

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)

THE STATE OF HAWAII)
DEPARTMENT OF BUSINESS,)
ECONOMIC DEVELOPMENT,)
AND TOURISM)

DOCKET NO. 2014-0135

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

DECISION AND ORDER NO. 32318

PUBLIC UTILITIES
COMMISSION

2014 SEP 30 P 3:36

FILED

Table of Contents

I.	Background.....	2
	a. Act 211.....	3
	b. DBEDT's Application.....	7
	c. Procedural History.....	13
	d. Positions Of The Parties And Intervenors.....	18
	i. DBEDT	18
	ii. The Consumer Advocate	19
	iii. The HECO Companies.....	20
	iv. HSEA	21
	v. HREA	24
	vi. LOL	25
	vii. Blue Planet.....	27
	e. GEMS Financing Structure under Docket No. 2014-0134	28
II.	Discussion.....	31
	a. The Commission's Statutory Authority	31
	b. Hawaii Green Infrastructure Authority.....	33
	c. The Commission's Role in Reviewing and Overseeing the GEMS Program.....	34
	i. In General	34
	ii. Prudent Management of Funds and Minimization of Administrative Costs	38
	iii. GEMS Program Transparency.....	39
	iv. Equitable Program Access For All Islands	40
	v. Benefits to Participants and Non-Participants	41
	d. Consideration of Specific Program Aspects.....	42
	i. Eligible Clean Energy Technologies	42
	A. GEMS Alignment with Advances in Distributed Energy Resources	49
	ii. Program Beneficiaries	51
	A. Allocation of Funds to Underserved Customers ...	52
	B. GEMS Program Focus on Customer-Sited Technology	57

C. GEMS Program Participants Cannot Avoid Repayment by Disconnecting From the Grid	60
iii. Financing Products	62
iv. Consumer Protection	65
v. Use of On-bill and Direct Billing Repayment Methods	66
vi. Use of GEMS Program Repayments	71
e. Oversight and Reporting Requirements	76
i. Programmatic Flexibility	77
ii. Program Notification/Modification Process	79
iii. Data Tracking and Metrics	86
iv. Quarterly Reporting and Annual Plan Submissions ...	91
v. Annual Auditing of the Authority	98
III. Orders	99

APPENDIX I

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)

THE STATE OF HAWAII)
DEPARTMENT OF BUSINESS,)
ECONOMIC DEVELOPMENT,)
AND TOURISM)

Docket No. 2014-0135

Decision and Order No. **32318**

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

DECISION AND ORDER

By this Decision and Order ("Program Order"), the commission approves the application of the DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT, AND TOURISM ("DBEDT" or "Applicant") for the use of funds deposited in the Green Infrastructure Special Fund to establish and institute a Green Infrastructure Loan Program ("GEMS Program" or "Program") as described in DBEDT's application ("Application" or "DBEDT Application"), and subject to the modifications and ongoing oversight by the commission discussed herein.¹ The commission also provides additional GEMS Program requirements and guidance to DBEDT in this Program Order for use in designing and implementing

¹"APPLICATION OF DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT, AND TOURISM; VERIFICATION; EXHIBITS; AND CERTIFICATE OF SERVICE," filed in this docket by DBEDT on June 6, 2014.

the GEMS Program. This Program Order is issued in conjunction with Decision and Order No. 32281² in Docket No. 2014-0134 that approves the application of DBEDT to issue Green Infrastructure Bonds ("Bonds") pursuant to Hawaii Revised Statutes ("HRS") § 269-163.

I. Background

One of the priorities of the State's clean energy objectives is to provide Hawaii's electric utility customers increased access to affordable credit to finance renewable energy system installations.³ Hawaii has experienced unprecedented growth in the amount of customer-sited renewable energy generation over the last decade,⁴ but the lack of available financing for some customers creates a divide between those who can directly benefit from clean energy technologies and those who cannot.⁵ In order to expand access to upfront capital or available credit for

²In the Matter of the Application of the State of Hawaii Department of Business, Economic Development, and Tourism for a Financing Order to Issue Bonds and to Authorize the Green Infrastructure Fee, Docket No. 2014-0134, Decision and Order No. 32281, filed September 4, 2014 ("Financing Order").

³See Act 211, Session Laws of Hawaii 2013 ("Act 211").

⁴See "Report to the 2014 Legislature on the Public Utilities Commission Review of Hawaii's Renewable Portfolio Standards," December 2013, Appendix B and Appendix C.

⁵See "Report from the Committee on Conference for S.B. No. 1087, S.D. 2, H.D. 3, C.D. 1," April 26, 2013.

clean energy financing for those who have not yet acquired such financing on reasonable terms, the Legislature of the State of Hawaii ("Legislature") passed S.B. No. 1087, and Governor Neil Abercrombie signed that measure into law on June 27, 2013, as Act 211. Since Act 211 was signed, DBEDT has worked to design and develop a GEMS Program that will most effectively utilize and deploy Green Infrastructure Special Fund amounts within a highly dynamic energy market in support of the State's clean energy goals.

a. Act 211

The stated purpose of Act 211 is:

[T]o establish a regulatory financing structure that authorizes the public utilities commission and the department of business, economic development, and tourism to acquire and provide alternative low-cost financing, to be deployed through a financing program to make green infrastructure installations accessible and affordable for Hawaii's consumers, achieve measurable cost savings, and achieve Hawaii's clean energy goals.⁶

To provide electric utility customers in the State with access to low-cost, upfront capital to use in financing clean energy installations pursuant to Act 211, the Act established the financing and regulatory frameworks for the issuance and subsequent repayment of Bonds, and for the utilization of

⁶Act 211, § 1.

Bond proceeds to fund a GEMS Program in Hawaii that will be administered by the Hawaii Green Infrastructure Authority ("Authority").⁷

The Legislature, in passing S.B. No. 1087, expressed its desire for the creation of a GEMS Program aimed at "support[ing] Hawaii's evolving energy market and ecosystem and provid[ing] affordable and accessible energy options for Hawaii's consumers."⁸ The challenge of obtaining sufficient upfront capital to finance clean energy installations for many in Hawaii was also recognized by the Legislature in passing S.B. No. 1087.⁹

S.B. No. 1087 received broad support throughout the 2013 legislative session from government agencies directly and indirectly affected by the creation of a GEMS Program,¹⁰

⁷Prior to the Authority's establishment, DBEDT is authorized to exercise the Authority's powers and is required to effectuate the Authority's responsibilities. See HRS § 196-63. Accordingly, references to the "Authority" in this Program Order include DBEDT acting prospectively in its capacity on behalf of the Authority until that entity is established.

⁸"Report from the Committee on Conference for S.B. No. 1087, S.D. 2, H.D. 3, C.D. 1," April 26, 2013.

⁹See "Report from the Committee on Conference for S.B. No. 1087, S.D. 2, H.D. 3, C.D. 1," April 26, 2013.

¹⁰The commission notes that, with the exception of the State Procurement Office, the various government agencies testifying on S.B. No. 1087 provided supporting comments. Those offices and agencies providing supporting testimony on S.B. No. 1087 included the Office of the Governor, DBEDT, the DIVISION OF CONSUMER ADVOCACY OF THE DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate"), the Department of

the HECO Companies,¹¹ businesses inside and outside the clean energy industry, various community groups, and individual community members.¹² Prior to signing S.B. No. 1087 into law as Act 211, Governor Abercrombie stated his support of the Bond financing structure and the GEMS Program for funds deployment, declaring that this initiative "will help to achieve measurable cost savings to consumers and utility customers" and

Budget and Finance, and the commission. See (1) testimony of Governor Neil Abercrombie, State of Hawaii, to the House Committee on Finance, S.B. No. 1087, S.D. 2, H.D. 2, Relating to Green Infrastructure, April 1, 2013; (2) testimony of Kalbert K. Young, Department of Budget and Finance, State of Hawaii, to the House Committee on Finance, S.B. No. 1087, S.D. 2, H.D. 2, Relating to Green Infrastructure, April 1, 2013; (3) testimony of Richard C. Lim, Department of Business, Economic Development, and Tourism, State of Hawaii, to the House Committee on Finance, S.B. No. 1087, S.D. 2, H.D. 2, Relating to Green Infrastructure, April 1, 2013; (4) testimony of Hermina Morita, Public Utilities Commission, State of Hawaii, to the House Committee on Finance, S.B. No. 1087, S.D. 2, H.D. 2, Relating to Green Infrastructure, April 1, 2013; (5) testimony of Jeffrey T. Ono, Division of Consumer Advocacy, Department of Commerce and Consumer Affairs, State of Hawaii, to the House Committee on Finance, S.B. No. 1087, S.D. 2, H.D. 2, Relating to Green Infrastructure, April 1, 2013; and (6) testimony of Aaron S. Fujioka, State Procurement Office, State of Hawaii, to the House Committee on Finance, S.B. No. 1087, S.D. 2, H.D. 2, Relating to Green Infrastructure, April 1, 2013.

¹¹The HECO Companies are HAWAIIAN ELECTRIC COMPANY, INC., HAWAII ELECTRIC LIGHT COMPANY, INC., and MAUI ELECTRIC COMPANY, LTD., each of which are parties to this proceeding.

¹²See "Standing Committee Report No. 1587 from the House Committee on Finance for S.B. No. 1087, S.D. 2, H.D. 3," April 5, 2013.

will move Hawaii toward achieving its clean energy goals.¹³ Moreover, prior to the filing of DBEDT's June 6, 2014 Application, the GEMS Program was appropriated \$150,000,000 in the State's 2013-2015 executive budget for use in fiscal year 2014-2015 "to make green infrastructure installations accessible and affordable to more of Hawaii's underserved ratepayers, achieve measureable cost savings, and further Hawaii's clean energy goals."¹⁴ Accordingly, the commission recognizes the wide-ranging support for Act 211 and the establishment of a GEMS Program as an initiative with the potential to provide clean energy solutions across the entire State.

The resulting programmatic structure established via Act 211 is a system whereby DBEDT and the Authority, in their respective capacities, carry out the Act's financing and operational requirements, and the commission acts in a regulatory capacity to ensure that the ratepayer funds used to help fund the GEMS Program are utilized appropriately. It is important to note that the commission's role in the implementation of Act 211 is limited to review and approval of a proposed Program, as well as

¹³See testimony of Governor Neil Abercrombie, State of Hawaii, to the House Committee on Finance, S.B. No. 1087, S.D. 2, H.D. 2, Relating to Green Infrastructure, April 1, 2013.

¹⁴"Report from the Committee on Conference for H.B. No. 1700, H.D. 1, S.D. 1, C.D. 1," April 25, 2014.

ongoing oversight of the Program to ensure the appropriate use of funds. The determination of specific program details and the control of day-to-day operations, such as the deployment of GEMS Program funds to customers, is appropriately within the Authority's purview. Both the commission and the State are relying on the expertise and judgment of DBEDT, the Authority, and their advisors to issue Bonds and to implement the GEMS Program in a manner that best serves the goals of Act 211. As such, the commission observes that DBEDT and the Authority are government agencies that have been delegated the responsibility to operate the GEMS Program in the public interest pursuant to the laws of the State of Hawaii.

b. DBEDT's Application

On June 6, 2014, DBEDT submitted its Application for a Program Order pursuant to HRS § 269-170(a), seeking commission approval to utilize amounts in the Green Infrastructure Special Fund¹⁵ to establish and implement the GEMS Program according to the parameters described in DBEDT's Application. Following the

¹⁵The Financing Order authorizes, among other things, (1) the issuance of Bonds in a principal amount not to exceed \$150,000,000, and (2) the transfer of proceeds from the Bond issuance to the Green Infrastructure Special Fund, net of any issuance and related financing costs. Financing Order at 92-93 and 107.

issuance of Protective Order No. 32142 ("Protective Order"),¹⁶ a number of exhibits relating to the GEMS Program that were deemed confidential by DBEDT were filed on June 17, 2014, thus, completing DBEDT's Application.¹⁷

The Application lays out the various aspects of the GEMS Program as envisioned by DBEDT on the date of filing, as well as the process for ongoing program development and adjustment in response to changing market conditions. At its core, the GEMS Program proposed in DBEDT's Application is a consumer financing operation focused on providing low interest financing for the installation of individual solar photovoltaic ("Solar PV") systems and related supporting infrastructure equipment. The target groups for GEMS Program services are those typically not able to directly benefit from clean energy installations, including renters, low-income individuals, non-profit organizations, and persons not otherwise able to access the high levels of upfront capital and/or financing necessary to acquire clean energy systems.¹⁸ DBEDT proposes to make an initial

¹⁶See "Stipulation for Protective Order, Exhibit A, and Certificate of Service," Docket No. 2014-0135, filed and approved June 17, 2014.

¹⁷Letter from G. Kinkley to the commission, Confidential Attachments (Exhibits 12, 13, 14, and 15), Docket No. 2014-0135, filed June 17, 2014.

¹⁸In its Application, DBEDT includes a Hawaii market analysis for the GEMS Program conducted by Renewable Funding, DBEDT's

GEMS Program deployment of the net proceeds from the Bond issuance of \$150,000,000 approved by the Financing Order, again focusing on Solar PV and associated infrastructure.¹⁹ Possible uses for repayments made on GEMS Program loans are discussed in the Application.²⁰

DBEDT proposes to make low-interest loans available to Hawaii participants over a deployment period of roughly two years, with fund deployment beginning November of 2014 and running through November of 2016.²¹ The GEMS Program will be administered by DBEDT until the Authority is created.²² GEMS funding will reach end-users via a deployment structure that will utilize multiple GEMS Program Deployment Partners ("Deployment Partners") consisting of financial and energy industry institutions working

consultant in the development of the proposed GEMS Program, in which two critical underserved markets are identified:

1. Single-family residents (homeowners and renters) with lower credit scores and lower income levels; and
2. Non-profit organizations, especially smaller and less-established non-profit organizations.

See DBEDT Application, Exhibit 6.

¹⁹See DBEDT Application at 4.

²⁰See DBEDT Application at 34-35.

²¹DBEDT Application, Exhibit 1 and Exhibit 2.

²²See DBEDT Application at 2.

with DBEDT to facilitate GEMS Program financing with consumers.²³ Utilizing both unleveraged financing products (loans consisting of 100% GEMS funds) and leveraged financing products (where loans consist of private capital combined with GEMS funds), the Proposed GEMS Program is designed to allow for flexible use of funds across a number of financial product options that can take advantage of opportunities to leverage GEMS funds with other sources of capital, such as tax equity investment structures.²⁴

DBEDT notes that the Proposed GEMS Program "has the ability to finance the installation of over 44 MW [megawatts] of solar photovoltaic [] equipment to assist these underserved homeowners, renters and non-profit customers."²⁵ To accomplish a deployment of funds to achieve a goal of this magnitude, DBEDT proposed that clean energy technology eligible for GEMS funding should include Solar PV systems, energy storage, advanced inverters, smart modules, and monitoring devices, as well as broader categories of technologies and infrastructure to assist

²³See DBEDT Application at 4.

²⁴See DBEDT Application at 23-26.

²⁵DBEDT Application at 3.

with the installation of Solar PV systems.²⁶ Repayment for GEMS Program loans would be facilitated through a standard direct billing approach (i.e., payment directly to Deployment Partner), as well as Hawaii's on-bill repayment mechanism (payment via participant utility bill), currently under development by the commission in Docket No. 2014-0129.²⁷

Throughout its Application, DBEDT requests discretion to establish a number of final GEMS Program details following the initial establishment of the Program. In support of this request, DBEDT observes that "programmatic flexibility" is a common and reasonable feature of successful, state-approved clean energy financing programs across the country.²⁸

If provided such flexibility, DBEDT commits to keeping the commission continuously informed of the various GEMS Program developments occurring after the issuance of an initial Program Order, with updates to the Program referred to as

²⁶See DBEDT Application, Exhibit 9, in which DBEDT proposes other categories of technology including:

- Other Technologies that Support Solar Photovoltaic System Interconnection; and
- Physical Infrastructure to Support Solar Photovoltaic Installations.

²⁷See DBEDT Application at 28-32.

²⁸See DBEDT Application at 8-10.

"Program Notifications."²⁹ DBEDT would also notify the commission of any proposed deviations from the GEMS Program parameters set in a GEMS Program Order via submissions referred to as "Program Modifications," which would be subject to approval, modification, or rejection by the commission.³⁰ Finally, in addition to statutorily-mandated annual filings, DBEDT proposes to implement a quarterly reporting process, designed to provide the commission a "snapshot" of program activities and financial summary information.³¹

DBEDT has indicated throughout this proceeding its support for, or acceptance of, a number of additions or other adjustments to the originally proposed GEMS Program details as those modifications have been offered by various Parties³² and Intervenor³³s in this docket. The commission discusses these

²⁹See DBEDT Application at 15-16.

³⁰See DBEDT Application at 16. In addition, as explained below, the commission has the ability to determine that a Program Notification is in fact a Program Modification.

³¹See DBEDT Application at 17.

³²DBEDT, the HECO Companies, and the Consumer Advocate are each Parties to this proceeding (collectively, the "Parties").

³³As further discussed in "Section I.c., Procedural History," BLUE PLANET FOUNDATION ("Blue Planet"), THE HAWAII RENEWABLE ENERGY ALLIANCE ("HREA"), THE HAWAII SOLAR ENERGY ASSOCIATION ("HSEA"), and LIFE OF THE LAND ("LOL") have been admitted as Intervenor³³s in this proceeding (collectively, the "Intervenor³³s").

suggested additions, as well as other adjustments, in the succeeding sections of this Order.

Finally, the commission notes that a number of DBEDT's proposed GEMS Program details have been submitted in redacted form pursuant to the terms of the Protective Order stipulated to by the Parties and issued by the commission.³⁴

c. Procedural History

Following the filing of DBEDT's Application, Blue Planet, HREA, HSEA, and LOL each submitted timely motions to intervene in this docket, pursuant to Hawaii Administrative Rules ("HAR") § 6-61-55.³⁵ Each organization moving to intervene set out its initial position and potential contributions to the development of the record for decision making in this proceeding, and each stated its familiarity with the commission's regulatory

³⁴In particular, DBEDT submitted GEMS Program details under confidential seal with respect to GEMS financing products (DBEDT Application, Exhibit 12), GEMS Program Guidelines (DBEDT Application, Exhibit 13), GEMS break even cash flow analyses (DBEDT Application, Exhibit 14), and anticipated GEMS Program impacts and benefits (DBEDT Application, Exhibit 15).

³⁵See (1) HSEA's Motion to Intervene, filed June 17, 2014; (2) HREA's Motion to Intervene, filed June 23, 2014; (3) LOL's Motion to Intervene, filed June 25, 2014; and (4) Blue Planet's Motion to Intervene, filed June 26, 2014.

processes from experiences in multiple energy-related dockets.³⁶ Neither the Consumer Advocate nor DBEDT raised objections to, nor made any other statements opposing, the various motions to intervene.³⁷ On July 14, 2014, the commission granted the motions to intervene of HSEA, HREA, LOL, and Blue Planet, and also provided a procedural schedule ("Procedural Schedule") and a statement of the issues to govern this proceeding ("Statement of Issues").³⁸

The issues governing this proceeding are as follows:

- (1) Whether the Application meets all applicable statutory requirements; and
- (2) Whether the Applicant's requests are just, reasonable, and consistent with the public interest.³⁹

³⁶See (1) HSEA's Motion to Intervene at 3; (2) HREA's Motion to Intervene at 2-3; (3) LOL's Motion to Intervene at 10-11; and (4) Blue Planet's Motion to Intervene at 3.

³⁷See (1) Consumer Advocate's Response to HSEA's Motion to Intervene, filed June 23, 2014; (2) Consumer Advocate's Response to HREA's Motion to Intervene, filed June 24, 2014; (3) Consumer Advocate's Response to LOL's Motion to Intervene, filed June 26, 2014; and (4) Consumer Advocate's Response to Blue Planet's Motion to Intervene, filed June 27, 2014. See also (1) DBEDT's Response to HREA's Motion to Intervene, filed June 25, 2014; (2) DBEDT's Response to HSEA's Motion to Intervene, filed June 25, 2014; and (3) DBEDT's Responses to LOL's and Blue Planet's Motions to Intervene, filed June 30, 2014.

³⁸See "Order No. 32207, Granting Intervention and Establishing a Procedural Schedule," Docket No. 2014-0135, filed July 14, 2014 ("Order No. 32207").

³⁹Order No. 32207 at 10-11.

Thus, these issues guide the commission's decision making and discussion herein.

The Procedural Schedule in Order No. 32207 set out the timeline for an expeditious proceeding so that the Program Order could be issued either simultaneously with, or in close proximity to, the issuance of the Financing Order. Parties and Intervenors were given from July 14, 2014, through August 14, 2014 ("Rolling IR Period"), to issue information requests ("IR") to any other Party or Intervenor, without limitation.⁴⁰ The Parties and Intervenors exchanged numerous IRs and associated responses, and the commission also issued several of its own IRs both before and during the Rolling IR period.⁴¹ To further aid in developing

⁴⁰See Order No. 32207 at 9-10. At the same time, Order No. 32207 required Parties or Intervenors receiving IRs to provide responses to those IRs within five days of issuance. Id. at 10.

⁴¹See (1) Letter from the commission to D. Emerson, Docket No. 2014-0135, filed July 1, 2014; (2) Life of the Land's Initial Information Requests, Docket No. 2014-0135, filed July 18, 2014; (3) Division of Consumer Advocacy's First Submission of Information Requests, Docket No. 2014-0135, filed July 24, 2014; (4) Information Requests of the Hawaii Renewable Energy Alliance to the Department of Business, Economic Development, and Tourism, Docket No. 2014-0135, filed July 29, 2014; (5) Blue Planet Foundation's Amended Information Requests to the Division of Consumer Advocacy, Docket No. 2014-0135, filed August 4, 2014; (6) Second Information Requests of the Hawaii Renewable Energy Alliance to the Department of Business, Economic Development, and Tourism, Docket No. 2014-0135, filed August 7, 2014; (7) Letter from the commission to D. Emerson, Docket No. 2014-0135, filed August 11, 2014; and (8) Third Information Requests of the Hawaii Renewable Energy Alliance to the Department of Business,

the Parties' and Intervenors' respective understanding of the Application, the commission held an informal technical conference on July 18, 2014, in which each participant was given the opportunity to discuss with each other the various aspects of DBEDT's Proposed GEMS Program in an open forum ("Informal Technical Conference").⁴²

Parties and Intervenors wishing to file statements of position ("SOPs") and/or reply statements of position ("Reply SOPs") were required to do so by August 7, 2014, and August 14, 2014, respectively.⁴³ SOPs, as well as Reply SOPs, were timely filed by each of the Parties and Intervenors pursuant to the Procedural Schedule.⁴⁴ These filings set forth each of the

Economic Development, and Tourism, Docket No. 2014-0135, filed August 11, 2014.

⁴²Given the informal nature of the Technical Conference, the statements made therein were not entered into the formal docket record for Docket No. 2014-0135. The commission did, however, allow Parties and Intervenors to request that any information discussed during the Informal Technical Conference be submitted in writing and appropriately filed in this docket.

⁴³See Order No. 32207 at 9.

⁴⁴See (1) LOL SOP, filed August 7, 2014; (2) HSEA SOP, filed August 7, 2014; (3) DBEDT SOP, filed August 7, 2014; (4) Blue Planet SOP, filed August 7, 2014; (5) HREA SOP, filed August 7, 2014; (6) HECO SOP, filed August 7, 2014; (7) Consumer Advocate SOP, filed August 7, 2014; (8) HSEA Reply SOP, filed August 14, 2014; (9) LOL Reply SOP, filed August 14, 2014; (10) Blue Planet Reply SOP, filed August 14, 2014; (11) DBEDT Reply SOP, filed August 14, 2014; (12) HREA Reply SOP,

Parties' and Intervenor's respective positions (support, opposition, or other) regarding the GEMS Program proposed by DBEDT (as further refined during this proceeding), and provided a number of recommendations for modifying the GEMS Program and its associated processes, as further discussed below.

The Procedural Schedule also included a placeholder for an evidentiary hearing during the week of August 18, 2014, "if necessary."⁴⁵ Based on the record here, the commission determined that an evidentiary hearing was not necessary in this docket.⁴⁶

filed August 14, 2014; (13) HECO Reply SOP, filed August 14, 2014; and (14) Consumer Advocate Reply SOP, filed August 14, 2014.

⁴⁵See Order No. 32207 at 9. No Party or Intervenor requested an evidentiary hearing at any time during this proceeding, with the exception of LOL, who suggested that the commission hold a combined evidentiary hearing covering both this docket and Docket No. 2014-0134 in order to address issues raised by various participants in this proceeding. See LOL Reply SOP at 4. As recognized in the Financing Order, LOL is neither a party nor an intervenor in Docket No. 2014-0134. See Financing Order at 41. Thus, the commission determined that an evidentiary hearing was not necessary in Docket No. 2014-0134. See Letter from the Commission to Docket No. 2014-0134 Service List, filed August 18, 2014.

⁴⁶The Parties and Intervenor's were notified of the commission's decision not to conduct an evidentiary hearing via letter. See Letter from the Commission to Docket No. 2014-0134 Service List, filed August 18, 2014.

d. Positions Of The Parties And Intervenors

Each of the Parties' and Intervenors' respective positions regarding the Application is summarized below. Where relevant, responses to those positions by other Parties and Intervenors are also discussed.

i. DBEDT

DBEDT's SOP and Reply SOP reaffirm its support for its Application, provide updates on GEMS Program adjustments made during the course of the proceeding, and respond to recommendations and concerns raised in various SOPs. DBEDT reiterates the need for the GEMS Program to operate with sufficient flexibility to "enter into agreements, invest its resources and adapt, as necessary, to changing market conditions," which is consistent with similar clean energy financing programs established in other states.⁴⁷ DBEDT also reiterates overarching Program goals and guiding principles, focusing on creating a self-sustaining Program for the deployment of funds to install Solar PV and supporting technologies,⁴⁸ with the majority - but not the

⁴⁷See DBEDT SOP at 3-5.

⁴⁸In its SOP, DBEDT also lists for commission review and approval three additional categories of eligible clean energy technologies that could receive GEMS Program funding. See DBEDT SOP at 5-6. These additional categories include: utility grid modernization, utility renewable integration, and commercial

entirety - of such funds going to assist underserved customers, and targeting the full deployment of funds to occur within a two-year timeframe.⁴⁹ DBEDT highlights different consumer safeguards and procedures to ensure transparency of the Program, and includes a discussion of a proposed open solicitation process for vetting new technologies or projects and the listing of specific metrics categories DBEDT has developed.⁵⁰

ii. The Consumer Advocate

The Consumer Advocate, in its SOP, supports the approval of DBEDT's Application, but recommends that such approval be subject to additional reporting and oversight requirements, as there is an identified "need to clarify and monitor the development of the GEMS Program."⁵¹ While the Consumer Advocate finds DBEDT's requested programmatic flexibility to be reasonable, the Consumer Advocate recommends a number of specific reporting and monitoring measures, including various metrics and reporting requirements designed to demonstrate that GEMS Program funds are

energy efficiency. Id. These additional categories are further discussed below.

⁴⁹See DBEDT SOP at 5-8.

⁵⁰See DBEDT SOP at 8-10.

⁵¹CA SOP at 8.

primarily being deployed to underserved customers,⁵² and that such customers are receiving verifiable bill savings.⁵³

The Consumer Advocate states that it supports having the GEMS Program focus on assisting underserved customers with the acquisition of affordable credit, and it recommends that the GEMS Program be used to deploy funds in support of utility-scale projects that would lower the rates of all customers.⁵⁴ The Consumer Advocate further states that GEMS Program loan repayments should be dedicated to replenishing any reductions to collections of the Public Benefits Fee resulting from the offsetting of Green Infrastructure Fee collections used to pay principal, interest, and other approved costs related to the issuance of Bonds pursuant to the Financing Order.⁵⁵ The various recommendations of the Consumer Advocate are discussed in greater detail below, where appropriate.

iii. The HECO Companies

The HECO Companies state that the Proposed GEMS Program appears to both satisfy the various statutory requirements under

⁵²See CA SOP at 9-10.

⁵³See CA SOP at 10-11.

⁵⁴See CA SOP at 18.

⁵⁵See CA SOP at 16.

HRS § 269-170⁵⁶ and is just, reasonable, and consistent with the public interest.⁵⁷ In their Reply SOP, the HECO Companies also signify their general willingness to assist with the reasonable gathering and reporting of data and other information related to the GEMS Program.⁵⁸

iv. HSEA

HSEA's SOP sets forth its strong support for the GEMS Program, noting that DBEDT's Application satisfies all applicable statutory requirements⁵⁹ and that the proposed GEMS Program is just, reasonable, and consistent with the public interest because it helps to "democratize.... access to clean energy for more Hawaii residents and non-profits" and supports the achievement of the State's clean energy and environmental goals.⁶⁰

⁵⁶HECO SOP at 3. The HECO Companies note that their assessment is based only on that information to which they were allowed access under the Protective Order. Id.

⁵⁷HECO SOP at 4.

⁵⁸See HECO Reply SOP at 4. The commission observes that none of the other Parties or Intervenors offered significant discussion on the HECO Companies' SOP in their respective Reply SOPs.

⁵⁹Despite its support of the GEMS Program, HSEA notes that its ability to review the proposed GEMS Program was limited to the extent that HSEA was not able to access a number of exhibits to DBEDT's Application that were deemed confidential materials. See HSEA SOP at 3.

⁶⁰See HSEA SOP at 3 and 8.

According to HSEA, the GEMS Program should be designed so as to ensure that a number of key guidelines are followed, including (1) focusing on deployment and financing of Solar PV installations and related infrastructure equipment, such as advanced inverters, energy storage, and other "attendant costs that customers might have to pay for circuit upgrades;" (2) focusing on underserved customers; (3) utilizing an allocation of GEMS Program funds that is balanced between unleveraged and leveraged financial products, including a requirement that allocations are split equally between these two product types; (4) using alternative lending practices and criteria to maximize the reach of the Program to assist underserved customers; and (5) allowing the use of on-bill repayment by the GEMS Program.⁶¹ Additionally, HSEA recommends that a rental market access action plan be developed and that Program administrative costs be tracked closely.⁶²

In its Reply SOP, HSEA again states that it opposes an expansion of the GEMS Program that would enable the funding of technologies other than distributed generation ("DG") and associated equipment.⁶³ HSEA claims that such an expansion would

⁶¹See HSEA SOP at 3-7.

⁶²See HSEA SOP at 8-9.

⁶³See HSEA Reply SOP at 3-6.

take GEMS Program operations outside the scope of what the Legislature intended in passing Act 211, and that clean energy installations other than the DG Solar PV-focused technologies of DBEDT's original proposal, such as the utility-scale projects supported by the Consumer Advocate, would not provide comparable direct benefits to customers.⁶⁴

The Consumer Advocate disagrees with HSEA's position concerning expansion of the GEMS Program, stating that "[t]he Consumer Advocate believes a successful GEMS Program could be used both to finance utility scale projects that would benefit all customers as well as provide greater opportunities for underserved customers to achieve bill savings via energy efficiency and/or renewable energy investments."⁶⁵ The Consumer Advocate also expresses its concern with HSEA's recommendation that the GEMS Program fund "related interconnection equipment for Solar PV," because such an expansion would allow many customers who are not traditionally underserved to utilize GEMS Program funding.⁶⁶

DBEDT observes that a number of HSEA's suggested guidelines (e.g., funding of circuit upgrade costs and the focus

⁶⁴See HSEA Reply SOP at 3-6.

⁶⁵See CA Reply SOP at 12.

⁶⁶See CA Reply SOP at 12-14.

of fund deployment for underserved customers) are already part of the proposed GEMS Program.⁶⁷ DBEDT also argues that limiting its flexibility to allocate funds between unleveraged and leveraged financial products - as proposed by HSEA - would hinder full deployment by reducing customer choice.⁶⁸ These issues are discussed further in this Program Order.

v. HREA

While HREA supports the use of GEMS Program funds to enhance on-bill financing programs,⁶⁹ it states that it cannot support the proposed GEMS Program due to a number of issues that it believes have not been adequately addressed.⁷⁰ These issues include:

- (1) Whether energy efficiency and solar hot water measures need to be added to the list of clean energy technologies for the initial GEMS Program funding;

⁶⁷See DBEDT Reply SOP at 5-6.

⁶⁸See DBEDT Reply SOP at 6.

⁶⁹See HREA Reply SOP at 3.

⁷⁰See HREA Reply SOP at 9.

- (2) Whether the GEMS Program should be "customer-driven" rather than "market-driven" as proposed by DBEDT;
- (3) Whether customer (consumer) needs and interests are recognized and protected;
- (4) Whether DBEDT should become a green bank; and
- (5) Whether DBEDT's proposed GEMS Program will actually reach "hard-to-reach" customers (i.e., pensioners, renters, and those that cannot qualify for conventional financing options).⁷¹

The commission addresses a number of HREA's issues in later sections of this Program Order.

vi. LOL

LOL conditions its support of the GEMS Program on the adoption of a set of modifications, including the following:

- (1) GEMS Program funds should only be deployed to support solar technology "on the customer's side of the meter;"
- (2) Deployment of GEMS Program funds should be limited to only underserved customers or those

⁷¹See HREA Reply SOP at 2 and 9.

customers unable to get traditional funding, such as the economically challenged, apartment residents, and non-profits;

- (3) Energy audits and the installation of energy efficiency systems, such as LEDs, CFLs, and solar water heaters, should be required and performed/installed before a GEMS Program-funded system is installed;
- (4) Customers participating in the GEMS Program should be able to disconnect from the grid;
- (5) Metrics for the GEMS Program should be defined as part of this proceeding;
- (6) A 10% management fee for GEMS Program administrative costs should be set so as to limit any fee increases on ratepayers associated with the GEMS Program; and
- (7) This proceeding should stay open and serve as a repository for the filing of all related documents.⁷²

While the Consumer Advocate disagrees with LOL's condition that participating customers be allowed to disconnect from the grid, the Consumer Advocate agrees with

⁷²See LOL SOP at 4-6.

LOL that metrics should be regularly reported and developed through a collaborative process.⁷³

DBEDT states that it does not support allowing GEMS Program participants to disconnect from the grid.⁷⁴ DBEDT also disagrees with LOL's proposal to require pre-installation energy efficiency audits and retrofits for GEMS Program participants, because that proposal could result in delays for system installations.⁷⁵ These issues are discussed further, where necessary, in this Program Order.

vii. Blue Planet

Blue Planet strongly supports the approval of the GEMS Program.⁷⁶ At the outset, Blue Planet observes that DBEDT's Application meets all applicable statutory requirements and the proposed Program is just, reasonable, and consistent with the public interest.⁷⁷ Blue Planet further notes that the GEMS Program can be an enabler of various technologies that support further

⁷³See CA Reply SOP at 10-11.

⁷⁴See DBEDT Reply SOP at 11-12.

⁷⁵See DBEDT Reply SOP at 11.

⁷⁶See Blue Planet SOP at 7; see also Blue Planet Reply SOP at 3.

⁷⁷See Blue Planet SOP at 2-3 and 7.

integration of Solar PV systems and other clean energy technologies,⁷⁸ as well as a means to support programs like community solar.⁷⁹

e. GEMS Financing Structure under Docket No. 2014-0134

Act 211 created a two part structure for financing, implementing, and regulating a state program dedicated to supporting the installation of clean energy infrastructure through the acquisition of low-cost capital. The first part of this structure was addressed in the Financing Order. The second part of this structure is the GEMS Program presented in this proceeding, which details DBEDT's proposal to deploy low-cost capital after issuing the Bonds approved in the Financing Order. To place the Program Order in context, the commission here provides a brief review of the financing structure, as approved in the Financing Order.

The funding used to capitalize the GEMS Program consists of the net proceeds obtained from the \$150,000,000 Bond issuance carried out by DBEDT, plus any interest earned on those net proceeds. The key benefit of acquiring funding through the issuance of the Bonds is the resulting low-interest capital that

⁷⁸See Blue Planet SOP at 5.

⁷⁹See Blue Planet SOP at 6-7.

will be generated.⁸⁰ Following the issuance of the Bonds, the net proceeds will be deposited into the Green Infrastructure Special Fund, and, by the approvals given in this Program Order, will be used to fund the loans, expenses, and other investments, as approved, of the GEMS Program.⁸¹

The commission further observes that a key element of Act 211's stated purpose is "to acquire and provide alternative low-cost financing, to be deployed through a financing program...."⁸² It is well understood that inexpensive capital at low, fixed interest rates can be highly beneficial to the success of any major capital-intensive project. Indeed, the Legislature highlighted Act 211's ability to facilitate the

⁸⁰To secure this low-interest capital, a fixed repayment stream for the Bonds is created in the form of a non-bypassable surcharge called the Green Infrastructure Fee ("GIF") that is authorized by Act 211 and is to be applied to all ratepayers within a participating utility's service territory until all Bonds are repaid. See HRS § 269-166. In order to eliminate the net impact from the GIF on ratepayers, Act 211 authorized an offset or rate reduction to the Public Benefits Fee, established pursuant to HRS § 269-121, by the total amount of the GIF to effectively reduce the total amount that affected ratepayers pay each year. See HRS § 269-166(b).

⁸¹See HRS § 196-65. The use of Bond proceed amounts deposited in the Green Infrastructure Special Fund are limited to making Green Infrastructure Loans, as defined under HRS § 196-61, paying various costs related to the GEMS Program, and other investments "as permitted by law" and otherwise approved by the commission.

⁸²Act 211, § 1.

acquisition of low-cost capital as one of the legislation's primary benefits.⁸³ Further, with interest rates continuing to remain at historically low levels for the time being,⁸⁴ it appears that acquiring a large pool of low-cost capital today to support clean energy projects requiring financing over many years would serve the interests of affected ratepayers and the State at large to an even greater extent than acquiring and deploying such low-cost capital at some undetermined time in the future.⁸⁵

Thus, the Act 211 financing structure enables the financing of the activities of the GEMS Program, and an approved GEMS Program Order must be in place in order for the Program to deploy Bond proceeds in the form of clean energy loans. Both the

⁸³Act 211, § 1, states that, for green infrastructure installations to support the State's clean energy goals, more installations "will require significant amounts of capital, and it is in the public interest to minimize these costs.... [and that a] key component to minimizing costs is reducing the cost of capital required to finance infrastructure installations." In addition, Act 211, § 1, states that "the impact and reach of proven clean energy financing programs, such as on-bill financing or on-bill repayment, can be greatly enhanced through the use of low-cost capital made available through the green infrastructure financing program established by this Act."

⁸⁴See www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=longtermrate.

⁸⁵DBEDT's overall Program structure and implementation timeline is designed in such a way as to benefit from existing state and federal clean energy tax credits prior to the expiration of one or both of those incentives. See DBEDT Application at 25-26.

commission and affected ratepayers expect the Authority to effectively utilize GEMS Program funding to its fullest potential and as soon as possible.⁸⁶

II. Discussion

a. The Commission's Statutory Authority

The provisions of Act 211⁸⁷ give the commission approval responsibility with respect to the Financing Order, and approval and oversight responsibility with respect to the implementation of the GEMS Program authorized herein through the Program Order. Specifically, with respect to the issuance of this Program Order, HRS § 269-171 provides:

- (a) The public utilities commission may issue a program order authorizing the allocation, use, expenditure, or other disposition of any amounts deposited or held in the green infrastructure special fund upon the submission by the authority to the commission of a completed application, as described in this section. A green infrastructure loan program order issued by the public utilities commission shall include

⁸⁶In the Financing Order, the commission specifically prohibited DBEDT from issuing Bonds until the issuance of this Program Order. Financing Order at 57. The commission observes that DBEDT agreed to this condition. See Response to PUC-DBEDT-IR-1, filed July 14, 2014.

⁸⁷Codified in part as Part IV, HRS Chapter 196, (Green Infrastructure Loans) and in part as Part X, HRS Chapter 269 (Green Infrastructure Bonds).

the following, where determined necessary and applicable by the commission:

- (1) An identification and description of each project, program, financing agreement, or other arrangement approved by the public utilities commission for which amounts deposited or held in the green infrastructure special fund may be allocated, used, expended, or otherwise disposed of;
- (2) Minimum criteria for the lending, crediting, or investing of amounts deposited or held in the green infrastructure special fund;
- (3) A description of the repayment processes, mechanisms, and applicable calculations for each project, program, financing agreement, or other arrangement approved by the public utilities commission for which amounts deposited or held in the green infrastructure special fund may be allocated, used, expended, or otherwise disposed of;
- (4) A review of the anticipated impacts and benefits to electric utility ratepayers of any project, program, financing agreement, or other arrangement approved under a green infrastructure loan program order; and
- (5) Any other provision or information determined to be necessary by the public utilities commission.

.

(c) The order shall specify the following, including:

- (1) The procedures to be followed by the electric utilities in the event of nonpayment or partial payment of the green infrastructure charge by

the electric utilities' customers, which procedures shall be consistent with the public utilities commission's approved procedures for nonpayment and partial payment of rates, charges, and fees under the electric utilities' tariffs; and

- (2) The distribution of the total amounts collected by the electric utilities for amounts billed to customers for the electric utilities' rates, fees, and charges, for the green infrastructure charge, for other fees and charges approved by the public utilities commission, and for associated taxes, in the event of partial payments of the billed amounts.

In compliance with the statutory directives above, the commission hereby approves the GEMS Program as proposed in DBEDT's Application and accompanying exhibits, subject to certain adjustments, modifications, and additional requirements as discussed in this Program Order.

b. Hawaii Green Infrastructure Authority

The commission recognizes the tremendous amount of time and effort DBEDT has invested - and will continue to invest - in establishing and operating a successful GEMS Program. The Legislature envisioned, however, that once established, the GEMS Program would be administered by the Authority - with its own staff, resources, and distinct powers and responsibilities - as an agency placed within DBEDT for

administrative purposes.⁸⁸ Continuing to utilize DBEDT resources to implement the GEMS Program may create an undesirable situation where the GEMS Program is perpetually competing for resources otherwise dedicated to carrying out other DBEDT functions and priorities. Given the commission's interest in having a well-run GEMS Program that will provide energy cost savings to ratepayers in the most effective manner, the commission concludes that the Authority should be established, if at all possible, prior to the initial deployment of GEMS Program funds.

c. The Commission's Role in Reviewing and Overseeing the GEMS Program

i. In General

The commission is responsible for reviewing and, where appropriate, approving DBEDT's Application to establish the GEMS Program, as well as for providing ongoing oversight of the Program.⁸⁹ The determination of specific program details and the control of day-to-day operations, such as the deployment of GEMS Program funds to customers, is the responsibility of the Authority. As instrumentalities of the State, both the commission and the Authority have a mandate to carry out their

⁸⁸See HRS §§ 196-62, 196-63, and 196-64.

⁸⁹See Act 211.

responsibilities in a manner that protects the public interest, furthers the goals of the State, and minimizes the costs and maximizes the benefits of the GEM Program for all utility customers.

The utilization of proceeds derived from the sale of bonds secured exclusively by a non-bypassable surcharge on ratepayers within the HECO Companies' service territories⁹⁰ compels the commission to ensure that any approved GEMS Program clearly demonstrates (1) its potential to provide a proportional benefit to affected, contributing ratepayers, and (2) the likelihood of operating over time in a successful and cost-effective manner.⁹¹ Thus, the commission's review of the Program is to verify whether it operates effectively and without unreasonably adversely affecting either participating or non-participating ratepayers. The commission must ensure that all ratepayers' interests are protected.

The Legislature provides additional guidance to the commission via Act 211 regarding its review/oversight

⁹⁰See Financing Order (approving the issuance of Bonds by DBEDT and the establishment of GIF).

⁹¹In the Financing Order, the commission similarly found that it is required to ensure that any GEMS Program it approves must show (1) its potential to provide proportional benefit to affected, contributing ratepayers, and (2) its likelihood of operating over time in a successful and cost-effective manner. Financing Order at 5.

responsibilities for the GEMS Program. Act 211 establishes the GEMS Program as one tool to assist the State in achieving its greater clean energy policy goals.⁹² Thus, the commission must review the proposed GEMS Program to determine whether such proposal is just, reasonable, and consistent with the public interest, while also taking into consideration the State's overarching clean energy policy goals.⁹³

To further aid in the implementation of Act 211, the Legislature provides a number of specific priorities for the design and operation of the GEMS Program:

The legislature further finds that the State would be best served by a State-administered green infrastructure financing program that:

- (1) Focuses on providing an alternative means of low-cost financing for green infrastructure equipment for Hawaii ratepayers, particularly

⁹²See Act 211, § 1. The Legislature begins Act 211 by stating that "building Hawaii's clean energy infrastructure at the lowest possible cost is vital to the State's reaching its seventy per cent clean energy goal in 2030," and by further stating that "significant investment in infrastructure installations is required to achieve the State's goals of energy self-sufficiency, greater energy security, and greater energy diversification, and to support the achievement of the renewable portfolio standards and energy efficiency portfolio standards, as established in chapter 269, Hawaii Revised Statutes."

⁹³Hawaii's Renewable Portfolio Standards under HRS § 269-92 and Hawaii's Energy Efficiency Portfolio Standards under HRS § 269-96, collectively, set the State's leading clean energy requirements that effectively call for 70% of the State's electricity demand to be satisfied using clean energy resources by the year 2030.

those ratepayers not currently able to obtain such technology on reasonable financing terms;

- (2) Utilizes excess loan program funds as a funding source to finance additional green infrastructure installations, subject to regulatory guidelines and approval; and
- (3) Establishes clearly defined program procedures and targets that encourage effective coordination among state agencies, industry, investors, and other critical energy industry stakeholders in order to help the State achieve its clean energy policy mandates and to provide customers affordable energy options.⁹⁴

Thus, the commission will use the following criteria to review GEMS Program matters now and in the future:

- (1) Whether the GEMS Program proposal is cost-effective;
- (2) Whether the GEMS Program proposal supports the goal of providing greater green infrastructure access for underserved customers;
- (3) Whether the GEMS Program proposal is likely to make positive contributions to the overall GEMS Program portfolio of loans and investments; and
- (4) Whether the GEMS Program proposal positively impacts the achievement of Hawaii's Renewable

⁹⁴Act 211, § 1.

Portfolio Standards and Energy Efficiency
Portfolio Standard requirements, including
the support of stakeholder coordination in
achieving the State's clean energy goals.

**ii. Prudent Management of Funds and Minimization of
Administrative Costs**

The Legislature enacted Act 211 for the purpose of increasing access to clean energy technology through the acquisition of low-cost capital.⁹⁵ Given this, the commission finds that the GEMS Program should be operated, from a general perspective, so as to ensure that all related funds are managed prudently, and that administrative costs are minimized to the fullest extent possible. Therefore, all parties involved should endeavor to ensure that such capital is used as efficiently as possible for that purpose.⁹⁶ To achieve this goal, the commission

⁹⁵See Act 211, § 1.

⁹⁶See Act 211, § 1, which states that:

[t]he legislature further finds that the upfront costs of green infrastructure equipment are a barrier preventing many electric utility customers from investing in these infrastructure installations. Existing programs and incentives do not serve the entire spectrum of the customer market, particularly those customers who lack access to capital or who cannot afford the large upfront costs required, thus creating an underserved market. It is in the public interest to make cost-effective green infrastructure

directs the Authority to develop administrative cost controls⁹⁷ for the GEMS Program and to submit them as part of its initial Annual Plan pursuant to HRS § 196-64(b), as discussed further below.

iii. GEMS Program Transparency

To instill public confidence in an innovative, ratepayer-funded initiative like the GEMS Program, the commission directs the Authority to avoid excessive or unnecessary redaction of material submitted with the Program's oversight and reporting processes, as discussed below. Therefore, the designation of material as confidential should be minimal and judiciously applied.⁹⁸

equipment options accessible and affordable to customers in an equitable way.

⁹⁷LOL states in its SOP that a 10% management fee should be established for the GEMS Program, as well as for all other programs regulated by the commission. See LOL SOP at 4. The commission does not believe a specific management fee cap for the Program is necessary at this time. Further, the issue of whether a 10% management fee should be set for all other commission-regulated programs is beyond the scope of this proceeding and unreasonably broadens the issues in this proceeding. Therefore, the commission will not further address this issue in this Program Order.

⁹⁸See Act 211, § 1 (indicating that one of the key GEMS Program design principles is the establishment of "clearly defined program procedures and targets that encourage effective coordination among... stakeholders in order to help the state achieve its clean energy policy mandates and to provide customers affordable energy options"). Further, DBEDT acknowledged with respect to proposed quarterly reports that "it is anticipated that most of the information and data on program progress will be publicly available" and that DBEDT "intends to make information and relevant

iv. Equitable Program Access For All Islands

Act 211 states that "[i]t is in the public interest to make cost-effective green infrastructure equipment options accessible and affordable to customers in an equitable way."⁹⁹ In this regard, the commission finds that, because contributions to fund the GEMS Program will be made by ratepayers of each of the HECO Companies,¹⁰⁰ the GEMS Program should provide equitable access for the ratepayers of each of the HECO Companies. The commission nevertheless recognizes that establishing specific island-by-island allocations for GEMS Program fund deployment, system quota levels per island, or other hard-and-fast Program design parameters may be unnecessarily restrictive and limiting with respect to the establishment of the GEMS Program at this stage.

Thus, to support the goal of equitable GEMS Program access for customers of each of the HECO Companies, the commission finds that the GEMS Program should be modified to include a guideline that directs the Authority to implement the Program in

data available to the public." DBEDT Response to LOL-DBEDT-IR-4, filed July 25, 2014.

⁹⁹Act 211, § 1.

¹⁰⁰See Financing Order at 95. The approved GIF will be applied to ratepayers across all islands within the service territories of the HECO Companies. Id.

a manner that ensures that Program products and benefits are equitably allocated to customers of each of the HECO Companies. Therefore, appropriate data collection steps, as well as accompanying metrics for tracking the allocation of funds to each island in the HECO Companies' service territories, shall be added to DBEDT's "Market Expansion Impact Metrics" category of measures,¹⁰¹ and shall be reported to the commission on an annual and quarterly basis, as further described below. These data collection steps and metrics shall be developed and finalized during the process to be conducted by DBEDT, as discussed below.

v. Benefits to Participants and Non-Participants

As discussed above, the securitization of the GEMS Program Bond proceeds is by way of a non-bypassable surcharge on all ratepayers within the HECO Companies' service territories. As such, all ratepayers, whether or not they are direct participants in the GEMS program, should share in the benefits to be derived from the program.

Based on this record, the commission finds that the following ratepayers and other entities may benefit from the GEMS Program: (1) Deployment Partners, such as solar financiers, financial institutions, specialty originators or services,

¹⁰¹See DBEDT Response to CA-DBEDT-IR-1, filed July 31, 2014.

installers, other clean energy capital providers; (2) end use consumers, such as underserved homeowners, renters, and non-profit organizations, as set forth on pages 36 and 37 of DBEDT's Application; and (3) non-participant ratepayers by virtue of a lessened reliance on costly imported fossil fuel and progress towards the achievement of the State's clean energy goals along with its attendant benefits.

d. Consideration of Specific Program Aspects

Act 211, in part, provided specific elements to be included in the GEMS Program, including a description of: (1) how the Bond proceeds will be used; (2) the minimum lending, crediting, or investing criteria in relation to the use of the Bond proceeds; (3) the repayment processes; and (4) the anticipated impacts and benefits on utility ratepayers.¹⁰² Throughout this proceeding, a number of critical Program aspects, including several related to those Program elements listed above, were addressed by the various Parties and Intervenor. These issues are addressed below.

i. Eligible Clean Energy Technologies

The commission finds that the GEMS Program must have sufficient deployment options available with respect to eligible

¹⁰²See HRS § 269-171(a).

clean energy technologies so as to fulfill the purposes of Act 211 in an effective and timely fashion.

In its Application, DBEDT provides a list of proposed eligible clean energy technologies that focuses on Solar PV systems and an array of non-Solar PV technologies that may be utilized to support the installation and interconnection of Solar PV.¹⁰³ The Application does not propose any limitations on the size of such installations. Instead, the Application allows for the financing of a wide range of production and capacity capabilities that include a range of technologies, from small scale systems up to utility scale technologies. DBEDT specifically requests that the commission approve Solar PV systems and "related customer and utility technologies and equipment necessary to successfully interconnect Solar PV systems to the grid" as being clean energy technologies eligible to receive GEMS Program funding.¹⁰⁴

Thus, as proposed by DBEDT, the focus of the GEMS Program is on the financing of Solar PV systems and associated

¹⁰³See DBEDT Application, Exhibit 9.

¹⁰⁴See DBEDT Application at 36. HRS § 269-121(b) states that "'clean energy technology' means any commercially available technology that enables the State to meet the renewable portfolio standards, established pursuant to section 269-92, or the energy efficiency portfolio standards, established pursuant to section 269-96, and approved by the public utilities commission by rule or order."

interconnection-enabling technologies.¹⁰⁵ To add additional technologies outside of its list, DBEDT states it is developing an "open solicitation process" that is similar to a process created by the New York Green Bank by which additional technologies and equipment can be first presented to DBEDT for review.¹⁰⁶ Then, any new technologies that DBEDT wishes to propose for GEMS Program eligibility would be submitted for commission review through either the Program Modification process or DBEDT's Annual Business Plan process required under HRS § 196-64(b).¹⁰⁷

Concerns related to the interconnection of new distributed generation systems to Hawaii's electrical grids have been raised from the outset of this proceeding as a potential barrier to GEMS Program success.¹⁰⁸ During the development of Act 211, the Legislature also noted that it had concerns with what it saw as "technical barriers to reaching higher penetration levels of intermittent power while maintaining acceptable reliability and safety standards for all electric ratepayers."¹⁰⁹ Thus, the

¹⁰⁵See DBEDT Application at 21.

¹⁰⁶See DBEDT Response to PUC-DBEDT-IR-4(b), filed July 14, 2014.

¹⁰⁷See DBEDT SOP at 6.

¹⁰⁸See, e.g., DBEDT Application at 33, and DBEDT response to PUC-DBEDT-IR-4, filed July 14, 2014.

¹⁰⁹"Report from the Committee on Conference for S.B. No. 1087, S.D. 2, H.D. 3, C.D. 1," April 26, 2013.

Legislature highlighted the importance of continuing to consider a "diverse portfolio of energy options" in parallel with ongoing efforts to find solutions to the State's interconnection and other technical issues.¹¹⁰

Parties and Intervenors in this proceeding have proposed a variety of different approaches to the kinds of allowable technologies that should be eligible to receive GEMS Program funding. The differences among these approaches include: (1) the specific form of energy production technology that can be funded; (2) the size or scale of eligible technologies, regardless of the underlying technology; and (3) the underlying business models attributed to using certain kinds of technology.

For example, LOL and HSEA take the position that only Solar PV and related interconnection-enabling equipment should be allowed to utilize GEMS Program funding,¹¹¹ while others recognize the potential use of GEMS Program funding to promote energy efficiency-related projects.¹¹² The Consumer Advocate supports the use of GEMS Program funding for utility-scale projects that will provide wide-ranging benefits to all affected ratepayers,¹¹³

¹¹⁰"Report from the Committee on Conference for S.B. No. 1087, S.D. 2, H.D. 3, C.D. 1," April 26, 2013.

¹¹¹See LOL SOP at 4; HSEA SOP at 3-4.

¹¹²See DBEDT SOP at 5-6; CA SOP at 4.

¹¹³See CA SOP at 18.

while others oppose such uses.¹¹⁴ Blue Planet recommends that the list of eligible technologies under Exhibit 9 of the Application be amended to include projects using the community solar business model.¹¹⁵

Moreover, in its SOP, DBEDT proposes to expand the list of eligible clean energy technologies it initially proposed in its Application to include the following, in order to "mitigate challenges related to grid saturation and interconnection":

- (1) Utility grid modernization;
- (2) Utility renewable integration; and
- (3) Commercial energy efficiency.¹¹⁶

While the commission believes that Act 211 places a priority on customer-side clean energy technology solutions,¹¹⁷ it does not agree that GEMS Program funding - even in an initial

¹¹⁴See, e.g., HSEA Reply SOP at 4-6.

¹¹⁵Blue Planet SOP at 7; see also LOL SOP at 4 (noting that GEMS Program with an initial focus exclusively on solar technology would include community-based solar facilities).

¹¹⁶DBEDT SOP at 6.

¹¹⁷See Act 211, § 1. The Legislature notes that "upfront costs of green infrastructure equipment are a barrier preventing many electric utility customers from investing in these infrastructure installations." Id. In addition, the Legislature thereafter finds that "[i]t is in the public interest to make cost-effective green infrastructure equipment options accessible and affordable to customers in an equitable way." Id.

deployment of funding - should be strictly limited to only Solar PV systems and those technologies that may assist with interconnecting such systems.¹¹⁸ The legislative record for Act 211 does not indicate that the Legislature intended that the GEMS Program be exclusively focused on a single technology type to the exclusion of all others.¹¹⁹

The commission recognizes both that DBEDT has designed a GEMS Program focused on the deployment of funds to support Solar PV systems, and that DBEDT has done the "groundwork" to allow for rapid implementation of these systems. The commission fully expects the Authority to continue implementing the overall deployment strategy proposed by DBEDT in its Application, but, in addition, to retain the ability to respond to Hawaii's dynamic energy landscape. The commission does not believe it is either prudent or useful at this time to foreclose or otherwise limit the

¹¹⁸"Customer-side" as used in this Program Order refers, among other things, to projects that (1) are physically located on the customer side of the meter or (2) are owned, leased, or otherwise acquired by the GEMS customer, such as community solar.

¹¹⁹See "Report from the Committee on Conference for S.B. No. 1087, S.D. 2, H.D. 3, C.D. 1," April 26, 2013. The Legislature notes the importance of considering a "diverse portfolio of energy options while also continuing to pursue ways to integrate increased levels of intermittent power onto the grid." Id. The Legislature also required DBEDT to study and report back on the whether the GEMS Program should be expended or revised following the initial deployment of funds, and to look into different energy technologies that "may be available to provide affordable energy options." Id.

ability of the GEMS Program to fund any potential technology solutions that may provide significant benefits to ratepayers.

Accordingly, the list of clean energy technologies in Exhibit 9 is amended to include DBEDT's additional proposed categories of technologies listed above in addition to those technologies originally included by DBEDT.¹²⁰ In order to provide additional options to the GEMS Program in deploying funds, the commission directs that Exhibit 9 be further amended to include the following technologies:

- (1) Technologies that incorporate a water-energy nexus, including sewage and waste water treatment;
- (2) Heating, ventilating, and air conditioning ("HVAC") and related systems; and
- (3) LED systems.

In its response to a commission Information Request, DBEDT stated its support for adding the above three technology types to the list of eligible clean energy technologies "[i]n order to facilitate greater program optionality."¹²¹

¹²⁰The commission observes that the first two added technology categories refer to the ability of individual customers, in the aggregate, to affect grid modernization and renewable integration.

¹²¹See DBEDT Response to PUC-DBEDT-IR-9, filed August 19, 2014.

A. GEMS Alignment with Advances in Distributed Energy Resources

While in the previous section the commission has expanded the list of eligible clean energy technologies for GEMS Program funding to provide further programmatic flexibility, the deployment plan proposed by DBEDT, and approved by this Order, would still allocate significant funding to install new customer-side distributed energy resources ("DER"),¹²² primarily new rooftop PV systems. In prior Orders, the commission has noted that Hawaii's electric utilities have been challenged to accommodate demand for DER and to enable adoption of these technologies for the benefit of their customers.¹²³ The commission

¹²²DER refers to technologies typically located at a customer's premises that can supply part or all of the customer's electric load, including energy efficiency, demand response, energy management systems and microgrids, energy storage and electric vehicles, and generation technologies such as Solar PV, wind, and combined heat and power. DER can also be designed to export energy into the electric utility's distribution system and thereby serve other nearby customers, as well as provide essential grid support services, depending on technology and configuration.

¹²³See In the Matter of the Public Utilities Commission Regarding Integrated Resource Planning, Docket No. 2012-0036, Decision and Order No. 32052, Exhibit A: Commission's Inclinations on the Future of Hawaii's Electric Utilities, filed April 28, 2014 (Exhibit A is hereinafter referred to as the "White Paper"). White Paper at 15-16. In order to expedite the assessment and mitigation of any legitimate constraints on further DER adoption, the commission directed the HECO Companies to prepare and submit a Distributed Generation Interconnection Plan. The commission's review of HECO Companies' submittal is ongoing in Docket No. 2014-0192. See also In the Matter of the Public Utilities Commission Instituting a Proceeding to Investigate the Implementation of Reliability Standards for Hawaiian Electric

observed that continued advances in DER technology and applications provide Hawaii's electric utilities and their customers with a number of solutions to address the present impediments in the area of DER integration.¹²⁴

Therefore, it is critical that the Authority work with the electric utilities and the Program's Deployment Partners to ensure that GEMS Program funds are used to support cost-effective advanced DER technologies that address current grid integration challenges and support long-term growth of the renewable energy market in the State. Accordingly, the Authority is required to include in its first Program Notification and ongoing Annual Plans detailed consideration and discussion of how the green infrastructure it 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.

Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Limited, Docket No. 2011-0206, Order No. 32053 Ruling on RSWG Work Product, filed April 28, 2014 ("RSWG Order"). See also In the Matter of the Public Utilities Commission Instituting a Proceeding to Review Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Ltd.'s Demand-Side Management Reports and Requests for Program Modifications, Order No. 32054 "Policy Statement and Order Regarding Demand Responses Programs," Docket No. 2007-0341, filed April 28, 2014 ("DR Policy Statement").

¹²⁴See White Paper at 15-16. See also RSWG Order. See also DR Policy Statement.

ii. Program Beneficiaries

As noted above, the commission finds that the GEMS Program will provide both direct and indirect benefits to a range of individuals and organizations, including individual GEMS Program participants or borrowers, Deployment Partners involved in the financing and installation processes, and ratepayers in the State of Hawaii. Benefits are expected to include access to low-cost capital for green infrastructure equipment for Program participants, increased business activity for Deployment Partners, and the promotion of the State's clean energy goals. The level of these benefits will be measured using a series of program metrics developed by DBEDT.¹²⁵

Parties and Intervenors have raised a number of specific issues with respect to program beneficiaries and the Program's deployment of funds, such as the allocation of funds across customer types, the nature of the clean energy systems that participants can have installed, and the ability of participating customers to use GEMS funds to disconnect from the grid. These specific issues are discussed in the succeeding sections.

¹²⁵See DBEDT Application at 32. DBEDT's metrics areas are divided into four broad categories: Energy and Environmental Impact Metrics, Economic Development Impact Metrics, Market Expansion Impact Metrics, and Cost Saving Metrics, and are further discussed below. Id.

A. Allocation of Funds to Underserved Customers

A primary objective of the GEMS Program is to increase access to low-cost financing for that portion of the population that has typically been underserved when it comes to financing green infrastructure and related equipment.¹²⁶ DBEDT identifies this underserved group broadly as those Hawaii homeowners, renters, and non-profit organizations who, for one reason or another, have not been able to obtain the needed financing to install green infrastructure systems.¹²⁷ Thus, DBEDT concluded that a major purpose of the Program, per Act 211, is to fill an existing clean energy financing gap by deploying the majority of GEMS Program funds to underserved customers.¹²⁸

All Parties and Intervenor in this docket offering a position on the allocation of GEMS Program funds have supported the deployment of funds to assist the underserved.¹²⁹ Some Parties

¹²⁶See Act 211, § 1.

¹²⁷See DBEDT Application at 23. Again, those customers identified as underserved in Renewable Funding's market analysis for the GEMS Program are (1) homeowners and renters with low credit scores and/or low income, and (2) small to mid-size non-profit organizations. See DBEDT Application, Exhibit 6.

¹²⁸See DBEDT SOP at 6-7.

¹²⁹See HSEA SOP at 6; LOL SOP at 5 (defining the underserved as "those who cannot get traditional funding: the economically challenged, apartment residents and non-profits"); HREA SOP at 2 (defining customers considered to be "Hard to Reach" to include "pensioners, renters, and those that cannot qualify for conventional financing options"); Blue Planet SOP at 6; CA SOP

and Intervenors have gone further, however, and recommended that the GEMS Program dedicate the use of funds exclusively to underserved customers. For example, LOL recommended that the GEMS Program "should be limited to those who cannot get traditional funding," or the underserved customer base.¹³⁰ Other Intervenors, such as HSEA, recommended that the commission create safeguards to ensure that sufficient GEMS funds are reserved for underserved customers.¹³¹ In addition, both HSEA and HREA urged that the Program use alternative or nontraditional lending criteria so as to place underserved customers on equal footing with those customers that do not qualify as underserved.¹³² The Consumer Advocate supports a mix of deployment options that will finance underserved customers and utility scale projects to more widely benefit the ratepayer base.¹³³

at 18. The commission notes that the Consumer Advocate supports providing greater opportunities for underserved customers to acquire energy efficiency and/or renewable energy systems through GEMS Program funding, but an additional priority for the Consumer Advocate is to ensure that all utility ratepayers benefit from GEMS Program funding through the financing of utility scale projects. See CA SOP at 18.

¹³⁰See LOL SOP at 5.

¹³¹See HSEA SOP at 6.

¹³²See HSEA SOP at 7; HREA SOP at 4.

¹³³See CA SOP at 18.

In response to these proposals and comments, DBEDT states that "it is important to have a [loan] portfolio that addresses the Program's goals while also balancing associated risk, but it is important to emphasize that the Program is not intended for only the underserved to the exclusion of all other consumers and customers."¹³⁴

As previously discussed, the commission has the responsibility to determine whether the proposed GEMS Program is just, reasonable, and consistent with the public interest within the context of Act 211's directives and the State's overall clean energy policy goals.¹³⁵ In keeping with the intent of Act 211, the commission must consider whether the proposed GEMS Program is one that increases access for underserved customers to low-cost financing for green infrastructure equipment, and, at the same time, may become a sustainable operation with the ability to make additional loans in the future.¹³⁶

Therefore, after consideration of the record, the commission finds that it is not appropriate to set specific

¹³⁴See DBEDT Reply SOP at 11. In responding to LOL's SOP, DBEDT again notes that it "will deploy the majority of funds to the underserved." Id.

¹³⁵See "Section II.c. The Commission's Role in Reviewing and Overseeing the GEMS Program," supra.

¹³⁶See Act 211, § 1.

parameters at this time that would limit DBEDT's flexibility in allocating Program funds between different customer types. Both the commission and the State are relying on the expertise and judgment of DBEDT and their advisors to design and administer the GEMS Program in conformance with their statutory duties. DBEDT has consistently stated that a main goal of the GEMS Program is to deploy the majority of funds to assist the underserved, while at the same time working to deploy the right mix of loans to ensure long-term Program viability.¹³⁷

The commission further finds that GEMS Program funding was not intended to be exclusively dedicated to underserved customers.¹³⁸ Nevertheless, as substantial deployment to the underserved is a primary goal of the Program, the commission finds that monitoring and reporting in this area is critical to ensure that this goal is being achieved.

¹³⁷See Application at 12 (GEMS Program Objectives); see also DBEDT SOP at 6-8.

¹³⁸One of the key GEMS Program design principles identified by the commission is that the Program should "[focus] on providing an alternative means of low-cost financing for green infrastructure equipment for Hawaii ratepayers, particularly those ratepayers not currently able to obtain such technology on reasonable financing terms...." (emphasis added). Act 211, § 1. Thus, while Act 211 indicates that underserved customers should be a primary focus of GEMS Program financing opportunities, it is not the exclusive focus.

The Consumer Advocate proposes that a number of data gathering and reporting procedures be established to ensure that deployment to underserved customers can be properly monitored and evaluated. In its SOP, the Consumer Advocate discusses the key metrics proposed by DBEDT to track participant characteristics. The Consumer Advocate then proposes additional metrics, including requirements that (1) the GEMS Program track the number of participants who are renters, and (2) the Authority report quarterly system costs, system sizes, electricity cost savings, and the percent savings for projects in underserved markets.¹³⁹ The Consumer Advocate further suggests that all metrics and data be "collected and maintained at the participant level" to aid in the review and analysis process, noting that confidentiality issues can be observed in the reporting process.¹⁴⁰

The commission finds that the recommendations made by the Consumer Advocate are reasonable and not overly burdensome to the Authority and the Deployment Partners when weighed against the need to have useful data to evaluate the GEMS Program's success in achieving one of its primary goals. The commission notes that it is particularly interested in ensuring that data is properly

¹³⁹See CA SOP at 10.

¹⁴⁰See CA SOP at 10.

gathered and presented at the participant level, as further discussed below.

B. GEMS Program Focus on Customer-Side Technology

The commission again states that the focus of the GEMS Program should be on deploying funds to support customer-side technology.¹⁴¹ The list of clean energy technologies eligible to receive GEMS Program funding has been expanded to include utility scale technologies and solutions primarily to provide the Program with sufficient options across technology types, where necessary, in order to achieve the purposes of Act 211.¹⁴² However, the Parties and Intervenor raise issues or otherwise make recommendations concerning funding of both customer-side and "utility side of the meter" technologies that require further discussion and clarification here.

For example, Blue Planet recommends that community solar projects be added to the list of eligible clean energy technologies for the GEMS Program.¹⁴³ However, the commission does not find that it is necessary to amend the list of eligible clean energy

¹⁴¹See LOL SOP at 4; HSEA SOP at 3-4.

¹⁴²See "Section II.d.i. Eligible Clean Energy Technologies," supra.

¹⁴³See Blue Planet SOP at 7.

technologies in Exhibit 9 to specify the inclusion of community solar projects at an aggregate level. Instead, the commission finds that, if the Authority seeks to utilize GEMS Program funds to support community solar programs, the priority for making such investments should be on the financing of individual participation in such a program or programs (i.e., financing the purchase of shares or interests in a community solar project), as opposed to the financing of the underlying large-scale developments that will utilize a community solar model. The commission finds that providing this kind of customer-side financing of clean energy technology is in keeping with Act 211's purposes.

In addition, the Consumer Advocate noted that it supports the use of GEMS Program funds to finance utility scale green infrastructure that it believes would produce benefits for all affected ratepayers (i.e., "utility side of the meter" technologies).¹⁴⁴ The Consumer Advocate further suggests adding reporting requirements both prior to and after the installation of these kinds of utility scale projects.¹⁴⁵ For example, the Consumer Advocate recommends the following with respect to GEMS Program funds used for utility scale installations:

¹⁴⁴See CA SOP at 4.

¹⁴⁵See CA SOP at 14-15.

- (1) DBEDT and/or HECO should demonstrate that the use of GEMS Program funds will be less costly to ratepayers than the costs of regular utility-secured funding;
- (2) DBEDT and/or HECO should report the costs of Bonds at the time of issuance in comparison to the cost of utility financing through conventional loans;
- (3) DBEDT and/or HECO should report the estimated benefits derived from the use of Bonds; and
- (4) DBEDT and/or HECO should provide a listing of projects to be funded by the GEMS Program.¹⁴⁶

Again, the commission finds that a primary purpose of the GEMS Program is to directly benefit ratepayers by funding customer-side projects.¹⁴⁷ Thus, the use of any GEMS Program funding to support "utility side of the meter" utility-scale projects must be justified and the benefits to ratepayers must be shown.

¹⁴⁶CA SOP at 14-15.

¹⁴⁷See Act 211, § 1. The Legislature notes that "upfront costs of green infrastructure equipment are a barrier preventing many electric utility customers from investing in these infrastructure installations." Id. In addition, the Legislature thereafter finds that "[i]t is in the public interest to make cost-effective green infrastructure equipment options accessible and affordable to customers in an equitable way." Id.

For these reasons, if the Authority seeks to use GEMS funds to finance utility-scale projects, the Authority shall file a Program Modification, and not a Program Notification, with the commission and provide the information requested by the Consumer Advocate indicating that the Authority intends to finance utility-scale projects. In addition, this information must be summarized and included as part of the Authority's quarterly reporting and Annual Plan reporting for the periods during which the utility-scale project financing will be initiated and the Project will be operated. The Authority and the HECO Companies shall take all necessary steps to gather and report the information listed above, subject to the need to protect confidential information of customers, the Program, Deployment Partners, and the HECO Companies.

C. GEMS Program Participants Cannot Avoid Repayment by Disconnecting From the Grid

LOL conditions its support of the GEMS Program on the adoption of a Program requirement that allows participants to disconnect from the grid.¹⁴⁸ According to LOL, potential advancements in clean energy technology (e.g., low-cost residential battery systems) may alter the grids and/or the

¹⁴⁸See LOL SOP at 4.

traditional customer-utility relationship, concluding that "[t]hose who finance solar through GEMS should not run the risk of huge payments for stranded costs" of an outdated grid if they are able to otherwise disconnect.¹⁴⁹

The Consumer Advocate disagrees with LOL's position, and states that it does not believe utility customers should pay the GIF if those payments are used to subsidize other utility customers who decide to go "off grid."¹⁵⁰ Further, the Consumer Advocate points out that (1) allowing participants to permanently disconnect from the grid would shift the burden of remaining GIF payment obligations to ratepayers still connected to the grid; and (2) enabling participants to disconnect would eliminate the Program's ability to use an on-bill process for collecting loan payments.¹⁵¹

In its Reply SOP, DBEDT states that allowing GEMS Program participants to disconnect from the grid would "undermine ratepayers' ability to support debt service" for Bonds, and that "[i]t is especially unfair for ratepayers to shoulder

¹⁴⁹LOL SOP at 5-6.

¹⁵⁰See CA Reply SOP at 10.

¹⁵¹See CA Reply SOP at 10-11.

higher [GIF payments] after helping Program participants fund their solar PV systems, only to see them disconnect."¹⁵²

The commission finds that allowing participants to bypass the GIF by disconnecting from the grid would leave remaining grid-connected ratepayers to cover all outstanding GIF collections, including those properly borne by those customers disconnecting from the grid. In addition, if customers participating in the GEMS Program are allowed to disconnect from the grid following the installation of green infrastructure, the ability to utilize on-bill repayment¹⁵³ through the On-bill Mechanism (defined below) would be seriously disrupted. Therefore, the commission declines to adopt LOL's proposal to allow GEMS customers to disconnect from a utility's grid, and further finds that GEMS customers must remain utility customers until any GEMS funds loaned to them are fully repaid.

iii. Financing Products

DBEDT proposes to use two different types of financing products to deploy GEMS Program funds to customers through its Deployment Partners: (1) unleveraged debt, and (2) leveraged debt

¹⁵²DBEDT Reply SOP 11-12.

¹⁵³The ability of the GEMS Program to use on-bill financing has been identified as a key component of long-term Program success. See Act 211, § 1.

financing. Unleveraged debt financing is the simpler of the two proposed forms because Program funds provide 100% of the loaned amount. Leveraged debt financing, on the other hand, combines GEMS Program capital with capital from other investors, which has the distinct advantage of increasing the amount of loans made and the quantity of technology supported through the GEMS Program. Another advantage of employing leveraged debt financing is that it allows the GEMS Program to indirectly utilize some of the benefits of clean energy investing that the Program would not otherwise be able to use, such as those benefits found attractive by tax equity investors, to increase the Program's potential lending power.

The lending criteria and other specific financing product details are to be developed by the Authority, or by the Authority in coordination with other investors and, where appropriate, Deployment Partners, resulting in "minimum lending standards, lending criteria, required documentation, and lending processes for both Deployment Partners and end-market consumers of financial products on a case-by-case basis, for each tranche of capital committed to a particular Deployment Partner."¹⁵⁴ Further, DBEDT indicates that, "[e]ach financial product, regardless of capital deployment arrangement, will have lending

¹⁵⁴DBEDT Application at 27.

standards that balance [DBEDT's] policy goals with appropriate levels of repayment risk."¹⁵⁵

HSEA recommends that safeguards be established to "balance these two financing structures so that no particular advantage is given to either group," and specifically suggests that such allocation be set at a "50/50 ratio."¹⁵⁶ In response, DBEDT states that placing a restriction on the allocation of GEMS Program funds between financing products would effectively limit financing options for Program participants.¹⁵⁷ However, DBEDT pledges that the GEMS Program "will ensure fairness among financing structures so that no particular advantage is given to either financing product."¹⁵⁸

The commission does not agree that it is appropriate to set a specific program parameter to establish a fixed allocation of GEMS Program funds between unleveraged and leveraged funds. A key focus of Act 211 is to increase access to consumer financing of green infrastructure installations;¹⁵⁹ thus, any parameter that

¹⁵⁵DBEDT Application at 27.

¹⁵⁶See HSEA SOP at 6.

¹⁵⁷See DBEDT Reply SOP at 6.

¹⁵⁸DBEDT Reply SOP at 6.

¹⁵⁹See Act 211, § 1.

limits the range of available financing options is counter to the aims of Act 211.

Finally, HREA raises the issue of whether DBEDT should become a green bank.¹⁶⁰ However, the commission finds that the issue of whether DBEDT should become a green bank is beyond the scope of this proceeding and would encompass discussion of a potential change in the GEMS Program enabling legislation. Thus, as this issue unreasonably broadens the issues in this proceeding, it is not further addressed in this Program Order.¹⁶¹

iv. Consumer Protection

The commission finds that the Authority must ensure that reasonable consumer protections are in place to guard participating customers. In this regard, the commission finds that DBEDT's proposed Deployment Partner Eligibility Criteria Categories shall include specific criteria to protect against fraud and other improper conduct.¹⁶² It is critical that DBEDT or the Authority ensure that stringent consumer protection requirements are included as part of each of its financing product standards and other criteria. Thus, DBEDT or the Authority is

¹⁶⁰See HREA Reply SOP at 9.

¹⁶¹See Order No. 32207 at 8; see also HAR § 6-61-55.

¹⁶²DBEDT Application, Exhibit 10.

required to provide full details of the GEMS Program consumer protection policies it develops to the commission with its quarterly reporting and Program Notifications, as offered in the Application.¹⁶³

Finally, DBEDT or the Authority shall report the details of any failure on the part of any Deployment Partner to comply with these consumer protection policies to the commission, 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 processes, as further discussed below.

v. Use of On-bill and Direct Billing Repayment Methods

DBEDT requests approval to utilize both direct billing and on-bill repayment ("OBR") methods to collect payments for GEMS Program loans.¹⁶⁴ For direct billing, DBEDT describes the process as one where Deployment Partners provide full billing services directly to GEMS Program customers, with remittance then being made by the Deployment Partners to the GEMS Program administrators.¹⁶⁵ Given the different types of organizations that will be Deployment Partners, the specific direct billing

¹⁶³See DBEDT Application at 15-17.

¹⁶⁴DBEDT Application at 28.

¹⁶⁵See DBEDT Application at 28.

arrangements that will be employed are subject to finalization and reporting to the commission via the Program Notification process.¹⁶⁶ However, DBEDT indicated in its Application that "under no circumstances will [DBEDT] or the Fund Manager directly bill consumers."¹⁶⁷ With this clarification, the commission finds the use of a direct billing repayment method for the use of GEMS Program funds to be reasonable, and, thus, approves DBEDT's request for use of the proposed direct billing repayment method for the GEMS Program.

For OBR, DBEDT requests that the GEMS Program be allowed to use the same mechanism currently under development by the commission in Docket No. 2014-0129¹⁶⁸ to allow for on-bill financing and OBR customers to pay for clean energy installations directly through their respective monthly electric utility bills ("On-bill Mechanism").¹⁶⁹

The natural connection between the On-bill Mechanism and the GEMS Program has been seen as one of the key drivers of

¹⁶⁶DBEDT Application at 15.

¹⁶⁷DBEDT Application at 29.

¹⁶⁸DBEDT notes that until such time as the On-bill Mechanism is fully established, it can and will utilize its direct billing repayment method to deploy and receive payment of GEMS Program funds. See DBEDT Application at 30.

¹⁶⁹DBEDT Application at 29-31.

GEMS Program success.¹⁷⁰ Further, several of the Parties and Intervenor in this docket have been a part of the working group process for the development of the commission's on-bill financing program and the On-bill Mechanism.¹⁷¹

The commission strongly supports the use of the On-bill Mechanism for the GEMS Program,¹⁷² and approves use of the On-bill Mechanism for the GEMS Program once the details of that On-bill Mechanism are finalized.¹⁷³ The commission agrees that the use of the On-bill Mechanism can provide a number of benefits that will

¹⁷⁰Act 211, § 1, stated that "the impact and reach of proven clean energy financing programs, such as on-bill financing or on-bill repayment, can be greatly enhanced through the use of low-cost capital made available through the green infrastructure financing program established by this Act." See DBEDT Application at 29-30; see also HSEA SOP at 7; Blue Planet Reply SOP at 3.

¹⁷¹Prior to the initiation of Docket No. 2014-0129, the commission's efforts to develop on-bill financing and on-bill repayment in coordination with a working group of interested stakeholders was associated with Docket No. 2011-0186. See HSEA's Motion to Intervene at 3; see also HREA's Motion to Intervene at 3; Blue Planet's Motion to Intervene at 1-2.

¹⁷²The commission observes that the repayment options are likely to have different risk profiles. For example, it appears that there is a higher level of ratepayer protection through the On-bill Mechanism.

¹⁷³See In the Matter of the Public Utilities Commission Instituting a Proceeding to Establish and Implement an On-Bill Financing Program, Docket No. 2014-0129, Order No. 32114, Opening Docket to Establish and Implement an On-bill Financing Program, filed June 3, 2014.

support the GEMS Program in achieving its full potential as an ongoing clean energy financing program for customers.¹⁷⁴

HRS § 269-172(b) states that Green Infrastructure Charges "shall not be considered revenue of the electric utilities and accordingly, shall not be subject to state or county taxes, including the general excise tax under chapter 237, the public service company tax under chapter 239, the public utility fee under section 269-30, and the public utility franchise tax under chapter 240." The commission finds that the GEMS Program repayments that use the On-bill Mechanism established in Docket No. 2014-0129 are Green Infrastructure Charges within the meaning of HRS § 196-61, subject to review of the final On-bill Mechanism established and implemented in Docket No. 2014-0129. Finding that the GEMS Program repayments that use the On-bill Mechanism are Green Infrastructure Charges is consistent with Act 211 and ensures that all GEMS program repayments will receive the advantages

¹⁷⁴In Docket No. 2014-0129, the commission will determine whether or not the On-bill Mechanism, as part of the commission's broader Hawaii Bill Saver Program, is just, reasonable, and consistent with the public interest. See Order No. 32252 at 15, filed August 7, 2014. The commission previously determined that an on-bill financing program in Hawaii is viable, provided that certain program components defined by the commission are incorporated into the program's design. In the Matter of the Public Utilities Commission Instituting a Proceeding to Investigate the Implementation of On-Bill Financing, Docket No. 2011-0186, Decision and Order No. 30974, filed February 1, 2013, at 41.

associated with a Green Infrastructure Charge, to the greater benefit of Program participants, other affected ratepayers, and other direct and indirect program beneficiaries.

With respect to DBEDT's request that the GEMS Program be effectively exempted from having to comply with criteria governing OBR participation for other Qualified Sources of Capital ("QSC"),¹⁷⁵ the commission recognizes the arguments of the Parties and Intervenor both for and against waiving or creating new QSC-type criteria specifically for the GEMS Program.¹⁷⁶ However, the commission believes that such a determination on this issue is premature at this time. Generally-applicable OBR participation criteria must be developed before the impact of those criteria on the GEMS Program may be considered.

The commission, therefore, instructs DBEDT to continue to work closely with the other parties involved in Docket No. 2014-0129, where the On-bill Mechanism and QSC criteria are being designed.¹⁷⁷ No later than ten (10) business days after the filing of QSC criteria in a program manual in Docket No. 2014-0129, DBEDT may file, in that Docket, a motion to waive

¹⁷⁵See DBEDT Application at 30.

¹⁷⁶See DBEDT Application at 30; HECO SOP at 3.

¹⁷⁷DBEDT has indicated its commitment to continue to work closely with the On-bill Finance Program Administrator. See DBEDT Reply SOP at 7.

or amend any qualifications required to become a QSC established in the program manual that DBEDT deems necessary to enable use of the On-bill Mechanism in the GEMS Program, including waivers from QSC criteria. Finalized details of both the direct billing and On-bill Mechanism to be used in the GEMS Program are to be submitted to the commission in this proceeding as Program Notifications, and summarized as part of the Authority's Annual Plan submissions approved and discussed below in this Program Order.

Finally, the procedures for electric utilities to follow in the case of (1) non-payment or partial payment of the Green Infrastructure Charge by customers and (2) the distribution of amounts collected from customers in relation to the partial payment of the Green Infrastructure Charge will be provided as part of a program manual to be filed by the commission in Docket No. 2014-0129, or any tariff arising from that proceeding.

vi. Use of GEMS Program Repayments

With respect to the use of funds deposited in the Green Infrastructure Special Fund, including the use of repayments made on GEMS Program loans, HRS § 196-64 states, in part, that:

- (a) In the performance of, and with respect to the functions, powers, and duties vested in the authority by this part, the authority, as directed by the director and in accordance with a green infrastructure loan program order

or orders under section 269-171 or an annual plan submitted by the authority pursuant to this section, as approved by the public utilities commission may:

- (1) Make loans and expend funds to finance the purchase or installation of green infrastructure equipment for clean energy technology, demand response technology, and energy use reduction and demand side management infrastructure, programs, and services.

(emphasis added)

HRS § 196-65(a) further states:

There is established the Hawaii green infrastructure special fund into which shall be deposited:

- (1) The proceeds of bonds net of issuance costs and reserves or overcollateralization amounts;
- (2) Green infrastructure charges received for the use and services of the loan program, including the repayment of loans made under the loan program;
- (3) All other funds received by the department or the authority and legally available for the purposes of the green infrastructure special fund;
- (4) Interest earnings on all amounts in the green infrastructure special fund; and
- (5) Such other moneys as shall be permitted by an order of the public utilities commission.

The Hawaii green infrastructure special fund shall not be subject to section 37-53. Any amounts received from green infrastructure charges or any other net proceeds earned from the allocation, use,

expenditure, or other disposition of amounts approved by the public utilities commission and deposited or held in the Hawaii green infrastructure special fund in excess of amounts necessary for the purposes of subsection (b) shall be credited to electric utility customers as provided in a green infrastructure loan program order or orders....

(emphasis added)

Finally, HRS § 196-65(b) provides, in part, that:

- (b) Moneys in the Hawaii green infrastructure special fund may be used, subject to the approval of the public utilities commission, for the purposes of:
 - (1) Making green infrastructure loans;
 - (2) Paying administrative costs of the Hawaii green infrastructure loan program;
 - (3) Paying any other costs related to the Hawaii green infrastructure loan program; or
 - (4) Paying financing costs, as defined in section 269-161, to the extent permitted by the public utilities commission in a financing order issued pursuant to section 269-163.

According to the statutory provisions listed above, the commission must determine the uses of amounts deposited in the Green Infrastructure Special Fund via a program order and/or approval of an annual plan submitted by the Authority pursuant to HRS § 196-64(b). The commission's authority to determine the uses of amounts deposited in the Green Infrastructure Special Fund also includes the ability to direct the crediting of the amount

of excess GEMS Program loan repayments for the benefit of ratepayers.¹⁷⁸

In its Application, DBEDT indicates that it intends to apply GEMS Program loan repayments collected over time to three major areas, including:

- (1) Replenishment of the Public Benefits Fee Surcharge or another ratepayer fund . the commission identifies and "based upon annual amounts collected through the Green Infrastructure Fee;"
- (2) Funding additional loans as approved via a program order; and
- (3) Payment of GEMS Program administrative costs.¹⁷⁹

The commission finds that GEMS Program loan repayments should be dedicated to replenishing the Public Benefits Fund each year following the payment of necessary cost items listed under HRS § 196-65(b), and approved by the commission pursuant to HRS § 196-64(a). Thus, the commission finds that GEMS Program loan repayment amounts should be allocated according to the following list of priorities:

¹⁷⁸See HRS § 269-171(a) .

¹⁷⁹DBEDT Application at 35.

- (1) Payment of GEMS Program administrative costs;
- (2) Replenishment of Public Benefits Fee collections up to the amount those collections have been reduced by the Green Infrastructure Fee collections in that same year and any remaining underpayments from previous years; and
- (3) Funding additional GEMS Program loans.

Accordingly, DBEDT is ordered to transfer to the Public Benefits Fund,¹⁸⁰ on an annual basis, amounts collected from repayments made on GEMS Program loans and deposited in the Green Infrastructure Special Fund or its trustee account, net of GEMS-related costs approved by the commission pursuant to HRS § 196-64(a) and incurred in that year, and in an amount not to exceed the amount of GIF collections made for that year and any remaining underpayments from previous years.

Finally, the use of GEMS Program loan repayments made in a given year that are in excess of amounts necessary to (1) pay for GEMS-related costs approved by the commission pursuant to HRS § 196-64(a), and (2) replenish the Public Benefits Fund with

¹⁸⁰While DBEDT identifies in their response to PUC-DBEDT-IR-5 that a potential process for crediting a ratepayer fund with GEMS Program loan repayments would include DBEDT transferring such repayments directly to the appropriate fund administrator, transfer to the Public Benefits Fund in this case is appropriate.

any reductions in Public Benefits Fee collections for that year and any remaining underpayments from previous years resulting from GIF collections, will be determined subsequent to the issuance of this Program Order, and such excess amounts are to be retained in the Green Infrastructure Special Fund until such time as the commission determines their appropriate use.

e. Oversight and Reporting Requirements

DBEDT's Application requests "programmatic flexibility" with respect to finalizing a number of Program elements that were or are currently under development, including, for example, specific details concerning lending criteria for each available financial product offered.¹⁸¹ The commission does not oppose the Authority operating with this kind of flexibility as long as a sufficient oversight and reporting structure is established and followed.

DBEDT proposes an oversight framework that supplements the requirements of Act 211, and states that their proposed framework "provides the Commission the ability to exercise its fiduciary responsibilities to ratepayers while allowing for a

¹⁸¹See DBEDT Application at 27.

market-driven approach that can adapt to both the financial and clean energy markets to best meet ratepayer needs."¹⁸²

The commission adopts the basic structure of DBEDT's proposed oversight framework - including the ability to operate with necessary programmatic flexibility - with the modifications discussed below.

i. Programmatic Flexibility

As previously discussed, DBEDT requests that the commission approve the various guidelines, parameters, and processes described in its Application for controlling the deployment of GEMS Program capital, and to further allow DBEDT "programmatic flexibility to implement the most efficient and effective market-based financing solutions to provide customer benefits."¹⁸³ DBEDT describes the experiences and approaches of a number of other states that have established customer-focused clean energy financing programs similar to the proposed GEMS Program in order to show that this kind of "programmatic flexibility" is a common, necessary element of these types of programs.¹⁸⁴ DBEDT further describes this flexibility from the

¹⁸²DBEDT Application at 14.

¹⁸³DBEDT Application at 5.

¹⁸⁴See DBEDT Application at 7-10.

perspective that "[s]tate financing entities approach their roles as dynamic market players with flexibility to invest resources and enter into agreements, as well as adapt to a rapidly changing environment."¹⁸⁵ At the same time, DBEDT recognizes the need for ongoing, continuous coordination between DBEDT, the commission, and other interested stakeholders to ensure the creation and operation of a successful GEMS Program, and proposes a governance and reporting structure in its Application that would increase the transparency and availability of GEMS Program information beyond what is required under Act 211.¹⁸⁶

The commission recognizes the need for an innovative program, particularly in the early stages of program development, that is able to adjust to changing market conditions. Thus, the commission finds that the GEMS Program should be permitted to adjust to the conditions of a dynamic operating environment in order to provide the highest value to affected ratepayers. With the modifications discussed herein, and an appropriate governance, notification, and reporting structure in place (as discussed further in this Program Order), the Authority will have sufficient flexibility to determine program details, while the commission will have the opportunity to monitor and

¹⁸⁵See DBEDT Application at 10.

¹⁸⁶See DBEDT Application at 10, 14-18.

determine whether ratepayer funds are being appropriately utilized through the information provided in the GEMS Program quarterly reports and the Annual Plan submission process, as further discussed below.

ii. Program Notification/Modification Process

DBEDT proposes a two-part process to notify the commission of the finalization of future Program details prior to implementation, and to allow the commission to consider potential and proposed Program modifications. This two-part process includes the "Program Notification" process and the "Program Modification" process (jointly referred to as the "Notification/Modification Process").¹⁸⁷

The Program Notification process is the vehicle through which the Authority will provide notice to the commission of the finalization and pending implementation of additional Program details that are within the scope of the GEMS Program parameters approved in this Program Order or subsequent orders.¹⁸⁸ DBEDT's Application states that Program Notifications would apply to a "project, program, financing, or other arrangements (clean energy technology, parties intended to benefit,

¹⁸⁷See DBEDT Application at 15-16.

¹⁸⁸DBEDT Application at 15.

loan program or other arrangement, and credit sources and funding); minimum lending, credit or investing criteria; and repayment mechanisms and processes" that are within the GEMS Program parameters already approved by the commission.¹⁸⁹ DBEDT further states that, because Program Notifications are for the purpose of informing the commission of items already approved via a program order, notice is required at least ten (10) business days prior to implementation by the Authority.¹⁹⁰ Significantly, the commission retains the ability to reclassify a Program Notification as a Program Modification (as discussed below) under DBEDT's proposed Notification/Modification Process, in which case an extended process for comment and review is invoked.

The Consumer Advocate recommends that DBEDT submit market assessments and cost-benefit analyses to the commission in support of using GEMS Program funding to finance approved clean energy technology other than Solar PV systems prior to the submission of a Program Notification.¹⁹¹ In addition, the Consumer Advocate recommends that a discussion identifying the underserved customers for each new technology be included as part

¹⁸⁹DBEDT Application at 15.

¹⁹⁰DBEDT Application at 15.

¹⁹¹See CA SOP at 13. The commission notes that the Consumer Advocate does not offer a preferred timeframe for the submission of pre-Program Notification assessments and analyses.

of this pre-Program Notification review.¹⁹² The Consumer Advocate also recommends that DBEDT and/or the HECO Companies be required to prove that the use of GEMS Program funds for utility projects will be less costly to ratepayers than if non-GEMS Program funding secured by the utility were used.¹⁹³

In response, DBEDT states that it does not object to providing the market assessment and cost-benefit analysis information for financing alternative approved clean energy technologies prior to a Program Notification.¹⁹⁴ However, DBEDT is otherwise silent on the proposed requirement to prove that GEMS Program funds used for utility scale projects will be less costly than the use of utility-secured non-GEMS Program funding.¹⁹⁵

The Program Modification process is the vehicle through which the Authority can propose changes to the GEMS Program beyond those Program details that have been initially approved by the

¹⁹²See CA SOP at 13-14.

¹⁹³See CA SOP at 14-15.

¹⁹⁴See DBEDT Reply SOP at 4.

¹⁹⁵See DBEDT Reply SOP at 4. The HECO Companies do indicate, however, they are willing to work with DBEDT to report the utility-scale project financing information that the Consumer Advocate requested, including the cost of GEMS Bonds at the time of issuance used for utility-scale project financing as compared to the cost of utility financing through conventional loans. See HECO Reply SOP at 4.

commission in this Order.¹⁹⁶ Upon submission of a Program Modification, which must include the nature of, and rationale for, the modification, the commission has thirty (30) days in which to suspend or deny the Program Modification, or it will automatically become effective.¹⁹⁷ DBEDT proposes that objections may be filed by any person pursuant to the process under HAR § 6-61-61.¹⁹⁸

The commission approves the Notification/Modification Process with modifications, and it does so independently of the HAR provisions as proposed by DBEDT in its Application. At the outset, DBEDT generally bases the Notification/Modification Process on the utility tariff change process outlined under various provisions of HAR Chapter 6-61, essentially relying on language in the commission's General Order No. 7 to classify the GEMS implementation process as something very close to a tariff to be governed by established tariff-specific rules.¹⁹⁹

¹⁹⁶See DBEDT Application at 16.

¹⁹⁷DBEDT Application at 16.

¹⁹⁸DBEDT Application at 16. The process under HAR § 6-61-61 allows any person to protest or oppose any proposed tariff changes no later than fifteen (15) days prior to the effective date of the proposed changes. In addition, the utility proposing the tariff change would have until no later than five (5) days prior to the effective date of the proposed tariff to reply to any protest made. HAR § 6-61-61.

¹⁹⁹See DBEDT Application at 15-16. For example, DBEDT specifically states that "[u]pon filing of Applicant's request for Program Modification, the Modification would become effective in 30 days, unless suspended by the Commission, *pending resolution of*

The commission finds that explicitly tying the overall Notification/Modification Process to the current tariff change process under HAR Chapter 6-61 is both problematic and unnecessary.

To begin, DBEDT is not a public utility as defined under HRS § 269-1 and is not subject to the commission's general regulatory authority under HRS § 269-6.²⁰⁰ Moreover, neither the Notification/Modification Process, nor the GEMS Program, is a tariff proposed by a utility. As discussed above, Act 211 creates the commission's responsibility in this matter - not any action taken by regulated utilities. The scope and applicability of statutory and regulatory provisions governing utilities are fundamentally different than those that govern this discrete Program. Thus, the commission does not adopt the proposed use of current HAR-based procedures relating to tariff changes in the Notification/Modification Process.

The commission further finds that, although current and future decisions concerning the GEMS Program are not properly treated as decisions concerning utility proposed tariffs,²⁰¹ they are properly part of the commission's docket

any protest or objection filed with the Commission under HAR § 6-61-61." (emphasis added). DBEDT Application at 16.

²⁰⁰See HRS §§ 269-1 and 269-6.

²⁰¹Specifically, the commission finds that utility-specific rules included in DBEDT's proposed Notification/Modification

process. Thus, certain generally-applicable provisions of HAR Chapter 6-61 will apply to the Notification/Modification Process, including, but not limited to, those provisions pertaining to notice, filing, intervention, participation, etc. Additionally, the public may file comments with respect to either Program Notifications or Program Modifications pursuant to HAR § 6-61-154.

With respect to the Program Notification process, the commission approves the Notification process as proposed by DBEDT with the exception of the proposed ten (10) day implementation period. The commission finds that the proposed period is too short to allow for adequate review of the proposal. Thus, the commission finds that the Authority shall file any Program Notification with the commission no less than fifteen (15) business days prior to the implementation of any Program component contained in the Program Notification.²⁰²

Process shall not apply, including HAR §§ 6-61-61, 6-61-111, and 6-61-112.

²⁰²See DBEDT Application at 15. DBEDT originally proposed that Program Notifications were to be filed with the commission not later than ten (10) days prior to the implementation of any key GEMS Program component. The commission recognizes the need for quick implementation of finalized GEMS Program components to support capital deployment within the overall Program's desired timeframe, but the commission believes the added days will be valuable in allowing it and others to fully review such finalized Program details.

The commission further directs DBEDT to provide the information identified by the Consumer Advocate concerning market assessments and cost-benefit analyses for approved non-Solar PV clean energy technology with any Program Notification that is submitted to finance those technologies. Program Notifications (and all associated information required herein) are to be filed in this Docket, subject to the Protective Order.

Next, with respect to the Program Modification process, the commission approves the Modification process with the exception of the proposed thirty (30) day review period and subject to certain additional information requirements as discussed below. The commission finds that the proposed thirty (30) day period is too short to review the more detailed and, perhaps, novel proposals to be included in a Modification filing. Thus, the commission finds that a Program Modification shall become effective forty-five (45) days from the date it is filed with the commission, unless suspended by the commission.

Any Program Modification filing shall specifically address whether the proposal (1) is cost-effective; (2) supports the goal of providing greater green infrastructure access for underserved customers; (3) is likely to make positive contributions to the overall GEMS Program portfolio of loans and investments; and (4) positively impacts the achievement of Hawaii's Renewable Portfolio Standards and Energy Efficiency

Portfolio Standard requirements. Moreover, in reviewing a Program Modification, the commission will consider whether the Program Modification requires the development of any new metrics, and the compatibility with, and the impact, if any, on established Program metrics and deployment methods.

As discussed above, the commission finds that if the Authority seeks to use GEMS funds to finance utility-scale projects, the Authority shall file a Program Modification, and not a Program Notification, with the commission. Also, the filing shall include financing cost comparison information for utility-scale projects located on the "utility side of the meter" (in coordination with the HECO Companies where necessary).

Finally, the commission reserves the right to amend or waive the GEMS Program oversight and governance procedures as modified and adopted herein, where it is determined by the commission to be necessary to ensure the just, speedy, or inexpensive resolution of matters in this proceeding.

iii. Data Tracking and Metrics

DBEDT proposes a number of metrics for measuring and evaluating the effectiveness of the GEMS Program, each of which falls into one of four broad evaluation categories: energy and environmental impacts, economic development impacts,

market expansion impacts, and cost savings impacts.²⁰³ Individual metrics are proposed for each of the above categories.²⁰⁴ These metrics, as set forth in Appendix 1 to this Order, are reasonable, and are, therefore, approved.

In addition, the commission finds that the additional metrics and tracking categories (including tracking the number of GEMS Program participants who are renters, and quarterly reporting of system costs, system sizes, and total electricity cost savings and percentage electricity cost savings for projects serving underserved customers) proposed by the Consumer Advocate are reasonable and are, therefore, approved.²⁰⁵

Likewise, the commission finds that, in concept, measures designed to break down and track specific purposes or allocations of GEMS Program loans (e.g., metrics to track loan allocations per eligible clean energy technology, etc.), as well as projections or explanations of the anticipated uses or allocation of any unused funds, should also be utilized.²⁰⁶

²⁰³DBEDT Application at 32.

²⁰⁴See DBEDT Response to CA-DBEDT-IR-1, filed July 31, 2014.

²⁰⁵See CA SOP at 10.

²⁰⁶The commission agrees with the Consumer Advocate's recommendation made in Docket No. 2014-0134 concerning the Financing Order that DBEDT should identify (1) the actual purpose or function of loaned amounts, and (2) the anticipated purpose or function of unused GEMS Program funds. See CA SOP, Docket No. 2014-0134, filed August 7, 2014.

In addition, the commission believes that metrics should be created to evaluate areas such as the overall effectiveness of GEMS Program investments and returns, and the provision of equitable GEMS Program access across all affected islands or service territories.

Certain Parties and Intervenors expressed concern that the metrics proposed by DBEDT are not sufficiently clear to let stakeholders determine whether or not the GEMS Program is successful.²⁰⁷ As such, they recommend or otherwise support the creation of additional metrics and a stakeholder-inclusive process whereby metrics can be further developed over the life of the GEMS Program.²⁰⁸

In addition, the Consumer Advocate argues that the data gathering and tracking processes underlying future GEMS Program evaluations will need to be detailed enough to support meaningful and flexible analysis of the various Program impacts.²⁰⁹ For example, the Consumer Advocate asserts that "all program metrics and underlying data, including data on underserved participants and cost savings, should be collected and maintained

²⁰⁷See CA Reply SOP at 11; LOL SOP at 6.

²⁰⁸See LOL Reply SOP at 4 (recommending that GEMS Program metrics be developed collaboratively in the course of Docket No. 2014-0135); CA Reply SOP at 11.

²⁰⁹See CA SOP at 10.

at the participant level so that the data can be made available to regulators for review and analysis."²¹⁰

The commission finds that well-defined metrics and data collection processes will provide for more meaningful reviews of the GEMS Program over time if designed correctly and implemented early. Act 211 encourages collaboration between stakeholders in GEMS Program development; similarly, clean energy financing programs established in other jurisdictions, such as in the case of the New York Green Bank, have employed a collaborative process for metrics design.²¹¹

Accordingly, the Authority is instructed to develop additional metrics in consultation with commission staff, as discussed further below, to assist the commission and other entities to properly evaluate the success of the GEMS Program as

²¹⁰See CA Reply SOP at 2-3 (citing CA SOP at 10-11).

²¹¹See Act 211, § 1. One of Act 211's three GEMS Program design principles is to establish "clearly defined program procedures and targets that encourage effective coordination among state agencies, industry, investors, and other critical energy industry stakeholders in order to help the State achieve its clean energy policy mandates and to provide customers affordable energy options." See also "Order Establishing New York Green Bank and Providing Initial Capitalization," Case 13-M-0412, issued and effective December 19, 2013, wherein the New York Public Service Commission required the requesting entity, the New York State Energy Research and Development Authority, to work in collaboration with Public Service Commission staff to design metrics to gauge Green Bank effectiveness, and to establish data collection reporting requirements to evaluate "New Yorkers' return on this investment." Id. at 21.

approved in this Program Order. This process shall include an opportunity for Parties and Intervenors to provide comment at critical points in the metrics and data collection development process. DBEDT is ordered to commence this metrics and data collection process in collaboration with commission staff within fifteen (15) business days following the issuance of this Program Order.

In conclusion, the commission adopts the metrics set forth in Appendix I. In addition, the following metrics and data collection categories and practices are adopted in concept, and are to be further refined as necessary during the metrics and data collection process to be run by DBEDT:

- (1) DBEDT's proposed metrics addressing energy and environmental impacts, economic development impacts, market expansion impacts, and cost savings impacts;²¹²
- (2) Additional metrics related to DBEDT's market expansion impact and cost savings impacts that specifically track levels of GEMS Program participants who are renters; metrics that follow GEMS Program system costs, system sizes, and the total electricity cost savings

²¹²See DBEDT Response to CA-DBEDT-IR-1, filed July 31, 2014.

and percentage electricity cost savings for projects serving underserved customers; and metrics to evaluate the allocation of GEMS Program funding among the HECO Companies' service territories so as to ensure the equitable deployment of funds;

- (3) Metrics to track and evaluate the returns and other success indicators for amounts deposited in and allocated from the Green Infrastructure Special Fund, and metrics to follow the specific purposes or allocations of GEMS Program loans (e.g., metrics to track loan allocations per eligible clean energy technology, etc.); and
- (4) Data collection practices to ensure that GEMS Program data and other information is collected with sufficient detail to support meaningful evaluations of the GEMS Program (i.e., participant level data).

iv. Quarterly Reporting and Annual Plan Submissions

HRS § 196-64(b) requires the Authority to submit to the commission an annual plan not later than ninety (90) days prior to the start of each fiscal year ("Annual Plan"). The Annual Plan

must include the Authority's projected operational budget for the next fiscal year. The commission is required to review and approve, where appropriate, the submitted Annual Plan each year.²¹³ Further, the Annual Plan can serve as a means by which the commission may approve additional GEMS Program elements.²¹⁴

To provide for more frequent reporting, DBEDT proposes to submit quarterly GEMS Program reports ("Quarterly Reports"), which are not otherwise required under Act 211, and which would be in addition to the Annual Plan required under HRS § 196-64(b).²¹⁵ According to DBEDT, the Quarterly Reports will provide "a snapshot of program activities and a financial summary" and will address Program adjustments either planned or implemented.²¹⁶

Throughout this proceeding, various Parties and Intervenor recommended, or offered support for, a number of additional reporting requirements that they believed would help increase Program transparency or the timeliness of information. For example, DBEDT described a number of specific items that would

²¹³HRS § 196-64(b).

²¹⁴See HRS § 196-64(a). The Annual Plan requirement is in addition to the issuance of orders and the Notification/Modification Process adopted with modifications and discussed above.

²¹⁵DBEDT Application at 17.

²¹⁶See DBEDT Application at 17.

be included in the Quarterly Reports, such as information derived from Market Expansion Impact Metrics,²¹⁷ metrics showing verifiable bill savings for customers,²¹⁸ and underlying Program data.²¹⁹ The Consumer Advocate recommended quarterly reporting of system costs, system sizes, and the total electricity cost savings and percentage electricity cost savings for projects serving underserved customers.²²⁰ In addition, the Consumer Advocate supported the quarterly reporting of identified bill or cost savings metrics.²²¹

The commission approves DBEDT's quarterly reporting proposal with the modification that the Consumer Advocate's recommended reporting requirements concerning the financing of utility-scale projects shall be included, when applicable.²²²

²¹⁷See DBEDT Reply SOP at 3. While it is unclear whether DBEDT further supports newly proposed metrics like the Consumer Advocate's proposed metrics relating to underserved markets, the commission finds these proposed metrics are reasonable and adopts these and other metrics in this Program Order. A process for ongoing metrics and data collection development is also established under "Section II.e.iii. Data Tracking and Metrics" above.

²¹⁸See DBEDT Reply SOP at 4.

²¹⁹See DBEDT response to HREA-DBEDT-FIR-2, filed August 5, 2014.

²²⁰See CA SOP at 10.

²²¹See CA SOP at 11.

²²²See CA SOP at 14-15.

In order to provide the necessary transparency and to build public confidence in the GEMS Program, the Authority is further required to include in its Quarterly Reports summary information concerning all metrics approved in this Program Order, as well as those developed through the metrics and data development process discussed in "Section II.e.iii, Data Tracking and Metrics" above.

A number of additional reporting requirements for the Annual Plan are recommended by the Parties and Intervenors. For example, the Consumer Advocate recommends additional reporting requirements that include annual reporting of any utility system costs that are incurred by the HECO Companies resulting from distributed generation Solar PV systems or other GEMS Program-financed clean energy projects.²²³ The HECO Companies respond that reporting "utility system costs" resulting from GEMS Program financing is an ambiguous requirement and, even if more clearly defined, would likely be difficult to track.²²⁴

The commission recognizes the HECO Companies' concerns, but finds that utility system costs are an important category of information that will help the commission fully evaluate the broad range of impacts of the Program. The HECO companies have offered to work collaboratively with DBEDT and other Parties to develop

²²³CA SOP at 14.

²²⁴See HECO Reply SOP at 3-4.

reporting requirements to address the Consumer Advocate's concerns in this area.²²⁵

The commission is, therefore, directing 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. The commission will then review these requirements and determine whether they should be incorporated into the regular reporting process.

The commission also finds that the following are reasonable to include as part of any Annual Plan submission: (1) summaries of all Quarterly Report information provided over the Annual Plan reporting period, which includes cost control metrics, if any, concerning the GEMS Program's administrative costs; and (2) the provision of consumer protection information discussed in "Section II.d.iv, Consumer Protection."

Thus, the commission generally approves both the Annual Plan and Quarterly Report processes as modified in this Order. Quarterly Reports will provide the commission and interested stakeholders with timely information to review the

²²⁵See HECO Reply SOP at 4.

progress of the GEMS Program's development, as opposed to simply having yearly updates through Annual Plans. In this fashion, Quarterly Reports will be useful for identifying the need to make course corrections, if any, within the Program's two-year deployment timeline.

In summary, Quarterly Reports and Annual Plans filed with the commission by the Authority shall include, at a minimum, the following information:

Quarterly Reports

- (1) All information proposed to be included in the Quarterly Reports as set forth in DBEDT's Application or as otherwise indicated by DBEDT in the course of this proceeding;
- (2) Summaries of all metrics approved pursuant to this Program Order, and as developed and approved through the metrics and data collection development process discussed in "Section II.e.iii, Data Tracking and Metrics" above, including the Consumer Advocate's recommended metrics related to utility-scale project financing;
- (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.

Annual Plans

- (1) Budget and operational information required to be provided under HRS § 196-64(b);
- (2) Annual summaries of all information included in the various Quarterly Reports;
- (3) A detailed discussion of grid integration considerations for green infrastructure funded by the GEMS Program, including a discussion of how such infrastructure will continue to support the ongoing transformation of the State's electric systems over time;
- (4) Information on utility system costs resulting from GEMS Program-funded projects, as determined by the Consumer Advocate,

the HECO Companies, and the Authority, and as approved by the commission; and

- (5) Administrative cost controls and associated implementation plans, as well as status updates on the implementation of those cost control plans.

v. Annual Auditing of the Authority

HRS § 196-64(a)(7) states that the Authority may be audited at least once a year by an Authority-selected independent certified public accounting firm, and that the audit results be provided to both DBEDT and the commission. In its application, DBEDT states its commitment to "the responsible deployment of funds."²²⁶

The commission finds that a detailed annual audit will provide essential operational information with which to evaluate the success and long-term viability of the GEMS Program. For this reason, the commission directs the Authority to conduct such an audit on an annual basis.

²²⁶DBEDT Application at 17. DBEDT also indicates in its Application that it will provide each audit report to the commission no later than 180 days following the end of each fiscal year. Id.

As discussed in this Program Order, prudent fiscal management of GEMS Program funds and the minimization of administrative costs of the Program are top priorities for the commission, and the commission has required DBEDT and the Authority to develop cost control measures and associated implementation plans that will be reported as part of the general GEMS Program oversight process.²²⁷ Thus, the commission directs that the annual audit address these issues as well.

III. Orders

THE COMMISSION ORDERS:

1. DBEDT's request to use amounts held in the Green Infrastructure Special Fund according to the GEMS Program Guidelines provided in its Application, filed June 6, 2014, is approved, subject to the guidance set forth in this Program Order, and further subject to the adjustments, modifications, and additional requirements adopted in this Order.

2. The Authority is ordered to coordinate the development of a metrics and data collection process for the GEMS Program, as discussed in this Program Order, to commence fifteen (15) business days following the issuance of this Program Order;

²²⁷See "Section II.c.ii. Prudent Management of Funds and Minimization of Administrative Costs," supra.

3. The Authority is ordered to file a Program Notification providing comprehensive details describing the processes for the initial deployment of funds prior to the initial deployment of GEMS Program funds in accordance with the procedures established in this Program Order;

4. The Authority, the HECO Companies, and the Consumer Advocate are ordered to develop reporting guidelines for the annual reporting of utility system costs and related impacts from green infrastructure installations financed by the GEMS Program, which the Authority shall include as part of its first Quarterly Report filing required under this Program Order;

5. GEMS Program loan repayments collected and deposited in the Green Infrastructure Special Fund are to be allocated and transferred annually by the Authority as a credit to the Public Benefits Fund, so as to replenish any reduction in collections of the Public Benefits Fee in that same year and any remaining underpayments from previous years that result from the offsetting of GIF collections, as ordered in the Financing Order in Docket No. 2014-0134. Such allocations and transfers are to be done following the allocation and payment, transfer, or other segregation of amounts in the Green Infrastructure Special Fund for the purposes of paying GEMS Program-related administrative and/or financing costs as authorized under HRS § 196-65(b) and this Decision and Order; and

6. This docket is closed, unless otherwise ordered by the commission.

DONE at Honolulu, Hawaii SEP 30 2014 .

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By Hermina Morita
Hermina Morita, Chair

By Michael E. Champley
Michael E. Champley, Commissioner

By Lorraine H. Akiba
Lorraine H. Akiba, Commissioner

APPROVED AS TO FORM:

SL

Shannon Mears
Commission Counsel

2014-0135.sr

Appendix I

Summary of Metrics

Category	Metrics
Energy and Environmental Impacts	<ol style="list-style-type: none"> 1. Energy Produced* 2. Petroleum Displaced* 3. Greenhouse Gas Avoided*
Economic Development Impacts	<ol style="list-style-type: none"> 1. Total GEMS Capital Deployed and Total Capital Deployed* 2. Allocation of GEMS Program Funds According to Use (e.g., GEMS Program Administrative Costs, Leveraged Loans, Unleveraged Loans, other Allocations, etc.) 3. Number of Projects Financed According to Technology Type/Category 4. Return on Investment of Green Infrastructure Special Fund Allocations 5. Indirect Economic Impact of Capital Deployed* 6. Indirect Economic Impact of Cost Savings*
Market Expansion Impacts	<ol style="list-style-type: none"> 1. Number of Underserved Consumers Financed* 2. Profile of Consumers* 3. Number of Nonprofits Financed* 4. Profile of Nonprofits Financed* 5. Number of Renters Financed 6. Number of Customers and Projects Financed by Service Territory

Cost Savings Impacts	<ol style="list-style-type: none"> 1. Electricity Cost Savings (Total and Percentage)*† 2. System Costs for Underserved Customer Participants 3. System Sizes for Underserved Customer Participants
<p>*<u>See</u> DBEDT Response to CA-DBEDT-IR-1, filed July 31, 2014.</p> <p>†To be designed and broken out to show electricity cost savings (total and percentage) for both underserved customer participants and other participants.</p>	

CERTIFICATE OF SERVICE

The foregoing Decision and Order was served on the
date of filing by mail, postage prepaid, and properly addressed
to the following parties:

JEFFREY T. ONO
EXECUTIVE DIRECTOR
DIVISION OF CONSUMER ADVOCACY
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
P.O. Box 541
Honolulu, HI 96809

DAVID M. LOUIE
Attorney General of Hawaii
DEBORAH DAY EMERSON
GREGG J. KINKLEY
Deputy Attorneys General
Department of the Attorney General
State of Hawaii
425 Queen Street
Honolulu, HI 96813

DANIEL G. BROWN
MANAGER-REGULATORY NON-RATE PROCEEDINGS
HAWAIIAN ELECTRIC COMPANY, INC.
HAWAII ELECTRIC LIGHT COMPANY, INC.
MAUI ELECTRIC COMPANY, LTD.
P.O. Box 2750
Honolulu, HI 96840-0001

LESLIE COLE-BROOKS
EXECUTIVE DIRECTOR
HAWAII SOLAR ENERGY ASSOCIATION
P.O. Box 37070
Honolulu, HI 96837

Certificate of Service

Page 2

WARREN S. BOLLMEIER II
PRESIDENT
HAWAII RENEWABLE ENERGY ALLIANCE
46-040 Konane Place, #3816
Kaneohe, HI 96744

HENRY Q. CURTIS
VICE PRESIDENT FOR CONSUMER ISSUES
LIFE OF THE LAND
P.O. Box 37158
Honolulu, HI 96837-0158

DOUGLAS A. CODIGA, ESQ.
SCHLACK ITO
A Limited Liability Law Company
Topa Financial Center
745 Fort Street, Suite 1500
Honolulu, HI 96813