

I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
Informational Briefing/ Oversight Hearing / Roundtable Hearing

STANDING COMMITTEE / SENATOR	HEARING	COMMITTEE REPORT	HEARING DATE	DATE COMMITTEE REPORT FILED	NOTES
Committee on Education, Air Transportation, and Statistics, Research, and Planning	Roundtable Hearing	Committee Report on Roundtable Hearing on Bill No. 196-35 (LS)	2/6/20 11:00 a.m.	3/6/20 11:12 a.m.	



OFFICE OF VICE SPEAKER TELENA CRUZ NELSON

COMMITTEE ON EDUCATION, AIR TRANSPORTATION, AND STATISTICS, RESEARCH, AND PLANNING
I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN | 35th GUAM LEGISLATURE

27 FEB 2020

The Honorable Régine Biscoe Lee

Chairperson, Committee on Rules

I Mina'trentai Singko na Liheslaturan Guåhan

163 Chalan Santo Papa

Hagåtña, Guam 96910

RE: Committee Report on Roundtable Hearing on Bill No. 196-35 (LS)

Håfa Adai Chairperson Lee:

Transmitted herewith is the Committee Report on the Roundtable Hearing on Bill No. 196-35 (LS), introduced by Vice Speaker Telena Nelson/Senator Joe S. San Agustin, "AN ACT TO AMEND §§ 7116(a) AND (d) OF CHAPTER 7, DIVISION 2, TITLE 17 AND §§ 5008.2(a), (b)(1), and (b)(2), CHAPTER 5, TITLE 5 OF THE GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION TO ENTER INTO POWER PURCHASE AGREEMENTS TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S)."

Senseramente,

Vice Speaker Telena Nelson



2020 MAR -6 AM 11:12



OFFICE OF VICE SPEAKER TELENA CRUZ NELSON

COMMITTEE ON EDUCATION, AIR TRANSPORTATION, AND STATISTICS, RESEARCH, AND PLANNING
I MINA'TRENTAI SINGKO NA LIHESLATURAN GUAHAN | 35th GUAM LEGISLATURE

COMMITTEE REPORT

ROUNDTABLE HEARING ON

Bill No. 196-35 (LS),
introduced by Vice Speaker Telena Nelson/Senator Joe S. San Agustin,
“AN ACT TO AMEND §§ 7116(a) AND (d) OF CHAPTER 7, DIVISION 2,
TITLE 17 AND §§ 5008.2(a), (b)(1), and (b)(2), CHAPTER 5, TITLE 5 OF
THE GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE
GUAM DEPARTMENT OF EDUCATION TO ENTER INTO POWER
PURCHASE AGREEMENTS TO PURCHASE SOLAR ENERGY FROM
QUALIFIED PROVIDER(S).”

By Vice-Speaker Telena Nelson



Telena Cruz Nelson <senatortcnelson@guamlegislature.org>

First Notice of Public Hearing: Thursday, February 6, 2020 at 10:00 a.m. and Roundtable Hearing at 11:00 a.m.

Office of Vice Speaker Telena Cruz Nelson <senatortcnelson@guamlegislature.org>

Tue, Jan 28, 2020 at 2:31 PM

To: phnotice@guamlegislature.org

Bcc: Christie Lyn San Nicolas <clsannicolas@gdoe.net>, Maria Roberto <mdroberto@gdoe.net>, "Isa J.B. Baza" <ijbbaza@gdoe.net>, Imbenavente@gdoe.net, jacclujan@gdoe.net, Jon Fernandez <jonfernandez@gdoe.net>, Mark Mendiola <gdoeparents@gdoe.net>, "Maria A. Gutierrez" <magutierrez@gdoe.net>, John Burch <jburch@guam.net>, rpchgualaf@gdoe.net, Karla Borja <kborja04@gmail.com>, Bernadette Lou Sablan <l.sablan@gpagwa.com>, CCU Board Members <ccu@gpagwa.com>, John M Benavente <jbenavente@gpagwa.com>

28 January 2020

MEMORANDUM

To: All Honorable Senators, Stakeholders, and Media
 From: Vice-Speaker Telena Nelson, Chairperson
 Subject: **First Notice of Public Hearing: Thursday, February 6, 2020 at 10:00 a.m. and Roundtable Hearing at 11:00 a.m.**

Håfa Adai! Please be advised that the Committee on Education, Air Transportation, and Statistics, Research, and Planning will convene on **Thursday, February 6, 2020 a Public Hearing at 10:00 a.m. and Roundtable Hearing at 11:00 a.m.** in the Public Hearing Room of the Guam Congress Building, 163 Chalan Santo Papa, *Hagåtña*, Guam 96910. The agenda includes the following:

10:00 a.m.

Public Hearing

Bill No. 232-35 (COR) - Telena Cruz Nelson

AN ACT TO AMEND ITEMS (A) AND (B) OF § 715(I)(13) OF CHAPTER 7, TITLE 1, GUAM CODE ANNOTATED, RELATIVE TO DEFINING THE ONE HUNDRED EIGHTY (180) INSTRUCTIONAL DAYS EQUIVALENT FOR GUAM PUBLIC SCHOOLS AND REQUIRING THE SUPERINTENDENT OF EDUCATION TO DEVELOP A STANDARD OPERATING PROCEDURE FOR THE ARRANGEMENT OF LOSS INSTRUCTIONAL TIME.

11:00 a.m.

Roundtable Hearing

Bill No. 196-35 (LS) - Telena Cruz Nelson / Joe S. San Agustin

AN ACT TO AMEND §§ 7116(a) AND (d) OF CHAPTER 7, DIVISION 2, TITLE 17 AND §§ 5008.2(a), (b)(1), and (b)(2), CHAPTER 5, TITLE 5 OF THE GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION TO ENTER INTO POWER PURCHASE AGREEMENTS TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S).

Written testimonies may be delivered to the Office of Vice Speaker Nelson at 173 Aspinall Avenue, Suite 202A, Ada Plaza Center, *Hagåtña*, Guam 96910 or submitted via email to senatortcnelson@guamlegislature.org. The Committee requests that testimonies be submitted at least forty-eight (48) hours prior to the hearing. In compliance with the Americans with Disabilities Act, individuals requiring assistance or accommodations should contact the Office of Vice-Speaker Nelson by phone call at 989-7696 or via email at senatortcnelson@guamlegislature.org. *Si Yu'os Ma'åse'!*

--



The Office of Vice Speaker Telena Cruz Nelson

*Committee on Education, Air Transportation,
and Statistics, Research, and Planning*

I Mina'trentai Singko na Liheslaturan Guåhan | 35th Guam Legislature

173 Aspinall Avenue, Suite 202A Ada Plaza Center, *Hagåtña*, Guam 96910

2/27/2020

Guam Legislature Mail - First Notice of Public Hearing: Thursday, February 6, 2020 at 10:00 a.m. and Roundtable Hearing at 11:00 a.m.

Phone: (671) 989-7696/4678

Email: senatortcnelson@guamlegislature.org



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OFFICE OF VICE SPEAKER TELENA CRUZ NELSON

CHAIRPERSON OF THE COMMITTEE ON
EDUCATION, AIR TRANSPORTATION, AND STATISTICS, RESEARCH, AND PLANNING
I MINA'TRENTAI SINGKO NA LIHESLATURAN GUAHAN | 35th GUAM LEGISLATURE

28 January 2020

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Telena Cruz Nelson <senatortcnelson@guamlegislature.org>

Second Notice of Public Hearing: Thursday, February 6, 2020 at 10:00 a.m. and Roundtable Hearing at 11:00 a.m.

Office of Vice Speaker Telena Cruz Nelson <senatortcnelson@guamlegislature.org>

Mon, Feb 3, 2020 at 11:41 AM

To: phnotice@guamlegislature.org

Bcc: Christie Lyn San Nicolas <clsannicolas@gdoe.net>, Maria Roberto <mroberto@gdoe.net>, "Isa J.B. Baza" <ijbbaza@gdoe.net>, Imbenavente@gdoe.net, jacclujan@gdoe.net, Jon Fernandez <jonfernandez@gdoe.net>, Mark Mendiola <gdoeparents@gdoe.net>, "Maria A. Gutierrez" <magutierrez@gdoe.net>, John Burch <jburch@guam.net>, rpchargualaf@gdoe.net, Karla Borja <kbjorja04@gmail.com>, Bernadette Lou Sablan <l.sablan@gpagwa.com>, CCU Board Members <ccu@gpagwa.com>, John M Benavente <jbenavente@gpagwa.com>

3 February 2020

MEMORANDUM

To: All Honorable Senators, Stakeholders, and Media
 From: Vice-Speaker Telena Nelson, Chairperson
 Subject: **Second Notice of Public Hearing: Thursday, February 6, 2020 at 10:00 a.m. and Roundtable Hearing at 11:00 a.m.**

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The Office of Vice Speaker Telena Cruz Nelson

Committee on Education, Air Transportation,

and Statistics, Research, and Planning

I Mina'trentai Singko na Liheslaturan Guåhan | 35th Guam Legislature

173 Aspinall Avenue, Suite 202A Ada Plaza Center, *Hagåtña*, Guam 96910

2/27/2020

Guam Legislature Mail - Second Notice of Public Hearing: Thursday, February 6, 2020 at 10:00 a.m. and Roundtable Hearing at 11:00 a.m.

Phone: (671) 989-7696/4678

Email: senatortcnelson@guamlegislature.org



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OFFICE OF VICE SPEAKER TELENA CRUZ NELSON

CHAIRPERSON OF THE COMMITTEE ON
EDUCATION, AIR TRANSPORTATION, AND STATISTICS, RESEARCH, AND PLANNING
I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÁHAN | 35th GUAM LEGISLATURE

3 February 2020

MEMORANDUM

To: All Honorable Senators, Stakeholders, and Media
From: Vice-Speaker Telena Nelson, Chairperson
Subject: **Second Notice of Public Hearing: Thursday, February 6, 2020 at 10:00 a.m.
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Bill No. 232-35 (COR) - Telena Cruz Nelson

AN ACT TO AMEND ITEMS (A) AND (B) OF § 715(l)(13) OF CHAPTER 7, TITLE 1, GUAM CODE ANNOTATED, RELATIVE TO DEFINING THE ONE HUNDRED EIGHTY (180) INSTRUCTIONAL DAYS EQUIVALENT FOR GUAM PUBLIC SCHOOLS AND REQUIRING THE SUPERINTENDENT OF EDUCATION TO DEVELOP A STANDARD OPERATING PROCEDURE FOR THE ARRANGEMENT OF LOSS INSTRUCTIONAL TIME.

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Bill No. 196-35 (LS) - Telena Cruz Nelson / Joe S. San Agustin

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I MINA'TRENTAI SINGKO NA LIHESLATURAN GUAHAN | 35th GUAM LEGISLATURE

AGENDA

Public Hearing and Roundtable Hearing
Thursday, February 6, 2020 at 10:00 a.m. and 11:00 a.m.
Public Hearing Room, Guam Congress Building

- I. Call to order at 10:00 a.m.
- II. Opening Remarks by Vice Speaker Telena Nelson
- III. Item(s) for Discussion:

10:00 a.m.

Public Hearing

Bill No. 232-35 (COR) - Telena Cruz Nelson

AN ACT TO AMEND ITEMS (A) AND (B) OF § 715(l)(13) OF CHAPTER 7, TITLE 1, GUAM CODE ANNOTATED, RELATIVE TO DEFINING THE ONE HUNDRED EIGHTY (180) INSTRUCTIONAL DAYS EQUIVALENT FOR GUAM PUBLIC SCHOOLS AND REQUIRING THE SUPERINTENDENT OF EDUCATION TO DEVELOP A STANDARD OPERATING PROCEDURE FOR THE ARRANGEMENT OF LOSS INSTRUCTIONAL TIME.

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- IV. Adjournment



OFFICE OF VICE SPEAKER TELENA CRUZ NELSON

CHAIRPERSON OF THE COMMITTEE ON
EDUCATION, AIR TRANSPORTATION, AND STATISTICS, RESEARCH, AND PLANNING
I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN | 35th GUAM LEGISLATURE

Thursday, February 6, 2020 | 11:00 a.m. | Guam Legislature Public Hearing Room

Roundtable Hearing: Bill No. 196-35(LS)- Telen Cruz Nelson-AN ACT TO AMEND §§ 7116(a) AND (d) OF CHAPTER 7, DIVISION 2, TITLE 17 AND §§ 5008.2(a), (b)(1), and (b)(2), CHAPTER 5, TITLE 5 OF THE GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION TO ENTER INTO POWER PURCHASE AGREEMENTS TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S).

NAME	CONTACT	ORAL TESTIMONY (Yes or No)
Maria Gutierrez, GEB		Yes
Jon Fernandez, GDAE	488-8348	Yes
Bill Hagen, Pac Sol		✓
John Birch	727-1444	NO
Felix B. Ange	483-8098	NO
Wendy Benavente	688-9562	
Zeny Duran	GDOE	NO
John Pantoja	GPA	✓
Tracie Limtiaco	GPA	NO



OFFICE OF VICE SPEAKER TELENA CRUZ NELSON

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NAME	CONTACT	ORAL TESTIMONY (Yes <u>or</u> No)
Jerran Voacelo	481-3163	

Page 2 of 2

173 Aspinall Avenue, Suite 202A Ada Plaza Center, Hagåtña, Guam 96910
Tel: (671) 989-7696 | Email: senatortcnelson@guamlegislature.org

William Hagen

Consumer, Solar Installer and power producer

Re: Bill No. 196-35

Feb. 6, 2020

Senators:

We spent much of 2013 working on what became PL 32-95, however flawed it was, it never produced the desired results. With bill 196-35 perhaps we can come closer to our mutual goal of assisting Guam DOE in obtaining renewable energy for the operations of their schools making not only a financial statement but an environmental proclamation.

I believe it was our installation of a PPA at St. Francis School in Yona in 2012, which Superintendent Fernandez visited, that prompted much of what became PL 32-95. Since then we have been involved in multiple PPAs and am owner of several. Our company also installed Guam's first net metering project in 2009 and many, many others. We also believe that in the past 9 years we have been the only successful designer, supplier and installer of photovoltaic systems for the U.S. Military on Guam.

Under section 2 (a) it states that the school's PPA cover no more that 80% of the power needs. Considering that building usage may only be 50% of the school year while photovoltaics are continually operational it may be necessary to transfer some over production to other school sites.

Under section 2 (d) we would suggest that GPA provide procurement assistance, as suggested by Mr. Benavente, rather than technical assistance and that other agencies and departments not be included for technical consultation. GPA has proven itself to be well qualified in the procurement process for photovoltaic power and, we would like to see GPA expand its involvement in any procurement process for photovoltaic power for GDOE. We would like to see GPA as the responsible party for the payment to any success PPA Provider.

Regarding technical matters, they should be left to the PPA provider/developer. As the investors of what may be a multimillion-dollar investment, their engineers, builders, insurance company and their bonding agents are far more knowledgeable

about the current technology and state of art regarding photovoltaic power production. The owners of the system should be responsible for the technical aspects, not the user.

As designers, suppliers and installers, show us the site, or the building, and the industry will tell you how much can be safely installed. From a procurement standpoint, it's really that simple.

Sincerely Yours

A handwritten signature in black ink, appearing to be 'W. H. Hagen', written over the printed name.

William H. Hagen

Consumer, taxpayer, solar installer and power producer



GUAM POWER AUTHORITY

ATURIDÁT ILEKTRESEDÁT GUÅHAN
P.O. BOX 2977 • HAGÁTÑA, GUAM U.S.A. 96932-2977

January 28, 2020

Honorable Telenia C. Nelson
I Mina' Trentai Singko Na Liheslaturan Guåhan
173 Aspinall Ave., Ste. 202A
Hagåtña, Guam 96910
Via email: senatortcnelson@guamlegislature.org

Honorable Joe S. San Agustin
I Mina' Trentai Singko Na Liheslaturan Guåhan
761 South Marine Corps Dr., Ste. 203
Tamuning, Guam 96931
Via email: senatorjoessanagustin@gmail.com

Re: Supplemental Testimony re. Bill 196-35 (LS)
AN ACT TO AMEND § 7116(a) AND (d), BOTH OF CHAPTER 7, DIVISION 2, TITLE 17, GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION (GDOE) TO ENTER INTO POWER PURCHASE AGREEMENTS (PPA) TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S)

Dear Senators:

The Guam Power Authority has no objection to the proposed amendments to Chapter 7, Division 2, Title 17, Guam Code Annotated, to amend the authority to procure Power Purchase Agreement (PPA) via a Multi-Step Bid from the General Services Agency (GSA) to Guam Department of Education (GDOE).

I propose that the legislation include the provision for GDOE to not only be authorized to contract for solar energy, but also to authorize GPA to conduct the procurement for GDOE. Under this scenario, GPA will conduct the procurement and recommend a contract for award to GDOE. GDOE can then sign an energy agreement with the proponent. After award, GPA would continue to provide assistance to GDOE to manage the contract over its life. Contracting for energy is only one part of the equation. The other parts include project management, warranties, performance guarantees, performance penalties, and other significant administrative, technical and engineering expertise requirements.

Entering into a Power Purchase Agreement (PPA) is a complicated, technical process. Additionally, because PPAs are long term, typically 20 years, there is a substantial risk that bad and/or uninformed decisions would result in substantially higher costs to GDOE in the millions. Historically, GPA's Power Purchase Agreements have taken 18 months to two (2) years to fruition. The entire process is substantially vetted through and by approvals from the Guam Consolidated Commission on Utilities (CCU) and the Guam Public Utilities Commission (PUC). This process, although time intensive, has resulted in affordable, responsible energy contracts of \$0.085/kWh without energy shifting batteries, to \$0.11/kWh inclusive of full energy shifting batteries.

There is a perception that GDOE would be saving several millions of dollars per year (as much as \$5M) by entering into a PPA. As I have previously stated, the perceived "savings" would truly be a subsidy borne by the ratepayers; under the existing net metering program (NEM), GDOE would avoid paying debt, O&M, capital improvement and

other costs of the island-wide system grid normally shared by all ratepayers. As you may be aware, GPA has filed a petition with the PUC to phase out the subsidy given current NEM customers noting that the subsidy is currently over \$3.5M; if approved, it could result in GDOE paying more for energy than it does today because it would be depending on the subsidy to pay its PPA.

GPA recently invested \$250,000 for an energy and water consumption study of GDOE facilities to determine feasible cost savings. The 2019 study, conducted by Siemens, identified an annual savings of \$4.27M with an investment of \$41.5M into the GDOE water and energy infrastructure. This investment would provide significant annual savings while at the same time directly improving the GDOE infrastructure which is the stated objective of Bill 196-35: to allocate GDOE energy cost savings toward school system infrastructure and other improvements. Furthermore, the energy and water reduction measures recommended in the 2019 study are being implemented at no impact to GDOE's budget, eliminating GDOE's cost impact on the grid. It is foreseeable that GPA could issue a procurement for a long-term contract to implement this beneficial cost-reduction program. This would directly result in savings that GDOE can apply to other much needed infrastructure upgrades.

I would be remiss, however, not to comment on Section 1, Legislative Findings and Intent, of Bill 196, as introduced. The following information is provided specifically to address the statement of "rising costs of electricity"¹ and that a Power Purchase Agreement (PPA) may be in the "best financial interests of the government of Guam"²

The cost of electricity on Guam is determined by two factors: rate (cost per kilowatt hour [\$/kWh]) and consumption (energy usage within a billing period). As illustrated in Figure 1 (below), the most influential component of Guam's rate (\$/kWh) is fuel cost. To counter fuel oil price volatility, GPA is committed to reducing its demand for fuel oil; this effort is reflected in several projects underway, including but not limited to the commission of the Ukudu power plant, adding several utility-scale solar photovoltaic farms with battery storage, utility-scale energy storage systems, and the decommissioning of current baseload generators. As a result of these projects and others, the cost of electricity from GPA is projected to decrease (see Figure 2).

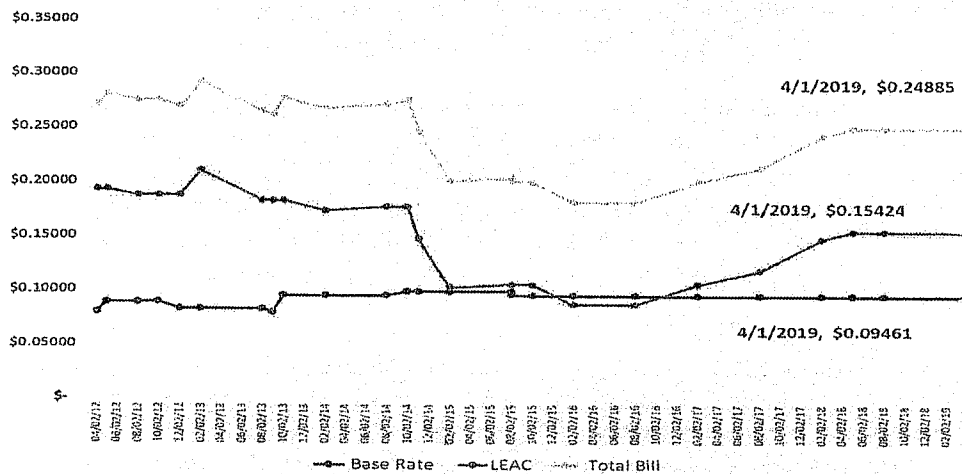


Figure 1 Guam Energy Rates

¹ Section 1, page 2, line 6.

² Section 1, page 1 lines 6-7.

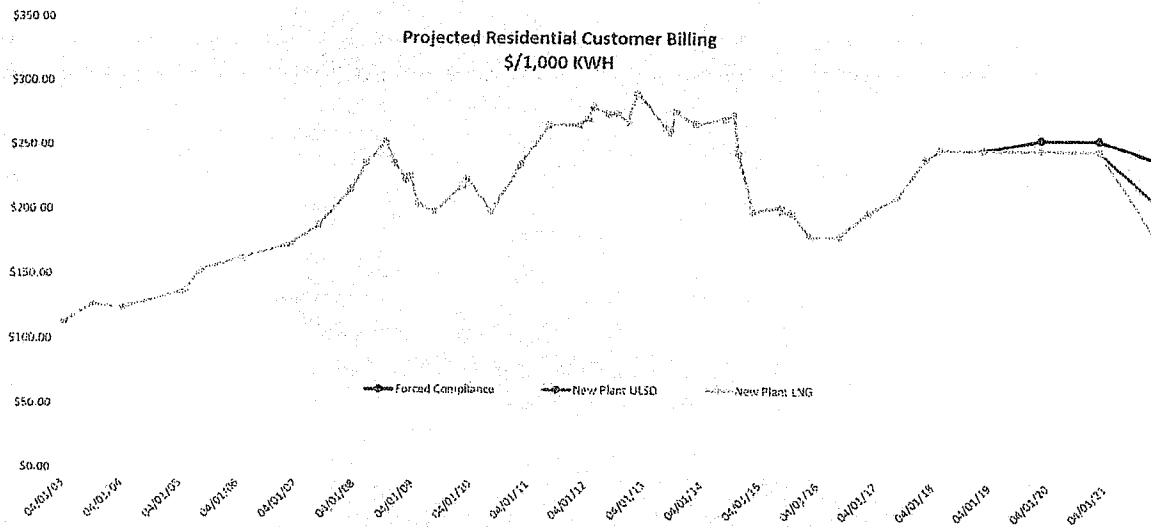


Figure 2 Projected Residential Billing

Energy consumption is best managed through conservation measures that include efficient devices and equipment (e.g. LED fixtures and lamps, EnergyStar® appliances, good SEER air conditioners), consistent maintenance, and energy saving behaviors. In comparison with other Pacific islands, Guam ranks highest in average monthly kWh consumption; its 940 kWh/month exceeds the lowest average monthly consumption (island of Hawaii at 471 kWh/month) by 66.5%.

In order to maintain overall energy affordability on Guam, ratepayers must reduce their energy consumption. Demand-side management (DSM) helps ratepayers to reduce the overall consumption (usage) of energy. Local businesses and government entities continue to offer services and information to achieve lower energy usage. GPA's ongoing DSM programs include Energy Sense rebates and MyEnergyGuam.com (a customer energy data portal). GPA has issued over \$4M in rebates to ratepayers to assist in lowering their energy consumption.


The following table shows GDOE billing for energy over the past 5 years. It appears that when energy cost was high, GDOE took conservation measures to reduce cost. However, at other times when energy cost was lower, it seems conservation disappeared. The implementation of demand-side management measures which reduces load through efficient equipment ensures that savings are consistent.

Fiscal Year	kWh Consumed	Yearly Change	Billed Amount	\$/kWh
2015	44,135,377		\$12,283,797	\$0.278
2016	43,959,491	-0.4%	\$10,699,133	\$0.243
2017	46,334,012	5.1%	\$8,789,208	\$0.190
2018	42,491,428	-9.0%	\$12,426,204	\$0.292
2019	43,411,121	2.1%	\$13,049,536	\$0.301

Thank you for meeting with me on this proposed legislation. Rest assured that GPA has GDOE's best interests in mind and has been working on solutions to reduce their cost while at the same time improving their infrastructure. A combination of demand-side management programs which reduces GDOE energy and water consumption, coupled with a solar PV system which provides long term lower and stable prices would benefit GDOE, ratepayers

and the island community. GPA is committed to work with GDOE in achieving this vision. However, I believe having GPA be the procurement entity for this type of measures would ensure it is successfully implemented.

Si Yu'os Ma'åse',



JOHN M. BENAVENTE, P.E.
General Manager

cc: Guam Consolidated Commission on Utilities
Guam Public Utilities Commission

//



GUAM POWER AUTHORITY

ATURIDÅT ILEKTRESEDÅT GUÅHAN
P.O. BOX 2977 • HAGÅTÑA, GUAM U.S.A. 96932-2977

February 5, 2020

Honorable Telena C. Nelson
I Mina' Trentai Singko Na Liheslaturan Guåhan
173 Aspinall Ave., Ste. 202A
Hagåtña, Guam 96910
Via email: senatortcnelson@guamlegislature.org

Honorable Joe S. San Agustin
I Mina' Trentai Singko Na Liheslaturan Guåhan
761 South Marine Corps Dr., Ste. 203
Tamuning, Guam 96931
Via email: senatorjoessanagustin@gmail.com

Re: 2nd Supplemental Testimony re. Bill 196-35 (LS)
AN ACT TO AMEND § 7116(a) AND (d), BOTH OF CHAPTER 7, DIVISION 2, TITLE 17, GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION (GDOE) TO ENTER INTO POWER PURCHASE AGREEMENTS (PPA) TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S)

Dear Senators:

The Guam Power Authority provides further information to the proposed amendments to Chapter 7, Division 2, Title 17, Guam Code Annotated, specifically to amend the authority to procure Power Purchase Agreement (PPA) via a Multi-Step Bid from GSA to Guam Department of Education (GDOE).

The legislation should be flexible to allow GPA to contract directly for solar PV energy for GDOE. GPA contracting for an energy agreement for GDOE allows GPA to provide its full complement of expertise and services to GDOE's benefit. A process which receives contract approval by the Consolidated Commission on Utilities and the Public Utilities Commission mitigates significant risk that GDOE enters in agreements which does not result in the intent of the bill.

PROCUREMENT & CONTRACT MANAGEMENT SERVICES

GPA offers its services to conduct the procurement for GDOE in order to ensure the intent of the bill is accomplished in an effective and most efficient manner for the benefit of GDOE, GPA ratepayers and the island community. To achieve lower energy costs while concurrently improving the infrastructure for years to come requires a comprehensive and implementable plan, and a team experienced and successful in executing this task for GDOE. GPA has the complete engineering and procurement team to make this happen. GPA is competent and able to accomplish the following which is necessary for success:

Assessment

- Review existing information and survey facilities to determine best candidates for solar PV systems. Prepare a plan and recommendation to install PV systems in certain schools, cluster of schools or other viable alternatives.
- The magnitude of solar PV systems which could be installed on GDOE infrastructure would certainly require frequency control system or Energy Storage Systems (ESS), such as batteries, in order to be tied

into the grid. GPA would evaluate whether one system or individual systems would be required; and would work to minimize its cost impact. All of GPA's solar PV systems are being installed with ESS in order to improve power quality.

Procurement

- Prepare bid specifications and issue a multi-step procurement tender. Vendors can ask questions, provide suggestions and recommendations during the question and comment period of the multi-step bid. Site visits would also be planned. This process is complex and technical, and must be well-documented to avoid misunderstandings amongst bidders and avoid or minimize bid protests. This process is strictly monitored and controlled by GPA's procurement department which has successfully awarded over 140,000 kW of Solar PV PPAs over recent years.
- Determine lowest responsive and responsible bidder. Prepare packages and recommendations for award. Address any protest(s) received. Defend decision at OPA appeals or other legal venues which bidders may pursue. Provide the volumes of documents requested through this process or FOIA request.

Approval & Award

- Obtain approval of the Consolidated Commission on Utilities (CCU) for award and the Public Utilities Commission (PUC) as required, and most especially if changes in rates are required to implement the award. As mentioned earlier, customers in the current Net Metering Program do not pay for using the island-wide power grid. GPA has petitioned the PUC to reduce this subsidy by crediting only the avoided cost which, if approved, could make a power purchase agreement more expensive and end up subjecting GDOE to higher costs over the 20-year contract. I would propose the PUC set a new rate to avoid GDOE incurring higher costs. I believe the savings being calculated for GDOE today are being based on a subsidized NEM program. The addition of GDOE into this program will result in increased cost to other ratepayers.
- The award of a PPA requires performance guarantees for the contract to be successful. Therefore, the project has to be successfully constructed and monitored over time. This would require construction management services and engineering expertise over the period. GPA has the expertise to achieve this requirement.

Additional Considerations

- The Net Metering Program has capacity limits of 25 KW for residential and 100 kW for non-residential customers. This could limit what GDOE could install at each school. A procurement which goes through the CCU/PUC process could be treated differently than the current NEM program because these entities have the authority to make the changes. We are all united in our support of our island's education system by improving GDOE infrastructure with energy cost savings without significantly impacting other utility ratepayers.
- GDOE's proposed system may likely trigger an interconnection study depending on the interconnection voltage, solar PV system size, and other characteristics.
- A 20-year PPA is a high-risk program, which if not carefully awarded and monitored, could result in unexpected consequences. A GDOE PPA may involve a commitment between \$100M to \$200M over the 20 years. I support the quest of the legislature to find a solution for GDOE and believe GPA conducting this procurement and contracting would minimize all risk. A process which passes through the CCU and PUC would be successful.

ENERGY CONSERVATION MEASURES

The other part of the equation for lower GDOE energy cost and improving its infrastructure is conservation and investing in demand side management systems to reduce its energy consumption. As noted in my Supplemental Testimony re. Bill 196-35 (LS) dated January 23, 2020, investing about \$41M into the infrastructure could net \$4.2M in annual savings. The following outlines the benefits of energy conservation measures:

- The 2019 Siemens study recommended improvements to lighting, air conditioning, energy management systems, water infrastructure and etc. These direct investments will provide system upgrades and new equipment, while concurrently reducing maintenance and energy costs.
- A concerted effort to obtain grants from the federal government and other entities could provide initial and/or sustained funding for the improvements. GPA recently worked with GDOE and successfully received over \$3M in grants to upgrade lighting in four (4) major schools to very efficient and longer-life LED lighting. These upgrades would provide significant direct savings to GDOE while extending the life of lights at the school, thereby reducing maintenance cost.
- Similar to a PPA agreement, GDOE could enter into an energy conversion agreement contract with an investor to install, operate and maintain an energy reduction to infrastructure improvement program over a 10 to 20-year period. The investor would be paid from energy cost reduction while reducing GDOE's annual energy bill. Investor could also be required to provide financing for other much needed improvements. The contractor would be required to monitor and manage energy consumption to ensure prudent energy usage. Under such agreement, GPA could be GDOE's owner/engineer to procure and manage such a contract.

In regard to energy conservation efforts, I reviewed GDOE's energy usage over the past four (4) years. The FY 2019 data for each GDOE school (shown below) is sorted by highest cost of energy consumption (kWh) per student.

School	Electricity (kWh)	Annual Spend	Students	kWh/Student	\$/Student
Southern HS	3,952,613	\$ 1,096,227	1,274	\$ 3,103	\$ 860
Tamuning ES	1,490,316	\$ 409,760	571	\$ 2,610	\$ 718
Liguan ES	1,172,110	\$ 309,123	472	\$ 2,483	\$ 655
Chief Brodie Memorial ES	686,795	\$ 192,448	304	\$ 2,259	\$ 633
Okkodo HS	4,061,058	\$ 1,016,834	1,643	\$ 2,472	\$ 619
Astumbo MS	1,417,741	\$ 369,353	624	\$ 2,272	\$ 592
Oceanview MS	826,259	\$ 240,069	449	\$ 1,840	\$ 535
Inarajan MS	903,396	\$ 266,871	506	\$ 1,785	\$ 527
Adacao ES	1,007,049	\$ 270,867	544	\$ 1,851	\$ 498
Agueda Johnston MS	1,390,748	\$ 377,786	765	\$ 1,818	\$ 494
Tiyan HS	2,184,489	\$ 588,950	1,201	\$ 1,819	\$ 490
P.C. Lujan ES	604,588	\$ 163,107	349	\$ 1,732	\$ 467
F.B. Leon Guerrero MS	1,789,827	\$ 492,641	1,108	\$ 1,615	\$ 445
C.L. Taitano ES	842,292	\$ 243,274	563	\$ 1,496	\$ 432
J.Q. San Miguel ES	819,468	\$ 213,398	498	\$ 1,646	\$ 429
George Washington HS	2,195,420	\$ 634,583	1,497	\$ 1,467	\$ 424
John F. Kennedy HS	2,784,516	\$ 724,413	1,768	\$ 1,575	\$ 410
Upi ES	847,284	\$ 251,724	655	\$ 1,294	\$ 384
Inarajan ES	378,793	\$ 101,058	263	\$ 1,440	\$ 384
Machananao ES	559,958	\$ 175,126	472	\$ 1,186	\$ 371
Wettengel ES	843,027	\$ 242,359	660	\$ 1,277	\$ 367
Vicente S.A. Benavente MS	1,504,652	\$ 410,666	1,128	\$ 1,334	\$ 364
Ordot Chalan Pago ES	628,497	\$ 171,457	471	\$ 1,334	\$ 364
L.P. Untalan MS	1,348,948	\$ 366,369	1,007	\$ 1,340	\$ 364
M.A. Sablan ES	540,204	\$ 153,871	427	\$ 1,265	\$ 360

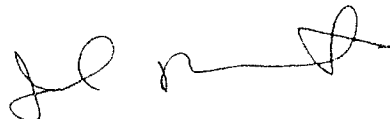
Merizo Martyrs Memorial ES	330,472	\$ 91,569	259	\$ 1,276	\$ 354
LBJ ES	415,973	\$ 108,816	311	\$ 1,338	\$ 350
Carbulido ES	609,571	\$ 152,924	457	\$ 1,334	\$ 335
Truman ES	463,812	\$ 133,344	399	\$ 1,162	\$ 334
Astumbo ES	533,131	\$ 178,068	574	\$ 929	\$ 310
Agana Heights ES	403,487	\$ 109,489	356	\$ 1,133	\$ 308
M.U. Lujan ES	502,710	\$ 168,823	591	\$ 851	\$ 286
Juan M. Guerrero ES	479,488	\$ 161,364	567	\$ 846	\$ 285
Captain Price ES	712,470	\$ 198,559	706	\$ 1,009	\$ 281
Simon Sanchez HS	1,664,731	\$ 434,607	1,661	\$ 1,002	\$ 262
Talofofo ES	270,617	\$ 77,133	304	\$ 890	\$ 254
Daniel L. Perez ES	648,580	\$ 197,074	780	\$ 832	\$ 253
Maria A. Ulloa ES	577,780	\$ 172,214	683	\$ 846	\$ 252
Jose Rios MS	655,675	\$ 216,314	879	\$ 746	\$ 246
J.P. Torres ES	95,928	\$ 32,830	157	\$ 611	\$ 209
Finegayan ES	443,999	\$ 149,722	909	\$ 488	\$ 165
Totals:	43,588,472	\$ 12,065,184	28,812	\$ 1,513	\$ 419

Observations:

- The average cost for energy per student in FY 2019 was \$419 per year.
- JFK, which was recently re-built, and GWHS are the benchmark average.
- The top 10 schools which were above average, translate to \$1.5M in higher costs.
- The leased schools' energy cost per student are substantially higher than the average and are in the top 10. A review of the variables causing this should be pursued. This information would be valuable as GDOE pursues new schools and to insure it considers energy efficiency in its procurement.
- I recommend an incentive program be established for GDOE schools. The incentive program would be one which allows energy savings above a certain benchmark to be provided back to the school to use for their individual programs, most especially programs typically receiving financing through external fundraisers. I believe such an incentive, would encourage principals and teachers to make all efforts to save energy because it would result in funds specifically available for their needs. I am not certain if this process would need only GDOE Board approval or if it requires specific legislation in order to appropriate savings directly to schools.

I provide my insight and suggestions for your consideration. I am available for discussions or questions prior to the Thursday roundtable meeting, should you so desire. Thank you for the opportunity to comment.

Si Yu'os Ma'ãse',



JOHN M. BENAVENTE, P.E.
General Manager
jbenavente@gpagwa.com



GUAM POWER AUTHORITY

ATURIDÁT ILEKTRESEDÁT GUÅHAN
P.O. BOX 2977 • HAGÁTÑA, GUAM U.S.A. 96932-2977

October 30, 2019

Honorable Telenia C. Nelson
Chairman
Committee on Education, Air Transportation, and Statistics, Research, and Planning
I Mina' Trentai Singko Na Liheslaturan Guåhan
173 Aspinall Avenue
Suite 202A, Ada Plaza Center
Hagåtña, Guam 96910

Re: Bill 196-35
An Act to Amend § 7116(a) And (d), Both of Chapter 7, Division 2, Title 17, Guam Code Annotated, Relative To Authorizing The Guam Department of Education (GDOE) To Enter Into Power Purchase Agreements (PPA) to Purchase Solar Energy from Qualified Provider(s)

Dear Senator Nelson:

The Guam Power Authority is pleased to offer testimony in support of Bill 196-35 (LS). GPA is confident that the Guam Department of Education (GDOE) has the capacity and capabilities to issue and award a solar PV power purchase agreement (PPA) for its schools, administrative and ancillary buildings.

GPA and GDOE have and continue to collaborate on several energy-related projects, including its prior efforts to procure solar PPAs for select GDOE schools. In 2017, GPA provided technical assistance and its recommendation to GDOE regarding its desire to negotiate and enter into PPAs for Okkodo High, Adacao Elementary, Liguana Elementary, and Astumbo Middle Schools. More recently, GPA and GDOE conducted a feasibility assessment of its schools to assist GDOE to prioritize its energy projects, modernize its infrastructure, while extending the useful life of their appliances and equipment.

PPAs, as with all contracts, are often complex; all benefits and risks must be considered before finalizing the material terms of any agreement. Specifically to PPAs, the proposed, or anticipated, cost per kilowatt hour (\$/kWh) may be significantly impacted by other factors including: actual and/or projected demand; projected production; capacity factor; energy conservation efforts; condition and useful life of the building or asset; alternative energy sources and rates; maintenance; risk/liability, including disposal, insurance and default events; and the cost of money, often expressed as an escalation rate. GPA has extensive experience with PPAs and expertise with complex, technical energy matters. We stand committed to continue to assist GDOE with their proposed power purchase agreements.

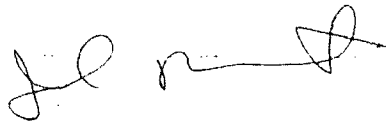
An inherent component of energy savings is demand side management (DSM). To this point, GPA funded and facilitated a recent assessment by energy contractor, Siemens Industry (Siemens), of GDOE's 27 elementary schools, eight (8) middle schools, and six (6) high schools to explore the financial viability of targeted facility improvement measures that include solar PV, HVAC, water/wastewater, energy management, and lighting systems; and operations and maintenance efficiencies. Siemens recommended implementing a pilot program to gain maximum efficiency improvements.

Carbullido Elementary was selected for the pilot program. The recently completed project included approaches to variable flow air conditioning, solar thermal collectors for HVAC systems, a building management system, and LED conversion. The GDOE-wide assessment and the pilot program were funded by \$500,000 savings resulting from the refinancing of GPA's 2010 bond. The anticipated annual cost savings for this school alone is \$24,100, or approximately 15% of its total annual energy bill. The results emphasize the value of energy efficiency measures, and its impact on energy consumption and overall energy costs.

Through a total of approximately \$2.2M Department of Interior grants, GPA and GDOE have four (4) other DSM projects that will not only save a combined total of over \$342,000 per year, but improves and extends the life of HVAC and other critical assets.

In conclusion, GPA supports Bill 196-35 (LS) as introduced. We believe that the strategic implementation of energy saving programs will greatly benefit GDOE, as well as all island ratepayers.

Si Yu'os Ma'āse',

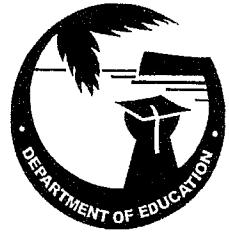
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JOHN M. BENAVENTE, P.E.
General Manager



DEPARTMENT OF EDUCATION OFFICE OF THE SUPERINTENDENT

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JON J. P. FERNANDEZ
Superintendent of Education

February 06, 2020

Honorable Telena C. Nelson
Vice-Speaker and Chair
Committee on Education, Air Transportation, and Statistics, Research, and
Planning
Thirty-Fifth Guam Legislature
173 Aspinall Avenue, Suite 202A, Ada Plaza Center
Hagatna, Guam 96910

Re: Testimony on Bill 196-35

Hafa Adai, Madam Vice-Speaker:

Thank you for the opportunity to testify on Bill 196-35. As you may recall, I previously testified in support of this bill at an earlier hearing held on October 30, 2019; a copy of that testimony is attached. Bill 196-35 would grant GDOE the authority to procure solar energy from qualified vendors for all non-leased schools. As I indicated in my earlier testimony, GDOE would like to be able to dedicate any savings from this effort to go towards facilities maintenance and improvement. In our recent school safety discussions with parents and other stakeholders, facility safety and maintenance are a key concern, and any support to address this priority would be appreciated.

I am aware that there is a separate bill, Bill 219-35 which will have a hearing later today as well, that also proposes to provide GDOE the authority to purchase solar power from qualified vendors. Bill 219-35 goes further on to extend that authority to other educational institutions and includes the option to enter into a sale-leaseback agreement with a vendor. The legislation would allow for the use of savings for the improvement of school facilities. We appreciate the efforts of all of the sponsors of both bills and would like to work with you to ensure that, at the end of the day, a solution is passed that will help GDOE pursue alternative energy, generate and benefit from savings, and promote sustainable practices.

I am also aware of the Guam Power Authority's interest in assisting with this effort and received a copy of their testimony yesterday. As of this writing, I have not had an opportunity to discuss the testimony with GPA officials, but I am certainly open to working with GPA to address their concerns and suggestions. It is not the intent of GDOE to negatively impact our incumbent power provider, as we understand the critical role that GPA plays in supplying power to island residents and businesses. However, the year is 2020, and agencies such as GDOE should be

able to explore and move forward with sustainable energy practices and ensure the effective use of our financial resources. We stand ready to work with the committee and GPA in this effort. I do not see Bill 196-35 as limiting the possibility of our partnership with GPA in any way.

Thank you again for our support for GDOE and our employees, students and families. We look forward to this legislation gaining favorable consideration by your committee and by the full Legislature in the near future.

Senseramente,

A handwritten signature in black ink, appearing to read "Jon J.P. Fernandez", with a stylized flourish at the end.

JON J.P. FERNANDEZ
Superintendent of Education

Attachment

Cc: Chairwoman and Members, GEB



DEPARTMENT OF EDUCATION

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JON J. P. FERNANDEZ
Superintendent of Education

October 30, 2019

Honorable Telena Nelson
Vice Speaker, Chairperson, Committee on Education, Air Transportation and Statistics,
Research and Planning
173 Aspinall Avenue
Ada Plaza Center, Suite 202A
Hagatna, Guam 96910

Hafa Adai, Madam Vice Speaker:

Thank you for the opportunity to provide testimony on Bill 196-35, *An Act to Amend Section 7116(a) and (d), Both of Chapter 7, Division 2, Title 17, Guam Code Annotated, Relative to Authorizing the Guam Department of Education (GDOE) to Enter into Power Purchase Agreements (PPA) to Purchase Solar Energy from Qualified Provider(s)*, sponsored by Vice-Speaker Telena Nelson and Senator Joe San Agustin. We come before you today in full support of the proposed legislation, which would provide the Guam Department of Education the authority to enter into power purchase agreements with qualified vendors to supply solar energy to our GDOE schools and other facilities. This legislation, fully implemented, would allow GDOE to save an estimated \$4 to \$5 million per year in utility costs.

Currently, GDOE pays the Guam Power Authority approximately \$13 million per year, over \$1 million each month, to supply power to all 41 schools as well as the central office facilities in Tiyan. In past years, we have worked on addressing our demand for power by attempting to conserve energy and reduce consumption, but what we have found is, as we see consumption reduce, power rates continue to adjust upwards, leaving us no better off than before. We believe that the approach offered by Bill 196-35, allowing us to seek alternative sources of energy at a discounted rate is a more promising route to take.

It is our request that the Committee not only authorize GDOE to realize energy savings through Bill 196-35 but also set aside the savings from the bill to go towards school facility improvements. This would require language to ensure that any projected or actual savings be deposited in a newly established GDOE Facility Improvement Fund that would be reserved for GDOE facility repair and renovation projects. We would also ask that there be language authorizing GDOE to obtain financing based on a pledge of revenues from the GDOE Facility Improvement Fund, which we estimate could yield upwards of \$50 million if leveraged effectively over a period of time.

A dedicated source of funds for facilities would be a "game-changer" in terms of addressing GDOE's ongoing facility needs. The U.S. Army Corps of Engineers issued its finding in 2013 that GDOE had about \$90 million in deferred maintenance that needed to be addressed. Unfortunately, the government of Guam has not had the ability to borrow the funds needed to invest in our school facilities, leaving GDOE to deal with major capital projects using only its yearly operating budget. With a dedicated source of funding, one that comes from reducing spending as opposed to raising taxes or fees, the Guam Legislature can finally provide GDOE with a long-term solution to help repair and improve school facilities across the island.

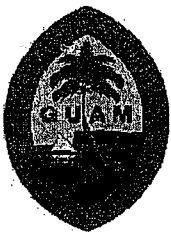
In a recent meeting with parents to discuss school safety, many of them cited school facilities as a safety issue. We agree with them. We have a lot of work to do, beginning with Simon Sanchez High School and extending to George Washington, Southern and all of our middle schools, to provide our students with safe and conducive learning environments. Bill 196-35 can be a critical step forward in making this a reality.

Thank you again for introducing Bill 196-35. We offer our strong support and ask that you move to expedite its passage so that we can get to work on reducing our utility costs and shifting those much-needed resources to improving our public school facilities.

Senseramente,

A handwritten signature in black ink, appearing to read "Jon J.P. Fernandez", with a stylized flourish at the end.

JON J.P. FERNANDEZ



MARIA A. GUTIERREZ
Chairwoman

GUAM EDUCATION BOARD

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Vice-Chair

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IBOGS Representative
Doris A. Terlaje
GFT Representative
Mayor Melissa B. Savares
MCOG Representative

EXECUTIVE SECRETARY

Jon J. P. Fernandez
GDOE Superintendent

February 6, 2020

Honorable Telenia C. Nelson
Vice-Speaker and Chair
Committee on Education, Air Transportation, and Statistics, Research, and
Planning
Thirty-Fifth Guam Legislature
173 Aspinall Avenue,
Suite 202A Ada Plaza Center
Hagatna, Guam 96910

Hafa Adai, Madam Vice-Speaker:

Re: Testimony on Bills 232-35 and 196-35

Thank you for the opportunity to testify before you today on behalf of the Guam Education Board ("GEB") regarding Bill 232-35 and Bill 196-35. Bill 232-35 would amend Public Law 34-105 to clarify that at least 900 instructional hours are required for students in both elementary and secondary public schools each school year. Bill 232-35 would also require that the superintendent develop a standard operating procedure to make up for the loss of instructional hours in the event of emergencies or natural disasters.


The GEB supports passage of Bill 232-35 and thanks Vice-Speaker Nelson for introducing the legislation, following the request of the GEB as set forth in Board Resolution 2019-10, passed last August. Board Resolution 2019-10 recommended the clarification of instructional time that is contained in Bill 232-35 and reflects the agreed language proposed by the Joint Board Union Calendar Committee, which is comprised of Guam Department of Education ("GDOE") management and representatives of the Guam Federation of Teachers. This clarification would help ensure that students receive the necessary instructional time to promote academic achievement while also giving the superintendent flexibility to address any interruption of instructional time due to typhoons, utility outages or other unforeseen situations. We urge the Legislature to pass Bill 232-35. A copy of the Board resolution is attached.

Bill 196-35 would amend Public Law 32-95 to grant GDOE the authority to procure solar energy from qualified vendors for all non-leased schools. Currently, the law provides that authority to the General Services Administration. There is an urgent need for GDOE to explore all opportunities

to implement alternative energy and generate savings that can be utilized for educational purposes. GDOE currently spends over \$13 million in power per year. With the authority provided by Bill 196-35, GDOE intends to move forward as soon as possible to promote sustainable energy practices within our school system by implementing solar power and, hopefully, provide additional funding to meet other important GDOE needs. In testimony offered at an earlier public hearing on this subject, GDOE had requested the opportunity to utilize any savings to address deferred maintenance in our school facilities. A copy of that testimony is attached.

Thank you Vice-Speaker for engaging with us and working on solutions for our education community. We ask for your continued support and hope that the bills being heard today will move forward for an affirmative vote by the Legislature soon.

Si Yu'os Ma'ase',


MARIA A. GUTIERREZ
Chairwoman, Guam Education Board

Attachments

**GUAM EDUCATION BOARD
RESOLUTION NUMBER 2019-10**



Introduced by:

Guam Education Board Members

**RELATIVE TO REQUESTING THE 35TH GUAM LEGISLATURE TO AMEND PUBLIC LAW 34-105 TO
CLARIFY THE REQUIREMENT FOR INSTRUCTIONAL TIME IN GUAM DEPARTMENT OF EDUCATION
ELEMENTARY AND SECONDARY PUBLIC SCHOOLS**

WHEREAS, pursuant to Subsections 3102.1 (k) and (p) Chapter 3 of Title 17 of the Guam Code Annotated, the Guam Education Board (GEB) is charged with establishing a school calendar and is authorized to make recommendations to the Governor of Guam or to the Guam Legislature for changes, additions or deletions to Guam Education Laws; and

WHEREAS, the Joint Board Union Calendar Committee (JBUCC), comprised of school administrators, Guam Federation of Teachers designees and representatives, GDOE Payroll Officer, Program Director of Head Start, deputy superintendents, and a GEB member, who serves in a liaison capacity, was established and tasked to review all issues related to the school calendar and to provide pertinent reports and recommendations to the Superintendent for approval and transmittal for GEB action; and

WHEREAS, under Section 715(l)13 et. al of Title 1 of the Guam Code Annotated, Guam Public Schools are required to provide at least 180 instructional days, or its equivalence, each school year; and, as amended on June 5, 2018 under PL 34-105, to use separate equivalent hours (5 hours for elementary and 7 hours for secondary) in computing what constitutes a school day for purposes of facilitating make up days coinciding with the actual amount of instructional time lost; and

WHEREAS, on March 18, 2019 the JBUCC advised the Superintendent the amendment as written and contained in PL 34-105 in effect, creates discrepancies between elementary and secondary schools and inconsistencies of including or excluding meals (breakfast and lunch) as well as breaks in converting the mandated 180 instructional days and further recommended an amendment to the statute to require, at a minimum, that the equivalent instructional units of conversion be the same for both elementary and secondary schools, and further proposed using instructional minutes in the conversion which coincides with how GDOE schools currently prepare and develop their master schedules; and

**GUAM EDUCATION BOARD
RESOLUTION NO. 2019-10**

WHEREAS, the JBUCC has determined that having the same, at a minimum, equivalent instructional units of conversion for all public school levels is critical to ensure uniformity and efficiencies may be achieved in managing and supervising the day to day operations of all 41 schools at all levels, ranging from the maximization and assignment of personnel, scheduling of classroom instruction, school activities, and school based services (food services, custodial, facilities maintenance, and others); and

WHEREAS, the JBUCC has determined the statute may also be strengthened in requiring the Superintendent to develop a standard operating procedure to determine whether and when the loss of instruction may be waived in the event an emergency or natural disaster resulting in disruptions to instructional time; and

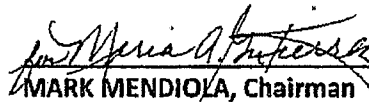
WHEREAS, GEB believes it would be prudent to request this amendment be expedited to ensure the adjustment be made prior to the opening of School Year 2019-20; now therefore be it

RESOLVED, the Guam Education Board does hereby exercise its authority under Subsection 3102.1 (p) of Title 17 of the Guam Code Annotated to approve and transmit the attached request for review by *I Mina' Trentai Cinco Na Liheslaturan Guåhan* to amend Section 715(l)13 of Title 1 of the Guam Code Annotated; and


BE IT FURTHER RESOLVED, the Guam Education Board urges the Thirty Fifth Guam Legislature to expedite consideration of this request and the timeliness of the opening of School Year 2019-20; and

BE IT FURTHER RESOLVED, that a copy of this Resolution and the attached draft legislation be transmitted to the Honorable Speaker Tina Muna Barnes, *I Mina' Trentai Cinco Na Liheslaturan Guåhan*, the Honorable Telenia Nelson, Chairwoman of the Thirty-Fifth Guam Legislative Committee on Education, the Honorable Governor Lou Leon Guerrero, *I Magå håga Guåhan* and all schools.

DULY AND REGULARLY ADOPTED THIS 16TH DAY OF JULY, 2019.



MARK MENDIOLA, Chairman
Guam Education Board



JON J.F. FERNANDEZ
Executive Secretary



MARK B. MENDIOLA
Chairman

GUAM EDUCATION BOARD

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Barrigada, Guam 96913-1608
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Vice Chairwoman

October 30, 2019

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Honorable Telenia C. Nelson
Vice-Speaker and Chair
Committee on Education, Air Transportation, and Statistics, Research, and Planning
Thirty-Fifth Guam Legislature
173 Aspinall Avenue,
Suite 202A Ada Plaza Center
Hagatna, Guam 96910

Hafa Adai, Madam Vice Speaker:

Thank you for working with the Guam Department of Education to address our request for the authority to implement solar energy in our school and administrative facilities. As you know, today, we are spending approximately \$13 million per year for power from our Guam Power Authority. However, we believe we can cut down on these costs by entering into power purchase agreements with solar energy providers for a substantial portion of our power needs. If we can meet this goal of reducing our energy costs, we hope that we will be able to shift these much-needed resources to improve our school facilities.

The superintendent will be presenting his proposal to generate savings and leverage these savings for long-term facility improvements across the island. The Guam Education Board supports this plan which is both innovative and resourceful in helping us address a major department need without having to ask the Legislature to raise taxes or fees. As you know, every year, we come to you asking you to support a budget in excess of \$300 million, and we don't make that request lightly because it comes to us from budget discussions that take place at every school with parents, teachers and staff. However, we are aware that a significant portion of our request — typically, \$20 to \$30 million — is for capital improvement projects that would normally be funded by the government issuing bonds. We believe Bill 196-35, if passed with language to reserve the savings for facility investments, will be a major part of the solution.

Thank you for engaging with us, coming to our meetings, participating in our outreach to the community and working on meaningful legislation for the department. We know that you are listening to our requests for assistance, and Bill 196-35 is evidence of your support. We hope that the Legislature will expedite consideration and support for your bill, so we can move forward with solar energy for our schools and a long-term solution to improve our public school facilities.

Senseramente,

MARK B. MENDIOLA
Chairman, Guam Education Board



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JOHN F. KENNEDY HIGH SCHOOL

GPA BEST Schools Program - GDOE Preliminary Feasibility Assessment

Presented by Guam Power Authority & Siemens Industry, Inc. - Building Technologies Division

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November 14, 2018



Introduction to GPA / Siemens Team

- 1 John Cruz, PE - Assistant General Manager of Engineering & Technical Services, GPA
- 2 Jennifer Sablan, PE - Manager of Strategic Planning & Operations Research Division, GPA
- 3 Amber McDonough, PE - Business Development Manager, Pacific Zone, Siemens
- 4 Alex Ramos, PE - Senior Energy Engineer, Pacific Zone, Siemens
- 5 John De Maio - General Manager, Pacific Zone Building Performance & Sustainability, Siemens



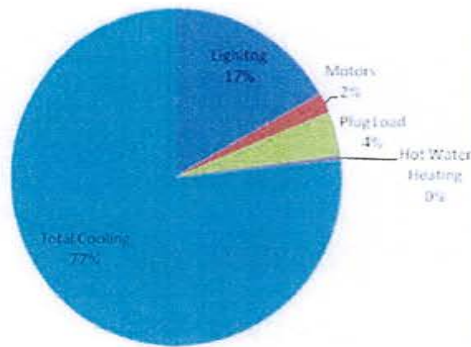
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Agenda

- 1** Overview of Report Findings
- 2** Review of Recommendations
- 3** Path Forward / Support from GPA
- 4** Next Steps



GPA BEST Schools Assessment Goals



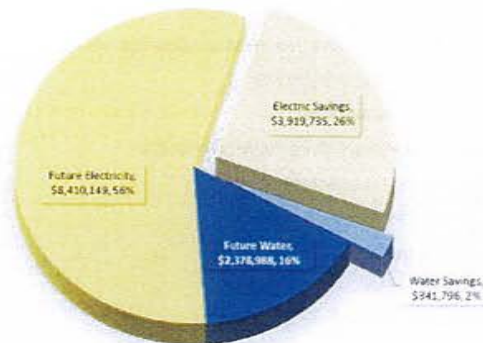
- GPA pledged initial seed money of \$500,000 for BEST Schools study and pilot project to demonstrate recommended FIMs
- Preliminary feasibility study to help GDOE:
 - 1) Achieve 10% energy consumption reduction & deploy renewable energy
 - 2) Assist GDOE to plan & prioritize actions to reduce operations expenditures, modernize their infrastructure & extend equipment life
- Audited 39 schools (26 ES, 8 MS & 5 HS) = ~4,000,000 sqf
- Explored viability of these key facility improvements measures (FIMs):
 - a. Solar Photovoltaic (PV) Systems
 - b. Heating Ventilation & Air-Conditioning (HVAC) Systems
 - c. Water/Wastewater Systems
 - d. Energy Management Systems (EMS)
 - e. Lighting Systems
 - f. Operations & Maintenance (O&M) Efficiencies



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GPA BEST Schools Overall Findings



- 1) Study included an existing conditions summary & utility cost and savings analysis by school.
- 2) Recommendations are prioritized and ranked based on our preliminary estimates of their implementation costs and expected savings by FIM.
- 3) New pathways for GDOE to cost-effectively fund, procure, and construct these improvements were explored.

*During 2017/2018 school year GDOE expenditures =
\$12,329,000 on electricity & \$2,720,000 on water = \$15,050,000 / year*

Total potential project cost to implement all FIMs = \$41,450,000

*Predicted savings of 11,629,000 kWh electricity + 15,579 kGal water
= \$4,261,000 / year = 27% cost reduction*

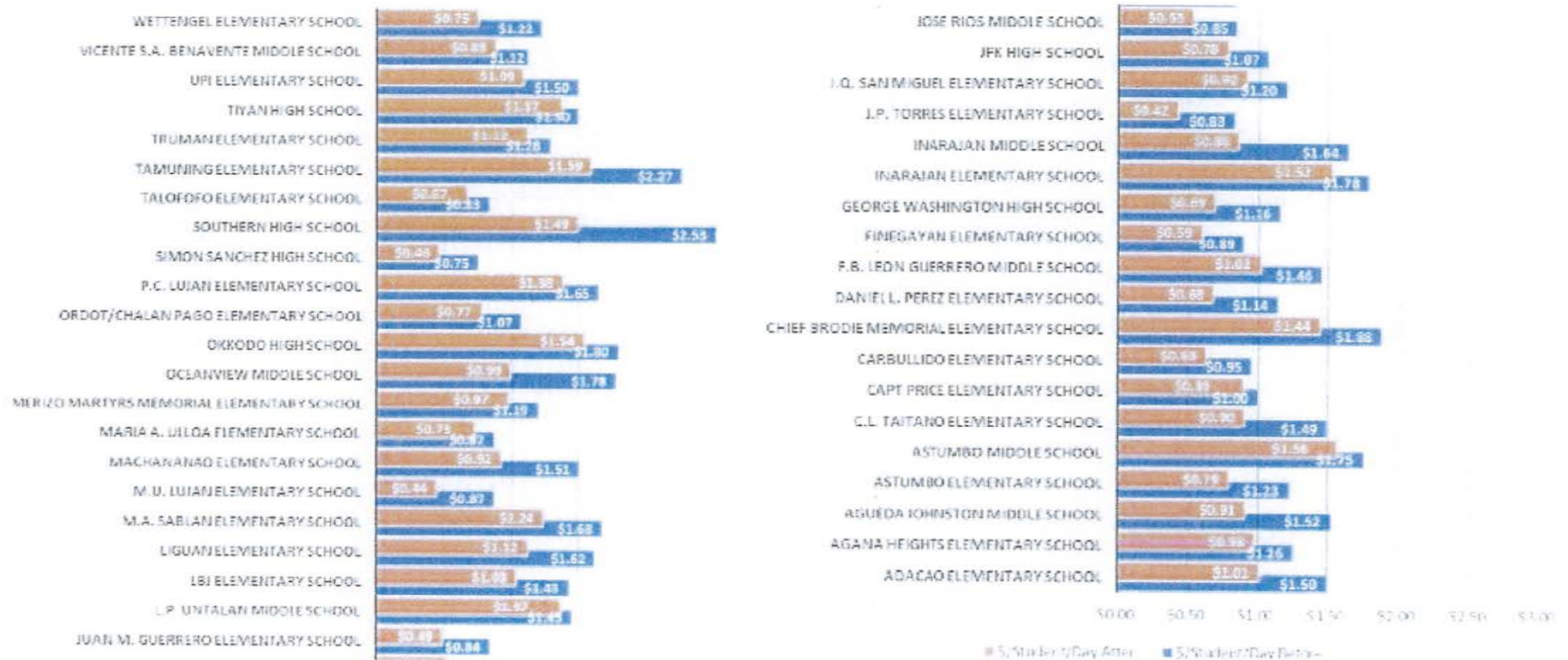
*** The energy project's utility savings would pay for itself in 9.7 years ***



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Utility Spend per Student / Year Before & After Project (pg 2-10)





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Priority FIMs by School (pg 2-3)

Location	Energy Management Systems	Water Conservation	LED Lighting	Solar PV	Solar Assisted AC	Plug Load Controllers
Adacao ES		x	x	x		x
Agana Heights ES	x	x	x	x		x
Agueda Johnston MS	x	x	x	x	x	x
Astumbo ES		x	x	x		x
Astumbo MS		x	x			x
C.L. Taitano ES	x	x	x	x	x	x
Captain Price ES		x	x	x		x
Carbulido ES	x	x	x			x
Chief Brodie Memorial ES	x	x	x			x
Daniel L. Perez ES	x	x	x	x		x
F.B. Leon Guerrero MS	x	x	x	x	x	x
Finegayan ES		x	x	x	x	x
George Washington HS	x	x	x	x	x	x
Inarajan ES		x	x			x
Inarajan MS	x	x	x	x		x
J.P. Torres ES		x	x	x		x
J.Q. San Miguel ES	x	x	x			x
John F. Kennedy HS		x	x	x		x
Jose Rios MS		x	x	x	x	x
Juan M. Guerrero ES		x	x	x	x	x
L.P. Untalan MS		x	x			x
LBJ ES	x	x	x			x
Liguan ES		x	x	x		x
M.A. Sablan ES		x	x	x		x
M.U. Lujan ES		x	x	x		x
Machananao ES	x	x	x	x		x
Maria A. Ulloa ES		x	x			x
Merizo Martyrs Memorial ES	x	x	x			x

Location	Energy Management Systems	Water Conservation	LED Lighting	Solar PV	Solar Assisted AC	Plug Load Controllers
Oceanview MS	x	x	x	x		x
Okkodo HS		x	x	x		x
Ordot Chalan Pago ES	x	x	x	x		x
P.C. Lujan ES	x	x	x			x
Simon Sanchez HS	x	x	x	x	x	x
Southern HS	x	x	x	x	x	x
Talofofo ES		x	x			x
Tamuning ES	x	x	x	x		x
Truman ES		x	x			x
Tiyan HS		x	x			x
Upi ES		x	x	x	x	x
Vicente S.A. Benavente MS	x	x	x	x	x	x
Wettengel ES	x	x	x	x		x
GDOE Headquarters				x		x

NOTE: Not all schools are checked for Energy Management Systems. While all schools would benefit from having this FIM installed, not all schools are included at this stage due to sufficient energy savings at specific schools.

Potential Costs, Savings & Simple Payback by School (pg 2-11 to 2-13)



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School	Electric Savings (kWh)	Water Savings (gallons)	Utility Cost Savings (\$)	Project Costs (\$)	SPB (Years)
Adacao Elementary School	203,118	258,750	\$95,127	\$960,937	10.10
Agana Heights Elementary School	135,068	203,367	\$40,899	\$466,881	11.42
Agueda Johnston Middle School	488,574	478,393	\$171,898	\$1,658,704	9.65
Astumbo Elementary School	239,543	283,802	\$92,792	\$1,008,572	10.87
Astumbo Middle School	139,834	374,312	\$41,315	\$367,685	8.90
C.L. Taitano Elementary School	355,754	295,485	\$129,908	\$1,401,986	10.79
Capt Price Elementary School	55,844	331,275	\$27,354	\$370,132	13.53
Carbullido Elementary School	222,638	247,198	\$58,555	\$267,138	4.56
Chief Brodie Memorial Elementary School	202,183	179,085	\$52,235	\$527,814	10.10
Daniel L. Perez Elementary School	375,640	328,957	\$111,715	\$1,267,719	11.35
F.B. Leon Guerrero Middle School	644,646	682,836	\$179,992	\$1,397,077	7.76
Finegayan Elementary School	234,299	441,715	\$92,681	\$1,007,279	10.87
George Washington High School	782,975	968,416	\$280,396	\$2,900,117	10.34
Inarajan Elementary School	84,238	129,265	\$22,896	\$225,403	9.84
Inarajan Middle School	395,293	315,941	\$139,122	\$1,369,913	9.85
Truman Elementary School	78,154	188,006	\$22,652	\$161,315	7.12
Tiyan High School	185,984	763,571	\$60,457	\$531,619	8.79
Upi Elementary School	351,752	416,188	\$132,080	\$1,258,893	9.53
Vicente S.A. Benavente Middle School	370,050	707,936	\$103,480	\$957,237	9.25
Wettengel Elementary School	319,475	346,486	\$120,535	\$1,233,694	10.24
GDOE Headquarters	123,303	0	\$47,497	\$736,565	15.51
Totals	12,314,273	16,495,804	\$4,261,531	\$41,449,903	9.73

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School	Electric Savings (kWh)	Water Savings (gallons)	Utility Cost Savings (\$)	Project Costs (\$)	SPB (Years)
J.P. Torres Elementary School	61,800	118,733	\$25,342	\$378,401	14.93
J.O. San Miguel Elementary School	192,893	272,411	\$51,939	\$370,402	7.13
JFK High School	446,448	864,969	\$201,176	\$1,699,484	8.45
Jose Rios Middle School	222,118	497,080	\$94,564	\$980,460	10.37
Juan M. Guerrero Elementary School	223,569	333,661	\$91,437	\$1,010,983	11.06
L.P. Untalan Middle School	89,132	682,104	\$35,525	\$224,515	6.32
LBJ Elementary School	133,612	144,557	\$35,062	\$619,520	17.67
Liguan Elementary School	217,844	265,109	\$102,762	\$995,042	9.68
M.A. Sablan Elementary School	203,324	217,306	\$70,271	\$953,507	13.57
M.U. Lujan Elementary School	235,373	305,842	\$93,838	\$968,405	10.32
Machananao Elementary School	321,414	254,395	\$114,171	\$1,202,029	10.53
Maria A. Ulloa Elementary School	123,422	345,780	\$36,786	\$307,853	8.37
Merizo Martyrs Memorial Elementary School	79,414	136,889	\$21,895	\$221,027	10.09
Oceanview Middle School	316,160	304,735	\$125,426	\$1,433,207	11.43
Okkodo High School	355,159	959,627	\$156,011	\$1,395,397	8.94
Ordot/Chalan Pago Elementary School	177,376	250,833	\$53,833	\$606,330	11.26
P.C. Lujan Elementary School	142,124	220,599	\$38,681	\$407,244	10.53
Simon Sanchez High School	516,306	1,098,606	\$195,371	\$1,841,921	9.43
Southern High School	1,810,241	823,937	\$528,557	\$4,384,436	8.30
Talofoto Elementary School	62,522	152,591	\$18,167	\$172,189	9.48
Tamuning Elementary School	395,658	305,060	\$147,131	\$1,200,871	8.16

Notes:

- 1) Figures shown are high level budgetary estimates with a range of $\pm 20\%$ and should be confirmed with future site investigations and detailed design development.
- 2) Potential savings do not account for resultant O&M repair cost reductions from implementing these FIMs; Actual net benefits to GDOE are expected to be greater than shown.



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GPA BEST Schools Current Recommendations



1)Ensure Water Bill Accuracy; billed water meter use = actual meter readings.

2)Identify & repair existing Water Leaks; If leak cannot be immediately repaired, shut off water at night or on weekends to reduce water bills until the leak fixed.

3)Request GPA Customer Service's evaluate all schools' for **Electric Rate Schedule Changes** to lower electricity costs; Repeat every 6 months.

4)Continue implementing comprehensive **LED Lighting Retrofits** to lower electrical demand and consumption costs & improve light quality in schools.



GPA BEST Schools Current Recommendations (cont.)

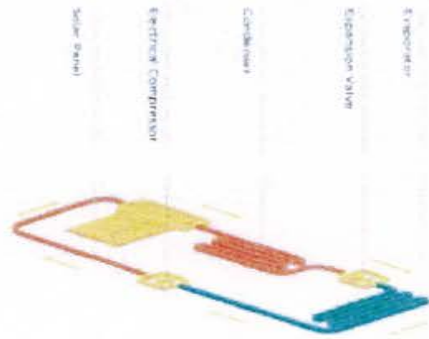


Figure 4-2 Schematic of Solar Assisted AC

5) Install solar assisted thermal on AC units > 10 tons to reduce electrical load.

6) Install **Solar PV** systems to lower electricity costs in conjunction with Electric Rate Schedule changes to maximize economic benefits.

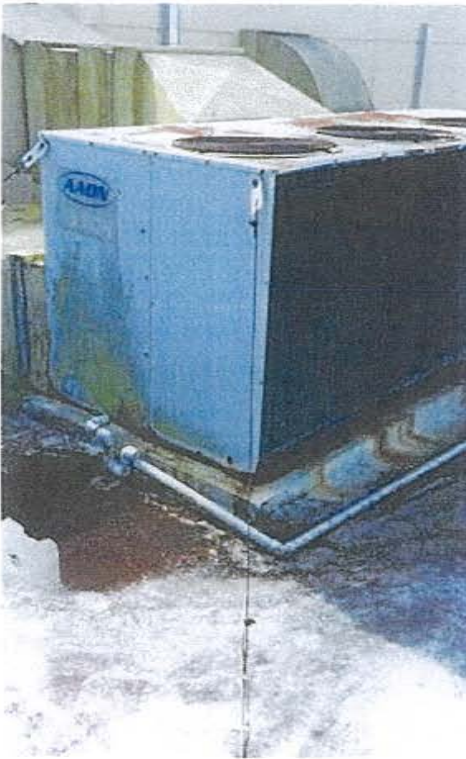
7) Run split system AC units in 'Dry Mode' at night (if available), instead of cooling mode to reduce excess humidity and condensation.



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GPA BEST Schools Current Recommendations (cont.)



8) Avoid over cooling spaces; Enforce min. space temperature setpoint = 75°F & educate staff & students on importance.

9) Review effectiveness of existing HVAC maintenance contracts; consider increasing GDOE's "in-house" staff for more frequent & cost-effective maintenance to extend AC equipment life & reduce repair costs.

10) Utilize a modern computerized maintenance management system (CMMS) to generate work orders & track execution of district's HVAC systems' service.

Note: Wide-scale high-efficiency AC unit replacements were not included as a priority recommendation at this time; GDOE will not reap the full benefit from extra money spent on advanced AC unit capabilities & increased SEER rating until the equipment O&M is able to prolong unit life > 5 years. In this study only new controls are recommended, however any future detailed development would seek to incorporate new high-efficiency AC units wherever possible.



SPLIT AC Replacements

Replacement Considerations for Split ACs

Not Recommended until Substantial Improvements in O&M are Made

Tons	SEER Before	SEER After	Annual kWh Before	Annual kWh After	% Savings	Approx No. of Units	kWh Savings	Blended Rate (\$/kWh)	Estimated Annual Savings
1.0	15	21.5	2,741	2,272	17.1%	157	73,633	\$0.24	\$17,672
1.5	15	20.8	4,175	3,508	16.0%	13	8,671	\$0.24	\$2,081
2.0	15	20.5	5,683	4,801	15.5%	507	447,174	\$0.24	\$107,322
2.5	16	18	6,629	6,203	6.4%	1,227	522,702	\$0.24	\$125,448
5.0	13	16	15,442	13,488	12.7%	232	453,328	\$0.24	\$108,799
Totals						1,904			\$361,322

Calculation above makes the following assumptions:

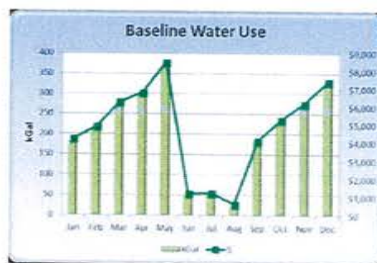
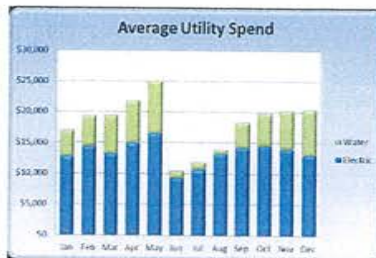
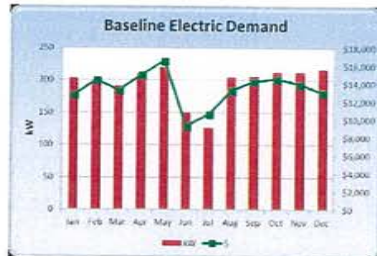
- 1) Unit available to run from 6AM - 9PM weekdays only
- 2) Unit doesn't run at all on weekends
- 3) $EER = 1.12 * SEER - 0.02 * SEER^2$
- 4) EER assumed constant at all loads in calculation



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GPA BEST Schools Future Recommendations



- 1) Convert & consolidate multiple ductless split system AC units into larger, single **Variable Refrigerant Flow (VRF)** system to save electricity & O&M costs.
- 2) Install rain water capture & storage systems for toilets and urinals to reduce water bills.
- 3) Develop **Procurement Specification Standards** to improve GDOE's repair & maintenance efficiency, increase staff equipment proficiency, and reduce spare parts inventory. Standards could include:
 - a) Minimum SEER rating
 - b) Mandatory corrosion coating
 - c) Preferred / limited equipment brands.
- 4) Expand Procurement Specification Standards to require all new HVAC systems to have dehumidification capabilities & dew point temperature control to 55°F to prevent excess condensation.



GPA BEST Schools Pilot Project Recommendations



- Pilot gives GDOE the opportunity to **explore new technologies & effectiveness recommended FIMs** that can be extrapolated district wide.
- GDOE can “**try before they buy**” innovative FIMs on a small scale without risk of over committing to a technology that may not be a good fit.
- Propose pilot implementation at one of the following schools: **Carbullido Elementary, Maria A. Ulloa ES, Agueda Johnston MS or Finegayan ES**; Each has a “twin” school & will allow easy comparison of pilot results with a control school.
- A pilot at one of these schools will enable GPA to showcase & compare FIMs that are new to GDOE such as:
 - 1) Variable Refrigerant Flow (VRF)
 - 2) Solar Assisted AC
 - 3) Ceiling Insulation
 - 4) Building Automation
- GPA & Siemens will work with GDOE to finalize the pilot project’s scope of work to maximize the impact of its \$250,000 construction budget.



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Challenges to Adopting BEST Schools Plan District Wide



- **Insufficient government funding** for adequate facility maintenance or needed infrastructure improvements; GDOE's funding is often cut or in jeopardy of being reduced on a year to year basis.
- **Limited in-house manpower** to perform the recommended day-to-day maintenance tasks or respond to emergency repairs; Difficult to retain skilled workers & need to outsource large portion of the recurring O&M service
- **Low bid procurement methodology** drives down the first cost of equipment & construction, but is not best use of GDOE's limited funds over long term from maintenance, efficiency, and sustainability standpoint.
- **AC units as Disposable Equipment**, to be purchased, minimally serviced & then replaced; prevents GDOE from justifying added cost for more efficient equipment or enforcing higher quality specification standards.
- **Ongoing financial challenges** have negatively impacted GDOE's ability to pursue funding for FIMs through traditional capital requests or bonds; GDOE struggles to secure federal grants & comply with reporting requirements.



A Time for Change has Arrived



“Business as usual” is no longer a viable option; Ongoing school deferred maintenance is continuing to amass causing:

- Comfort issues for students and staff
- Erosion to GDOE’s limited budget with expensive emergency repairs
- Damage to GDOE’s ability to create an effective learning environment
- Difficulty attracting & retaining highly skilled teachers
- Risk of tarnishing of the district’s overall reputation within territory



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New Path Forward for BEST Implementation

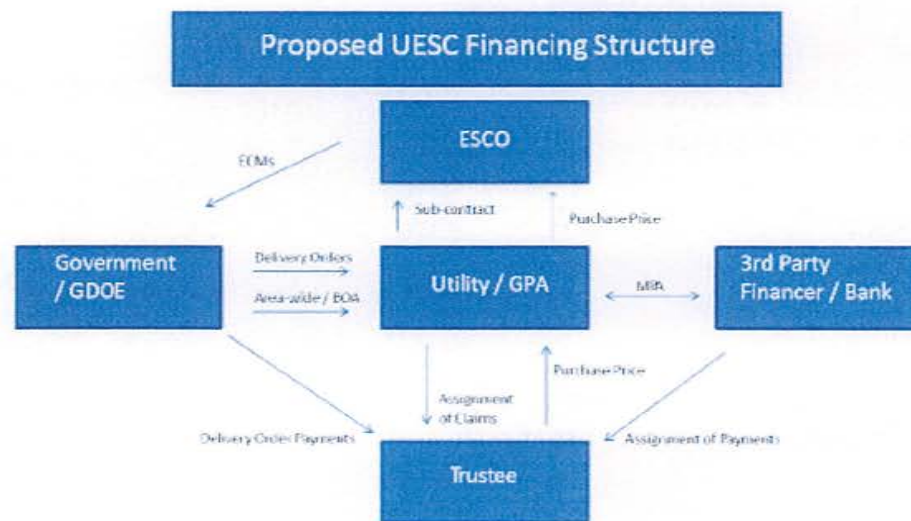


GDOE is able to take advantage GPA's support programs such as:

- 1) **Demand Side Management (DSM) Program / BizConnect:** free access to view detailed energy use information on a meter by meter basis
- 2) **DSM Program Commercial Rebates:** program provides fixed rebates for replacing inefficient lights and AC units with more efficient equipment (pending funding renewal).
- 3) **Grant Application & Implementation Assistance:** GPA will help the district secure grants such as those offered by the U.S. DOI Office of Insular Affairs. GPA will also provide turn-key design-build services to expedite final design & construction of the improvements & provide grant reporting help.



New Path Forward for BEST Implementation (cont.)



4) **Utility Energy Service Contract (UESC) Program:** allows federal clients to contract with utilities to perform widespread energy efficiency FIMs with savings that pay for themselves over time. GPA will offer GDOE access to a similar UESC-style partnership to assist with:

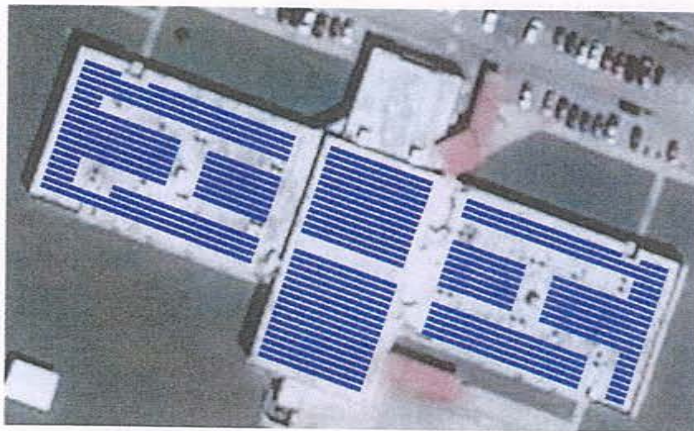
- project procurement
- design & implementation
- help GDOE connect with 3rd party financing



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New Path Forward for BEST Implementation (cont.)



5) **Power Purchase Agreements:** GPA can provide GDOE with internally or externally sourced PPAs to assist in the deployment and procurement of solar PV systems as part of a district wide program. Benefits would include:

- A PPA program would lock in a reduced cost of solar PV power for an extended term (typically 20 years).
- Under a PPA, GDOE would not be liable for any risks or costs associated with solar PV array design, development, procurement, financing, construction, maintenance, power quality, or performance.
- GPA can provide an in-depth cost analysis on pros and cons of solar PV ownership vs. PPA to help the district determine which option is most advantageous.



New Path Forward for BEST Implementation (cont.)

- 6) Project Financing: Possible funding sources to enable GDOE to pursue implementation of FIMs include:
- Tax-exempt municipal lease purchase agreement up to 15 years.
 - Non-appropriation clause to enables public agencies to legally commit to multi-year leases.
 - We have received interest from national lenders Dominion, Bostonia, Siemens Financial Services & potentially Bank of Guam.
 - After project scope or work, firm price proposal, start date, and repayment term are determined established we will work to get offer letters from multiple lenders.
 - Current market interest in GDOE seems to be trending at interest rates (yields) of about 5.0 - 5.25%; *(Dominion indicative rate this week was 7.5% for 15 year term)*
 - This report estimates a total funding need of \$41M with a projected simple payback of 9.7 years. Assuming GDOE can secure financing with the interest rates shown above, our preliminary modeling indicates a viable cash flow over a 15 year term.



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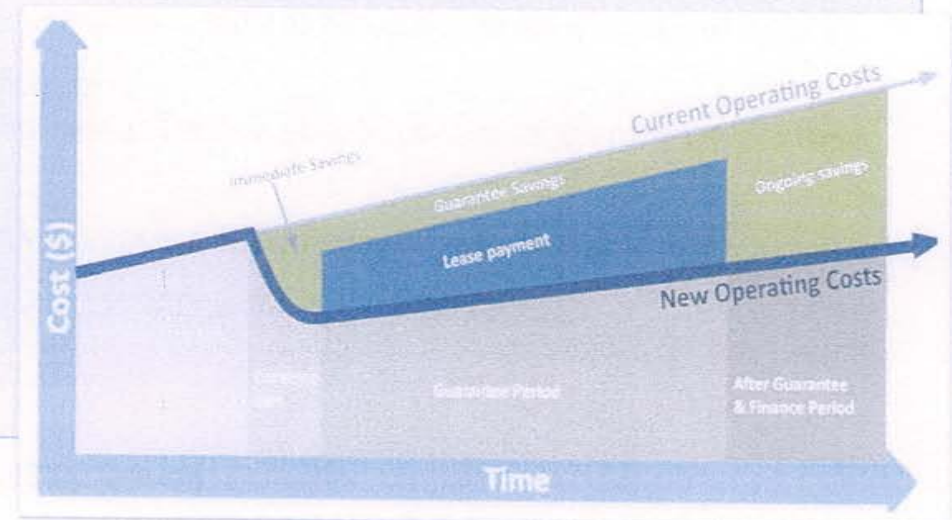
New Path Forward for BEST Implementation (cont.)

7) **Project Phasing for Success:** The total value of FIMs identified is probably too large to pursue as a single project. We recommend GDOE consider smaller phases to:

- Allow the IGA and project design to be completed more quickly.
- Encourage “on the fence” financial institutions to participate.
- Enable GDOE to start realizing savings more quickly than if they waited a for a much larger project’s development to be completed.

A ladder approach would allow GDOE to:

- Start a Phase 1 project (\$5M for example), finish its design, start its construction & then begin on an IGA to scope Phase 2.
- Once onsite work for Phase 1 is complete, construction of Phase 2 could begin, along with the kick-off for a Phase 3 IGA.





GPA BEST Schools Program Recap / Next Steps



GPA seeks to use the BEST Schools Program to help GDOE:

- 1) Transform its inventory of schools to be resilient, energy efficient & sustainable facilities.
- 2) Achieve legislative mandate to reduce energy consumption by 10% & deploy renewable energy systems.
- 3) Use creative intra-agency agreements to provide new cost-effective ways to fund, procure, and construct critical facility improvements.
- 4) Capture reductions in energy, water, and maintenance costs by pursuing UESCs & PPAs that can be used in concert with DSM program.

Next Steps of this GPA/GDOE partnership:

- Schedule a follow up meeting to scope a Phase 1 project
- Sign MOU for an Investment Grade Audit for Phase 1 defining SOW & walk-away fee

Questions?



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Si Yu'os Ma'åse'!

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JOHN F. KENNEDY HIGH SCHOOL

BEST Schools - Technical Discussion

Presented by Guam Power Authority & Siemens Industry, Inc. – Building Technologies Division

Restricted © Siemens AG 2018

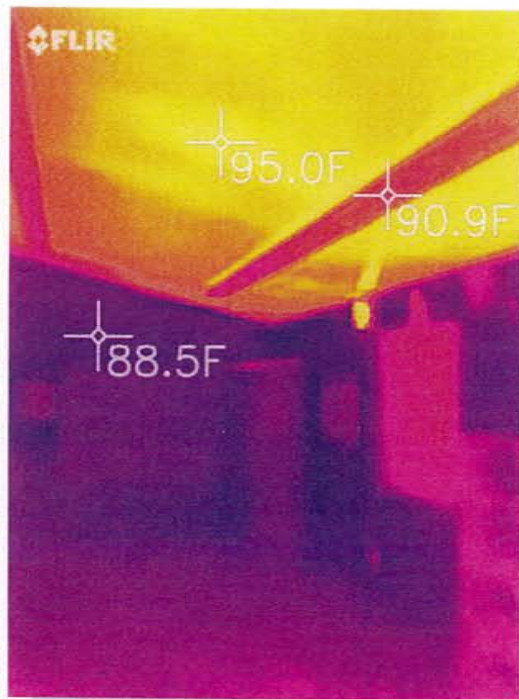
November 14, 2018



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Lack of Ceiling Insulation



C.L Taitano

6/22/2018

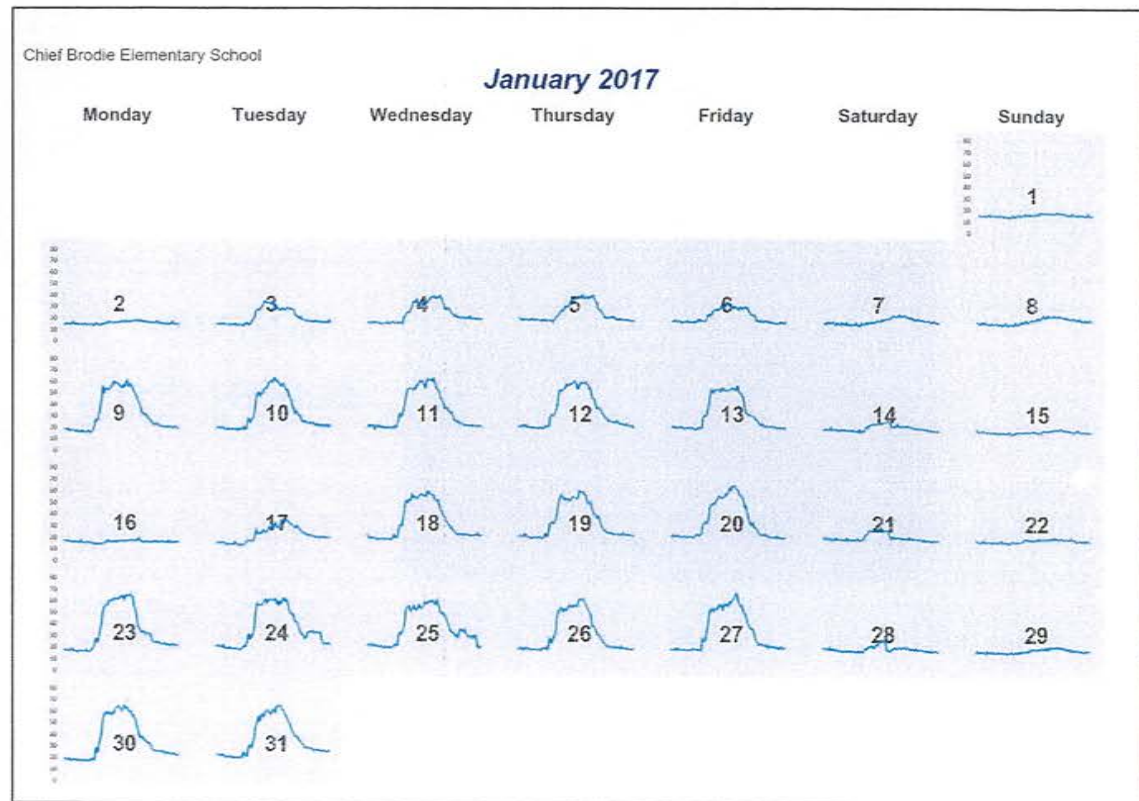
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Electric Load Profile - Chief Brodie ES

- 1) Flat load profile on weekends and Holidays
- 2) Low base load (~20kW)
- 3) Load Factor = 49.03%



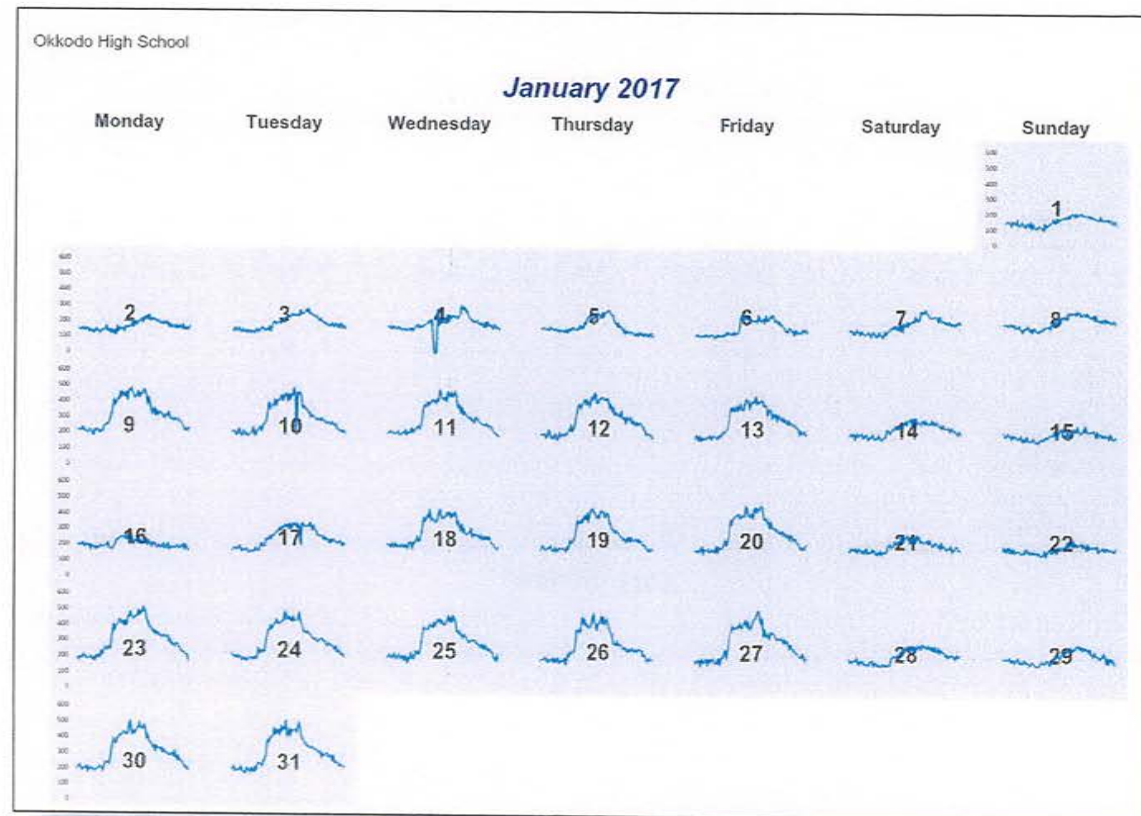


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Electric Load Profile - Okkodo HS

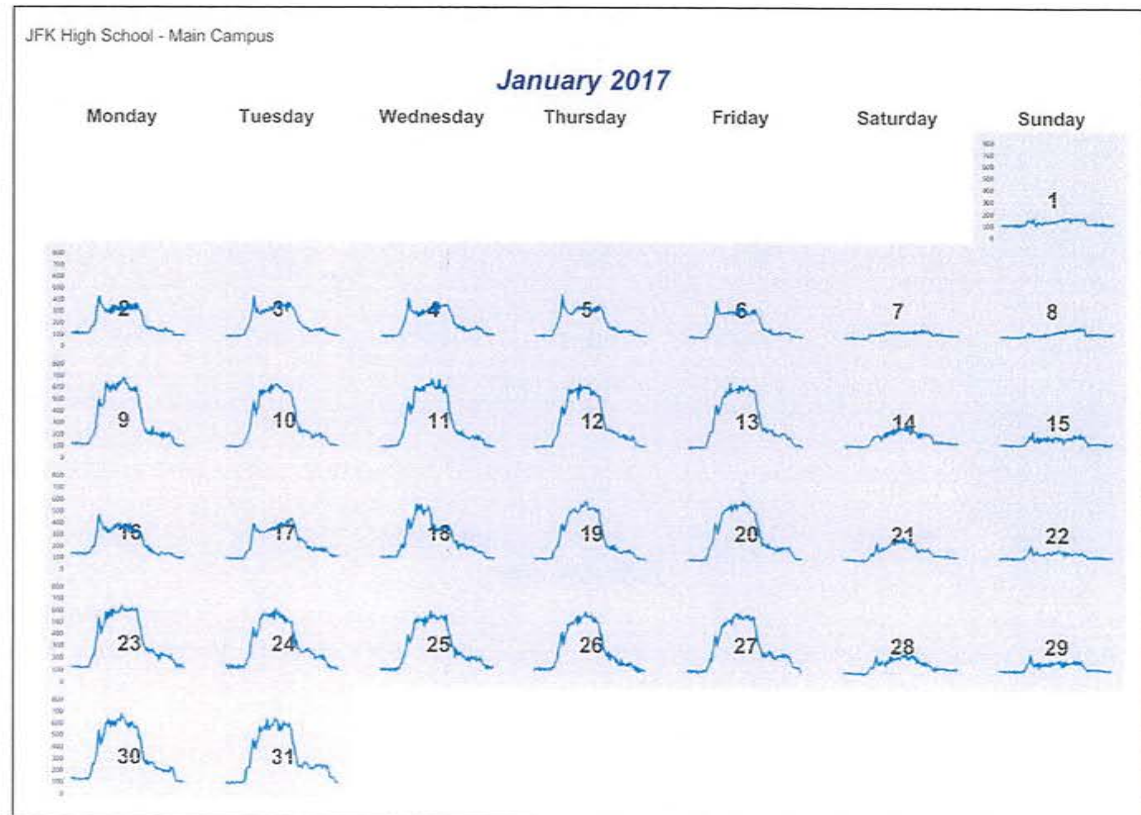
- 1) Load profile on weekends and Holidays is NOT flat
- 2) High base load (~200kW)
- 3) Load Factor = 49.14%
- 4) Base load of 200kW higher than peak load of many schools
- 5) Okkodo Expansion has base load of 130kW
- 6) Okkodo High School has a base electrical load over 300kW!





Electric Load Profile - JFK High School

- 1) Load profile *mostly* flat weekends or Holidays
- 2) Medium High base load (~100kW)
- 3) Load Factor = 35.55%





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Condensation Happens



When humid air meets a cold surface, moisture condenses from the warmer air.
This causes problems for GDOE when:

- A classroom is overcooled and the AC is abruptly shut off, humid air meets the cold surfaces (i.e. concrete wall, glass, etc.) and condenses.
- Heat conducts through concrete wall or glass and condenses

Both conditions cause excess moisture in the schools, encouraging mold growth and causing water damage



Strategies to Minimize Condensation and Mold in Schools

1. Prevent water infiltration from leaks
2. Do NOT over cool space during the day. This limits your options during unoccupied periods; enforce minimum low temperature set points.
3. Run unit in “dry” or “dehumidification” mode rather than shutting off the unit completely.
4. Raise the setpoint during unoccupied times
5. Control the space to dewpoint instead of just space temperature



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Si Yu'os Ma'åse'

QUESTIONS???

STAKEHOLDER OUTREACH ON CCU NET METERING RESOLUTIONS

John M. Benavente, P.E.
General Manager

January 9, 2020
CCU Conference Room, 3rd Fl
Gloria B. Nelson Public Service Building
Fadian, Mangilao



OVERVIEW

GPA is proposing two (2) changes to the current Net Metering (NEM) program:

1. Require all future solar PV & wind turbine systems to have frequency control capability or energy storage systems (batteries) in order to be tied into GPA's grid; and
2. Remove the annual cash payment and credit roll-over options.

Brief summaries of the issues are provided in this presentation.

Resolution 2020-01

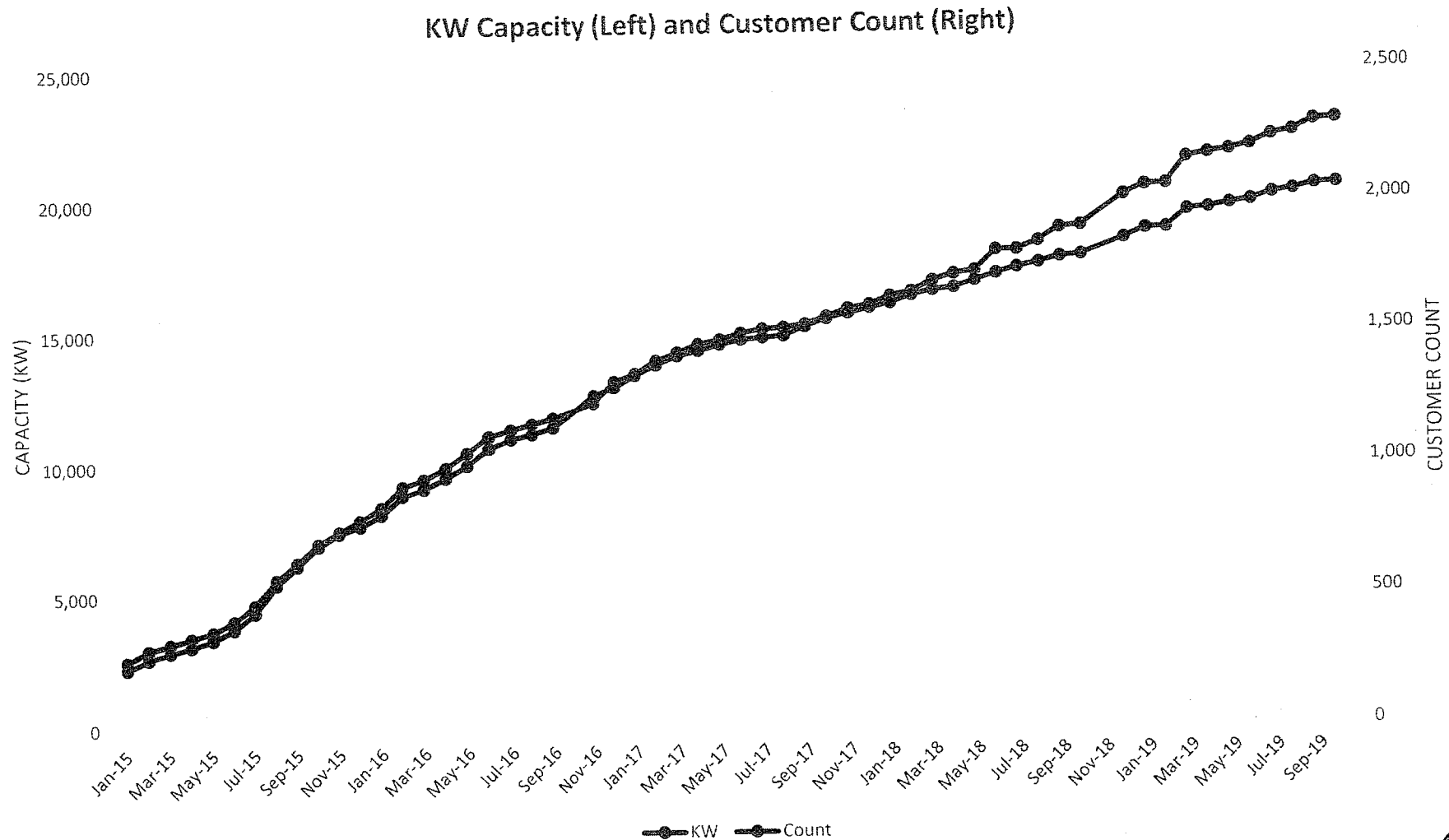
3

AUTHORIZING MANAGEMENT TO REQUIRE ALL FUTURE NET METERING SOLAR PV AND WIND TURBINE SYSTEMS TO ALSO HAVE FREQUENCY CONTROL CAPABILITY OR ENERGY STORAGE SYSTEM (ESS) IN ORDER TO BE TIED IN TO GPA'S GRID



NET METERING (NEM) GROWTH

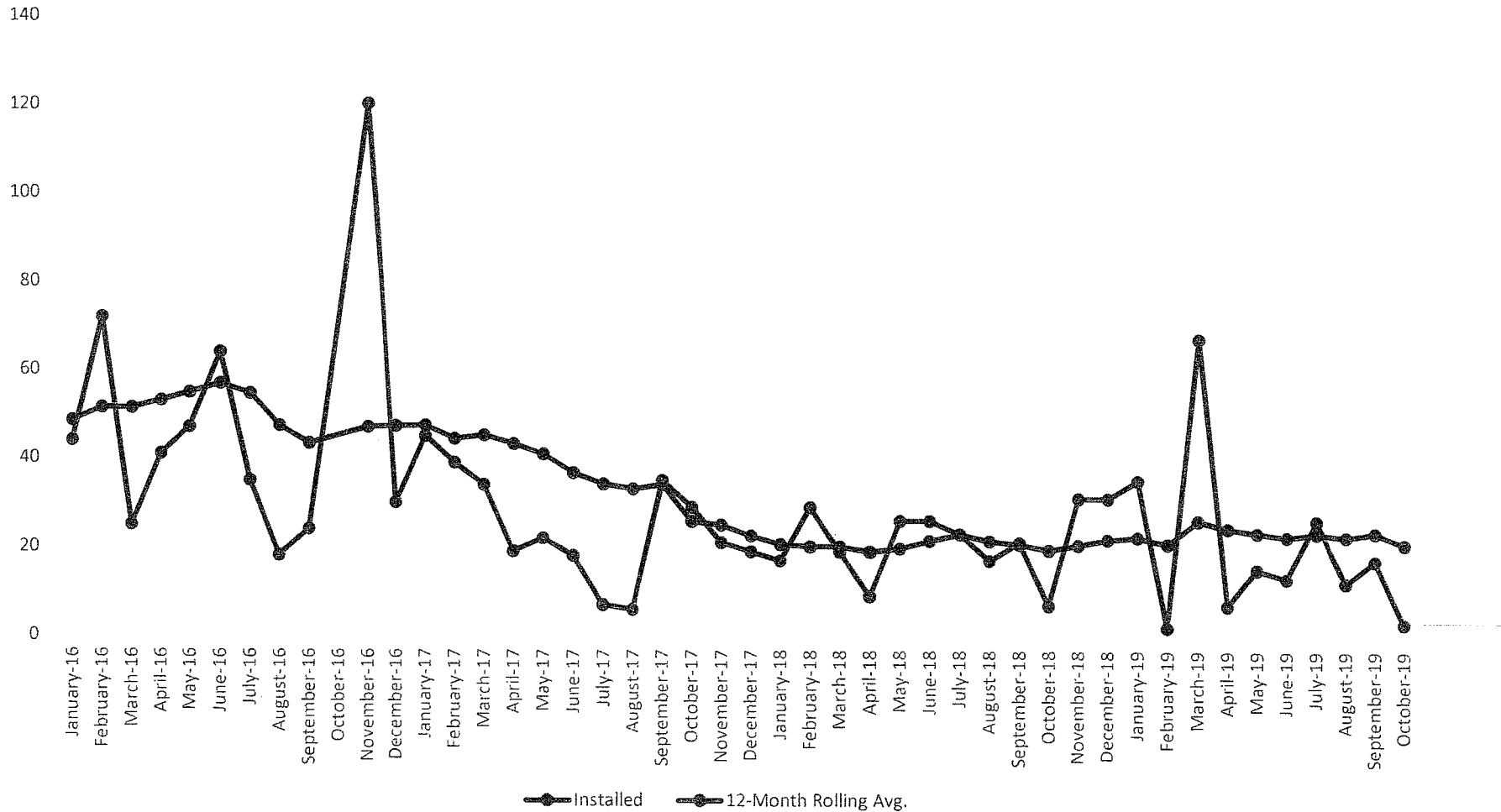
NEM Growth through October 2019



NET METERING (NEM) GROWTH

5

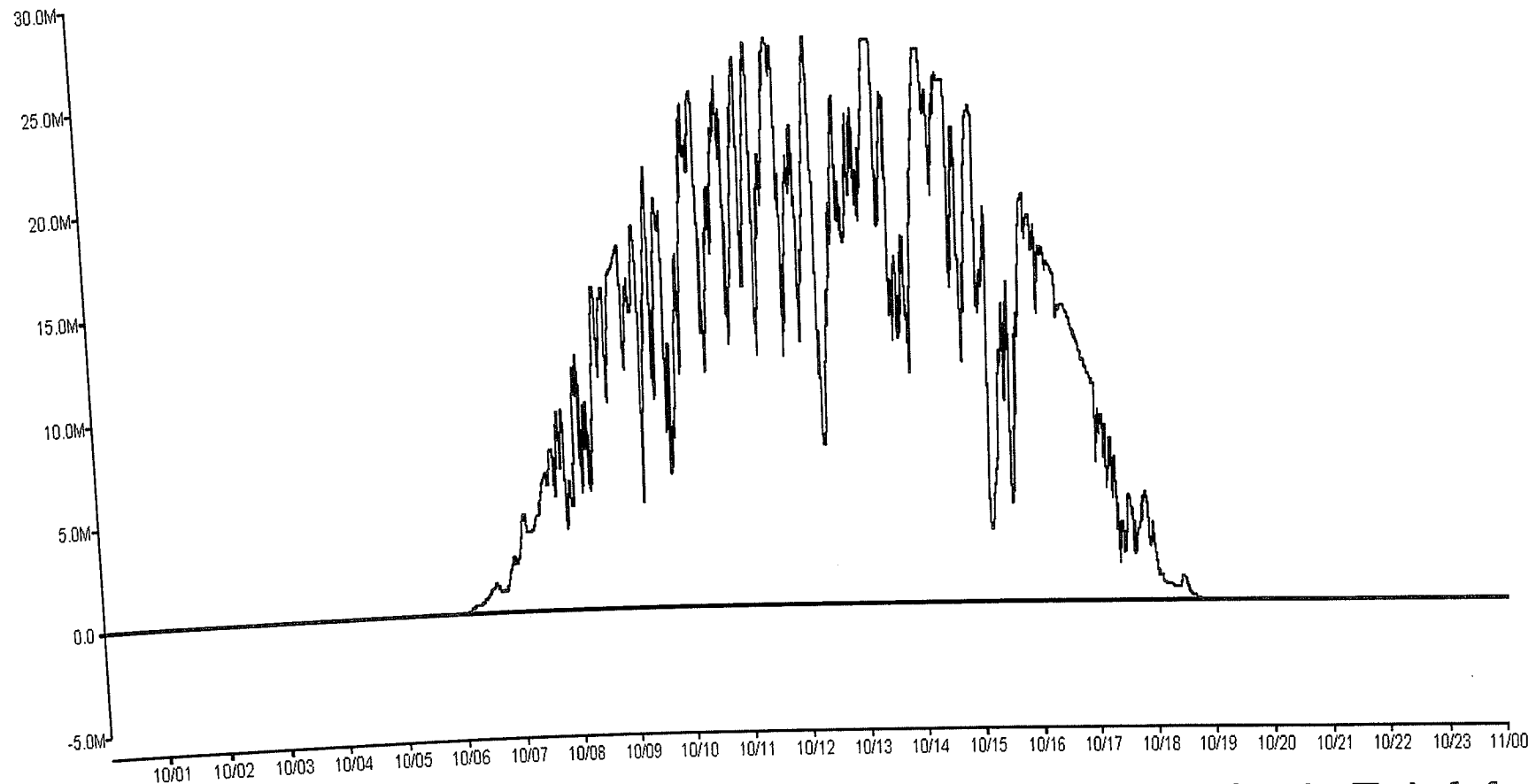
NEM Monthly Installations Through October 2019



INTERMITTENCY DEGRADES RELIABILITY

6

GPA 25MW Solar PV Production Intermittent - Causing Reliability Issues



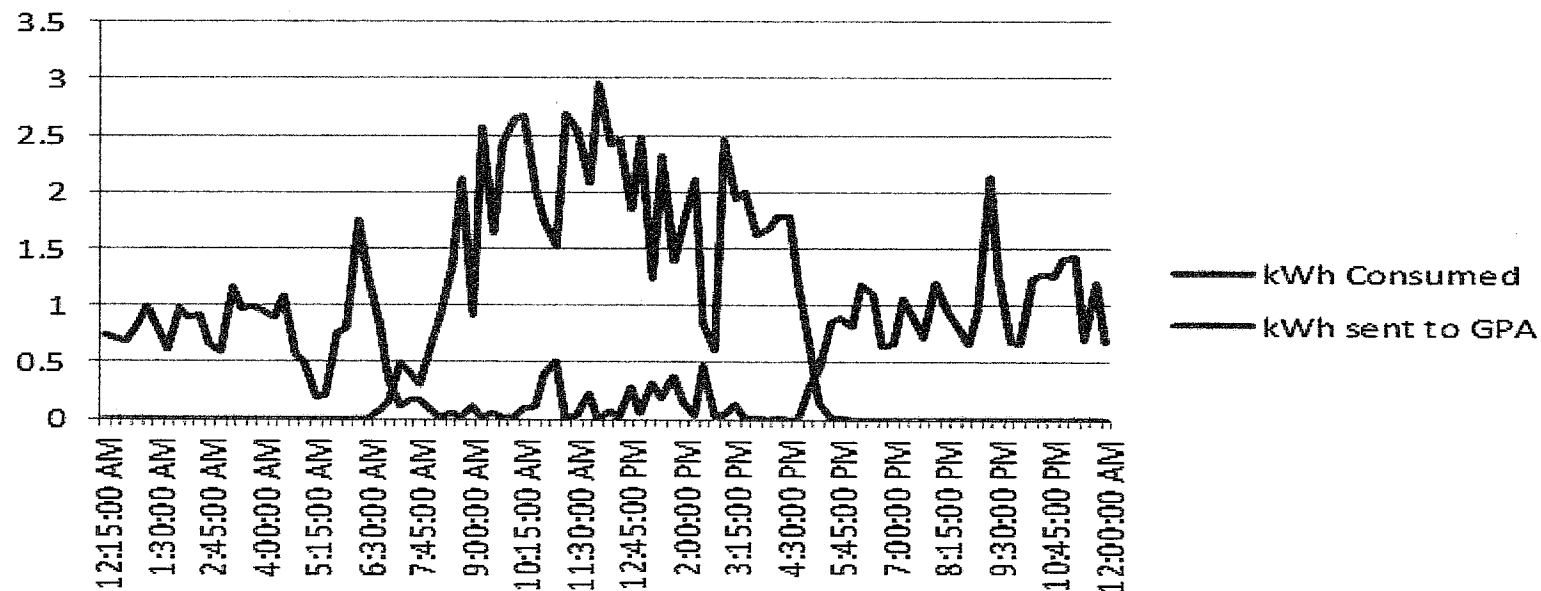
Solution: Installation of 16 MW Energy Storage Batteries in Talofofo

INTERMITTENCY DEGRADES RELIABILITY

7

NEM 22MW Solar PV Production Intermittent - Causing Reliability Issues

Date:		14-Jun-16		
PV System KW Size		24.7		
GPA KWH 12am to 7am		22.56		
GPA KWH 7am to 6pm		7.44		
GPA KWH 6pm to 12am		24.67	Evening Peak	
NEM KWH 7am to 6pm		69.35		
Net GPA KWH		-14.68		

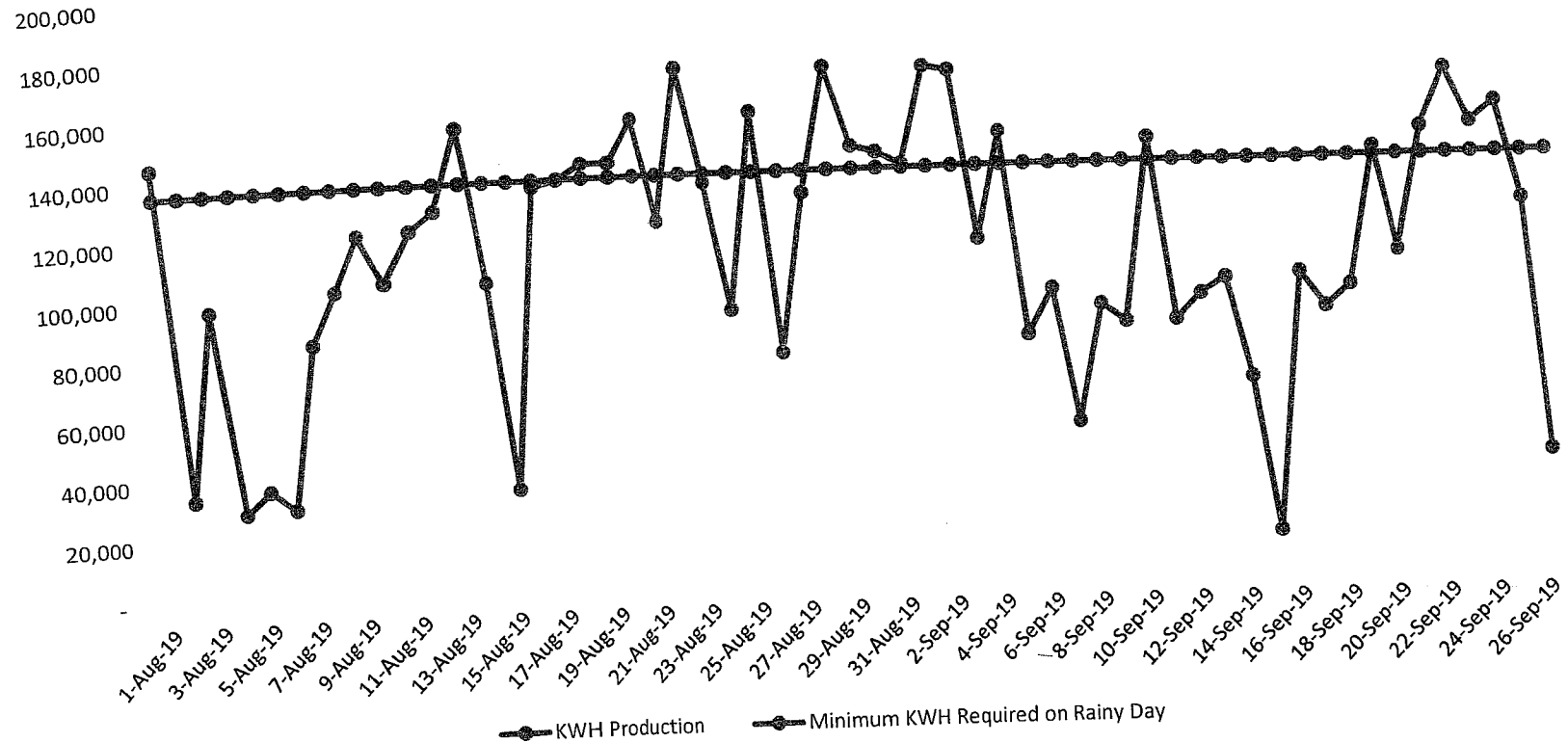


Solution: Installation of 24 MW Energy Storage Batteries in Hagåtña

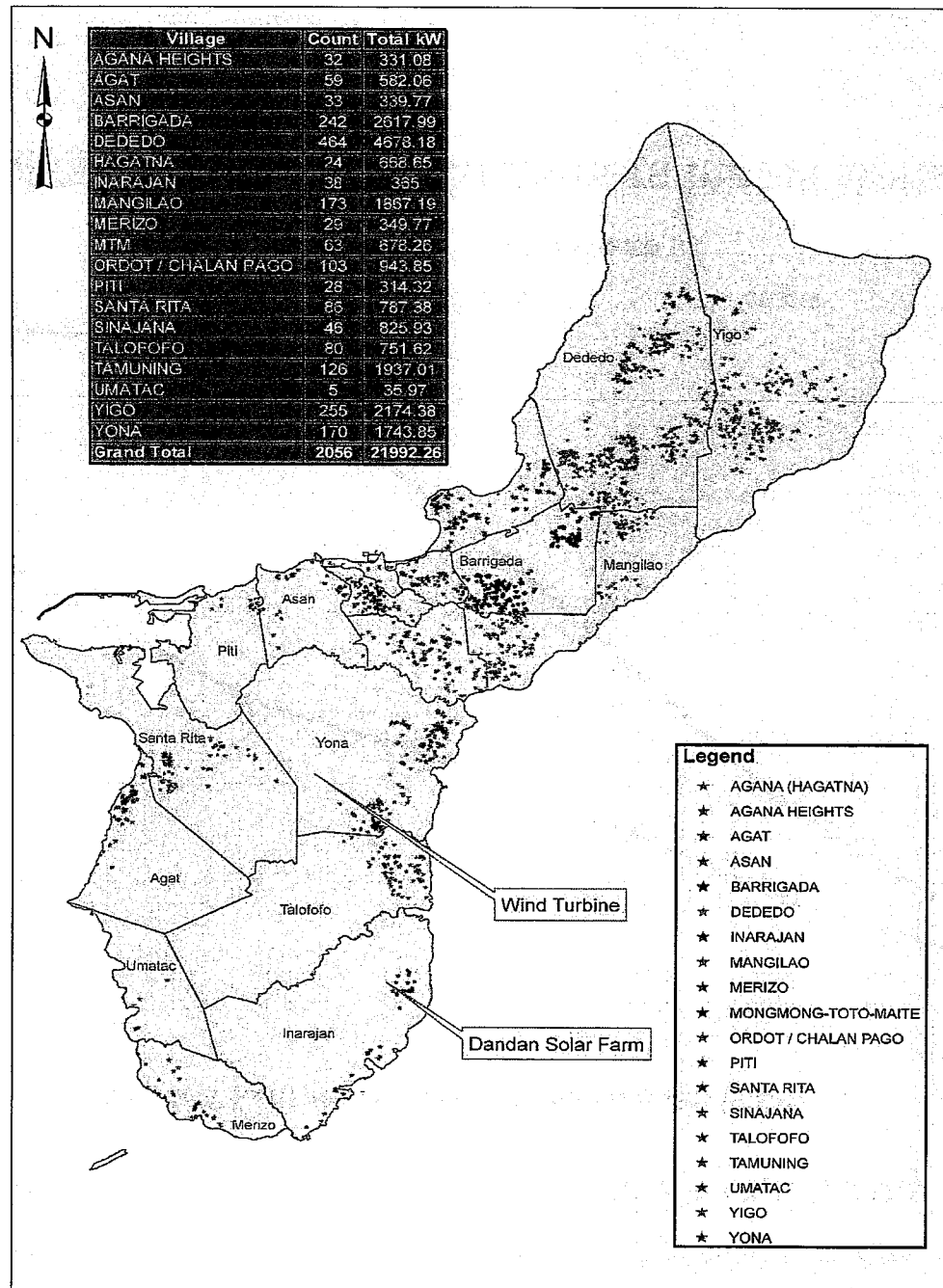
SOLAR PV PRODUCTION INCONSISTENT

Solar PV Production Inconsistent & Depends on GPA System for Reliability

25 MW Solar PV Production
Aug 1st thru Sept 26th, 2019



Solution: Inconsistency Mitigated by Availability of GPA Conventional Generators

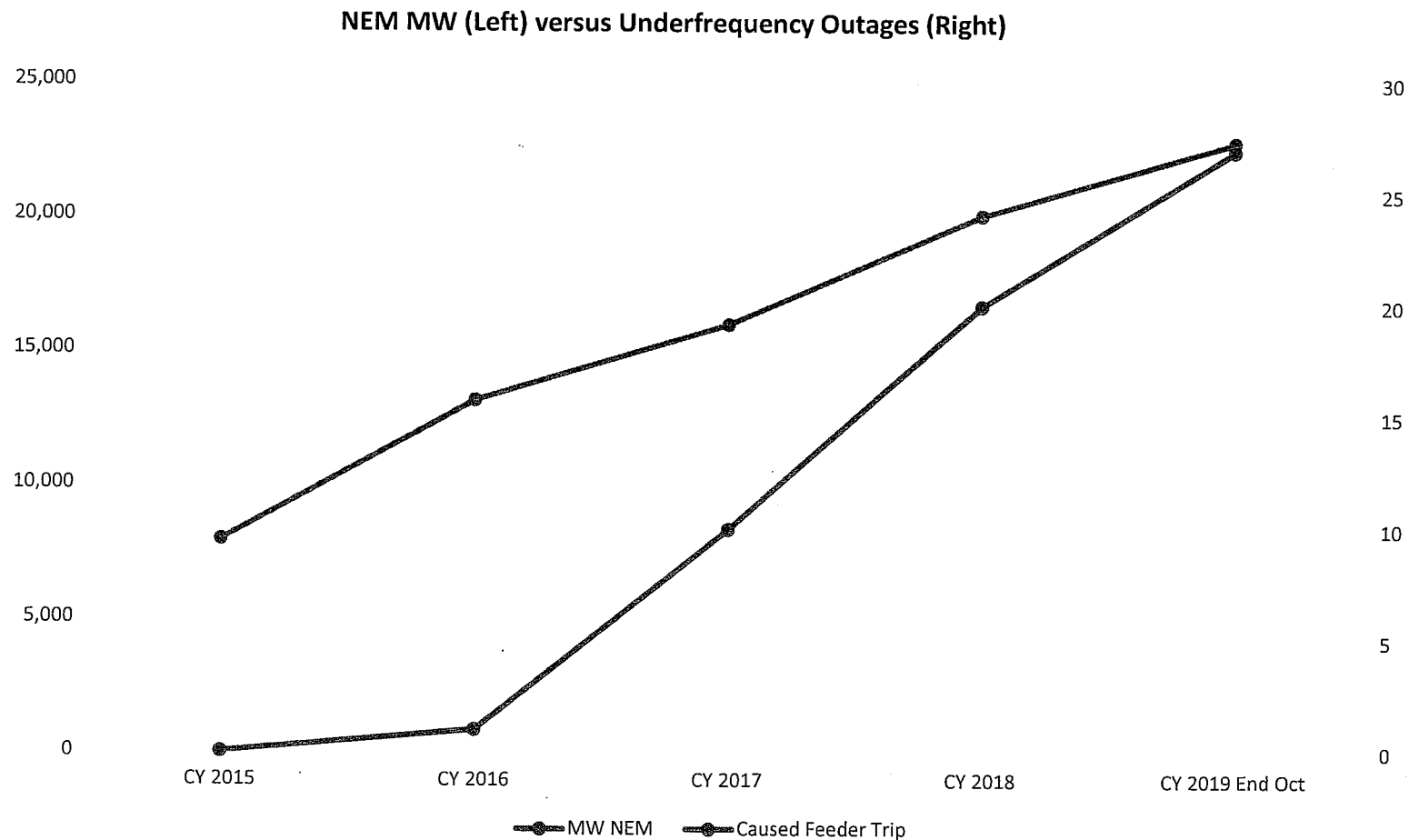


Guam Power Authority
Net Metering Locations

ENSURING SYSTEM RELIABILITY

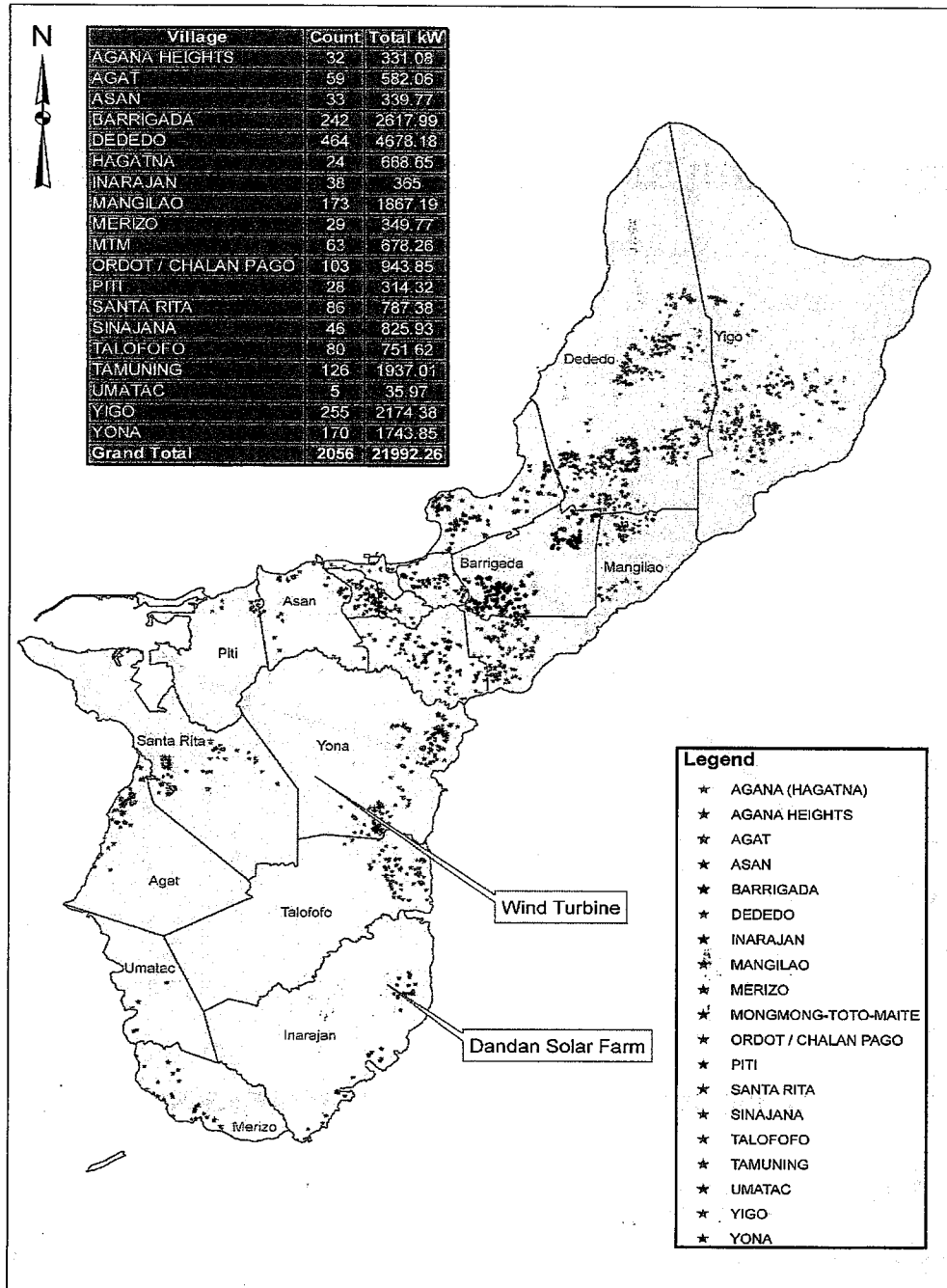
10

Continued NEM Growth Without Batteries Will Significantly Degrade Reliability



Solution: Future NEM Customers Install Batteries





Guam Power Authority
Net Metering Locations

SUMMARY - Resolution 2020-01

11

- GPA is installing two Energy Storage System (ESS) batteries totaling 40 MW of batteries to address reliability issues when conventional generators trip off line.
 - The 40 MW ESS commissioning is within next two months.
- The continued addition of Solar PV Systems without batteries would result in continued degrading of reliability despite ratepayers paying for new \$35M ESS to decrease outages.
- GPA has previously issued policy that all future utility-scale solar PV systems must be installed with batteries. GPA's Phase II and III projects include batteries.
- Net Metering Capacity without Batteries has grown to 22 MW. The continued uncontrolled growth without Batteries increases outages and must be curbed.
- CCU Resolution 2020-01, if passed, will require all future NEM customers to install batteries in order to connect to GPA grid.
 - GPA recommends the requirement be effective May 1, 2020.

Testimonies – Jan 9th Stakeholder's Outreach Meeting

Speaker	Discussion Summary
Stan Wilson <i>Current NEM Customer who produces excess.</i>	<ol style="list-style-type: none"> 1) Battery storage for his system will cost him \$4,500 for batteries alone and if the resolution passes then solar will no longer be a feasible investment. 2) Mentioned PG&E in California and state law passed that all new homes be equipped with solar and they do not require battery storage and that the utility agency provides the energy storage. 3) Suggested that GPA explore other solutions where GPA provides the solar batteries to flatten the load. He gives a theoretical example of having the power system run its baseload units all day even at off peak or low demand times to continually charge batteries and use batteries during peak times. 4) He is okay with paying the \$15/month fee or even doubling it. He is okay adjusting the price of solar from \$0.24 to \$0.10.
Brook Powers <i>Chief Engineer of Adventist World Radio (AWR), Interested in installing solar technology on facilities.</i>	<ol style="list-style-type: none"> 1) Wanted information on what percentage of storage is required per production of solar? 2) What inverter technology will GPA be requiring to stabilize the frequency? 3) Is there any option where customer takes on the cost using batteries during peak times and gets additional compensation during those times? He is talking about Time-Of-Use modeling (TOU).
Paulette Coulter <i>Customer who owns a 9 year old system with a battery backup system.</i>	<ol style="list-style-type: none"> 1) Wants to know what protections would GPA provide for customers who provide their own PV and battery storage systems? 2) What support or information will GPA provide to assist customers with the technical aspects and requirements of PV and energy storage.
Moneka De Oro <i>"Policy and Curriculum Fellow" Micronesia Climate Change Alliance</i>	<ol style="list-style-type: none"> 1) Concerned about the utilities impacts towards climate change and de-incentivizing renewables. 2) Requesting GPA and CCU to be more aggressive towards renewables. 3) Against the justification of the cost of the \$640M new plant versus supporting of costs towards renewable energy.
Henry Simpson <i>Solar customer for 6 years and has an EV</i>	<ol style="list-style-type: none"> 1) Feels solar customers will be an asset to GPA. 2) Recommends having solar distributed and not clustered throughout the island. 3) Suggests a phased in type of approach where customer gets 5 years to amortize their investment in their system then chose to do a battery or avoided fuel cost vs. upfront requirements. 4) Suggest for GPA to work with nonprofits to provide and advocate solar power with a long term 15 year deal at full retail rate, so he can get investors to invest in his race track for solar panels.
Rob Frohne <i>Adventist World Radio (AWR)</i>	<ol style="list-style-type: none"> 1) Requesting more information for studies and specs on our requirements for inverters and other technologies. 2) Looking to work with GPA for ways AWR can connect to the grid with renewables and inverters and other requirements. 3) Doing a feasibility study for their company solar PV system.

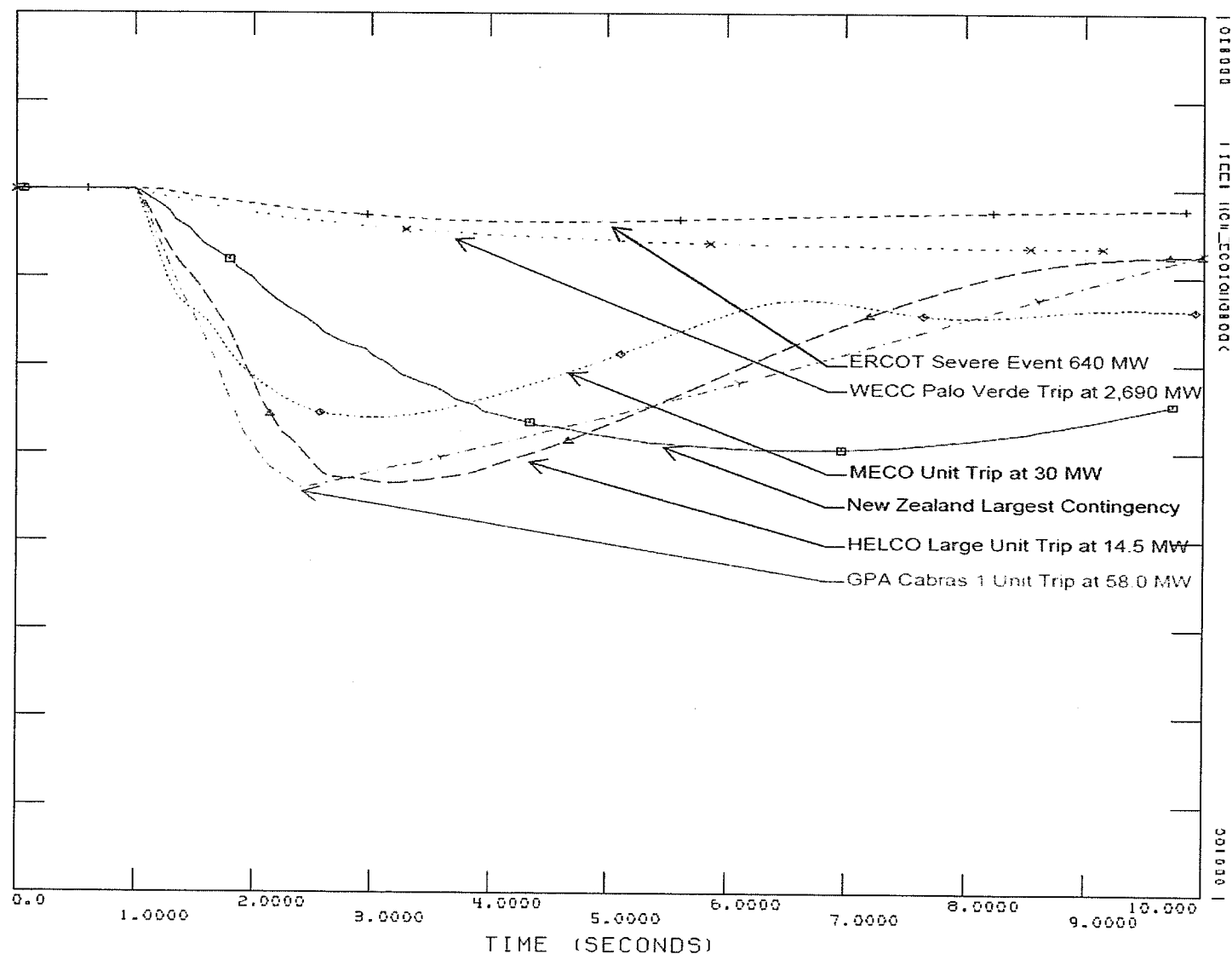
Previous Testimony of MRE

15

Date	Legislative Hearing	Witness	Summary of Testimony/Information
10/10/2019	Round Table Hearing with Industry Professionals about the type of renewable energy available on Guam	Jeffrey Voacolo, Chief Operations Officer Micronesia Renewable Energy, Inc. (MRE)	<ul style="list-style-type: none"> - Information provided on Battery Storage, MRE has been installing batteries for 2 years. In the last 2-3 years technology has come so far. Tesla & LG CAM Batteries, 2 batteries needed for average home (around 13.5 kWh for Tesla & 10 kWh for LG CAM) to fully power it through the night. - At wholesale level, cost is estimated around \$5K to \$6K per battery with 10-year warranty. Two batteries in a solar is cheaper than the utilities right now. - Utilities scale batteries been experiencing explosion, ongoing issue.
10/14/2019	Written Testimony on Bill 80-35, AN ACT TO AMEND § 8311 OF ARTICLE 3, CHAPTER 8, TITLE 12, GUAM CODE ANNOTATED, RELATIVE TO RAISING THE RENEWABLE PORTFOLIO STANDARDS OF THE GUAM POWER AUTHORITY	Jeffrey Voacolo, Chief Operations Officer Micronesia Renewable Energy, Inc. (MRE)	<ul style="list-style-type: none"> - Testimony provided regarding Sustainability as one of the three main parameters to reaching the bill's goal of reaching 50% renewable by 2015. - Advocating for greater Distributed Energy (DG) solar utilization on Guam and in favor to add a component of DG onto Bill 80-35. - In 2017, MRE invited CPS Energy's Executive team to Guam. CPS Energy is the nation's largest municipal/publicly owned energy company. - They met with GPA's Executive team & CCU members and spoke about Distributed Energy and Solar Farms. - Their model is using existing commercial buildings and residential customers adding solar energy and now energy storage at the point of consumption make more sense.
10/14/2019	Written Testimony on Bill 80-35, AN ACT TO AMEND § 8311 OF ARTICLE 3, CHAPTER 8, TITLE 12, GUAM CODE ANNOTATED, RELATIVE TO RAISING THE RENEWABLE PORTFOLIO STANDARDS OF THE GUAM POWER AUTHORITY	Joe Rosario, Business Dev Director Micronesia Renewable Energy, Inc. (MRE)	<ul style="list-style-type: none"> - Testimony provided advocating for greater DG solar utilization on Guam - He stated to imagine "40MW's of distributed generation developed by a local company in the solar industry and constructed by local companies in the solar industry. I can imagine a KWH rate of 13 cents (with storage)."



Shows GPA System Most Affected by Loss of Generation



ESS Cost Sharing Analysis:

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Frequency Control Energy Storage System:

Benefits:		Non-NEM	NEM/Non-NEM
Location:		Talofofo GlidePath	Hagatna NEM / System
Battery KW Size	40,000	16,000	24,000
Investment	\$35,000,000	\$14,000,000.00	\$21,000,000.00
Annual Debt Service 5%, 20 years	\$2,006,065	\$802,426.00	\$1,203,639.00
Annual O&M	\$300,000	\$120,000.00	\$180,000.00
Total Annual Cost	\$2,306,065	\$922,426.00	\$1,383,639.00

Total NEM Customers - Dec, 2019			2,068
Total NEM KW			23,702
Annual Cost NEM/Non-NEM			\$1,383,639
NEM 50% Share			\$691,820
Cost/NEM Customer/Month			\$27.88
NEM Annual Energy			37,373,314
\$/Kwh ESS for NEM Customers			\$0.019

Cost/KW/Month			\$2.43
Average NEM KW			11.46
\$/Month/NEM Avg. KW			\$27.88



GDOE Savings is a Ratepayer Subsidy!

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GDOE SOLAR PV COST ESTIMATION

	<i>w/out</i> <u>WITHOUT ESS (per kWh)</u>	<i>w/ battery</i> <u>WITH FREQUENCY ESS (per kWh)</u>
<i>Installation \$/Watt</i>	\$ 3.00	\$ 4.50
<i>Total Watts</i>	22,024,922	22,024,922
<i>Annual kWh</i>	34,728,896	34,728,896
<i>Investment Required</i>	\$ 66,074,765	\$99,112,147
<i>Life (years)</i>	20	20
<i>Interest Rate</i>	5.0%	5.0%
<i>Debt Service</i>	\$ 5,302,029	\$ 7,953,043
<i>O&M @ 5% DS</i>	\$ 265,101	\$ 397,652
<i>Annual Cost</i>	\$ 5,567,130	\$8,350,695
<i>Cost/kWh</i>	\$ 0.160	\$ 0.240
<i>FY2020 without Solar PV</i>	\$ 0.285	\$ 0.285
<i>Solar PV \$/kWh</i>	\$ 0.160	\$ 0.160
<i>ESS \$/kWh</i>	\$ -	\$ 0.080
<i>Savings \$/kWh</i>	\$ 0.124	\$ 0.044
<i>Cost Reduction</i>	\$ 4,316,837	\$ 1,538,525

RESULT

GPA System
Cost Avoided

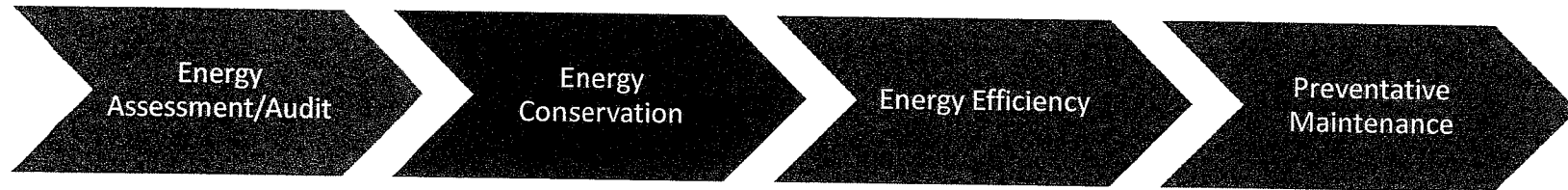
Base rate
\$5,091,379

Burden Shifted
to Non-NEM
Customers



Guam Department of Education

20



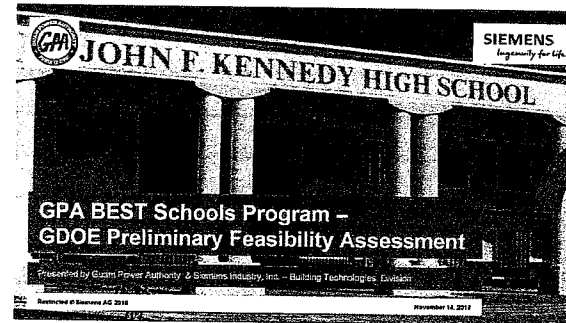
Insular ABCs
Insular Schools: Assessment
of Buildings and Classrooms

FINAL
ENERGY AUDIT
GUAM PUBLIC SCHOOLS
Abridged Report

July 2013

RECOMMENDED ENERGY CONSERVATION MEASURES

- Programmable thermostats
- LED fixtures & lamps
- Solar hot water heaters
- Heat recovery/desuperheater systems



Siemens study
- \$250,000
Carballedo
#250k
**RECOMMENDED ENERGY
& WATER REDUCTION
MEASURES**

\$ 41,499,900
Investment

\$ 4,261,531
Annual Savings

GDOE DATA (FY2019)

Annual Energy Usage 43,411,121

Annual kW Demand 68,260

Annual Cost \$ 13,049,536.84

\$/kWh \$ 0.301

GDOE Load Factor 7.3%

80% SOLAR PV REQUIREMENTS

kWh Required 34,728,896

Capacity Factor 18.0%

kW Required 22,025

80% ANNUAL ENERGY \$

Rate \$/kWh \$/year

LEAC \$ 0.154 \$ 5,348,250

Base \$ 0.147 \$ 5,091,379

Don't pay
Base Rate



Comparison of Island Communities

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	Guam	Oahu	Maui	Hawaii	Kauai
Land Area (sq mi) <i>(includes lakes and rivers)</i>	210	598	772	4,028	552
Population	167,930	953,207	144,444	200,983	66,921
Peak System Demand (kW)	256,000	1,206,000	202,000	192,000	78,000
Electric Customers	51,400	304,948	71,352	85,925	37,705
NEM Customers	2,068	71,000			4,300
NEM kW	23,702	524,000	112,000	95,000	31,300
EV Count	20	7,989	1,136	562	316
Type Utility (IOU, Public, COOP)	Public	IOU	IOU	IOU	COOP
Annual Revenue	\$378,300,000	\$1,801,439,279	\$368,184,936	\$374,734,337	\$162,659,638
Residential Average Rate (\$/kWh) Oct 2018	\$ 0.249	\$ 0.310	\$ 0.340	\$ 0.370	\$ 0.370
Latitude/Longitude	13.4443° N 144.7937° E	21.4389° N 158.0001° W	20.7984° N 156.3319° W	19.5429° N 155.6659° W	22.0964° N 159.5261° W
Income per capita	\$ 16,549	\$ 32,194	\$ 30,599	\$ 25,827	\$ 28,791
Average kW/Customer	5.0	4.0	2.8	2.2	2.1
Average kW/Person	1.5	1.3	1.4	1.0	1.2
Average NEM kW/NEM Customer	11.5		10.3		7.3
Average kWh Usage	940	493	533	471	503
Average Monthly Bill	\$234	\$153	\$181	\$174	\$186



Testimonies – Jan 9th Stakeholder’s Outreach Meeting (Cont’d)

Speaker	Discussion Summary
<p>Jeff Voacolo COO of MRE</p>	<ol style="list-style-type: none"> 1) Agrees with the issue on “Over-build” of PV systems. He uses New Jersey as a recommendation of how GPA should proceed to handle excess payments of NEM customers who over-build their PV systems. 2) Worried that resolution 2020-01 “de-incentivize” any business, home, or government entity from installing solar and feels that it will be counter-productive towards GPA’s 50% renewable portfolio goal and other renewable aspects. 3) Concerned about it hindering solar in the schools. 4) Believes the widespread dysfunction caused by NEM customers on the GPA grid is true for the Dandan solar farm due to its concentration of solar arrays. 5) Concerned how the 25MW of Solar is having such a large impact on our grid and saying our Grid might be what is the issue instead of NEM customers. 6) Mentioned they have inverters that meet California rule 21 and the IEEE 1547-2018 requirements. States that the resolution is lacking requirements or parameters for frequency control and storage. 7) Feels there are disconnects between GPA and the Solar Industry and mentions FW Star Frequency ramp down rates. 8) Wants the industry and the utility to work together and provides three recommendations: <ol style="list-style-type: none"> a) Acquire a 3rd party independent engineering study be conducted on the grid to propose transformation grid changes and a root cause analysis for the issues and fit the support of PV. b) GPA work with the industry to establish timelines for introductions of PV and NEM. c) Battery rebate program should be established.

Summary of Testimonies



OFFICE OF VICE SPEAKER TELENA CRUZ NELSON

COMMITTEE ON EDUCATION, AIR TRANSPORTATION, AND STATISTICS, RESEARCH, AND PLANNING
I MINA'TRENTAI SINGKO NA LIHESLATURAN GUAHAN | 35th GUAM LEGISLATURE

Committee Report Digest

I. OVERVIEW

The Committee on Education, Air Transportation, and Statistics, Research, and Planning convened a **Roundtable Hearing** on **February 6, 2020** at **11:00 AM** in *I Liheslatura's* **Public Hearing Room** to discuss Bill No. 196-35 (LS) introduced by Vice Speaker Telen Nelson/Senator Joe S. San Agustin, "AN ACT TO AMEND §§ 7116(a) AND (d) OF CHAPTER 7, DIVISION 2, TITLE 17 AND §§ 5008.2(a), (b)(1), and (b)(2), CHAPTER 5, TITLE 5 OF THE GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION TO ENTER INTO POWER PURCHASE AGREEMENTS TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S)."

Public Notice Requirements

Public Hearing notices were disseminated via email to all senators and all main media broadcasting outlets on Tuesday, January 28, 2020 (5-Day Notice), and again on Monday, February 3, 2020 (48-Hour Notice).

Senators Present

Vice Speaker Telen Nelson, Chairperson
Senator Sabina Perez, Committee Member
Senator Clynton Ridgell, Committee Member
Senator Régine Biscoe Lee
Senator Telo Taitague

II. SUMMARY OF TESTIMONY AND DISCUSSION

Vice Speaker Telen Cruz Nelson

We will now convene the Round Table Hearing. It is 10:51 and I'd like to thank GPA for being here... being present today. If you'd like to come to the table, please and DOE. This is in regard to Bill No. 196 (LS). Bill No. 196-35 (LS) is:

AN ACT TO AMEND §§ 7116(a) AND (d) OF CHAPTER 7, DIVISION 2, TITLE 17 AND §§ 5008.2(a), (b)(1), and (b)(2), CHAPTER 5, TITLE 5 OF THE GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION TO ENTER INTO POWER PURCHASE AGREEMENTS TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S).

On the same token, just to give a little um... overview, Senator San Agustin has also introduced a similar measure and really the goal is to allow educational institutions to be able to use the savings from solar to utilize for capital improvement projects. So we did have this bill on the session floor just this past session, but GPA came and they shared some concerns and so I'd like for us to clear that. Clear all the concerns and see if we need to address some changes in the bill to protect the interest of the island as a whole and up... perhaps we can discuss how we will move forward once the authority is given. So perhaps... Mr. Superintendent did you prepare something for us?

Okay. Okay. Thank you. And I'd like to thank my colleagues, again, Senator Clynt Ridgell and Senator Lee for being present. Thank you senators. So I'll just give it off to you guys. Thank you.

Maria Gutierrez Chair, Guam Board of Education

Good Morning Again Madam Vice Speaker, Senator Ridgell and Senator Regine Lee. My name is Maria Gutierrez. I am the Guam Education Board Chairwoman and my testimony will be very short. This is regarding the Bill 196-35. Madam Vice Speaker Bill 196-35 would amend Public Law 32-95 to grant GDOE the authority to procure solar energy from qualified vendors for all non-lease schools. Currently the law provides the authority to the General Services Administration. There is an urgent need for GDOE to explore all opportunities, implement alternative energy and generate savings that can be utilized for educational purposes. GDOE currently spends over thirteen million (\$13,000,000.00) in power per year. With the authority provided by Bill 196-35, GDOE intends to move forward as soon as possible to promote sustainable energy practices within our school system by implementing solar power and hopefully provide additional funding to meet other important GDOE needs. In testimony provided offered at an earlier public hearing on this subject, GDOE had requested the opportunity to utilize any savings to address deferred maintenance in our school facilities. A copy of the testimony is provided. Thank you again, Vice Speaker for engaging with us and working on solutions for our education community. We ask for your continued support and hopefully that your colleagues will support you. That the bills heard today will move forward for an affirmative vote by the Legislature soon. Si Yu'os Ma'ase.

Vice Speaker Telen Cruz Nelson

Thank you Madam Chair. Mr. Superintendent?

Superintendent Jon Fernandez

Thank you Vice Speaker and members of the committee. Just to echo that, of course, we testified at the last hearing. We do support the bill which essentially just shifts the authority from GSA to DOE to begin the procurement of solar energy from qualified vendors for all of our non-lease schools. I did mention... I know we discussed this prior about the ability to use the savings to support efforts around facilities or other improvement efforts but, as a start we definitely... we're very appreciative of you addressing the issue of whether DOE can now just take responsibility and move forward. Again you mentioned the bill... bill 219 which has a hearing later today, we understand that the a... that bill would extend the authority to other educational institutions. We don't take a position on that, we just... we're really just concerned with DOE'S interest. It does open it up to enter to a sell – lease back agreement as well as sets up a structure for the use of savings for school facilities and other changes. I just want to say as... we will be providing testimony at that round table but we do appreciate the efforts of the sponsors of both bills and just want to work with you to ensure that at the end of the day a solution is passed that will help DOE move forward to pursue alternative energy, generate savings and promote sustainable practices. I did receive a copy from GPA of their testimony today and as of this writing, I have not had an extensive opportunity to discuss the testimony with the GPA officials, except just shortly before the hearing but I am definitely open to working with them to address their concerns and suggestions. It's not the intent, as you know, to negatively impact our incumbent power provider as we understand the critical role that GPA plays in supplying power to residents and businesses; however, we are looking forward to finally in 2020 being able to explore and move forward with sustainable energy practices and ensure the effective use of our financial resources. So we stand ready to work with the committee and GPA with the input they're going to provide today. We don't... and we never seen Bill 196 in any way limiting the possibility of that partnership with GPA to address our intended goal. So with that, we stand by to listen and, you know, provide our feedback with regard to GPA and to the solar providers should they have continued suggestions. Thank you.

Vice Speaker Telen Cruz Nelson

Thank you Mr. Superintendent. Mr. Benavente do you... would like to...

John Benavente, General Manager, Guam Power Authority

Thank you Madam Vice Speaker. Senators, good morning. The... again, I'm not sure that the you want me to read through my whole letter from February 5th but basically the crux of it is that we're asking the legislations to be flexible to allow GPA to contract directly for solar energy for Guam DOE. By contracting for an energy agreement for DOE, allows GPA to provide this full complement of expertise and service to Guam DOE benefit. A process which receives contract approval by the Consolidated Commission on Utilities and the Public Utilities Commission mitigates significant risks that Guam DOE that enters into agreements which does not result with the intent of the bill and part of that is... I can summarize it... summarize that by the net metering

concept today provides full credit to the solar... solar owner if you will. That full will credit actually allows them not to pay for any of the infrastructure, the debt... Two Cents (\$0.02) of that goes to debt; the TND, about once cent (\$0.01) goes to TND; All the different aspects of the utility that... that meets our fixed costs, if you will. So therefore, the continuation of net metering without consideration for the non-solar PD customers is really not a parity situation. So therefore, right now I can say about \$3.8 Million Dollars (\$3,800,000.00) of subsidy is already happening from non-solar to solar. You add DOE, that's another five million (\$5,000,000.00); you add UOG, that's another one million (\$1,000,000.00); you add GCC, that's another five hundred (\$500,000.00); so now you're already up to 3.8, over Ten Million Dollars (\$10,000,000.00) of subsidy. That's Ten Million Dollars (\$10,000.00) are, again, used to pay debts of the system. The infrastructure is very strong today but they are debts. We had to borrow money to make it concrete, to make it to what it is today and all... So again, that's the reason for that and so we have petitioned the PUC to provide parity and to move away from net metering and move it towards avoided costs: avoided cost is fuel cost; avoided costs is line losses because they're not experiencing loss for that energy because it's right at the location; and some other aspects that could be added in. But really it's just above the LEAC and so the balance of that cost is used to service the system. So again, by going through the PUC then it allows the PUC to set a rate based on the... based on the benefits that the Guam DOE system provides. From a solar... and again, there's going to be batteries needed. There's no way around this. You can't put anymore solar without batteries in the system, no. With the battery system, you're going to have a combination of economies of scale. They may be able to... be able to put a process... a contract together that allows them to make more... provide more savings by utilizing economies of scale or a battery system that will work with the solar PV. So again, that can all be vetted and everything through the process so that once PUC sets a rate, then that's the rate that we'll go on and then... again, what savings is there are actual savings hence forth. You mitigate a lot of this risk because the way it is now... okay, DOE can go out and contract for it... contract for an agreement for, what... Fifteen Cents (\$0.15), Seventeen Cents (\$0.17) and then it gets changed and then they end up having to pay not only that plus other base rates scenarios and then they end up with a contract that is more... it's going to cost them more then what it's costing today. Now this other... there's two other parts of the equation that I proffered or I mentioned in my letter. One, there has been a study conducted which says you invest Forty-One Million Dollars (\$41,000,000.00) into the DOE system. You're going to get about Four Million Dollars (\$4,000,000.00) a year annual savings. The next portion is, again... I showed you how there's a big differential between the different schools and what is the cost per student and if you look, and again this is a good food for thought even when we go out for these schools in the future, if you look at the top of the list, the ones... the highest energy cost per student consists of the of least schools, no, other than Southern High, of course is not... not efficient at all; Tamuning Elementary School... I think they need to change that air conditioning there to really reduce that cost. But again, the others are leased and so therefore, even when you add new schools you have to have efficiency performance standards for them to be able to make sure that you, again, minimize their use of energy. Then the third one, again, the leased cost energy is the one used, no. So again, perhaps I mentioned a program within DOE which allows the principals and the management of the school to really boil down and conserve energy. Shut off air conditioners at night, put it at 78 degrees at night and turn it, you know, a little colder in the morning. Little things

like that is going to save a lot of energy for them, but they're not going to do it, in my opinion, unless there is some kind of incentive, no. The incentive could be where based on that bench mark, they get either 50% of the savings that they achieve beyond that bench mark and use it for the other programs, because again, I get all this... what you call it... Whatsapp: "we're having a fundraiser at Adacao School for a school program... different things like that". I support that, but again, this is a scenario where put the... put this on them so that given the chance and let's see what happens. So eliminate the energy that could be; improve with energy efficient; and then cap that off with solar PV; and then that will provide Guam DOE really with the intention of the bill, because the middle part of that improving energy efficiency you're actually upgrading the infrastructure: your changing out the air conditioning; your changing out the lights from the old lights to LED, you know. Again, recently Jon we... about Three Million Dollars (\$3,000,000.00) have been received for... total about three million... two to three million is being used to change all the lights in certain four schools to LED and that's going to result in savings, no. So that's my concern Madam Vice Speaker and again the full gamut of GPA's expertise can be provided including procurement, preparation of the bid spec, assessment, preparation of the bid specs, to conducting the bid process, contracting, getting all the approvals, again, beginning with the construction management and then last but not least, making sure that the provider has minimum guarantees and performance standards that will... that we monitor that every year to make sure they're in compliance and penalties are provided as such if necessary, no. So again, this is not just a one-time procurement, it's really a commitment for twenty years because, remember I mentioned earlier, forty million (\$40,000,000.00) to upgrade the schools to save 4.2 million (\$4,200,000.00). The investment or commitment for solar PV for Guam DOE for 80% of its energy, is anywhere between sixty-six million (\$66,000,000.00) investment to ninety-nine million (\$99,000,000.00). Okay. It's not free because you're committed to that for the next twenty years; 66 million without batteries or 99 million with batteries. So therefore, again, it's a big investment requiring that you really get into a very... a very well vetted type contract to allow you to ensure that over the next twenty years we have not come out with unintended consequences. So that's my testimony Madam Speaker.

Vice Speaker Telen Cruz Nelson

Thank you Mr. Benavente. I'd also like to thank our colleagues Senator Perez and Senator Taitague for attending today's round table. Thank you senators.

Would you like to come up and speak? Anyone from the board. Okay.

I think you wanted to give oral testimony so you can go ahead and give it at this time and then once you're done we'll have the panel ask some questions and can move forward with the dialogue from there. Thank you.

Jeff Voacelo, Chief Operations Officer, Micronesia Renewable Energy

Thank you very much for allowing me to speak. My name is Jeff Voacelo, Chief Operations Officer from Micronesia Renewable Energy. It... I read the bill thoroughly. We agree with the way the bill is written. I think the procurement should stay with GDOE. It has in the bill and actually the existing bill that GPA shall provide technical advice and assistance to GDOE. So it's already in there that they're supposed to supply that technical advice... the technical assistance and in the procurement side of it, you know there's a lot of other experts out there, not only in the

solar energy industry like SEIA, Solar Energy Industry Association that helps with procurement on public entities but other experts throughout the industry that could help on that side of it; plus, you also have the Department of Ed... Department of Energy, (???) of course. So there's a lot of experts out there. For GDOE to handle the procurement, they're handling a Hundred Million Dollar (\$100,000,000.00) project right now, which is the Simon Sanchez School. So they do have the expertise for sure to handle this procurement. Some of the structures, you know, I also read Senator San Agustin's bill too and one of the structures in there is, you know, power purchase agreement. There's other been some other finance structures that have been developed over the last couple of years the sale lease back structure. One of the questions that was asked to GPA during the last public hearing was 'what would be the best structure for GDOE?' and the answer was owner ship, the answer was a structure with no escalator. So there's different finance structures out there that can be introduced that accomplish that task, not just the power purchase agreement. Also with those type of structures, the savings on the structures can be leveraged for additional monies to go back into maintenance programs, energy efficiency programs. So I think that accomplishes a lot of things. Keeping that with GDOE. One of the things over the past couple years is with the power plant... public hearings on the power plant and a lot of articles that came out from the utility, the power plant was supposed to solve a lot of the issues with intermittencies. So that's what we were hoping for, you know, not the size of the power plant as it was approved... the contract, but, you know, when they were talking power plant for base load generation and of course for some peak load but to help out with the intermittencies and GPA, of course, as we all know they have a forty megawatt project that they're deploying with battery storage. That should also help out with intermittencies. But regardless of that, our inverters... the new inverters that are out, we do frequency control on our inverters. So that should handle a lot of the frequency issues with solar energy systems coming on the grid. Plus, as they stated, the developer, whoever gets this project, it should be a requirement in the RFP where they would or should have to do a feasibility study on the grid at each location to determine if it can be incorporated into the utilities grid. So that should be part of the RFP. The other thing is it's already written in the law that the developer can offset 80% of DOE's energy so it has nothing to do with an end program. What may be should be put in there is protection for GDOE that they would always be or they would always have the ability to export power when they are exporting power at the retail rate. So they're always protected on that side. Of course, time has always of the essence for the industry and for the Department of Education because right now what makes these programs really enticing and works for a developer is, of course, the ITC credit. So right now in 2020, that's going from 30% down to 26%. Next year it goes down to 22% and it actually gets phased out to 10%. So that's a mechanism that the developers use in finance to help finance these systems and actually may sometimes allow. So to wait another year... you know this law was first passed in 2014, now it's 2020, we did the finance analysis not it and GDOE has already missed over Thirty Million Dollars (\$30,000,000.00) in savings. So to stretch this out another year, another two years, is... I just don't see the point. Now is the time to capitalize on this. GDOE has a shortfall. That money can be put back into the schools, the savings on it; finance structures are out there and so it's time to get this out for procurement. So thank you very much.

Vice Speaker Telen Cruz Nelson

Thank you very much Jeffrey. Mr. Superintendent, Guam Power Authority came to our office right on the eve of our session specifically for this bill and they presented the study from the SEMANS that they contracted and so basically this study says: “that if you do a 40.5 Million Dollar (\$41,500,000.00) investment in fixing the lighting to be more energy efficient, the air conditioning units to be more energy efficient, you can save 4.2 Million Dollars (\$4,200,000.00) annually; but of course you have to have the investment of 41.5 Million Dollars (\$41,500,000.00). So really the... some of the concerns that they shared was, you know, it’s a matter of consistent savings. So if you do these upgrades to energy efficient models then you have a consistent savings in revenue of Four Million Dollars (\$4,000,000.00) annually for the lifetime of the school. So also another concern is that we’re moving on these power purchase agreements, not just for DOE but UOG and GCC, and concern is that DOE will have a separate business contracted with them to provide solar energy, UOG will have a different business and GCC. An additional concern on top of that is do our local companies here on Guam have the capabilities to support the schools at DOE. So really it’s trying to understand the vision that you have in mind for the solar energy the; where will the capital come from; how many schools are looking to introduce into the solar energy; are you going to award different businesses the contract... of course you can’t tell me... we don’t know that, right, but just some kind of vision that you have for DOE to be able to go solar and perhaps even a possibility to get off the grid because we run the schools during day. So can you just share a little bit about that and then I think... Senator Ridgell do you have any questions? Okay. After you. Thank you.

Superintendent Jon Fernandez

Alright. Thank you. So with regard to demand sight management, you know, I think we would be able to say that we support that as a key component for addressing the energy use in our schools and we’ve been able to address some of the demand-site management issues with the investment of some of our Department of Interior funds. So some of the LED lighting replacement that has been funded by DOI funds as well as in partnership with GPA with available funds to... as part of the BEST program and through some DOI grants, have been able to look at demand site management, not only to do an assessment of the schools but to pilot demand-site management strategies at Carbullido and I think we are working on another school as well. So I don’t believe that’s a separate conversation. I think that it can be done hand in hand and should be done hand in hand, but I think you’ve identified the other piece of it, which is the financing issue. So in order for the demand-site management piece to work you have to invest in those demand-site strategies, whether it’s replacing equipment, upgrading equipment, improving infrastructure and then you’ll benefit... you’ll see the benefits over time. So I don’t disagree with that. I think the concern is how do we get the up-front financing, right? So this is a major investment and then the payoff is over time. Given the government’s resources, that’s the key question. So we wouldn’t be opposed to doing more demand-site management but it’s just going to be a function of resources... of up-front resources and then the payback overtime, we would be able to view as available for investment in other parts of the school system. With regard to the solar proposal before us, the power purchase agreement and then I think as our... as my fellow panelist have mentioned with the sale lease back that is being proposed in other bill, both of those are really targeting the financing challenge. Which

is to say that we don't have the up-front funding to do the demand-site management and to purchase the equipment, there's two ways you can go about it within our constrained resources. One is to enter into a power purchase agreement, where we're using our current budget set aside for... to pay GPA, we use that portion to pay for our provider's just in a typical way. We allocate that towards power and depends on who our provider is and if we're doing a power purchase agreement the provider would be that third party. So that's within our... let's say within our annual budget... our operating budget. A sale lease back would operate in a similar fashion. It would be an annual payment to the... I guess an annual lease payment just like with our leased schools. We can't afford the Sixty, Hundred Million Dollars (\$60,000,000.00, \$100,000,000.00) it takes to build new schools. We then set aside part of the budget to pay the annual payment. Let the developer take the risk of financing the project and then we are able to set aside funding to annual payments over a period of time that would enable us to then own that equipment and it just... So those two strategies are really financing strategies given the fact that we don't have the up-front funding to invest and this... which is obviously a more direct and straight forward way.

Our solar strategy really has been to try to pilot schools. So I think the challenge is... we have a challenge on the lease school side which is, you know, there... we're kind of still stuck in the AG's Office and working with the vendors because of the issue of: how to be exempt from procurement, you know, it was an exemption from procurement and then determining whether what we produce or set... put forward, to the AG really was compliant with that. You know, to what extent are we bound by procurement law versus to what extent are we actually free of procurement regulations. So we're still in that discussion but with the non-lease schools we intend to go through the procurement process. We're required to go through the procurement process. So I don't think that will be an issue. I think the issue for us is because we don't have the up-front financing to just go purchase the equipment, we're looking at these creative strategies of power purchase and lease back. We understand the uncertainty built into the power purchase agreement. I mean, I think if you hear on the one hand, you know, we've negotiated an agreement for the lease schools that would put us at Sixteen and a Half Cents (\$.165) per kilowatt hour, at least in our last agreement. At that rate we wouldn't be reaching our current kilowatt hour rates until 2020, based on the escalator and so forth built into that agreement. That's not yet done but that was in the agreement that was sent to the AG. That's one way to look at it. I mean, obviously it's a negotiation and it has to, of course, take into account the changing conditions in the... in terms of the cost of power today. You know, every year it might differ and so that we always want to take that into account. So there is some risk built into it. I think, as it was posed to me before, what happens if the GPA's rates are much lower than your power purchase agreement? I think in the end of the day we're talking about one school versus forty-one schools. It means that for the forty schools you got a great rate and you're going to make up for that loss, because the idea was always to pilot, not expose ourselves entirely to this risk. Just to see how it worked and to determine whether we could achieve savings. Of course, the other issue is not just a matter of financial savings but we, you know, we are promoting sustainable practices; the governor and other partners, agencies have committed to try to achieve some sustainability goals and we have to be able to as the largest agency practice and be able to explore those opportunities. So it was never... I think the issue for... that I will be concerned with as a utility is, you know, how many schools at what pace and how would that effect the overall system. Our intent has always been to do it, you know, very

incrementally so that we could put it in place, get a financing structure that works and after see what the impact is on our utilization of power and what the impact is both on DOE and GPA. It's never... I think we're... at least from my perspective, very concerned that we don't, you know, put our incumbent utility, you know, in a predicament, but we should be able to have some reasonable measure of progress on the solar energy side. So demand-site management, support it, we don't have the resources up front to necessarily do that but we appreciate anything that can provide it. Solar we're just looking for an incremental reasonable opportunity to move forward so that we can have more data and more information to share with the Legislature as to whether we want to expand it to more schools and what that impact will be on GPA and its rate payers. So, again, not a full get off the grid strategy but a really just trying to pilot a hand full of schools and then go from there.

Vice Speaker Telen Cruz Nelson

Thank you Mr. Superintendent. Senator Ridgell?

Senator Clynton E. Ridgell

Thank you Vice Speaker. Mr. Benavente my question is I didn't, excuse me, I didn't quite catch the entire gist of your testimony or presentation today. What is it exactly that GPA is proposing, if you could sum it up?

Mr. John Benavente

To sum it up is really to conduct the procurement for Guam DOE and comes up to a process where we bring that to the CCU and the PUC which eventually sets a rate based on that procurement for Guam DOE. In that case, it eliminates all the uncertainties of DOE having to pay for the system because, just going to Jon's testimony... just what Jon just said now, you can get contract for Sixteen and a Half Cents (\$.16) right, but it's cost today, let's say, twenty-six... twenty-eight, right, but there's a two...there's a Twelve Cents (\$.12) difference. That's a fuel, Fifteen and Four Cents (\$.154), the fuel just went down to about Thirteen Point Eight CENTS (\$.138), Fourteen Cents (\$.14) right almost Two Cents (\$.02), so therefore now his bill is down to Twenty-Six Cents (\$.26) versus the Sixteen Cents (\$.16). That Ten Cents (\$.10) is not savings... it's a savings directly between himself, between Guam DOE and the... by that contract, but that's for no payment to the grid. So therefore, this is what the grid provides to Guam DOE. They only generate the power in the day time, right, and then they use it at night also. Correct? To generate power, you know, throughout the year, they mainly use it only certain nine months out of the year. The rest of the year who's the storage. The storage is the GPA grid. Know when it rains for eleven...

Senator Clynton E. Ridgell

Well I think...

Mr. John Benavente

... No, no let me finish senator...

Senator Clynton E. Ridgell

...nine months, the other months it's actually feeding power into the grid.

Mr. John Benavente

... Yeah but I'm saying...

Senator Clynton E. Ridgell

Summertime it's closed...

Mr. John Benavente

... Yeah...

Senator Clynton E. Ridgell

... so it's just not in operation so it's feeding power to the grid, right...

Mr. John Benavente

... but it is using the grid. Right senator? It is using the grid. It's feeding back in on whatever it is using the grid, but no contribution to the grid and when I say the grid, I'm not talking about GPA. I'm talking about the whole fifty-two thousand rate payers that pay for the grid, no. It's their... it's their grid. They paid all this time to make it concrete poll, to make it solid and their paying a debt of Two Cents (\$.02), Three Cents (\$.03) for other things. So everybody should contribute and lessen the burden of everyone to that. That's my only concern because at the end, what you end up to be is that GPA needs a rate increase. It will go and file for one and the PUC will have to provide it to make sure that we pay all our debts. That's part of their requirement but then who's going to provide the additional money? Those that are paying for the grid, but not everyone is paying for it. So that's the concern. So again, that savings is going to come from the non-solar pd. So what we're trying say is, the PUC in its wisdom can probably find a way to provide... CCU and PUC, through the process can find a way to provide a value for Guam DOE which becomes a true savings while at the same time they're contributing to the grid. So that's the... that's what I'm trying to... I mean if Guam DOE was independent and just get off the grid and do, you know, then there won't be Sixteen Point Five Cents (\$.165), it won't be Sixteen Point Five Cents (\$.165) to. I can assure you that you need at least another Fifteen to Twenty Cents (\$.15 to \$.20) to that Sixteen Cents (\$.16) just for them to be off the grid. Okay. So again, the grid plays a major part in this and all we're trying to do and, you know, it's just frustrating at times, all I'm trying to do is protect everyone....

Senator Clynton E. Ridgell

GPA's interest, I understand.

Mr. John Benavente

Wait, wait...

Senator Clynton E. Ridgell

Um.

Mr. John Benavente

...when I say GPA, it's rate payers. Senator please.

Senator Clynton E. Ridgell

Um. So Mr. Superintendent, Mr. Benavente represented that you guys use the grid at night. How much power do you guys use at night?

Superintendent Jon Fernandez

I don't if I took that from him. I think what he was saying... and again, at least I interpret it...

Senator Clynton E. Ridgell

He said you guys produce power during the day then use the grid at night.

Superintendent Jon Fernandez

Correct. So I think what... I think, at least the way I interpret it, is that to the extent that we don't... we're not able to generate sufficient power, we would rely on the grid and I guess the way I'm interpreting this, just broadly speaking... and again, trying to balance the interest of rate payers as well as our school system, is that we... nothing in the proposal proposes that we remove ourselves entirely from the grid. It maximizes the capacity of 80% of our utilization we will be provided from solar PV and then the rest we would still have a connection to the grid. So I don't...

Senator Clynton E. Ridgell

I guess what I'm trying to say...

Superintendent Jon Fernandez

... so I don't anticipate that there will be that disconnection from GPA...

Senator Clynton E. Ridgell

Yeah well I'm just trying to determine is do you use a lot of power at night?

Superintendent Jon Fernandez

The most is going to be during the day and...

Senator Clynton E. Ridgell

It's mostly during the day when school is in operation, right.

Superintendent Jon Fernandez

Correct.

Senator Clynton E. Ridgell

So really during peak hours that's really when DOE's using less power during peak hours. Peak hours is...

Superintendent Jon Fernandez

And... peak hours...

Senator Clynton E. Ridgell

Mr. Benavente what time is peak hours?

Mr. John Benavente

But senator, just from what you said, they are using the grid, whether it's the day time or peak time or whatever... without contribution. That's my whole point. They are using the grid. That's all.

Senator Clynton E. Ridgell

During peak... when is peak hour or what's the peak time?

Mr. John Benavente

Peak is about seven at night.

Senator Clynton E. Ridgell

Seven?

Mr. John Benavente

Seven pm.

Senator Clynton E. Ridgell

And that's probably when you guys use the least amount of power, right?

Superintendent Jon Fernandez

It would probably only be sports events for the high schools. Pretty much, yeah.

Senator Clynton E. Ridgell

That's all I was trying to get out was that they're really not using a lot of power during peak and that...

Mr. John Benavente

Less during the peak time. That's correct, but my point is that we're energy storage for the school because they only generate in the day time and allowed... and that was my only point. No?

Senator Clynton E. Ridgell

So your proposal Mr. Benavente is for GPA to take over the entire procurement of any sort of solar or any kind of renewable energy system for DOE. Correct?

Mr. John Benavente

That's correct. If you want to... in my opinion, if you want to get it done and get it done where you minimize risk, invite a lot of competition to make it happen, bring you the best cost; then we have the expertise and the experience to make that happen and...

Senator Clynton E. Ridgell

Understood.

Mr. John Benavente

... by allowing us to do that and going through our process then GPA can provide the full gamut of its services. No? From engineering, procurement, to all of that because consultation can mean, just that, consultation. Case in point: Jon negotiated, right, the lease school agreement, then he asks us our opinion. So that's consultation. Anything else, you know, I mean to spend all the energies required to go through a bid process... go through the question and answer period; answer the technical questions; do all of this, as mentioned in my thing... in my summary, that's an extensive amount of effort. So that's the proposal that we have before you.

Senator Clynton E. Ridgell

Wait. What about if you guys just provided technical assistance as I believe this would... the bill will allow anyways currently is that DOE would do the procurement but you guys would provide all that expertise as you were mentioning with the technical assistance for the procurement.

Mr. John Benavente

Yeah. It's not technical assistance... again, unless you let us be the one to provide it, I doubt whether we can be able to successfully make that happen. That's all I'm saying.

Senator Clynton E. Ridgell

So your...

Mr. John Benavente

Technical assistance is not going to be enough to make this thing happen; In terms of priority, in terms of all the different things that needs to be done. Whereas if you place that under GPA's requirement to ensure that Guam DOE comes out with a solution, then I can assure you that we will make it happen. That's what... that's my point.

Senator Clynton E. Ridgell

Mr. Fernandez. If GPA were to take over the procurement as they're proposing, how much would DOE save on its power?

Superintendent Jon Fernandez

I'm not sure. It depends how... you know, what gets negotiated through that procurement. I think the... you know, our biggest concern and I... you know, that's my conversation with GPA is what really concerned with at GDOE is an assurance that: one, we will move forward and get a

procurement done in a reasonable time frame; number two, that we will maximize the opportunities for savings so that we can utilize that savings for the school system; and three, that we can have an assurance of a certain number of schools, you know, being done within that time. Like I said, you know, that clarity... I think we always appreciate the technical expertise and assistance, but for us, and I did mention this, we just want a guarantee that we can get a certain number of schools done within a reasonable period of time and in a way that maximizes the savings to... in any way... if you can do it in a way that offsets any risk, doesn't negatively impact the, you know, the rest of the island in a significant way, you know, we're not... you know, we're open to that. It's just we need some basic level of assurance because we've been discussing this for so long and I believe the solar providers have talked a little about the tax credit time frame. If that doesn't extend then, you know, we start losing the opportunities for, you know, for that incentive to remain in place. A...

Senator Clynton E. Ridgell

What I'm trying to determine is if you would still save the same amount if you went through GPA's procurement as you would if procured it yourself. That's what I'm trying to determine.

Superintendent Jon Fernandez

Well if they can negotiate a better rate overall, I mean, that was... this is like a, I mean, for us from the procurement side, it's a... it would be, you know, making sure we have qualified vendors and then entering into negotiation with them and we've done that. You know... and I think the consultation we've had with GPA is just to make sure that it operates, you know, in a way that GPA can sign off on. If they can negotiate a better rate, then of course, we'd be willing to entertain that, but...

Senator Clynton E. Ridgell

So Mr. Benavente, if you were to handle procurement for these services for power for DOE, would DOE realize the same amount of savings they would if they would procure it themselves?

Mr. John Benavente

And what is that amount of savings, senator?

Senator Clynton E. Ridgell

I believe it was represented before that you guys could cut your power bill in half.

Superintendent Jon Fernandez

I think we, you know... if we use the.... I think we were based on the Sixteen and a Half Cents (\$.165). I think maybe that's the way to look at it. Based on the Sixteen and a Half Cents (\$.165) we estimated for the lease schools, probably about a third of... a third savings. We would be able to save about a third of our amount spent on the lease schools currently. So I forget which year we would hit that but that was the general expectation.

Senator Clynton E. Ridgell

I remember in a hearing previously there was some testimonies that currently you spent about twelve million (\$12,000,000.00) on power. Correct?

Superintendent Jon Fernandez

Correct.

Senator Clynton E. Ridgell

And I think there was some representation, I believe is was from DOE, that had... if you were to go renewable on all the schools then you could cut that to around six million (\$6,000,000.00).

Superintendent Jon Fernandez

I think I probably... I'd be more comfortable saying around four million (\$4,000,000.00) was what... I think if you extrapolate from what we've done with trying to get the deal down the lease schools, it would come down to about that amount, probably around four million (\$4,000,000.00). Mostly about a third of the... and if we could get a half, of course, we would benefit from it more. It just really depends on, you know, the deal that gets negotiated at that time. I have to tell you, in our experience with the lease schools, we went through several iterations in that negotiation because when we earlier in the negotiated prices were higher, you know... we ended up with a higher rate. We kept pushing it down as the conditions got better. So, you know, point and time estimates, that's what we're basing it on.

Senator Clynton E. Ridgell

So four to six million. So let's go with four million, the lower figure. Mr. Benavente, if GPA were to handle procurement for GDOE, would GDOE be able to save four million on its power bill annually?

Mr. John Benavente

GDOE would not be able save four million on its power bill if they have to pay their fair share of the system. The only way they're going to save that amount of money is through subsidy. We think we can... the Sixteen and a Half Cents (\$.165), we think we can lower that but it still doesn't mean that... wait... but it doesn't mean that they're going to save four and half million unless the PUC authorizes that they get the full subsidy of...

Senator Clynton E. Ridgell

Can I just clarify. You're saying... you said unless they pay fair share. I think you're referring to avoided costs and those issues that you bring up with regards the NEM program...

Mr. John Benavente

The paying fair share is paying...

Senator Clynton E. Ridgell

But that hasn't been...

Mr. John Benavente

... paying the base rate of the system.

Senator Clynton E. Ridgell

But that... but the NEM program you haven't completed that petition with PUC. Correct?

Mr. John Benavente

That's correct. That petition is in play...

Senator Clynton E. Ridgell

So under current frame work, they would be able to save four million. It's unless you get that change.

Mr. John Benavente

Well senator we're going into a twenty-year contract. I cannot just speak as to today. No? You're going a twenty-year contract and if the PUC says will pay the full rate, you sign for sixteen and they...

Senator Clynton E. Ridgell

What I'm getting at is you're saying fair share but it hasn't been determined what the fair share is.

Mr. John Benavente

You sign... you sign for sixteen and you have to pay the base rate and now oil price in about two years... our LEAC price is down to ten, now DOE is paying Six Cents (\$.06) more than what they would have had with GPA. That's the how the numbers work. No?

Senator Clynton E. Ridgell

I was specifically talking about you mentioned pay their fair share. That's... and you were referring to the NEM program. Correct? You're referring to what you're petitioning the PUC...

Mr. John Benavente

I'm referring to the base rate...

Senator Clynton E. Ridgell

In order for NEM customers to pay what you are representing as the fair share.

Mr. John Benavente

... the base rate of the system is what everyone pays except the NEM program today which is what we're petitioning the PUC to change and which...

Senator Clynton E. Ridgell

Which hasn't been changed yet is what I'm saying

Mr. John Benavente

...which... which we're still in the process to change and then when you're going into a twenty-year contract, which could be changed in a year, for all I know, ... less than a year, by the time you get a contract in place; you know, hopefully you'll know but if not you could sign a twenty-year contract resulting in higher costs and that's my whole point about this process. Now if you went through PUC and stuff. PUC, which sets the rates for all the customer, therefore, they can set the rate and once that rate is set then there's no deviation from it, see. You mitigate that risk. That's all I'm saying. No?

Vice Speaker Telen Cruz Nelson

Thank you Senator Ridgell. Senator Taitague, I believe you have some questions.

Senator Telo T. Taitague

Thank you Madam Chair. Thank you everyone for being here and it's good to hear that the Superintendent was mentioning earlier about working with GPA. Most especially when he made a comment on the... on some kind of feasibility study to see the cost on this. We definitely need a person to look into the cost verification savings analysis that I don't think has ever been done yet. You know, to determine the cost. It was mentioned here and I think by both GPA as well as yourself Mr. Superintendent with regards to, you know, going to energy efficient measures like what they did on the program at the University of Guam. Where they were able to cut their fuel bill or their power bill almost in half by this project that they were... by simply changing out the light bulbs but most especially I think the biggest cost was the air conditioning. You know, putting more star efficient energy efficient air conditioning is going to cut a huge amount of costs for the Department of Education. I mean we are looking at here saving money for the Department of Education but we have to keep in mind that your savings is not going to cost more for the people out there paying power and their... the importance of using the grid. So I'm glad that you guys are working together to discuss this. I mean even you mentioned it yourself that, you know, going... you know, saving money but you don't want to have to do it on the shoulders of everyone else who's on the backs of those individuals. You know, the... one of the things I had questioned was regarding the purchase power agreement utilizing only businesses that are on Guam to go after this procurement and, you know, I agree in supporting our locals but if we can get someone in here and we're looking at cutting costs, if we can get someone in here who actually answer to this RFP if it should come up. Do you have a problem with utilizing anyone even if they're not homebased on Guam but, you know, it's... some companies what they do when they see an RFP they get a license and then they go after the bid as well but they're home based in another state or country? Do you have a problem with that?

Superintendent Jon Fernandez

I think that's a policy decision for the Legislature. I think in the procurement process, you know, we typically invite as much competition as possible and then we evaluate our, you know, the

bidders on those qualifications. Sometimes it benefits them to be local businesses because they're more familiar, have expertise and more of a proven background of success but I can easily see that, you know, I wouldn't want to restrict competition if it generates a good outcome for the department. Again...

Senator Telo T. Taitague

That's good... that's good to hear.

Superintendent Jon Fernandez

Again...

Senator Telo T. Taitague

Okay.

Superintendent Jon Fernandez

Our position is, you know, let's move forward but in terms of the specifics of whether it's local or off island, you know, I leave that to you for input on that.

Senator Telo T. Taitague

Well. Thank you and you know, the twenty-five years is quite long as I was reviewing this and looking through some of the options that we have, not just today but in the future. We know that solar panels only have life expectancy of about twenty years. We lose one percent every year on that solar power panel. By the time the PPA program is done, you know, we've... the power of the solar panel is not... it's inept. It won't be able to move forward. So we have to again go into another purchase agreement. Now the technology today is showing that smaller panels are generating just as much a production as the larger panels are doing it. So if we get our self into a twenty-five year contract utilizing a certain amount of panels, and of course I read some of the testimony that was brought up by one individual and I thank the GPA for providing this outreach program that you did to the community that mentioned, you know, having all these panels everywhere, you know, on our roofs, in our backyards, in almost, I don't want to say littering but it's quite a bit of panels out there and technology is coming so that smaller panels are more efficient but being in the twenty-five year contract we won't have that option to move forward, you know, in utilizing smaller panels when the technology comes about. I really hope you look at possibilities in grants and opportunities by one, two schools at a time and outright purchasing these panels because through a cost analysis and verification you'll find... and I don't see anybody submitting any of these documents with a cost analysis here to show us. It will be a lot less, you know, inexpensive for us and for DOE as well but of course, if we go... we provide and I think GPA mentioned opportunities to provide purchasing the panels outright, might be the better option for us. I hope that's also included in your feasibility study analysis and coming up with good solutions. So.

Superintendent Jon Fernandez

Well, I think a couple of things, I mean, you're referring to the term of the agreement so I think nothing in the bill will preclude a vendor from making... from utilizing the latest technology to meet their obligations. The obligation for the vendor is to provide 80% of our need based on what our current utilization looks like. So the way I would structure that contract was that that would be the obligation over time. Over that twenty-five years the vendor would be responsible for installing, maintaining and ensuring adequate capacity for those solar panels throughout the duration of the contract. So there wouldn't be a period in time where they're producing less. You know, where you're talking about they're only doing about 30% need and we're still paying the same... you know, we're relying on GPA now. That wouldn't be the way... at least that's my understanding of how this law is structured. So there's that... hopefully that protection. I think the other... additionally, over that period of time, you know, should the situation change... should the environment change, obviously we would like the flexibility to be able to exit that agreement if needed. Right? So in our discussion with the vendors, at least with our particular vendor, it was our understanding that, you know, by the time we hit... you're going to need at least a commitment of five to six, seven years for that vendor to be made whole in terms of their financing commitment and the upfront costs. Afterwards you might want to consider an exit strategy in the event that one of the parties or at least the DOE determines that it's no longer in our economic interest to participate in this agreement. What we negotiated was the opportunity to, first of all we held off the escalator rates for as long as we could in that agreement so that we would maintain the same rate for us or at least guarantee the saving for six years or guarantee the rate for six years and then beyond that we put in place an exit clause that in the event that we want to move forward and just outright purchase the panels instead of paying the power and paying for all that maintenance, that we would be able to do so based on an independently determined market rate for the panels. So I think there're ways to work through a contract to protect against some of those risks but you're absolutely right. If you just lock yourself in a twenty-five years and without the protections in place to maximize our savings and, you know, the benefit for DOE, then...

Senator Telo T. Taitague

And then utilize new technology is important.

Superintendent Jon Fernandez

Right. So I do... yes, absolutely. A lot of that is just built into the... will be built into the contract.

Senator Telo T. Taitague

I appreciate that.

Superintendent Jon Fernandez

But yes, we are absolutely concerned about the same things. I think that you also mentioned the, of course, the demand-site management and outright purchasing, that again is the most direct way

of accessing, you know, solar panels and to be able to use solar panels. The challenge there is, again, the upfront costs to do so. So I think, you know, if it's an option...

Senator Telo T. Taitague

I think if we go slower, you know, by one school at a time and not the cost...

Superintendent Jon Fernandez

Right.

Senator Telo T. Taitague

...for all your schools, but just go in a slow pace...

Superintendent Jon Fernandez

Absolutely, you know, we don't want to...

Senator Telo T. Taitague

...to get to where we need to do without jeopardizing, you know, other rate payers and moving forward...

Superintendent Jon Fernandez

Right.

Senator Telo T. Taitague

...but one last question Madam Chair. Thank you for this opportunity because I have another meeting to attend. You mentioned earlier, you've been talking to one particular vendor. Who is that vendor.

Superintendent Jon Fernandez

Well this was actually through the lease schools. So this was through our work with the Guam Education Financing Foundation which runs the Adacao, Liguán, Astumbo Middle and Okkudu. So the law actually exempts them from the procurement process and allows them to go directly... enter into an agreement with the vendor subject to a negotiated power purchase agreement. So that actually did not go through the full, I mean, if we went through a full procurement process and got a better deal, that would be even better, but this actually because of the structure of the lease, you know, they're actually the landlord for that facility and we would, you know, the law asks us to go directly to the landlord for them to go and engage the vendor.

Senator Telo T. Taitague

Okay. Thank you. Thank you Madam Chair.

Vice Speaker Telena Cruz Nelson

Thank you Senator Taitague. Senator Perez, do you have any questions?

Senator Sabina Flores Perez

Thank you Madam Chair. So I think it's really important that we provide these checks so that we don't get locked into these agreements that where DOE is actually paying more than what really the cost of energy... to supply that energy. So that's good to hear that. I just want to bring up another point, I mean, but this is not maybe the primary concern but as far as when we're looking at solar power, renewable energy, you know, it's great that you're going to leverage the savings to pay for this demand site improvements. So I think like putting in energy efficient products like air conditions are the big ticket, I think. I think you can reduce your energy use by 70% just by replacing these non-energy efficient products. So I think that's one great way to leverage the savings. I think, you know, maybe even adding into this pilot... I mean if we could think a little bit bigger. So this idea as perhaps, like on weekends where energy is not being consumed... is not being used by the school, that if there's a way that this could be a part of the infrastructure to charge electric vehicles. So that way there could be a revenue generating source for the schools that can go into their programs or potentially even leveraging even more of that money to go towards more energy efficiency in the schools. So I see this as a potential... and investment that not only saves money but it can produce money. So I really hope that you can maybe think about that in this RFP process.

Superintendent Jon Fernandez

Yeah. I just want to... so I appreciate that. I think the law doesn't quite have that language in place but I do... I was just thinking along the same lines that, you know, because we lack the upfront resources to do a lot, you know, to invest heavily into demand-site management and we've been relying on federal funds and grants to do so. It might be a good idea to, you know, if the... let's say they wanted to ensure that as part of the savings that we do, you know, utilize that in part to improve the demand-site management because that's... it would go hand in hand. I mean, I think we don't want to leave this conversation saying it's either solar or demand-site management. These things should be able to operate hand in hand. So I appreciate that. I think always had... you know, along the same lines. Director I'd like to be able to... I would be happy to, you know, entertain any creative, you know, ideas about how to maximize our contribution and use of what's generated, again. So, again, if I could roll this back again, I think... I've heard... we've heard from GPA and I'm well aware... I think everyone is well aware of GPA's concerns that if we took this out to its full capacity, we're going to have a major issue with regard to how the... what the impact is on the existing infrastructure and the rates that get charged to all the users. I'm not proposing that and I've never come to this table saying that that's what we're looking at. Whether we work with GPA in this legislation or outside of legislation, I believe that in the year 2020, as the largest government agency in the Government of Guam with trying to incorporate, you know, issues of sustainability into our curriculum, part of the governor's efforts to promote this as part of an island wide effort; that we should be able to demonstrate in short order, at least, a handful of schools where we can test the concept of whether solar energy helps us to benefit our schools, demonstrates sustainable practices, generates savings, provide a source of revenue for other investments and do it, you know, in a way that we can then test that concept and see impact on GPA and DOE and then make adjustments from there. I'm open to that. It's just we have to get started at some point.

Senator Sabina Flores Perez

So Mr. Benavente. In the... so you're proying that GPA consult with DOE as far as setting up the RFP. What is your position on PPA as versus leasebacks? You know, are you... my concern basically with some these power purchase agreements is that we're locked into a rate. So I just wanted to get your position on that.

Mr. John Benavente

Actually, the power purchase agreement is the tool we use for even our utilities scale today. We're into a twenty-year contract with a provider. They own, operate and maintain the facility and we just buy for the energy that we receive from them with a minimum guaranteed amount of energy. So they have... there are bench marks that they have to meet. At the end of twenty years the facility is still theirs. And why is that? Because the life of this equipment is about twenty years, whether you look at it as from the battery or from the solar PV panel itself. After twenty years there's other technologies that may, you know... don't forget the... I'm sorry. I don't mean don't forget but solar PV and batteries are in evolution. They're constantly improving and heading forward. So in ten, twenty years, there's going to be better technology. I would bet on that. No? So therefore you have an opportunity to come in then and have another contractual agreement. If you have a solar farm and you own such a big one for yourself, then you have to deal with some unknown consequences yet. You don't know whether: how do you get rid of the panels; all of a sudden there's something found in the panel that is environmentally unacceptable; the batteries itself, how do you get rid of it? That is on part of the proponents so there's minimal risk by going... but the key to whole thing is you have to contract... you have to have a very tight contract to ensure that you don't... that you are going to make that savings through the twenty-five years. That's what we've worked real hard in our... on our power purchase agreement we have hundred and twenty thousand kilowatts at Eight and a Half Cents (\$.085) and we have before the OPA which, again, that's the other... The amount of effort to go before the OPA; lawyers and the amount of volumes of information is substantial. So it's going to take us probably another month or two to go through that process. I'm confident that we will win that process and if we did, that being the case, where going to get Eleven Cents (\$.11) per kilowatt hour with batteries. That Eleven Cents (\$.11) is going to offset Nineteen Cents (\$.19) per kilowatt hour peak time costs in the system. When it does offset that, then the value of the peak time use is going to... you know, the cost of peak time is going to come down. So again, continuing processes like that, you know, is how we assure our self that we end up with a good contract moving forward. You can... As an individual owner, the best pay back, of course, is owning the system yourself. You can pay back for it in five to eight years. As for the utility, we're having them make the investment because at end we really don't want to own the solar PV farm at the end of the investment period. No? For the residential, five to eight years, they recover their money... their balance of the years is kind of create that amount of free energy for them. By owning the systems. See. That's even, if it's avoided costs, it goes to like ten to twelve years, but they still get like eight years of savings. And avoided costs doesn't now impact... they're paying their fair share of the grid. So that's where... somewhere between there is a compromise that we hope to achieve so at least, you know, it's not one side to the other right now. That's all.

Mr. Joey Duenas

Thank you. Senators, I've been listening a lot and just some observations. First off, there are a lot of numbers that are thrown around and I've never ever seen any substantiation of these numbers. The numbers of saving four million (\$4,000,000.00) or six million (\$6,000,000.00) a year, that's a number but I've never seen anybody say, and I just want to correct one thing, you are one of the largest GovGuam users of power, the other one whose just as large as you in the Government of Guam who uses power is called GWA. They pay Thirteen Million Dollars (\$13,000,000.00) to GPA. So we have two very large power consumers in the Government of Guam. The point I think I'd like to make and this is my belief; if GPA... if DOE procures from GPA, they will get the best deal possible because it will be reviewed. That deal will be reviewed by the PUC, it'll be reviewed by GPA first, the CCU and it will be reviewed by the PUC. The rate will be set by the PUC. The contracts that we have, have clauses in them that don't say that they... the power producer will be paid so much every month. No. They're paid per kilowatt delivered and if they don't deliver, there's no payment. That's what you need to look for and if they don't deliver below a certain amount, there are penalties and that's what you need to look for. That ability to contract, that knowledge to contract is at GPA. That's the bottom line. If you want the best deal for DOE to save the most amount of money, that ability is at GPA. I've been to many of these hearings and I sat in the back because I wanted to John speak first. John is a registered public... I mean, registered engineer, a P.E. He's one of... he has thirteen others at GPA. That's all they do is utility and they know all this stuff, I don't, they do. I rely on them and if you want the best deal they are going to go in when they... when John says he's going to do an assessment, he and his group are going to do an assessment. They'll look at the roofs, they'll look at the power panels, they'll be able to know what they're going to ask somebody who's going to submit a bid. They're going to say this is what we're looking for. If you're going to just say; "well anybody come in and look", they're going to say; "Oh, yeah. We can do this". John is going to lay it all out. It's going to take a little bit of time. I'm not going to lie to you. Our agreements take us time but at the end of the day, we come out with Eight Cents (\$.08) for the people of Guam and Eleven Cents (\$.11) to shift at night to cut down. We're going to shut down a lot of power plants with this new power plant and what we're doing. We're going to bring the power bill down. That's going to come down. I appreciate DOE, they don't have this expertise and the people who are coming in who will want to bid, if you have... it's called economy of scale, the bigger, the better. John mentioned that we have a protest at OPA on the Eleven Cents (\$.11) for shifting. Guess why? Because one of the bidders is saying: "I'm using local preference" and I should get... the bottom line is so then we'll pay more for power? We'll make people of Guam pay more for power so we can have local preference? I... and the guy didn't even win... he's not even number two, he's number three, but he's still trying to argue. The number one bidder is the Eleven Cents (\$.11). He's higher than that. I don't know the number John but immaterial. He's higher but because of the local preference, he beats number two and now he's arguing: "Well number one can't do the job, so I should be considered". I'm saying number one is going to do the job or pay a huge penalty to GPA and the people of Guam because the people of Guam own GPA. So they are going to do the job. That's the hammer we have. That's what John brings to the table with all of his engineers. Okay? I... it's just that simple. You know, maybe what I can

offer you, is that as we go through this process, and John Benavente works with Jon Fernandez at DOE, that they would... they should be reporting to you. They should come back. When John puts the bid specs together, he should come back with Jon Fernandez and explain it to you and then when the bids go out and they come back and we evaluate them, after the evaluation, John Benavente and Jon Fernandez can come back and explain. Then you can say, okay, this is what mostly likely the savings will be and it'll be quantified. It will be quantified in paper. You can see the documents and then it goes to the PUC. If the PUC sees anything wrong, they're going to say "no, no, this should... and they'll set the price that DOE will pay for that renewable energy. Okay. It's really that simple and I don't want to belabor the point. We want clean energy for the school system. We also want to see if we can save them as much money as possible. Okay. Whether they leave lights on at night, that's immaterial to us. That's something that John will work on, you know, making sure... we all do that, even at GPA. We always say to people "shut off the light when you leave the room" and that's something that, you know, system wide we should all be doing. Simple things like that, but really this is, to me, the best way to accomplish this.

Vice Speaker Telen Cruz Nelson

Thank you Mr. Duenas. We're running a little bit over time so I'd like to thank GIAA for being here. I know the General Manager is a very punctual man, so just close up within five minutes and I think you have...

Superintendent Jon Fernandez

Yes. I just want to respond and I know, again. There's no way this is going to get done without DOE and GPA working together. I mean that's what we're here for. I mean, I'd like to agree with Mr. Duenas that they definitely have the technical expertise and experience to be more familiar with the specifications, with the vendors... you know, with running technical procurement... you know, issuing technical procurement packages such as this. I cede that. I don't... we don't claim to have that but we do... what we do have at the Department of Education is a desire to ensure that we do whatever is possible to generate savings so that we can invest them back into the education system for other purposes. So we are spending Twelve, Thirteen Million Dollars (\$12,000,000.00, \$13,000,000.00) on power each year. This notion that we can go and explore, I mean, this really was an issue about piloting not taking over... taking ourselves completely off the grid and I appreciate GPA coming and being here to tout the expertise and I cede that and I want to work in good partnership but I think at the end of the day what we're both looking for and I hope we're all looking for is just assurance. Can we... if we're going to, you know, if they want to take over the procurement, all I would ask for is let's get some timelines in place, let's come to an agreement on the scope of what we would... this project so we can just move forward and just make it happen. We're happy to come back and report it. We're happy to talk about progress. We're happy to negotiate what makes sense for DOE and GPA in the course of this, but maybe if that's the case and there is a desire to have GPA, you know, working together with DOE, the real key thing for me is, outcome. So it's time frame, understanding what schools we can start to pilot and then putting a plan together and executing. Other than that, you know, if we don't have that then

there's... you might as well give GDOE the procurement authority and let us take a shot at it. But we're happy to work with them and, you know, have them in the lead. It's just a matter of can we agree on some measureable progress over the near future... you know, the near future.

Vice Speaker Telenia Cruz Nelson

Thank you Mr. Superintendent. Simon did you have something to say. Alright.

Mr. Simon Sanchez, Commissioner, Consolidated Commission on Utilities

Thank you senators for giving us the opportunity. Quick comments. The... at the last CCU meeting this discussion of no one wants to unfairly shift the cost of the grid from one customer to any other customer and it's really a balancing act. I think John can update me on the record, but he showed the CCU, if we don't address the NEM piece which is hotly debated but it is properly resolved by the PUC, it could be a shift of Five to Six Million Dollars (\$5,000,000.00 to \$6,000,000.00) to the other rate payers if... depending on how far we take DOE in this process. The key think I just want to leave with you as an impression. The grid really comes into play with solar when you have five or six days of rain in a row. Right? When solar can't make energy. Then everyone that has solar, needs that grid to get energy from us in order to keep their lights on. So the grid costs people... costs Guam. Right now, non NEM customers pay for the grid and NEM customers in our view don't pay for the grid. Without getting into that argument, but the best example for you to visualize is just when you have heavy rains for three, four, five days and that solar system on top of school isn't making any power, they're going to have to get that power from GPA through the grid. So the concern is, can they help pay for that benefit that they receive and John is rightfully putting together a strategy that says, let's work together and we'll work it through the CCU and the PUC. Of course, those are all public processes as well so providers can jump in and voice their concerns... their opinion. So I just wanted to put that in perspective that the grid really steps in with solar when you have heaving rain, as you know, we have heavy rain. The other thing that I want to stress, and I think John alluded to it, in 2008 we passed a law with Speaker Ben to be at 25% by 2035. We're going to be there by in 2023. We did it in phases... none of us promised that and none of us really knew in 2008 that we could do it that fast but technology allowed us to do it. But we had a phase one, a phase two, a phase three, and a phase four. John has presented to you the heavy hitters; which schools use the most, which schools use the least. I'll use an extreme example, I'm not sure the first school we do it would be at Malesso Elementary. I'd rather look at the big schools. Right? So we would propose... in our discussions we've talked about in the same way GPA phased in this migration, we would phase... we would propose that we phase in this migration with Jon and his schools. To really, you know, get the biggest bang for the buck sooner rather than later. To get those savings everyone in this room wants to get. So when we talk about, and I appreciate Senator Ridgell you know, well how much will you save this... when. I think it'll start... you'll save a little bit in the beginning and then you'll start to save more and more as we add more and more schools with solar but until Jeff and Bill Hagen and that industry can bid, we're all speculating as to what the savings will be and you need that number every year for the budget but let's let the process go through. They're struggle is the tax credits are going away. Some of the numbers you hear about now may not be the same numbers you hear about when they bid because, the tax credit is going away. So if we do it in phases and we work with Jon and DOE's team, we...

I'm very confident we can do this. We're the only group at this table that's ever bought a PPA for solar. Trust us. We know how to do it. We're getting great prices. We're getting great prices with storage and we're beating Speaker Ben's deadline by fourteen years. That's the kind of success we think we... our expertise can bring to your goal and Jon's goal of reducing the power bill at DOE. We're happy to help. Frankly, I've been cringing since 2013, seeing all these bills pass that excluded GPA. So...

Vice Speaker Telen Cruz Nelson

Thank you Simon

Mr. Simon Sanchez

... we'd love to participate if you'll allow it.

Vice Speaker Telen Cruz Nelson

Just one question really quick. Mr. Benavente, if GPA was to procure for DOE, what would be the cost for DOE having to pay GPA for this level of expertise?

Mr. John Benavente

For the service?

Vice Speaker Telen Cruz Nelson

Correct.

Mr. John Benavente

If the procurement is done through GPA, then it really there's no cost to the Guam DOE because now... if the procurement is outside of that where, okay, consultation... minor consultation and stuff, of course, but not the extent of the... of what I'm see...

Vice Speaker Telen Cruz Nelson

So we're not going to see a Thirty Thousand Dollars (\$30,000.00) bill for GPA to DOE?

Mr. John Benavente

Not if it goes through GPA. If we are the ones that procure it, we're using our resources there's no real additional costs.

Vice Speaker Telen Cruz Nelson

Okay. Alright. Thank you everyone for coming here today. There will be some discussions of how we can make this work. We'd like to see GPA and GDOE work in the best interest of the whole island of Guam, right, and we don't want to have this... other rate payers pay for this kind of transition. So, we will still move forward with the bill. We'll just tweak it a little bit to make sure that both parties are in agreement and then the people are not affected. I'd like to thank everyone for coming today. That exhaust our items...

Mrs. Maria Gutierrez

Vice Speaker can I just say something?

Vice Speaker Telen Cruz Nelson

...for the public hearing. Miss... Madam Chair I'm sorry we have to... we are short of time. It is now 12:11. This is adjourned. Thank you, Madam Chair.

The public hearing was adjourned at 12:11 p.m.

III. FINDINGS AND RECOMMENDATIONS

The Guam Power Authority would like to conduct the procurement for GDOE where the Public Utilities Commission “eventually sets a rate based on that procurement for the Guam DOE” (Benavente p. 9)

The Guam Department of Education would like to have “timelines in place” and to “come to an agreement on the scope of what we would (do)” (Fernandez p. 24). However, the GDOE also stated, “...If we don't have that then... you might as well give GDOE the procurement authority and let us take a shot at it. But we're happy to work with them and... have them in the lead. It's just a matter of can we agree on some measurable progress over the near future” (Fernandez p. 25).

The Committee on Education, Air Transportation, and Statistics, Research, and Planning hereby reports on the Roundtable Hearing of Bill No. 196-35 (LS) introduced by Telen Cruz Nelson/Senator Joe S. San Agustin, AN ACT TO AMEND §§ 7116(a) AND (d) OF CHAPTER 7, DIVISION 2, TITLE 17 AND §§ 5008.2(a), (b)(1), and (b)(2), CHAPTER 5, TITLE 5 OF THE GUAM CODE ANNOTATED, RELATIVE TO AUTHORIZING THE GUAM DEPARTMENT OF EDUCATION TO ENTER INTO POWER PURCHASE AGREEMENTS TO PURCHASE SOLAR ENERGY FROM QUALIFIED PROVIDER(S).