

# Overcoming Challenges Towards Our Goals

2016 Annual Report







# Our Mission

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Provide reliable electrical services as economically, efficiently and safely as possible in a courteous and professional manner to ratepayers of Guam.





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“A great organization is reflective of not how well you operate all of the time . . . It is rather how well you recover from a disaster that really shows how good that organization really is.”

- Joseph “Joey” T. Duenas, CCU Chairman







# It's Been Quite a Ride

**2016 has been quite a ride, filled with many twists and turns.**

2016 has been quite a ride, filled with many twists and turns. This year marks a significant event in the history of this public utility to better serve its customers through energy solutions.

With the aftermath of the Cabras III & IV incident in August, GPA remained committed to meeting daily demand for power by aggressively engaging several initiatives. These initiative positioned the Authority to not only recover, but to better position itself to meet future generation needs as well as launching an energy initiative to help customers reduce their power bills.

The Authority managed to work through overwhelming odds made possible through the efforts of its employees, support from our island community and leveraging partnerships with different stakeholders to engage a future of energy resources that include more renewable technologies, diversification of existing energy resources and the support or creations of new job opportunities and programs aimed at keeping more of our local monies circulating on Guam.

With these proactive efforts, the commitment and dedication of its staff, and support from the island community, GPA aims to continue its journey in providing energy solutions to its customers.





## OFFICE OF THE GOVERNOR OF GUAM

### A Message from the Governor and the Lt. Governor of Guam



Bueñas yan Háfa Adai! The Guam Power Authority and its employees continue to work hard on delivering reliable service to its ratepayers and the people of Guam. This past year has seen much improvement on work to get more generating units online to provide power that is essential to our island's quality of life.

**Additionally, GPA's plans for more renewable power in the form of photovoltaics will bring more jobs and expand this burgeoning industry on Guam.**



This work included bringing in an international power company, Agrekkco, to add another 40 megawatts of power to the Island Wide Power System. Other work included engaging large power companies to go offline during peak hours to reduce their load on the power grid thereby sparing residential customers from forced power outages. Additionally, GPA's plans for more renewable power in the form of photovoltaics will bring more jobs and expand this burgeoning industry on Guam. GPA is seeking to add to its power grid new energy storage systems to help with increase power demands during the evening period when most residents are home after a long day at work – this is where most of our island's need for power is greatest.

As GPA moves into new energy technologies, this Administration will also do its part to curb our local Government's demand for electricity through the use of energy efficient technology at our facilities, supporting infrastructure for electric vehicles in our fleets and energy conservation throughout the Agencies.

We congratulate the employees and management at the Guam Power Authority for the hard work they do to bring reliable power to our island and commend the Consolidated Commission on Utilities for their foresight in providing a positive vision for our publicly owned electric utility.

  
Eddie Baza Calvo  
Governor

  
Ray Tenorio  
Lieutenant Governor

# A Message from the Chairman of the Consolidated Commission on Utilities



**Francis E. Santos**  
Vice Chairman of the Board



**J. George Bamba**  
Chairman of IT & Cyber Security  
Committee, Secretary



**Simon A. Sanchez II**  
Commissioner



**Joseph T. Duenas** - Chairman



**Pedro S.N. Guerrero**  
Treasurer & Chairman  
of the Audit Committee



**Graham Botha**  
Legal Counsel GPA

Buenas Yan Hafa Adai,

The enactment of Public Law 26-76 which created the Consolidate Commission on Utilities (CCU) as the policy making body for the Guam Power Authority (GPA) and the Guam Waterworks Authority (GWA) changed both GPA & GWA into municipal utilities in charge of their finances and focused on their core missions of delivering services as economically, efficiently and safely as possible to island ratepayers.

**It is my sincere belief that my fellow Commissioners are intelligent, well educated and dedicated people serving our constituents and truly representative of the People who elected us.**

The Consolidated Commission on Utilities services two constituents. The first and main constituent are the ratepayers of the Guam Power Authority & the Guam Waterworks Authority, whom are the true owners of these utilities. The CCU Commissioners work together to balance the needs of ratepayers for quality utility services and their ability to pay for these services. This is the main challenge for the CCU. There are no simple or quick and easy solutions. The success of GPA and GWA will take a business model that is founded on the principle of continually building ratepayer's confidence in the integrity of both utilities in its ability to deliver reliable services, while keeping rates as low as possible. Building ratepayer confidence in the integrity of the utilities means that that the CCU must ensure that all its ratepayers (residents, businesses, Federal & the local government) know and believe that we will treat them all equally. The ratepayers must know that they will be accurately & timely billed for services and they will all be expected to pay in a timely manner, so that no ratepayer will become so delinquent as to cause harm to the utilities and therefore harm their fellow ratepayers.

Our second constituent are the employees of GPA and GWA. These dedicated hardworking employees deserve a good and safe working environment. They need to be assured that they will have the ability to provide for their families. These employees are the most important asset of our utilities. They must be motivated to be conscientious, hardworking and frugal with ratepayer's funds.

It is my sincere belief that my fellow Commissioners are intelligent, well educated and dedicated people serving our constituents and truly representative of the People who elected us.

Put Respetu,

**Joseph "Joey" T. Duenas**



# A Message from the General Manager

The Guam Power Authority is on a positive track in its recovery from the August 1, 2015 incident that removed about 80 megawatts of base load generation capacity from our Island Wide Power System (IWPS).

Through focus, teamwork and support from our Consolidated Commission on Utilities, Public Utilities Commission, GPA has worked hard to minimize forced outages to our customers. Our work centered on courses of action that delivered immediate results from engaging stakeholder partnerships to the procurement of fast track generation. The first action centered on resurrecting partnerships with large power customers through the interruptible load program; this allowed for some relief on load demands during peak hours.

This coupled with ongoing efforts to revitalize repairs on diesel and combustion turbine units, overhaul base load generators and bring online 40 megawatts (MW) of “drop in” units from power provider Aggreko to significantly increased generation availability to the IWPS. As a result, GPA was able to reduce generation forced outages to less than 1 percent; presently, that number is even lower.

**This past year has seen much effort in meeting the existing and future generation needs of the Authority and it's customers.**

Today, GPA continues to embark on future generation planning & procurement of 180 MW of combined cycle units with a target commissioning date of 2021 and the procurement of more renewables including 60MW of renewable energy and energy storage system in the next year. The renewable energy projects will provide a hedge against rising oil prices as well as address intermittency issues related to renewable technologies.

Shifting gears; GPA is also diligently working to reduce operating costs. Efforts are mobilized to reduced spinning reserves to help optimize daily energy production costs. This is coupled with a delicate balance of scheduling preventive maintenance on generating units to meet dispatching criteria ideal for costs savings. Include in this planning is the cross training of existing personnel while contracting out infrequent maintenance to minimize manpower requirements.



**John M. Benavente, P.E.**

General Manager

This past year has seen much effort in meeting the existing and future generation needs of the Authority and its customers. In the upcoming fiscal year, more attention will be on reducing Transmission & Distribution outages to help protect revenues and reduced force outages. These are factors that GPA can address within our present resources to meet customer's expectations of reliable and quality power at affordable rates.

Thank you to our Consolidated Commission on Utilities, Public Utilities Commission, Government and private sector, Department of the Navy and other community stakeholders. Thank you to the management, staff and employees of GPA for all their hard work during the recovery effort and last, but not least to our ratepayers for their patience and understanding during these difficult times.

Si Yu'us Ma'ase,

A handwritten signature in white ink, appearing to read "John Benavente", written over a dark blue background.



# Spinning Forward, Gaining Ground.

**We never stop spinning our wheels.** We're always thinking up ways to improve how to better serve our customers and the local community. Our staff of over 470 employees is specially trained to provide first-rate service to the 47,000 customers we serve. And we never tire doing just that. We are committed to continue this cyclical momentum in our close-knit community where the customers we serve are also our family members, friends and neighbors.

The Authority has 429 megawatts of generation capacity, 663 miles of transmission and distribution lines and 29 substations. As part of an "Oil to Jobs" initiative, the Authority invested in a solar farm and wind turbine with a combined generation capacity of 25 megawatts (MW). GPA continues to commit ourselves to green energy solutions as stewards of our island environment.

## Reach Out to More Customers

A partnership to contract with a marketing firm to further develop relationships with trade allies (vendors) to market qualified appliances as sales associates on energy efficiency, technology changes and saving calculations.

The same efforts are in the planning stages for GPA customer service representatives and engineers as customer advocates to better market the program. Efforts are also ongoing to expand the program to include more technologies for residential and commercial customers to reach program goals.



**34.5 KV Breaker Upgrades**



**Harmon – Yigo Line Reconductoring**

A photograph of a person riding a mountain bike on a dirt trail. The rider is wearing a white helmet and an orange shirt. The trail is reddish-brown and leads into a hilly landscape under a clear blue sky. In the foreground, the large, knobby tire of another bike is visible on the left. A semi-transparent grey text box is positioned in the upper right area of the image.

**Guam Power Authority is a Public Corporation and enterprise fund of the Government of Guam. It provides electric energy and other energy service to almost 47,000 residential, commercial and industrial customers of Guam.**



# Going the distance towards excellence

## GPA Project Management Engineering Division Accomplishments

- Dededo Indoor Substation
- Dandan Substation
- Harmon - Yigo Line Reconductoring
- Cabras T1 Transformer
- Aggreko Temporary Power Service
- 34.5 KV Breaker Upgrades
- Cabras Compound Perimeter Fence Upgrade and Repairs
- Yigo CT and Substation Typhoon Dolphin Repairs
- Orote Power Plant Smoke Stack Repairs
- GWA Domestic Water Supply to Cabras Power Plant Facilities
- Yigo CT Turbine Replacement and Auxillary Equipment Repairs
- Cabras 3&4 Roof Demolition
- Cabras Compound Employee and Visitor Parking Lot





# 2016 Division Reports

## Wind Turbine Pilot Project

The Wind Turbine Pilot Project is Guam's first utility wind project. It will assist GPA in determining the viability of larger scale wind turbine projects and open opportunities to work with local educational institutions in developing technical trades to support such technology on Guam and in the region. It will also help GPA gain experience in the construction management, operation, maintenance and grid interconnection of wind turbines and comply with Guam Public Law 29-62, which promotes the development of renewable energy. The wind turbine site will also act as an educational tool providing hands-on electrical work, build local expertise, and possibly expand Guam's economic opportunities. There has been training done for the Guam Community College instructors and enabling the project to serve as a "field classroom" for future curriculum to support technician trades in wind energy. Wind power mitigates the impacts of fossil fuel price volatility, produces no carbon dioxide or air pollutant emissions and requires no water or transportation of fuel. This wind turbine is anticipated to produce about 482 MWh of annual wind energy reducing CO2 emissions by roughly 578,400 pounds per year, contributing to the global fight to reduce greenhouse gas emissions and prevent climate change. The project involved the design and construction of a 275 kW wind turbine in Cotal, Guam. The turbine is interconnected to GPA's electrical distribution grid and has a tilting system to allow for the lowering and securing of the turbine in the event of cyclone conditions. There are tours that been conducted for several agencies including the University of Guam and a few island schools.



## NRG

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On October 30, 2015 NRG commissioned the 25.65 MW solar photovoltaic facility located in Malojloj, in the village of Inarajan. This renewable facility is Guam's first utility scale renewable system. NRG purchase Quantum Guam Power which owned the Power purchase Agreement for 20MW and 5.65MW solar photovoltaic renewable resource systems awarded through a 2011 multi-step bid each for 25 year terms. In addition to the photovoltaic renewable system installations, the project included upgrade of the Talofofo Substation and the construction and transfer of the Dandan Substation and approximately 7 miles of underground 34.5KV transmission line to GPA. Today the facility is in its second contract year and has produced over 69,297 MWH.

## Demand Side Management

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GPA has been working with the Public Utilities Commission (PUC) on resurrecting its Demand Side Management (DSM) initiative since June of 2016. The Authority has rebranded the DSM initiative as the Guam Energy Sense Program and formally launched the initiative in December. Guam Energy Sense provided direct cash rebates for the purchase of qualified appliances (aircons, washers & dryers) through participating vendors. The goal of the program was to engage residential customers to purchase energy efficient appliance wherein energy consumption is reduced thus saving customers money and reducing the demand for power over the grid. The program has since gained momentum with thousands of residential customers participating in the program and more expected to sign up for Guam Energy Sense in the years to come as appliances are changed out.

## Integrated Resource Plan

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The Integrated Resource Plan consists of: Generation Expansion Planning including Conventional Generation, Renewable Energy, Demand-Side Management, Energy Storage, Interruptible/Flexible Loads, Fuel Diversity, Reserve Margin Planning, and Mutual Support Agreements (DOD). This project also includes Long Range Transmission Planning, Long-Range Distribution Planning, and Grid Operations & System Protection. The IRP is the cornerstone for GPA's Strategic Plan and Capital Plan. GPA is executing on its IRP. The projects include: a DSM Program, Phase I ESS, Phase II and III Renewable Acquisition, 180 MW of Flexible Conventional Generation, Smart Grid post-grant projects such as grid analytics, and more.

## Energy Storage System Phase I

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GPA plans to enter into a contract with LG CNS, an Engineer/Procure/Construct (EPC) contractor, for the design, procurement, installation and interconnection to the GPA power system of a 24 MW Energy Storage System (ESS) at the GPA Agana Substation compound. This project will help alleviate system frequency issues including those resulting from the intermittency of renewable generation throughout the island. The contractor shall design, procure equipment and materials, obtain required permitting, construct, install, interconnect, test and commission the ESS. GPA will also enter into a 25-year Operations and Maintenance (O&M) Contract with the contractor. The project requirements include compliance with all applicable local and federal laws as well as applicable local and national standards for the services rendered. The ESS will be commissioned within 12 months after the contract is awarded and will deliver energy directly to the existing GPA transmission system.

## Fuel Logistics

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The Fuel Supply Management is tasked to undertake the management of GPA's Fuel Supply Operations, Contracts and Agreements in Fuel Supply Contracts, Fuel Handling Contracts, and Monthly Reports.

## Electric Grid Analysis System Project

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For the Electric Grid Analysis System, GPA is currently implementing Landis+Gyr Advanced Grid Analytics. This system will provide GPA with voltage analysis/alerts of low and high voltages utilizing AMI data. GPA personnel will be able to view areas graphically where voltages may be an issue and become proactive in correcting these problems. The system will also provide analysis Distribution transformers loading based on AMI meter data and transformers ratings to properly size existing transformers to accommodate existing load. For planning purpose, AGA will provide the analysis for Distributed Energy Resources and how it will affect the Grid in addition to the analysis of how much DER a feeder or Substation can handle.



## Outage Management System

GPA's outage management system is Milsoft's Dispatch. This system will be integrated with GPA's Advance Meter Infrastructure (AMI), Customer Information System (CIS), and Geographic Information System (GIS). This system will enable rapid, efficient management of outages on an electrical distribution system. It will process information from a variety of sources such as customers, utility crews, SCADA, AMI, IVR, AVL, CIS, GIS, and weather monitors in order to locate the cause of the outage and identify affected customers. It will enable GPA to better manage any level of system outage, from a single transformer outage to major disasters where a significant portion of your customers are without power.

## Provision of Hotline Phones via GPA network at Aggreko

With the teamwork from the GPA's IT and other departments, the phone line was installed at the Yigo Aggreko Power Plant via power over ethernet and wireless communications (ABB/Tropos) using GPA internal phone system (Shoretel). Being internal to GPA means there will be no additional monthly cost. This is just a start. GPA plans to move remote site phones to the GPA's internal phone system to save costs throughout the year.

## Command Center Upgrade

GPA's AMI (Advanced Meter Infrastructure) system software is Landis+Gyr's Command Center. With the assistance from IT, it is being upgraded from version 6.0 to 6.5. With this upgrade, additional capabilities will be added which includes: remote programming of meters, ability to use the newer meters that can provide one minute load profile data, and more display information for each meter including program id.

## Tropos/ABB Router Expansion and O&M

The Tropos/ABB Expansion will allow Guam Power Authority (GPA) to achieve an island-wide Smart Grid Communications Network. The project consists of installing Tropos Routers at new locations and replacing damage routers at existing locations. SPORD is currently collaborating with Customer Service Section and Transmission and Distribution Section to reach a date of completion of July 1st, 2017. The three (3) phases of the project are installation, replacement, and verification. Customer Service Section will be handling the new installations. Both divisions will work on the replacements of damage ABB/Tropos Routers. The final phase will be testing and troubleshooting. Once the project is completed, the Smart Grid Network will be ready for the implementation of SCADA and the Mobile Workforce Management System.

## Combustion Turbine – Performance Management Contract (PMC)

In the 4th Quarter of 2015, GPA issued the solicitation for a performance management contract for its units located in the northern part of Guam. The purpose of the CT PMC contract was to provide engineering expertise and management, operations and maintenance of the combustion turbine plants, to GPA to aggressively address issues with its Macheche and Yigo units. Additionally, to increase GPA's reserve capacity, the Rehabilitation of the Dededo CT Plant was included in the contract as a top-priority, critical deliverable. Once the units are in stable operating condition, the PMC will also ensure proper, reliable, efficient and effective operation and maintenance of the units. This contract was awarded to TEMES, Guam, Inc. , which also manages GPA's Steam Turbine units under a similar (PMC) contract. To date, major turbine work has been completed at the Macheche and Yigo units, and both are cleared for operation and dispatched daily to support MW demand particularly in the day time. The Dededo CT Rehabilitation is nearing completion.

## Supervisory Control and Data Acquisition / Energy Management System (SCADA)

GPA will be implementing a new SCADA/EMS which GPA will utilize to primarily monitor and control its electric transmission grid. The new SCADA/EMS will replace GPA's Siemens Power TG Energy Management System, which has served as GPA's SCADA/EMS for more than ten years. The new SCADA/EMS will be installed, commissioned, and operating in parallel with GPA's existing system. The existing system will operate as backup until a fully functioning Disaster Recovery system is completed and commissioned. With the integration of the new SCADA/EMS, GPA hopes to improve power system economy, electric power quality, and reliability. The system will be able to provide business intelligence applications such as Report Designer, Data Analytics, Asset Management, Event Log, and Alarm & Notification will also have the capability of delivering advanced applications such as Generation Dispatch Control and Transmission Security Management.



# GPA continues to face major challenges:

- USEPA compliance
- 180 MW dual-fired flexible generation by 2021
- Integrating non-firm renewable energy sources
- Incentivizing energy efficiency (DSM)
- Transformation and modernization
- Building additional smart grid capabilities
- Maintaining GPA competitive advantage
- Service affordability and rightsizing
- Achieving operational excellence
- Transformation and modernization
- Maintaining investment grade rating
- Satisfying customers

USEPA has implemented new regulations affecting several GPA Generation Units. GPA has submitted a compliance plan to USEPA wherein GPA transitions from residual fuel oil-burning generation to dual-fuel generations beginning with ultralow sulfur diesel (ULSD) and adding natural gas. When fuel oil prices rise significantly, GPA will invest in a natural gas infrastructure to lower costs.

## GPA has provided a compliance timeline including:

- Tanguisson Power Plant retirement
- Establishing LNG infrastructure
- 180MW of new baseload generation by 2021
- Generation Retrofits for dual-fired operation
- Integrating over 120MW renewable energy systems
- Retiring Cabras 1&2 and potentially Cabras 3

The Guam PUC has approved the hire of an EPCM consultant to assist GPA to develop a bid for 180 MW of New Generation. GPA has initiated procurement of land for the new power plant. GPA expects an August 24, 2017 release of the new power plant multistep bid.

Since 2014, net metering (NEM) cumulative capacity has doubled each year to about 16 MW. GPA is moving forward with Phase II and Renewable Energy Acquisition projects. GPA has awarded 40 MW of Battery Energy Storage Systems capable of contingency/spinning reserve or frequency regulation control modes improving grid stability. GPA has kicked off a Renewable Integration Study with the United States Navy to support integrating more renewable energy and improve grid stability/power quality. GPA must ameliorate existing inherent weaknesses of its grid.

GPA has launched three DSM residential programs. The PUC has reviewed GPA's recommendation for 18 new commercial, industrial, and residential programs. PUC has requested that GPA prioritize five new programs for immediate roll-out including an Energy Audit Program for residential, commercial, and industrial customers. Additionally, GPA purchased two Nissan Leaf electric vehicles with Level II Chargers. GPA seeks participation of other Guam automobile dealerships to provide EV's and chargers citing GPA's commitment to change out its light-duty vehicle fleet with electric vehicles.

GPA must leverage information and intelligent business systems to modernize aging bulk power infrastructure and achieve operational excellence. In FY 2017, GPA initiated the following projects: Grid Analytics, Mobile Work force Management, SCADA, Fiber and Wireless Communication Network Expansion, and Performance Management Dashboards.

GPA's competitive advantage is its power system infrastructure. GPA must maintain control over its distribution and transmission system. GPA must plan and execute improvements to this infrastructure as well as adopt a least-cost plan for upgrading and replacing legacy equipment. Additionally, GPA is rightsizing its operations to improve operational excellence and affordability.


## Excellent opportunities for rightsizing exist:

- Leveraging intelligent business systems such as smart grid
- Consolidating common systems and functions with GWA
- Converging operations and information technology
- Creating new uses for electric energy
- Increasing automation and embedded intelligence within power equipment and control systems
- Replacing aging assets with more efficient, less resource intensive options

GPA must maintain access to capital markets to meet the challenges described above. Customers expect higher levels of electric service quality and engagement. GPA must find better ways to engage, inform, communicate, and please customers. Customers now increasingly engage with service organizations by using technology and social media. The CCU has tasked GPA with exceeding customers' expectations. We will deliver.





A photograph of three cyclists on a red dirt trail. The cyclist on the left is wearing a blue and white jersey and a blue helmet, standing with their back to the camera. The cyclist in the middle is wearing a black and yellow jersey and a red helmet, also with their back to the camera. The cyclist on the right is wearing an orange jersey and a white helmet, pointing towards the horizon. They are standing on a red dirt trail that winds through a hilly landscape with green vegetation and a clear blue sky.

Not enough to move, but to move forward to reach the goals set forth. But how we will get to our destination is all in our strategy and perseverance to keep moving forward, no matter what lies on our path. And it is only our plan of movement, our clear visions of the finish line, the light at the end of the road, reaching our goals - it's all part of our forward movement to help us achieve and arrive to our destination.



# Internal Audit Office (IAO) - Revenue Protection Section

## FY 2016 Internal Audit Financial Impact Overview

The IAO conducted and completed 12 analyses, investigations, and evaluations in FY 2016: October 1, 2015 - September 30, 2016. The reports made 18 recommendations to improve GPA's operation, performance, and efficiency. The reports and activities of the IAO identified more than \$11.3 million of financial impact.

### FY 2016 Financial Impact Identified by Internal Audit Office

Potential Savings	\$5,467,619
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Questioned Costs	\$4,238,028
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Savings Realized	\$1,168,645
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Subtotal from Audits and Evaluations:	\$10,874,292
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Revenues Collected Tampering Cases	\$247,706
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Potential Revenues Assessed from Confirmed Tampering Cases	\$214,265
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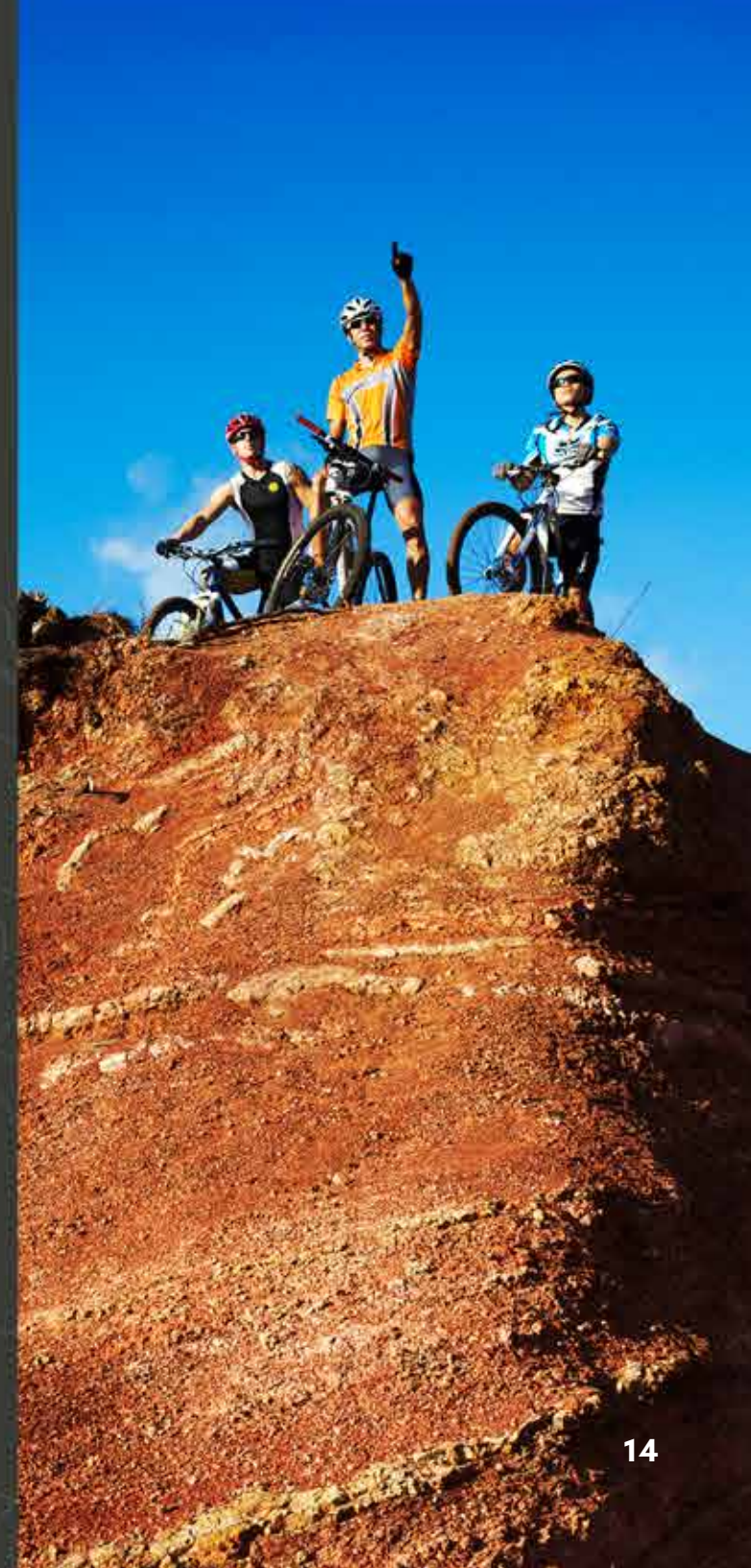
Subtotal from Revenue Protection (Tampering Cases):	\$461,971
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**TOTAL**  
Financial Impact  
Identified  
FY2016:  
**\$11,336,263**

Revenue Protection Services (RPS) Unauthorized Connection Investigations. In FY 2016, the RPS investigated 405 reported and/or potential thefts of utilities cases of which 45 were confirmed cases. The backbill and penalties from the cases totaled \$214,265. Revenues collected from confirmed tampering cases was \$247,706 in FY 2016. Since 2003, revenues collected from confirmed tampering cases was \$3M.

### FY 2016 Accomplishments and Ongoing Initiatives:

- \$1M Overtime - Its Lowest in the last 10 Years
- Monitoring and Reduction of Take home Vehicles Continue to Decrease Fuel Fleet Cost - From \$456K in FY 2013 down to \$150K in FY 2016
- Transmission & Distribution (T&D) Inventory Stock Level Reduced by \$2M











# Finding Balance in a Changing Environment

## Financials

**GUAM POWER AUTHORITY  
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

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**FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND  
INDEPENDENT AUDITOR'S REPORT**

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**YEARS ENDED SEPTEMBER 30, 2016 AND 2015**



Deloitte & Touche LLP  
361 South Marine Corps Drive  
Tamuning, GU 96913  
USA

Tel: +1 (671) 646-3884 Fax:  
+1 (671) 649-4265

[www.deloitte.com](http://www.deloitte.com)

## **INDEPENDENT AUDITORS' REPORT**

Commissioners  
Consolidated Commission on Utilities:

### **Report on Financial Statements**

We have audited the accompanying financial statements of Guam Power Authority (GPA), a component unit of the Government of Guam, which comprise the statements of net position as of September 30, 2016 and 2015, and the related statements of revenues, expenses and changes in net position and of cash flows for the years then ended, and the related notes to the financial statements.

### **Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditors' Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.





## **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Guam Power Authority as of September 30, 2016 and 2015, and the changes in its net position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## **Emphasis of a Matter**

As discussed in Note 10 to the financial statements, on August 31, 2015, GPA suffered major damage to two of its generators due to an explosion at the Cabras 3 and 4 power plants. During the year ended September 30, 2016, the Cabras 3 and 4 generators were written down to a zero value. GPA recorded insurance recoveries and incurred losses and estimated repair costs at September 30, 2016 pending final determination of the ultimate amount of losses and damages and related insurance recoveries. Ultimate losses and damages and related insurance recoveries may be materially different than estimated. Our opinion is not modified with respect to this matter.

## **Other Matters**

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 1 through 10 as well as the Schedule of Proportional Share of the Net Pension Liability on page 48, and the Schedule of Pension Contributions on page 49 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management has omitted the Schedule of Funding Progress and Actuarial Accrued Liability – Post Employment Benefits Other Than Pension that accounting principles generally accepted in the United States of America require to be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the financial statements in an appropriate operational, economic or historical context. Our opinion on the financial statements is not affected by this missing information.

### *Other Financial Information*

Our audits were conducted for the purpose of forming an opinion on the financial statements as a whole. The Schedules of Sales of Electricity, Operating and Maintenance Expenses and Salaries and Wages on pages 50 through 53 are presented for purposes of additional analysis and are not a required part of the financial statements.



## **Other Matters, Continued**

### *Other Financial Information, Continued*

The Schedules of Sales of Electricity, Operating and Maintenance Expenses and Salaries and Wages are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedules of Sales of Electricity, Operating and Maintenance Expenses and Salaries and Wages are fairly stated, in all material respects, in relation to the financial statements as a whole.

The Schedule of Employees by Department on page 54 has not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

## **Other Reporting Required by Government Auditing Standards**

In accordance with Government Auditing Standards, we have also issued our report dated April 6, 2017 on our consideration of GPA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering GPA's internal control over financial reporting and compliance.

A handwritten signature in cursive script that reads "Deloitte + Touche LLP".

April 6, 2017



**GUAM POWER AUTHORITY  
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Management's Discussion and Analysis  
Years Ended September 30, 2016 and 2015

This Management's Discussion and Analysis should be read in conjunction with the Guam Power Authority's September 30, 2016 audited financial statements and accompanying notes.

**OVERVIEW**

The Guam Power Authority (GPA or the Authority) was created in 1968 as a public corporation and autonomous instrumentality of the Government of Guam. Since that time, the Authority has maintained and expanded the island wide power system on Guam. The Authority has 420 megawatts (MW) of generation capacity, 663 miles of transmission and distribution lines, 29 substations, \$886 million in assets, and \$308 million in annual revenues. GPA currently serves approximately 50,000 customers with the U.S. Navy being the largest representing about 17% of revenues.

In 2002, the Consolidated Commission on Utilities (CCU) was established as the board of directors for both the Guam Power Authority and the Guam Waterworks Authority. The CCU is made up of five elected members and is vested with the same powers exercised by the previous board of directors. In addition, it retains contracting authority, establishes policies and controls over the selection of the top management of the Authority. GPA also continued its existence as a public corporation.

The Authority is regulated by the Guam Public Utilities Commission (PUC) – a rate setting body made up of Commissioners appointed by the Governor of Guam. The PUC has established rules of operation that are similar to those of other jurisdictions within the United States. The PUC has broad regulatory authority over GPA including approval of any contracts that might have an impact on GPA's rates.

**GPA'S STRATEGY**

GPA is committed to providing outstanding energy solutions to our island community by focusing on capital discipline and operational excellence. Key components of GPA's strategy include:

- Achieve Superior Customer Service – GPA is continuously reaching for ways to better serve our customers through accountability, efficiency and reliability.
- Optimize Energy Production Cost – Focus on driving down cost and on improved productivity.
- Achieve Energy Diversification – GPA implemented an Integrated Resource Plan which includes renewable energy resources like solar and wind power generating 25 megawatts. More renewable energy is in the works.
- Become Financially Sound and Stable – Improve credit rating and debt service coverage.

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**Promote Energy Innovation**

GPA successfully completed the smart grid project. The project included installing the smart meters for all customers, substation automation, AMI technology and high broadband communication. The smart meters give customers greater control over their energy use and costs by allowing them to monitor their energy use online and determine which activities are contributing to the fluctuations in their bills.

In conjunction with the smart grid project, GPA successfully completed the new billing system, Customer Care and Billing from Oracle, in March 2015. The new software enabled GPA to improve billing processes, customer service and credit management. In addition, it enables GPA to integrate online bill payment where posting is real time. Future integrations are prepaid power services, payment kiosk, 24/7 pay-by-phone and e-billing.

Customers can visit the MyEnergy online site which enables customers to see their current usage and past history allowing them to take actions to mitigate their consumption before being charged in their bill. Information also helps customers decide on which energy efficient appliances to purchase.

Lastly, GPA redesigned the energy statement to provide immediate information on energy usage, a historical consumption graphic, a "Tips" section on energy services, rebate program or reminder notices and much more that will enable the consumers to manage their energy usage.

**Cabras 3 & 4 Fire**

On August 31, 2015, GPA experienced a major failure with two of its base load units - Cabras units 3 & 4 - when an explosion and fire occurred in the Cabras 4 engine. The power system lost 78.6 MW of base load capacity. GPA promptly coordinated efforts with large customers to establish 29 MW of interruptible load program, run smaller peaking units, and installed 40 MW of newly acquired temporary generation.

In addition, GPA aggressively implemented a rehabilitation plan for its Diesel engines and turbines. GPA has been working to bring back its decommissioned Dededo Combustion Turbine 1 & 2 of 40 MW which should be fully operational by April 2017.

Currently, GPA has about 420 MW of generation capacity without Cabras 3 & 4 and GPA also has 25 MW of renewable generation. In 2016, GPA's peak demand was 258 MW which GPA was able to meet despite the Cabras plant explosion.

Prior to the outage, Cabras 3 & 4 represented 19% of GPA's total system capacity of 420 MW, and GPA's reserve margin was approximately 39% with its peak at 258 MW. With its baseload out of service, the reserve margin ran thin. Low reserve margin caused GPA to shed some load during peak demand and unplanned repairs. Over the past year, GPA was able to bring various small generators online and increased capacity of some generators; thus, bringing its total capacity back to 420 MW of generation.

Due to GPA's service focus efforts, the average customers experienced less than 1% of the total period hours of load shedding.

GPA has in place a \$300 million insurance policy with Lloyd's of London that provided cash advances to mitigate the impact of the outages. Lastly, the savings on the operational costs from not running Cabras 3 and 4 were used to fund other generation projects.



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GPA filed its updated 2016 Integrated Resource Plan (IRP) to the CCU and the PUC. The IRP includes the plan to install 180 MW of dual-fired combined-cycle generation units, retirement of Cabras 1 & 2 generators, expansion of renewable energy portfolio, and installation of an energy storage. The 180 MW of combined cycle generation is planned to be commissioned on December 31, 2020. MEC 8 and 9 with 88 MW of generation is to be converted to burn Ultra Low Sulfur Diesel (ULSD) within one year after the commission of the new combined-cycle generation. The PUC has approved GPA's generation plan in October 2016 and GPA hired a consulting engineer to assist with the engineering and procurement.

GPA obtaining the combined-cycle generation has several benefits, such as better fuel efficiency, lower capital cost compared to installing emission control system to its existing generation plants, promotion of fuel diversity, and compliance with USEPA requirements.

**United States Environmental Protection Agency**

The United States Environmental Protection Agency (USEPA), under the Clean Air Act, established rules under National Emission Standard for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engine Maximum Achievable Control Technology (RICE MACT). These rules require stack emissions control and continuous monitoring systems (CPMS) equipment to be installed on all GPA peaking and base load diesel generators including its Cabras 3 and 4 and MEC 8 and 9 slow speed diesel units. The deadline for complying with the rules was May 3, 2013. GPA applied for and received an extension for complying with the rules with respect to its small diesel peaking units. The required stack emission equipment was installed within the extension period.

With regards to the slow speed diesel units, GPA engaged the assistance of USEPA along with U.S. Department of Justice (USDOJ) to negotiate a consent decree that will allow sufficient time to implement recommendations in its Integrated Resource Plan (IRP) which included new and efficient generation, renewable energy, and diversification of its fuel sources.

In 2016, the CCU and the PUC approved the procurement of combined combustion turbine plants which will put GPA in compliance with USEPA requirements. GPA believes that ongoing negotiations with USEPA and USDOJ will defer potential fines after the RICE MACT deadlines for the slow speed diesel units. If the consent decree is not reached, the maximum liability for GPA would not exceed \$169 million as of March 1, 2017.

**FINANCIAL HIGHLIGHTS**

The table below highlights the financial comparison from fiscal year 2014 through 2016. During fiscal year 2015, Guam Power Authority implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* and GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date – an amendment of GASB Statement No. 68*. These Statements are effective for fiscal years beginning after June 14, 2014. The adoption of GASB 68 and 71 is reflected in the 2014 to 2016 fiscal year financial statements. These Statements require a new approach to recording an employer's pension liability. This new approach reflects the underlying notion that pensions are a form of compensation provided to employees in exchange for the services they provide to a government over the employees' career. The implementation of these Statements had a material effect in the liabilities and on GPA's net position resulting in the restatement of fiscal year 2014.

During fiscal year 2016, Guam Power Authority implemented GASB Statement No. 72, *Fair Value Measurement and Application*, which addresses accounting and financial reporting issues related to fair value measurements; GASB Statement No. 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local*

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*Governments*, which eliminates two of the four categories of authoritative GAAP that exist under the existing hierarchy prescribed by Statement No. 55; and GASB Statement No. 79, *Certain External Investment Pools and Pool Participants*, which addresses certain external investment pools and their participants the accounting and financial reporting implications that result from changes in the regulatory provisions referenced by previous accounting and financial reporting standards.

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Assets:			
Current assets	\$ 381.0	\$ 323.7	\$ 384.5
Non-current investments	9.8	9.5	9.8
Other non-current assets	4.6	5.0	5.7
Utility plant	<u>467.5</u>	<u>541.4</u>	<u>552.7</u>
	862.9	879.6	952.7
Deferred outflows of resources	<u>22.8</u>	<u>23.9</u>	<u>23.2</u>
	\$ <u>885.7</u>	\$ <u>903.5</u>	\$ <u>975.9</u>
Liabilities:			
Current liabilities	\$ 91.9	\$ 79.6	\$ 110.1
Non-current liabilities	<u>713.1</u>	<u>728.3</u>	<u>770.3</u>
	805.0	807.9	880.4
Deferred inflows of resources	3.7	11.6	26.6
Net position:			
Net investment in capital assets	(49.2)	16.9	28.0
Restricted	4.6	21.2	20.1
Unrestricted	<u>121.6</u>	<u>46.0</u>	<u>20.8</u>
	<u>77.0</u>	<u>84.1</u>	<u>68.9</u>
	\$ <u>885.7</u>	\$ <u>903.6</u>	\$ <u>975.9</u>

The increase in the current assets in 2016 compared to 2015 is due to insurance recoveries and recovery receivable accrued in 2016 (Note 3). The decrease in current assets in 2015 compared to 2014 is due to the global reduction in fuel prices. The decrease is reflected in the financial statements as a decrease in accounts receivable and fuel inventory. The materials inventory declined in 2015 compared to 2014. GPA assisted CUC-Saipan to recover from Typhoon Soudelor which reduced the materials inventory.

The increase in current liabilities in 2016 compared to 2015 is due to accrual of estimated repair costs for Cabras 3 and 4 offset by the reduction in the principal bond payment in the current maturities of the long-term debt. The decline in the current liabilities in 2015 compared to 2014 is attributable to drop in fuel price and non-current liabilities decreased due to the termination of the Energy Conversion Agreement with Pruvient for the Tanguisson units in January 2015.



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Financial results summary:

- Loss for 2016 was \$8.4 million, compared to \$13.6 million income in 2015.
- Operating income for 2016 was \$40.6 million, compared to \$48.8 million in 2015.

The table below details certain items from GPA's Statements of Revenue, Expenses and Changes in Net Position from 2014 through 2016. The presentation below separately identifies activities that impact earnings and cost recovery activities that do not impact earnings.

(in '000)	2016			2015			2014		
	Earning Activities	Cost Recovery Activities	Total Utility	Earning Activities	Cost Recovery Activities	Total Utility	Earning Activities	Cost Recovery Activities	Total Utility
Sales of Electricity	\$ 159,567	146,340	\$ 305,907	\$ 162,049	\$ 204,136	\$ 366,185	\$ 163,287	\$ 271,175	\$ 434,462
Other	<u>2,294</u>	<u>-</u>	<u>2,294</u>	<u>3,816</u>	<u>-</u>	<u>3,816</u>	<u>1,978</u>	<u>-</u>	<u>1,978</u>
<b>Total operating revenues</b>	<b>161,861</b>	<b>146,340</b>	<b>308,201</b>	<b>165,865</b>	<b>204,136</b>	<b>370,001</b>	<b>165,265</b>	<b>271,175</b>	<b>436,440</b>
Cost of electricity	-	146,340	146,340	-	204,136	204,136	-	271,175	271,175
Operating and maintenance	77,012	-	77,012	75,342	-	75,342	85,101	-	85,101
Depreciation	<u>44,240</u>	<u>-</u>	<u>44,240</u>	<u>41,765</u>	<u>-</u>	<u>41,765</u>	<u>36,989</u>	<u>-</u>	<u>36,989</u>
<b>Total operating expenses</b>	<b><u>121,252</u></b>	<b><u>146,340</u></b>	<b><u>267,592</u></b>	<b><u>117,107</u></b>	<b><u>204,136</u></b>	<b><u>321,243</u></b>	<b><u>122,090</u></b>	<b><u>271,175</u></b>	<b><u>393,265</u></b>
<b>Operating Income</b>	<b>40,609</b>	<b>-</b>	<b>40,609</b>	<b>48,758</b>	<b>-</b>	<b>48,758</b>	<b>43,175</b>	<b>-</b>	<b>43,175</b>
Interest income			1,101			1,179			1,372
Interest expense			(33,989)			(37,145)			(37,196)
Allowance for funds used during construction			4,137			5,646			3,976
Other expense, net			(451)			(4,838)			(6,560)
Extraordinary item			<u>(19,806)</u>			<u>-</u>			<u>-</u>
<b>(Loss) income</b>			<b>\$ <u>(8,399)</u></b>			<b>\$ <u>13,600</u></b>			<b>\$ <u>4,767</u></b>

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**Operating Revenues**

GPA's operating revenues decreased by \$61.8 million, or 17%, in 2016 compared to 2015, primarily due to reduction in the LEAC rate over the course of the year. Reduction in LEAC was due to a drop in global fuel prices and GPA securing better rate on fuel. Reduction in revenue in 2015 compared to 2014 is also due to price reduction in the global fuel prices.

**Electric Sales Information**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Peak Demand (MW)	263	257	249	255	258
Total Electric Sales (MWh)	1,563,475	1,566,410	1,533,323	1,539,587	1,574,000
Sales Growth (%)	(3.4)	0.2	(0.2)	0.4	2.2
Total Customers	48,512	48,598	48,918	49,530	50,207

The energy sales increased by 2.2% in fiscal year 2016 and 0.4% in fiscal year 2015. Annual electric sales were 1,574 GWH and 1,539 GWH for 2016 and 2015, respectively. Number of customers were 50,207 and 49,530 for 2016 and 2015, respectively.

The strong growth of 2.2% in 2016 is a departure from prior years and the industry where the growth is stagnate or declining in customer demand. The previous noted decline in the demand is attributable to conservation efforts, efficiencies in appliances, and growing number of net metering customers.

**Operating and Maintenance**

GPA's operating and maintenance expense increased slightly in 2016 compared to 2015 due to higher insurance cost. In 2016, GPA achieved several cost saving measures like headcount reduction, overtime reduction, fleet fuel consumption cost reduction, greater energy station efficiencies, reduced transmission and distribution (T&D) line loss, and lower merchant service cost from credit cards due to better rates.

GPA headcount reduced from 489 in 2015 to 466 in 2016. Overtime decreased from \$1.5 million in 2015 to \$1.2 million in 2016. Fleet fuel consumption went down from \$94,412 in 2015 to \$60,440 in 2016. Station use of energy went down from 83,060 MWH in 2015 to 64,952 MWH in 2016. T&D line loss went down from 79,267 MWH to 64,952 MWH. Credit card service fee went down by \$413,000 in 2016 compared to 2015.

GPA's operating and maintenance expenses decreased by \$9.8 million, or 11%, in 2015 compared to 2014, primarily due to retirement of power plants, Tanguisson 1 and 2, and reduction in labor cost and overtime. On December 29, 2014, the PUC approved early termination of the associated energy conversion agreement of the Tanguisson power plant effective January 2, 2015.



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**Depreciation and Amortization**

GPA's depreciation and amortization expense increased by \$2.5 million, or 5%, in 2016 compared to 2015. The change is due to reassessment of the estimated useful life of Cabras 1 and 2 based on the expected retirement of these plants when the new power plant becomes operational.

**Utility Cost Recovery Activities**

**Cost of Electricity**

GPA's cost of electricity includes the costs of power purchased from third parties, transmission, fuel used in its own generation facilities, and fuel supplied to other facilities under power purchase agreement.

GPA relies on fuel oil to run its generation plants. The recent contract was awarded to Hyundai Corp. which significantly lowered the cost compared to prior years.

In line with GPA IRP to increase its renewable resources, GPA procured a power purchase agreement for a utility scale solar farm of 25 MW with NRG Energy, located in southern Guam and the system became available to the grid in August 2015. The project performed as expected and it is producing approximately 4,300 MWH of emission free energy each month.

In addition, GPA commissioned 275 kW wind project which became operational in March 2016. The \$2 million wind project was funded by a USDOJ Grant and provided available experience and data on the potential of wind renewable projects.

GPA is currently working on Phase II of new solar PV. The bid was issued requesting 60 MW of renewable energy and that solar and wind renewables must have integrated battery systems. The bids are currently being evaluated and the award is expected over the next few months.

There is a Phase III renewable project where GPA will be utilizing 30-year lease of Navy property for 35 MW solar PV. The proposed property has been identified and it is close to 200 acres where the CCU and the PUC approved the lease.

**Interest Income, Interest Expense, and Other Income and Expenses**

Interest expense decreased in 2016 compared to 2015 due to completion of payments for 2010 Series Subordinate Revenue Bonds.

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**Cash Flows from Operating Activities**

GPA's cash flows from operating activities primarily consist of receipts from customers less payments of operating expenses.

GPA's cash flows from operating activities from 2014 to 2016 are as follows:

(in millions)	<u>2016</u>	<u>2015</u>	<u>2014</u>
Cash received from customers	\$ 305.2	\$ 354.8	\$ 453.8
Cash payments to suppliers	(198.8)	(245.3)	(322.2)
Cash payments to employees for services	(35.3)	(40.1)	(40.2)
Cash payments to retiree benefits	(4.2)	(3.8)	(3.0)
<b>Net cash provided by operating activities</b>	<b><u>\$ 66.9</u></b>	<b><u>\$ 65.6</u></b>	<b><u>\$ 88.4</u></b>

**Capital Activities**

GPA's capital activities primarily consist of new construction and replacement of facilities necessary to deliver safe and reliable power to its customers. The largest capital cost incurred during the year was Cabras #2 turbine overhaul (\$4.4M), line extension and distribution plant (\$5.8M), Solar Dandan Interconnection (\$1.8M), Yigo and Machete CT overhaul (\$2.5M), Street lights (\$1.1M), and general plant (\$2.5M). Cash used in capital activities includes proceeds from bonds and from revenue funds.

Please refer to Note 14 to the financial statements for details of GPA's capital activities.

**Investing Activities**

GPA's cash flows from investing activities from 2014 to 2016 are as follows (in millions):

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net cash (used in) provided by investing activities	\$ (37.8)	\$ (8.9)	\$ 0.8

**Borrowing Activities**

In fiscal year 2014, GPA completed the issuance of \$76.5 million bond to fund projects such as energy storage system, transmission and distribution system improvements, and SCADA system upgrade. The bonds were sold at a rate of 4.34% - lowest rate ever achieved by the Authority. This achievement is due to GPA's improved credit rating and investors view that GPA is a stable investment grade utility.



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GPA's cash flows from capital and non-capital financing activities from 2014 to 2016 are as follows (in millions):

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net cash provided by non-capital financing activities	\$ 52.7	\$ 2.9	\$ 3.0
Net cash used in capital and related financing activities	\$ (83.4)	\$ (96.4)	\$ (37.1)

No new borrowing was done in 2015 and 2016. Please refer to Note 7 to the financial statements for details of GPA's borrowing activities.

**Credit Ratings**

GPA's credit rating relates to the Authority's cost of funds and liquidity. In particular, GPA's ability to access and engage in certain activities on a cost-effective basis is primarily dependent upon maintaining a strong credit rating.

GPA's long-term senior debt ratings are:

Long-Term Senior Debt	Rating	Long-Term Outlook
Standard & Poor's	BBB	Stable
Moody's Rating	Baa2	Stable
Fitch Rating	BBB-	Stable

**Future Capital Activities**

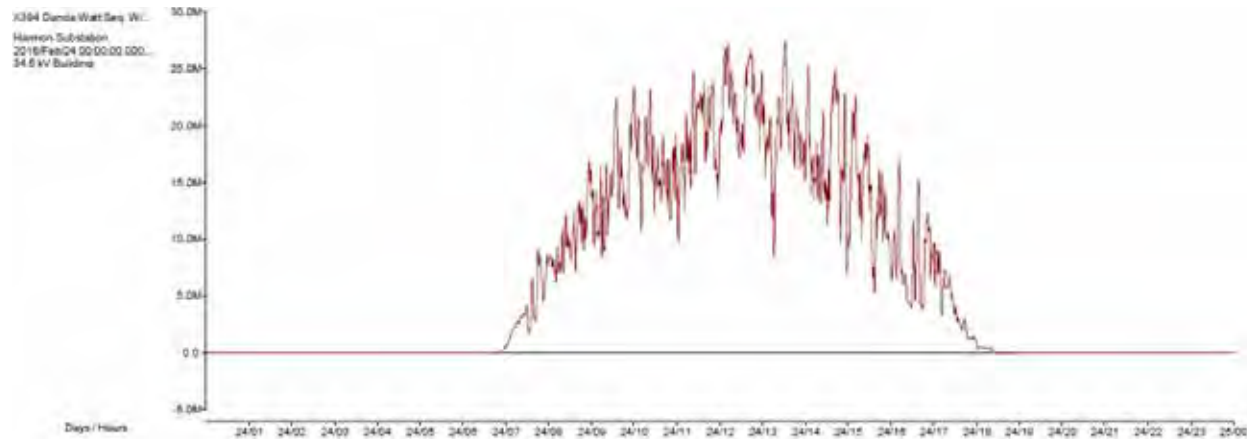
GPA is committed to green energy and the reduction of greenhouse gas emissions. GPA invested in an industry scale solar farm of 25 MW and we are committed to increasing green energy solutions as noted earlier.

The investment in a solar farm and increase in net metering customers (NEM) has led to a grid that is becoming physically and operationally very different from historical patterns. The energy received from the solar farm and net metering customers are "must take" contracts, meaning their energy goes into the grid whenever they can generate. The Power System Control Center must now monitor and respond to dramatic changes in system frequencies during certain times of the day. These fast changes are known as ramping events. Historically, the need for fast ramping was in response to load changes, but now is also due to generation output from non-GPA sources.

GPA is required to absorb all the power fluctuation emitted by the solar farm, and NEM. On any given day, the solar farm can fluctuate as much as 15 MW in an hour. Below is a sample reading for a day on February 24, 2016.

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To mitigate the drop in generation by solar PV, GPA procured energy storage solution (ESS) and should be fully operational around early part of 2018.

GPA is working to expand its renewable footprint and is currently working on Phase II 60 MW solar PV and Phase III 35 MW solar PV.

In 2016, the CCU and the PUC approved to proceed with the procurement of 180 MW dual fire combined cycle combustion turbine. The project is planned to be completed by December 2020.

GPA procured two electric vehicles (EV) and is committed to replacing some of its current aging fleet with EV and invest in charging infrastructures. The community adoption of electric vehicles should reduce the importation of oil.

#### **Future Borrowing**

Despite the advancement of renewable energy generation and storage, the traditional power generation is still required. As noted earlier, GPA filed an integrated resource plan (IRP) to the CCU and the PUC for the construction of combined cycle combustion turbine plants and an approval was given by the CCU and the PUC to authorize GPA to proceed with the procurement of up to 180 MW. The plan for the procurement model is independent power purchase agreement (IPP) where the IPP finance the construction of the plant. However, GPA is not ruling out the review to determine if financing by GPA is more economical.



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**Contacting GPA's Financial Management**

The Management Discussion and Analysis report is intended to provide information concerning known facts and conditions affecting GPA's operations. This financial report is designed to provide a general overview of GPA's finances and to demonstrate GPA's accountability for the funds it receives and expends.

Management's Discussion and Analysis for the years ended September 30, 2015 and 2014 is set forth in GPA's report on the audit of financial statements which is dated March 11, 2016. That Discussion and Analysis explains in more detail major factors impacting the 2015 and 2014 financial statements. A copy of that report can be obtained by contacting the CFO office at (671) 648-3066 or from GPA's website at the addresses noted below.

For additional information about this report, please contact Mr. John J.E. Kim, Chief Financial Officer, Guam Power Authority, P.O. Box 2977, Hagåtña, Guam 96932-2977 or visit the website at [www.guampowerauthority.com](http://www.guampowerauthority.com).

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Statements of Net Position  
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<u>ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</u>	<u>2016</u>	<u>2015</u>
Current assets:		
Cash and cash equivalents - restricted	\$ 188,768,078	\$ 201,969,525
Cash and cash equivalents - unrestricted	<u>15,332,510</u>	<u>3,835,959</u>
Total cash and cash equivalents	<u>204,100,588</u>	<u>205,805,484</u>
Certificates of deposit - restricted	8,752,047	-
Certificates of deposit - unrestricted	<u>18,501,460</u>	<u>-</u>
Total certificates of deposit	<u>27,253,507</u>	<u>-</u>
Investments held by trustee - restricted	41,367,658	30,626,433
Accounts receivable, net	62,635,768	35,517,682
Materials and supplies inventory, net	13,555,719	16,312,559
Fuel inventory	31,326,368	34,774,612
Prepaid expenses	<u>754,023</u>	<u>734,996</u>
Total current assets	<u>380,993,631</u>	<u>323,771,766</u>
Utility plant, at cost:		
Depreciable utility plant, net of accumulated depreciation	449,259,789	509,246,172
Non-depreciable utility plant	<u>18,278,666</u>	<u>32,128,337</u>
Total utility plant	<u>467,538,455</u>	<u>541,374,509</u>
Other non-current assets:		
Investments held by trustee - restricted	9,801,436	9,458,442
Unamortized debt issuance costs	<u>4,646,601</u>	<u>5,026,210</u>
Total other non-current assets	<u>14,448,037</u>	<u>14,484,652</u>
Total assets	<u>862,980,123</u>	<u>879,630,927</u>
Deferred outflows of resources:		
Unamortized loss on debt refunding	12,324,400	13,574,416
Pension	8,168,718	7,490,630
Unrecovered fuel costs	1,492,055	1,869,344
Unamortized forward delivery contract costs	<u>796,717</u>	<u>956,078</u>
Total deferred outflows of resources	<u>22,781,890</u>	<u>23,890,468</u>
	<u>\$ 885,762,013</u>	<u>\$ 903,521,395</u>

See accompanying notes to financial statements.

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Statements of Net Position, Continued  
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<u>LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION</u>	<u>2016</u>	<u>2015</u>
Current liabilities:		
Current maturities of long-term debt	\$ 115,000.00	\$ 14,265,000
Current obligations under capital leases	16,737,242	14,820,776
Accounts payable:		
Operations	18,695,325	15,521,064
Fuel	6,622,514	6,547,139
Accrued repair costs	22,317,509	-
Accrued payroll and employees' benefits	1,533,636	1,296,749
Current portion of employees' annual leave	2,405,799	2,388,129
Interest payable	15,146,696	15,673,208
Customer deposits	8,381,571	9,043,908
Total current liabilities	<u>91,955,292</u>	<u>79,555,973</u>
Regulatory liabilities:		
Provision for self-insurance	<u>19,550,977</u>	<u>19,758,320</u>
Total regulatory liabilities	<u>19,550,977</u>	<u>19,758,320</u>
Long-term debt, net of current maturities	595,057,778	597,785,166
Obligations under capital leases, net of current portion	22,872,720	39,609,006
DCRS sick leave liability	3,436,738	3,113,912
Net pension liability	71,049,220	67,025,973
Employees' annual leave, net of current portion	806,762	806,762
Customer advances for construction	319,321	205,461
Total liabilities	<u>805,048,808</u>	<u>807,860,573</u>
Deferred inflows of resources:		
Pension	732,788	7,694,438
Unearned forward delivery contract revenue	2,920,088	3,504,106
Other unearned revenues	-	357,000
Total deferred inflows of resources	<u>3,652,876</u>	<u>11,555,544</u>
Commitments and contingencies		
Net position:		
Net investment in capital assets	(49,190,904)	16,924,495
Restricted	4,645,344	21,212,177
Unrestricted	121,605,889	45,968,606
Total net position	<u>77,060,329</u>	<u>84,105,278</u>
	<u>\$ 885,762,013</u>	<u>\$ 903,521,395</u>

See accompanying notes to financial statements.



**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Statements of Revenues, Expenses and Changes in Net Position  
September 30, 2016 and 2015

	2016	2015
Revenues:		
Sales of electricity	\$ 306,896,753	\$ 366,185,083
Miscellaneous	<u>2,293,868</u>	<u>4,774,889</u>
	309,190,621	370,959,972
Bad debt expense	<u>(989,762)</u>	<u>(959,008)</u>
Net operating revenues	<u>308,200,859</u>	<u>370,000,964</u>
Operating and maintenance expenses:		
Production fuel	146,339,927	204,135,936
Other production	<u>15,834,795</u>	<u>20,079,027</u>
	162,174,722	224,214,963
Depreciation and amortization	44,240,395	41,765,404
Administrative and general	29,057,723	21,907,999
Energy conversion costs	16,800,170	18,403,965
Transmission and distribution	10,816,588	11,169,991
Customer accounting	<u>4,501,923</u>	<u>3,780,276</u>
Total operating and maintenance expenses	<u>267,591,521</u>	<u>321,242,598</u>
Operating income	<u>40,609,338</u>	<u>48,758,366</u>
Non-operating revenues (expense):		
Allowance for funds used during construction	4,137,421	5,645,781
Non-operating grants from the United States (U.S.) Government	13,612	1,500,362
Interest income	1,100,895	1,179,347
Interest expense	(33,988,980)	(37,144,961)
Loss from early termination of energy conversion agreement	-	(2,840,842)
Loss from write-off of utility plant	-	(1,666,666)
Other expense, net	<u>(465,599)</u>	<u>(1,831,189)</u>
Total non-operating revenues (expense), net	<u>(29,202,651)</u>	<u>(35,158,168)</u>
Income before extraordinary item	11,406,687	13,600,198
Extraordinary item - generator explosion and fire	<u>(19,805,608)</u>	-
(Loss) income before capital contributions	(8,398,921)	13,600,198
Capital contributions:		
Grants from the U.S. Government	<u>1,353,972</u>	<u>1,590,937</u>
Change in net position	(7,044,949)	15,191,135
Net position at beginning of year	84,105,278	68,914,143
Net position at end of year	<u>\$ 77,060,329</u>	<u>\$ 84,105,278</u>

See accompanying notes to financial statements.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Statements of Cash Flows  
September 30, 2016 and 2015

<u>Increase (decrease) in cash and cash equivalents</u>	<u>2016</u>	<u>2015</u>
Cash flows from operating activities:		
Cash received from customers	\$ 305,166,728	\$ 354,799,650
Cash payments to suppliers for goods and services	(198,802,614)	(245,294,780)
Cash payments to employees for services	(35,328,683)	(40,107,649)
Cash payments for retiree benefits	<u>(4,146,630)</u>	<u>(3,833,401)</u>
Net cash provided by operating activities	<u>66,888,801</u>	<u>65,563,820</u>
Cash flows from investing activities:		
Interest on investments and bank accounts	516,877	595,330
Investments in certificates of deposit	(27,253,507)	-
Increase in bond fund investments	<u>(11,084,219)</u>	<u>(9,458,442)</u>
Net cash used in investing activities	<u>(37,820,849)</u>	<u>(8,863,112)</u>
Cash flows from non-capital financing activities:		
Proceeds from insurance claims	50,000,000	-
Self insurance fund receipts net of disbursements	(207,343)	3,069,947
Proceeds from typhoon assistance to Saipan	2,946,569	1,762,905
Typhoon costs and other noncapital activities	-	(1,831,189)
Interest paid on deposits	<u>(80,918)</u>	<u>(118,049)</u>
Net cash provided by non-capital financing activities	<u>52,658,308</u>	<u>2,883,614</u>
Cash flows from capital and related financing activities:		
Receipts from the U.S. Government	1,763,046	1,170,459
Payment for early termination of energy conversion agreement	-	(8,100,000)
Interest paid on capital leases	(5,969,664)	(7,847,938)
Principal paid on capital leases	(14,819,819)	(13,515,250)
Principal paid on long-term debt	(14,265,000)	(13,600,000)
Interest paid on long-term debt	(25,150,895)	(22,413,653)
Additions to utility plant	<u>(24,988,824)</u>	<u>(32,114,346)</u>
Net cash used in capital and related financing activities	<u>(83,431,156)</u>	<u>(96,420,728)</u>
Net change in cash and cash equivalents	(1,704,896)	(36,836,406)
Cash and cash equivalents at beginning of year	<u>205,805,484</u>	<u>242,641,890</u>
Cash and cash equivalents at end of year	<u>\$ 204,100,588</u>	<u>\$ 205,805,484</u>

See accompanying notes to financial statements.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Statements of Cash Flows, Continued  
September 30, 2016 and 2015

	<u>2016</u>	<u>2015</u>
<u>Reconciliation of operating earnings to net cash provided by operating activities:</u>		
Operating earnings	\$ 40,609,338	\$ 48,758,366
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	44,240,395	41,765,404
Bad debts	989,762	959,008
Pension recovery	(3,616,491)	(8,045,373)
Cabras 4 repairs	(20,254,497)	-
(Increase) decrease in assets:		
Accounts receivable	154,119	5,575,421
Materials and supplies inventory	1,687,682	1,731,586
Fuel inventory	3,448,244	23,260,615
Prepaid expenses	(19,027)	(225,737)
Other assets	-	262,193
Increase (decrease) in liabilities:		
Accounts payable	3,249,636	(26,990,919)
Customer deposits	288,108	585,164
Customer advances for construction	113,860	(2,965,285)
Unrecovered fuel costs	(4,222,711)	(19,355,622)
Accrued payroll and employees' benefits	236,887	(35,260)
Other unearned revenues	(357,000)	-
Employees' annual and sick leave	340,496	284,259
Net cash provided by operating activities	<u>\$ 66,888,801</u>	<u>\$ 65,563,820</u>

See accompanying notes to financial statements.



**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies

Organization

Guam Power Authority (GPA) is a component unit of the Government of Guam (GovGuam). GPA provides electrical services on Guam to residential, commercial and GovGuam customers and to the United States (U.S.) Navy under a Utility Services Contract (USC). GPA is governed by the Consolidated Commission on Utilities (CCU), an elected five member board. GPA is subject to the regulations of the Public Utilities Commission of Guam (PUC) and has adopted the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission. Because of the rate-making process, certain differences arise in the application of accounting principles generally accepted in the United States of America between regulated and non-regulated businesses. Such differences mainly concern the time at which various items enter into the determination of net earnings in order to follow the principle of matching costs and revenues.

Basis of Accounting

The accounting policies of GPA conform to accounting principles generally accepted in the United States of America, as applicable to governmental entities, specifically proprietary funds. GPA utilizes the flow of economic resources measurement focus. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles.

Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Taxes

As an instrumentality of GovGuam, GPA and all property acquired by or for GPA, and all revenues and income therefrom are exempt from taxation by GovGuam or by any political subdivision or public corporation thereof and from all taxes imposed under the authority of the Guam Legislature, or with respect to which the Guam Legislature is authorized to grant exemption.

Cash, Cash Equivalents and Investments

Cash and cash equivalents include cash on hand, cash in banks, certificates of deposit, money market accounts and U.S. treasury bills with original maturities of three months or less in the interest and principal funds for debt repayment, the bond indenture funds, the bond reserve fund, the energy sense fund and the self-insurance fund.

**GUAM POWER AUTHORITY**  
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Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies, Continued

Cash, Cash Equivalents and Investments, Continued

Investments in short-term, highly liquid debt instruments, including commercial paper, banker's acceptances, and U.S. Treasury and agency obligations are recorded at amortized cost.

All other investments are recorded at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability (i.e., the exit price) in an orderly transaction between market participants at the date as of which the fair value of an asset or liability is determined.

The deposits and investment policies of GPA are governed by 5 GCA 21, *Investments and Deposits*, in conjunction with applicable bond indentures. Authorized investments include obligations issued or guaranteed by the U.S. government or agencies of the U.S. government; bonds, notes or other indebtedness rated in the highest rating by Moody's Investors Service (Moody's) or Standard & Poor's Corporation (S&P); obligations issued by the Federal National Mortgage Association or the Federal Home Loan Mortgage Corporation with remaining maturities of not more than three years; any bonds or other obligations of any state of the U.S. or any agency, instrumentality or local government unit of such state which are rated in the highest rating category of either Moody's or S&P; demand and time deposits in or certificates of deposit or bankers acceptances with U.S. domestic banks which have a rating of their short term certificates of deposit of A-1 or better by S&P and P-1 by Moody's and mature no more than 360 days after purchase; commercial paper which has a rating in the highest classification by S&P and Moody's; and money market funds rated AAAm or better by S&P.

Allowance for Doubtful Receivables

The allowance for doubtful receivables is stated at an amount which management believes will be adequate to absorb possible losses on accounts receivable that may become uncollectible based on evaluations of the collectability of these accounts and prior collection experience. The allowance is established through a provision for bad debts charged to expense. Uncollectible accounts are written-off against the allowance or are charged to expense in the period GPA deems the accounts to be uncollectible but with prior approval of the CCU.

Inventory Valuation

Materials and supplies inventories and fuel inventories are stated at the lower of cost (using the weighted average and the first-in, first-out method, respectively), or market.

Allowance for inventory obsolescence is provided for inventory items with no movement for a period of five years and over and for parts and supplies for equipment no longer in use. Allowance for inventory obsolescence amounted to \$1,485,450 and \$416,292 as of September 30, 2016 and 2015, respectively.

**GUAM POWER AUTHORITY**  
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Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies, Continued

Utility plant purchased or constructed is stated at cost. Cost includes an allowance on certain projects for funds used during construction of specific power generation plants based on the net cost of borrowed funds used for construction purposes. Donated utility is recorded at fair market value at the date of donation or at the donating entity's basis in the asset if donated by GovGuam or a GovGuam agency. Current policy is to capitalize utility plant with a cost of \$1,000 or more.

Utility Plant

Depreciation

Depreciation is computed under the straight-line method over the estimated useful lives of the respective assets.

Compensated Absences

Compensated absences are accrued and reported as a liability in the period earned. Annual leave expected to be paid out within the next fiscal year is accrued and is included in current liabilities. The maximum accumulation of annual leave convertible to pay upon termination of employment is limited to 320 hours. Pursuant to Public Law 27-106, employees who have accumulated annual leave in excess of three hundred twenty (320) hours as of February 28, 2003, may carry over their excess and shall use the excess amount of leave prior to retirement or termination from service. Any unused leave over 320 hours shall be lost upon retirement.

Public Law 26-86 allows members of the Defined Contribution Retirement System to receive a lump sum payment of one-half of their accumulated sick leave upon retirement.

Pensions

Pensions are required to be recognized and disclosed using the accrual basis of accounting. GPA recognizes a net pension liability for the defined benefit pension plan in which it participates, which represents GPA's proportional share of excess total pension liability over the pension plan assets – actuarially calculated – of a single employer defined benefit plan, measured one year prior to fiscal year-end and rolled forward. Changes in the net pension liability during the period are recorded as pension expense, or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change, in the period incurred. Those changes in net pension liability that are recorded as deferred inflows of resources or deferred outflows of resources that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the qualified pension plan and recorded as a component of pension expense beginning with the period in which they are incurred. Projected earnings on qualified pension plan investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five-year period beginning with the period in which the difference occurred.



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Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies, Continued

Forward Delivery Contract Costs and Revenues

The forward delivery contract costs and revenues arose as a result of the Bond Reserve Fund Forward Delivery Agreements entered into in September 2000. The unamortized forward delivery contract costs represent termination fees and closing costs while the unearned forward delivery contract revenues represent the gross proceeds. The costs and revenues are amortized on a straight line basis until 2034.

Unamortized Debt Issuance Costs

Unamortized debt issuance costs mainly include insurance costs related to the issuance of the Series 2010, 2012 and 2014 bonds. These costs are being amortized using the effective interest method over the life of the applicable debt.

Net Position

Net position represents the residual interest in GPA's assets and deferred outflows of resources after liabilities and deferred inflows of resources are deducted and consist of four sections:

Net investment in capital assets - include capital assets, restricted and unrestricted, net of accumulated depreciation, reduced by outstanding debt net of debt service reserve.

Restricted expendable - net position whose use is subject to externally imposed stipulations that can be fulfilled by actions of GPA pursuant to those stipulations or that expire with the passage of time.

Restricted nonexpendable - net position subject to externally imposed stipulations that require GPA to maintain them permanently.

Unrestricted - net position that is not subject to externally imposed stipulations. Unrestricted net position may be designated for specific purposes by management or the CCU or may otherwise be limited by contractual agreements with outside parties.

All of GPA's restricted net position is expendable.

Sales of Electricity

Sales of electricity are recorded as billed to customers on a monthly cycle billing basis. At the end of each month, unbilled revenues are accrued for each cycle based on the most recent cycle billing.

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Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies, Continued

Operating and Non-Operating Revenue and Expenses

Operating revenues and expenses generally result directly from the operation and maintenance of systems to provide electrical services to the island of Guam. Non-operating revenues and expenses result from capital and financing activities, costs and related recoveries from natural disasters, and certain other non-recurring income and costs.

Deferred Outflows of Resources

Deferred outflows of resources represent consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense) until that future time.

Deferred Inflows of Resources

Deferred inflows of resources represent an acquisition of net position that applies to a future period and therefore will not be recognized as an inflow of resources (revenue) until that future time.

Levelized Energy Adjustment Clause

Fuel oil costs increase or decrease billings to customers based on increases or decreases in the price of fuel oil purchased by GPA. Under or over recoveries of fuel oil costs including the fair value of outstanding commodity swap agreements (if any) are recorded as unrecovered fuel cost or unearned fuel revenue, respectively, in the accompanying statements of net position, and are recovered or deducted in future billings to customers based on the Levelized Energy Adjustment Clause (LEAC) approved by the PUC in January of 1996. The LEAC results in the conversion of the monthly fuel charge to a levelized fuel charge, which is reviewed and adjusted by the PUC on a bi-annual basis. GPA is only permitted to recover its actual fuel and related costs.

GPA also bills customers fuel surcharges to recover the cost difference between fuel inventory on hand against a base year.

Derivative Instruments

GPA is exposed to market price fluctuations on its purchases of fuel oil. GPA uses derivatives such as commodity swaps to protect itself from increases in market prices. GPA records commodity swap agreements associated with its fuel oil hedging activities at fair value with gains and losses recognized in operations in the statement of revenues, expenses and changes in net position. The fair value of outstanding commodity swaps at year-end is included as a component of the LEAC and is recorded as part of unrecovered fuel cost or unearned fuel revenue in the accompanying statements of net position. GPA did not have outstanding commodity swap agreements at September 30, 2016 and 2015.

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Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies, Continued

GPA's power purchase agreements are considered "normal purchases and normal sales" and accordingly, the operations and maintenance portions of GPA's energy conversion agreements are not recognized in the statements of net position. Operations and maintenance costs associated with the power purchase agreements are expensed as incurred with the independent power producers.

Allowance for Funds Used During Construction

The allowance for funds used during construction (AFUDC) is provided only for construction projects of more than \$50,000, which require a minimum of 90 days to complete. AFUDC is computed using the interest expense on directly assignable borrowings to finance the projects less interest income on the related unused borrowings which have been invested. AFUDC is provided only during the period in which such projects are undergoing activities to prepare them for their intended use. AFUDC of \$4,137,421 and \$5,645,781 was recognized during the years ended September 30, 2016 and 2015, respectively.

New Accounting Standards

During the year ended September 30, 2016, GPA implemented the following pronouncements:

- GASB Statement No. 72, *Fair Value Measurement and Application*, which addresses accounting and financial reporting issues related to fair value measurements and requires entities to expand their fair value disclosures by determining major categories of debt and equity securities within the fair value hierarchy on the basis of the nature and risk of the investment. The implementation of this statement resulted in additional disclosures made about fair value measurements, the level of fair value hierarchy, and valuation techniques. Refer to note 2.
- GASB Statement No. 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*, which eliminates two of the four categories of authoritative GAAP that exist under the existing hierarchy prescribed by Statement No. 55. The two categories that will remain under the new standard are (1) GASB Statements and (2) GASB technical bulletins and implementation guides in addition to AICPA guidance that the GASB clears. The implementation of this statement did not have a material effect on the accompanying financial statements.
- GASB Statement No. 79, *Certain External Investment Pools and Pool Participants*, addresses for certain external investment pools and their participants the accounting and financial reporting implications that result from changes in the regulatory provisions referenced by previous accounting and financial reporting standards. Those provisions were based on the Investment Company Act of 1940, Rule 2a7. Rule 2a7 contains the Securities and Exchange Commission's regulations that apply to money market funds and were significantly amended in 2014. The implementation of this statement did not have a material effect on the accompanying financial statements.



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Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies, Continued

In June 2015, GASB issued Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not Within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements No. 67 and No. 68*, which aligns the reporting requirements for pensions and pension plans not covered in GASB Statements No. 67 and No. 68 with the reporting requirements in Statement No. 68. The provisions in Statement No. 73 are effective for fiscal years beginning after June 15, 2016. Management has yet to determine whether the implementation of this statement will have a material effect on the financial statements.

In June 2015, GASB issued Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, which replaces Statements No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*, and addresses financial reporting requirements for governments whose employees are provided with postemployment benefits other than pensions (other postemployment benefits or OPEB). The provisions in Statement No. 74 are effective for fiscal years beginning after June 15, 2016. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

New Accounting Standards, Continued

In June 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, which replaces the requirements of Statements No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*, and provides guidance on reporting by governments that provide OPEB to their employees and for governments that finance OPEB for employees of other governments. The provisions in Statement No. 75 are effective for fiscal years beginning after June 15, 2017. Management has not determined the financial impact but anticipates that the implementation of this statement will have a material effect on the financial statements.

In August 2015, GASB issued Statement No. 77, *Tax Abatement Disclosures*, which requires governments that enter into tax abatement agreements to disclose certain information about the agreements. The provisions in Statement No. 77 are effective for fiscal years beginning after December 15, 2015. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In December 2015, GASB issued Statement No. 78, *Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans*, which addresses a practice issue regarding the scope and applicability of Statement No. 68, *Accounting and Financial Reporting for Pensions*. The provisions in Statement No. 78 are effective for fiscal years beginning after December 15, 2015. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In January 2016, GASB issued Statement No. 80, *Blending Requirements for Certain Component Units - an amendment of GASB Statement No. 14*, which improves financial reporting by clarifying the financial statement presentation requirements for certain component units. The

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Notes to Financial Statements  
September 30, 2016 and 2015

(1) Organization and Summary of Significant Accounting Policies, Continued

New Accounting Standards, Continued

provisions in Statement No. 80 are effective for fiscal years beginning after June 15, 2016. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In March 2016, GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*, which improves accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. The provisions in Statement No. 81 are effective for fiscal years beginning after December 15, 2016. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In March 2016, GASB issued Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68, and No. 73*, which addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The provisions in Statement No. 82 are effective for fiscal years beginning after June 15, 2016. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

Reclassifications

Certain items in the 2015 financial statements have been reclassified to correspond with the 2016 financial statement presentation.

(2) Cash, Cash Equivalents and Investments

The bond indenture agreements for the 2010, 2012 and 2014 series revenue bonds (note 7) require the establishment of special funds to be held and administered by trustees and by GPA. In addition, proceeds from borrowings to finance generation and transmission facility construction are maintained by GPA in construction accounts. Funds in these accounts are required by loan agreement or public law to be used for generation and transmission facility construction. Certain funds are restricted by rate orders of the PUC.

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Notes to Financial Statements  
September 30, 2016 and 2015

**(2) Cash, Cash Equivalents and Investment, Continued**

At September 30, 2016 and 2015, cash and cash equivalents, certificates of deposit and investments held by trustees and by GPA in these funds and accounts were as follows:

	2016					
	Cash and Cash Equivalents and Certificates of Deposit				Investments	
	Held By Trustees	Held By GPA			Held By Trustees	
	Bond Indenture Funds	PUC Restricted Funds	Unrestricted Funds	Cash Total	Bond Indenture Funds	Total
Construction funds	\$ 69,821,815	\$ -	\$ -	\$ 69,821,815	\$ -	\$ 69,821,815
Interest and principal funds	-	-	-	6,203,627	9,801,436	16,005,063
Excess bond funds	510,504	-	-	510,504	-	510,504
Working capital funds	11,932,417	-	-	11,932,417	20,363,113	32,295,530
Bond reserve fund	34,808,887	-	-	34,808,887	13,742,000	48,550,887
Self-insurance fund	-	19,506,796	-	19,506,796	-	19,506,796
Revenue funds	1,372,165	-	-	1,372,165	-	1,372,165
Energy sense fund	-	1,646,041	-	1,646,041	-	1,646,041
Operating funds	-	-	33,833,970	33,833,970	-	33,833,970
Surplus funds	51,717,873	-	-	51,717,873	7,262,545	58,980,418
	<u>\$ 170,163,661</u>	<u>\$ 21,152,837</u>	<u>\$ 33,833,970</u>	<u>\$ 231,354,095</u>	<u>\$ 51,169,094</u>	<u>\$ 282,523,189</u>

	2015					
	Cash and Cash Equivalents and Certificates of Deposit				Investments	
	Held By Trustees	Held By GPA			Held By Trustees	
	Bond Indenture Funds	PUC Restricted Funds	Unrestricted Funds	Cash Total	Bond Indenture Funds	Total
Construction funds	\$ 79,336,424	\$ -	\$ -	\$ 79,336,424	\$ -	\$ 79,336,424
Interest and principal funds	13,390,665	-	-	13,390,665	9,458,442	22,849,107
Excess bond funds	510,452	-	-	510,452	-	510,452
Working capital funds	26,201,225	-	-	26,201,225	4,855,561	31,056,786
Capitalized interest fund	5,650,381	-	-	5,650,381	-	5,650,381
Bond reserve fund	28,585,721	-	-	28,585,721	25,770,872	54,356,593
Self-insurance fund	-	19,500,066	-	19,500,066	-	19,500,066
Revenue funds	5,854,823	-	-	5,854,823	-	5,854,823
Energy sense fund	-	1,806,014	-	1,806,014	-	1,806,014
Operating funds	-	-	3,835,959	3,835,959	-	3,835,959
Surplus funds	21,133,754	-	-	21,133,754	-	21,133,754
	\$ 180,663,445	\$ 21,306,080	\$ 3,835,959	\$ 205,805,484	\$ 40,084,875	\$ 245,890,359

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(2) Cash, Cash Equivalents and Investments, Continued

GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, addresses common deposit and investment risks related to credit risk, concentration of credit risk, interest rate risk, and foreign currency risk. As an element of interest rate risk, disclosure is required of investments that have fair values that are highly sensitive to changes in interest rates. GASB Statement No. 40 also requires disclosure of formal policies related to deposit and investment risks.

A. Cash and Cash Equivalents

Custodial credit risk is the risk that in the event of a bank failure, GPA's deposits may not be returned to it. Such deposits are not covered by depository insurance and are either uncollateralized, or collateralized with securities held by the pledging financial institution or held by the pledging financial institution but not in the depositor-government's name. GPA does not have a deposit policy for custodial credit risk.

As of September 30, 2016 and 2015, the carrying amount of GPA's total cash and cash equivalents and certificates of deposit was \$231,354,095 and \$205,805,484, respectively, and the corresponding bank balances were \$230,764,038 and \$205,450,169, respectively. Of the bank balance amount as of September 30, 2016 and 2015, \$53,327,876 and \$24,754,759 was maintained in financial institutions subject to Federal Deposit Insurance Corporation (FDIC) insurance. As of September 30, 2016 and 2015, bank deposits in the amount of \$763,256 and \$739,756, respectively, were FDIC insured. GPA does not require collateralization of its cash deposits; therefore, deposit levels in excess of FDIC insurance coverage are uncollateralized. At September 30, 2016 and 2015, \$53,972,549 and \$24,370,520, respectively, of cash and cash equivalents and certificates of deposit were subject to custodial credit risk. GPA has not experienced any losses in such accounts and management believes it is not exposed to any significant credit risk on its deposits. Bank balances as of September 30, 2016 and 2015, also include \$176,367,288 and \$180,663,445, respectively, representing cash, cash equivalents and certificates of deposit held and administered by GPA's trustees in GPA's name in accordance with various trust agreements and bond indentures.



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(2) Cash, Cash Equivalents and Investments, Continued

B. Investments

As of September 30, 2016, GPA's investments were as follows:

	<u>Amount</u>	<u>Maturity</u>	<u>S&amp;P or Moody's Rating</u>
<i>Current:</i>			
Investments held by trustee – restricted:			
Bond Reserve Fund:			
BNP Paribas Fortis (commercial paper)	\$ 13,742,000	Less than 1 year	P-1
Bond Fund:			
Federal Home Loan Banks	12,773,015	Less than 1 year	P-1
Federal Farm Credit Banks	5,002,380	Less than 1 year	P-1
Federal Home Loan Mortgage Corporation	2,001,210	Less than 1 year	P-1
Federal National Mortgage Association	3,013,090	Less than 1 year	P-1
Federated Government Ultrashort Duration Fund (mutual fund)	<u>4,835,963</u>	Less than 1 year	Not rated
	\$ <u>41,367,658</u>		

B. Investments, Continued

	<u>Amount</u>	<u>Maturity</u>	<u>S&amp;P or Moody's Rating</u>
<i>Noncurrent:</i>			
Investments held by trustee - restricted:			
Bond Fund:			
Bayerische Landesbank Guaranteed Investment Certificate (GIC)	\$ <u>9,801,436</u>	More than 10 years	A1

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Notes to Financial Statements  
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(2) Cash, Cash Equivalents and Investments, Continued

As of September 30, 2015, GPA's investments were as follows:

	<u>Amount</u>	<u>Maturity (In Years)</u>	S&P or Moody's <u>Rating</u>
<i>Current:</i>			
Investments held by trustee – restricted:			
Bond Reserve Fund:			
Fortis Funding LLC (commercial paper)	\$ 13,742,000	Less than 1 year	P-1
Natixis Funding Corp. Guaranteed Investment Certificate (GIC)	12,028,872	Less than 1 year	P-1
Bond Fund:			
Federated Government Ultrashort Duration Fund (mutual fund)	<u>4,855,561</u>	Less than 1 year	Not rated
	\$ <u>30,626,433</u>		
<i>Noncurrent:</i>			
Investments held by trustee - restricted:			
Bond Fund:			
Bayerische Landesbank Guaranteed Investment Certificate (GIC)	\$ <u>9,458,442</u>	More than 10 years	A3

Custodial credit risk for investments is the risk that in the event of the failure of the counterparty to a transaction, GPA will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. GPA's investments are held and administered by trustees in accordance with various trust agreements and bond indentures.

Credit risk for investments is the risk that an issuer or other counter party to an investment will not fulfill its obligations.

Concentration of credit risk for investments is the risk of loss attributed to the magnitude of an entity's investment in a single issuer. GASB Statement No. 40 requires disclosure by issuer and amount of investment in any one issuer that represents five percent (5%) or more of total of investments for GPA. As of September 30, 2016 and 2015, each of GPA's investments exceeded 5% of total investments, except for the investment in Federal Home Loan Mortgage Corporation which represents 4% of total investments.

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September 30, 2016 and 2015

(2) Cash, Cash Equivalents and Investments, Continued

B. Investments, Continued

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of debt instruments. Maturities of investments in certain funds are limited to five years to limit interest rate risk. Maturities of investments in all funds may not be later than the dates that such moneys are expected to be required by the trustees.

Investments Measured at Fair Value

GPA categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. As of September 30, 2016 and 2015, GPA's investment in Federated Government Ultrashort Duration mutual fund is valued using Level 1 inputs.

(3) Receivables

Accounts receivable at September 30, 2016 and 2015, were summarized as follows:

	<u>2016</u>	<u>2015</u>
Customers:		
Private	\$ 22,865,829	\$ 27,337,741
Government	<u>4,546,621</u>	<u>4,449,739</u>
	27,412,450	31,787,480
U.S. Government - Navy (note 8)	2,379,893	3,116,035
U.S. Government - grants	1,964,866	2,360,325
Insurance	34,040,000	-
Others	<u>869,189</u>	<u>4,518,698</u>
	66,666,398	41,782,538
Less allowance for doubtful receivables	<u>(4,030,630)</u>	<u>(6,264,856)</u>
	\$ <u>62,635,768</u>	\$ <u>35,517,682</u>

Unbilled accounts receivable included in the accounts receivable – private customers amounted to \$5,658,070 and \$7,058,889 at September 30, 2016 and 2015, respectively.

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September 30, 2016 and 2015

**(3) Receivables, Continued**

At September 30, 2016, receivables included \$34 million of insurance receivables representing insurance recoveries realizable as at September 30, 2016 (see note 10).

At September 30, 2015, other receivables included \$2,310,358 due from the Commonwealth Utilities Corporation for the assistance provided by GPA for typhoon restoration efforts during that year.

Substantially all of GPA's customer accounts receivable are from individuals, companies and government agencies based in Guam. Concentrations largely result from accounts receivable from GovGuam agencies and the U.S. Navy. Management assesses the risk of loss and provides for an allowance for doubtful accounts to compensate for known credit risks.

**(4) Levelized Energy Adjustment Clause**

At September 30, 2016 and 2015, GPA has under recovery of fuel costs of \$1,492,055 and \$1,869,344, respectively.

At September 30, 2016 and 2015, no under or over recovery of the fuel inventory cost difference is recognized as the fuel price for the year is lower than the base year.

**(5) Obligations Under Capital Leases**

In September 1996, GPA entered into energy conversion agreements to purchase electricity produced by generating plants constructed or refurbished and operated by three companies. The agreements have twenty-year terms. At the end of the agreements, ownership of the plants and the plant improvements reverts to GPA. Under each of the agreements, GPA pays capacity and operation and maintenance costs and purchases fuel for the plants.

GPA has determined that the agreements to purchase electricity are in fact capital leases to acquire the plants and that the capacity payments made under the agreements are lease payments. The operations and maintenance payments under the agreements are reflected as energy conversion costs under operation and maintenance expenses.

On December 29, 2014, GPA obtained PUC approval to early terminate one of the energy conversion agreements effective January 2, 2015 for a payment of \$8.1 million. The agreement was originally to expire in September 2017. GPA incurred a \$2.8 million loss due to early termination of the agreement.

At September 30, 2016 and 2015, the costs of plant and plant improvements were \$155,382,727 and accumulated depreciation was \$69,298,046 and \$65,480,144, respectively, which were presented as part of depreciable utility plant in the accompanying statements of net position. The leases have effective interest rates ranging from 8.6% to 13.7%.



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**(5) Obligations Under Capital Leases**

Future capacity payments under these agreements are as follows:

<u>Year Ending September 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Amount</u>
2017	\$ 16,737,242	\$ 4,051,185	\$ 20,788,427
2018	16,950,423	1,934,418	18,884,841
2019	<u>5,922,297</u>	<u>159,673</u>	<u>6,081,970</u>
	\$ <u>39,609,962</u>	\$ <u>6,145,276</u>	\$ <u>45,755,238</u>

**(6) Employees' Retirement Plan**

**Defined Benefit Plan**

**A. General Information About the Pension Plan:**

*Plan Description:* GPA participates in the GovGuam Defined Benefit (DB) Plan, a single-employer defined benefit pension plan administered by the GovGuam Retirement Fund (GGRF). The DB Plan provides retirement, disability, and survivor benefits to plan members who enrolled in the plan prior to October 1, 1995. Article 1 of 4 GCA 8, Section 8105, requires that all employees of GovGuam, regardless of age or length of service, become members of the DB Plan prior to the operative date. Employees of a public corporation of GovGuam, which includes GPA, have the option of becoming members of the DB Plan prior to the operative date. All employees of GovGuam, including employees of GovGuam public corporations, whose employment commenced on or after October 1, 1995, are required to participate in the Defined Contribution Retirement System (DCRS). Hence, the DB Plan became a closed group.

A single actuarial calculation is performed annually covering all plan members and the same contribution rate applies to each employer. GGRF issues a publicly available financial report that includes financial statements and required supplementary information for the DB Plan. That report may be obtained by writing to the Government of Guam Retirement Fund, 424 A Route 8, Maite, Guam 96910, or by visiting GGRF's website – [www.ggrf.com](http://www.ggrf.com).

*Plan Membership:* As of September 30, 2015, the most recent measurement date, plan membership consisted of the following:

Retirees and beneficiaries currently receiving benefits	7,197
Terminated employees entitled to benefits but not yet receiving them	4,701
Current members	<u>2,460</u>
	<u>14,358</u>

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(6) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

*Benefits Provided:* The DB Plan provides pension benefits to retired employees generally based on age and/or years of credited service and an average of the three highest annual salaries received by a member during years of credited service, or \$6,000, whichever is greater. Cost-of-living adjustments and other supplemental annuity benefits are provided to members and beneficiaries at the discretion of the Guam Legislature, but are provided outside of the Plan.

Members who joined the DB Plan prior to October 1, 1981 may retire with 10 years of service at age 60 (age 55 for uniformed personnel); or with 20 to 24 years of service regardless of age with a reduced benefit if the member is under age 60; or upon completion of 25 years of service at any age.

Members who joined the DB Plan on or after October 1, 1981 and prior to August 22, 1984 may retire with 15 years of service at age 60 (age 55 for uniformed personnel); or with 25 to 29 years of service regardless of age with a reduced benefit if the member is under age 60; or upon completion of 30 years of service at any age.

A. General Information About the Pension Plan, Continued:

Members who joined the DB Plan after August 22, 1984 and prior to October 1, 1995 may retire with 15 years of service at age 65 (age 60 for uniformed personnel); or with 25 to 29 years of service regardless of age with a reduced benefit if the member is under age 65; or upon completion of 30 years of service at any age.

Upon termination of employment before attaining at least 25 years of total service, a member is entitled to receive a refund of total contributions including interest. A member who terminates after completing at least 5 years of service has the option of leaving contributions in the GGRF and receiving a service retirement benefit upon attainment of the age of 60 years. In the event of disability during employment, members under the age of 65 with six or more years of credited service who are not entitled to receive disability payments from the United States Government are eligible to receive sixty six and two-thirds of the average of their three highest annual salaries received during years of credited service. The DB Plan also provides death benefits.

*Contributions and Funding Policy:* Contribution requirements of participating employers and active members are determined in accordance with Guam law. Employer contributions are actuarially determined under the One-Year Lag Methodology. Under this methodology, the actuarial valuation date is used for calculating the employer contributions for the second following fiscal year. For example the September 30, 2014 actuarial valuation was used for determining the year ended September 30, 2016 statutory contributions. Member contributions are required at 9.54% of base pay (9.55% in 2015).

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(6) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

As a result of actuarial valuations performed as of September 30, 2014, 2013, and 2012, contribution rates required to fully fund the Retirement Fund liability, as required by Guam law, for the years ended September 30, 2016, 2015 and 2014, respectively, have been determined as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Normal costs (% of DB Plan payroll)	15.86%	15.92%	16.61%
Employee contributions (DB Plan employees)	<u>9.54%</u>	<u>9.55%</u>	<u>9.50%</u>
Employer portion of normal costs (% of DB Plan payroll)	<u>6.32%</u>	<u>6.37%</u>	<u>7.11%</u>
Employer portion of normal costs (% of total payroll)	1.94%	2.05%	2.39%
Unfunded liability cost (% of total payroll)	<u>22.42%</u>	<u>24.09%</u>	<u>24.01%</u>
Government contribution as a % of total payroll	<u>24.36%</u>	<u>26.14%</u>	<u>26.40%</u>
Statutory contribution rates as a % of DB Plan payroll:			
Employer	<u>28.16%</u>	<u>29.85%</u>	<u>30.03%</u>
Employee	<u>9.54%</u>	<u>9.55%</u>	<u>9.50%</u>

A. General Information About the Pension Plan, Continued:

GPA's contributions to the DB Plan for the years ended September 30, 2016, 2015 and 2014 were \$2,438,748, \$2,772,299 and \$3,046,347, respectively, which were equal to the required contributions for the respective years then ended.

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(6) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

*Actuarial Assumptions:* Actuarially determined contribution rates are calculated as of September 30, two years prior to the end of the fiscal year in which contributions are reported. The methods and assumptions used to determine contribution rates are as follows:

Valuation Date:	September 30, 2014
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	15.58 years
Asset Valuation Method:	3-year smoothed market value
Inflation:	2.75%
Total payroll growth:	3.00% per year
Salary Increases:	4.50% to 7.50%
Expected Rate of Return:	7.00%
Discount Rate:	7.00%
Retirement age:	40% are assumed to retire upon first eligibility for unreduced retirement. Thereafter, the probabilities of retirement are 15% until age 65, 20% from 65-69, and 100% at age 70.
Mortality:	RP-2000 healthy mortality table set forward by 4 years for males and 1 year for females. Mortality for disabled lives is the RP 2000 disability mortality table with no set forwards.
Other information:	Actuarial assumptions are based upon periodic experience studies. The last experience study reviewed experience from 2007-2011, and was first reflected in the actuarial valuation as of September 30, 2012.



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Notes to Financial Statements  
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(6) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

A. General Information About the Pension Plan, Continued:

*Discount Rate:* The total pension liability is calculated using a discount rate of 7.0% that is a blend of the expected investment rate of return and a high quality bond index rate. There was no change in the discount rate since the previous year. The expected investment rate of return applies for as long as the plan assets (including future contributions) are projected to be sufficient to make the projected benefit payments. If plan assets are projected to be depleted at some point in the future, the rate of return of a high quality bond index is used for the period after the depletion date.

*Discount Rate Sensitivity Analysis:* The following schedule shows the impact of the Net Pension Liability if the discount rate used was 1% less than and 1% greater than the discount rate that was used (7%) in measuring the 2015 Net Pension Liability.

	1% Decrease in Discount Rate 6.0%	Current Discount Rate 7.0%	1% Increase in Discount Rate 8.0%
Net Pension Liability	\$ 86,329,406	\$ 71,049,220	\$ 57,905,280

B. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions:

*Pension Liability:* At September 30, 2016 and 2015, GPA reported a net pension liability of \$71,049,220 and \$67,025,973, respectively, for its proportionate share of the Government of Guam net pension liability. GPA's proportion of the net pension liability was based on projection of GPA's long-term share of contributions to the pension plan relative to the projected contributions of GovGuam and GovGuam's component units, actuarially determined. At September 30, 2016 and 2015, GPA's proportion of the GovGuam overall liability was 5.19% and 5.38%, respectively.

*Pension Expense:* For the years ended September 30, 2016 and 2015, GPA recognized pension expense (recovery) of \$2,839,525 and (\$624,346), respectively.

*Deferred Outflows and Inflows of Resources:* At September 30, 2016 and 2015, GPA reported total deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

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Notes to Financial Statements  
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**(6) Employees' Retirement Plan, Continued**

**Defined Benefit Plan, Continued**

**B. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions, Continued:**

	<u>2016</u>		<u>2015</u>	
	<u>Deferred</u> <u>Outflows of</u> <u>Resources</u>	<u>Deferred</u> <u>Inflows of</u> <u>Resources</u>	<u>Deferred</u> <u>Outflows of</u> <u>Resources</u>	<u>Deferred</u> <u>Inflows of</u> <u>Resources</u>
Difference between expected and actual experience	\$ 891,044	\$ -	\$ 497,265	\$ -
Net difference between projected and actual earnings on pension plan investments	802,882	-	-	5,101,436
Contributions subsequent to the measurement date	6,474,792	-	6,993,365	-
Changes in proportion and difference between GPA contributions and proportionate share of contributions	-	732,788	-	2,593,002
	<u>\$ 8,168,718</u>	<u>\$ 732,788</u>	<u>\$ 7,490,630</u>	<u>\$ 7,694,438</u>

Deferred outflows resulting from contributions subsequent to measurement date will be recognized as reduction of the net pension liability in the following year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at September 30, 2016 will be recognized in pension expense as follows:

**Year Ending September 30,**

2017	\$ (241,947)
2018	\$ (422,284)
2019	\$ 587,574
2020	\$ 1,037,795

**Defined Contribution Retirement System**

Contributions into the Defined Contribution Retirement System (DCRS) plan by members are based on an automatic deduction of 5% of the member's regular base pay. The contribution is periodically deposited into an individual investment account within the DCRS. Employees are afforded the opportunity to select from different investment accounts available under the DCRS.

Statutory employer contributions for participants in the DCRS plan for the years ended September 30, 2016, 2015 and 2014 are determined using the same rates as the DB Plan. Of the amount contributed by the employer, only an amount equivalent to 5% of the member's regular pay is deposited into the member's individual investment account in the DCRS. The remaining amount is contributed towards the unfunded liability of the DB Plan.

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(6) Employees' Retirement Plan, Continued

Defined Contribution Retirement System, Continued

Members of the DCRS plan, who have completed five years of government service, have a vested balance of 100% of both member and employer contributions plus any earnings thereon.

GPA's contributions for participants in the DCRS plan for the years ended September 30, 2016, 2015 and 2014 were \$5,075,223, \$5,244,535, and \$5,219,217, respectively, which were equal to the required contributions for the respective years then ended. Of these amounts, \$4,206,313, \$4,395,461 and \$4,379,771 were contributed toward the unfunded liability of the DB Plan for the years ended September 30, 2016, 2015 and 2014, respectively.

GPA has accrued an estimated liability of \$3,436,738 and \$3,113,912 at September 30, 2016 and 2015, respectively, for potential future sick leave payments pursuant to Public Law 26-86 (note 1). However, this amount is an estimate and actual payout may be materially different than estimated.

Other Post-Employment Benefits

GovGuam, through its substantive commitment to provide other post-employment benefits (OPEB), maintains a cost-sharing multiple employer defined benefit plan to provide certain postretirement healthcare benefits to retirees who are members of the GovGuam Retirement Fund. Under the Plan, known as the GovGuam Group Health Insurance Program, GovGuam provides medical, dental, and life insurance coverage. The retiree medical and dental plans are fully-insured products provided through insurance companies. GovGuam shares in the cost of these plans, with GovGuam's contribution amount set each year at renewal. Current statutes prohibit active and retired employees from contributing different amounts for the same coverage. As such, GovGuam contributes substantially more to the cost of retiree healthcare than to active employee healthcare. For the life insurance plan, GovGuam provides retirees with \$10,000 of life insurance coverage through an insurance company. Retirees do not share in the cost of this coverage. Because the Plan consists solely of GovGuam's firm commitment to provide OPEB through the payment of premiums to insurance companies on behalf of its eligible retirees, no stand-alone financial report is either available or generated.

For the years ended September 30, 2016, 2015 and 2014, GPA reimbursed GovGuam for certain supplemental benefits for retirees, including contributions for the abovementioned Plan, as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Supplemental benefits and COLA	\$ 1,235,078	\$ 1,212,303	\$ 1,137,620
Medical and dental	<u>2,911,552</u>	<u>2,621,098</u>	<u>1,919,579</u>
	\$ <u>4,146,630</u>	\$ <u>3,833,401</u>	\$ <u>3,057,199</u>

Contributions to the OPEB plan for the years ended September 30, 2016, 2015 and 2014 were equivalent to the statutorily required contributions for those years.

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	<u>2016</u>	<u>2015</u>
2014 Series Senior Revenue Bonds, initial face value of \$76,470,000, interest at varying rates from 4.0% to 5.0 per annum payable semi-annually in October and April, principal and mandatory sinking fund payments payable in varying annual installments commencing with a payment of \$1,310,000 in October 2017, increasing to a final payment of \$4,855,000 in October 2044.	\$ 76,470,000	\$ 76,470,000
2012 Series Senior Revenue Bonds, initial face value of \$340,620,000, interest at varying rates from 2.98% to 5.0% per annum payable semi-annually in October and April, principal and mandatory sinking fund payments payable in varying annual installments commencing with a payment of \$110,000 in October 2013, increasing to a maximum payment of \$25,630,000 in October 2031, with a final payment of \$24,485,000 in October 2034.	339,945,000	340,055,000
2010 Series Senior Revenue Bonds, initial face value of \$150,440,000, interest at varying rates from 5.0% to 5.5% per annum payable semi-annually in October and April, principal and mandatory sinking fund payments payable in varying annual installments commencing with a payment of \$225,000 in October 2022, increasing to \$17,215,000 in October 2040.	150,440,000	150,440,000
2010 Series Subordinated Revenue Bonds, initial face value of \$56,115,000, interest at varying rates from 6.0% to 7.5% per annum payable semi-annually in October and April, principal and mandatory sinking fund payments payable in varying annual installments commencing with a payment of \$4,435,000 in October 2011, increasing to \$14,155,000 in October 2015.	-	14,155,000
Total long-term debt	566,855,000	581,120,000
Less current maturities	(115,000)	(14,265,000)
	566,740,000	566,855,000
Add premium on 2014 and 2012 bonds	31,824,124	34,543,120
Less discount on 2010 Senior and Subordinate bonds	(3,506,346)	(3,612,954)
Total bonds	<u>\$ 595,057,778</u>	<u>\$ 597,785,166</u>

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Notes to Financial Statements  
September 30, 2016 and 2015

(7) Noncurrent Liabilities, Continued

A. Long-term Debt, Continued

Proceeds of the 2010 Series Senior Revenue Bonds were used to finance capital projects, generally consisting of a new administration building and various generation, transmission and distribution facilities, make a deposit to the Bond Reserve Fund, provide capitalized interest through October 1, 2013, and pay costs of issuance.

Proceeds of the 2010 Series Subordinated Revenue Bonds were used to make a deposit to the Working Capital Fund, Bond Reserve Fund, provide capitalized interest through April 1, 2011, and pay costs of issuance.

Proceeds of the 2012 Series Revenue Bonds were used to refund GPA's 1993 and 1999 Senior Bonds, make a deposit to the Senior Bond Reserve Fund to increase the amount on deposit therein to the Bond Reserve Fund Requirement, and pay costs of issuance.

Proceeds of the 2014 Series Revenue Bonds were used to finance a variety of generation, transmission and distribution improvements and systems and information technology upgrades, make a deposit to the Senior Bond Reserve Fund, provide capitalized interest through September 30, 2016, and pay costs of issuance.

As of September 30, 2016, future maturities of long-term debt are as follows:

<u>Year Ending September 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total Debt Service</u>
2017	\$ 115,000	\$ 28,754,130	\$ 28,869,130
2018	1,780,000	28,712,600	30,492,600
2019	1,495,000	28,636,625	30,131,625
2020	15,950,000	28,201,700	44,151,700
2021	20,515,000	27,290,075	47,805,075
2022 through 2026	119,755,000	119,790,825	239,545,825
2027 through 2031	153,850,000	85,562,450	239,412,450
2032 through 2036	139,280,000	46,178,000	185,458,000
2037 through 2041	95,990,000	19,782,150	115,772,150
2042 through 2045	<u>18,125,000</u>	<u>1,781,775</u>	<u>19,906,775</u>
	\$ <u>566,855,000</u>	\$ <u>414,690,330</u>	\$ <u>981,545,330</u>



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(7) Noncurrent Liabilities, Continued

A. Long-term Debt, Continued

All gross revenues of GPA have been pledged to repay the 2010, 2012 and 2014 series bonds principal and interest. The debt service for the 2010, 2012 and 2014 series bonds was \$28,870,850 and \$44,096,257 or approximately 9% and 12% of pledged gross revenues, for the years ended September 30, 2016 and 2015, respectively.

Premium and discount associated with the 2010, 2012 and 2014 series bonds at September 30, 2016 and 2015 are being amortized on the effective interest method over the life of the applicable debt.

Debt Refunding

In October 2012, GPA refunded its 1993 and 1999 Series bonds through the issuance of the 2012 Series bonds. At the time of refunding, the 1993 and 1999 Series bonds had principal balances outstanding of \$56,370,000 and \$299,680,000, respectively. The proceeds for the refunding were transferred to an escrow agent who used the proceeds to purchase non-callable and non-prepayable obligations of the United States of America or held as cash and are to be held in an irrevocable trust to be used for the payment of the principal of and interest on the 1993 and 1999 Series bonds. The advance refunding met the requirements of an in-substance defeasance and the 1993 and 1999 bonds were removed from GPA's financial statements. The advance refunding resulted in a loss on defeasance totaling \$17,283,801 representing the difference between the reacquisition price and the carrying amount of the 1993 and 1999 bonds. Although the advance refunding resulted in the recognition of an accounting loss, GPA in effect reduced its aggregate debt service payments by \$16,506,398 over the next twenty years and obtained an economic gain (difference between the present values of the old debt and the new debt service payments) of \$27,940,966.

The loss on refunding of the 1993 and 1999 Series bonds is being amortized using the effective interest method over the average remaining life of the 1993 and 1999 bonds which approximated the average life of the 2012 Series bonds. The unamortized balance of the loss refunding of the 1993 and 1999 Series bonds is \$12,324,400 and \$13,574,416 as of September 30, 2016 and 2015, respectively.

Forward Delivery Contract

On September 28, 2000, GPA entered into Bond Reserve Fund Forward Delivery Agreements (the agreements) with Lehman Brothers and Bank of America. In connection with the agreements, GPA received cash of \$13.5 million in October 2000, representing the present value of interest income on certain invested bond proceeds. Based on the terms of the agreements, gross proceeds totaled \$17,521,029 while GPA incurred termination fees and closing costs totaling \$3,530,000 and \$1,250,000, respectively. The \$13.5 million in net proceeds included \$759,500 of interest income earned as of the closing dates of the agreements.

The gross proceeds, termination fees and closing costs have been deferred and amortized on a straight line basis over the average remaining life of the 1993 and 1999 bonds. The gross proceeds, net of amortization, are reflected as unearned forward delivery contract revenue in the

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Notes to Financial Statements  
September 30, 2016 and 2015

(7) Noncurrent Liabilities, Continued

A. Long-term Debt, Continued

accompanying statements of net position. The termination fees and closing costs are reflected as unamortized forward delivery contract costs in the accompanying statements of net position. The amortization of forward delivery contract revenues and costs is reflected as components of interest income and interest expense, respectively, in the accompanying statements of revenues, expenses and changes in net position.

A. Long-term Debt, Continued

Forward Delivery Contract, Continued

The following summarizes the unearned revenues and unamortized costs on the forward delivery contract at September 30, 2016 and 2015:

	<u>2016</u>	<u>2015</u>
Unearned forward delivery contract revenues	\$ 8,760,514	\$ 8,760,514
Accumulated amortization	(5,840,426)	(5,256,408)
	<u>\$ 2,920,088</u>	<u>\$ 3,504,106</u>
Unamortized forward delivery contract costs	\$ 2,390,265	\$ 2,390,265
Accumulated amortization	(1,593,548)	(1,434,187)
	<u>\$ 796,717</u>	<u>\$ 956,078</u>

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Notes to Financial Statements  
September 30, 2016 and 2015

**(7) Noncurrent Liabilities, Continued**

**B. Long-term Liabilities, Continued**

Changes in long-term liabilities were as follows:

	Outstanding October 1, 2015	Increases	Outstanding Decreases	September 30, 2016	Current
2010 Series Senior bonds	\$ 150,440,000	\$ -	\$ -	\$ 150,440,000	\$ -
2010 Series Subordinate bonds	14,155,000	-	(14,155,000)	-	-
2012 Series Senior bonds	340,055,000	-	(110,000)	339,945,000	115,000
2014 Series Senior bonds	76,470,000	-	-	76,470,000	-
Unamortized premium on bonds	34,543,120	-	(2,718,996)	31,824,124	-
Unamortized discount on bonds	(3,612,954)	-	106,608	(3,506,346)	-
Obligations under capital leases	54,429,781	-	(14,819,819)	39,609,962	16,737,242
DCRS sick leave liability	3,113,912	322,826	-	3,436,738	-
Employees' annual leave	3,194,892	2,599,550	(2,581,881)	3,212,561	2,405,799
Net pension liability	67,025,973	4,023,247	-	71,049,220	-
Customer advances for construction	205,461	129,522	(15,662)	319,321	-
	<u>\$ 740,020,185</u>	<u>\$ 7,075,145</u>	<u>\$ (34,294,750)</u>	<u>\$ 712,800,580</u>	<u>\$ 19,258,041</u>

	Outstanding October 1, 2014	Increases	Decreases	Outstanding September 30, 2015	Current
2010 Series Senior bonds	\$ 150,440,000	\$ -	\$ -	\$ 150,440,000	\$ -
2010 Series Subordinate bonds	27,300,000	-	(13,145,000)	14,155,000	14,155,000
2012 Series Senior bonds	340,510,000	-	(455,000)	340,055,000	110,000
2014 Series Senior bonds	76,470,000	-	-	76,470,000	-
Unamortized premium on bonds	37,137,418	-	(2,594,298)	34,543,120	-
Unamortized discount on bonds	(3,713,958)	-	101,004	(3,612,954)	-
Obligations under capital leases	73,204,190	-	(18,774,409)	54,429,781	14,820,776
DCRS sick leave liability	2,842,985	270,927	-	3,113,912	-
Employees' annual leave	3,181,559	2,545,396	(2,532,063)	3,194,892	2,388,129
Net pension liability	77,870,353	-	(10,844,380)	67,025,973	-
Customer advances for construction	3,170,746	127,741	(3,093,026)	205,461	-
	<u>\$ 788,413,293</u>	<u>\$ 2,944,064</u>	<u>\$ (51,337,172)</u>	<u>\$ 740,020,185</u>	<u>\$ 31,473,905</u>

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**(8) Agreements with the U.S. Navy**

On September 15, 1996, a lease agreement was entered into between GPA and the U.S. Navy (Navy) to transfer to GPA the operations, maintenance, and custody of certain Navy-owned electrical transmission and distribution lines, electric power generation facilities, related structures and equipment, together with the associated land interest. The facilities are leased to GPA at no cost for a period of 50 years.

On August 1, 2012, GPA and the Navy entered into a USC for a period of ten years, unless terminated early at the option of the Navy, with no option for extension. Key features of the USC include transfer of certain Navy facilities to GPA at no charge, calculation of power rates charged to the Navy in accordance with the methodology approved by the PUC, GPA's continued use of the Navy's assets and associated real estate assets at no charge, compensation by GPA to the Navy for energy supplied to GPA's customers from Navy dedicated facilities, weekly fuel payments by the Navy, supply of water to Guam Waterworks Authority (GWA) by the Navy for power generation facilities, maintenance of a minimum contract demand with no maximum demand provision, and payment within fifteen days of electric billing by the Navy, subject to late payment charges.

On August 31, 2015, GPA and the Navy entered into a Basic Ordering Agreement (BOA) which enumerates task items that are to be contracted to identify, develop and/or implement work on Navy facilities and utility systems. The tasks are generally related to energy services including renewable energy and energy efficiency. The period during which the orders may be placed against the BOA may not exceed five years. As of September 30, 2016, no work has commenced on this BOA.

During the years ended September 30, 2016 and 2015, GPA billed the Navy \$49,193,414 and \$61,586,006, respectively, for sales of electricity under the USC. Receivables from the Navy were \$2,379,893 and \$3,116,035 at September 30, 2016 and 2015, respectively.

**(9) Commitments and Contingencies**

**Fuel Purchase Contracts**

In August 2013, GPA entered into a fuel purchase contract with Hyundai Corporation. The agreement is for two years commencing on September 1, 2013 with options to extend for three additional one-year terms upon mutual agreement of both parties. In August 2015, the parties amended and agreed to extend the contract for three years commencing on September 1, 2015 with options to extend for a three-year term upon mutual agreement of both parties.

In January 2015, GPA entered into diesel fuel supply contracts with IP&E Guam, Inc. and Mobil Oil Guam, Inc. The agreements are for three years ending December 31, 2017 with an option to extend for two additional one-year terms, renewable annually.

In May 2015, GPA entered into cylinder lubrication oil supply contract with Pacific Petroleum Trading Corporation. The agreement is for three years commencing June 1, 2015 with options to extend for two additional one-year terms, renewable annually.

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(9) Commitments and Contingencies, Continued

Performance Management Contracts

In 2010, GPA entered into Performance Management Contracts (PMC) with two companies for the operation and maintenance of Cabras 1 and 2, and Cabras 3 and 4 generators, which became effective on October 1, 2010 and July 1, 2010, respectively. The PMCs are for a period of five years with an option to extend for another five-year term. The fees are subject to certain incentives and penalties, as agreed by both parties. Several extensions were made on both PMCs. The latest extension of the PMC for Cabras 1 and 2 expires on September 30, 2020 while the PMC for Cabras 3 and 4 expires on February 28, 2018.

In 2016, GPA entered into a PMC for the Dededo, Macheche and Yigo combustion turbine power plants. The PMC is for a period of five years commencing on March 1, 2016 with options to extend for one additional three-year term and one additional two-year term. The fees are subject to certain incentives and penalties, as agreed by both parties.

At September 30, 2016, the minimum future fixed management fees are as follows:

<u>Year Ending September 30,</u>	<u>Amount</u>
2017	\$ 3,533,299
2018	2,688,626
2019	2,449,963
2020	2,515,840
2021	<u>293,203</u>
	\$ <u>11,480,931</u>

Fuel Bulk Storage Facility Contract

In June 2012, GPA entered into an agreement for the management and operations of its fuel bulk storage facility. The agreement is for three years ended May 31, 2015 with an option to extend the contract for two additional one-year terms. In March 2015, GPA exercised the option and extended the contract through May 31, 2017. At September 30, 2016, the minimum future management fees for the year ending September 30, 2017 is \$456,038.

Operating Leases

GPA entered into a sublease agreement for vehicle, equipment, and material storage and for a power substation beginning November 1, 2002 with annual rental of \$61,261 through October 31, 2012, and was extended for ten years.



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**(9) Commitments and Contingencies, Continued**

**Operating Leases, Continued**

GPA entered into a lease agreement for fuel storage tanks effective September 1, 2013. The contract includes fixed annual fees escalating 4% every year until August 31, 2018.

GPA entered into a commercial space lease beginning July 1, 2010, with monthly rentals of \$4,495 through June 30, 2015, and was extended for five years.

At September 30, 2016, future minimum lease payments for operating leases are as follows:

<u>Year Ending September 30,</u>	<u>Amount</u>
2017	\$ 1,709,954
2018	1,630,481
2019	115,196
2020	101,712
2021	61,261
2022 through 2023	<u>66,366</u>
	\$ <u>3,684,970</u>

Rent expense under the aforementioned agreements totaled \$1,648,617 and \$1,589,639 during the years ended September 30, 2016 and 2015, respectively.

**Temporary Power Services**

On December 7, 2015, GPA entered into a contract for temporary power services to provide 40 Megawatts (MW) of additional generation for \$11,781,392 a year plus an energy charge of \$4.40 per MW hour. GPA reimburses the payments for the temporary power services from the insurance proceeds from the Cabras 3 and 4 explosion (see note 10). The contract is for one year effective January 2016 with option to extend for a period to be mutually agreed. The contract is extended for four years effective January 9, 2017 and includes payments for the acquisition of the power plant.

**Renewable Energy Contracts**

GPA entered into two renewable energy purchase agreements to purchase 20 MW and 5.65 MW of solar renewable energy. The commercial operation date of the two solar plants was October 30, 2015. The agreements include escalating contract prices per MW hour until 2041 and

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**(9) Commitments and Contingencies, Continued**

**Renewable Energy Contracts, Continued**

90% minimum production which is the minimum requirement per contract year that is to be met to avoid production shortfall penalties. The total minimum renewable energy purchase commitment is 1.1 million MW hours.

At September 30, 2016, the minimum future renewable energy purchases are as follows:

<u>Year Ending September 30,</u>	<u>Amount</u>
2017	\$ 9,135,070
2018	9,164,695
2019	9,157,338
2020	9,162,071
2021	9,171,682
2022 through 2026	46,013,014
2027 through 2031	46,055,722
2032 through 2036	46,519,297
2037 through 2041	<u>38,321,837</u>
	\$ <u>222,700,726</u>

**Capital Commitments**

As of September 30, 2016, GPA has various on-going construction contracts with a total contract price of \$26.9 million, of which \$16.8 million has been paid and recorded as construction work in progress.

**Letters of Credit**

As of September 30, 2016, GPA has a \$35 million uncollateralized revolving documentary letter of credit for purchases of fuel. There were no commitments under the standby letter of credit at September 30, 2016.

**Self-Insurance**

GPA self-insures its transmission and distribution (T&D) plant, because no insurance is available at reasonable rates.

As the result of a PUC Order, GPA adds an insurance charge of \$0.00290 per kWh for civilian ratepayers and from \$0.00035 per kWh to \$0.00070 per kWh for the Navy until a self-insurance fund balance of \$20 million is achieved. Insurance charge proceeds are transferred to the restricted self-insurance fund to be used to cover losses that would normally be covered by insurance. GPA is not prohibited from petitioning PUC for approval to use the self-insurance fund for additional purposes to the extent that such losses are not covered by insurance.

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Notes to Financial Statements  
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(9) Commitments and Contingencies, Continued

Self-Insurance, Continued

The self-insurance fund, included in cash and cash equivalents held by GPA, was \$19,506,796 and \$19,500,066 at September 30, 2016 and 2015, respectively.

In 2015, GPA reached the \$20 million self-insurance cap and the insurance surcharge was discontinued. The insurance surcharge will be reactivated after the fund balance falls to less than \$18 million.

Autonomous Agency Collections Fund

On March 31, 2011, GPA received an invoice from the Government of Guam Department of Administration (GovGuam DOA) of \$12,250,000 representing an annual assessment of \$875,000 for each of the fiscal years 1998 to 2011 pursuant to 5 GCA Chapter 22 Section 22421, *Transfer of Autonomous Agency Revenues To Autonomous Agency Collections Fund*. In September 2013, GPA received another invoice for \$875,000 from the Chamorro Land Trust Commission referring to the same annual assessment aforementioned. There was no invoice received for the years ended September 30, 2016 and 2015. GPA obtained approval from the CCU to offer GovGuam DOA a settlement amount of \$2.6 million. However, such settlement offer is conditional on the approval by the PUC of a surcharge to recover the assessment from ratepayers. The PUC has not approved the surcharge as of September 30, 2016 and therefore, no liability or other impact has been recognized in the accompanying financial statements.

Hazardous Waste Assessment

Guam Public Law 20-110 requires certain entities to remit payments to a hazardous substance expense fund. There are questions as to the enforceability of the law; accordingly, no provision has been made in the accompanying financial statements for payments to be made under this law. GPA is covered by its self-insurance and worker's compensation insurance in case of accidents due to hazardous substances.

Merit System

In 1991, Public Law 21-59 was enacted to establish a bonus system for employees of GovGuam, autonomous and semi-autonomous agencies, public corporations and other public instrumentalities of GovGuam who earn a superior performance grade. The bonus is calculated at 3.5% of the employee's base salary beginning 1991 but was suspended by law for the years 1996, 2002, 2003 and 2004. Between 1991 and 2008, GPA did not calculate or pay any bonuses. In 2010, the Guam Legislature authorized GPA to implement a Pay for Performance program, similar to the GovGuam unified pay systems for certified, technical and professional positions, covering the evaluation period of 2009. As of September

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**(9) Commitments and Contingencies, Continued**

Merit System, Continued

30, 2016 and 2015, the CCU determined that there was no liability for employees covered in the new pay system. Therefore, no liability has been recognized in the accompanying financial statements.

Litigation

GPA has several asserted and unasserted claims outstanding as of September 30, 2016. It is not possible for the management of GPA to estimate the ultimate resolution of these matters and therefore, no provision for any liability that may result from these claims has been made in the accompanying financial statements.

Environmental Protection Agency

On May 24, 1986, the administrator of the U.S. Environmental Protection Agency (EPA) granted a continuing exemption to GPA under the provisions of Section 325(b) of the Clean Air Act, as amended. The terms of the exemption require monitoring by EPA, certain commitments by GPA regarding fuel stocks, and reporting and delineation of grounds for revocation of the exemption.

In February 2011, EPA, under the Clean Air Act, established new rules under National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engine Maximum Achievable Control Technology (RICE MACT). These new rules require stack emissions control and continuous monitoring system equipment to be installed on all GPA peaking and baseload diesel generators including its Cabras 3 and 4 and MEC 8 and 9 slow speed diesel units. Compliance under the diesel MACT was due May 3, 2013. Non-compliance under the diesel MACT could result in penalty fees of \$37,000 per unit per day. GPA applied for and received a one year extension for complying with the rules with respect to its small diesel peaking units. The required stack emission equipment was installed within the extension period. As to compliance with the other units subjected to RICE MACT, GPA requested EPA to enter into a consent decree allowing time for GPA to comply with the regulations and allowing potential fines and penalties for non-compliance to be used for compliance with regulations. In January 2015, GPA submitted its compliance plan outlining the proposed timelines for inclusion in the consent decree. In August 2015, due to explosion and fire at Cabras 3 and 4 power plant (see note 10), these units are no longer subject to compliance. As of September 30, 2016, GPA is still negotiating the consent decree with EPA. GPA believes result of negotiations with EPA will defer potential fines post RICE MACT deadlines for the slow speed diesel units. If the consent decree is not reached, the maximum liability of GPA would be \$159 million as of September 30, 2016. No liability that may result from potential noncompliance has been recorded in the accompanying financial statements.

EPA also established rules for Electric Generating Unit Maximum Achievable Control Technology (EGU MACT) which applies to Cabras 1 and 2 and Tanguisson steam boiler units. Compliance under the EGU MACT was due in April 2015. Non-compliance could result in penalty fees of \$37,000 per unit per day. GPA obtained PUC approval to early terminate the associated energy conversion agreement of the Tanguisson unit (see note 5). By deactivating the Tanguisson unit, GPA did not incur compliance costs for this unit. As to compliance for Cabras 1 and 2, a consent decree requested from EPA for compliance with RICE MACT is also expected to cover the EGU MACT compliance.

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(9) Commitments and Contingencies, Continued

Integrated Resource Plan

In 2012, GPA developed its Integrated Resource Plan (IRP). The objectives of the IRP are primarily to identify the timing, size, technology of future power generating units, and to address issues such as fuel diversification and the renewable energy portfolio standards. Specifically, the IRP recommendations include the replacement of older generation equipment with combined cycle combustion turbine generators which can utilize either Liquefied Natural Gas (LNG) or Ultra-Low Sulfur (ULS) diesel fuel oil; adding 40-45 MW of generation from renewable energy sources; and diversification of its fuel source to LNG and ULS diesel fuel oil.

In August 2015, GPA lost 78MW of base load capacity and experienced insufficient generation reserve after the explosion and fire at the Cabras Power Plant. The PUC ordered GPA to update the IRP in consideration of this event. The results of the updated IRP indicated that GPA should procure up to 180 MW of combined cycle units. In October 2016, the PUC authorized GPA to proceed with procurement which shall be based upon the Independent Power Producer (IPP) model. No approval was given in regards to bond financing, restructuring, or financing/leasing for the IPP. The PUC also ordered GPA to retire Cabras 1 and 2 upon commission of the new combined cycle plants.

GPA reassessed the estimated useful life of Cabras 1 and 2 based on the expected retirement of these plants when the new combined cycle plant becomes operational. GPA recorded additional depreciation expense of approximately \$3.7 million during the year ended September 30, 2016 due to the revised estimated useful life of these power plants.

Asset Retirement Obligation

GPA has power plants that were identified to be retired in the future. Upon retirement, GPA may incur costs to dismantle and clean-up the power plants. GPA has no legal or contractual obligation to perform these actions when they retire their assets; therefore, no provision for this potential cost was recorded in the accompanying financial statements.

(10) Explosion and Fire at Cabras Power Plant

On August 31, 2015, GPA suffered an explosion and fire at its Cabras 3 and 4 generator building. GPA commissioned an investigation and evaluation of the loss of Cabras 4 generator. In 2016, it was determined that Cabras 4 is a total loss and is beyond repair. At the inception of the loss, GPA intended to repair the Cabras 3 generator and proceed forward at the site. For a variety of reasons, this has become an infeasible task. As a result, both the Cabras 3 and 4 generators and related facilities and equipment have been written down to zero value at September 30, 2016.



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**(10) Explosion and Fire at Cabras Power Plant, Continued**

As of September 30, 2016, GPA received \$50 million of insurance recoveries. Subsequent to year-end, GPA secured an additional \$34 million recovery which GPA accrued and included in the receivables (see note 3). Insurance recoveries totaling \$84 million are recorded as extraordinary item in the accompanying financial statements. GPA applied the insurance recoveries against incurred and estimated repair costs pending final determination of the total amount of losses and damages and related insurance recoveries by the insurance company. Ultimate actual losses and damages and related insurance recoveries may be materially different than estimated. Therefore, when the insurance claims are finalized and settled, any differences, in amounts recorded will be accounted for prospectively in the financial statements.

Damages, repairs and insurance recoveries presented as extraordinary item for the year ended September 30, 2016, comprise the following:

Insurance recoveries	\$ 84,040,000
Impairment of Cabras 3 and 4	(52,873,884)
Temporary power services	(13,923,247)
Repair and other costs	(24,780,107)
Administrative charges	(2,850,577)
Clean-up costs	(1,018,075)
Fuel recovery	(4,600,000)
Provision for inventory obsolescence	(1,069,158)
Revenue loss	<u>(2,730,560)</u>
	\$ <u>(19,805,608)</u>

**(11) Related Party Transactions and Balances**

During the years ended September 30, 2016 and 2015, GPA billed GovGuam agencies \$45,460,183 and \$53,709,913, respectively, for sales of electricity. Receivables from GovGuam agencies were \$4,546,621 and \$4,449,739 at September 30, 2016 and 2015, respectively (see note 3).

GPA provides electrical and administrative services to GWA, a component unit of the GovGuam, which is also governed by the CCU. Electricity sales to GWA for the years ended September 30, 2016 and 2015 were \$11,193,172 and \$14,070,011, respectively. Outstanding receivables were \$897,240 and \$933,386 at September 30, 2016 and 2015, respectively, and were included in GovGuam agencies receivable mentioned above.

On June 23, 2009, GPA and GWA entered into a Memorandum of Understanding (MOU) where each agency agrees to provide administrative, operational, maintenance, repair and other specified services on behalf of the other agency and each will reimburse the other for their actual

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(11) Related Party Transactions and Balances, Continued

costs for providing said services. Total billings by GPA to GWA for administrative expenses and cost reimbursements were \$202,090 and \$348,182 for the years ended September 30, 2016 and 2015, respectively. Outstanding receivables totaled \$112,815 and \$111,358 at September 30, 2016 and 2015, respectively, and were included in other receivables (see note 3).

In 2015, GPA and GWA replaced their revenue billing systems with a combined billing system. In accordance with a MOU entered by GPA and GWA, costs necessary for the implementation and operation of the combined billing system are shared by GPA and GWA. Total amounts billed by GPA to GWA for its share in the implementation costs of the combined billing system approximated \$1 million in 2015. Total amounts billed by GPA to GWA for its share in the operation of the combined billing system amounted to \$250,000 in 2016. Outstanding receivables were \$118,774 and \$389,512 at September 30, 2016 and 2015, respectively, and were included in other receivables (see note 3).

Effective October 1, 2015, GPA and GWA implemented a cost sharing agreement to share in the costs of the office building commonly occupied by them for an annual cost of \$269,170 due from GWA to GPA. GWA also shares in the actual costs incurred for security, janitorial services, building insurance and other maintenance costs. Total billings by GPA to GWA for its share in the costs of the office building were \$353,291 for the year ended September 30, 2016. Outstanding receivables were \$31,935 at September 30, 2016 and were included in other receivables (see note 3).

GWA billed GPA for water and sewer charges on the facilities transferred by the Navy to GPA under the USC (see note 8) totaling \$1,166,911 and \$1,426,618 for the years ended September 30, 2016 and 2015, respectively. The amount due to GWA at September 30, 2016 and 2015 was \$139,738 and \$253,870, respectively, which was included in accounts payable - operations in the accompanying statements of net position.

In October 2011, U.S. Federal Emergency Management Agency (FEMA) reimbursed GPA for certain typhoon related costs incurred in 2002 of approximately \$1,800,000. The reimbursement was received by GovGuam DOA which plans to offset such amount against billings to GPA related to the Autonomous Agency Collections Fund (see note 9). Due to uncertainty of receipt, GPA has not recorded the reimbursement in the accompanying financial statements.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Notes to Financial Statements  
September 30, 2016 and 2015

(12) Restricted Net Position

At September 30, 2016 and 2015, net position was restricted for the following purposes:

	<u>2016</u>	<u>2015</u>
Debt service	\$ 1,627,138	\$ 13,551,340
Budgeted maintenance and operating expenses	1,372,165	5,854,823
Demand Side Management Program and projects	<u>1,646,041</u>	<u>1,806,014</u>
	\$ <u>4,645,344</u>	\$ <u>21,212,177</u>

(13) Subsequent Events

In October 2016, Bill 2-33 was passed, enacting two new government retirement plans; the DB Lite plan and the Guam Retirement Security Plan. Beginning 2018, the Security Plan and Defined Contribution plan are to become the primary retirement systems for all new hires.

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Notes to Financial Statements  
September 30, 2016 and 2015

(14) Utility Plant

A summary of changes in capital assets for the years ended September 30, 2016 and 2015 were as follows:

<b>2016</b>	<b>Estimated Useful Lives in Years</b>	<b>Beginning Balance October 1, 2015</b>	<b>Transfers and Additions</b>	<b>Transfers and Deletions</b>	<b>Ending Balance September 30, 2016</b>
<u><b>Depreciable:</b></u>					
Steam production plant	25 - 50	\$ 101,802,084	\$ 15,477,391	(1,058,402)	\$ 116,221,073
Other production plant	25	271,811,044	2,262,159	(48,871,299)	225,201,904
Transmission plant	30 - 45	168,377,451	10,225,658	(26,274)	178,576,835
Distribution plant	25 - 45	215,803,790	7,080,812	(1,903,533)	220,981,069
General plant	3 - 60	90,173,607	2,718,926	266,221	93,158,754
Production plant under capital lease	20 - 40	155,382,727	-	-	155,382,727
		1,003,350,703	37,764,946	(51,593,287)	989,522,362
Accumulated depreciation		(494,104,531)	(44,240,395)	(1,917,647)	(540,262,573)
		509,246,172	(6,475,449)	(53,510,934)	449,259,789
<u><b>Non-depreciable:</b></u>					
Land and land rights		1,072,236	-	-	1,072,236
Construction work in progress		31,056,101	27,252,248	(41,101,919)	17,206,430
		32,128,337	27,252,248	(41,101,919)	18,278,666
		<u>\$ 541,374,509</u>	<u>\$ 20,776,799</u>	<u>\$ (94,612,853)</u>	<u>\$ 467,538,455</u>
<b>2015</b>	<b>Estimated Useful Lives in Years</b>	<b>Beginning Balance October 1, 2014</b>	<b>Transfers and Additions</b>	<b>Transfers and Deletions</b>	<b>Ending Balance September 30, 2015</b>
<u><b>Depreciable:</b></u>					
Steam production plant	25 - 50	\$ 100,124,986	\$ 2,270,643	\$ (593,545)	\$ 101,802,084
Other production plant	25	265,726,059	6,212,470	(127,485)	271,811,044
Transmission plant	30 - 45	161,400,598	6,980,772	(3,919)	168,377,451
Distribution plant	25 - 45	211,851,249	5,799,656	(1,847,115)	215,803,790
General plant	3 - 60	42,277,762	49,893,284	(1,997,439)	90,173,607
Production plant under capital lease	20 - 40	171,382,727	-	(16,000,000)	155,382,727
		952,763,381	71,156,825	(20,569,503)	1,003,350,703
Accumulated depreciation		(469,978,040)	(41,765,404)	17,638,913	(494,104,531)
		482,785,341	29,391,421	(2,930,590)	509,246,172
<u><b>Non-depreciable:</b></u>					
Land and land rights		1,072,236	-	-	1,072,236
Construction work in progress		68,834,656	40,043,333	(77,821,888)	31,056,101
		69,906,892	40,043,333	(77,821,888)	32,128,337
		<u>\$ 552,692,233</u>	<u>\$ 69,434,754</u>	<u>\$ (80,752,478)</u>	<u>\$ 541,374,509</u>

**GUAM POWER AUTHORITY**  
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Required Supplemental Information (Unaudited)  
Schedule of Proportional Share of the Net Pension Liability  
Last 10 Fiscal Years\*

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Government of Guam net pension liability	\$ 1,370,173,934	\$ 1,246,306,754	\$ 1,303,304,636
GPA's proportionate share of the net pension liability	\$ 71,049,220	\$ 67,025,973	\$ 77,870,353
GPA's proportion of the net pension liability	5.19%	5.38%	5.97%
GPA's covered-employee payroll**	\$ 26,270,086	\$ 26,951,843	\$ 27,262,728
GPA's proportionate share of the net pension liability as percentage of its covered employee payroll	270.46%	248.69%	285.63%
Plan fiduciary net position as a percentage of the total pension liability	53.50%	56.60%	53.94%

\* This data is presented for those years for which information is available.

\*\* Covered-employee payroll data from the actuarial valuation date with one-year lag.

See Accompanying Independent Auditors' Report.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Required Supplemental Information (Unaudited)  
Schedule of Pension Contributions  
Last 10 Fiscal Years\*

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially determined contribution	\$ 6,992,435	\$ 7,253,802	\$ 7,391,863
Contribution in relation to the actuarially determined contribution	<u>6,993,365</u>	<u>7,249,568</u>	<u>7,375,045</u>
Contribution (excess) deficiency	<u>\$ (930)</u>	<u>\$ 4,234</u>	<u>\$ 16,818</u>
GPA's covered-employee payroll **	<u>\$ 26,270,086</u>	<u>\$ 26,951,843</u>	<u>\$ 27,262,728</u>
Contribution as a percentage of covered-employee payroll	26.62%	26.90%	27.05%

\* This data is presented for those years for which information is available.

\*\* Covered-employee payroll data from the actuarial valuation date with one-year lag.

See Accompanying Independent Auditors' Report.



**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Required Supplemental Information (Unaudited)  
Schedule of Sales of Electricity  
Last 10 Fiscal Years\*

	2016	2015
Commercial	\$ 120,185,796	\$ 145,356,113
Residential	92,057,360	105,533,051
Government of Guam	45,460,183	53,709,913
U.S. Navy	49,193,414	61,586,006
	<u>\$ 306,896,753</u>	<u>\$ 366,185,083</u>
Annual Electric Sales in kWh		
Commercial	580,473,950	571,569,295
Residential	487,022,560	461,568,899
Government of Guam	176,786,363	176,890,499
U.S. Navy	318,082,773	317,393,055
Other	11,974,425	12,165,406
	<u>\$ 1,574,340,071</u>	<u>\$ 1,539,587,154</u>

See accompanying independent auditors' report.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Schedule of Operating and Maintenance Expenses  
Years Ended September 30, 2016 and 2015

	2016	2015
Administrative and General:		
Salaries and wages:		
Regular pay	\$ 4,931,869	\$ 4,522,993
Overtime	57,528	32,060
Premium pay	2,367	1,873
Benefits	2,220,391	10,593,967
Pension adjustment	4,413,468	(8,045,373)
Total salaries and wages	<u>11,625,623</u>	<u>7,105,520</u>
Insurance	7,178,726	5,439,736
Retiree COLA/supplemental benefits	4,146,630	3,833,401
Contract	3,993,505	3,381,260
Utilities	1,715,061	1,863,688
Travel	161,923	208,905
Other administrative expenses	158,237	93,851
Operating supplies	109,670	121,018
Trustee fee	93,944	89,993
Office supplies	84,110	54,237
Training	80,951	119,877
Overhead allocations	13,671	31,437
Completed work orders	(829,045)	(1,065,197)
Miscellaneous	524,717	630,273
Total administrative and general	<u>\$ 29,057,723</u>	<u>\$ 21,907,999</u>
Customer Accounting:		
Salaries and wages:		
Regular pay	\$ 1,835,855	\$ 1,563,272
Overtime	39,481	115,139
Premium pay	4,718	5,341
Benefits	144,309	141,656
Total salaries and wages	<u>2,024,363</u>	<u>1,825,408</u>
Completed work orders	950,692	283,753
Collection fee	866,868	1,280,340
Communications	333,478	303,432
Demand-side management program	189,179	-
Office supplies	61,420	42,574
Overhead allocations	44,260	31,169
Contracts	18,091	18,000
Operating supplies	11,330	2,334
Miscellaneous	2,242	(6,734)
Total customer accounting	<u>\$ 4,501,923</u>	<u>\$ 3,780,276</u>

See accompanying independent auditors' report.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Schedule of Operating and Maintenance Expenses, Continued  
Years Ended September 30, 2016 and 2015

	2016	2015
Fuel:		
Salaries and wages:		
Regular pay	\$ 111,773	\$ 86,400
Overtime	8,499	7,693
Premium pay	292	240
Benefits	92	-
Total salaries and wages	<u>120,656</u>	<u>94,333</u>
Fuel	<u>146,219,271</u>	<u>204,041,603</u>
Total fuel costs	<u>\$ 146,339,927</u>	<u>\$ 204,135,936</u>
Other Production:		
Salaries and wages:		
Regular pay	\$ 7,913,336	\$ 8,786,928
Overtime	477,671	675,715
Premium pay	169,927	185,617
Benefits	756,612	866,451
Total salaries and wages	<u>9,317,546</u>	<u>10,514,711</u>
Contract	4,766,115	6,863,305
Completed work orders	854,916	1,892,785
Operating supplies	772,018	481,606
Overhead allocations	114,875	91,902
Office supplies	9,325	10,457
Miscellaneous	-	224,261
Total other production	<u>\$ 15,834,795</u>	<u>\$ 20,079,027</u>
Transmission and Distribution:		
Salaries and wages:		
Regular pay	\$ 6,728,684	\$ 6,528,626
Overtime	366,604	367,768
Premium pay	65,416	65,325
Benefits	427,125	483,867
Total salaries and wages	<u>7,587,829</u>	<u>7,445,586</u>
Overhead allocations	1,763,708	1,549,072
Contract	924,002	994,331
Operating supplies	600,006	705,173
Completed work orders	(75,247)	463,385
Office supplies	16,290	12,444
Total transmission and distribution	<u>\$ 10,816,588</u>	<u>\$ 11,169,991</u>

See accompanying independent auditors' report.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Schedule of Salaries and Wages  
Years Ended September 30, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Salaries and wages:		
Regular pay	\$ 21,521,517	\$ 21,488,219
Overtime	949,783	1,198,375
Premium pay	242,720	258,396
Benefits	3,548,529	12,085,941
Pension adjustment	<u>4,413,468</u>	<u>(8,045,373)</u>
Total salaries and wages	\$ <u>30,676,017</u>	\$ <u>26,985,558</u>

See accompanying independent auditors' report.

**GUAM POWER AUTHORITY**  
**(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)**

Employees by Department  
Years Ended September 30, 2016 and 2015

		2016	
		Full Time Employees (b)	PL 28-150 Section 45b Category Personnel Services (a)
Department:			
Board	2	\$	219,885
Executive	17		806,318
Administration	23		2,340,751
Finance	25		2,085,640
Planning and Regulatory	8		746,903
Property and Facilities	9		371,560
Purchasing and Supply Management	20		701,113
Customer Service	45		2,280,945
Engineering	37		2,327,129
Generation	142		10,258,764
Strategic Planning and Operation Research and Development	10		934,749
Power System Control Center	21		1,844,120
Transportation	10		124,424
Transmission and Distribution	97		5,290,333
Total full time employees	<u>466</u>		<u>30,332,634</u>
Apprentice and summer engineering			<u>343,383</u>
			<u>\$ 30,676,017</u>
		2015	
		Full Time Employees (b)	PL 28-150 Section 45b Category Personnel Services (a)
Department:			
Board	2	\$	250,884
Executive	17		790,761
Administration	24		2,474,997
Finance	23		2,059,336
Planning and Regulatory	7		656,421
Property and Facilities	7		353,058
Purchasing and Supply Management	20		700,112
Customer Service	57		2,602,757
Engineering	34		2,363,823
Generation	158		13,107,364
Strategic Planning and Operation Research and Development	9		843,717
Power System Control Center	21		1,901,098
Transportation	11		237,068
Transmission and Distribution	99		6,303,874
Total full time employees	<u>489</u>		<u>34,645,270</u>
Pension adjustment			<u>(8,045,373)</u>
Apprentice and summer engineering			<u>385,661</u>
			<u>\$ 26,985,558</u>

Note:

(a) The amounts consist of total payroll charge to O & M for the year end funded by revenues.

(b) Filled positions at the end of the year, excluding apprentices.

See accompanying independent auditors' report.

# NOTES

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Gloria B. Nelson Public Service Building  
688 Route 15 Fadian, Mangilao, Guam

P.O. Box 21868  
Barrigada, Guam 96921 - 1868

(671) 648-3000  
[guampowerauthority.com](http://guampowerauthority.com)