bill Repayment Mechanism.
- Utility Connection Agreement. On January 22, 2018, the Authority filed the executed Utility Connection Agreement for the Kahauiki Village project with the Commission in Docket No. 2014-0135.
- Joint Filing. On February 28, 2018, the Authority and the Hawaiian Electric Companies¹⁸ filed a Joint Filing For Approval of the Green Energy Money Saver On-Bill Program.
- Information Request. On March 5, 2018, the Commission filed an Information Request on the Joint Filing for Approval of the Green Energy Money Saver On-Bill Program.
- Information Request. On March 8, 2018, the Consumer Advocate filed an Information Request on the Joint Filing for Approval of the Green Energy Money Saver On-Bill Program.
- Program Notification No. 12 ("PN#12"). On March 9, 2018, the Authority submitted PN#12 to provide direct financing of commercial energy efficiency measures to nonprofits, multi-family rental projects and small businesses.
- HGIA and Hawaiian Electric Companies Responses. On March 12, 2018, the Authority and Hawaiian Electric Companies filed its responses to the Commission's Information Request on the Joint Filing for Approval of the Green Energy Money Saver On-Bill Program.
- HGIA and Hawaiian Electric Companies Responses. On March 16, 2018, the Authority and Hawaiian Electric Companies filed its responses to the Consumer Advocate's Information Request on the Joint Filing for Approval of the Green Energy Money Saver On-Bill Program.
- Loan Approvals. Since the last quarterly filing, the Authority's Loan Committee approved Commercial PV Loans aggregating \$2.9 million to install solar PV systems for nonprofits.
- Loans Funded. Since December 31, 2017, the Authority funded Residential PV Loans aggregating \$169,000 and commercial loans aggregating \$2.6 million.

¹⁸ Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc. and Maui Electric Company, Limited are collectively referred to as the Hawaiian Electric Companies.

3.3 Historical Milestones and Timeline

The following is a timeline of the major GEMS events that have occurred since Act 211 was signed into law:

| Period | Milestones |
|---------|--|
| FY 2014 | <ul style="list-style-type: none"> Loan Program and Bond Financing Order Applications submitted to the PUC |
| FY 2015 | <ul style="list-style-type: none"> PUC approval of Loan Program and Bond Financing Orders Hawaii Green Infrastructure Authority constituted GEMS Bonds 2014 Series A of \$150,000,000 issued Nonprofit, Small Business and Residential loan products launched |
| FY 2016 | <ul style="list-style-type: none"> Nonprofit and Small Business products shuttered due to loss of equity partner. |
| FY 2017 | <ul style="list-style-type: none"> Metrus Energy, an approved capital partner, launched its commercial energy efficiency product. An Open Solicitation for Financing Arrangements process was established. New commercial PV loan products for Nonprofits, Small Businesses and Multi-Family Rental Projects launched. Consumer Lease Product launched |
| FY 2018 | <ul style="list-style-type: none"> Commercial Energy Efficiency Loan extended to the Department of Education Contract with outsourced loan originator in Wisconsin terminated. Authority brings all loan origination and underwriting in-house. Joint Filing of the Green Energy Money Saver On-Bill Program filed for Commission approval on February 28, 2018. Program Notification No. 12 for direct loan products for commercial energy efficiency filed for Commission approval on March 9, 2018. |

3.4 Program Metrics

The following Program Metrics were reported in the Quarterly Reports. Updated metrics will be included in the next GEMS Quarterly Report for the quarter ended March 31, 2018.

| 3.1 Energy and Environment Impact | | | |
|---|---|----------------------------|------------------------------------|
| | This Quarter: 10/1 -12/31/17 | FY 2018 To Date | Since Program Inception |
| Clean Energy Production of Projects Financed | | | |
| Installed Capacity (Actual kW) | 1,342.6 | 2,152.4 | 3,919.9 |
| Total Yr 1 Production (Estimated kWh) | 1,912,003.3 | 3,299,337.3 | 5,975,001.3 |
| Total Project Production Over Lifetime of Installed PV (Projected kWh) (including 0.50% degradation) | 36,477,014.6 | 62,944,438.6 | 113,990,500.6 |
| Electricity Reductions from Energy Efficiency Projects Financed | | | |
| Total Yr 1 kWh Reduction (Energy Efficiency)* | 35,312,352 | 35,314,352 | 35,314,352 |
| Total kWh Reduction Over Lifetime of Installed EE* | 529,715,280 | 529,715,280 | 529,715,280 |

| Petroleum Displaced by Clean Energy and Energy Efficiency Projects | | | |
|---|-----------|-----------|-----------|
| Total Petroleum Displaced/Saved Over Lifetime (Clean Energy and Energy Efficiency Projects (1)) (Estimated barrels) | 347,741.2 | 363,996.9 | 395,348.1 |
| Petroleum Displaced/Saved based on Yr 1 Clean Energy Generation (Estimated barrels) | 1,174.3 | 2,026.3 | 3,669.7 |
| Petroleum Displaced Over Lifetime of Installed PV (Projected barrels) | 22,403.3 | 38,659.0 | 70,010.1 |
| Cumulative Annual Petroleum saved from Yr 1 Efficiency Projects* | 21,689.2 | 21,689.2 | 21,689.2 |
| Petroleum Saved over Lifetime of Efficiency Projects* | 325,338.0 | 325,338.0 | 325,338.0 |

| Greenhouse Gas Avoided | | | |
|--|-----------|-----------|-----------|
| Total Greenhouse Gas Avoided (2) Over Lifetime (Clean Energy and Energy Efficiency Projects) (Est. metric tons CO ₂) | 170,382.8 | 178,347.6 | 193,708.7 |
| Greenhouse Gas Avoided from Clean Energy Yr 1 Production (Estimated metric tons CO ₂) | 575.4 | 992.8 | 1,798.0 |
| Greenhouse Gas Avoided Over Lifetime of Installed PV (Projected metric tons CO ₂) | 10,976.9 | 18,941.7 | 34,302.9 |
| Greenhouse Gas Avoided from Yr 1 Energy Efficiency* | 10,627.1 | 10,627.1 | 10,627.1 |
| Greenhouse Gas Avoided over Lifetime of Energy Efficiency Project* | 159,405.9 | 159,405.9 | 159,405.9 |

(1) Reference unitjuggler.com for conversion metric.

(2) Reference eia.gov for conversion metrics.

3.2 Economic Development Impact

| GEMS Capital (Cash Basis) | This Quarter: 10/1 -12/31/17 | FY 2018 To Date | Since Program Inception |
|---|---|----------------------------|------------------------------------|
| GEMS Revenues | \$ 645,652 | \$ 1,014,661 | \$ 2,014,104 |
| GEMS Administrative & Program Costs | \$ 153,641 | \$ 309,251 | \$ 3,083,542 |
| GEMS Loans Funded | \$ 3,423,174 | \$ 5,313,200 | \$ 10,380,763 |
| Indirect Economic Impact - Jobs Created/Retained (1)* | 541.9 | 595.8 | 675.3 |
| State of Hawaii Tax Revenues Generated* | \$ 839,937 | \$ 7,351,440 | \$ 8,332,553 |

(1) Jobs created or retained was previously calculated utilizing the SBA's metric of \$65,000/job. However, as a state program, we will be utilizing the State's metric of \$97,922/job for 2018.

| Projects Financed According to Technology Type/Category | | | |
|--|---------|---------|---------|
| Solar Photovoltaic Systems (1) | 267 | 305 | 420 |
| Energy Storage | 0 | 0 | 0 |
| Lighting Upgrades (2)* | 725,000 | 725,000 | 725,000 |
| HVAC Upgrades* | 324 | 324 | 324 |
| Mechanical Upgrades | 0 | 0 | 0 |
| Controls and Monitoring Devices | 273 | 307 | 434 |
| Energy/Water Nexus | 0 | 0 | 0 |
| Total No. of Projects | 26 | 45 | 121 |

(1) Including advanced inverters and smart modules.

(2) DOE Project: 700,000 Interior LEDs and 25,000 Exterior LEDs

| 3.3 Market Expansion Impact | | | |
|---|---|----------------------------|------------------------------------|
| Residential PV Loan Program | This Quarter: 10/1 -12/31/17 | FY 2018 To Date | Since Program Inception |
| Total No. of GEMS Loans | 15 | 29 | 98 |
| Total No. of GEMS Leases | 8 | 8 | 8 |
| No. Loans Serving Underserved Market (1) | 20 | 31 | 88 |
| % Loans Serving Underserved Market | 87.0% | 83.8% | 83.0% |
| (1) See AMI Distribution | | | |
| Status of Applications: | | | |
| No. of Residential PV Applications Received | 32 | 111 | 439 |
| No. of Residential PV Applications In Process | 29 | N/A | N/A |
| No. of Residential PV Applications Declined | 14 | 35 | 161 |
| No. Residential PV Applications Withdrawn | 15 | 22 | 111 |
| No. of Residential PV Applications Loan Docs Accepted | 40 | N/A | N/A |
| Geographic Location | | | |
| No. of Loans on Oahu | 21 | 34 | 89 |
| No. of Loans on Maui | 0 | 0 | 9 |
| No. of Loans on Molokai | 0 | 0 | 0 |
| No. of Loans on Lanai | 0 | 0 | 0 |
| No. of Loans on Hawaii | 2 | 3 | 8 |
| Profile of Customers | | | |
| Number of Customers By Customer FICO Credit Score | | | |
| 700 and above | 11 | 15 | 41 |
| 675-699 | 6 | 10 | 27 |
| 650-674 | 3 | 6 | 17 |
| 620-649 | 2 | 3 | 14 |
| 600-619 | 1 | 3 | 7 |
| 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 | 1 |
| \$35,000-\$49,999 | 4 | 4 | 7 |
| \$50,000-\$74,999 | 2 | 6 | 15 |
| \$75,000-\$99,999 | 3 | 6 | 26 |
| \$100,000 and Above | 14 | 21 | 56 |
| Number of Customers by Area Median Income (1) | | | |
| <30% AMI (Extremely Low Income) | 1 | 1 | 1 |
| 30% to <50% AMI (Very Low Income) | 2 | 4 | 10 |
| 50% to <80% AMI (Low Income) | 2 | 5 | 19 |
| 80% to <140% AMI (Moderate Income) | 15 | 21 | 57 |
| > 140% AMI | 3 | 6 | 19 |
| (1) Area Median Income as provided by the U.S. Department of Housing & 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. | | | |
| Commercial Loan Program | This Quarter: 10/1 -12/31/17 | FY 2018 To Date | Since Program Inception |
| Total Number of GEMS PV Loans | 3 | 7 | 13 |
| Total Number of GEMS EE Loans | 0 | 1 | 1 |
| No. of Nonprofits Participating in GEMS | 1 | 5 | 8 |

| | | | |
|--|---|----------------------------|------------------------------------|
| Status of Applications: | | | |
| No. of Commercial PV Applications Received | 5 | 14 | 24 |
| No. of Commercial PV Applications Approved | 6 | 15 | 21 |
| No. of Commercial PV Applications Declined | 0 | 0 | 0 |
| No. of Commercial PV Applications Withdrawn | 1 | 1 | 1 |
| No. of Commercial PV Applications Under Review | 2 | N/A | N/A |
| No. of Commercial EE Applications Received | 0 | 0 | 1 |
| No. of Commercial EE Applications Approved | 0 | 0 | 1 |
| 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 | 0 | 0 | 0 |
| Geographic Location (1) | | | |
| No. of Loans on Oahu | 2 | 5 | 10 |
| No. of Loans on Maui | 0 | 2 | 2 |
| No. of Loans on Molokai | 0 | 0 | 0 |
| No. of Loans on Lanai | 0 | 0 | 0 |
| No. of Loans on Hawaii | 1 | 1 | 2 |
| (1) DOE loan benefits 241 public schools statewide (except Kauai) | | | |
| | | | |
| No. Small Businesses Participating in GEMS | 1 | 1 | 1 |
| No. 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 | 1 | 1 | 1 |
| \$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 | 241 | 241 | 746 |
| | | | |
| 3.4 Cost Savings Impact | | | |
| | This Quarter: 10/1 -12/31/17 | FY 2018 To Date | Since Program Inception |
| Aggregate Estimated Gross (1) Electricity Cost Savings from Energy Production and Reduction (life of system) (\$) | \$ 175,567,569 | \$ 187,916,698 | \$ 211,483,734 |
| Aggregate Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer) | \$ 2,611,428 | \$ 4,802,602 | \$ 13,125,439 |
| Aggregate Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial) | \$ 14,041,551 | \$ 24,199,506 | \$ 39,443,705 |
| Aggregate Estimated Gross Electricity Cost Savings from Energy Efficiency (life of system)(\$)(Commercial)* | \$ 158,914,590 | \$ 158,914,590 | \$ 158,914,590 |

| | | | |
|---|----------------|----------------|----------------|
| <u>Average</u> Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer) | \$ 113,540 | \$ 129,800 | \$ 123,825 |
| <u>Average</u> Estimated Gross Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial) | \$ 4,680,517 | \$ 4,680,517 | \$ 3,034,131 |
| <u>Average</u> Estimated Gross Electricity Cost Savings from Energy Efficiency (life of system)\$(Commercial)* | \$ 659,397 | \$ 659,397 | \$ 659,397 |
| Aggregate Estimated Net (2) Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer) | \$ 1,718,082 | \$ 3,466,745 | \$ 9,228,051 |
| Aggregate Estimated Net Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial) | \$ 4,160,239 | \$ 8,748,626 | \$ 17,265,839 |
| Aggregate Estimated Net Electricity Cost Savings From Energy Efficiency (life of system) (\$) (Commercial)* | \$ 112,514,590 | \$ 112,514,590 | \$ 112,514,590 |
| <u>Average</u> Estimated Net Electricity Cost Savings From Energy Production (life of system) (\$) (Consumer) | \$ 114,547 | \$ 119,551 | \$ 94,172 |
| <u>Average</u> Estimated Net Electricity Cost Savings From Energy Production (life of system) (\$) (Commercial) | \$ 1,386,746 | \$ 1,249,804 | \$ 1,328,141 |
| <u>Average</u> Estimated Net Electricity Cost Savings from Energy Efficiency \$(Commercial)* | \$ 466,866 | \$ 466,866 | \$ 466,866 |
| <u>Average</u> System Cost per Watt for All Consumers (PV) (\$) | \$ 4.15 | \$ 4.07 | \$ 4.00 |
| <u>Average</u> System Cost per Watt for Underserved Consumers (PV) (\$) | \$ 3.97 | \$ 3.94 | \$ 3.99 |
| <u>Average</u> System Size for All Consumers (PV) (kW) | 8.3 | 8.0 | 8.3 |
| <u>Average</u> System Size for Underserved Consumers (PV) (kW) | 8.5 | 8.1 | 8.4 |
| Project Cost per Watt for All Consumers – Energy Efficiency (\$) | 0 | 0 | 0 |
| <u>Average</u> Project Size for All Consumers – Energy Efficiency (kW) | 0 | 0 | 0 |
| Project Cost per Watt for Underserved Consumers – Energy Efficiency (\$) | 0 | 0 | 0 |
| <u>Average</u> Project Size for Underserved Consumers – Energy Efficiency (kW) | 0 | 0 | 0 |
| (1) Savings calculation assumes a historical utility rate increase of 5.72% annually. | | | |
| (2) Savings calculations includes tax credits, assumes a historical utility rate increase of 5.72% annually and is net of loan payments required. | | | |
| * Energy Efficiency metrics based on DOE's completed project plan. | | | |

4 Budgets and Administrative Cost Controls

During FY 2019, the Authority intends to deploy approximately \$25.0 million in capital (see Section 5.4.) and expend approximately \$1.0 million on administrative costs (see Section 4.1). Although the Authority anticipated the Program to be self-sustaining with future administrative costs beyond FY 2018 to be paid through income generated from the GEMS loan program in its FY2018 Annual Plan, due to Order No. 34930 Changing the Priority of Uses of GEMS Program Loan Repayments, loan repayments received are now required to be applied first toward the replenishment of the reduced Public Benefits Fee collections before the payment of GEMS Program administrative costs.

4.1 Proposed Administrative Budget for FY 2019

HAWAII GREEN INFRASTRUCTURE AUTHORITY ANNUAL ADMINISTRATION BUDGET FOR FY 2019

| | FY 2019 |
|---|----------------------------|
| ADMINISTRATIVE STAFF | |
| Salaries | \$ 488,854 |
| Fringe Benefits | <u>190,154</u> |
| Subtotal | \$ 679,008 |
| OPERATING EXPENSES | |
| Office Expenses | \$ 2,500 |
| Office Equipment | 2,500 |
| Travel Transportation & Subsistence | 4,000 |
| Training & Other Support | 19,000 |
| Other Administrative Expenses | <u>10,492</u> |
| Subtotal | \$ 38,492 |
| PROGRAM MARKETING, OUTREACH & SUPPORT | |
| Program Administration | \$ 158,500 |
| Legal Services | 21,500 |
| Audit Services | 75,000 |
| Contractor & Stakeholder Outreach, Marketing and Business Development | <u>27,500</u> |
| Subtotal | \$ 282,500 |
| TOTAL BUDGET | <u>\$ 1,000,000</u> |

4.2 Administrative Cost Controls

Administrative costs are paid out of the Green Infrastructure Special Fund and are subject to the appropriation and allotment processes and approval procedures of the Hawaii Revised Statutes, Chapter 37, Part II. This requirement ensures legislative approval for ongoing expenses from the fund, in addition to approval by HGIA's Board and the Department of Budget and Finance.

The GEMS Program was initially designed to use existing market service providers and channels as Deployment Partners. While the use of existing market service providers reduces administrative costs as these partners already have the experience and infrastructure in place, such as IT, marketing, etc., these arrangements have also resulted in unanticipated challenges such as different time zones, unfamiliarity to situations unique to Hawaii (i.e. properties held in

trust, leasehold properties, etc.), lack of commitment to the Hawaii market and a lack of priority or sense of urgency for the GEMS Program.

As stated earlier, the Authority terminated its contract with its Wisconsin loan originator on December 31, 2017 and began originating applications for all loan products. As such, the Authority is working with the State's Office of Enterprise Technology Services to develop an on-line portal to originate both GEMS direct loans and GEM\$ on-bill loans.

The Authority remains committed to operating efficiently. The State has set a precedent of restricting administrative expenses to a percentage of a fund. The statutory restriction for administrative costs for the Public Benefits Fee Administrator is 10% of the collected public benefits fees in any fiscal year.¹⁹ The administrative expense restriction placed on the Tourism Special Fund is 5% of money in the special fund.²⁰ However, in the GEMS Program, there is an upfront pool of capital rather than annual program funds. Therefore, the traditional cost control guidelines are not applicable. Based on benchmarks from other green banks, 6-8% of initial capitalization is a reasonable expectation for administrative costs to deploy capital. The New York Green Bank has an explicit cap at 8% of initial capitalization, and we aspire to outperform this benchmark. The Authority is restricting administrative costs to 4% of the projected capital to be deployed during the upcoming period.

5. Operational and Financing Plans for FY 2019

5.1 Residential Loan Portfolio

Existing Residential PV Loan Product

While this product has experienced an increase in loan activity, the long-term growth prospect of the residential PV loan product is limited to the few remaining NEM and CGS projects in the queue. As such, the anticipated deployment for this product is \$1.0 million in FY 2019.

5.1.1. Residential PV + Storage Loan Product

Due to the diminishing NEM and CGS queue, the Authority will be seeking Commission approval to finance Residential PV plus Storage. PV plus Battery Storage is quickly becoming an increasingly compelling solution for consumers in today's energy market. Two simultaneous market developments are making battery storage an increasingly attractive part of a PV solution in Hawaii:

- (1) Technology: battery technology, while not mature, has expanded with a variety of manufacturers now offering a competitive mix of products and economic performance. Storage prices have decreased while product warranties have been extended and replacement cost projections now amazingly affordable as there is intense competition to establish market position among early adopters.
- (2) Public policy: With NEM and CGS fully subscribed, any future residential PV installations within the State will not be feasible without inclusion of a battery storage system.

¹⁹ HRS §269-122 (a).

²⁰ HRS §201B-11 (c).

Upon Commission approval, the Authority anticipates funding some \$1.0 million in Residential PV + Storage loans during FY 2019.

5.1.2. On-bill Repayment Mechanism

As mentioned in Section 3.2., the Authority and the Hawaiian Electric Companies submitted a Joint Filing on February 28, 2018 for approval of the Green Energy Money Saver On-Bill Program. Anticipated deployment of GEMS funding leveraging the OBR loan products are expected to aggregate \$3.5 million during FY 2019.

5.2. Commercial Loan Portfolio

5.2.1. Existing Commercial PV Loan Product: Project Sponsor and Direct

Developers continue to show interest in this product for nonprofit, small business and multi-family rental projects. Anticipated deployment for this product during FY 2019 is \$12.0 million.

5.2.2. Commercial PV + Battery Storage Product

Similar to the scenario in Section 5.1.1., current market conditions for nonprofits, multi-family rental projects and small businesses will require the installation of storage with solar PV if consumption is outside of the solar production time frame.

The Authority will be requesting Commission approval of GEMS financing for commercial PV plus storage. Upon Commission approval, the Authority anticipates funding some \$5.0 million in Commercial PV + Storage loans during FY 2019.

5.2.3. Commercial Energy Efficiency

Upon Commission approval of PN#12 the Authority will market its Commercial Energy Efficiency – Project Sponsor and Direct products. The Authority anticipates funding some \$2.5 million in commercial energy efficiency loans, either direct or through Metrus Energy, its capital deployment partner during FY 2019.

5.3. Other

5.3.1. Government Financing

There are currently two bills being considered by the Hawaii State Legislature (SB2910 and HB2249). Depending on its outcome, the Authority may submit additional program notifications to develop loan programs specific to the bill(s).

5.3.2. Grid Stabilization and Optimization

As the Commission and the utility continue to identify grid stabilization and/or optimization technologies, the Authority may develop loan products to meet the needs of the market.

5.3.3. Grid Resilience

The devastating impacts of Hurricanes Irma and Maria (Puerto Rico), Sandy (Atlantic Coast) and others remain a tangible threat to Hawaii's communities. As the Legislature, Commission and

utility continue to identify grid resilience measures, the Authority may develop loan products to meet the needs of the market.

5.3.4. *Community Solar*

With the issuance of Order no. 35137 on December 22, 2017, outlining the Commission's Community Based Renewable Energy Program Framework, the Authority may develop loan products to meet the needs of the market.

5.3.5. *Additional Loan Capital*

As mentioned previously, as opportunities arise, the Authority may seek additional funding sources and loan capital to further diversify HGIA's loan products.

5.4. **GEMS Operations Timeline**

| Quarter | Target Milestones |
|-------------------------------|---|
| Prior to FY 2019 | <ul style="list-style-type: none"> • Obtain Commission approval for direct financing of Commercial Energy Efficiency • Obtain Commission approval of the GEM\$ On-Bill Program and Loan Product |
| FY 2019 Q1: JUL - SEP 2018 | <ul style="list-style-type: none"> • Launch Commercial EE loan products • Start accepting OBR loan applications Submission of Revised Program Notification to finance Commercial PV + Storage • Submission of Revised Program Notification to finance Residential PV + Storage |
| FY 2019 Q2: OCT - DEC 2018 | <ul style="list-style-type: none"> • Launch Commercial and Residential PV + Battery Storage Products • Hawaiian Electric Companies to start processing OBR payments |
| FY 2019 Q3: JAN -MAR 2019 | <ul style="list-style-type: none"> • Submission of Program Notification/Program Modification (as may be applicable) for Community Solar loan products |
| FY 2019 Q4: APR - JUN 2019 | <ul style="list-style-type: none"> • Launch Community Solar Loan Products • Submission of Program Notification/Modification (as may be applicable) for grid stabilization/optimization/resilience loan products • Seek additional loan capital. |

5.5. **Projected Fund Deployment Timeline and Portfolio Allocations**

The GEMS Program is focused on solar PV loans for consumers, renters, nonprofits and small businesses. However, the Authority acknowledges that grid saturation limitations in the Solar PV market as well as the limited interconnection options currently offered by the utility will require the Authority to seek approval to expand the GEMS product mix and financing options to meet the needs of the market. FY 2019 Deployment Targets are as follows:

| Product Category | Deployment Amount | Comments |
|------------------------------------|--------------------------|---|
| Residential PV | \$ 1.0 Million | Existing NEM and CGS queue |
| Residential PV + Storage | \$ 1.0 Million | Requires PUC approval to finance storage |
| Residential Energy Efficiency (EE) | \$ 3.5 Million | Requires PUC approval to finance residential EE via the GEM\$ on-bill repayment mechanism |
| Commercial PV | \$12.0 Million | |
| Commercial PV + Storage | \$ 5.0 Million | Requires PUC approval to finance storage |
| Commercial EE | \$ 2.5 Million | Via Metrus Energy and/or require PUC approval for direct financing of commercial EE |
| | \$25.0 Million | Total Projects Financed |

Should loan volume in the PV market not meet projections, and/or the Authority not be granted approval from the Commission for the various products itemized above, the Authority may reallocate funds between loan products and/or other projects.

6. Additional Information

6.1. 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”²¹ 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” in its Quarterly Reports.²²

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

6.2. 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.²³ The Authority has not been focusing any efforts on initiating utility-scale projects during the reporting period and there are no utility-scale projects that have been financed or are currently being discussed.

6.3. 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

²¹ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

²² See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 66.

²³ See “Decision and Order No. 32318,” filed in Docket No. 2014-0135 on September 30, 2014, at p. 60.

and impacts reporting requirements as part of DBEDT's first Quarterly Report filing."²⁴ 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."²⁵ 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. While the Authority did not allocate any resources for this initiative during the reporting period, it will update the Commission on utility system cost information should discussions resume.

7. Conclusion

The GEMS Program represents one way the State is innovating to transform access to clean energy technologies and achieve our ambitious clean energy goals. The reporting period has been a year of major milestones for the GEMS Program and the Authority.

Further, with the implementation of the On-Bill Repayment mechanism imminent, after the Commission and key stakeholders devoted considerable time and resources to set the foundation and complete its framework, the Authority is eager to leverage this mechanism to democratize clean energy by expanding access and affordability of renewable energy and energy efficiency projects for renters and low and moderate-income homeowners, as was the original intent of the legislation.

GEMS funding is uniquely positioned to have significant, positive impact in the coming years. As a market-based program, it is critical for GEMS to remain flexible and open to innovation in a rapidly moving sector of the market. We remain confident that the program can be instrumental in achieving the State's energy sustainability.

The ambitious goals of the GEMS program cannot be achieved without with the support and collaboration of the Commission, the Consumer Advocate, the electric utility and industry partners, for which the Authority is deeply grateful.

²⁴ See "Decision and Order No. 32318," filed in Docket No. 2014-0135 on September 30, 2014, at p. 95.

²⁵ See "Division of Consumer Advocacy's Statement of Position," filed in Docket No. 2014-0135 on August 7, 2014, at p. 14.