

REQUEST FOR ACTION

To	The Collection Board of Directors			
Subject	Solar PV System, Phase I			
Preparer	Rodney Funakoshi			
Date	June 8, 2019	For Board	x	Action
				Info

EXECUTIVE SUMMARY

Installation of a solar photovoltaic (PV) system on the Tower garage rooftop over the trellis (Phase I) to reduce electricity costs and contribute to energy self-sufficiency. See attached *Solar PV System for the Collection AOOU* dated 6-1-19 which was distributed to owners attending an informational and committee meeting of the Building and Grounds Committee on June 4, 2019.

Phase I: 2019 (trellis)

Installation/Purchase cost: \$661,514 (Energy Industries)

Purchase w/State GEMS loan: **\$905,185** (Total cost over 20 years)

Power Purchase Agreement (lease): **\$814,935** (Total cost over 20 years)

Estimated reduction in HECO annual bill: \$75,607

Estimated lifetime net savings w/PPA: **\$785,000** (over 20 years)

Phase II: 2019-2020 (trellis + drive aisles)

Estimated 50% more solar power production

Structural feasibility analysis and preliminary design is being pursued for the expansion to cover the drive aisles. Seeking approval of Phase II is pending more information on feasibility, costs and benefits, and is not being requested at this time.

Proposed Financing and Installation

Proposed financing is through a Power Purchase Agreement (PPA), using a PPA investor who will seek a State GEMS commercial loan. The AOAO would make PPA payments, then assume the loan and own the system after 5 years. Until then, the PPA investor would be responsible for managing the contractor's installation to ensure timely and quality workmanship and for system maintenance.

The Committee recommends retaining Wendell Choy of Energy Storage Hawaii LLC, to handle project management and be PPA investor. Wendell Choy is a retired attorney with a business and tax focus, formerly with Solar Wave, a PV company which did sales, engineering, installation and financing. His PV project experience includes Iolani School, Mid-Pacific Institute, 10+ AOAOs and several churches.

RECOMMENDATION

That the Board of Directors approve the following:

- 1) Approval of Phase I project - trellis coverage
- 2) PPA financing through GEMS w/AOOU loan assumption after 5 years
- 3) Retaining Wendell Choy, Energy Storage Hawaii, for project management and as PPA investor.

RATIONALE

The AOOU will realize significant savings in electrical expenses over the lifetime of the project and will contribute to Hawaii's energy self-sufficiency goals.

Exhibits (If applicable)	Index	Title
	1	Solar PV System for the Collection AOOU, 6-1-19

FOR BOARD USE ONLY

CERTIFICATE OF BOARD ACTION

X	Approved		Declined		Noted		Returned		Deferred		Withdrawn
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Stipulations

Coordinating Instructions

Distribution Instructions

Recording Secretary	Desmond Oliveira	Action Date	06/25/19	RFA No.	8-2019
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6-1-19

Solar PV System for The Collection AOOU

On February 1, 2019, Requests for Proposals (RFP) were sent to major solar contracting firms. On March 1, 2019, three (3) proposals addressing the RFP requirements were received (Energy Industries, Hawaii Energy Connection, and Revolusun). Technical and financial proposals were reviewed by members of the Building and Grounds Committee and Budget & Finance Committee, assisted by the State GEMS agency and Wendell Choy, attorney.

Project Description and Cost: (Energy Industries)

- Installation of a solar photovoltaic (PV) system on the Tower garage rooftop
- Trellis-mounted, lighting under the carport
- 634 solar panels, 228 kW, annual production 265,305 kWh
- Estimated reduction in HECO annual bills @\$0.285: \$75,607
- Direct Purchase cost: \$661,514
- Total cost over 20 years w/GEMS loan: **\$905,185**

Proposed Financing:

- Power Purchase Agreement (PPA) using 20-year State GEMS loan @5.5% interest
- AOOU to assume loan after 5 years (Owners approval required)
- PPA investor and contractor responsible for construction & performance
- Total cost over 20 years: **\$814,935**
- Lifetime net savings: **\$785,000**

Potential Expansion over Drive Aisles

- Install trusses and add PV panels to also cover the drive aisles
- Structural feasibility study needed: \$7,000
- At least 50% more solar power production

