MINUTES - MEETING NO. 011
HAWAII GREEN INFRASTRUCTURE AUTHORITY

State of Hawaiʻi

July 6, 2016 – 4:00 PM

Department of Business, Economic Development and Tourism
250 S. Hotel Street, 4th Floor, Conference Room 436
Honolulu, Hawaiʻi 96813

ATTENDANCE

Members Present:	Mark Glick, Wesley Machida, Jeff Mikulina, Luis Salaveria and Kalbert Young
Members Absent:	None
Others Present:	Gregg Kinkley (Deputy Attorney General), Tara Young, Gwen Yamamoto Lau, Heather Wallenstrom and James Strange
Members of the Public:	Alberto Vargas

I. ROLL CALL

Chair Salaveria called the meeting of the Hawaii Green Infrastructure Authority (HGIA) to order at 4:00 PM.

Chairperson Salaveria	Present
Vice Chair Glick	Present
Secretary Mikulina	Present
Member Machida	Present
Member Young	Present

MATERIALS DISTRIBUTED

1. Agenda for July 6, 2016 Meeting.
2. Minutes of the Regular Meeting on February 24, 2016.
3. Report of the Executive Director

II. APPROVAL OF MINUTES

Chair Salaveria announced that the first item on the agenda was the approval of the minutes of the February 24, 2016 regular meeting, and asked for a motion to approve the minutes. Secretary Mikulina moved, and Vice Chair Glick seconded. The members declined further discussion.

Chair Salaveria asked if there were comments from any members of the public. Seeing none, he called for a vote.

Ayes: Members Glick, Machida, Mikulina, Salaveria and Young
Nays: None

The motion carried unanimously, 5 to 0.

III. REPORT OF THE EXECUTIVE DIRECTOR

Chair Salaveria stated that the next section on the agenda was the report of the Executive Director. Tara Young would be presenting the report.

Ms. Young reported these items:

Executive Summary

- Continuing to resource organization to get results, efficiently
- Some progress on processes, staffing and programs
- Still considerably more work to do to meet aggressive FY2017 goals for capital deployment

Introduction to New Staff

To successfully pursue new opportunities, and get the programs to market in a competitive time-frame, HGIA needed additional staff resources and it took considerable time recruiting for these positions. The skill-sets include people with energy industry and/or policy experience and finance experience to work on the structuring of new deals and programs.

As of May, HGIA is a fully-staffed program with 5.5 employees (Executive Director, Managing Director, Program Officer, Summer Senior Associate, Executive Assistant and Part-Time Accountant).

- Gwen Yamamoto Lau (Managing Director) – 30 years of leadership, management and strategic experience in the banking, non-profit and not-for-profit credit union industries. She has a Bachelor of Business Administration in Accounting from

UH and received a Banking School Degree from the University of Wisconsin, Madison, Graduate School of Banking.

- Heather Wallenstrom (Program Officer) – Heather has worked in non-profit and government organizations in Honolulu and the Washington D.C. area, focusing on energy economics, alternative transportation planning and project management. She graduated from the University of California, Santa Barbara with a Bachelor's degree in Environmental Studies and Natural Resource Management and has a Master's degree in Urban and Regional Planning from UH Manoa.
- James Strange (Summer Senior Associate) – James' professional experience includes management positions with SolarCity. He currently attends the Richardson School of Law at UH Manoa where he assisted in the development of the Energy Justice Program and specializes in energy and environmental law. He recently conducted research in collaboration with the law school and Sustainable Molokai to create an alternative energy plan for the Molokai community. James received a Bachelor's degree in Studio Art from the University of California, Riverside.

<u>Update on 2016 Legislative Session</u>

- In January 2016, Governor Ige proposed using GEMS capital to finance a $100 million energy efficiency and heat abatement program for the DOE. While the Legislature chose to fund the program using general funds, in March the PUC confirmed that the use of GEMS for the project was a permissible use and aligned with the mission of the program. HGIA continues to work with government agencies, which constitute some of the largest users of electricity in the State, on opportunities to responsibly finance renewable energy and energy efficiency investments.
- During the Legislative session, HGIA sought a $45M increase in its FY 2017 appropriation ceiling for the issuance of green infrastructure loans. This request was included in Governor's Message 10 to the Legislature. While, as reported in the FY 2016 Annual Plan, the Authority had already received appropriations from the Legislature in FY 2015 for all funds to be deployed as loan capital in the GEMS Program, the Attorney General's office has stated that an appropriation ceiling is required for expenditures out of the GEMS special fund. The current FY 2017 appropriation ceiling of $1M for the GEMS special fund did not account for this. The Legislature did not approve the increase in the expenditure ceiling.

  However, in FY15, an appropriation of $50M was appropriated by the Legislature for the Hawaii Green Infrastructure Special Fund. Over the last two years, DBEDT had assigned this $50M ceiling to the Hawaii Green Infrastructure Bond Fund (S368). It should have been assigned to the Hawaii Green Infrastructure Special Fund (S367) to provide the ceiling to allow making green infrastructure loans and paying various administrative and other costs. It has been determined by the Department of Budget & Finance that the legislative intent of this $50M ceiling was to cover expenditures of green infrastructure loans and paying various administrative and other costs. As such, DAGS and B&F will make the necessary journal entries to record the transactions.

Member Machida commented that the Deputy Attorney General who advises the Department of Budget & Finance has confirmed that the use of this ceiling is permissible.

Ms. Young summarized that in addition to the $1 million ceiling for administrative expenses, HGIA has a $50 million ceiling for FY16 and FY17 for loan issuances.

- HGIA operating budget - Subsequent to the FY 2017 budget request submission deadlines in Fall 2015, Ms. Young was hired in October 2015 and conducted an assessment of FY 2017 budget and details. The challenge of deploying $145M within the next three years requires additional and experienced staff to get the programs to market in a competitive time frame. The $500,000 request was for two associate positions and one analyst position, as well as additional contractual services. If HGIA were to get the additional expenditure ceiling increase approved, total expenses over a 3-year period until all capital is deployed would be less than 3% of the total capitalization and less than comparable organizations. The Authority held a board meeting on January 21, 2016, at which the board approved submission of a supplemental budget request to increase the $1M HGIA expenditure ceiling for FY 2017 by $500,000. The Governor did not include the requested $500,000 expenditure ceiling in the Executive Supplemental Budget Request for FY 2017.

<u>FY17 Annual Plan</u>
The FY17 Annual Plan was filed with the PUC in March and has gone into effect, as submitted, on July 1st. $26 million of capital deployment is projected for FY17.

Changes have occurred in the renewable marketplace that have profoundly affected all sectors of the renewable energy industry, including HGIA. While the Authority funded its first consumer PV loans in January 2016, market demand for this product has declined precipitously and the GEMS Program forecasts only $1 million of loans under this program in FY17. As a market-driven program, it is critical that the Authority adapt to dynamic conditions rapidly to fulfill its mission. HGIA is moving aggressively to re-tool existing programs and develop new means of deploying capital to get ahead of trends in the market.

Consumer PV with Battery Solutions
HGIA's focus will shift to solutions that include PV with battery storage, which will be increasingly compelling solutions for all consumers, not only the affluent or early adopters, in the evolving renewable energy market. PV systems without battery storage will not be viable in the future once grid supply has been fully subscribed,

possibly by year end 2016. Maui has already reached its grid supply cap in the last month. HGIA is actively working with solar installers and battery manufacturers to modify the existing Consumer PV program to address the longer term, scaleable opportunity to finance renewable solutions with battery storage. Because of the high up-front cost of these assets (~$8,000 - $15,000), financing will be critical to provide access to this technology for underserved and economically vulnerable homeowners. It is estimated that $5M of capital will be deployed under this program in FY17.

To develop the Consumer PV plus battery program, HGIA must submit a Program Notification to the PUC because the Consumer Advocate has expressed concerns in the past about energy storage solutions. HGIA must demonstrate a market analysis and cost-benefit analysis. In addition, HGIA must demonstrate that PV with battery solutions offers a bill savings (loan payment plus remaining utility bill is less than original utility bill). Currently, the Consumer PV program requires a 20% bill savings and it is extremely difficult to meet that savings requirement under self-supply. The Authority is developing an underwriting model to ensure that any system financed by GEMS would meet a savings requirement.

Chair Salaveria asked about the current grid supply rate. Vice-Chair Glick stated that it is around 15 cents. He continued to explain that the self-supply model was a temporary construct to replace NEM. While HGIA seeks to deploy funds today, there will eventually be a replacement program as part of the DER Phase II, however this is not on a fast track.

Secretary Mikulina commented that the market is extremely dynamic and it is unclear what the future will look like. For example, we may find that the new time of use rates will make battery storage more attractive or we may find that standalone PV systems without storage may work in the future. It is unclear what the next DER will look like.

Chair Salaveria noted that it was discussed at the recent VERGE conference that the industry expects a significant price decrease in the near-term which could have a significant impact on the economics of these energy storage systems.

Ms. Young agreed that the market is very dynamic and things are changing rapidly. Battery warranties are typically 7-10 years, however the simple payback on an average system could be a little over 10 years. HGIA is concerned about the battery replacement after year 10, particularly if we're considering the financing of a 20 year loan. In addition to battery price declines, we're expecting to see longer warranty periods in the coming months.

Vice-Chair Glick noted that NEM ended October 2015, the end of NEM changed the environment a great deal, and that the financing of consumer PV and battery is a reasonable plan to deal with the new rules and rates.

Community Solar
In 2015 the Legislature directed HECO to create a community-based renewable energy program designed to extend the benefits of solar PV and other clean energy technologies to underserved residents. The program would be particularly beneficial to apartment dwellers, renters and other who face impediments in installing PV systems. Last month the PUC issued an Order and Staff Proposal on CBRE and solicited stakeholder comments by June 30. Once a Community Solar structure is developed and approved by the PUC, HGIA believes the community solar space holds great long-term promise for GEMS funding by opening access to renewables to a much wider range of utility ratepayers. No funds are projected to be deployed in FY17. Given the current status of the docket and the time needed to construct a community solar project, the first project for GEMS funding could occur in January 2018.

Vice-Chair Glick commented that HGIA's contemplated structure would finance the end-user. Ms. Young concurred, but noted that the structure is still being worked out by the PUC. In order to successfully participate in this market, particularly to reach the underserved, HGIA would need to have an on-bill repayment mechanism in place.

Secretary Mikulina asked what Ms. Young's estimate would be for capital deployment by the start of the 2017 legislative session. Ms. Young stated that there are not a lot of shovel-ready projects presently in market. In addition, any project that comes in will take some time to evaluate, negotiate and fund. The FY17 Annual Plan projects $26 million in capital deployment, however the majority of loans will be made in the latter half of FY17. Potentially, some clean energy projects not currently on HGIA's radar may be submitted through the Open Solicitation process.

Open Solicitation Process
In the coming weeks, the Authority will have established an Open Solicitation process for proposals related to deployment of GEMS funds. Doing so is consistent with best practices by Green Banks and similar State entities and provides a consistent, transparent approach to sourcing opportunities for capital deployment. While there are a limited number of shovel-ready projects, and proposals expected from this process will take some time to evaluate, negotiate and fund, the Authority is expecting approximately $5M of capital deployment in FY17.

Commercial PV
Despite the termination of the Non-profit/Small Business program with Clean Power Finance, the Authority is committed to financing PV projects for commercial and non-profit institutions. Lending would be conducted in conjunction with local financial institutions, with GEMS funds contributing part or all of the capital. Doing so would allow the Authority to access other institutions' pipelines for loans, finance projects for that may not otherwise be financed by traditional lending institutions, and

compete with agility in a crowded marketplace for renewable energy lending. Such programs may be subject to a further Program Notification, which the Authority will submit.

Commercial Energy Efficiency
In February 2016 HGIA approved a capital partner, Metrus Energy, for the Commercial Energy Efficiency Product. Marketing for the program will launch later this month. The sales cycle for these loans can be lengthy, because there is considerable engineering work required on the part of the borrower and the transactions tend to be large. The first funding from the pipeline may not materialize until early 2017 and we are estimating $5M under this program. The Authority intends to submit a Program Notification in the coming weeks to expand the definition of eligible participant to include any commercial entity.

<u>Program Update – Consumer PV</u>
As of June 30, 2016, the program received 190 applications, 30 applications are credit approved, 23 loan documents are out ($698,134) and 12 loans are funded ($385,453). The Authority expects to fund $1M in consumer loans by the end of fiscal year 2016.

Program pipeline continues to materialize slowly. The Authority is making further changes to improve the competitiveness of the program:

- Automated-decisioning has been added to the online application process which allows a potential borrower immediate notice of pre-approval, denial or pending status following completion and submission of the online application. This has simplified the sales process for the Deployment Partners.
- The Authority is working to address the issue of ineligible properties, notably the exclusion of properties held in a trust, which constitutes almost half of the rejected applications to date. The Authority has contracted with WECC to support development of a solution for properties held in trust.

While the Authority expects these actions to favorably affect the pipeline and approval rates, the long-term growth prospects for the program are limited by the broader market environment.

All loans funded to date have been NEM systems. A few grid supply applications have come in since the grid supply tariff was established in October 2015. The slow-down in application volume under grid supply makes sense when considering that it extends the payback period for a PV system by several years.

Discussion ensued on the shift to energy storage systems. As the Authority develops program notifications to finance self supply systems with energy storage, they are taking into account key lessons learned from the Consumer PV systems and differences from battery storage:

- Sales will require a different approach, since the benefits and payback period for self supply systems are different and specific to consumer load profiles.
- Due to the higher up-front equipment costs, the Authority must create standards, to protect the consumer's interests, for sizing systems and ensuring that they do not purchase more battery than is necessary for their needs.
- Interconnection timelines and market conditions may drive an initial lag in the volume of self supply applications and installations.
- New rate tariffs currently being considered by the PUC, such as TOU, may soon add additional value to battery storage.

HGIA continues to monitor developments in this market closely, working with OEM's, installers, and the utility, to ensure that GEMS programs brought to market anticipate future market conditions.

On-Bill Repayment

In May 2016, the PUC discontinued development of the on-bill repayment mechanism and directed HECO to work directly with HGIA on its development. The Authority understands the PUC's decision to discontinue pursuit of an On-Bill Repayment mechanism and is actively pursuing avenues for investment of GEMS funds that do not depend on this mechanism for success. HGIA continues to believe that GEMS capital can be sustainably deployed, and advance the public interest, without such a mechanism in place.

With that said, our mission is to expand access to renewable energy technology and accelerate its adoption. To the extent On-Bill Repayment could be implemented responsibly and economically, HGIA would still consider doing so as it advances our mission. The Authority is in active discussion with HECO and a possible primary servicing agent to scope and price the project. However, there is no reason to believe that the same market factors that affected the PUC's effort would not similarly affect any other effort. Moreover, the benefits would be applicable to a smaller scope. While the Authority will collaborate with HECO to carefully study the issue, the Authority would not invest in the development of On-Bill Repayment unless the Authority felt there was a compelling economic and public benefit to doing so.

IV. DISCUSSION AND/OR DECISION MAKING

A. Approval to Use Appropriation Ceiling Budgeted for GEMS in BED 120 for Loan Issuances in FY2016 and FY2017

Chair Salaveria announced that the next item on the agenda is the Approval to Use Appropriation Ceiling Budgeted for GEMS in BED 120 for Loan Issuances in FY2016 and FY2017. Chair Salaveria asked if there were questions from any members and there were none. He asked if there were any questions from the public and there were none. He asked for a motion to approve the use of the appropriation ceiling. Secretary Mikulina moved, and Member Machida seconded.

Secretary Mikulina asked if this was a short-term solution to the problem. Ms. Young explained that this would only be used for FY2016 and FY2017 and Chair Salaveria stated that in the next biennium, it would be appropriate for HGIA to have the ceiling in BED 138 instead of BED 120.

Chair Salaveria asked if there were comments from any members of the public. Seeing none, he called for a vote.

Ayes: Members Glick, Machida, Mikulina, Salaveria and Young
Nays: None

The motion carried unanimously, 5 to 0.

B. Elect Vice-Chairperson and Secretary of the Hawaii Green Infrastructure Authority

Chair Salaveria announced that the next item on the agenda is to Elect the Vice-Chairperson and Secretary of the Hawaii Green Infrastructure Authority.

Section 2 of the Bylaws of the Hawaii Green Infrastructure Authority (Appointments and Elections) states that the Vice-Chairperson and Secretary shall be elected by the Authority from among its members. Regular elections shall be held on the first regular or a special meeting held after July 1st of each year, and the officers elected at each regular election shall take office immediately following their election. Section 3 (Terms of Office) states that the terms of office of the Vice-Chairperson and Secretary shall serve until the annual regular elections are held. The Vice-Chair of the Hawaii Green Infrastructure Authority will conduct the meetings of the HGIA when the Chair is not present. The Secretary will be responsible for compiling, publishing and submitting meeting minutes for board review.

Chair Salaveria asked for any nominations for the position of Vice-Chairperson and Secretary. Member Machida nominated Secretary Mikulina as the Vice-Chairperson and Vice-Chairperson Glick as Secretary. There being no further nominations and no questions from the public, Chair Salaveria asked for a motion. Secretary Mikulina moved, and Member Machida seconded. The members declined further discussion.

Chair Salaveria asked if there were comments from any members of the public. Seeing none, he called for a vote.

Ayes: Members Glick, Machida, Mikulina, Salaveria and Young
Nays: None

The motion carried unanimously, 5 to 0, electing Secretary Mikulina as Vice-Chairperson and Vice-Chairperson Glick as Secretary.

C. Approval of Loan Committee Members

Chair Salaveria announced that the next item on the agenda is the Approval of the Loan Committee Members.

Section 6 and Section 7 of the Bylaws of the Hawaii Green Infrastructure Authority (Lending Authority and Loan Committee) states that the Authority, Loan Committee, and/or Executive Director are entrusted with the authority to lend as specified, and shall be responsible for the oversight and credit approval of loans through the GEMS program. Each entity is authorized to lend based on the credit approval limits as follows:

Authorized Individual/Group	Dollar Limits
Executive Director and Chair	Less than $100,000
Loan Committee	$100,000 to $5,000,000
Authority	More than $5,000,000

The Loan Committee shall consist of no fewer than three members. Two of the members shall be members of the Authority and one member is appointed chair of the Loan Committee.

Chair Salaveria asked for any nomination for two members of the Loan Committee. Member Machida nominated Member Young as Loan Committee Member (Chair). Member Young nominated Member Machida as Loan Committee Member. There being no further nominations and no questions from the public, Chair Salaveria asked for a motion. Vice-Chair Glick moved, and Secretary Mikulina seconded. The members declined further discussion.

Chair Salaveria asked if there were comments from any members of the public. Seeing none, he called for a vote.

Ayes: Members Glick, Machida, Mikulina, Salaveria and Young
Nays: None

The motion carried unanimously, 5 to 0, electing Kalber Young and Loan Committee member and chair, and Wes Machida as Loan Committee member.

Chair Salaveria announced that Ms. Young would present the nominations for non-members for the Loan Committee who must be approved by the Authority. Ms. Young proposed a slate of three non-member candidates for the Loan Committee.

Ryan Hamadon – Ryan has been Vice President & Commercial Loan Officer at First Foundation Bank since March 2015. In this role, he manages an approximately $20 million commercial loan department consisting of a mix of business loans, commercial real estate loans and lines of credit. He also oversaw First Foundation's participation in the GEMS PV Financing program for nonprofits and small business. Prior to joining First Foundation Bank, Ryan held management positions as a Commercial Loan Underwriter at Pacific Rim Bank; Residential Mortgage Loan Officer at Primary Residential Mortgage Company, Inc.; and a Commercial Real Estate/Construction Loan Analyst at City Bank/Central Pacific Bank. Ryan graduated from the University of Hawaii with a Bachelor of Business Administration, with a major in accounting.

Gabe Lee – Gabe is EVP of Commercial Markets at American Savings Bank and is the division manager overseeing Corporate Banking, Commercial Banks, Commercial Real Estate, Cash Management and International Services. Under his leadership, Gabe has financed over $60M in commercial clean energy loans generating approximately 20MW, utilizing Renewable Energy Tax Credits and New Markets Tax Credits leveraged structures. Prior to joining ASB in 1998, Gabe was in commercial banking at First Hawaiian Bank and corporate banking at Bank of Hawaii. He is a graduate of the UH with a BA in Economics, and The Amos Tuck School of Business at Dartmouth College, Graduate School of Credit and Financial Management.

Heather Piper – Heather has been President and Executive Director of the Hawaii Community Renivestment Corporation since June 2015. Prior to this position, she had 25 years of strategic planning, credit risk management, personnel management, customer service, sales and lending experience in the banking industry. She has held senior positions at Central Pacific Bank and Bank of Hawaii. Heather is a graduate of Hawaii Pacific University with a Bachelor of Arts in Economics.

Chair Salaveria asked if there were any questions from the members and from the members of the public. Seeing none, Chair Salaveria asked for a motion to approve the nomination of Ryan Hamadon, Gable Lee and Heather Piper to the Loan Committee. Member Machida so moved, and Vice-Chair Glick seconded. The members declined further discussion.

Chair Salaveria asked if there were comments from any members of the public. Seeing none, he called for a vote.

Ayes: Members Glick, Machida, Mikulina, Salaveria and Young
Nays: None

The motion carried unanimously, 5 to 0, naming Ryan Hamadon, Gabe Lee and Heather Piper to the Loan Committee as outside members.

V. ADJOURNMENT

Chair Salaveria asked if there were any other matters that should be brought up. Secretary Mikulina asked when the next Board Meeting would be held. Ms. Young responded that Board Meetings will be held on a quarterly basis. After seeing no other matters to discuss, Chair Salaveria asked for a motion to adjourn.

Vice-Chair Glick moved and Secretary Mikulina seconded the motion. Chair Salaveria then called for the vote.

Ayes: Members Glick, Machida, Mikulina, Salaveria and Young.
Nays: None

The motion passed unanimously.

Chair Salaveria adjourned the meeting at 4:46 PM.

Respectfully Submitted By: