

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

IN THE MATTER OF:) GPA Docket 24-06
)
PETITION TO APPROVE AMENDMENT)
2 TO HANWHA ENERGY) **ALJ REPORT**
CORPORATION'S, PHASE II,)
RENEWABLE ENERGY ACQUISITION)
POWER PURCHASE AGREEMENT)
_____)



INTRODUCTION

This matter comes before the Guam Public Utilities Commission ["PUC"] upon the Petition of the Guam Power Authority ["GPA"] for Approval of Amendment 2 to Hanwha Energy Corporation's ["Hanwha"] Phase II Renewable Energy Acquisition Power Purchase Agreement and the Second Amendment to the Interconnection Agreement.¹

GPA proposes to amend the Renewable Energy Acquisition Power Purchase Agreement and the Interconnection Agreement that it entered with Hanwha in March of 2018. The original Hanwha Agreement provided for a two 30MW plant solar project. Amendment 2 would now provide for a single 41MW solar photovoltaic project with additional/increased energy storage system ("ESS") and Microgrid, permitting the delivery of solar energy during the day and night.²

BACKGROUND

On May 29, 2018, the PUC authorized GPA to award a Phase II Renewable Acquisition Agreement for two 30MW plants to Hanwha.³ Now, roughly five- and one-half years later, it is clear that Hanwha did not build two 30MW solar plants in accordance with

¹ GPA Petition, GPA Docket 24-06, Petition to Approve Amendment 2 to Hanwha Energy Corporation's Phase II Renewable Energy Acquisition Power Purchase Agreement, dated November 14, 2023.

² GPA Petition at p. 2.

³ PUC Order, GPA Docket 18-08, dated March 29, 2018, at p. 4.

the 2018 Agreement. GPA indicates that, since 2018, the construction for the two projects “has faced delays and now remains unfinished chiefly due to increased interconnection costs (affected by the project’s location) and the COVID-19 pandemic.”⁴

As discussed below, Amendment 2 now provides for a solar project that is very different from the project that Hanwha was supposed to construct in 2018.

In Resolution No. FY2024-03, the Guam Consolidated Commission on Utilities approved Amendment 2 to Phase II Renewable Energy Acquisition Power Purchase Agreement for Hanwha Energy Corporation.⁵ The primary reason stated by the CCU for approval of Amendment 2 is that the loss of this project would negatively impact GPA’s ability to construct 100MW of solar energy as agreed under the Consent Decree.⁶ The CCU authorized GPA to petition the PUC for approval to amend the Renewable Energy Purchase Agreement (REPA) and Interconnection Agreement for Hanwha, but **subject to the following conditions:**

- a. HEC Guam A shall amend the current Assignment Provision at Section 11.2 of REPA to require GPA’s written consent before any sale, transfer, pledge, encumbrance, or assignment of this agreement and its amendments.
- b. HEC Guam A must be doing business in Guam with a valid business license and be in good standing with the Department of Revenue and Taxation prior to GPA’s execution of the contract Amendment and throughout the contract’s term.
- c. Prior to the execution of the contract Amendment HEC Guam A shall submit proof of its procured and approved financing to support the successful completion of the project as amended.

⁴ GPA Petition at p. 2.

⁵ Guam Consolidated Commission on Utilities, Resolution No. FY2024-03, Relative to Approval of the Amendment 2 to Phase II Renewable Energy Acquisition Power Purchase Agreement for Hanwha Energy Corporation, adopted and approved on November 1, 2023, at GPA Petition, EX-A-001 to EX-A-003.

⁶ GPA Petition at EX-A-001.

- d. HEC Guam A shall agree to meet its milestone confirming the order of PV Modules or be subject to termination at the discretion of GPA and to surrender its Development Security of \$4.6M at the time of termination.

ANALYSIS

1. Amendment 2 considerably alters the solar project that Hanwha was supposed to build in 2018.

Amendment 2 would provide for a very different project. The original Agreement provided for 60MW. The new plant will provide 41MW. Under the original agreement Hanwha would have provided combined net annual generation of 144,000 MWH.⁷ The annual net generation under Amendment 2 begins in the first year at 75,156 MWH/YR.⁸ The original total energy cost for Year 1, including Microgrid, was \$11,822,486.⁹ The total energy cost under Amendment 2 for the first year, including Microgrid, is \$10,811,518.¹⁰ While slightly less expensive, the new project provides only a little over one-half of the energy provided in the 2018 Agreement.

It should be noted that KEPCO-LG CNS was also awarded a Renewable Energy Acquisition Agreement in 2018. Unlike Hanwha, KEPCO completed its two 30MW solar plants in accordance with contract requirements.

The ALJ followed developments with the 2018 Hanwha Agreement from its inception. Over the years he learned from different GPA personnel that GPA was

⁷ PUC Counsel Report, GPA Docket 18-08, dated March 23, 2018, at p. 1.

⁸ GPA Petition at EX-A-041.

⁹ GPA Work Session, February 22, 2018, at Issues for Decision, Exhibit B.

¹⁰ GPA Petition at EX-A-047.

concerned about the failure of Hanwha to perform under the Agreement; at different times GPA considered the possibility of defaulting Hanwha and retaining its \$4.6M Development Security.

Amendment 2 would waive any failures of performance by Hanwha under the original 2018 Agreement, provide that all obligations thereunder are satisfied, and release any and all claims.¹¹

With the energy storage/microgrid capacity in the Amendment 2, Hanwha would provide up to 22MW PCS, 66MWh usable energy at the point of interconnection.¹² The total dispatch time for ESS power will be less than 4 hours.¹³ Unlike the original Hanwha proposal, the energy storage/microgrid under Amendment 2 will provide energy storage for load capacity during evening hours.

2. This transaction with Hanwha has not caused “savings” for GPA but has resulted in substantial Losses.

In its Petition, GPA claims that “[T]he unfinished projects came at no contractual cost to GPA; except for the loss of the renewable energy and power generation needed.”¹⁴ The ALJ cannot agree. The failure of Hanwha to complete the project as originally agreed has caused substantial losses to GPA. Exhibit D to Guam Consolidated Commission on Utilities Resolution No. 2018-04, Relative to Approval of the Phase II Renewable Energy Acquisition Award to Hanwha Energy Corporation for 60MW of Renewable Energy Capacity, indicates the Hanwha was

¹¹ GPA Petition at EX-A-008-009.

¹² GPA Petition at EX-A-015.

¹³ GPA Petition at EX-A-017.

¹⁴ GPA Petition at p. 2 fn. 1.

supposed to start producing 60 megawatts of solar energy in 2019 or 2020.¹⁵ Exhibit “B” to Resolution No. 2018-04, Proposal Evaluation Summary, indicates that the 5-year Projected savings (2019-2023) from the two 30MW plants, based upon the current LEAC (at \$115/MWH), was \$22,820,053. The 5-year savings from the two plants on the projected LEAC rate was even far higher, at \$44,934,650. Exhibit “B” is attached hereto as Exhibit “1”.

Since Hanwha did not build the plants, two 30MW plants were not in operation for five years, from 2019 to 2023. Under Amendment No. 2, the Commercial Operation Date for the 41MW Solar Plant and the ESS Micro Grid will not be until December 31, 2025.¹⁶ The failure of Hanwha to construct the two 30MW plants has cost GPA \$44,934,650 on a projected basis. Actually, even the nearly \$45M estimate of loss now appears to be grossly underestimated. The \$45M estimate is based upon a five-year estimate which used a projected LEAC rate of from twelve cents to sixteen cents through 2023.

As we now know, the LEAC rate increased to a far greater extent than projected in 2018. In 2021, the LEAC rate was increased to over seventeen cents (rather than the over fifteen cents projected).¹⁷ In 2022, instead of fifteen cents, the LEAC rate was raised from eighteen cents to over thirty-one cents (twice the estimate)!¹⁸ In 2023, instead of the projected rate of sixteen cents, the actual LEAC rate was lowered from thirty-two cents to twenty-three cents. The actual losses for GPA are substantially

¹⁵ Guam Consolidated Commission on Utilities Resolution No. 2018-04, Relative to Approval of the Phase II Renewable Energy Acquisition Award to Hanwha Energy Corporation for 60MW of Renewable Energy Capacity, adopted and approved on February 27, 2018, Exhibit “D”.

¹⁶ GPA Petition, Appendix M, Milestones, at EX-A-019.

¹⁷ Order, GPA Docket 21-14, at p. 7.

¹⁸ ALJ Report, GPA Docket 23-06, dated January 19, 2023, at p. 1.

higher than \$44,934,650, perhaps even twice as much. There are further losses for 2024 and 2025, when the two Hanwha 30MW plants will not be in operation.

There are other potential losses too; the failure of Hanwha to complete the projects now places GPA in possible default of the Consent Decree. GPA will likely have to convince USEPA to amend the Consent Decree to allow for the completion of the new Hanwha project contemplated in Amendment 2. Also, the lack of the Hanwha solar plants slows GPA's integration of renewables into the power system. Guam is deprived of the benefits of the additional solar energy that Hanwha was to provide. Against these extraordinary losses, GPA claims that there will be "savings" from Amendment 2 based upon the current LEAC from 2026 through 2030 of \$28,877,817.¹⁹ However, all the alleged savings are wiped away by the losses caused by the failure to build the two 30 MW plants.

3. Notwithstanding GPA's losses caused by the inability of Hanwha to comply with the Agreement, there are Justifications for Approval of Amendment 2.

The CCU indicated that the Hanwha Phase II project was considered during consent decree negotiations with USEPA; the potential loss of the Hanwha project would impact GPA's ability to meet the renewable commissioning milestone.²⁰ The Issue for Decision write up provided to the CCU in support of GPA Resolution No. FY2024-03 provided that the objective of the Hanwha project in Amendment 2 was "to enable GPA to meet the USEPA consent decree requirement for 100MW of new Renewable Energy Installations."²¹ GPA has a valid and legitimate concern that failure to consummate an amended agreement with Hanwha could result in

¹⁹ GPA Petition at EX-A-047.

²⁰ GPA Petition at EX-A-001.

²¹ GPA Petition at EX-A-046.

violation of the Consent Decree. It is likely that USEPA will have to approve the new arrangement between GPA and Hanwha.

If GPA has not complied with the deadline in the Consent Decree to produce 100 MW of solar energy, it could be subject to penalties under the Consent Decree.

It would be difficult for GPA to rebid this project. Since there is already a signed agreement with Hanwha, proceeding with amendments precludes the necessity of having to bid this project out again. With rebid, there is always a possibility of protests and the prospect that the project will not be completed on time.

The failure of Hanwha to complete the 30MW Solar Plants under the 2018 Agreement does raise concerns about its performance under this Amendment 2. Hanwha now only has two years to complete this 41MW Plant and the microgrid project, until December 31, 2025. There could be a risk that the project will not be completed on time.

The Second Amendment to the Interconnection Agreement imposes substantial duties upon Hanwha. In the original Agreement, Hanwha was required to comply with interconnection requirements, including a power transmission line to the Talofoto substation. Under the Second Amendment, Hanwha is responsible for designing construction of additions at the existing DanDan Substation. It must install facility hardware to provide for “a complete, functional, and operating modification of the DanDan Substation.”²² It is responsible for the design and

²² GPA Petition at EX-A-029.

construction of the interconnection to the existing DanDan Substation along with necessary Facility Hardware.²³

As stated in Resolution No. FY2024-03, the project requires the use of existing spare conduits from DanDan Substation to Talofoto Substation, an upgrade of the conductors from DanDan to Talofoto underground system, an upgrade of the Apra to Talofoto overhead conductors, as well as increased energy storage for additional energy shifting. Hanwha must also perform another System Impact Study.²⁴ It is hoped that Hanwha will comply with these interconnection requirements on a timely basis and ensure commercial operation date for all facilities by December 31, 2025.

If the PUC approves Amendment 2 and the Second Amendment, it should do conditionally, subject to the four conditions stated in Resolution No. FY2024-03. GPA is in an unfortunate predicament. It needs to salvage the Hanwha project in order to comply with the Consent Decree. Other options, such as rebid, do not seem to be feasible. Hanwha is fortunate to be in the right place at the right time.

4. The Provisions of Amendment 2 and the Second Amendment appear to be Standard and Commercially Reasonable.

The Hanwha Renewable Energy Purchase Agreement, Amendment 2, and the Second Amendment appear to be based upon earlier renewable energy contracts, such as the NRG Contract and the KEPCO Contract. Amendment 2 appears to be well written and provides numerous provisions that protect GPA and its ratepayers' interests in the event of contractor default. The Amendment establishes minimum

²³ GPA Petition at EX-A-030.

²⁴ GPA Petition at EX-A-002.

annual production requirements. In the case of delay of the Commercial Operation Date, maximum daily delay liquated damages are provided which range from \$1,250/Day to \$10,000/Day, depending on how long after the Scheduled Commercial Operation Date actual operation occurs. The ALJ has reviewed both the 2018 Hanwha Renewable Energy Acquisition Power Purchase Agreement, Amendment 2, and the Second Amendment and believes that the appropriate changes have been made. Amendment 2 also contains insurance, indemnity, alternative dispute resolution, and default procedures.

RECOMMENDATION

The ALJ recommends that the PUC approve Amendment 2 to Hanwha Energy Corporation's Phase II Renewable Energy Acquisition Power Purchase Agreement and the Second Amendment to the Interconnection Agreement, subject to the four conditions set forth in Guam Consolidated Commission on Utilities Resolution No. FY2024-03.

A Proposed Order is submitted herewith for the consideration of the Commissioners.

Dated this 22nd day of November, 2023.

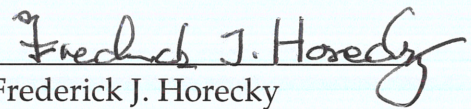

Frederick J. Horecky
Chief Administrative Law Judge

EXHIBIT B
Proposal Evaluation Summary

CASE	Description	Project Size	5 Year Projected Savings On Current LEAC (\$115/MWH)	5 Year Projected Savings on Projected LEAC
1	Hanwha Energy Corporation Proposal 1&2 (60MW)	60 MW	\$ 22,820,053	\$ 44,934,650

Contract Year	Year 1	Year 2	Year 3	Year 4	Year 5	TOTALS
Hanwha Proposal 1 Energy Rate (\$/MWH)	62.45	63.08	63.71	64.35	64.99	
Energy Guarantee (MWH)	72,005	71,831	71,245	70,865	70,485	
Hanwha Proposal 2 Energy Rate (\$/MWH)	65.99	66.65	67.32	67.99	68.67	
Energy Guarantee (MWH)	72,005	71,831	71,245	70,865	70,485	
Hanwha Microgrid Operations Option	\$ 2,574,164	\$ 2,529,420	\$ 2,489,938	\$ 2,450,458	\$ 2,413,608	
Phase II Energy Costs	\$ 11,822,486	\$ 11,848,056	\$ 11,825,170	\$ 11,828,732	\$ 11,834,633	\$ 59,159,077
Current LEAC Rate (\$/MWH)	115	115	115	115	115	
Current Energy Costs	\$ 16,561,150	\$ 16,521,130	\$ 16,386,350	\$ 16,298,950	\$ 16,211,550	\$ 81,979,130
Proposed Savings	\$ 4,738,664	\$ 4,673,074	\$ 4,561,180	\$ 4,470,218	\$ 4,376,917	\$ 22,820,053

Year	2019	2020	2021	2022	2023	TOTALS
Projected LEAC Rate* (\$/MWH)	122.27	140.02	154.63	154.03	159.65	
Current Energy Costs	\$ 17,608,221	\$ 20,115,743	\$ 22,033,092	\$ 21,830,945	\$ 22,505,726	\$ 104,093,728
Proposed Savings	\$ 5,785,735	\$ 8,267,687	\$ 10,207,922	\$ 10,002,213	\$ 10,671,093	\$ 44,934,650

STRATEGIST CASE SUMMARY

	Base Case (No Phase II)	Case 1 (60MW)	SAVINGS
Present Value Utility Cost ³ (\$000)	6,896,417	6,662,844	233,572

Notes:

- 1. The Current LEAC is used in this case evaluation to demonstrate minimum savings potential with \$115/MWH LEAC rate presently proposed for next LEAC period.**
- 2. Projected LEAC is based on STRATEGIST software output that analyzes generation costs for various generation resources and its operating characteristics. This LEAC is based on load and fuel forecasts done by LEIDOS in 2016.**
- 3. Present Value Utility Cost is an evaluation of generation operating costs in the STRATEGIST software. This is used to determine cost impact of generation resources and their operation variables (efficiency, fuel costs, capacity, etc.) based on energy requirements.**