

GUAM PUBLIC UTILITIES COMMISSION
REGULAR MEETING
October 31, 2019
Suite 202, GCIC BUILDING, HAGATNA



MINUTES

The Guam Public Utilities Commission [PUC] conducted a regular meeting commencing at 6:30 p.m. on October 31, 2019, pursuant to due and lawful notice. Commissioners Johnson, Perez, Montinola, McDonald, Cantoria, and Miller were in attendance. The following matters were considered at the meeting under the agenda included as *Attachment "A"* hereto.

1. Approval of Minutes

The Chairperson announced that the first item of business on the agenda was approval of the minutes of September 26, 2019. Upon motion duly made, seconded, and unanimously carried, the Commission approved the minutes subject to correction.

2. Docomo Pacific, Inc.

The Chairperson announced that the next item of business was Docomo Pacific, Inc. [Docomo] Docket 19-01, Petition for Approval of Interconnection Agreement, ALJ Report, and Proposed Order. ALJ Horecky stated the Interconnection Agreement concerned a wireline interconnection between Docomo and TeleGuam Holdings LLC [TeleGuam], and that federal law requires the Commission to review the agreement. ALJ Horecky stated that for the past several years Docomo relied on an Interconnection Agreement between IT&E and TeleGuam that the Commission had previously approved as an adopted agreement, however, Docomo and TeleGuam have negotiated this new agreement which must be approved by the Commission. ALJ Horecky stated that the agreement provides a reciprocal access and non-access arrangement between the parties, and that the agreement focused more on non-access, which means non-interstate or local communications, than access communications, that the agreement had a term of three years, and that the parties would interconnect via fiber optic interface at an interconnection point. ALJ Horecky stated that the Commission could reject the interconnection agreement if it found that it discriminates against a carrier that is not a party to the agreement or if the implementation of any portion of the agreement is inconsistent with public interest, convenience, or necessity and that neither factor is present in this agreement, and he stated that the agreement's rates and pricing were those previously approved by the Commission. ALJ Horecky recommended that the Commission approve the agreement. Commissioner Montinola

moved to approve the Docomo-TeleGuam Interconnection Agreement, which motion was seconded by Commissioners Miller and Perez. The motion carried unanimously.

3. Port Authority of Guam

The Chairperson announced that the next item of business was Port Authority of Guam [PAG] Docket No. 20-01, Petition to Approve Contract for A/E Design and Consulting Services for the Structural Repair of Golf Pier, Legal Counsel Report and Proposed Order. Legal Counsel Camacho stated that PAG's petition was for the EQMR, Warehouse No. 1, and the Waterline. Legal Counsel Camacho stated that the EQMR building and Warehouse No. 1 are two of PAG's principal buildings and that neither was small in size because the former is half an acre in size, and the latter was over an acre in size, and that both structures were built in 1968. Legal Counsel Camacho stated that the Waterline Replacement project entailed replacing the PAG's ten-inch and sixteen-inch water lines which not only provide water to PAG, but are also connected to the fire suppression systems of the PAG's buildings, pier, and container yard. Legal Counsel Camacho stated that PAG had awarded for the contract for the A/E Design and Consulting Services for these projects to Macario & Associates [M&A], that the contract price was \$1.4 million. Legal Counsel Camacho stated that M&A would have to complete an investigation phase to determine what structural repairs and renovations would be required for each of the projects, it would have to complete a design phase in which it develops the design and cost estimates for each of the projects, and it would have to complete a building phase in which it would assist the PAG in soliciting for and obtaining a contractor to complete the projects. Legal Counsel Camacho stated that PAG did not obtain the Commission's prior approval of the solicitation because it did not know whether the resulting offers would come in above the PAG's \$1 million contract review threshold and he recommended that the Commission approve the contract because it was reasonable, prudent, and necessary. PAG Director Respecio requested that the Commission approve the contract and he stated that PAG has been trying to be prudent with the use of its revenue bonds and that these projects are part of the PAG's port modernization program and are necessary for the military build-up on Guam and that PAG needs this contract so that it can develop the solicitation to obtain a contractor that will complete these projects. Commissioner Perez moved to approve the contract, which motion was seconded by Commissioner Montinola. The motion carried unanimously.

4. Guam Power Authority

The Chairperson announced that the next item of business was the Guam Power Authority's [GPA] Docket No. 19-03, GPA Petition to Approve the Energy Conversion Agreement [ECA] with KEPCO for the 198 MW Power Plant, Concentric Energy

Advisor's [CEA] Report, ALJ Report, Chairperson's Report, and Proposed Order. ALJ Horecky stated that CEA is one of the Commission's consultants and they were tasked with determining whether the ECA was reasonable. ALJ Horecky stated that CEA benchmarked the ECA against best practices and CEA determined that the ECA was reasonable. ALJ Horecky stated that CEA conducted an exhaustive review of the provisions of the ECA and it determined that the ECA complies with best practices, that the ECA would meet GPA's needs, that the ECA would be environmentally compliant, and that the new plant would have the flexibility of supporting at least 100MW of renewable energy, and that the cost of building and operating the plant is fair. ALJ Horecky stated that CEA concluded that Guam is too small a jurisdiction to replace its current Cabras plants with renewable energy because Guam is not able to buy or sell power to other jurisdictions because it is an island.

ALJ Horecky stated that in his very detailed report, that he recommends that the Commission approve the ECA and that Guam would incur severe consequences if the ECA were not approved and the new power plant were not built or its construction was further delayed. ALJ Horecky described the detailed background of how the ECA was developed, including GPA's 2008 Integrated Resources Plan, and how that plan was modified by the Commission's 2012 rejection of GPA's proposed LNG conversion plan and that plan's new 60-120MW gas-fired combined cycle power plant, and by the Commission's 2015 rejection of GPA's proposed new 120MW dual fired combined cycle generation plant because GPA had not shown a need for a new generation facility, and how GPA's situation had changed as a result of the explosion and fire of the Cabras 3 & 4 power plants on August 31, 2015 and the consequential loss of 78MW of baseload generating capacity when those two plants went off-line permanently. ALJ Horecky stated that GPA submitted its Reserve Generation Restoration Plan in October, 2015 which showed that GPA could not meet Guam's power needs without Cabras 3 & 4, and the Commission approved GPA's request to procure a new 180MW power plant on October 27, 2016 and the Commission had also found that neither LNG fuel or renewable energy were viable alternatives for GPA's fossil fuel base-load generation. ALJ Horecky stated that on October 30, 2018, the Commission approved GPA's solicitation for the new power plant and subsequently, the Commission approved GPA's acquisition of three lots in Ukudo, Dededo for the future home of the new power plant. ALJ Horecky went on to describe other projects that the Commission has approved and that GPA has undertaken to construct the new power plant in Dededo and that the current ECA is the result of the Commission's extensive and exhaustive review of GPA's plans for a new power plant over the last ten years.

ALJ Horecky stated that KEPCO submitted the lowest qualified bid with a twenty-five-year net present value of \$3.1 billion which is inclusive of the total fuel costs that GPA will supply the plant for the twenty-five-year period. ALJ Horecky stated that the Rate Impact of the new plant would be that after the new plant begins its operations in 2023, there would be a 7.9% rate reduction for most ratepayers, and that based on the

most reliable current information, the ECA would not result in an adverse rate impact. ALJ Horecky stated that the Commission conducted four public hearing concerning the ECA and that the public comments that arose from those hearing was duly recorded and considered. ALJ Horecky stated that there would be serious consequences if the Commission did not approve the ECA, mainly because the ECA and the retirement of the Cabras 1 and 2 plants by October 31, 2022 is a centerpiece in the settlement negotiations between GPA and the U.S. Environmental Protection Agency [USEPA] which has found that GPA's remaining Cabras plants are not in compliance with current emissions regulations and that the potential fines, if imposed, and potential litigation of this matter would be substantial and would have a very adverse rate impact. ALJ Horecky stated that the Commission should not delay approving the ECA to conduct further studies into renewable energy alternatives because GPA has already conducted fifty-seven such studies and the most recent one indicated that GPA will not be able to integrate more renewable energy into its system and retain its reliability without a flexible gas-powered generation plant and because GPA's existing renewable energy sources, specifically the 24MW Dandan Solar Plant, has shown that the current technology producing renewable energy on Guam is unreliable and that GPA has taken every reasonable measure to incorporate renewable energy into the power system.

ALJ Horecky stated that the ECA will result in KEPCO building and operating the plant and that GPA will only be purchasing energy from KEPCO and that KEPCO has over fifty years of experience in the energy sector and currently provides ninety-four percent of South Korea's electrical needs and that the Commission must resist attempts by the ECA's opponents to retroactively bar KEPCO from being awarded the ECA contract due to the highly likely protracted and expensive such a move would result in. ALJ Horecky stated that other opponents of the ECA state that the plant will become a stranded asset because renewable energy technology is progressing and this will result in reliable base-load generation based on renewable energy alone, but this theory is not shown in the studies which indicate that Guam needs the new plant now to ensure the reliability of the power system in the near future and ALJ Horecky reminded the Commission that the it rejected the "stranded asset argument" in 2015 when it found that if renewable energy created more of GPA's baseload generation the new plant would still be useful as peaking units which would allow GPA to retire its older, costly, and less efficient peaking units. ALJ Horecky stated that the Commission should reject the opponents of the ECA who claim that Guam should have one-hundred percent renewable energy now because this is completely impractical, non-feasible, and an unrealistic alternative to the new plant and the ECA because solar energy does not provide the firm and reliable generation capacity of a fossil fuel plant, and because solar energy is far more expensive to produce than fossil fuel energy. ALJ Horecky stated that the new plant will produce less harmful emissions and green house gasses than GPA's existing plants and that the USEPA has approved of the new plant and the ECA because it complies with the federal Clean Air Act. ALJ Horecky emphasized his recommendation that the Commission approve the proposed plant and the ECA for all

the reasons he provided in his report. See *Attachments "B" and "C"* hereto, summaries of ALJ Horecky's presentation.

The Chairperson stated that he would like to talk about some of the communities mentioned by the opponents of the ECA as models that the Commission should follow in implementing more renewable energy instead of the proposed plant and the ECA. The Chairperson stated that he spoke with Finoti Perlini who is the chairman of the board of American Samoa's power authority and that Perlini stated that American Samoa currently pays about 30 cents per Kilowatt-hour, which is high compared to Guam, and American Samoa hopes to reduce the cost of electricity by implementing more solar power and that in his research, the Chairperson discovered that American Samoa is not comparable to Guam because its peak load is only 23MW which is less than 10% of Guam, and that American Samoa has experienced set backs with solar energy, such as a the fire at a solar plant on the American Samoan island of Ofu, which almost destroyed most of the power infrastructure on that island. The Chairperson stated that he spoke with Vic April, counsel for Palau on Guam who stated that Palau signed a contract with a French solar company to construct a solar plant that would have supplied forty-five percent of the electrical needs of Koror and Babeldaob, but the Palau Senate rejected the contract because it would have increased Palau's electrical rates to over twenty-cents a kilowatt-hour which was very high. The Chairperson researched Puerto Rico, which has a mixed system of renewable energy and fossil based fuels and discovered that when its electrical system was knocked out for the better part of a year by Hurricane Maria in 2017, up to 2,975 people perished there as a result of this prolonged lack of electricity on medically compromised persons and as a result of waterborne diseases caused by most of Puerto Rico's people drinking contaminated water because they lacked the electricity needed to purify it, and that Guam is fortunate to have GPA's power system because it is more resilient to natural disasters than Puerto Rico's power system. The Chairperson stated that he spoke to Jackson Dailey, the Assistant City Manager of Georgetown, Texas who stated that although Georgetown's power system is based solely on renewable energy, the city had overbought and overpaid on its twenty-five year fixed price renewable contracts and that the city is currently trying to renegotiate them or get out of them. The Chairperson stated that he researched the Hawaiian island of Kawaii, which has fifty-five percent of its power based on renewable energy, and that when their diesel generators go down, they have to load shed because their renewable energy resources are simply not as reliable as their fossil fuel-based generators. The Chairperson stated that he also looked into California and he advised that California's approach to renewable energy would be as disastrous for Guam as it is for them, and that other countries mentioned during the public hearings, are blessed by their geography which supports one hundred percent renewable energy based on thermal heat from active volcanoes or hydroelectric dams, which Guam is unable to have based on its geography. The Chairperson stated his research into the other jurisdictions that are moving aggressively into renewable energy

indicates that for the near future, Guam must rely on traditional fossil fuel-based generation facilities while it builds up its renewable energy resources over time.

GPA General Manager [GM] Benavente stated that even with battery storage, which is expensive, solar energy would not be a reliable alternative to the new power plant and the ECA, that GPA's power infrastructure is very strong and reliable, and requires the new power plant to ensure that GPA has a solid, dependable supply of power to feed into the infrastructure. GPA GM Benavente stated that the Consolidated Commission on Utilities [CCU] and the Commission have been challenging GPA to make the best deal for the ratepayers possible and that GPA has met this challenge with the new power plant and the ECA. GPA GM Benavente stated that the new plant's cost would be 10 cents per kilowatt hour as compared with the current LEAC rate of 15 cents per kilowatt hour and that over time, the plant will pay for itself and he asked the Commission to approve the new power plant and the ECA so that GPA could move on and begin the project.

GPA Attorney Graham Botha then introduced Matt Marson, GPA's Washington D.C. based attorney who is negotiating a consent decree between GPA and the USEPA. Marson stated that the USEPA case against GPA for its alleged violations of emissions regulations and the federal Clean Air Act is a substantial one, and despite this, the settlement that was reached between GPA and the USEPA is very fair and that the mix of renewable and traditional fossil fuel plants GPA has and will develop with the new plant is going to give Guam a very stable, reliable, and cost effective mix of energy for decades to come. Marson stated that GPA should be commended for the additional 120 MW of energy that will be going into the system on top of its existing renewable energy portfolio and that the traditional power GPA will have as a result of the new power plant will be a much cleaner and greener supply of energy and that he endorses the ECA as well as the settlement between GPA and USEPA.

Commissioner Montinola inquired as to whether there would be fines if the Commission were to delay approving the ECA. Marson stated that if there were any further delays, the USEPA would probably file a complaint against GPA, there would be depositions, the amount of the fines would continue to mount, and getting a favorable outcome in such litigation would be tricky because GPA's fate would be in the hand of a judge. The Chairperson stated that potential USEPA fines could be between \$350 million to \$600 million and Marson confirmed that this might be so because such fines are now approximately \$99,000 per day per violation and GPA may have been in violation for the past four to six years, and that the \$400,000 amount in fines which is part of the settlement between GPA and USEPA is a good deal.

Commissioner Cantoria inquired as to whether the new plant would satisfy USEPA's emission requirements despite using fossil fuel and Marson confirmed that it would do so because its emissions would comply with the federal Clean Air Act.

Commissioner McDonald inquired as to whether the new power plant and the ECA were one of the steps required to reduce the USEPA fines from about \$600 million to \$400,000 and Marson confirmed this was so and he stated that the \$600 million was the maximum statutory amount that USEPA could fine GPA and that the \$400 million was even lower than what the USEPA typically recovers in such settlements.

Commissioner Montinola inquired as to what provisions were in the ECA to prevent KEPCO from delaying the completion of the new power plant. ALJ Horecky stated that the new plant has to be funded by KEPCO and that KEPCO had to retain twenty-percent equity in the project, that GPA would retain a \$3 million bid guarantee paid by KEPCO until KEPCO reaches financial closure on the project, that KEPCO would provide and maintain \$63.8 million as security for the duration for the construction period, that liquidated damages could be imposed on KEPCO in amounts similar to the fines that the USEPA could impose on GPA, that KEPCO has to come up with \$15 million at the time it transfers the plant to GPA to ensure that it is in good working order, that there were default and termination provisions, and that all of these provisions provide substantial protections for GPA.

Commissioner Miller inquired as to how long the new plant would be in compliance with federal emission requirements. Marson stated that the emissions requirements are fairly recent and are based on what the best power plants are capable of achieving and that, albeit it is difficult to predict how the federal government might change these requirements in the future, with the new plant, GPA will be well positioned to comply with them.

Commissioner Perez inquired as to how much GPA on the fifty-seven studies that it conducted concerning the new power plant in the last ten years. GPA GM Benavente stated that the amount is really a small amount of the total saving that GPA is going to have with the new plant. GPA GM Benavente stated that the new plant is also going to make it easier for GPA to integrate more renewable energy in the future and that GPA is currently in the process of contracting for more renewable energy and will continue to do so in the future. The Chairperson inquired as to whether GPA's current net metering program and GPA's solar plant in Dandan were a combined system or separate systems and GPA GM Benavente confirmed that the two were separate systems and that GPA needed an integrated system, and that GPA was trying to make Dandan more reliable by bringing in a battery system.

Commissioner Perez inquired as to how many GPA employees would be affected by the eventual retirement of the Cabras 1 and 2 plants and GPA GM Benavente stated that thirty to fifty employees would be affected and there are opportunities to place them elsewhere and that GPA had to develop a downsizing plan as well if it retired any more of its older units. Commissioner Montinola moved to approve the proposed order,

which motion was seconded by Commissioner Perez. The motion carried unanimously and was confirmed by a poll vote conducted by the Chairperson.

CCU Chairman Joey Duenas thanked the commissioners and GPA's management team for all the hard work they put in to this process.

5. Administrative Matters.

The Chairperson announced that the next item of business was the date of the Commission's next meeting and a discussion ensued between the commissioners and Doris Flores Brooks, who was recently appointed by the Governor to be a Commissioner, as to their availability during the holiday season wherein Doris Flores Brooks stated that it was unlikely that she would be confirmed by the Guam Legislature prior the Commission's next meeting. Commissioner McDonald moved to hold a special meeting on December 5, 2019, which motion was seconded by Commissioner Montinola. The motion carried unanimously.

The Chairperson inquired as to whether the Commission would have a regular meeting in late December, 2019 and a discussion ensued between the commissioners concerning their availability for such meeting. Commissioner McDonald moved to not conduct a regular meeting for the Commission in late December, 2019, which motion was seconded by Commissioner Perez. The motion carried unanimously.

The Chairperson announced that the next item of business was the Guam Water Works Authority's [GWA] Ribbon Cutting Ceremony for the Sinifa, Santa Rita, and Santa Rosa Reservoir Project. ALJ Horecky stated that this was informational and that all of the Commissioners had received an invitation for the ceremony which will be held on November 5, 2019 at 4:00 p.m. in Santa Rita, and that GWA confirmed that the ceremony was for a ground-breaking and not a ribbon cutting.

There being no further administrative matters or business, the Commissioners moved to adjourn the meeting.

A handwritten signature in blue ink, appearing to read 'J. Johnson', is written over a horizontal line.

Jeffrey C. Johnson
Chairperson

ATTACHMENT A
THE GUAM PUBLIC UTILITIES COMMISSION
NOTICE OF PUBLIC MEETING

NOTICE IS HEREBY GIVEN that the Guam Public Utilities Commission [PUC] will conduct a regular business meeting, commencing at 6:30 p.m. on October 31, 2019, at Suite 202 GCIC Building, 414 W. Soledad Ave., Hagatna.

The following business will be transacted:

Agenda

1. **Approval of Minutes of September 26, 2019**
2. **Docomo Pacific Inc.**
 - **Docomo Docket 19-01, Petition for Approval of Interconnection Agreement, ALJ Report, and Proposed Order**
3. **Port Authority of Guam**
 - **PAG Docket 20-01, Petition to Approve Contract for A/E Design and Consulting Services for the Structural Repair of Golf Pier**
4. **Guam Power Authority**
 - **GPA Docket 19-13, Petition to Approve Energy Conversion Agreement (ECA) with KEPCO for the 198MW Power Plant, Concentric Energy Advisors Report, ALJ Report, Chairman's Report, and Proposed Order**
5. **Administrative Matters**
 - **Meeting Date for November Meeting**
 - **GWA Ribbon Cutting for Sinifa, Santa Rita and Santa Rosa reservoir project**
6.
 - **Other Business**

Further information about the meeting may be obtained from the PUC's Administrator Lou Palomo at 472-1907. Those persons who require special accommodations, auxiliary aids, or services to attend the meeting should also contact Ms. Palomo.

This Notice is paid for by the Guam Public Utilities Commission

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION



IN RE:)
) DOCOMO DOCKET 19-01
)
PETITION OF DOCOMO PACIFIC FOR)
APPROVAL OF WIRELINE) **ORDER**
INTERCONNECTION AGREEMENT)
PURSUANT TO SECTION 252 OF THE)
TELECOMMUNICATIONS ACT OF 1996)

INTRODUCTION

1. This matter comes before the Guam Public Utilities Commission ["PUC"] upon the Petition of Docomo Pacific Inc. ["DPAC"] for approval of its Wireline Interconnection Agreement with TeleGuam Holdings, LLC ["GTA"] pursuant to Section 252 of the Telecommunications Act of 1996.¹
2. DPAC submits its Interconnection Agreement for approval by the PUC in accordance with the terms of Section 252(e) of the Telecommunications Act of 1996. It requests that the PUC approve the Agreement pursuant to the requirements of Section 252(e).²

BACKGROUND

3. On December 23, 2009, the PUC approved an Interconnection Agreement between Guam Telecom LLC [which Docomo later purchased] and GTA Telecom LLC.³
4. On June 20, 2012, the PUC authorized Guam Telecom LLC to "adopt" an Interconnection Agreement that had previously been approved by the PUC between GTA Telecom LLC and Pacific Data Systems.⁴
5. In GT Docket 12-03, the PUC approved the transfer of control and ownership of Guam Telecom LLC to Docomo Guam Holdings Inc.⁵

¹ Petition of Docomo Pacific Inc. for Approval of Interconnection Agreement pursuant to Section 252 of the Telecommunications Act of 1996, DOCOMO Docket 19-01, filed September 23, 2019.

² Representatives of DPAC and GTA executed the Interconnection Agreement on September 18, 2019 and September 20, 2019, respectively.

³ PUC Order Approving Interconnection Agreement, GT Docket 09-02, dated December 23, 2009.

⁴ PUC Order, GTA Docket 12-03, dated June 20, 2012.

⁵ PUC Order Approving Sale/Transfer of Ownership and Control of Guam Telecom LLC, GT Docket 12-03, dated December 18, 2012.

6. In Docomo Docket 16-01, the PUC approved the transfer of Certificates of Authority from Guam Telecom LLC to DPAC.⁶
7. Since the transfer of ownership and control of Guam Telecom LLC, DPAC has been utilizing the “adopted” Interconnection Agreement that had previously been approved by the PUC between GTA Telecom LLC and Pacific Data Systems. DPAC determined that it would negotiate its own Interconnection Agreement with GTA.⁷
8. In the instant docket, after discussion and negotiations, on September 23, 2019, DPAC and GTA filed their final, executed Interconnection Agreement with the PUC.
9. The ALJ filed his Report herein dated October 16, 2019. The PUC adopts the findings and recommendations therein.⁸

DETERMINATIONS

10. 47 U.S.C. §251 provides that each telecommunications carrier has the duty to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers.⁹
11. The duty to interconnect includes providing facilities and equipment for the transmission and routing of telephone exchange service and exchange access at any technically feasible point within the carrier’s network; the interconnection provided must be at least equal in quality to that provided by a local exchange carrier to itself or its subsidiaries and affiliates. The rates, terms and conditions of such access must be just, reasonable and nondiscriminatory.¹⁰

⁶ PUC Order Approving the Transfer of Certificates of Authority from Guam Telecom LLC to Docomo Pacific Inc., Docomo Docket 16-01, dated March 31, 2016.

⁷ Phone Conference between Sean Miles, DPAC Compliance Regulatory Manager, and Frederick J. Horecky, PUC ALJ, on October 15, 2019.

⁸ ALJ Report, Docomo Docket 19-01, dated October 16, 2019.

⁹ 47 U.S.C. §251(a)(1).

¹⁰ 47 U.S.C. §251(c)(2).

12. Where, as in the instant case, parties adopt an interconnection agreement through negotiation, the agreement must be submitted for approval to a state utilities commission such as the PUC.¹¹
13. The Agreement establishes specific interconnection and non-access Reciprocal Compensation arrangements between the parties solely for the exchange of wireline Non-Access Reciprocal Compensation Traffic between each party's End User Customers and Transit Traffic.¹²
14. Non-Access Telecommunications Traffic means "traffic exchanged between a LEC and a telecommunications carrier other than a CMRS, including VOIP-PSTN Traffic that originates and terminates within a single mandatory 2-way local calling area as identified in GTA's Tariff, except for telecommunications traffic that is interstate or intrastate exchange access, information access, or exchange services for such access."¹³
15. Non-Access Reciprocal Compensation is an arrangement between two communications service providers that is either a Bill-and-Keep Arrangement or an arrangement in which each carrier receives intercarrier compensation for the transport and termination of Non-Access Telecommunications Traffic.¹⁴
16. Under the "Bill-and-Keep" arrangement, "the company billing the call gets to keep all the money."¹⁵
17. The Interconnection Agreement contains a detailed explanation of the terms and arrangements between the parties. There are various attachments to the Agreement which cover: (1) Glossary of Terms; (2) Pre-Ordering, Ordering, Provisioning, Maintenance and Repair; (3) Local Number Portability; (4) Interconnection; (5) 911; and (6) Pricing.

¹¹47U.S.C. §252(e)(1).

¹² Attachment A to Docomo Pacific Inc. Petition, DOCOMO Docket 19-01, Wireline Interconnection Agreement between Docomo Pacific Inc. and TeleGuam Holdings, LLC, at p. 1.

¹³ Id., at GLOSSARY, General Terms and Conditions, §2.43.

¹⁴ Id., at GLOSSARY, General Terms and Conditions, §2.42.

¹⁵ Newton's Telecom Dictionary (25th Anniversary Edition), definition of "Bill-and-Keep."

18. The Wireline Interconnection Agreement provides for a term of three (3) years.¹⁶
19. The parties physically interconnect their networks via an optical fiber interface at a point of interconnection. The point of interconnection is the location where one party's facilities, provisioning, and maintenance responsibility begins and the other party's responsibility ends.¹⁷
20. The Agreement provides detailed provisions concerning services to be provided, payment requirements, dispute resolution, handling of confidential information, default, good faith performance, indemnification, insurance, liabilities and other matters.¹⁸
21. The Wireline Interconnection Agreement negotiated by the parties in this Docket is very similar, with regard to terms and conditions, to the Wireline Interconnection Agreement between PTI Pacifica Inc. and GTA, which was approved by the PUC in PTI Docket 19-02.¹⁹
22. The PUC may only reject an interconnection agreement if: (1) The agreement or portion thereof discriminates against a telecommunications carrier not a party to the agreement; or (2) The implementation of such agreement or portion is not consistent with the public interest, convenience, and necessity.²⁰
23. The Agreement does not discriminate against a telecommunications carrier not a party to the Interconnection Agreement pursuant to the standards set forth in 47 USC §252[e][2][A]. In the Agreement, it is specified that neither party will use any service provided which in any manner prevents other persons from using their service or destroys the normal quality of service to other carriers or to either party's customers.

¹⁶ Attachment A to Docomo Pacific Inc. Petition, DOCOMO Docket 19-01, Wireline Interconnection Agreement between Docomo Pacific Inc. and TeleGuam Holdings, LLC, at p. 2.

¹⁷ Id., at Interconnection Attachment, §3.4.3.

¹⁸ Attachment A to Docomo Pacific Inc. of Petition, at pgs. 1-23.

¹⁹ PUC Order, PTI Docket 19-02, dated March 28, 2019, at p. 4.

²⁰ 47U.S.C. §252(e)(2).

24. The Interconnection Attachment, §7.5 (Network Harm), provides that “Neither party will use any service related to or provided in this Agreement in any manner that interferes with third parties in the use of their service, prevents third parties from using their service, impairs the quality of service to other carriers or to either party’s end User Customer; causes electrical hazards to either party’s personnel, damage to either party’s equipment or malfunction of either party’s billing equipment...”²¹
25. The Agreement is consistent with the public interest, convenience and necessity. In accordance with the Guam Telecommunications Act of 2004, it is in the public interest to provide the people of Guam with modern, innovative, accessible, and affordable telecommunication services and products. This Agreement will enable the parties to provide telecommunications services and products to their customers.
26. The rates in the Pricing Attachment appear to be “just and reasonable”, as they are based upon the pricing set forth in GTA’s General Exchange Tariff (GET).

ORDERING PROVISIONS

After careful review of the record herein, the proposed Wireline Interconnection Agreement of DPAC and GTA, and considering the recommendations of the ALJ, for good cause shown, on motion duly made, seconded and unanimously carried by the undersigned Commissioners, the Guam Public Utilities Commission hereby **ORDERS** that:

1. The Interconnection Agreement between DPAC and GTA is approved pursuant to 47 USC 252[e][4].
2. The Interconnection Agreement satisfies the requirements of 47USC §252[e][2]. It does not discriminate against any non-party to the Interconnection Agreement.
4. In the event that the parties further revise, modify, or amend the Interconnection Agreement approved herein, the revised, modified or amended Interconnection

²¹ Attachment A to Docomo Pacific Inc. Wireline Interconnection Agreement, Interconnection Attachment, at §7.5.

Agreement shall be submitted to the PUC for approval pursuant to 47 USC 252[e][1] prior to taking effect.

5. DPAC is ordered and directed to pay the PUC's regulatory expenses and fees in this Docket.

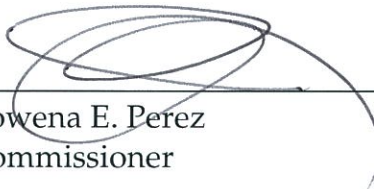
[SIGNATURES TO FOLLOW ON NEXT PAGE]

Order
In Re: Petition of DPAC
For Approval of ICA
DOCOMO Docket 19-01
October 31, 2019

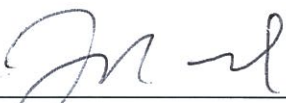
Dated this 31st day of October, 2019.



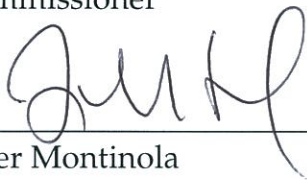
Jeffrey C. Johnson
Chairman



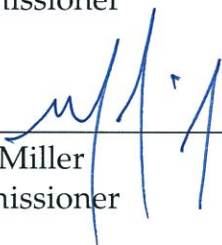
Rowena E. Perez
Commissioner



Joseph M. McDonald
Commissioner



Peter Montinola
Commissioner



Mark Miller
Commissioner

Michael A. Pangelinan
Commissioner



Filomena M. Cantoria
Commissioner



BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

IN THE MATTER OF:

PAG DOCKET 20-01

**PORT AUTHORITY OF GUAM'S
PETITION FOR APPROVAL OF
CONTRACT FOR A/E DESIGN &
CONSULTING SERVICES FOR THE
EQMR, WAREHOUSE NO. 1, AND
WATERLINE REPLACEMENT
PROJECTS**

ORDER

INTRODUCTION

1. This matter comes before the Guam Public Utilities Commission ["PUC"] pursuant to the Port Authority of Guam's ["PAG"] Petition for Approval of its contract with N.C. Macario & Associates, Inc. ("Macario & Associates") for the Architectural & Engineering [A/E] Design and Consulting Services for the Equipment, Maintenance, and Repair Building [EQMR], Warehouse No. 1, and the Waterline Replacement Projects.¹
2. PAG requests that the PUC approve the \$1,406,427.48 PAG/Macario & Associates Contract for A/E Design & Consulting Services for the EQMR, Warehouse No. 1, and the Waterline Replacement Projects.

BACKGROUND

3. PAG's EQMR has 24,000 square feet of space, it was constructed in 1968, and currently houses PAG's maintenance and repair supply management staff. PAG's Warehouse No. 1 has 55,000 square feet of space, it was also constructed in 1968, and is currently occupied by various PAG Departments including its Operations, Riggers, and Police Departments.² The A/E Design and Consulting Services are necessary to develop assessment reports, plans specifications, and cost estimates to be used to repairing and retrofitting the EQMR and Warehouse No. 1 to preserve the structural integrity of the buildings and to build additional office space, and to

¹ PAG Petition for Approval of Contract for A/E Design & Consulting Services for the structural repair of Warehouse No. 1 and the Waterline Removal Projects under the Contract Review Protocol, PAG Docket 20-01 ["PAG Petition"], filed on October 14, 2019 at 1.

² PAG-RFP-019-002 (A/E Design Consulting Services for Warehouse 1 and EQMR Building Upgrades, and Waterline Replacement), Attachment 1, Scope of Services, Paragraph 1, Warehouse 1 and EQMR Building, attached as Exhibit A to PAG Board Resolution No. 2019-10 [PAG Board Resolution].

modernize both buildings to ensure they comply with modern fire and electrical code requirements.³

4. The PAG's existing main water lines are over fifty-years old and some contain asbestos pipes. The main line is 16 inches in diameter and it distributes water to other lines throughout PAG's container yard. The other water lines are 16-inch and 10-inch diameter lines that run diagonally through the container yard and return to Route 11. PAG's water system also includes a 10-inch diameter looped system that covers the waterfront with feeds to the buildings on the west end of the terminal. The 10-inch diameter lines connect to six-inch diameter lines that are linked to fire suppression systems in the PAG's buildings and to fire hydrants in the container yard.⁴ The Water Line Replacement Project is necessary because PAG has experienced fifteen major water leaks in the past three years and includes the relocation of the main service feed line from the container yard to Route 11, additional water lines to increase system redundancy, and to improve water pressure to meet modern building codes and safety and U.S. Coast Guard codes governing firefighting operations.⁵
5. PAG determined that a private contractor would be more effective for completing the extensive A/E Design and Consulting work required to design and oversee these projects and issued PAG-RFP-19-003 (A/E Design Consulting Services for Warehouse 1 and EQMR Building Upgrades, and Waterline Replacement) [RFP] on January 8, 2019.⁶
6. A total of seven firms submitted offers in response to the RFP and PAG determined that Macario & Associates was the most qualified firm to provide the A/E Design & Consulting Services for the projects.⁷
7. On October 10, 2019, the PAG approved the PAG/Macario & Associates Contract for A/E Design & Consulting Services for the EQMR, Warehouse No. 1, and the Waterline Replacement Projects for \$1,004,935.94 for the EQMR and Warehouse No. 1 Projects, and \$401,491.54 for the Waterline Replacement Project, for a total of \$1,406,427.48, to be paid out of PAG Bond Indentures and Investment Projects, subject to PUC's approval.⁸

³ Id.

⁴ Id., at Paragraph 2, Waterline Replacement.

⁵ Id.

⁶ PAG Board Resolution at 1.

⁷ Id.

⁸ Id., and PAG Petition at 1.

DETERMINATIONS

8. The PUC's Contract Review Protocol for PAG mandates that PAG must obtain PUC approval for all professional service contracts in excess of \$1,000,000 and for any contract that exceeds the amount of \$1,000,000.⁹ Here, the PUC must approve the PAG/Macario & Associates Contract for A/E Design & Consulting Services for the EQMR, Warehouse No. 1, and the Waterline Replacement Projects because its \$1,406,427.48 cost exceeds the \$1,000,000 contract review amount.
9. PAG is required to obtain the PUC's approval of contracts in excess of \$1,000,000 prior to beginning the procurement process. It appears that this was not done in this case because PAG likely did not believe that the RFP's contract would exceed the amount of \$1,000,000 at the time it solicited for the bids.
10. PAG also made a good faith attempt to negotiate the lowest cost for this contract. PAG successfully negotiated a fourteen percent reduction of the original contract price offered by Macario & Associates which resulted in the final contract price of \$1,406,427.48.¹⁰
11. The EQMR and Warehouse No. 1 Building Projects and Waterline Replacement Projects are, considering the age and condition of important aspects of PAG's infrastructure, vital to ensure PAG continues to provide a sustainable, healthy, and safe environment for its employees, tenants, and the vessels and public it serves.
12. The RFP Scope of Services justifies the \$1,406,427.48 cost of the contract. Said scope of services includes an Investigation Phase in which Macario & Associates will determine what structural repairs and renovations are needed for the EQMR, Warehouse No. 1, and the Waterline, a Design Phase to develop and provide the designs and cost estimates of the structural repairs, renovations, and the new waterline system, a Bidding Phase to assist PAG with soliciting for and obtaining a contractor to perform the construction required by these projects, and Construction Services which include inspections and oversight of the construction contractor to ensure the improvements are constructed in accordance with the design.¹¹

⁹ PUC Order re Contract Review Protocol for PAG, PUC Administrative Docket 09-01, filed on June 20, 2011 ["PAG Contract Review Protocol"] at paragraphs 1(c) and (e) at 1.

¹⁰ PAG Petition at 1.

¹¹ RFP, Attachment 1, Scope of Services, Paragraph 1, Warehouse 1 and EQMR Building, Paragraph 2 Waterline Replacement, attached as Exhibit A to PAG Board Resolution.

13. Based on the foregoing, PAG's request to approve the PAG/Macario & Associates Contract for A/E Design & Consulting Services for the EQMR, Warehouse No. 1, and the Waterline Replacement Projects is reasonable, prudent, and necessary.

ORDERING PROVISIONS

After review of the record herein, including PAG's Petition for Approval of its contract with Macario & Associates for the A/E Design & Consulting Services for the EQMR, Warehouse No. 1, and the Waterline Replacement Projects, the PUC Counsel's Report, and for good cause shown, on motion duly made, seconded and carried by the undersigned Commissioners, the Guam Public Utilities Commission **HEREBY ORDERS** that:

1. PAG's Petition for Approval of its contract with Macario & Associates for the A/E Design & Consulting Services for the EQMR, Warehouse No. 1, and the Waterline Replacement Projects is hereby approved.
2. PAG shall file a complete copy of the PAG/Macario & Associates Contract for A/E Design & Consulting Services for the EQMR, Warehouse No. 1, and the Waterline Replacement Projects with the PUC.
3. PAG is ordered to pay the Commission's regulatory fees and expenses, including, without limitation, consulting and counsel fees and the fees and expenses of conducting the hearing proceedings. Assessment of the PUC's regulatory fees and expenses is authorized pursuant to 12 GCA §12002(b) and 12024(b), and Rule 40 of the Rules of Practice and Procedure before the Public Utilities Commission.

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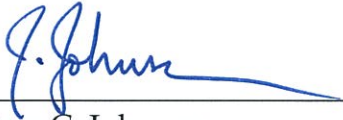
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Order
Petition for Approval of PAG's Contract
For A/E Design & Consulting Services
PAG Docket 20-01
October 31, 2020

Dated this 31st day of October, 2019.

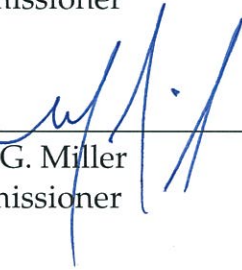


Jeffrey C. Johnson
Chairman



Rowena E. Perez
Commissioner

Michael A. Pangelinan
Commissioner



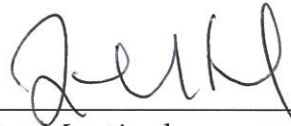
Mark G. Miller
Commissioner



Joseph M. McDonald
Commissioner



Filomena M. Cantoria
Commissioner



Peter Montinola
Commissioner

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION



IN THE MATTER OF:) GPA Docket 19-13
)
The Application of the Guam Power)
Authority to Approve the Energy) **ORDER**
Conversion Agreement (ECA) with)
KEPCO for the 198MW Power Plant.)
_____)

INTRODUCTION

This matter comes before the Guam Public Utilities Commission ["PUC"] upon the Petition of the Guam Power Authority's ["GPA"] for Approval of the Energy Conversion Agreement (ECA) with Korean Electric Power Company ["KEPCO"] for the 198MW Power Plant.¹ GPA asks PUC to approve the ECA and the award of the 198MW Power Plant project, including the construction, operation, and financing.

BACKGROUND

The PUC does not undertake its task to review the award to KEPCO for the 198MW Power Plant and the Energy Conversion Agreement "with a blank slate." For a period of over 10 years, the PUC has been intricately involved in reviewing GPA's plans for generation capacity and a New Power Plant. The Power Plant Plan was jointly formed by GPA and the PUC. PUC has worked with GPA in the development of the Power Plant Plan, the procurement process, the procurement forms, the technical specifications for the Plant, the land siting of the Plant, pipeline improvements, and numerous other aspects.

The Administrative Law Judge filed his Report herein dated October 28, 2019.² Therein he provides a review of docket proceedings since 2008 in which the PUC has been involved in reviewing GPA's plans for a New Power Plant. The PUC adopts the ALJ Report, including the Background Section, and the conclusions in the Report. In its October 27, 2016, Order approving GPA's procurement for a new 180MW Power Plant, the PUC made a number of determinations which guide its decision in this matter: (1) GPA justified the need to procure new generation capacity; Cabras No. 3 & 4 were unavailable, resulting in the loss of 78MW. (2) GPA's current plan to retire the Cabras No. 1 & 2 plants upon the commissioning of the New Power Plant was approved; (3)

¹ GPA Petition for Approval of the Energy Conversion Agreement (ECA) with KEPCO for the 198MW Power Plant, GPA Docket 19-13, filed September 5, 2019.

² ALJ Report, GPA Docket 19-13, dated October 28, 2019.

Based upon the increased need for baseload capacity, GPA had offered sufficient justification to procure a new generation combined cycle plant of 180MW. (4) It was reasonable for GPA to request procurement of 180MW to replace the Cabras No. 1 & 2 plants (132MW) and to offset the loss of the Cabras No. 3 & 4 plants (78MW). (5) Renewable energy was not reliable or stable enough to provide firm baseload generation for Guam. It was “speculation to suggest when renewable energy would be a viable alternative to baseload fossil fuel generation” (emphasis added); (6) GPA was authorized to procure engineering, procurement and construction contractor support for the new combined cycle plant. (7) As to the rate impact of the New Power Plant, GPA was required to provide a fully updated and comprehensive rate impact study. (8) The plan for proceeding with LNG was disapproved, as GPA had not demonstrated that such plan was economically viable.³

On April 17, 2017, the PUC clarified its October 27, 2016 Order to provide that GPA could consider any LNG proposals for the procurement.⁴ No specific plan or proposal for the use of LNG has ever been approved by the PUC to date.

The record establishes that the PUC has conducted an extensive review of GPA’s plans for a New Power Plant over the last 10 years. Given the extensive review by the PUC of the New Plant Power Project over a ten-year period, it would now be a complete reversal of position for PUC to reject the award of the Energy Conversion Agreement to KEPCO. The ten-year process between GPA and PUC of developing and refining the power plant proposal would be discarded. The resources expended over the years by GPA (as well as those of PUC), including purchase of the plant site, would be wasted. Where would a PUC rejection of the New Power Plant, or a delay of decision, leave the ratepayers of Guam? The procurement process would have to be commenced from scratch and could take many more years to complete. No New Power Plant could be built until this new procurement process was completed. The urgent environmental compliance issues of USEPA would go unaddressed. The likely result would be load-shedding, substantial fines for GPA, a degraded and insufficient power system with potential for blackouts, and a possible federal receivership.⁵

**KEPCO’S SELECTION AS MOST QUALIFIED PROPONENT,
IT’S PROPOSAL FOR THE NEW GENERATION PLANT,
AND THE ENERGY CONVERSION AGREEMENT**

³ Id.

⁴ PUC Supplemental Order, GPA Docket 15-05, dated April 27, 2017.

⁵ These issues will be addressed in detail in the “ANALYSIS” Section of this Report.

KEPCO was selected by GPA as a result of a three-step bidding process (GPA's Multi-Step Invitation for Bid (MS IFB) for Build, Operate & Transfer Contract for 120-180MW of New Generation Capacity). In the Request for Qualifications, Step 1, seven of the original 18 proponents were qualified to proceed to Step 2, submission of technical specifications. At step 3, three proponents submitted price proposals. On June 10, 2019, GPA determined that KEPCO was the lowest responsive and responsible proponent.⁶

Along with its Petition, GPA has submitted a proposed Energy Conversion Agreement "ECA" between GPA and KEPCO to Build, Operate, and Transfer (BOT) a 198MW power generation plant. The Agreement provides for the construction, operation and maintenance of the facility over a 25-year term. In accordance with KEPCO's proposal, the Power Plant will include a Combined Cycle Unit: three (3) 44MW Siemens SGT-800 combustion turbine units with heat recovery steam generators (HRSG); one (1) 68MW Siemens steam turbine; one (1) 25MW battery energy storage system, providing up to 15MW output for 30 minutes; and 64.5MW of reserve capacity from high-speed diesel generators.⁷ The cost to build the plant has been estimated in the range of \$600M. KEPCO was the lowest qualified bidder, with a 25-year Net Present Value cost of \$3,121,230,000.⁸ The economic evaluation of KEPCO's bid was based upon net present value, incorporating all costs over the 25-year period. These include: Fixed Capacity Cost, Fixed Operation and Maintenance Cost, Variable Operation and Maintenance Cost, and Fuel Cost.⁹ The estimated annual first-year cost based upon the power plant capacity and production at the 81% capacity factor is \$69,440,216, with a charge to GPA for energy produced at \$0.049/kWh.¹⁰

The draft Energy Conversion Agreement presented by GPA is a document of 298 pages. The document is comprehensive and covers every aspect of the building, construction, financing, and operation of the New Power Plant. The ALJ has reviewed the contract in

⁶ Testimony of General Manager John Benavente for Legislative Oversight Hearing on September 10, 2019, dated September 10, 2019, at p. 3; see also GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p.16.

⁷ Testimony of General Manager John Benavente for Legislative Oversight Hearing on September 10, 2019, dated September 10, 2019, at p. 3; see also GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p.29.

⁸ GPA Application to approve the Energy Conversion Agreement (ECA) with KEPCO for the 198MW Power Plant, GPA Docket 19-13, dated September 5, 2019, at p. 1.

⁹ Testimony of General Manager John Benavente for Legislative Oversight Hearing on September 10, 2019, dated September 10, 2019, at p. 3; see also GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p. 20.

¹⁰ Testimony of General Manager John Benavente for Legislative Oversight Hearing on September 10, 2019, dated September 10, 2019, at p. 3; see also GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p. 3.

its entirety and recommends approval by the PUC. The ECA includes the Technical Specifications that were previously approved by the PUC. The Agreement was drafted by GPA with the assistance of its Consultants Stanley and K&M. GPA GM John Benavente has outlined the specific protections for GPA ratepayers and the government of Guam included in the Agreement¹¹:

“The ECA contains specific protections for GPA ratepayers and the government of Guam:

1. Funding: The generation plant is wholly funded by the proponent and the proponent is required to maintain 20% equity in the project.
2. Bid Guarantee & Construction Security¹²: GPA retains the \$3 million bid guarantee until the proponent reaches financial close, approximately eight (8) months after contract execution. Upon financial close, the proponent is required to provide and maintain \$63.8 million in security for the duration of the construction period, estimated at 28 months.
3. Liquidated Damages¹³: Delay in commissioning is subject to \$2,000 per day for the initial 60 days. Thereafter, the liquidated damages shall be \$240,000 per day for each additional day delayed.
4. Performance Guarantees: The proponent is subject to penalties for excessive forced outages¹⁴
5. Dependable Capacity Tests¹⁵: Calculation of monthly fixed charges are confirmed through capacity tests scheduled prior to commercial operation date and annually thereafter.
6. Transfer of Security at Contract Year 21¹⁶: The proponent must transfer \$15 million as security to ensure plant maintenance is continued until the end of the contract term.
7. Default: The proponent’s lender shall have step-in rights to address and/or correct the proponent’s default.¹⁷ Additionally, upon default of the proponent, GPA may exercise its termination right to purchase the plant at the amount of the outstanding debt.¹⁸”

¹¹ Testimony of General Manager John Benavente for Legislative Oversight Hearing on September 10, 2019, dated September 10, 2019, at pgs. 3-4.

¹² Energy Conversion Agreement, Article 8.5(d).

¹³ Energy Conversion Agreement, Article 8.1.

¹⁴ Energy Conversion Agreement, Article 8.3(a).

¹⁵ Energy Conversion Agreement, Article 7.

¹⁶ Energy Conversion Agreement, Article 17.4.

¹⁷ Energy Conversion Agreement, Article 4.5; and Lender’s Direct Agreement.

¹⁸ Energy Conversion Agreement, Article 4.5(e); and Schedule 8.

The PUC Consultant Concentric Energy Advisors [“CEA”] has submitted its Report, “High Level Review of 198MW Combined Cycle Energy Conversion Agreement,” dated October 16, 2019¹⁹. The Report contains a thorough assessment of the reasonableness of the Energy Conversion Agreement between GPA and KEPCO. CEA concludes that, “when benchmarked against best practices, the ECA proves to be reasonable.” The interests of both parties are balanced, and the pricing components are in line with other documents that Concentric has reviewed or assisted in negotiating. CEA further finds that the ECA and the project are “well-conceived.” They comply with USEPA Regulations, replace the aged Cabras Steam Plants, meet load growth, and increase renewable integration.²⁰ Citing standards for agreements such as the ECA, prepared by the World Bank and the Edison Electric Institute, CEA concludes that the ECA includes the required provisions that are necessary for such an Agreement.²¹ Based upon the testimony submitted by GPA GM Benavente and CEA, and the ALJ Report, the PUC finds that the ECA adequately protects the interests of GPA and its ratepayers, and is a reasonable, well-conceived agreement.

RATE IMPACT

In GPA Docket 15-05, PUC ordered that GPA conduct a “rate impact study” indicating what impact the proposed New Power Plant would have on customer rates. GPA retained Mark Beauchamp, President of Utility Financial Solutions, LLC, to conduct a review of New Generating Rate Impacts. Mr. Beauchamp conducted a presentation to the ALJ and the Commissioner on August 18, 2019. Mr. Beauchamp found that there would be no rate impact until fiscal year 2023, when the New Power Plant would already have been constructed and would be in operation.²² Mr. Beauchamp indicated that fuel costs were expected to decrease by \$50 to \$60 million between 2023-2025. At the same time, due to operational cost increases, there would be a base rate increase of 11.8% in fiscal year 2023. For the average customer this would result in a monthly dollar increase of approximately \$10.80. However, due to a reduction in fuel usage by the new plant (which is more efficient than the Cabras plants), the net residential

¹⁹ Concentric Energy Advisors Inc., High Level Review of 198MW Combined Cycle Energy Conversion Agreement, GPA Docket 19-13, dated October 16, 2019.

²⁰ Id. at p. 4.

²¹ Id. at p. 3 and Table 1.

²² Mark Beauchamp, Guam Power Authority Review of New Generating Rate Impacts, Presentation, dated August 18, 2019.

rate will decrease by 7.95% in FY2023. Similarly, there would be a decrease in net residential rates for 2024 and 2025 of 11.84% and 12.37% respectively.²³ Throughout the entire process for development and consideration of the new generation plant, GPA committed to undertaking all possible efforts to avoid any rate impact from the new plant. At the Public Hearings on the new plant procurement in 2016, GPA indicated that there are numerous cost-cutting and savings initiatives which will result from the addition of the new plant that minimize any rate impact upon GPA customers. GPA has promised to minimize such rate impact by any means available.²⁴

PUBLIC HEARINGS

The PUC caused a Public Notice for Public Hearings on GPA's request for approval of the KEPCO Energy Conversion Agreement to be published in the Pacific Daily News on September 13, September 20, and September 27, 2019.

The PUC conducted three public hearings on the 198MW Power Plant project: On October 1, 2019, at 6:30p.m., at the PUC Conference Room, Hagatna; on October 2, 2019, at 6:30p.m., at the Dededo Senior Citizens Center; and on October 3, 2019, 6:30p.m., at the Agat Community Center. In his Report, the ALJ has fully set forth the numbers of attendees at the public hearings, testifying witnesses, written testimonies, and the principal arguments of both witnesses testifying for and against the 198MW Power Plant. The PUC adopts the Report of the ALJ on the Public Hearings and incorporates the same herein by reference.

DETERMINATIONS

Having reviewed the arguments of the testifying witnesses, and the Reports of Concentric Energy Advisors and the ALJ, the PUC hereby makes the following determinations:

1. THE PUC SHOULD NOT FURTHER DELAY DECISION ON GPA'S PROPOSAL FOR THE 198MW POWER PLANT.

There is no justifiable reason for the PUC to further delay decision on GPA's proposal for the 198MW Power Plant. Both GPA and the PUC have been in a continual process of vetting and considering New Power Plant alternatives for the

²³ Id.

²⁴ PUC Order, GPA Docket 15-05, dated October 27, 2016.

island wide power system for over ten years. It is unnecessary to conduct further study on “the feasibility of other alternative power solutions.” In the past 15 years, GPA has conducted over 57 studies relating to integration of renewables into the IWPS, battery storage, and system performance/reliability. See Attachment 4 to ALJ Report.²⁵ GPA has over five years of practical experience in assessing the Dandan 25MW Solar Plant. In numerous dockets, as well as at the Public Hearings herein, GPA has presented evidence that solar power is not presently firm or stable enough to support the baseload generation needs of the power system (GPA NEW COMBINED CYCLE POWER PLANT PRESENTATION). There has been no testimony or evidence submitted by solar proponents establishing that solar energy can provide the type of baseload generation now needed by GPA. GPA has demonstrated that it will not be possible to further integrate solar generation into the island wide power system without constructing the new baseload plant.

The record before the PUC justifies approval of GPA’s plan for the 198MW Power Plant. The prior Lummus Report was issued *before* GPA lost 78MW with the Cabras No. 3 & 4 explosion. The recent Report of Concentric Energy Advisors states as follows: “**It would not be reasonable to replace the Cabras units only with renewable resources. The renewable technology is not mature enough to provide the level of reliability to support baseload needs.**”²⁶ (emphasis added). Delay in the construction of this plant will also delay fuel savings which will benefit ratepayers and lower power rates. There is simply no reason for further delay on this decision.

2. THE AUTHORITY TO DECIDE WHAT POWER PLANT WILL BE APPROVED, AND THE TIMETABLE FOR CONSTRUCTION, IS FIRMLY VESTED BY LAW IN GPA, SUBJECT TO PUC APPROVAL, NOT IN OTHER THIRD PARTIES. THE PUC SHOULD DETERMINE THAT GPA HAS JUSTIFIED APPROVAL FOR THE 198MW PLANT AND THE ENERGY CONVERSION AGREEMENT.

Guam law vests decisions concerning the type of power plants that will be built, and the fuel sources for the plants, in the Guam Power Authority. In accordance with 12 GCA § 8104(k), it is the Guam Power Authority that exercises the power to “**control, operate, improve, equip, maintain, repair, renew, replace, reconstruct, alter and insure the electric system...**”²⁷ The Guam Legislature reinforced the control of GPA

²⁵ Listing of GPA Planning Studies, submitted to PUC ALJ Fred Horecky on October 14, 2019, by John Cruz, Assistant General Manager, Engineering & Technical Services, GPA (Attachment 4 to ALJ Report).

²⁶ Concentric Energy Advisors Inc., High Level Review of 198 MW Combined Cycle Energy Conversion Agreement, GPA Docket 19-13, dated October 16, 2019, at p. 5.

²⁷ 12 GCA § 8104(k).

over the power system by creating a Consolidated Commission on Utilities, an elected body, which exercises “all powers vested in the Authority.”²⁸ The Legislature created an elected Consolidated Commission on Utilities whose purpose “is to exercise powers vested in them by the laws establishing the Guam Power Authority (“GPA”) and the Guam Waterworks Authority (“GWA”).”²⁹ The Legislative intent was to vest control over the power system in GPA and the CCU. With regard to review of GPA decisions, the Organic Act of Guam created the Public Utilities Commission as an “independent rate-making authority.”³⁰ The Legislature established the Guam PUC and vested it with responsibility for review of GPA contracts and rate decisions. PUC is obligated under law to review any GPA contracts which could increase rates (“the utilities shall not, however, enter into any contractual agreements or obligations which could increase rates and charges prior to the written approval of the Commission.”).³¹

By virtue of the Contract Review Protocol between GPA and the PUC, PUC is required to review the Energy Conversion Agreement. With the deteriorating condition of the aged Cabras No. 1 & 2 plants, and with only a likely 5-year further life span for those plants (loss of another 132MW), it became increasingly apparent that GPA needed a new plant with at least 180MW of generation capacity. GPA filed an Update with the PUC on its Integrated Resource Plan on May 24, 2016.³² The key implementation recommendation of the IRP was to procure up to 180MW combined cycle units, to retire the Cabras plants, and to convert MEC No. 8 & 9 to ULSD under the IPP capitalization model.³³ Based upon GPA’s justification for a New Power Plant, on October 27, 2016, the PUC approved GPA’s procurement for a 180MW power plant.³⁴ Decisions as to what power plant should be approved, and the type of fuels used, should be determined by the CCU, GPA and its staff of Engineers, and the PUC and its Consultants. GPA has a staff of forty professional engineers to make decisions concerning the electric power system. However, contrary to testimony at the public hearing (Testimony of Barry Mead), GPA did not rely only upon its internal staff but over the years retained a substantial number of

²⁸ 12 GCA § 8107.

²⁹ 12 GCA § 79100 at et seq.

³⁰ 48 USC § 1423a, as amended by P.L. 98-454, Title II, § 203, 98 Stat. 1733(1984).

³¹ 12 GCA § 32105(e)(1).

³² Consolidated Commission on Utilities UPDATE, Integrated Resource Plan and GPA Implementation Plan, GPA Docket 15-05, filed May 17, 2016.

³³ Id., at GPA Implementation Plan.

³⁴ PUC Order, GPA Docket 15-05, dated October 27, 2016.

qualified off-island consultants to assist it in arriving at the best proposal for a new generation plant (Attachment 4 to ALJ Report).³⁵

3. CONTRARY TO PUBLIC TESTIMONY, GPA HAS FULLY CONSIDERED ALTERNATIVES TO THE 198MW COMBINED CYCLE PLANT, INCLUDING RENEWABLE ALTERNATIVES.

Since its submission of an Integrated Resource Plan in 2008, GPA has revised its power plant proposals and has thoroughly considered alternatives. It initially considered a plan to convert the existing plants, Cabras No. 1 & 2, and MEC No. 8 & 9, for compliance with environmental regulations (with low Sulfur RFO), with life extension plans and addition of scrubbers, etc.³⁶ However, subsequently GPA decided that a preferable investment would be to build a New Power Plant, with fuel-efficient compliant generators.³⁷ In GPA's 2016 update of its IRP, it agreed to build a 180MW combined cycle plant with fuel conversion to Ultra Low Sulfur Diesel.³⁸ GPA has fully considered the use of renewables as an alternative to the fossil fuel plant. In response to the PUC Order in GPA Docket 15-05 dated October 29, 2015, GPA provided a substantial amount of information to PUC concerning how it arrived at a projected plant size of 180MW, what fuels would be used, its procurement plans and what technology it would seek, whether it would use the IPP model, whether Cabras 3 or 4 were still operable, and what ratepayer impacts would result from the new plant.³⁹

GPA addressed the Lummus concern that GPA must adequately incorporate the impact of renewable energy in its resource/compliance planning. GPA stated that it was continuing to investigate renewables as an alternate source of power which contributes to fuel diversity and could reduce fossil fuel generator capacity requirements. However, GPA submitted that both solar photovoltaic technology and wind technology are "intermittent resources or non-firm capacities that would only contribute to supporting peak demand if energy storage was implemented to store and shift energy from the renewable energy resources to discharge during GPA peak periods which occur at night."⁴⁰ It pointed out that it had increased the

³⁵ See Attachment 4 to ALJ Report.

³⁶ GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p.3.

³⁷ Id.

³⁸ Consolidated Commission on Utilities UPDATE, Integrated Resource Plan and GPA Implementation Plan, GPA Docket 15-05, filed May 17, 2016.

³⁹ GPA Response to PUC Order in GPA Docket 15-05 dated October 29, 2017 (Attachment to GPA Revised Petition for Approval of New Generation Combined Cycle Units, GPA Docket 15-05, dated July 14, 2016).

⁴⁰ Id. at p. 14.

Phase II bid awards to 60MW of installed energy capacity and ultimately agreed upon 120MW of solar energy capacity. There was an additional 40MW plan with the Navy for additional renewable capacity.⁴¹ GPA indicated that it had been working with its consultants and energy storage suppliers to evaluate cost for energy shifting. The problem with battery storage is its high cost. GPA's feasibility study indicated that battery-type energy storage for "on demand spinning reserve of 40MW for 15 minutes", an energy capacity of 10MWH, would cost nearly \$40 million. The cost of energy storage for the Dandan solar plant was more than \$320 million.⁴²

GPA determined that other renewable forms of energy were not feasible: "Since 2008 GPA has evaluated other renewable opportunities that would provide the firm power and could lower thermal or fossil-fuel capacity reserve requirements. These include waste to energy, geothermal, bio fuels and even sea water air conditioning as a cooling cost offset. Our renewable bids since 2009 only confirmed that these options are not cost effective or require expensive studies to further confirm their potential."⁴³ GPA has also conducted Engineering Feasibility Studies to evaluate and determine additional Energy Storage System capability for its utility scale projects. In a May 17, 2016 GPA/CCU Presentation, GM Benavente stated that energy storage was not yet matured enough for baseload generation, but would be "a part of the future."⁴⁴ He also indicated that renewables do not significantly reduce peak load generation needs of GPA. CCU Chairman Joey Duenas stated that there was no proof that renewables could provide 24/7 firm power, or when battery storage technology would be sufficient to provide peak load power during the night time. GPA has recognized its obligation to keep the lights on for 24 hours per day.⁴⁵

With regard to the procurement, PUC made it clear that Bidders were fully authorized to submit proposals other than combined cycle, which could also include LNG, LPG, or possible renewable solutions.⁴⁶ No facts or evidence presented to the PUC support a claim that no bidder submitted a renewable solution because of what was "known" about GPA's position. The fact that no bidder submitted a renewable solution is likely due to the conclusion that renewable solutions could not meet the 96% reliability standards which GPA sought for its power plant in the bid. Two

⁴¹ Id. at pgs. 14-15.

⁴² Id. at p. 15.

⁴³ Id.

⁴⁴ GM Benavente's Presentation on Update of the Integrated Resource Plan, GPA Boardroom May 17, 2016; Notes of PUC ALJ Frederick J. Horecky.

⁴⁵ Id.

⁴⁶ Id.

bidders who have already secured contracts to build a total of 120MW solar plants, KEPCO and Hanwha, did not submit solar renewable bids for the 198MW New Power Plant proposal.

4. KOREAN ELECTRIC POWER COMPANY (KEPCO) WAS PROPERLY DETERMINED BY GPA TO BE THE MOST QUALIFIED, LOWEST COST PROPOSER FOR THE 198MW POWER PLANT. KEPCO IS FULLY CAPABLE OF CONSTRUCTING THE NEW POWER PLANT; THERE IS NO LEGAL BASIS FOR RETROACTIVELY DISQUALIFYING KEPCO FROM THE RFP AWARD.

A principal argument of the opponents of the New Power Plant is that the awardee of the Energy Conversion Agreement, KEPCO, and its subsidiary KEWP, are improper and inappropriate parties to construct GPA's New Power Plant. There is a claim that a subsidiary of KEPCO, Korea East West Power (KEWP) "blew up" the Cabras No. 3 & 4 units when it was in charge of the maintenance, operations and overall management. To date, there is no factual evidence proving that KEWP was responsible for "blowing up" GPA's plant. There is a pending lawsuit in which insurance companies are seeking indemnification from KEWP, as they allege that it was responsible for the plant explosion. There has been no legal determination of "causation" or "responsibility" for the explosion. KEWP denies negligence and responsibility. The explosion could have occurred as the result of defective plant construction, equipment or materials, or even as the result of actions of GPA employees. These issues will be determined after years and years in a lawsuit, but it is impractical for GPA to delay proceeding with its new plant until the lawsuit is resolved. In reality, however, the Cabras 3 and 4 explosion is irrelevant to the current RFP award. To begin with, the awardee for the ECA is KEPCO, not KEWP. It is unknown whether KEPCO will utilize KEWP as its new plant operator. However, even if KEWP will be the operator, comparisons between the Cabras explosion and the new plant operation are inapposite. Cabras 3 and 4 were constructed and owned by the Guam Power Authority. Neither KEPCO nor KEWP had any role in the construction of the plants. KEWP was the Performance Management Contractor of Cabras 3 and 4 at the time of the explosion; however, as required by contract, KEWP was utilizing many GPA employees to operate and run the plant. Since the new plant will be operated by an Independent Power Producer, KEPCO, the IPP will be entirely responsible for the construction and operation of the plant. That is the whole purpose of an IPP—to remove the risk of construction and operation from GPA and shift it to the contractor, KEPCO. GPA's insulation from risk would be destroyed if GPA compelled KEPCO to hire a specific plant operator.

There are further claims that: (1) since KEPCO had over \$500 Million in operating losses in the first quarter of this year, it is somehow disqualified from bidding or being awarded the ECA; (2) KEPCO is the subject of bribery scandals and numerous of its officers and employees have been criminally charged; and (3) The U.S. Securities and Exchange Commission is investigating allegations that both KEPCO and KEWP have been involved in graft.⁴⁷ Much of KEPCO losses are due to the fact that it is a government owned utility and has also been required to implement expensive renewables: “KEPCO is poised to raise electricity rates as it continues to lose money amid the Moon Jae-in governments drive to phase out nuclear power and expand the use of expensive renewable energy...”.⁴⁸ One would be hard-pressed to find large world-wide corporations that have no lawsuits against them. However, the existence of such suits is not a disqualifying factor which prevents corporations such as KEPCO from bidding on or being awarded contracts.

It is not possible for GPA to reverse its determination that KEPCO was a qualified bidder, and now find that KEPCO is disqualified from being awarded the ECA. Such a course of action is unauthorized by the Procurement Law of Guam and would likely result in a lawsuit by KEPCO that could prevent the people of Guam from obtaining a New Power Plant for many years into the future. Such action could lead to load shedding, the imposition of huge amounts of USEPA fines, and the possibility of a receivership for the entire GPA system. KEPCO is a competent company to build power plants and has the technical capability to do so. KEPCO is the national power company of South Korea, and supplies 94% of all power to South Korea.⁴⁹ South Korea is one of the most technologically advanced countries in the world. If KEPCO can supply the people of South Korea with power, it likely can construct a power plant on Guam. At the Public Hearing in Dededo, General Manager John Benavente testified that KEPCO has built similar power plants to the one envisioned in Guam in Malta and in Illinois in the United States.⁵⁰ KEPCO was properly selected by GPA as the lowest responsive bidder for the 198MW power project.

5. THE PUC HAS REJECTED THE ARGUMENT THAT THE 198MW POWER PLANT WILL BECOME A ‘STRANDED ASSET.’”

⁴⁷ Testimony of Michelle Voacolo.

⁴⁸ The Korean Times, Biz & Tech, http://www.koreatimes.co.kr/www/tech/2019/05/515_268836.html

⁴⁹ Testimony of Simon A. Sanchez.

⁵⁰ Testimony of GPA General Manager John Benavente.

Opponents of the New Power Plant have argued that, in a few years, the fossil fuel power plant will become a “stranded asset” due to rapid improvement in renewable technologies and lowering in cost. When renewables become the technology of choice, the fossil fuel power plant will be useless and obsolete.⁵¹ The PUC has previously rejected the argument that the 198MW Power Plant will become a “stranded asset”. In public hearings held in GPA Docket 15-05 regarding the procurement of the New Power Plant, Jeff Voacolo of Micronesia Renewable Energy Inc. indicated his belief that a smaller plant, perhaps 60MW or 100MW, would be sufficient. He argued that there could be substantial developments regarding renewable energy, such as advancements in battery storage that would make renewable energy a more viable alternative within the next few years. The fossil fuel plant would then become a “stranded asset”; it would be taken out of commission or seldom used, which would render the financial cost for the plant a waste.⁵²

However, the PUC held that, even if renewable energy became reliable and available during the 30 year IPP Contract, GPA could still use the combined cycle units as peaking units and possibly retire the other peaking units.⁵³ When solar power and battery storage will be able to provide baseload generation capacity, or 24/7 availability, is speculation and unknown. As one solar company executive on Guam, Bill Hagen, testified at the September 10, 2019, Legislative Oversight Hearing on the future of solar renewables, it would be impossible for the General Manager of GPA to predict what the status or technology of solar renewables and batteries would be five years from now. Mr. Hagen sympathized with the need of GPA to make determinations as to the New Power Plant based upon its current knowledge and evaluation.⁵⁴ GPA is not required to speculate on when renewable energy will be viable alternative to baseload fossil fuel generation.

6. INSISTANCE UPON THE IMMEDIATE 100% IMPLEMENTATION OF RENEWABLES WILL JEOPARDIZE GPA’S COMPLIANCE WITH USEPA REQUIREMENTS, AND COULD RESULT IN HUNDREDS OF MILLIONS OF DOLLARS OF FINES TO GPA, AND EVEN RECEIVERSHIP.

There are two issues concerning conversion of GPA’s power system to solar renewables. The first is the timetable for such conversion; the second is whether immediate conversion of GPA’s power system to 100% renewable is practical or

⁵¹ Testimony of Michelle Voacolo.

⁵² PUC Order, GPA Docket 15-05, dated October 27, 2016, at pgs. 4-6.

⁵³ Id. at p. 6.

⁵⁴ Testimony of Bill Hagen at the Legislative Oversight Hearing on September 10, 2019.

desirable. Since it is GPA's responsibility to maintain adequate and reliable power, it must also be responsible for determining the risk of converting to solar renewables system wide too quickly. Guam, unlike stateside jurisdictions, has no ability to buy power from other state or local grid jurisdictions, or to sell power to such jurisdictions. One of the most important purposes of the New Power Plant is to comply with USEPA RICE-MACT and EGU-MACT regulations which became effective in 2013 and 2015.⁵⁵ GPA's Cabras No. 1 & 2 base units are non-compliant with those regulations.⁵⁶ GPA has been engaging in negotiations with USEPA for agreement upon a Consent Decree since at least 2013. If a Consent Decree and Compliance Plan is not implemented soon, GPA will face significant penalties from USEPA. For non-compliance with USEPA regulations, GPA currently faces \$352,200,000 in penalties.⁵⁷ The plan that GPA has proposed for the new 198MW combined cycle power plant will comply with USEPA regulations and appears to be satisfactory to USEPA. The plan includes retirement of the Cabras No. 1 & 2 plants after construction of the New Power Plant, and conversion of the MEC No. 8 & 9 units to ULSD within one year after the commissioning of the 198MW combined cycle plant.⁵⁸

The opponents of the New Power Plant have not proposed a plan for compliance with USEPA regulations other than to contend that conversion to 100% solar will comply with USEPA emission standards. There is no specific timetable for the building of new solar plants, addition of battery storage, or conversion of more roof top solar that would comply with the USEPA requirements. Without specific plans for compliance, GPA would again face the risk that USEPA will impose hundreds of millions of dollars of fines upon GPA. Even other drastic alternatives, such as receivership for GPA, could be considered. Given the immediate need of GPA to come into compliance USEPA regulations and enter a Consent Decree, it is too risky to rely upon an undefined, unplanned process concerning implementation of renewables.

The opponents allege that renewables will be sufficient to cover the loss of the Cabras 1 & 2 plants and render the 198MW power plant unnecessary.⁵⁹ Unless GPA proceeds with the construction of its new 198MW power plant, the 120MW pending solar projects in Phase II will not be able to function or be supported in the power

⁵⁵ GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p.2.

⁵⁶ Id. at p. 3.

⁵⁷ Id. at p. 4.

⁵⁸ Id. at p. 5.

⁵⁹ Senator Clynton E. Ridgell, Letter All Members of the Public Utilities Commission, Testimony on GPA Docket 19-13, dated October 9, 2019, at pgs. 3-4.

system. Megawatts produced by solar plants are not the same as, or equivalent to megawatts produced by fossil fuel plants. To date, GPA does not include system solar production in its determination of total system load capacity. The reason is that solar power is not firm or reliable. The power produced by the Dandan plant has been extremely intermittent and is not reliable baseload power (See Attachments 5 and 6 to ALJ Report).⁶⁰ That plant, with 25MW nameplate capacity production, is actually estimated by GPA to produce about 5MW of solar power. GPA utilizes a 20% factor to determine the actual energy production of the Dandan plant. Furthermore, Inverter based generation does not provide the same value of synchronous generation as baseload generation. It does not provide voltage support or short circuit current.⁶¹ Ruben Moreno, of Concentric Energy Advisors, PUC's Consultant, has represented to the ALJ that, in general, a solar plant only produces 30-32% of the power production of a fossil fuel plant of the same size. In other words, to replace a fossil fuel plant that produced 100MW of firm power, a solar plant replacement would need to have available capacity of 300MW.⁶²

Solar power will not be a replacement for fossil fuel generations unless there is full time and sufficient battery storage. Although the KEPCO and Hanwha plants will have some amount of battery storage, it is not anticipated that those plants will produce baseload generation. Unless there is sufficient battery storage, it is unrealistic to expect that the 120MW of renewable energy that will be produced by the KEPCO and Hanhwa projects will "cover" the 110MW that the Cabras No. 1 & 2 plants are presently producing. Battery storage is now too expensive and not sufficiently reliable to provide the needed power. GPA's Renewable Integration Study demonstrated that it will not even be possible to integrate more renewables into the system unless this power plant is constructed.⁶³ The new plant will provide faster response to the rapid and constant changes in renewable loads. It creates a flexible response to grid intermittency. The new plant will allow the addition of further renewables to the system.⁶⁴ But, without the stability of a fossil fuel plant, Guam will be incapable of creating a reliable solar renewable system.

⁶⁰ Attachment 5 to ALJ Report, April 2019 Solar PV Production, GPA Work Session Presentation to the Consolidated Commission on Utilities, September 19, 2019; Attachment 6 to ALJ Report, August 1 – September 30, 2019, 25MW PV Production, submitted by Tricee P. Limtiaco, Assistant General Manager, Guam Power Authority, on October 16, 2019.

⁶¹ Id.

⁶² Phone Conversation between Ruben Moreno, Concentric Energy Advisors, and PUC ALJ Frederick J. Horecky, on October 18, 2019.

⁶³ Guam Power Authority System Improvement Plan for Renewables, Final Report and Presentation, dated July 23, 2018 (Electric Power Systems Inc. Consulting Engineers), at Slide 2.

⁶⁴ GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p.2. Id. at p. 13.

7. CONVERSION TO AN ENTIRELY RENEWABLE POWER SYSTEM AT PRESENT IS NOT A PRACTICAL OR FEASIBLE SOLUTION TO GUAM'S POWER NEEDS.

There is also an assumption by opponents to the power plant that Guam can rely upon solar roof top net-metering power to provide the necessary generation capacity in the system.⁶⁵ However, GPA's planning model assumes that it is more feasible to rely upon utility scale solar renewable generation to add renewable power to the IWPS.⁶⁶ A Study by the Massachusetts Institute of Technology cites evidence that distributed solar generation costs utilities, and ratepayers, more than it saves.⁶⁷ Residential solar receives far higher subsidies per watt of deployed capacity than utility-scale solar. Utility-scale solar is viewed as a more advantageous solution.⁶⁸ GPA has also provided cost estimates for implementation of a 100% renewable power system. The initial costs for land and construction would be more than \$3.7 billion dollars (Attachment 7 to ALJ Report).⁶⁹ With full battery storage and supply redundancy, the cost could approach \$9 Billion.⁷⁰

Opponents of the power plant reference different solar projects and claim that GPA can now implement 100% renewables. However, a review of the projects suggests that none of them can succeed in providing the firm, reliable power presently needed by GPA. A Scientific American Article is cited for the proposition that "utility-scale energy storage will enable a renewable grid."⁷¹ When one reads the article, however, it becomes apparent that neither utility-scale energy storage nor a renewable grid are imminent or expected in the near future: **"...getting to the point where renewables and energy storage can handle the baseline load of electricity generation will take energy storage at longer timescales, which will mean moving beyond lithium-ion batteries....[I]t is uncertain whether and how much the costs of energy storage will continue to decline."**⁷² (emphasis added). Renewables and

⁶⁵ Senator Clynton E. Ridgell, Letter All Members of the Public Utilities Commission, Testimony on GPA Docket 19-13, dated October 9, 2019, at p. 4.

⁶⁶ Guam Power Authority System Improvement Plan for Renewables, Final Report and Present, dated July 23, 2018 (Electric Power Systems Inc. Consulting Engineers), at Slides 14 and 15.

⁶⁷ <https://www.cleanenergyauthority.com/solar-energy-news/mit-study-favors-utility-scale-solar-over-rooftop-solar>

⁶⁸ Id.

⁶⁹ Testimony of Simon A. Sanchez; see also Attachment 7 to ALJ Report, Solar PV Cost for 1-day Supply, GPA Work Session Presentation to the Consolidated Commission on Utilities, September 19, 2019.

⁷⁰ Id.

⁷¹ Andrea Thompson, the Scientific American, "Utility-Scale Energy Storage will Enable a Renewable Grid, July 1, 2019.

⁷² Id. at p. 3.

battery storage are not currently capable of providing firm and reliable power to the GPA system. The PUC concurs with the ALJ determination that there is no present evidence that hydro storage or hydroelectric power is a plausible form of energy generation on Guam.

The PUC also adopts the ALJ conclusion at pages 30-33 of his Report that reliance upon other alternatives, such as more roof top solar (roof top solar systems on 20,000 Guam homes) or a “solar host program”, are not presently reliable solutions to produce 198MW of power.⁷³ In no manner do such proposed solutions supplant the need for the 198MW Power Plant.

8. THE 198MW POWER PLANT SHOULD SIGNIFICANTLY REDUCE PRESENT HARMFUL EMISSIONS, ADVERSE ENVIRONMENTAL IMPACTS, AND GREENHOUSE GASES.

Issues have been raised concerning the emissions and smoke from the proposed power plant that will impact Micronesia Mall, GRMC, and other locations. Similar concerns were raised before the Guam Legislature, but the Legislature refused to allow such concerns to dissuade it from approving the Ukudu site for the New Power Plant. The Legislature approved the New Power Plant Ukudu location in Public Law 34-102, enacted on May 16, 2018.⁷⁴ The Legislature was satisfied that the proposed site could appropriately be used for the construction and operation of a power generation plant on behalf of the Guam Power Authority. The Guam Legislature stated that the site was “suitable” “and the “best” site. Various witnesses at the public hearings testified that the proposed plant is “bad” for the world’s environment, as it adds “another carbon emitting component further exacerbating climate change.” The New Power Plant, utilizing ULSD, should reduce greenhouse gases by 36% (Attachment 9 to ALJ Report).⁷⁵ It should result in lower emissions, cleaner emissions, and exceed the National Ambient Air Quality Standards. It substantially reduces almost all levels of pollutants, including nitrogen oxides, sulfur dioxide, and particulate matter.⁷⁶ There are also beneficial environmental impacts from the New Power Plant. GPA’s annual fuel consumption will be reduced by about 35 million gallons annually.⁷⁷ This will result in less pollutants and greenhouse gases being released into the air. Furthermore, the new

⁷³ALJ Report, GPA Docket 19-13, dated October 28, 2019, at pgs. 10-33.

⁷⁴ Public Law 34-102, enacted on May 16, 2018.

⁷⁵ Attachment 9 to ALJ Report; GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 3, 2019, at p. 25.

⁷⁶ GPA PRESENTATION ON NEW COMBINED CYCLE POWER PLANT, dated October 1, 2019, at p. 24.

⁷⁷ Id. at p. 32.

plant will use tertiary-treated waste water for cooling, substantially reducing demand on the aquifer.⁷⁸ The use of seawater cooling, which is the case with the Cabras plants, will be eliminated, thereby protecting the ocean environment. Finally, the new plant complies with USEPA regulations by burning clean fuel and much less fuel thereby reducing the island's carbon footprint and its impact in climate change.⁷⁹ GPA's proposed solution is a move in the right direction to improve and ameliorate adverse environmental impacts that resulted from prior plants.

9. SOLAR POWER IS MORE EXPENSIVE THAN POWER PRODUCED BY THE NEW PLANT

The opponents of the New Power Plant contend that, since the cost of solar power to be produced by the KEPCO and Hanwha Solar Plants is between \$.06 and \$.08 per kWh, and power produced by the New Power Plant is approximately \$.15 per kWh, that a solar power solution for Guam is cheaper than fossil fuel. However, this contention misstates the true cost of solar plants. The prices of \$.06 and \$.08 referred to are the costs per kWh for the KEPCO and Hanwha solar plants to be constructed in Phase II of GPA's solar program. These plants were never intended to be baseload units. While they have some battery storage to avoid intermittency system faults, they will not have load shifting energy storage systems. Load shifting is only required for projects beyond Phase II, which does not include the KEPCO and Hanwha projects.⁸⁰ In accordance with GPA's plan, "Phase 111 and beyond systems should have energy storage included as an integral component of the project, in order to optimize the economics of the projects—this reduces the PV ramping effects due to intermittent solar irradiation."⁸¹ To serve as baseload plants, the Hanwha and KEPCO solar plants would need to have substantial energy storage systems, which would likely increase the per kWh charge beyond that of the proposed new plant. GPA has submitted cost figures that for a 100% renewable system; the initial construction cost would be over \$3.7 billion, which is in excess of the New Power Plant cost over 30 years of operation.⁸² The total cost for a 100% renewable system, which includes daily use, recharge capacity for 1 day recharging, and one day

⁷⁸ Id.

⁷⁹ Id.

⁸⁰ See Attachment 7 to ALJ Report.

⁸¹ Guam Power Authority System Improvement Plan for Renewables, Final Report and Present, dated July 23, 2018 (Electric Power Systems Inc. Consulting Engineers), at Slide 96.

⁸² See Cost discussion in Paragraph 3, Principal Arguments of the Witnesses testifying in favor of the 198MW Power Plant, which is incorporated herein by reference.

battery reserve capacity would be \$8,816,860, 731.⁸³ The estimated per kWh charge would be \$0.335.⁸⁴

There is a further claim that the fossil fuel plant will be too expensive because of the volatility of fuel prices. Fuel prices could rise as high as \$123.55/barrel by 2030 and \$225.74/barrel by 2050.⁸⁵ However, as a general principle, oil prices are not predictable.⁸⁶ Another Article has a substantially different prediction of future fuel prices. According to it, Brent Crude oil price will be \$92.98bbl. by 2030 and \$107.94bbl. by 2050. Forecasting future fuel prices is inherently unreliable because only information available at the time of the forecast is relied upon.⁸⁷ Unanticipated events in Crude markets “leave the futures price barely more capable than a random walk.”⁸⁸

ORDERING PROVISIONS

Upon consideration of the record herein, the Petition of GPA for Approval of the Energy Conversion Agreement (ECA) with Korean Electric Power Company [“KEPCO”] for the 198MW Power Plant, the Concentric Energy Advisors Report, the ALJ Report, and for good cause shown, on motion duly made, seconded and carried by the affirmative vote of the undersigned Commissioners, the Commission hereby **ORDERS** that:

1. GPA’s award of the Energy Conversion Agreement to Korean Electric Power Company (KEPCO) in Multi-Step Bid GPA-034-18 for a Build, Own/Operate and Transfer Contract for 198MW is hereby approved. GPA has demonstrated that it needs the generation capacity provided by the New Plant to replace the generation capacity lost (78MW) through the Cabras 3 and 4 explosion and the loss of 132MW anticipated from the retirement of Cabras 1 and 2. Without the additional baseload capacity provided by the New Plant, GPA will be unable to sustain load growth.
2. The Energy Conversion Agreement between GPA and KEPCO is approved. Based upon the testimony submitted by GPA GM Benavente, the Concentric Energy Advisors Report, and the ALJ Report, the PUC finds that the ECA

⁸³ Attachment 7 to ALJ Report, at p. 3.

⁸⁴ Id.

⁸⁵ Senator Clynton E. Ridgell, Letter All Members of the Public Utilities Commission, Testimony on GPA Docket 19-13, dated October 9, 2019, at p. 1.

⁸⁶ www.vbalance.com/oil/price/forecast/3306219.

⁸⁷ www.forbes.com/sites/uhenergy/2016/01/19/why-are-oil-prices-so-hard-to-forecast/.

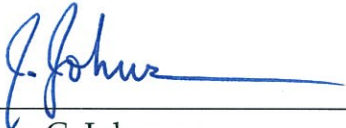
⁸⁸ Id.; See also www.brookings.edu/opinions/why-is-the-price-of-oil-so-hard-to-predict/.

adequately protects the interests of GPA and its ratepayers, and is a reasonable, well-conceived agreement.

3. GPA shall file a copy of the final executed Energy Conversion Agreement with the PUC.
4. During the term of the ECA, GPA shall fully advise the PUC concerning the progress of the parties in carrying out their obligations under the ECA, including the construction and financing of the Plant, and any other significant developments. After the execution of the ECA, GPA shall file monthly reports with the PUC concerning developments and progress on the Plant. It shall provide the same level of reporting to the PUC as it does to the Consolidated Commission on Utilities. Copies of Reports required under the ECA shall also be provided to the PUC.
5. This Order does not authorize or approve any use of LNG as a fuel source for the New Plant. GPA shall seek prior authorization and approval from the PUC for any use of LNG as a fuel source for the New Plant.
6. PUC approval of the 198MW award to KEPCO does not authorize any rate increase. Should GPA at any point become aware of any potential rate impact resulting from the New Plant, it shall notify PUC and explain the nature of such impact. Should GPA seek any rate increase which in any manner results from the construction, financing, or operation of the New Plant, it shall file a petition with the PUC in accordance with all current rules, regulations, and statutes governing such public utility rate increases.
7. GPA is ordered to pay the Commission's regulatory fees and expenses, including, without limitation, consulting and counsel fees and the fees and expenses of conducting the hearing proceedings. Assessment of PUC's regulatory fees and expenses is authorized pursuant to 12 GCA §§12103(b) and 12125(b), and Rule 40 of the Rules of Practice and Procedure before the Public Utilities Commission.

Order
Petition to Approve the ECA
with KEPCO for 198MW Power Plant
GPA Docket 19-13
October 31, 2019

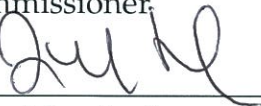
Dated this 31st day of October, 2019.



Jeffrey C. Johnson
Chairman



Joseph M. McDonald
Commissioner



Peter Montinola
Commissioner



Mark Miller
Commissioner



Rowena E. Perez
Commissioner

Michael A. Pangelinan
Commissioner



Filomena M. Cantoria
Commissioner