
# 1968-2018
# 50 Years of Progress

## 2018 Annual Report

# GPA VISION

GPA will be the best utility providing outstanding energy solutions to our island community.

# GPA Mission

**GPA shall provide REAL Energy Solutions:**

**R**eliable
**E**fficient, Effective, Environmentally Sound
**A**ffordable, Accountable
**L**eading Energy Solutions

***This report is dedicated to each of these unsung heroes whose time and service are also a part of GPA's history. Their memory lives on at GPA. We treasure their contributions and the sacrifices of their families in having served the mission of GPA and all the people of Guam.***

| | |
|---|---|
| **1970** | **Jose M. Crisostomo, Electric Operations Trainee** |
| **1974** | **Jose G. Manibusan, Electric Operations Trainee** |
| **1978** | **Thomas T. Meno, Line Electrician Leader** |
| **1984** | **Frank P. Concepcion, Electric Troubleshooter** |
| **1989** | **Pedro G. Cepeda, II Electric Operations Trainee** |
| **1989** | **Juan S. Santos, Electric Troubleshooter** |
| **2002** | **Patrick V. Respicio, Substation Electrician Leader** |

# GUAM POWER AUTHORITY

**Aturidåt Ilektrisedåt Guahån**

GPA Annual Report Fiscal Year 2018

For 50 years, the Guam Power Authority has operated as a public power utility that provides adequate, not-for-profit, reliable electricity, at a reasonable cost, with the proper protection of the environment, for the ratepayers of Guam.

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# The Guam Power Authority Overview

Established in 1968, the Guam Power Authority (GPA) is a public corporation and autonomous instrumentality of the Government of Guam. Since 2002, GPA has been governed by the Consolidated Commission on Utilities (CCU), a five-member board elected by the people of Guam. The CCU establishes policies and controls for the operations of the Authority.

GPA is subject to the regulations of the Guam Public Utilities Commission (GPUC). The GPUC members are appointed by the Governor of Guam with the responsibility and authority to review all contracts in which GPA may engage, which would impact rates and charges. GPA has adopted the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission (FERC). GPA continuously works to improve its credit worthiness and maintains U.S. bond rating agencies' investment grade ratings from Moody's Standard & Poor's, and Fitch.

The Authority owns total assets of $954M, employs a workforce of 464 and serves approximately 51,000 customers, with the U.S. Navy being the largest, representing approximately 16 percent of revenues.

GPA is Guam's sole public power electric utility, with a power supply from various fuel oil based generating units including 420 megawatts (MW) of installed generation capacity and 25.3 megawatts of renewable capacity; 1,797 miles of combined transmission and distribution lines and 29 substations.

GPA has forged independent private partnership contracts to achieve a 25 percent Renewable Energy Portfolio Standard (RPS) by 2021, to hedge against rising fuel prices; and to include an additional 160 megawatts of solar photovoltaics and 150 megawatts of Energy Storage Systems (ESS) expected to come online by 2022. GPA is working to achieve a 50 percent renewable energy portfolio by 2035.

A planned addition of 180 megawatts of new, flexible base load generation capacity expected to come online by late 2022, will allow GPA to meet future load growth on Guam and also add more renewable energy sources to the island wide power system.

Committed to providing affordable and reliable power, GPA maintains the lowest rates compared to other neighboring Pacific islands at an average rate of 24.9 cents per kWh in 2018.

The Guam Power Authority is a member of the American Public Power Association (APPA) representing 2,011 community-owned electric utilities in 49 states and 5 U.S. territories. Collectively, these public power utilities service more than 49 million Americans. Created in 1940, the APPA is a non-profit, non-partisan organization, which advances the public policy of its members and their consumers, and provides member services to ensure adequate, not-for-profit, reliable electricity, at a reasonable price with the proper protection of the environment. The APPA currently ranks GPA 49th in the top 100 public power utilities by net generation in megawatt-hours; 62nd by number of customers, and 45th in revenues.

UFISINAN IMAGA'HÅGA
OFFICE OF THE GOVERNOR

LOURDES A. LEON GUERRERO
MAGA'HÅGA • GOVERNOR

JOSHUA F. TENORIO
SIGUNDO MAGA'LÅHI • LIEUTENANT GOVERNOR

# 2018 Guam Power Authority Annual Report

*Håfa Adai!*

On behalf of the Leon Guerrero-Tenorio Administration, we would like to call special attention to the Guam Power Authority's men and women, both past and present, on their 50th Anniversary of service to the People of Guam. The Guam Power Authority's record of achievement over these past five decades is a testament to the vision and commitment to excellence to those whose professions align with the highest traditions of public service.

Our island has changed much over the years, as has our standard of living. The most basic of needs to maintain our quality of life depend on a reliable electrical grid that adapts to an ever-changing industry. In every decade since its creation in 1968, GPA has, through innovation or sheer determination, worked through many challenges, and has provided reliable power. This was done through sound policy, pragmatic solutions, and teamwork.

The Authority's plans within the next 5 years will bring even more benefits for ratepayers. With over 100 megawatts of solar energy to offset our reliance on imported fossil fuels, utility scale battery storage to help reduce the need for diesel generators during peak hours, more backup generators for water and wastewater pumps, more underground line projects and a new power plant that improves system efficiency and renewable integration, the Guam Power Authority will surely tum the next 50 years for Guam into a success.

Congratulations to the Guam Power Authority on celebrating 50 years of service to the people of Guam.
We look forward to the next 50 years of continued excellence in service that will benefit our island and our people!

*Si Yu'os Ma'åse!*

Lourdes A. Leon Guerrero
*Maga'hågan Guåhan*
Governor of Guam

Joshua F. Tenorio
*Sigundo Maga'låhen Guåhan*
Lt. Governor of Guam

# 50-Year Milestones

**1968** "The Guam Power Authority Act of 1968," established GPA on May 8, 1968, when it was signed by Governor Carlos Garcia Camacho.

**Prior to 1968, the U.S. Navy was the sole supplier of electrical power to Guam.**

**1950** The Guam Organic Act of 1950 designated the island of Guam as an unincorporated territory of the United States and established the executive, legislative and judicial branches and transferred federal jurisdiction from the U.S. Navy to the U.S. Department of the Interior.

**1950** The Public Utility Agency of Guam (PUAG) was established by GovGuam and charged with distribution of electrical power produced by the U.S. Navy to the civilian community.

**1969** In March 1969, PUAG transferred all assets and liabilities pertaining to electric utility operations to GPA.

**1970** The first Guam bonds ever sold were $1,425,000 in GPA bonds at an interest rate of 6.5% to the Bank of America in San Francisco.

**1970** GPA installed four high speed diesel generators totaling a capacity of 11,000kW which significantly reduced power outages.

**1971** Construction began on four 2,500kW General Motors diesel units at GPA's Dededo Diesel Plant. Also planned were four 2,500 kW diesel units at the Tamuning Substations.

**1971** The GPA Board of Directors authorized the U.S. Navy OICC, Marianas, to enter into a contract to build GPA's first base load steam electric generating plant, a 25 megawatt unit to be located adjacent to the U.S. Navy power plant at Tanguisson Point. Tanguisson 1 came online later that year and a second plant, Tanguisson 2, came online in 1972.

**After decades of service "Tango 1" and "Tango 2" were cleaned to environmental standards and closed in January and February of 2015.**

**1972** An agreement between GovGuam and the federal government established a target date of 1975 for GPA to assume full control of the Island Wide Power System (IWPS) with the U.S. Navy becoming GPA's customer.

**1972** The Power Pool Agreement provided for the pooling of power generation and transmission facilities and cost sharing between the U.S. Navy and GPA. Under this agreement GPA demonstrated its ability to assume operational control of the IWPS.

**1972** The U.S. Navy power barge Inductance was loaned to GPA to provide additional power. It became operational on March 15, 1972.

**1972** GPA's Dededo Diesel Plant became operational on October 15, 1972.

**1974** GPA's Cabras #1 unit, a 66 megawatt reheat-type steam turbo electric generator, came on-line. The unit was financed by a $25 million bond sale.

**1975** The GPA Cabras #2 unit, a 66 megawatt reheat-type steam turbo electric generator came on-line.

**1975** GPA constructed two 268,000 barrel tanks in order to purchase fuel directly from suppliers and reduce costs.

**1976** The U.S. federal government granted a $36 million loan guarantee to GPA with stipulations to be established by the U.S. Department of Interior.

**1977** GPA worked to recover business operations losses due to unaccountable energy losses caused by Typhoon Pamela and billing and collection challenges.

**1978** GPA established a policy of replacing wooden power poles with concrete poles. Known as "pole hardening," the decades-long process has made the IWPS more typhoon resistant.

**1979** The Guam Power Authority Services Rules and Rate Schedule was established.

**1979** GPA strived to achieve financial stability. The Guam Public Utilities Commission (GPUC) granted a 10.7 percent rate increase to meet contractual obligations and debts.

**1979** The Clean Air Act and Clean Water Act presented serious compliance challenges for GPA. The U.S. Environmental Protection Agency (USEPA) supported Guam's progress toward compliance.

**1981** Inflation and the decline in kilowatt hour sales created a cash crunch for GPA, but the Guam Legislature advised the GPUC to take no action to avoid placing a financial burden on GPA customers. Subsequently, the Guam Legislature abolished the GPUC with the enactment of P.L. 16-49.

**1982** Inflation continued to rise and GPA requested a rate increase, but the public resisted such measures. In March 1982, the Guam Legislature froze all rates.

**1983** GPA received an alleged default notice under the trust agreement of the bond indenture caused mainly by the erosion of GPA's autonomy and insufficient debt service coverage for an ensuing 12-month period.

**1984** Public Law 17-074 created the Guam Public Utilities Commission (GPUC) to regulate utility rates for Guam Power Authority, the Guam Waterworks Authority, and the (now private) Guam Telephone Authority.

**1984** A default crisis and cash shortage challenged GPA. The Secretary of the Interior signed an agreement to extend time to repay a $36 million loan.

**1985** The U.S. EPA granted a continuing exemption to GPA under the provisions of the Clean Air Act.

**1989** A Customer Service Agreement provided for joint U.S. Navy/GPA operation of the IWPS until GPA assumed full responsibility. The U.S. Navy and other Department of Defense facilities would become full-service customers of GPA. In addition, certain U.S. Navy -owned joint assets were to be transferred to GPA.

**1991** The GPUC and Guam Legislature approved the GPA-U.S. Navy Customer Supplier Agreement.

**1991** GPA recorded a 13.3 percent growth rate—the largest growth recorded over the previous eight years.

**1992** Governor Joseph F. Ada signed the GPA-U.S. Navy Customer Supplier Agreement into law, making the U.S. Navy a customer of GPA.

**1992** GPA installed emergency standby generators at 139 PUAG water wells and booster pump sites. These generators were needed to keep fresh water available during power outages and after disasters.

**1992** GPA's Dededo Combustion Turbine Unit #1 came online.

**1993** GPA installed approximately 84 megawatts of emergency generating capacity dubbed "Fast Track" generators.

**1993** The GPUC approved Cabras 3 and 4. These were GPA's first new base load generator power plants in almost 20 years.

**1996** GPA and the U.S. Navy entered into a 50-year lease agreement to transfer to GPA the operations, maintenance and custody of certain U.S. Navy-owned electrical transmission and distribution lines, and electric power generation facilities and equipment at no cost.

**1999** The Tumon Underground Conversion was completed improving power quality and reliability to Guam Memorial Hospital; and hotels and businesses in the tourism sector.

**2000** GPA introduced the Levelized Energy Adjustment Clause (LEAC) in the recovery of fuel costs. To alleviate strain brought about by fluctuating fuel rates, the Fuel Recovery Charge to ratepayers was changed from a monthly to a six-month period between rate changes.

**2001** GPA installed a 34.5kV line at the Antonio B. Won Pat Guam International Airport Authority switching station providing service for the new airport terminal.

*Continued on Page 6*

**2002** The Consolidated Commission on Utilities (CCU) was created. Elected by the people of Guam, the five-member board has jurisdiction over all utility policies pertaining to GPA and the Guam Waterworks Authority. In January 2003, the first elected CCU board was sworn in: Simon A. Sanchez, II, Chairman; Frank San Nicholas Shimizu, Vice Chairman, Guam Power Authority; Benigno Palomo, Vice Chairman, Guam Waterworks Authority; Vincent C. Camacho, Treasurer; and Dr. Judith P. Guthertz, Secretary/ Public Information Officer.

**2003** GPA entered into Private Management Contracts with TEMES for GPA's Cabras 1 and 2 base load generator units.

**2004** GPA reinstated its Apprenticeship Program, in collaboration with the Agency for Human Resource Development and Guam Community College. Some 64 trainee applicants were admitted to the program.

**2004** GPA created its Strategic Planning & Operations Research Division (SPORD).

**2005** GPA began two additional underground projects to increase reliability and streamline recovery from typhoons. One line linked the Archbishop Flores Circle to the Guam Memorial Hospital, and a second line linked Cabras Island to the Jose D. Leon Guerrero Guam Commercial Port at Apra Harbor.

**2006** GPA continued to work towards greater typhoon resiliency, with more underground transmission line conversions from Harmon to Tumon to Tamuning using FEMA hazard mitigation grants and GPA revenue funds.

**2007** GPA monthly online customer payments exceeded $1 million for the first time with 3,111 residential customers opting to pay their utility bills online.

**2008** The Guam Power Authority Integrated Resource Plan (IRP) was approved by the PUC. GPA began to pursue renewable sources of energy to reduce fuel costs under Public Law 29-62, which required 25 percent of GPA's net sales to come from renewables by December 2025.

**2009** GPA's Tree Trimming project was well underway in areas including Inarajan, Ordot/Chalan Pago, Barrigada, Santa Rita and Agat. The practice of trimming vegetation is a public safety concern; but also helps to prevent damage to the island wide power system and prevent outages.

**2009** Fitch Credit Rating Service notified GPA of its BB+ rating, with a positive outlook bringing GPA a step closer to the goal of restoring its investment grade bond rating which was lost a few years earlier.

**2009** The first use of "net metering" is implemented as a Barrigada customer generates solar power to offset IWPS grid power consumption. GPA is chosen as one of 100 electric utilities nationwide to receive federal stimulus funds under the American Recovery and Reinvestment Act (ARRA) of 2009. The $16.6 million award was to pay for half of the total GPA SMART Grid project.

**2011** GPA received PUC approval to contract for solar and wind energy technologies to improve service, efficiency and reliability. GPA's Phase 1 Renewable Acquisition included 35 megawatts of wind and solar energy production.

**2011** GPA began a $33.4 million Smart Grid Initiative Grant Program, with 50 percent ($16.7 million) funded through a federal grant. Smart Grid was designed to enhance the customer experience, improve power quality and reliability, and reduce costs.

**2012** The PUC approved a Utilities Services Contract that GPA negotiated with the U.S. Navy, its largest customer. The 10-year contract strengthened GPA's position as the sole provider of power service for Guam.

**2012** GPA signs the first renewable energy contract to reduce dependence on imported oil for power generation with Quantum Guam Power to supply 3 percent of Guam's energy needs. The 25-year contract would lessen Guam's dependence on imported fuel oil.

**2012** GPA launched its Smart Meter project with the installation of the first 5,000 digital meters.

**2013** To boost system protection and reliability, GPA completed installation of a fiber optic communications network linking its Harmon office and various GPA substations including the Guam Airport Authority, Harmon, Macheche, Dededo, Andersen Air Force Base and Pagat.

**2013** GPA received $1.5 million in funding for a wind turbine project from the U.S. Department of Interior Office of Insular Affairs grant. The single 275kW wind turbine was in service on Cross Island Road in Yona by 2015. GPA received related additional funding for a total of $2.5 million.

**2013** Funded by the Smart Grid program, GPA launched MyEnergyGuam. The program encourages consumers to control power consumption in their household.

**2013** GPA launched the Agat Village Pole Hardening and Hybrid Project which removed inaccessible wooden poles located and replace them with a combination of concrete poles and underground secondary conduits. This investment in Guam's neighborhoods improved power quality and reliability and allowed for faster restoration after storms.

**2013** GPA broke ground to build the Gloria B. Nelson Public Service Facility. This centralized office was to consolidate both GPA and the Guam Waterworks Authority.

**2014** Construction began on the Dandan solar farm. The project created 300 jobs over a period of 19 months and was built by NRG Renew, GPA, Quantum Guam Power, Inc. and Guam Solar Properties, LLC.

**2015** On January 28th, the Gloria B. Nelson Public Service Building (GBNPSB) opened in Fadian, Mangilao. The three-story building, which received a Silver LEED rating, centralizes the GPA and GWA operations. The building is of cutting edge design, and the public meeting conference room incorporates the shape of Chamorro sling stone. Over 100 pieces of original art by Guam artists depicting "Water & Energy for Guam's Past, Present & Future" are on display.

**2015** On August 31st, an explosion and fire caused the shutdown of Cabras 3 and 4, resulting in the loss of 79 megawatts of base load generation capacity.

**2015** The PUC approved $1.8 million to fund GPA's Demand Side Management Energy Sense Rebate Program.

**2016** The November purchase of new bucket trucks and other new heavy equipment expanded capacity for preventative maintenance, typhoon preparedness and LED street light installation.

**2016** In October, the PUC approved the construction of up to 180 megawatts of new, flexible generation base load capacity. The new base load power plant will allow for more renewables to be added into the grid by 2022.

**2017** Construction began in May for Battery Energy Storage Systems (BESS) in Talofofo and Agana which will increase the availability and reliability of the solar power that GPA produces.

**2017** On May 16th, GPA and the U.S. Navy entered into a 164-acre land lease agreement for the installation of 40 megawatts of utility scale renewable energy projects to lessen Guam's dependency on imported, carbon fuel.

**2017** After completion of a 20-year private-public partnership agreement, GPA took over the TEMES 40 megawatt power plant assets. The transfer was made at no cost to GPA and will save ratepayers $5 million per year.

**2017** In July, GPA received two Nissan Leaf Electric Vehicles and installed one charging station. Over the next five years, GPA plans to replace its conventional vehicles and install more charging stations.

**2018** On May 8th, the Guam Power Authority celebrated 50 years of providing electrical power to the people of Guam. The dedicated efforts of past and present employees of the Authority has allowed the development of reliable, safe, affordable and environmentally-friendly power to serve the island's needs today and tomorrow.

**2018** The 34th Guam Legislature approved GPA's land rezoning request to build Guam's new base load power plant in Ukudu, Dededo. Costing $400 million, the 180 megawatt power plant will allow GPA to substantially improve reliability and in addition provides the opportunity to gain control of Guam's energy costs.

**2019** 40 megawatts of utility-scale Battery Energy Storage Systems (BESS) will come online. This will be GPA's first BESS, which will reduce outages and improve power quality.

**2021** An additional 120 megawatts of renewable solar power will come online. This project will provide approximately 18 percent of Guam's energy needs, resulting in over $43 million in savings in the first five years.

**2021** 26 percent of Guam's energy needs will be provided by renewable energy sources; exceeding the mandate of PL 29-62 requiring GPA to produce 25 percent of net electricity sales through renewables, by 2035.

**2022** A NEW 180 megawatt base load power plant to be commissioned. This plan will allow GPA to comply with USEPA regulations and expand renewable energy production.

# CONSOLIDATED COMMISSION ON UTILITIES

### Message from the Consolidated Commission on Utilities

It is with great pleasure that we present to you this Guam Power Authority Fiscal Year 2018 Annual Report, as we commemorate our golden anniversary. We, the Consolidated Commission on Utilities, wish to recognize the previous board and commission members, management and employees whose service to our ratepayers has resulted in the Guam Power Authority becoming a ranking national public utility; committed to making continual improvement in services to our ratepayers in the future.

Throughout its 50-year history, GPA has worked to build a solid foundation of resiliency through investments in people and assets. Since 1968, GPA has confronted many challenges unique to our location in Micronesia, such as operating an isolated electric utility with no connections to any other power grid, while still delivering a similar level of service as other electric utilities that are connected to a power grid. And, GPA's track record of recovery of services after numerous typhoons and tropical storms, has improved to a world class standard.

Finally, I acknowledge a fellow commissioner, whose life embodied the spirit of our Consolidated Commission on Utilities and to whom our home in Fadian is dedicated – former Commissioner Gloria B. Nelson. Her commitment to our island through her public service is one shining example of the best we bring every day to our ratepayers.

Joseph "Joey" T. Duenas
Chairman
Consolidated Commission on Utilities

# GUAM POWER AUTHORITY
Aturidåt Ilektrisedåt Guahån

## Message from the General Manager

This year, the Guam Power Authority commemorates 50 years of service to the ratepayers of Guam since its creation in 1968 with legislation signed into law by then Governor Carlos G. Camacho. With the enactment of this legislation, Governor Camacho created an entity that would go on to depict the noblest traditions of pride in public service, professionalism in work and quality customer service.

Over five decades, the tools and technology our industry deploys to better serve customers has changed. Our core functions have advanced from just generating, transmitting and distributing electricity and billing for such services, to providing energy solutions for customers to help maintain their quality of life; and GPA will continue to evolve, adapt and modernize. Progressing from conventional generation units to renewable energy systems, from field map surveys to global positioning systems, from manual ledger entries to data entry on financial management software, from roving meter reading to smart grid technology; from typewriters to desk top computers, the driving force behind all these changes and their necessary function in GPA – has been and will continue to be the resolute public service spirit and resilience of our employees.

Guam Power Authority's progress and success has always rested on our single greatest asset: the men and women of GPA. Throughout GPA's history, our employees have worked to deliver the necessary improvements to ensure the reliability of the island wide power system, which serves to benefit all GPA ratepayers. Through hard and dangerous work, selfless actions, skills improvement, job expertise and experience, the current GPA employees and numerous retirees of these past five decades, has positioned GPA well in its continuing commitment to meeting the growing demand for power and finding energy solutions here at home. We also recognize in this report, those whom have passed away while in the line of duty – they remain a part of our GPA history.

We also thank our employee's families for their support and sacrifices in ensuring a safe and secure home front, so that our employees could respond to the call and need for work during the most difficult of times including storms, typhoons, other disasters here at home, and providing mutual aid in other locations.

We sincerely thank our ratepayers and our entire community for the patience, confidence and support entrusted to GPA over these many years, as we continually commit to providing the best service which you deserve.

Senseramente,

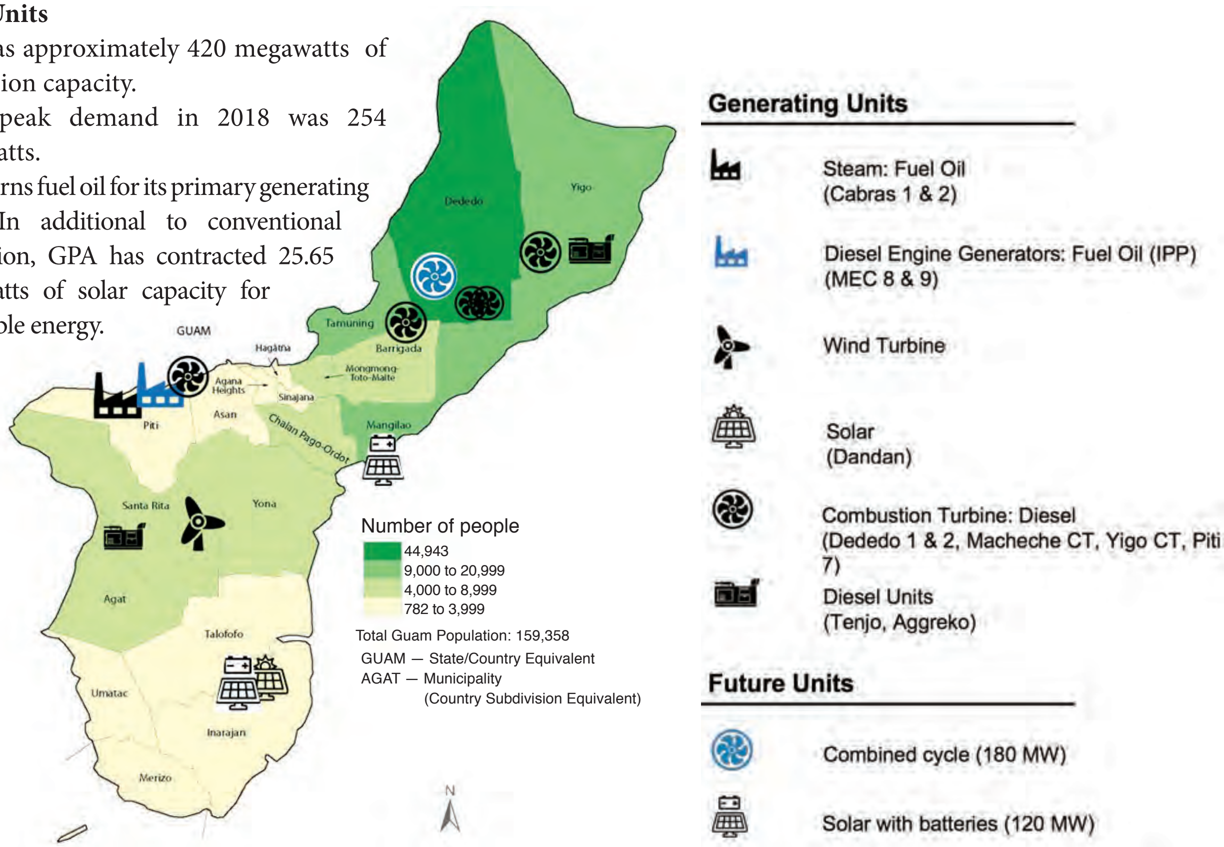
John M. Benavente, P.E.
General Manager

# Fiscal Year 2018
## GPA by the Numbers

- **$954 million** - Total assets as of September 30, 2018
- **$952 million** - Total liabilities including Pension and Other Post Employment liability, as of September 30, 2018
- **$380 million** - GPA's annual revenue from approximately 51,000 customers

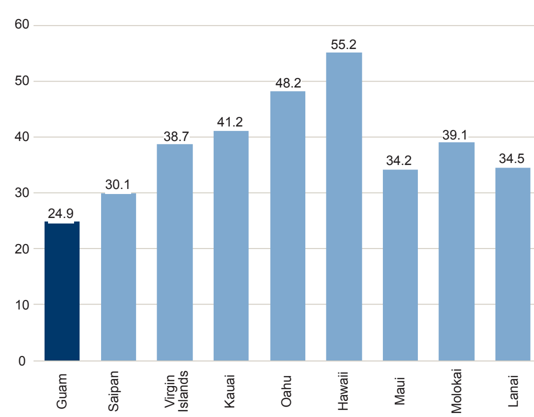
**Generating Units**

- GPA has approximately 420 megawatts of generation capacity.
- GPA's peak demand in 2018 was 254 megawatts.
- GPA burns fuel oil for its primary generating units. In addition to conventional generation, GPA has contracted 25.65 megawatts of solar capacity for renewable energy.




**Residential Rate Comparison**

Committed to providing affordable and reliable power to the people of Guam, GPA maintains the lowest rates compared to other neighboring Pacific islands. GPA's system average rate was 24.9 cents per kWh in 2018.




*Note: Rates for Guam as of August 1, 2018. Rates for Oahu, Molokai, Lanai, Kauai, Hawaii and Maui as of October 1, 2018. Rates for Saipan as of June 1, 2018. Rates for Virgin Islands as of July 1, 2018.*

# Finances

In fiscal year 2018, all financial activities of GPA were in line with the mission, vision and goals established by the Authority. GPA's financial statements for fiscal year 2018 received a clean opinion from Deloitte & Touche. Comprehensive financials are included in this report; as well as can be reviewed online at guampowerauthority.com.

GPA's operating revenues increased by $46.4 million or 13.9% as compared to 2017. The increase is due to the Levelized Energy Adjustment Clause (LEAC), which increased due to the worldwide increase in fuel prices. GPA is determining ways to provide clean energy by adopting sustainable renewable sources of energy.

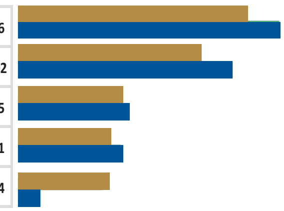
Production fuel costs increased by $51.1 million or 23.5% from Fiscal Year 2017. These costs include fuel used by the generation facilities and the cost of fuel handling and power purchased from third parties. GPA is planning to increase its renewable resources and fuel diversification. Other expenses increased slightly as compared to the prior year. Other postemployment benefits were recognized this year.

GPA's primary source of funds is the payment received from the ratepayers for power consumed. For FY2018, GPA received $377.1 million or approximately 98% of the total revenues for the year. Another source of funds for this fiscal year was the insurance settlement received from the fire and explosion damage of the Cabras 3 and 4 units. No new borrowings were transacted in FY18, except for the refunding of the 2010 Revenue Bond, which was completed in December 2017.

Most of the funds were used for various capital and related financing activities. The largest capital expenditure for FY18 was the purchase of land for the new power plant site in Ukudu, Dededo. In fiscal year 2018, GPA spent approximately $23.4 million for system and plant improvements.

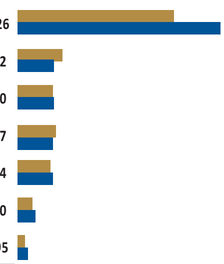
## Revenues

| Type (in $000) | 2018 | 2017 |
|---|---|---|
| Commercial | $ 146,278 | $ 126,806 |
| Residential | $ 117,823 | $ 100,602 |
| Navy | $ 59,119 | $ 54,905 |
| Government | $ 55,108 | $ 48,761 |
| Other income | $ 8,305 | $ 47,794 |
| Total | $ 386,633 | $ 378,868 |

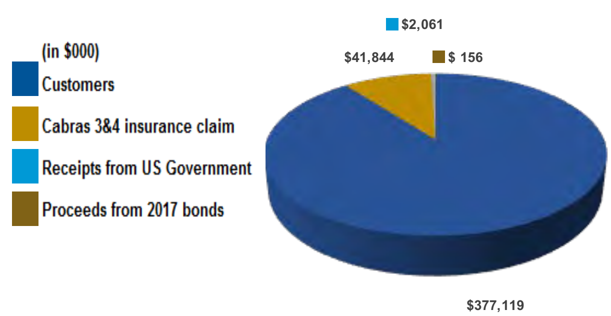


## Expenses

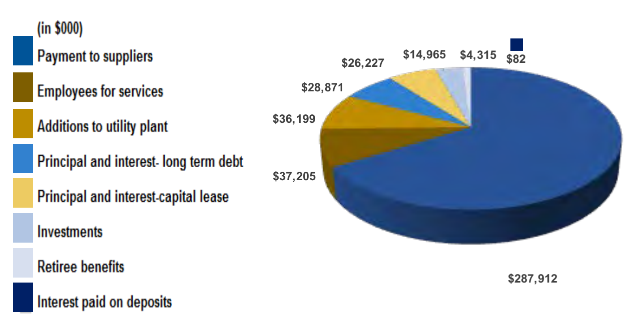
| Type (in $000) | 2018 | 2017 |
|---|---|---|
| Production fuel | $ 217,567 | $ 166,426 |
| Depreciation and Amortization | $ 37,184 | $ 44,292 |
| Interest & other Extraordinary expenses | $ 36,079 | $ 33,770 |
| IPP and Other production costs | $ 34,967 | $ 37,697 |
| Administrative and General | $ 33,971 | $ 32,484 |
| Transmission and Distribution | $ 12,338 | $ 11,750 |
| Customer Accounting | $ 6,354 | $ 4,095 |
| Total | $ 378,460 | $ 330,514 |



## Sources of Funds




## Uses of Funds



# Key Strategies and Accomplishments

## Key Performance Strategies

- Product Affordability
- Superior Customer Service
- High System Reliability
- Financially Sound and Stable
- Commitment to Workforce Development
- Optimize the Use of Technology

Six strategic measures including product affordability, superior customer service, high system reliability, sound and stable finances, a commitment to workforce development and optimizing the use of technology for all its ratepayers, drive the operations of the Guam Power Authority. Steadfastly committed to energy production and fuel diversification, GPA's efforts support a prosperous economy and an improved quality of life for all, and are key to preserving the natural resources and clean environment of our island.

**Energy Storage Systems**

The Hagåtña 24 megawatt and Talofofo 16 megawatt utility-scale energy storage systems are scheduled for commissioning in late 2019. Ratepayers will benefit through improved power quality, the reduction of short-term outages and lower fuel operating costs.

**GPA/GDOE BEST Schools Project**

The GPA/GDOE Bringing Energy Savings to Schools (BEST) Project was launched on May 16, 2018. Guam Power Authority and the Guam Department of Education (GDOE), along with the Siemens Industry, Inc., Smart Infrastructure Division are all collaborating on the project, which supports GPA's goal to help GDOE achieve its legislative mandate to deploy and utilize green energy. The program also provides an incentive for GDOE to reduce its energy use and expenditures, while modernizing infrastructure and extending the life of energy equipment with enhanced, proactive maintenance routines. On September 28, 2018, the Department of the Interior Office of Insular Affairs Energizing Insular Communities Program awarded GPA a $1.25 million grant award for LED lighting retrofits at two GDOE high schools. The grants earmarked $954,685 for Southern High School in Santa Rita and $295,315 for George Washington High School in Mangilao.

**GPA Apprenticeship Program**

On July 13, 2018, GPA graduated 15 new apprentices to journeymen certified by the U.S. Department of Labor, in its GPA Apprenticeship 4th cycle. In May 2018, GPA opened recruitment for its 5th cycle for 20 Transmission and Distribution apprentices who will eventually become U.S. Department of Labor--certified and join the GPA workforce.


**Phase II Renewables**

Beginning in 2022, ratepayers can expect a combined 120 megawatts of photovoltaic renewables to contribute to the island wide grid through GPA's Power Purchase Agreement partners KEPCO (60 MW) and Hanwha (60 MW). Annual savings will be passed through to all ratepayers in the Levelized Energy Adjustment Clause (LEAC) portion of their monthly electric bill. A total of $43 million in savings is projected in the first five years of operations.



**Supervisory Control and Data Acquisition (SCADA)**

The installation of the new GPA SCADA system is completed at Fadian, Mangilao. This state-of-the-art system is designed for power, water and wastewater operations to include systems dispatching will be managed from one location. The new SCADA system allows for GPA and GWA to better serve all customers.

**Streetlight Upgrade Replacement**

GPA Line crews continue change outs of existing High Pressure Sodium (HPS) street lights to Light Emitting Diodes (LED) street lights. This work will improve energy efficiency and reduce operating and maintenance costs, as well as contribute to public safety. GPA estimates it will save on fuel expenses by nearly $1 million annually; and reduce annual maintenance costs by approximately $400,000. Crews are prioritizing lighting along main routes and secondary roadways. The LED streetlight replacement program will continue through fiscal year 2020.

**Village Maintenance Vegetation Management Program with Mayors**

Mayors receive credit for painting power poles with yellow reflective paint and conducting vegetation trimming in certain areas within their village(s). The public is encouraged to work with their mayor(s) and GPA to help report vegetation overgrowth on or underneath GPA power lines.

# Customer Focused

Guam's economy requires a strong electric power infrastructure to support a modern standard of living.

The Guam Power Authority (GPA) marked its 50th anniversary on May 8, 2018, with a proclamation signing and year-long celebration. Today's GPA evolved from an entity with basically zero assets, to one of the region's largest public corporations, with $954 million in assets that generate $380 million in annual revenues.

Over the past half-century, GPA has overcome many substantial operational and financial challenges. GPA continues to move ahead in serving its mission for the next 50 years.

GPA has advanced through building on its capabilities and strengthening relations to develop energy solutions that are fair and equitable for all ratepayers. GPA has taken bold strides toward producing our island's power using technologies that are more reliable and economical and environmentally friendly, while at the same time maintaining a reliable grid to power Guam's economic needs today and in the future.

Over the last 50 years, with a worthy team of professional and dedicated people, GPA confronted its challenges to realize positive results. GPA has stabilized its "bottom line," resulting in avoided or minimized rate increases by employing manpower and overtime


cost-cutting measures--reducing its workforce in recent years from 543 to 464 and reducing overtime costs from $3.7 million to $1.4 million. GPA manages the fuel recovery charges on customers' power bills steadily, despite

## Smart Energy for Guam

**2011** **GPA began a $33.4 million Smart Grid Initiative Grant Program, with 50 percent ($16.7 million) funded through a federal grant. Smart Grid was designed to enhance the customer experience, improve power quality and reliability, and reduce costs.**


**2012** **GPA launched its Smart Meter project with the installation of the first 5,000 digital meters.**


**2013** **Funded by the Smart Grid program, GPA launched MyEnergyGuam. The program encourages consumers to control power consumption in their household.**


the rise and fall of fuel oil prices on the world market, which is beyond GPA's or anyone's control on Guam. An increase to the GPA base rate was last implemented in 2013.

GPA has remained focus and stood strong, making very significant progress toward adding more renewable energy to the island wide power system and is progressing toward building Guam's new base load power plant that will serve the entire island, providing dual-fuel burning capabilities to ensure less financial impacts in power bills.

All GPA ratepayers are the true owners of the Guam Power Authority and GPA is committed to providing affordable and reliable power such that in regional rate comparisons, in Fiscal Year 2018, GPA maintains the lowest rates compared to other island power utilities including the U.S. Virgin Islands, Hawaii and the CNMI at 24.9 cents per kilowatt hour.

Over the years, GPA's bond ratings have significantly improved resulting in investment grade ratings supporting GPA's bond refinancing strategies that have reduced debt service payments. In December 2017, GPA successfully refinanced bonds at the lowest interest rate of 4.12% for any Goverment of Guam entity ever; resulting in \$1.5M in savings to GPA and its ratepayers for three years. The savings are creatively being shared to assist the Guam Department of Education (GDOE) to bring solar power enhancements and engineering expertise to viable public schools; and provide funding for GPA's Guam Energy Sense Rebate program which grants rebates for consumer purchases of qualified energy-efficient appliances, thus returning cash into GPA customer's pockets.

GPA's improved operations including Guam's hardened overhead power system and newly-built underground hybrid power system, results in typhoon restoration and recovery that is safe and expeditious, as never before for GPA and Guam. The federal government and surrounding island utilities look to GPA's operations and storm-related (FEMA) financial management as a model to follow. In 2017, national and international Hurricane relief officials called upon the Guam Power Authority's management expertise, requesting recovery guidance and storm-related financial processes best practices information.

GPA recovered \$125.8M in insurance proceeds from the downed Cabras 3 and 4 base load power plants, which will which will be used to pay for Guam's new base load power plant and allow GPA to hold rates steady and not increase its base rate.

**Customer Convenience**
The Gloria B. Nelson Public Service Building in Fadian consolidated GPA and the Guam Water Works Authority (GWA) to enhance services for customers, promote operational efficiencies and customer convenience. Most importantly, the facility allows for the savings of \$1 million in annual rent for Guam's ratepayers; and millions of dollars for years to come.

*Continued on Page 16*

GPA's new energy statement, local outreach and media campaigns, its prominent web presence coupled with a strong social media program and GPA's *Insights* monthly ratepayer newsletter creatively brings customer account information and useful energy solutions options to all ratepayers. Additionally, GPA achieved its product affordability strategy through its reductions on station power at its power plants to result in fuel savings to all customers. GPA also reduced its line losses whenever possible, resulting in lower fuel expenses. And, reducing its operating costs by maintaining a steady level of FTEs and reducing overtime expenditures, results in savings passed onto GPA ratepayers. In fiscal year 2018, GPA paid out $1.3 million in Guam Energy Sense Rebates to customers for purchasing approved energy efficient appliances for their homes. Since inception of the program, GPA has paid a total of $2 million to support and encourage customers to manage power consumption in their homes, by investing in approved energy efficient appliances.

**Management of Resources**

GPA's effective management of resources shows results in GPA's total assets of $954M at consistent annual investment grade ratings. Being financially sound and stable, GPA maintains 173 days of unrestricted cash, a debt service coverage of 1.65x and consistently positive reports by Standard & Poor's, Moody's and Fitch credit rating agencies. GPA has optimized its investment in and use of technology from its 52,000+ customer smart meters, a revamped online payment system, iDashboards and Advanced Grid Analytics through to launching new Android and iOS Mobile Payment APPS for customer necessity and convenience, GPA executes continuous reviews and updates of all security processes and network systems to ensure customer data security, so that it can successfully deliver its mission.

In September 2018, GPA re-opened discussions to seek approval through a CCU Resolution and Guam Public Utilities Commission (GPUC) ruling on net metering for the consideration to change GPA's existing net metering credit from retail, to avoided costs(s); and for future net metering customers to have a credit set at the GPA avoided cost(s). The GPUC ordered GPA to continue its current net metering credit program; while both the GPUC and GPA hire an independent firm to evaluate the benefits and costs of GPA's Net Metering Program.

**Active Membership in Professional, Community and Civic Organizations**

Guam Power Authority is an active member of local, national and regional professional organizations including the Association of Government Accountants-Guam Chapter; the Guam Society of Professional Engineers and the Society of Human Resource Management (SHRM) Guam Chapter; the

*Continued on Page 18*

# Safe and Expedient  Restoration and Mutual Aid

**TYPHOON PAMELA — May 21, 1976, this Category 4 typhoon struck Guam with winds of 150mph causing $500 million in damages. Six months later, Guam's power system was substantially restored to normal ooperations.**

**TYPHOON ROY — January 12, 1988, struck with winds of 100-130mph causing $28 million in damages.**

**TYPHOON ANDY — April 21, 1989, struck Guam with winds of 80-100mph.**

**HURRICANE HUGO — September 17, 1989, a strong Category 4 hurricane, devastated the U.S. Virgin Islands with winds of 140mph. The Guam Power Authority responded to the call for humanitarian aid, mobilizing 24 personnel, tools, and line equipment to St. Croix.**

**TYPHOON RUSS — December 20, 1990, struck with winds of 120-150mph leaving $120 million in damages.**

**TYPHOON YURI — November 27, 1991, this Category 5 typhoon with winds of 90-150mph devastated Guam causing $33 million in damages.**

**TYPHOON OMAR — August 28, 1992, Category 4 with winds of 135-150, Typhoon Omar caused $457 million in damages including destruction of more than 400 power poles and an interruption of electrical power services island wide. After four weeks, Guam's power system was substantially restored to normal operations.**

**TYPHOON GAY — November 23, 1992, brought winds of 100mph.**

**HURRICANE MARILYN — September 15, 1995, a strong Category 2 hurricane struck the U.S. Virgin Islands with winds of 100mph. The Guam Power Authority sent personnel, equipment and supplies to assist with the restoration of power to the Carribean islands.**

**TYPHOON PAKA — December 16, 1997, Category 5 struck with 185 mile-per-hour winds, causing damages totaling $500 million including $16 million in damages to GPA's transmission and distribution system.**

**TYPHOON CHATA'AN — June 28, 2002, Category 4 with winds of 100 mph left damages of $60 million.**

**TYPHOON PONGSONA — December 8, 2002, Category 4 with winds of 144-173mph ravaged Guam causing $700 million in widespread damages. Just two months later, GPA had restored power to 99% of the island.**

**TYPHOON DOLPHIN — May 15, 2015 Typhoon Dolphin struck with 80-106mph winds. Although 40 percent of homes on Guam were without power, restoration was completed in just one week.**

**TYPHOON SOUDELOR — August 2015, Typhoon Soudelor left critical damage to Saipan CNMI. GPA joined "Operation Soudelor Recovery" by providing manpower support from 48 employees, materials and equipment to help our neighbors recover.**

**TYPHOON MANGKHUT — September 8, 2018, struck with winds of 80-100mph. Estimated damages were approximately $2.5 million; there were zero injuries and the island wide power system were substantially restored to normal operations in five days.**

**SUPER TYPHOON YUTU — On October 25, 2018, Super Typhoon Yutu struck Guam with 180-220mph winds and continued north to be the most powerful typhoon in U.S. history, destroying Saipan, CNMI. GPA responded with mutual aid, deploying 64 personnel, equipment and materials to complete a 4-month recovery and restoration of electrical power to residents, critical services and businesses — essentially rebuilding an isolated, island territory and economy.**

Pacific Power Association; and the American Public Power Association.

For its workforce development, GPA maintains partnerships with the Guam Community College, the Guam Department of Labor and the U.S. Department of Labor.

In February 2018, GPA Engineers were published nationally in *T&DWorld* magazine having written "Grid Upgrades Deliver Big, - Guam Power Authority implements a smart grid program to modernize infrastructure, reduce costs and increase customer satisfaction."

**Energy Solutions**

GPA's operations have evolved from being a power generator and distributor, to being an energy solutions provider.

One of GPA's landmark energy solutions is the GPA Guam Energy Sense Rebate Program that encourages conservation and lower energy consumption through a customer rebate program. GPA's Guam Energy Sense Program offers rebates on energy-efficient air conditioners, washers and dryers.

**Vegetation Management**

Providing reliable power is among GPA's goals, but Guam's ever-growing vegetation, does cause damage to power lines and unscheduled power outages. Vegetation overgrowth poses a year-round and significant challenge for GPA and GPA is investing resources to better manage vegetation trimming and clearing under power lines.

In January 2018, GPA acquired three new boom mowers, three wood chippers and two dump trucks, increasing its fleet of heavy equipment to support vegetation maintenance near GPA overhead power lines. The boom mowers are capable of extending toward hard-to-reach areas to quickly trim overgrowth. The wood chippers convert the vegetation into mulch, and the dump trucks transport the mulch to designated green waste collection points.

To augment its in-house vegetation trimming operations, GPA also engages vegetation management contractor(s) to address main roads and power lines.

For a longer-term goal to maintain a sustainable vegetation management program, GPA has forged partnerships with village mayors. Under this program, GPA pays village mayors for trimming trees and vegetation near and under power lines within various areas in their respective villages. GPA is optimistic that the Authority can now engage in more preventive maintenance work in areas prone to heavy vegetation.

**Smart World**

The world has since gotten smart and so has GPA, which has expanded the use of technology in every aspect of its operations and customer service.

Years ago, GPA retired its antiquated analog meters, replacing them with smart meters, a major component of its Smart Grid project.

The project involved the deployment of advanced metering infrastructure (AMI) and integration of the AMI with an outage



management system within the entire island wide power system. An energy management system was deployed to leverage the new automation assets.

Today, smart meters provide a more accurate reading of the ratepayers' power use, which was impossible 20 years ago. By registering through an existing account on MyEnergyGuam, customers can access and monitor their power usage. This tool allows customers to set up their payment method, allowing them to track and settle their bills at their own convenience and without having to stand in long lines.

One of the continuing innovative technological improvements GPA has made is optimizing smart phone technology. This year, GPA rolled out its mobile payment portal, downloadable on Apple and Android cellular phones. This allows customers to pay their utility bills anytime, at their convenience.

The GPA mobile app features allow customers to view their payment history, power use or consumption over a period of time and/or make changes to an account such as updating a mailing address and phone number.

GPA continues to explore new innovations, operational efficiencies and organizational effectiveness to serve its mission of delivering reliability, quality service and affordability to all our ratepayers. GPA has further embraced technology by enhancing its web and social media presence to better communicate and engage with customers.

# Safety Awards

American Public Power Association

1988 — 1st Place
1989 — 1st Place
1990 — 1st Place
1991 — 1st Place
1992 — 1st Place
1993 — 1st Place
1997 — Honorable Mention
1998 — 2nd Place

1999 — 1st Place
2000 — 3rd Place
2001 — 3rd Place
2002 — 1st Place
2006 — 3rd Place
2007 — 2nd Place
2008 — 3rd Place
2009 — 2nd Place

2010 — 2nd Place
2011 — 1st Place
2012 — 2nd Place
2013 — 3rd Place
2015 — 3rd Place
2016 — 3rd Place
2017 — 3rd Place
2018 — 1st Place


# Government Recognition Awards

The 'Magnificent Seven Awards,' evolved over the years to become the MagPRO Awards wherein pride in public service is celebrated in recognition of government employees, programs, leaders and agencies. Since the program began in 1987, GPA has been recognized receiving numerous awards for service, excellence in leadership, integrity, athleticism and community service projects.



# Community Owned and Community Powered


GPA's operations critically impact the overall economy and quality of life on Guam. The voice for all GPA ratepayers and our community on energy issues and solutions is the Consolidated Commission on Utilities. The CCU's local control and decision making allows the community to have a say in how their power utility runs programs and uses the revenue it generates.

GPA's employees are also ratepayers who regularly volunteer and support the community in which they work and live. For 10 years, GPA has been a major sponsor of the University of Guam's annual Island Sustainability Conference. In April 2018, GPA presented two papers entitled "A Sustainable Grid" and "An Introduction to GPA's Utility Energy Services Contract and Demand Side Services" programs to conference attendees. GPA also collaborated in support of is energy services partner Siemens and their presentation.

In June 2018, GPA partnered with the University of Guam (UOG) Sea Grant Office to showcase GPA's Demand Side Management (DSM) program, as one goal to expand energy efficiency through partnerships with other government of Guam agencies. The UOG Sea Grant retrofit project at house #25 in Dean's Circle, included the study and design of efficient energy equipment with installation(s) to reduce overall energy consumption. The UOG Sea Grant Office is a model house for energy efficiency, which includes four high energy efficiency air conditioners, one energy efficient refrigerator, one high efficiency electric water heater, LED lighting fixtures and several energy monitoring and control devices. Soon, the UOG Sea Grant Office will have use of a GPA-owned electric vehicle (EV) to gain a greater awareness of and to promote the benefits of the electric vehicle to students and the general public. It is a future goal of GPA to determine new revenue sources, including the promotion of electric vehicles as a solution to Guam's transportation resiliency. GPA will explore how to migrate through grants and/or other incentives of an electric vehicle transportation system to determine if this would increase electric revenues and decrease customer traveling and vehicle maintenance costs.

*Continued on Page 22*


GPA employees supported the non-profit Guam Cancer Care organization and signed a “Join the Fight” pledge to fight against cancer and work towards promoting a healthier Guam. Employee donations through the GPA “Power of One” Dollar program supported the American Red Cross, the American Cancer Society, regional typhoon relief and national and international hurricane relief with check donations.


Annually, GPA celebrates Public Power Week and GPA's connection to the community. GPA employees donated school supplies, to elementary schools, personal toiletry and hygiene items to the St. Dominic’s Senior Care Residential Facility; and personal toiletry and hygiene items along with toys and books to patients of the Pediatric Ward of the Guam Memorial Hospital.

Looking ahead to the future of Guam, GPA conducts education outreach to all of Guam’s public elementary, middle and high schools promoting the science and safety of electricity, energy conservation and pre and post-storm recovery to students and teachers. Additionally, GPA volunteer employees participate in school ‘Career Day’ presentations providing guest speakers, equipment and vehicle demonstrations and classroom presenters for trade and career-path occupations. GPA also collaborates with the University of Guam “TRIO” Program and accommodates tours of its Fadian headquarter facilities, exposing students to various career opportunities.

Through vegetation management, streetlight services, and other community-focused service requests, GPA bonds to all Guam village mayors. In collaboration with the mayors, the community will benefit from the consistent and sustainable programs aimed to serve the public need of ensuring reliability of the island wide power system. Such proactive activities connect GPA to the community to provide open communication channels especially to minimize vegetation outages, provide pre and post heavy weather briefings to partner and assure clarity and understanding GPA’ operations to best serve all residents.

In July 2018, GPA deployed its expertise and resources to help assess and repair the Guam Memorial Hospital’s (GMH) primary electrical panel.



GPA's contribution was to support the continuity of safe hospital services; and help Guam's community hospital avert any immediate high-cost expenditures. Looking ahead, GPA also devised a standard operating procedure for GMH emergency electrical panel repair responses, to positively impact the hospital patients, its operations and the people of Guam.

The governance of the Consolidated Commission on Utilities over the Guam Power Authority and the Guam Waterworks Authority (as GPWA) has established policies to ensure utility operations that work together, co-exist and implement similar systems in operations such as updated technologies to include billings, cyber security, data bases, and customer services. As much as possible, policies consistent across the two public corporations result in efficiencies in operations and cost savings due to economies of scale for ratepayers. The resiliency of the island wide GPWA infrastructures against storms and natural disasters have improved substantially across Guam. Recoveries from natural disasters are now quicker, effective and efficient. Recent storms have shown how services during and after storms were commendable, most especially being able to avoid water service interruption to approximately 99% of customers. This first-time, monumental accomplishment of maintaining water service delivery and restoring all power customers within one week, has set a new standard for GPA operations in the years ahead.

# Looking Ahead

The Guam Power Authority has been serving Guam for 50 years. GPA owns all power generation, transmission, and distribution assets outside of the U.S. military bases and generates all energy for the entire Guam community including the U.S. military.

GPA has entered into private public partnerships for additional generating assets in order to mitigate power shortages during various periods. Guam Public Law 29-62 established Guam's Renewable Portfolio Standard (RPS) requiring GPA to meet a 25% renewable energy penetration by 2035. GPA expects to meet this standard between 2021 and 2023. GPA's future initiatives include:

- Awarding a 25-year Independent Power Producer contract for 180 megawatts of generation capacity to replace aged power plants and to comply with Clean Air Act regulations. GPA completed its evaluation of bids for the new power plant to be constructed in Ukudu, Dededo. GPA ratepayers can look forward to improved reliability and efficiency; low cost operations and maintenance; technology compatible to solar photovoltaic resources; diversified fuel capabilities; clear, clean and compliant emissions; and minimized vulnerability to damage by tsunamis or storm surges. GPA's target date to send a contract to the Consolidated Commission on Utilities (CCU) for approval; and then on to the Guam Public Utilities Commission (GPUC) for review and approval is September 2019. Construction is planned for 2019-2022.
- Awarding 40 megawatts of photovoltaic renewables on approximately 164 acres of U.S. Navy properties with the capability to store daytime energy and shift energy for use in the evening hours.
- Establishing the next Renewable Portfolio Standard for GPA and to establish the plan to achieve such a standard by contracting for more photovoltaic renewables, as well as consideration of waste-to-energy, and other feasible technologies. GPA is formulating a plan to achieve 50% renewables by 2035.
- The procurement of Liquefied Natural Gas (LNG) with storage and gasification infrastructure in order to diversify GPA's fuel source to reduce and stabilize fuel costs.
- Upgrading GPA's power transmission system to add more renewables and to increase reliability in addition to establishing policy for storm resiliency through the long-term conversion of Guam's power grid to an underground system.
- Determining new revenue sources for GPA such as the promotion of electric vehicles as a solution to Guam's transportation resiliency.
- Establishing a Human Resources Workforce Plan. A substantial number of employees are eligible to retire over the next 10 years, which could lead to shortfalls in expertise in various areas of power utility management and operations. GPA will plan for the future needs and continue its succession and apprenticeship trainings.

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

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## FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT

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## YEARS ENDED SEPTEMBER 30, 2018 AND 2017

## (AS RESTATED)

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# 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, 2018 and 2017, 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 auditors' 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.

Deloitte.

## 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, 2018 and 2017, 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 1 to the financial statements, in 2018, GPA adopted Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (OPEB). GPA has elected to restate its 2017 financial statements to reflect the adoption of this standard. 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 pages 56 through 58, the Schedule of Pension Contributions on page 59, the Schedule of Changes in the Proportional Share of the Total OPEB Liability and Related Ratios on page 60, the Schedule of Proportional Share of the Total OPEB Liability on page 61, and the Schedule of OPEB Contributions on page 62 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.

*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 63 through 66 are presented for purposes of additional analysis and are not a required part of the financial statements.

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.

Deloitte.

**Other Matters, Continued**

*Other Financial Information, Continued*

The Schedule of Employees by Department on page 67 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 3, 2019 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 solely 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 the effectiveness of GPA's 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.

Deloitte & Touche LLP

April 3, 2019

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

Management's Discussion and Analysis
Years Ended September 30, 2018 and 2017

This Management's Discussion and Analysis should be read in conjunction with the Guam Power Authority's September 30, 2018 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, $954 million in assets, and $380 million in annual revenues. GPA currently serves approximately 51,000 customers with the U.S. Navy being the largest representing about 16% 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 such as solar and wind power generating 25 megawatts. An additional 120 megawatts of solar renewable generation have been contracted and approved by the CCU and the PUC.
- Become Financially Sound and Stable – Improve credit rating and debt service coverage.

**Promote Energy Innovation**

GPA has been operating the smart grid for the past couple of years. The smart grid includes 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 consumption online and determine which activities are contributing to the fluctuations in their bills.

In conjunction with the smart grid, GPA has been using the Customer Care and Billing system from Oracle, which enables GPA to improve billing processes, customer service, and credit management. In addition, it enables GPA to integrate to online bill payment, mobile payment applications for Android and Apple, and 24/7 pay-by-phone where account balance and payment posting are real time. Future integrations include prepaid power services and e-billing.

Customers can visit 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 energy statement provides 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 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, run smaller peaking units, and installed 40MW of diesel generation.

In addition, GPA aggressively implemented a rehabilitation plan for its Diesel engines and turbines. GPA activated its decommissioned Dededo Combustion Turbine 1 & 2 of 40MW which became fully operational by April 2017.

Currently, GPA has about 420MW of generation capacity without Cabras 3 & 4 and GPA also has 25MW of renewable generation. In 2018, GPA's peak demand was 254MW, which GPA was able to meet despite the loss of Cabras 3 & 4.

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

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 and the claim for the explosion damage has been settled. Lastly, the savings on the operational cost from not running Cabras 3 and 4 were used to fund other generation projects.

**Integrated Resource Plan**

GPA filed its updated 2016 integrated resource plan (IRP) to the CCU and PUC. The IRP included the plan to install 180MW of dual-fired combined-cycle generation units, retirement of Cabras 1 & 2, expansion of a renewable energy portfolio, and installation of energy storage. The 180MW of new generation is planned to be commissioned by December 31, 2021. MEC 8 and 9 of 88MW 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 have approved GPA's generation plan in October 2016 and GPA hired a consulting engineer to assist with the engineering and procurement.

For GPA, combined-cycle generation has several benefits like better fuel efficiency, lower capital cost compared to installing emission control system to its existing generation plants, promotes fuel diversity and is in 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 & 4 and MEC 8&9 slow speed 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 units. If the consent decree is not reached, the maximum liability for GPA would not exceed $220 million as of January 22, 2019.

**FINANCIAL HIGHLIGHTS**

The table below highlights the financial comparison from fiscal year 2016 through 2018. In 2018, the Authority adopted GASB Statement No. 75, *Accounting and Financial Reporting for Post-Employment Benefits Other Than Pensions.* The implementation of this statement had material effect on the accompanying financial statements resulting in the restatement of the Authority's fiscal year 2017 to reflect the reporting of post-employment benefits other than pension liabilities, deferred inflows of resources and deferred outflows of resources for health insurance in accordance with the provisions of GASB Statement No. 75. See note 1 to the financial statements.

In 2017, the Authority adopted GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Relate Assets That Are Not Within the Scope of GASB Statement 68, and Amendments to Certain Previsions of GASB Statements 67 and 68*, which aligns the reporting requirements for pension plans not covered in GASB Statements 67 and 68 with the reporting requirements in Statement 68. The implementation of this statement had a material effect on the financial statements resulting in the restatement of the Authority's fiscal year 2016 to reflect the reporting of pension liabilities, deferred inflows of resources and deferred outflows of resources for ad hoc COLAs and supplemental annuity payments and the recognition of pension expense in accordance with the provisions of GASB Statement No. 73. The 2016 financial statements were also restated due to changes in actuarial assumptions and other inputs used to determine the pension liabilities, deferred inflows of resources and deferred outflows of resources of the qualified pension plan.

In 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 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.

Statements of Net Position (in $million)

| | 2018 | 2017 (Restated) | 2016 (Restated) |
|---|---|---|---|
| Assets | | | |
| Current assets | $ 338.6 | $ 349.9 | $ 311.2 |
| Non-current investments | 10.6 | 12.5 | 9.8 |
| Other non-current assets | 52.4 | 61.2 | 74.4 |
| Utility plant | 493.8 | 494.8 | 467.5 |
| | 895.4 | 918.4 | 862.9 |
| Deferred outflows of resources | 58.7 | 53.7 | 28.3 |
| | $ 954.1 | $ 972.1 | $ 891.2 |
| Liabilities | | | |
| Current liabilities | $ 91.9 | $ 116.3 | $ 91.9 |
| Non-current liabilities | 860.5 | 880.0 | 862.8 |
| | 952.4 | 996.3 | 954.7 |
| Deferred inflows of resources | 20.0 | 4.5 | 3.7 |
| Net position | | | |
| Net investment in capital assets | (39.0) | (40.2) | (49.2) |
| Restricted | 19.8 | 15.2 | 4.6 |
| Unrestricted | 0.9 | ( 3.7) | (22.6) |
| | (18.3) | (28.7) | (67.2) |
| | $ 954.1 | $ 972.1 | $ 891.2 |

The decrease in current assets in 2018 compared to 2017 is due to decrease in working capital fund. GPA used its working capital to fund the under recovery from LEAC. In addition, GPA has been reinvesting in its plant assets. The increase in current assets in 2017 compared to 2016 is due to increase in accounts receivable. The accounts receivable increased in 2017 due to the insurance claim from the insurance company for Cabras 3 & 4 fire. (Note 3).

The decrease in the current liabilities in 2018 compared to 2017 is due to completion of capital lease payment of TEMES CT 7 and payment of outstanding capital project. The increase in the current liabilities in 2017 compared to 2016 is attributable to increase in fuel price.

Financial results summary:

- 2018 had an income of $10.4 million compared to an income of $38.5 million in 2017.
- Operating income for 2018 was $38.2 million, compared to $26.7 million in 2017.

The table below details certain items from GPA's Statements of Revenue, Expenses and Changes in Net Position from 2016 through 2018. The presentation below separately identifies activities that impact earnings and cost recovery activities that do not impact earnings.

| | 2018 | | | 2017 (Restated) | | | 2016 | | |
|---|---|---|---|---|---|---|---|---|---|
| (in '000) | Earning Activities | Cost Recovery Activities | Total Utility | Earning Activities | Cost Recovery Activities | Total Utility | Earning Activities | Cost Recovery Activities | Total Utility |
| Sales of Electricity | $ 160,084 | $ 217,567 | $ 377,651 | $ 164,849 | $ 166,426 | $ 331,275 | $ 159,567 | $ 146,340 | $ 305,907 |
| Other | 2,217 | - | 2,217 | 2,193 | - | 2,193 | 2,294 | - | 2,294 |
| **Total operating revenues** | **162,301** | **217,567** | **379,868** | **167,042** | **166,426** | **333,468** | **161,861** | **146,340** | **308,201** |
| Cost of electricity | - | 217,567 | 217,567 | - | 166,426 | 166,426 | - | 146,340 | 146,340 |
| Operating and maintenance | 86,953 | - | 86,953 | 96,080 | - | 96,081 | 79,640 | - | 79,640 |
| Depreciation | 37,184 | - | 37,184 | 44,292 | - | 44,292 | 44,240 | - | 44,240 |
| **Total operating expenses** | **124,137** | **217,567** | **341,704** | **140,372** | **166,426** | **306,799** | **123,880** | **146,340** | **270,220** |
| **Operating Income** | **38,164** | **-** | **38,164** | **26,670** | **-** | **26,670** | **37,981** | **-** | **37,981** |
| Interest income | | | 3,260 | | | 1,722 | | | 1,101 |
| Interest expense | | | (33,167) | | | (32,771) | | | (33,989) |
| Allowance for funds used during construction | | | 1,686 | | | 3,676 | | | 4,137 |
| Other expense, net | | | (1,472) | | | (846) | | | (451) |
| Extraordinary item | | | 1,920 | | | 40,049 | | | (19,806) |
| **Income (Loss)** | | | **$ 10,391** | | | **$ 38,500** | | | **$ (11,027)** |

**Operating Revenues**

GPA's operating revenues increased by $46.4 million or 13.9% in 2018 compared to 2017. The increase is due to increase in the LEAC rate over the course of the year due to increase in global fuel prices. GPA's operating revenues increased by $25 million or 8.1% in 2017 compared to 2016. The increase is due to increase in demand of electricity and increase in the global fuel price.

## Electric Sales Information

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Peak Demand (MW) | 257 | 249 | 255 | 258 | 261 | 254 |
| Total Electric Sales (MWh) | 1,566,410 | 1,533,323 | 1,539,587 | 1,574,000 | 1,610,093 | 1,567,052 |
| Sales Growth (%) | 0.2 | (0.2) | 0.4 | 2.2 | 2.29 | (2.7) |
| Total Customers | 48,598 | 48,918 | 49,530 | 50,207 | 51,114 | 51,372 |

The energy sales decreased by 2.7% in fiscal year 2018 compared to 2017. The decrease is due to conservation efforts by customers due to increase in LEAC rate and lower consumption due to weather during the year. The energy sales increased by 2.29% in fiscal year 2017 compared to fiscal year 2016. The increase in sales is due to increase in peak demand and customer consumption. Annual electric sales were 1,567 gWh and 1,610 gWh for 2018 and 2017, respectively. Number of customers were 51,372 and 51,114 for 2018 and 2017, respectively.

**Operating and Maintenance**

GPA's operating and maintenance expenses decreased in 2018 compared to 2017 due to the impact of GASB 75 *Accounting and Financial Reporting for Post-Employment Benefits Other Than Pensions*. Cost saving measures done in prior years carried the impact to the current year.

GPA's operating and maintenance expenses increased in 2017 compared to 2016 due to GASB 75 *Accounting and Financial Reporting for Post-Employment Benefits Other Than Pensions* and addition of 40MW power generation and repairs of existing combustion turbine. In 2016, GPA achieved several costs 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 decreased to 464 in 2018 from 475 in 2017. Overtime increase from $1.4 million in 2017 to $1.54 million in 2018. Increase in overtime was due to typhoon preparation and recovery.

GPA headcount increased from 436 in 2016 to 475 in 2017. Overtime increased from $1.2 million in 2016 to $1.4 million in 2017.

Station use in 2018 of 62,716 mWh decreased in comparison to 2017 station use of 65,895 mWh. Station use in 2017 of 65,895 mWh remained comparable to 2016 of 64,952 mWh.

T&D line loss increased from 83,949 mWh in 2017 to 84,855 mWh in 2018. T&D line loss increased in 2017 from 80,852 mWh in 2016 to 83,949 mWh in 2017.

**Depreciation and Amortization**

GPA's depreciation and amortization expense decreased in 2018 compared to 2017. The decrease is due to GPA plant assets reaching the end of their useful lives. Depreciation and amortization expense for 2017 and 2016 remained approximately the same.

**Utility Cost Recovery Activities**

**Cost of Electricity**

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

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

In addition, GPA commissioned 275kW wind project and became operational on March 2016. The $2 million wind projected was funded by USDOI Grant and providing available experience and data on the potential of wind renewable projects.

GPA completed its bid process of acquiring additional 120MW of utility scale solar farm under Phase II renewal project. This project includes batteries to mitigate the sudden drop or increase in production due to electrical or atmospheric condition like rain. GPA signed the contract in 2018 and it is anticipated to be in operations in 2020.

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

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

Interest income increased in 2018 compared to 2017 due to refinancing of 2010 revenue bond. Interest expense decreased in 2017 compared to 2016 due to GPA's lease with independent power producer being near the end of its contracts where principle balance is lower.

**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 2016 to 2018 are as follows:

| **(in millions)** | **2018** | **2017** | **2016** |
|---|---|---|---|
| Cash received from customers | $ 377.1 | $ 326.1 | $ 305.2 |
| Cash payments to suppliers | (287.9) | (233.0) | (198.8) |
| Cash payments to employees for services | (37.2) | (35.5) | (35.3) |
| Cash payments to retiree benefits | (4.3) | (4.3) | (4.2) |
| **Net cash provided by operating activities** | **$ 47.7** | **$ 53.3** | **$ 66.9** |

## 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 costs incurred during 2018 were the land acquisition for the new power plant site ($11M), ESS ($9.2M), distribution plant ($5M), diesel and CT plants system improvements ($2.6M), SCADA ($1.2M) and general plant (5.4M).

The largest capital cost incurred in 2017 are Cabras #1 overhaul ($7.7M), 40MW diesel generation ($32M), Dededo CT 1&2 ($9.4M), Macheche CT ($2.1M), Yigo CT ($2.3M), transmission plant ($4.4M), distribution plant ($6.8M) and general plant ($5.3M).

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 2016 to 2018 are as follows (in millions):

| | **2018** | **2017** | **2016** |
|---|---|---|---|
| Net cash (used in) provided by investing activities | $ (15.0) | $ 17.4 | $ (37.8) |

## Borrowing Activities

No new borrowing was done in 2016, 2017, and 2018. Refunding of 2010 Revenue bond was done in December 2017. Please refer to Note 7 to the financial statements for details of GPA's borrowing activities.

GPA's cash flows from capital and non-capital financing activities from 2016 to 2018 are as follows (in millions):

| | **2018** | **2017** | **2016** |
|---|---|---|---|
| Net cash provided by non-capital financing activities | $ 43.8 | $ 34.0 | $ 52.7 |
| Net cash used in capital and related financing activities | $ (91.1) | $ (94.5) | $ (83.4) |

## 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 as follows:

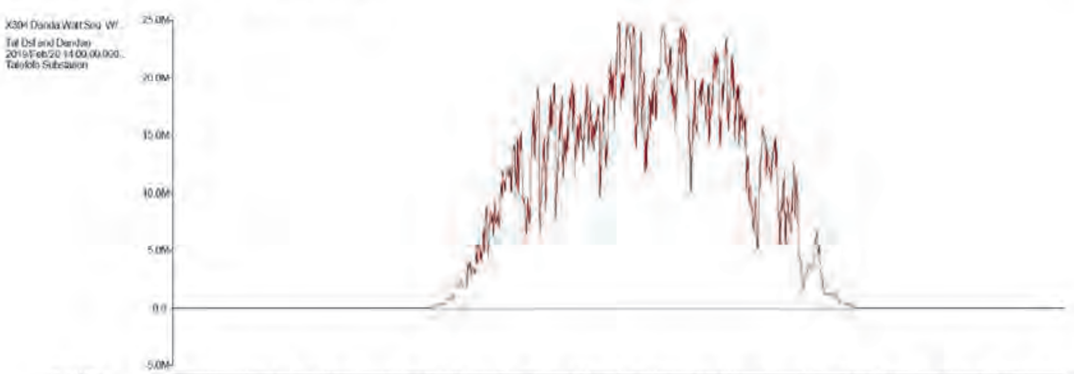
| Long-Term Senior Debt | Rating | Long-Term Outlook |
|---|---|---|
| Standard & Poor's | BBB | Stable |
| Moody's Rating | Baa2 | Stable |
| Fitch Rating | BBB- | Positive |

**Future Capital Activities**

GPA is committed to renewable energy and the reduction of greenhouse gas emissions. GPA invested in an industry scale solar farm of 25MW which became operational in 2015. GPA will be adding 120MW of solar PV as part of phase II renewable project and anticipates the system to be online by 2020. Phase III project is underway and is expected to add 35MW of renewable energy with energy storage system (ESS); shifting 100% of the energy to evening load.

The investment of 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 in Dandan 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 15MW in an hour. Below is a sample reading for a day on February 21, 2019.




To mitigate the sudden drop in power generation by solar PV, GPA procured an energy storage solution (ESS) to cut the shortfall and inject power to the system to prevent an outage. The ESS system is being installed and should be fully operational around September of 2019.

In 2016, CCU and PUC approved to proceed with the procurement of 180MW dual fire combined cycle combustion turbine. The project is planned to be operational in December 2021.

**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 up to 180MW. The plan for the procurement model is independent power purchase agreement (IPP) where the IPP finance the construction of the plant.

**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, 2017 and 2016 is set forth in GPA's report on the audit of financial statements which is dated April 16, 2018. That Discussion and Analysis explains in more detail major factors impacting the 2017 and 2016 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.

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

Statements of Net Position
September 30, 2018 and 2017

| ASSETS AND DEFERRED OUTFLOWS OF RESOURCES | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Current assets: | | |
| Cash and cash equivalents - restricted | $ 111,900,741 | $ 119,684,409 |
| Cash and cash equivalents - unrestricted | 37,805,471 | 37,681,703 |
| Total cash and cash equivalents | 149,706,212 | 157,366,112 |
| Certificates of deposit - restricted | 1,803,667 | 7,049,535 |
| Certificates of deposit - unrestricted | 999,964 | 10,248,873 |
| Total certificates of deposit | 2,803,631 | 17,298,408 |
| Investments - restricted | 28,426,513 | 27,354,760 |
| Investments - unrestricted | 38,026,695 | 5,002,970 |
| Accounts receivable, net | 37,851,906 | 77,826,134 |
| Materials and supplies inventory, net | 12,812,072 | 11,989,746 |
| Fuel inventory | 67,993,103 | 52,387,370 |
| Prepaid expenses | 979,829 | 629,586 |
| Total current assets | 338,599,961 | 349,855,086 |
| Utility plant, at cost: | | |
| Depreciable utility plant, net of accumulated depreciation | 453,695,490 | 475,219,795 |
| Non-depreciable utility plant | 40,091,847 | 19,552,409 |
| Total utility plant | 493,787,337 | 494,772,204 |
| Other non-current assets: | | |
| Cash and cash equivalents - restricted | 49,970,719 | 56,907,535 |
| Investments - restricted | 10,562,833 | 10,523,203 |
| Investments - unrestricted | - | 1,999,040 |
| Unamortized debt issuance costs | 2,503,448 | 4,267,305 |
| Total other non-current assets | 63,037,000 | 73,697,083 |
| Total assets | 895,424,298 | 918,324,373 |
| Deferred outflows of resources: | | |
| Unamortized loss on debt refunding | 27,093,636 | 11,076,064 |
| Pension | 8,932,987 | 8,698,853 |
| Other post-employment benefits | 13,798,017 | 16,621,449 |
| Unrecovered fuel costs | 8,370,542 | 16,751,048 |
| Unamortized forward delivery contract costs | 477,997 | 637,357 |
| Total deferred outflows of resources | 58,673,179 | 53,784,771 |
| | $ 954,097,477 | $ 972,109,144 |

See accompanying notes to financial statements.

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

Statements of Net Position, Continued
September 30, 2018 and 2017

| LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Current liabilities: | | |
| Current maturities of long-term debt | $ 1,630,000 | $ 1,780,000 |
| Current obligations under capital leases | 13,613,066 | 23,330,193 |
| Accounts payable: | | |
| Operations | 19,445,106 | 28,190,510 |
| Fuel | 28,979,364 | 30,802,200 |
| Accrued repair costs | - | 5,328,230 |
| Accrued payroll and employees' benefits | 1,949,080 | 1,546,860 |
| Current portion of employees' annual leave | 2,101,168 | 2,045,201 |
| Interest payable | 14,745,285 | 15,065,830 |
| Customer deposits | 9,387,519 | 8,209,228 |
| Total current liabilities | 91,850,588 | 116,298,252 |
| Regulatory liabilities: | | |
| Provision for self-insurance | 19,345,291 | 19,550,977 |
| Total regulatory liabilities | 19,345,291 | 19,550,977 |
| Long-term debt, net of current maturities | 604,881,434 | 590,568,862 |
| Obligations under capital leases, net of current portion | 10,808,951 | 24,428,832 |
| DCRS sick leave liability | 1,331,151 | 4,008,397 |
| Net pension liability | 76,554,735 | 85,875,217 |
| Other post-employment benefits liability | 145,955,861 | 154,134,007 |
| Employees' annual leave, net of current portion | 1,204,085 | 1,086,456 |
| Customer advances for construction | 385,293 | 369,180 |
| Total liabilities | 952,317,389 | 996,320,180 |
| Deferred inflows of resources: | | |
| Pension | 3,532,642 | 788,894 |
| Other post-employment benefits | 14,804,043 | 1,363,744 |
| Unearned forward delivery contract revenue | 1,752,053 | 2,336,071 |
| Total deferred inflows of resources | 20,088,738 | 4,488,709 |
| Commitments and contingencies | | |
| Net position: | | |
| Net investment in capital assets | (38,960,028) | (40,220,465) |
| Restricted | 19,750,354 | 15,232,832 |
| Unrestricted | 901,024 | (3,712,112) |
| Total net position | (18,308,650) | (28,699,745) |
| | $ 954,097,477 | $ 972,109,144 |

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
Years Ended September 30, 2018 and 2017

| | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Revenues: | | |
| Sales of electricity | $ 378,328,874 | $ 331,074,056 |
| Miscellaneous | 2,217,201 | 2,193,478 |
| | 380,546,075 | 333,267,534 |
| Bad debts (expense) recovery | (677,870) | 200,589 |
| Net operating revenues | 379,868,205 | 333,468,123 |
| Operating and maintenance expenses: | | |
| Production fuel | 217,567,039 | 166,426,110 |
| Other production | 17,414,539 | 17,762,063 |
| | 234,981,578 | 184,188,173 |
| Depreciation and amortization | 37,184,133 | 44,291,589 |
| Administrative and general | 33,971,438 | 42,337,373 |
| Energy conversion costs | 17,552,373 | 19,935,334 |
| Transmission and distribution | 12,338,142 | 11,749,623 |
| Customer accounting | 5,676,402 | 4,296,347 |
| Total operating and maintenance expenses | 341,704,066 | 306,798,439 |
| Operating income | 38,164,139 | 26,669,684 |
| Non-operating revenues (expense): | | |
| Allowance for funds used during construction | 1,686,380 | 3,675,581 |
| Non-operating grants from the United States (U.S.) Government | 1,438,655 | 153,356 |
| Interest income | 3,260,339 | 1,722,483 |
| Interest expense | (33,167,246) | (32,771,454) |
| Other expense, net | (2,911,606) | (998,654) |
| Total non-operating revenues (expense), net | (29,693,478) | (28,218,688) |
| Income (loss) before extraordinary item | 8,470,661 | (1,549,004) |
| Extraordinary item - generator explosion and fire and related insurance recoveries, net | 1,920,434 | 40,049,467 |
| Change in net position | 10,391,095 | 38,500,463 |
| Net position at beginning of year | (28,699,745) | (67,200,208) |
| Net position at end of year | $ (18,308,650) | $ (28,699,745) |

See accompanying notes to financial statements.

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

Statements of Cash Flows
Years Ended September 30, 2018 and 2017

| Increase (decrease) in cash and cash equivalents | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Cash flows from operating activities: | | |
| Cash received from customers | $ 377,119,167 | $ 326,061,020 |
| Cash payments to suppliers for goods and services | (287,912,187) | (233,043,926) |
| Cash payments to employees for services | (37,205,445) | (35,490,659) |
| Cash payments for retiree benefits | (4,315,060) | (4,239,420) |
| Net cash provided by operating activities | 47,686,475 | 53,287,015 |
| Cash flows from investing activities: | | |
| Interest on investments and bank accounts | 2,676,321 | 1,138,466 |
| Decrease in certificates of deposit | 14,494,777 | 9,955,099 |
| (Increase) decrease in investments | (32,136,068) | 6,289,121 |
| Net cash (used in) provided by investing activities | (14,964,970) | 17,382,686 |
| Cash flows from non-capital financing activities: | | |
| Proceeds from insurance claims | 41,844,342 | 34,040,000 |
| Receipts from the U.S. Government | 2,061,297 | 51,950 |
| Interest paid on deposits | (81,909) | (79,132) |
| Net cash provided by non-capital financing activities | 43,823,730 | 34,012,818 |
| Cash flows from capital and related financing activities: | | |
| Principal paid on capital leases | (23,337,008) | (21,317,453) |
| Interest paid on capital leases | (2,890,359) | (4,940,987) |
| Principal paid on long-term debt | (1,780,000) | (115,000) |
| Interest paid on long-term debt | (27,090,906) | (25,078,544) |
| Proceeds from issuance of 2017 bonds | 155,588 | - |
| Additions to utility plant | (36,199,266) | (43,057,476) |
| Net cash used in capital and related financing activities | (91,141,951) | (94,509,460) |
| Net change in cash and cash equivalents | (14,596,716) | 10,173,059 |
| Cash and cash equivalents at beginning of year | 214,273,647 | 204,100,588 |
| Cash and cash equivalents at end of year | $ 199,676,931 | $ 214,273,647 |
| Non-cash capital and related financing activities: | | |
| Proceeds from the issuance of 2017 bonds | $ 147,617,433 | $ - |
| Carrying amount of 2010 bonds | (150,440,000) | - |
| Accrued interest | (1,999,800) | - |
| Unamortized discount | 3,365,676 | - |
| Unamortized debt issuance costs | 1,456,691 | - |
| | $ - | $ - |

See accompanying notes to financial statements.

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

Statements of Cash Flows, Continued
Years Ended September 30, 2018 and 2017

| | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Reconciliation of operating earnings to net cash provided by operating activities: | | |
| Operating earnings | $ 38,164,139 | $ 26,669,684 |
| Adjustments to reconcile operating earnings to net cash provided by operating activities: | | |
| Depreciation and amortization | 37,184,133 | 44,291,589 |
| Bad debts expense (recovery) | 677,870 | (200,589) |
| Pension recovery | (6,810,868) | (885,531) |
| Cabras 4 costs | - | (1,794,874) |
| Other post-employment benefit costs | 8,085,585 | 9,853,264 |
| (Increase) decrease in assets: | | |
| Accounts receivable | (3,376,312) | (7,084,030) |
| Materials and supplies inventory | (822,326) | 1,565,973 |
| Fuel inventory | (15,605,733) | (21,061,002) |
| Prepaid expenses | (350,243) | 124,437 |
| Increase (decrease) in liabilities: | | |
| Accounts payable | (12,280,454) | 33,674,871 |
| Accrued repair costs | (3,407,796) | (16,989,279) |
| Customer deposits | (66,709) | (172,343) |
| Customer advances for construction | 16,113 | 49,859 |
| Unrecovered fuel costs | 8,380,506 | (15,258,993) |
| Accrued payroll and employees' benefits | 402,220 | 13,224 |
| Employees' annual and sick leave | (2,503,650) | 490,755 |
| Net cash provided by operating activities | $ 47,686,475 | $ 53,287,015 |

See accompanying notes to financial statements.

## (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 classified as current assets include cash on hand, cash in banks, money market accounts, certificates of deposit, 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.

Cash and cash equivalents restricted for the acquisition or construction of capital assets are classified as noncurrent assets.

(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. Investment in guaranteed investment certificate is measured at 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 deposit 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 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 cost (using the weighted average and the first-in, first-out method, respectively).

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 was $1,577,883 and $1,528,226 as of September 30, 2018 and 2017, respectively.

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

Utility Plant

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.

Depreciation

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

Compensated Absences

Vesting annual leave is accrued and reported as an expense and a liability in the period earned. No liability is accrued for non-vesting sick leave benefits. 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 (DCRS) to receive a lump sum payment of one-half of their accumulated sick leave upon retirement. A liability is accrued for estimated sick leave to be paid out to DCRS members 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. The total pension liability also includes GPA's proportionate share of the liability for ad hoc cost-of-living adjustments (COLA) and supplemental annuity payments that are anticipated to be made to defined benefit plan members and for anticipated future COLA to DCRS members. Changes in the net pension liability 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 are 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.

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

Other Postemployment Benefits (OPEB)

OPEB is required to be recognized and disclosed using the accrual basis of accounting. OPEB offered to GPA retirees includes health and life insurance. GPA recognizes OPEB liability for the defined benefit OPEB plan in which it participates, which represents GPA's proportional share of total OPEB liability - actuarially calculated - of an agent multiple employer defined benefit plan, measured one year prior to fiscal year-end and rolled forward. An OPEB trust has not been established; thus, the OPEB plan does not presently report OPEB plan fiduciary net position. Instead, the OPEB plan is financed on a substantially "pay-as-you-go" basis.

Changes in the OPEB liability during the period are recorded as OPEB 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 the OPEB 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 OPEB plan and recorded as a component of OPEB expense beginning with the period in which they are incurred.

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. Debt issuance costs related to the 2010 Series bonds were written off in fiscal year 2018 upon issuance of the 2017 Series bonds.

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.

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

Net Position, Continued

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 unbilled actual usage at month end.

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. At September 30, 2018 and 2017, GPA has an under recovery of fuel costs of $8,370,542 and $16,751,048, respectively.

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

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, 2018 and 2017.

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 and is capitalized as part of the cost of the applicable projects. AFUDC of $1,686,380 and $3,675,581 was recognized during the years ended September 30, 2018 and 2017, respectively.

New Accounting Standards

During the year ended September 30, 2018, GPA implemented the following pronouncements:

- GASB 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 implementation of this statement had a material effect on the accompanying financial statements resulting in the restatement of GPA's fiscal year 2017 financial statements to reflect the reporting of the OPEB liability, deferred inflows of resources and deferred outflows of resources for its OPEB plan and the recognition of OPEB expense in accordance with the provisions of GASB Statement No. 75. The implementation of GASB Statement No. 75 results in GPA reporting deferred outflows of resources of $2,820,229 and OPEB liability of $131,843,267 as of October 1, 2016. GPA's net position as of October 1, 2016 and the statement of revenues, expenses, and changes in net position for the year ended September 30, 2017 have been restated to reflect the required adjustments as follows:

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

### New Accounting Standards, Continued

| | As Previously Reported | Adjustment | As Restated |
|---|---|---|---|
| As of October 1, 2016: | | | |
| Net position | $ 61,822,830 | $(129,023,038) | $ (67,200,208) |
| For the year ended September 30, 2017: | | | |
| Change in net position | $ 48,353,727 | $ (9,853,264) | $ 38,500,463 |
| As of September 30, 2017: | | | |
| Deferred outflows of resources related to OPEB | $ - | $ 16,621,449 | $ 16,621,449 |
| OPEB liability | $ - | $(154,134,007) | $(154,134,007) |
| Deferred inflows of resources related to OPEB | $ - | $ (1,363,744) | $ (1,363,744) |
| Net position | $ 110,176,557 | $(138,876,302) | $ (28,699,745) |

- GASB 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.

- GASB Statement No. 85, *Omnibus 2017*, which addresses practice issues that have been identified during implementation and application of certain GASB Statements including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits).

- GASB Statement No. 86, *Certain Debt Extinguishment Issues*, which improves consistency in accounting and financial reporting for in-substance defeasance of debt.

Except for GASB Statement No. 75, the implementation of these statements did not have a material effect on GPA's financial statements.

In November 2016, GASB issued Statement No. 83, *Certain Asset Retirement Obligations*, which addresses accounting and financial reporting for certain asset retirement obligations (AROs) associated with the retirement of a tangible capital asset. The provisions in Statement No. 83 are effective for fiscal years beginning after June 15, 2018. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*, which establishes criteria for identifying fiduciary activities of all state and local governments. The provisions in Statement No. 84 are effective for fiscal years beginning after December 15, 2018. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

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

### New Accounting Standards, Continued

In June 2017, GASB issued Statement No. 87, *Leases*, which establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. The provisions in Statement No. 87 are effective for fiscal years beginning after December 15, 2019. Management has yet to determine whether the implementation of this statement will have a material effect on the financial statements.

In April 2018, GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, which improves the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. The provisions in Statement No. 88 are effective for fiscal years beginning after June 15, 2018. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*, which requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. The provisions in Statement No. 89 are effective for fiscal years beginning after December 15, 2019. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In August 2018, GASB issued Statement No. 90, *Majority Equity Interests – an Amendment of GASB Statements No. 14 and No. 61,* which improves the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and the relevance of financial statement information for certain component units. The provisions in Statement No. 90 are effective for fiscal years beginning after December 15, 2018. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

### Reclassification

Certain items in the 2017 financial statements have been reclassified to correspond with the 2018 financial statement presentation.

## (2) Cash, Cash Equivalents and Investments

The bond indenture agreements for the 2010, 2012, 2014 and 2017 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. Also, certain other funds are restricted by rate orders of the PUC.

(2) Cash, Cash Equivalents and Investments, Continued

At September 30, 2018 and 2017, cash and cash equivalents, certificates of deposit and investments held by trustees and by GPA in these funds and accounts were as follows:

| | 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cash and Cash Equivalents and Certificates of Deposit | | | | Investments | | |
| | Held By Trustees | Held By GPA | | | Held By Trustees | Held By GPA | |
| | Bond Indenture Funds | PUC Restricted Funds | Unrestricted Funds | Cash Total | Bond Indenture Funds | Unrestricted Funds | Total |
| Construction funds | $ 49,970,719 | $ - | $ - | $ 49,970,719 | $ - | $ - | $ 49,970,719 |
| Interest and principal funds | 7,435,094 | - | - | 7,435,094 | 10,562,833 | - | 17,997,927 |
| Working capital funds | 15,828,832 | - | - | 15,828,832 | 14,684,513 | - | 30,513,345 |
| Bond reserve fund | 34,858,661 | - | - | 34,858,661 | 13,742,000 | - | 48,600,661 |
| Self-insurance fund | - | 19,258,353 | - | 19,258,353 | - | - | 19,258,353 |
| Revenue funds | 14,719,830 | - | - | 14,719,830 | - | - | 14,719,830 |
| Energy sense fund | - | 1,085,472 | - | 1,085,472 | - | - | 1,085,472 |
| Operating funds | - | - | 38,805,435 | 38,805,435 | - | 38,026,695 | 76,832,130 |
| Surplus funds | 20,518,166 | - | - | 20,518,166 | - | - | 20,518,166 |
| | $ 143,331,302 | $ 20,343,825 | $ 38,805,435 | $ 202,480,562 | $ 38,989,346 | $ 38,026,695 | $ 279,496,603 |

| | 2017 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cash and Cash Equivalents and Certificates of Deposit | | | | Investments | | |
| | Held By Trustees | Held By GPA | | | Held By Trustees | Held By GPA | |
| | Bond Indenture Funds | PUC Restricted Funds | Unrestricted Funds | Cash Total | Bond Indenture Funds | Unrestricted Funds | Total |
| Construction funds | $ 56,907,535 | $ - | $ - | $ 56,907,535 | $ - | $ - | $ 56,907,535 |
| Interest and principal funds | 7,538,676 | - | - | 7,538,676 | 10,523,203 | - | 18,061,879 |
| Working capital funds | 20,367,797 | - | - | 20,367,797 | 10,353,509 | - | 30,721,306 |
| Bond reserve fund | 34,834,863 | - | - | 34,834,863 | 13,742,000 | - | 48,576,863 |
| Self-insurance fund | - | 19,251,372 | - | 19,251,372 | - | - | 19,251,372 |
| Revenue funds | 10,472,662 | - | - | 10,472,662 | - | - | 10,472,662 |
| Energy sense fund | - | 1,074,491 | - | 1,074,491 | - | - | 1,074,491 |
| Operating funds | - | - | 47,930,576 | 47,930,576 | - | 7,002,010 | 54,932,586 |
| Surplus funds | 33,194,083 | - | - | 33,194,083 | 3,259,251 | - | 36,453,334 |
| | $ 163,315,616 | $ 20,325,863 | $ 47,930,576 | $ 231,572,055 | $ 37,877,963 | $ 7,002,010 | $ 276,452,028 |

The operating funds include the remaining insurance monies of $72,039,672 and $49,700,979 as of September 30, 2018 and 2017, respectively, recovered by GPA from the Cabras 3 and 4 explosion and fire insurance claims.

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.

## (2) Cash, Cash Equivalents and Investments, Continued

### A. Cash and Cash Equivalents, Continued

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, 2018 and 2017, the carrying amount of GPA's total cash and cash equivalents and certificates of deposit was $202,480,562 and $231,572,055, respectively, and the corresponding bank balances were $202,627,178 and $231,788,408, respectively. Of the bank balance amount as of September 30, 2018 and 2017, $59,251,773 and $68,427,002, respectively, was maintained in financial institutions subject to Federal Deposit Insurance Corporation (FDIC) insurance. As of September 30, 2018 and 2017, bank deposits in the amount of $933,751 and $988,101, 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, 2018 and 2017, $58,171,406 and $67,222,548, 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, 2018 and 2017, also include $143,331,302 and $163,315,616, respectively, representing cash and 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.

### B. Investments

As of September 30, 2018, GPA's investments were as follows:

| | Amount | Maturity | Moody's Rating |
|---|---|---|---|
| *Current:* | | | |
| 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 | 7,502,921 | Less than 1 year | P-1 |
| Federal National Mortgage Association | 2,335,830 | Less than 1 year | P-1 |
| Federated Government Ultrashort Duration Fund (mutual fund) | 4,845,762 | Less than 1 year | Not rated |
| | 28,426,513 | | |
| Investments held by GPA - unrestricted: | | | |
| Operating Fund: | | | |
| Federal Home Loan Banks | 17,229,066 | Less than 1 year | P-1 |
| Federal Home Loan Mortgage Corporation | 12,817,949 | Less than 1 year | P-1 |
| U.S. Treasury Note | 7,979,680 | Less than 1 year | Aaa |
| | 38,026,695 | | |
| | $ 66,453,208 | | |

## (2) Cash, Cash Equivalents and Investments, Continued

### B. Investments, Continued

| | Amount | Maturity | Moody's Rating |
|---|---|---|---|
| *Noncurrent:* | | | |
| Investments held by trustee - restricted: | | | |
| Bond Fund: | | | |
| Bayerische Landesbank Guaranteed Investment Certificate (GIC) | $ 10,562,833 | More than 10 years | Aa3 |

As of September 30, 2017, GPA's investments were as follows:

| | Amount | Maturity | Moody's Rating |
|---|---|---|---|
| *Current:* | | | |
| 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 | 2,997,780 | Less than 1 year | P-1 |
| Federal Farm Credit Banks | 1,899,411 | Less than 1 year | P-1 |
| Federal Home Loan Mortgage Corporation | 2,374,872 | Less than 1 year | P-1 |
| Federal National Mortgage Association | 1,499,835 | Less than 1 year | P-1 |
| Federated Government Ultrashort Duration Fund (mutual fund) | 4,840,862 | Less than 1 year | Not rated |
| | 27,354,760 | | |
| Investments held by GPA - unrestricted: | | | |
| Operating Fund: | | | |
| Federal Home Loan Banks | 1,999,460 | Less than 1 year | P-1 |
| Federal Farm Credit Banks | 1,003,970 | Less than 1 year | P-1 |
| Federal Home Loan Mortgage Corporation | 999,650 | Less than 1 year | P-1 |
| Federal National Mortgage Association | 999,890 | Less than 1 year | P-1 |
| | 5,002,970 | | |
| | $ 32,357,730 | | |
| *Noncurrent:* | | | |
| Investments held by trustee - restricted: | | | |
| Bond Fund: | | | |
| Bayerische Landesbank Guaranteed Investment Certificate (GIC) | $ 10,523,203 | More than 10 years | A1 |
| Investments held by GPA - unrestricted: | | | |
| Operating Fund: | | | |
| Federal National Mortgage Association | 1,999,040 | More than 10 years | Aaa |
| | $ 12,522,243 | | |

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.

(2) Cash, Cash Equivalents and Investments, Continued

B. Investments, Continued

Credit risk for investments is the risk that an issuer or other counterparty 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 investments. As of September 30, 2018 and 2017, each of GPA's investments exceeded 5% of total investments, except for the investment in Federal National Mortgage Association which represents 3% of total investments at September 30, 2018.

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, 2018 and 2017, the following investments are valued using Level 1 inputs:

| | 2018 | 2017 |
|---|---|---|
| Federated Government Ultrashort Duration Fund (mutual fund) | $ 4,845,762 | $ 4,840,862 |
| Federal National Mortgage Association | - | 1,999,040 |
| | $ 4,845,762 | $ 6,839,902 |

(3) Receivables

Accounts receivable at September 30, 2018 and 2017, were summarized as follows:

| | 2018 | 2017 |
|---|---|---|
| Customers: | | |
| Private | $ 30,164,613 | $ 26,893,888 |
| Government | 5,663,115 | 4,977,262 |
| | 35,827,728 | 31,871,150 |
| U.S. Government - Navy (note 8) | 3,340,899 | 4,020,017 |
| U.S. Government - grants | 1,237,944 | 2,066,272 |
| Insurance | - | 41,844,342 |
| Others | 807,618 | 1,224,184 |
| | 41,214,189 | 81,025,965 |
| Less allowance for doubtful receivables | (3,362,283) | (3,199,831) |
| | $ 37,851,906 | $ 77,826,134 |

(3) Receivables, Continued

Unbilled accounts receivable included in the accounts receivable - private customers amounted to $8,490,893 and $7,768,323 at September 30, 2018 and 2017, respectively.

At September 30, 2017, receivables included $42 million insurance receivables representing insurance recoveries (see note 10). The insurance receivables were collected in 2018.

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 and estimated credit risks.

(4) Obligations Under Capital Leases

In September 1996, GPA entered into energy conversion agreements to purchase electricity produced by generating plants constructed and operated by two companies. The agreements were determined to be capital leases and the generating plants costs were recorded as production plant under capital lease. The agreements have twenty-year terms. In December 2017, one of the energy conversion agreements expired and ownership of the plant was transferred to GPA.

In December 2015, GPA entered into a contract for temporary power services to provide 40 megawatts (MW) of generation. The contract was for one year effective January 2016 with an option to extend for a period to be mutually agreed. In January 2017, GPA extended the contract for four years which includes payments for the acquisition of the underlying power plant.

Under each of the agreements, GPA pays capacity and operation and maintenance costs and purchases fuel for the plants. The operations and maintenance payments are reflected as energy conversion costs under operation and maintenance expenses. Future capacity payments under these agreements are as follows:

| Year Ending September 30, | Principal | Interest | Total |
|---|---|---|---|
| 2019 | $ 13,613,066 | $ 916,292 | $ 14,529,358 |
| 2020 | 8,582,729 | 346,471 | 8,929,200 |
| 2021 | 2,226,222 | 18,578 | 2,244,800 |
| | $ 24,422,017 | $ 1,281,341 | $ 25,703,358 |

At September 30, 2018 and 2017, the costs of plant and plant improvements were $163,085,831 and $184,849,243 and accumulated depreciation was $66,411,697 and $73,182,614, 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 5.0% to 13.7%.

(5) Pensions

GPA is statutorily responsible for providing pension benefits for GPA employees through the GovGuam Retirement Fund (GGRF).

A. General Information About the Pension Plans

*Plan Description:* GGRF administers the GovGuam Defined Benefit (DB) Plan, a single-employer defined benefit pension plan, and the Defined Contribution Retirement System (DCRS) Plan. 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 public corporations of GovGuam, which include 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 commences on or after October 1, 1995, are required to participate in the DCRS Plan. Hence, the DB Plan became a closed group.

Members of the DB Plan who retired prior to October 1, 1995, or their survivors, are eligible to receive annual supplemental annuity payments. In addition, members of the DB Plan and the DCRS Plan who retired prior to September 30, 2017 are eligible to receive an annual ad hoc cost of living allowance (COLA).

A single actuarial valuation 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.

*Plan Membership:* As of September 30, 2017 (the measurement date), plan membership consisted of the following:

| | |
|---|---|
| DB members: | |
| Inactive employees or beneficiaries currently receiving benefits | 7,279 |
| Inactive employees entitled to but not yet receiving benefits | 4,289 |
| Active employees | 2,058 |
| | 13,626 |
| DCRS members: | |
| Active employees | 9,027 |
| | 22,653 |

*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. 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.

(5) Pensions, Continued

A. General Information About the Pension Plans, 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.

Supplemental annuity benefit payments are provided to DB retiree members in the amount of $4,238 per year, but not to exceed $40,000 per year when combined with their regular annual retirement annuity. Annual COLA payments are provided to DB retiree and DCRS retiree members in a lump sum amount of $2,000. Both supplemental annuity benefit payments and COLA payments are made at the discretion of the Guam Legislature, but are funded on a "pay-as-you-go" basis so there is no plan trust. It is anticipated that ad hoc COLA and supplemental annuity payments will continue to be made for future years at the same level currently being paid.

On September 20, 2016, the Guam Legislature enacted Public Law 33-186, which created two new government retirement plans; the DB 1.75 Plan and the GRSP. Commencing April 1, 2017 through September 30, 2018, eligible employees may elect, during the "election window", to participate in the DB 1.75 Plan or the GRSP with an effective date of January 1, 2018. Beginning January 1, 2018, all new employees shall be automatically enrolled in the GRSP. New employees have sixty (60) days from the date of hire to elect to participate in the DCRS.

The DB 1.75 Plan is open for participation by certain existing employees, new employees, and reemployed employees who would otherwise participate in the DC Plan or the new GRSP and who make election on a voluntary basis to participate in the DB 1.75 Plan by December 31, 2017. Employee contributions are made by mandatory pre-tax payroll deduction at the rate of 9.5% of the employee's base salary while employer contributions are actuarially determined. Members of the DB 1.75 Plan automatically participate in the GovGuam deferred compensation plan, pursuant to which employees are required to contribute 1% of base salary as a pre-tax mandatory contribution.

*Contributions and Funding Policy:* Contribution requirements of participating employers and active members to the DB Plan 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, 2016 actuarial valuation was used for determining the year ended September 30, 2018 statutory contributions. Member contributions are required at 9.55% of base pay.

(5) Pensions, Continued

A. General Information About the Pension Plans, Continued:

As a result of actuarial valuations performed as of September 30, 2016, 2015 and 2014, contribution rates required to fully fund the Retirement Fund liability, as required by Guam law, for the years ended September 30, 2018, 2017 and 2016, respectively, have been determined as follows:

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| Normal costs (% of DB Plan payroll) | 15.97% | 16.27% | 15.86% |
| Employee contributions (DB Plan employees) | 9.55% | 9.55% | 9.54% |
| Employer portion of normal costs (% of DB Plan payroll) | 6.42% | 6.72% | 6.32% |
| Employer portion of normal costs (% of total payroll) | 1.60% | 1.87% | 1.94% |
| Unfunded liability cost (% of total payroll) | 22.12% | 21.60% | 22.42% |
| Government contribution as a % of total payroll | 23.72% | 23.47% | 24.36% |
| Statutory contribution rates as a % of DB Plan payroll: | | | |
| Employer | 27.83% | 27.41% | 28.16% |
| Employee | 9.55% | 9.55% | 9.54% |

GPA's contributions to the DB Plan for the years ended September 30, 2018, 2017 and 2016 were $4,631,209, $2,284,475 and $2,438,748, respectively, which were equal to the statutorily required contributions for the respective years then ended.

GPA's contributions to the supplemental annuity benefit payments and the COLA payments for the years ended September 30, 2018, 2017 and 2016 were $1,295,324, $1,319,634 and $1,239,078, respectively, which were equal to the statutorily required contributions for the respective years then ended.

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.

Contributions into the 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 annuity account within the DCRS. Employees are afforded the opportunity to select from different annuity accounts available under the DCRS.

Statutory employer contributions for the DCRS plan for the year ended September 30, 2018 are determined using the same rates as the DB Plan. Of the amount contributed by the employer, only 5% of the member's regular pay is deposited into the DCRS. The remaining amount is contributed towards the unfunded liability of the defined benefit plan.

GPA's contributions to the DCRS Plan for the years ended September 30, 2018, 2017 and 2016 were $3,035,381, $5,280,871 and $5,075,223, respectively, which were equal to the required contributions for the respective years then ended. Of these amounts, $2,416,600, $4,173,926 and $4,036,044 were contributed toward the unfunded liability of the DB Plan for the years ended September 30, 2018, 2017 and 2016, respectively.

(5) Pensions, Continued

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

*Pension Liability:* At September 30, 2018 and 2017, GPA reported a net pension liability for its proportionate share of the net pension liabilities measured as of September 30, 2017 and 2016, respectively, which is comprised of the following:

| | 2018 | 2017 |
|---|---|---|
| Defined Benefit Plan | $ 58,849,896 | $ 71,113,926 |
| Ad Hoc COLA/supplemental annuity Plan for DB retirees | 13,986,942 | 10,942,403 |
| Ad Hoc COLA Plan for DCRS retirees | 3,717,897 | 3,818,888 |
| | $ 76,554,735 | $ 85,875,217 |

GPA's proportion of the GovGuam net pension liabilities was based on GPA's expected plan contributions relative to the total expected contributions received by the respective pension plans for GovGuam and GovGuam's component units. At September 30, 2018 and 2017, GPA's proportionate shares of the GovGuam net pension liabilities were as follows:

| | 2018 | 2017 |
|---|---|---|
| Defined Benefit Plan | 5.15% | 5.20% |
| Ad Hoc COLA/supplemental annuity Plan for DB retirees | 4.85% | 4.77% |
| Ad Hoc COLA Plan for DCRS retirees | 5.95% | 6.19% |

*Pension Expense (Benefit):* For the years ended September 30, 2018 and 2017, GPA recognized pension expense (benefit) for its proportionate share of plan pension expense from the above pension plans as follows:

| | 2018 | 2017 |
|---|---|---|
| Defined Benefit Plan | $ 3,180,889 | $ 5,405,355 |
| Ad Hoc COLA/supplemental annuity Plan for DB retirees | (4,217,361) | 1,135,370 |
| Ad Hoc COLA Plan for DCRS retirees | (294,082) | 332,974 |
| | $ (1,330,554) | $ 6,873,699 |

## (5) Pensions, Continued

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

*Deferred Outflows and Inflows of Resources:* At September 30, 2018 and 2017, GPA reported total deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

| | 2018 | | | | | |
|---|---|---|---|---|---|---|
| | Defined Benefit Plan | | Ad Hoc COLA/ Supplemental Annuity Plan for DB Retirees | | Ad Hoc COLA Plan for DCRS Retirees | |
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Difference between expected and actual experience | $ - | $ - | $ - | $ - | $ 168,924 | $ 28,880 |
| Net difference between projected and actual earnings on pension plan investments | - | 2,860,028 | - | - | - | - |
| Changes of assumptions | - | - | - | - | 375,495 | 247,266 |
| Contributions subsequent to the measurement date | 7,047,809 | - | 1,185,324 | - | 110,000 | - |
| Changes in proportion and difference between GPA contributions and proportionate share of contributions | - | 138,235 | 45,435 | - | - | 257,233 |
| | $ 7,047,809 | $ 2,999,263 | $ 1,230,759 | $ - | $ 654,419 | $ 533,379 |

| | 2017 | | | | | |
|---|---|---|---|---|---|---|
| | Defined Benefit Plan | | Ad Hoc COLA/ Supplemental Annuity Plan for DB Retirees | | Ad Hoc COLA Plan for DCRS Retirees | |
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Difference between expected and actual experience | $ - | $ 234,273 | $ 856 | $ - | $ 73,715 | $ 32,144 |
| Net difference between projected and actual earnings on pension plan investments | - | 371,960 | - | - | - | - |
| Changes of assumptions | 202,481 | - | 11,287 | - | 417,059 | - |
| Contributions subsequent to the measurement date | 6,458,402 | - | 1,221,634 | - | 98,000 | - |
| Changes in proportion and difference between GPA contributions and proportionate share of contributions | 33,408 | - | 55,373 | - | 126,638 | 150,517 |
| | $ 6,694,291 | $ 606,233 | $ 1,289,150 | $ - | $ 715,412 | $ 182,661 |

(5) Pensions, Continued

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

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, 2018 will be recognized in pension expense as follows:

| Year Ending September 30 | Defined Benefit Plan | Ad Hoc COLA/ Supplemental Annuity Plan for DB Retirees | Ad Hoc COLA Plan for DCRS Retirees |
|---|---|---|---|
| 2019 | $ (778,780) | $ 45,435 | $ (9,195) |
| 2020 | (170,287) | - | (9,195) |
| 2021 | (1,223,353) | - | (9,195) |
| 2022 | (826,843) | - | (9,195) |
| 2023 | - | - | (9,195) |
| Thereafter | - | - | 57,015 |
| | $ (2,999,263) | $ 45,435 | $ 11,040 |

*Actuarial Assumptions:* Actuarially determined contribution rates for the DB Plan 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, 2016 |
| Actuarial Cost Method: | Entry age normal |
| Amortization Method: | Level percentage of payroll, closed |
| Remaining Amortization Period: | May 1, 2031 (14.58 years remaining as of September 30, 2016) |
| Asset valuation method: | 3-year smoothed market value (effective September 30, 2009) |
| Inflation: | 2.75% per year |
| Total payroll growth: | 2.75% per year |
| Salary increases: | 4.0% to 7.50% |
| Retirement age: | 50% are assumed to retire upon first eligibility for unreduced retirement. Thereafter, the probabilities of retirement are 20% until age 75, and increases to 100% at age 75. |
| Mortality: | RP-2000 healthy mortality table set forward by 3 years for males and 2 years for females. Mortality for disabled lives is the RP 2000 disability mortality table set forward by 6 years for males and 4 years for females. |

(5) Pensions, Continued

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

The actuarial assumptions used in the September 30, 2016 valuation were based on the results of an actuarial experience study for the period October 1, 2011 to September 30, 2015.

The investment rate assumption as of September 30, 2016 was 7%. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and the assumed rate of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of the expected nominal return for each major asset class are summarized in the following table:

| Asset Class | Target Allocation | Nominal Return |
|---|---|---|
| U.S. Equities (large cap) | 29% | 8.78% |
| U.S. Equities (small cap) | 7% | 9.45% |
| Non-U.S. Equities | 13% | 9.15% |
| Non-U.S. Equities (small cap) | 4% | 9.15% |
| Non-U.S. Equities (emerging markets) | 1% | 10.75% |
| U.S. Fixed Income (aggregate) | 25% | 4.85% |
| Risk parity | 8% | 8.36% |
| High yield bonds | 8% | 7.35% |
| Global Real Estate (REITs) | 5% | 8.71% |

*Changes in Actuarial Assumptions*: The following changes in actuarial assumptions occurred from the September 30, 2015 valuation to the September 30, 2016 valuation:

Mortality: The mortality table used as of September 30, 2016, is the RP-2000 combined mortality table, set forward by 3 years for males and 2 years for females. The mortality table used for disabled lives is the RP-2000 disability mortality table, set forward by 6 years for males and 4 years for females. Mortality improvement is assumed to be 30% of Scale BB, projected generationally from 2016. For the prior valuation, the mortality table used was the RP-2000 combined mortality table, set forward by 4 years for males and 1 year for females. The mortality table used for disabled lives was the RP-2000 disability mortality table for males and females. No provision was made for future mortality improvement in the prior valuation.

Salary Increases: Salaries are assumed to increase 7.5% per year for employees in their first 5 years of service, 6.0% for service between 6 and 10 years, 5.0% for service between 11 and 15 years, and 4.0% for service after 15 years. For the prior valuation, salaries were assumed to increase 7.5% per year for employees in their first 5 years of service, 6.0% for service between 6 and 10 years, 5.0% for service between 11 and 15 years, and 4.5% for service after 15 years.

(5) Pensions, Continued

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

Total Payroll Growth: Total payroll for defined benefit and defined contribution members is assumed to increase 2.75% per year. For the prior valuation, total payroll for defined benefit and defined contribution members was assumed to increase 3.0% per year.

Retirement Age: 50% of employees are assumed to retire when first eligible for unreduced retirement. Thereafter, 20% of employees will retire at each year until age 75, at which time all remaining employees are assumed to retire. For the prior valuation, 40% of employees are assumed to retire when first eligible for unreduced retirement. Thereafter, 15% of employees would retire at each year until age 65, and 20% of employees would retire from age 65 until age 70, at which time all remaining employees were assumed to retire.

Rates of Disability: The assumed rates of disability are based on the 1974-78 Society of Actuaries Long Term Disability Non-Jumbo table, with rates reduced by 50% for males and 75% for females. For the prior valuation, these rates were based on the 1974-78 Society of Actuaries Long Term Disability Non-Jumbo, with rates reduced by 50% for both males and females.

Leave Adjustments: Unused leave is assumed to increase a member's service by 1.5 years and increases average earnings by 5% at retirement. For the prior valuation, unused leave is assumed to increase service by 1.5 years and increased average earnings by 10% at retirement.

Survivor Benefit - Minor Children: An average of 0.2 eligible child survivors is assumed at the time of a retiree's death, with payments to the child survivor continuing for 6 years. For the prior valuation, this survivor benefit was assumed to increase the value of retirement benefits by 0.67% and survivor benefits by 20% for active members.

*Discount Rate:* The discount rate used to measure the total pension liability for the DB Plan as of September 30, 2017 was 7.0% (6.7% as of September 30, 2016), which is equal to the expected investment rate of return. The expected investment rate of return applies to benefit payments that are funded by plan assets (including future contributions), which includes all plan benefits except supplemental annuity payments to DB retirees and ad hoc COLA to both DB and DCRS retirees. The discount rate used to measure the total pension liability for the supplemental annuity and ad hoc COLA payments as of September 30, 2017 was 3.64% (3.058% as of September 30, 2016), which is equal to the rate of return of a high quality bond index.

*Discount Rate Sensitivity Analysis:* The following presents the sensitivity of the net pension liability to changes in the discount rate. The sensitivity analysis shows the impact to GPA's proportionate share of the net pension liability if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current discount rate:

(5) Pensions, Continued

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

Defined Benefit Plan:

| | 1% Decrease in Discount Rate 6.0% | Current Discount Rate 7.0% | 1% Increase in Discount Rate 8.0% |
|---|---|---|---|
| Net Pension Liability | $ 73,039,584 | $ 58,849,896 | $ 46,628,462 |

Ad Hoc COLA/Supplemental Annuity Plan for DB Retirees:

| | 1% Decrease in Discount Rate 2.64% | Current Discount Rate 3.64% | 1% Increase in Discount Rate 4.64% |
|---|---|---|---|
| Net Pension Liability | $ 15,261,107 | $ 13,986,942 | $ 12,878,944 |

Ad Hoc COLA Plan for DCRS Retirees:

| | 1% Decrease in Discount Rate 2.64% | Current Discount Rate 3.64% | 1% Increase in Discount Rate 4.64% |
|---|---|---|---|
| Net Pension Liability | $ 4,227,641 | $ 3,717,897 | $ 3,283,598 |

C. Payables to the Pension Plans:

As of September 30, 2018 and 2017, GPA recorded payables to GGRF of $442,425 and $362,689, respectively, representing statutorily required contributions unremitted as of the respective year-ends.

(6) Other Post-Employment Benefits

A. General Information About the OPEB Plan

*Plan Description:* GPA participates in the retiree health care benefits program - an agent multiple-employer defined benefit plan administered by the GovGuam's Department of Administration. The OPEB plan provides healthcare benefits to eligible employees and retirees who are members of the GovGuam Retirement Fund. No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75. The Governor's recommended budget and the annual General Appropriations Act enacted by the Guam Legislature provide for a premium level necessary for funding the program each year on a "pay-as-you-go" basis. Because the OPEB 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.

(6) Other Post-Employment Benefits, Continued

A. General Information About the OPEB Plan, Continued:

*Plan Membership:* As of September 30, 2016, the date of the most recent valuation (the actuarial valuation date), plan membership consisted of the following:

| | |
|---|---|
| Inactive plan members or beneficiaries currently receiving benefits | 7,342 |
| Active plan members | 10,282 |
| | 17,624 |

*Benefits Provided:* GovGuam provides post-employment medical, dental and life insurance benefits to GovGuam retirees, spouses, children and survivors, which are the same benefits as provided to active employees. Active employees and retirees who waive medical and dental coverage are considered eligible for the life insurance benefit only. GovGuam contributes a portion of the medical and dental premiums, based on a schedule of semi-monthly rates, and reimburses certain Medicare premiums to eligible retirees. Retirees are also required to pay a portion of the medical and dental insurance premiums. Three types of health plans are offered to eligible participants.

- Standard islandwide Preferred Provider Organization (PPO) Plan
- High Deductible (Health Savings Account - HSA) PPO Plan
- Retiree Supplement Plan (RSP)

The PPO and HSA Plans apply to both active employees and retirees and work with set deductible amounts whereas the RSP Plan is an added option for retirees only.

*Contributions:* No employer contributions are assumed to be made since an OPEB trust has not been established. Instead, the OPEB plan is financed on a substantially "pay-as-you go" basis whereby contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

For the years ended September 30, 2018, 2017 and 2016, GPA reimbursed GovGuam $2,945,357, $2,884,459 and $2,820,229, respectively, for its share of the costs of the above mentioned Plan, which were equal to the statutorily required contributions.

B. Total OPEB Liability

*Actuarial Assumptions:* The total OPEB liability for the OPEB Plan was determined by an actuarial valuation as of September 30, 2016 rolled forward to September 30, 2017 (the measurement date) using the following actuarial assumptions, applied to all periods included in the measurement:

| | |
|---|---|
| Inflation: | 3.00% |
| Amortization method: | Level dollar amount over 30 years on an open amortization period for pay-as-you-go funding |
| Salary increases: | 7.5% per year for the first 5 years of service, 6% for 5-10 years, 5% for 11-15 years and 4.5% for service over 15 years |

(6) Other Post-Employment Benefits, Continued

B. Total OPEB Liability, Continued:

| | |
|---|---|
| Healthcare cost trend rates: | 8% for 2016, decreasing 0.25% per year to an ultimate rate of 4.5% for 2030 and later years. Health care trend assumptions begin at current levels and grade down over a period of years to a lower level equal to some real rate plus inflation. The principal components of health trend are medical inflation, deductible erosion, cost shifting, utilization, technology and catastrophic claims. The overall effect of these components are expected to decline year by year. |
| Dental trend rates: | 4% per year |
| Participation rates: | Medical - 100% of eligible retired employees will elect to participate. Dental - 100% of eligible retires will elect to participate. Life - 100% of eligible retirees will elect to participate. |
| Medicare enrollment: | 15% of current and future retirees are assumed to enroll in Medicare and will enroll in a Retiree Supplemental Plan upon attainment of age 65. All employees retired prior to September 30, 2008 are assumed ineligible for Medicare upon attainment of age 65 and therefore will not enroll in a Medicare Supplemental Plan. |
| Dependent status: | Male spouses are assumed to be three years older and female spouses are assumed to be three years younger than the retired employee. 60% of employees are assumed to retire with a covered spouse. For current retired employees, the actual census information is used. |
| Actuarial cost method: | Entry Age Normal. The costs of each employee's post-employment benefits are allocated as a level basis over the earnings of the employee between the employee's date of hire and the assumed exit ages. |
| Healthy retiree mortality rate: | RP-2000 Combined Healthy Mortality Table, set forward 4 years and 1 year for males and females, respectively. |
| Disabled retiree mortality rates: | RP-2000 Disabled Mortality Table for males and females |

(6) Other Post-Employment Benefits, Continued

B. Total OPEB Liability, Continued:

| | |
|---|---|
| Withdrawal rates: | 15% for less than 1 year of service, decreasing 1% for each additional year of service up to 10 years, further decreasing 0.5% for each additional year of service up to 15 years, and 2% for service over 15 years. |
| Disability rates: | 0.05% for beneficiaries aged 20-39 years, 0.1%-0.53% for beneficiaries aged 40-59 years, and 0.76% for beneficiaries aged 60-64 years. |
| Retirement rates: | 40% of employees are assumed to retire at earliest eligibility for unreduced benefits under the Government of Guam Retirement Fund, 15% per year thereafter until age 65, 20% per year thereafter until age 70 and 100% at age 70. Previously, 50% of employees were assumed to retire at first eligibility for postretirement health benefits, 20% per year thereafter until age 70, and 100% at age 70. |

*OPEB Plan Fiduciary Net Position:* An OPEB trust has not been established thus the OPEB Plan does not presently report OPEB plan fiduciary net position.

*Discount Rate:* The discount rate used to measure the total OPEB liability was 3.63% as of September 30, 2017 (3.058% as of September 30, 2016). The projection of cash flows used to determine the discount rate assumed that contributions from GovGuam will be made in accordance with the plan's funding policy. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be insufficient to make all projected benefit payments of current plan members. Therefore, the 3.63% municipal bond rate as of September 30, 2017 (3.058% as of September 30, 2016) was applied to all periods of projected benefit payments to determine the total OPEB liability.

C. Changes in the Total OPEB Liability

Changes in the total OPEB liability are as follows:

| | 2018 | 2017 |
|---|---|---|
| At October 1 | $ 154,134,007 | $ 131,843,267 |
| Changes for the year: | | |
| Service cost | 4,181,160 | 3,281,051 |
| Interest | 4,805,542 | 4,969,757 |
| Change of assumptions | (14,827,646) | 16,377,134 |
| Benefit payments | (2,337,202) | (2,337,202) |
| Net change | (8,178,146) | 22,290,740 |
| At September 30 | $ 145,955,861 | $ 154,134,007 |

(6) Other Post-Employment Benefits, Continued

C. Changes in the Total OPEB Liability, Continued:

*Discount Rate Sensitivity Analysis:* The following schedule shows the impact on the OPEB Liability if the discount rate used was 1% less than and 1% greater than the discount rate that was used (3.63%) in measuring the 2017 OPEB Liability.

| | 1% Decrease in Discount Rate 2.63% | Current Discount Rate 3.63% | 1% Increase in Discount Rate 4.63% |
|---|---|---|---|
| OPEB Liability | $ 173,502,975 | $ 145,955,861 | $ 123,860,597 |

*Healthcare Cost Trend Rate Sensitivity Analysis:* The following schedule shows the impact on the OPEB Liability if the healthcare cost trend rate used was 1% less than and 1% greater than the current healthcare cost trend rate used (8% decreasing to 4.5%) in measuring the 2017 OPEB Liability.

| | 1% Decrease 7% Year 1 Decreasing to 3.50% | Healthcare Cost Trend Rates 8% Year 1 Decreasing to 4.50% | 1% Increase 9% Year 1 Decreasing to 5.50% |
|---|---|---|---|
| OPEB Liability | $ 119,829,734 | $ 145,955,861 | $ 180,057,861 |

D. OPEB Liability, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

At September 30, 2018 and 2017, GPA reported a liability of $145,955,861 and $154,134,007, respectively, for its proportionate share of the GovGuam total OPEB liability measured as of September 30, 2017 and 2016. At September 30, 2018 and 2017, GPA's proportion was 6.00% and 6.09%, respectively.

For the years ended September 30, 2018 and 2017, GPA recognized OPEB expense of $11,030,943 and $12,737,723, respectively. At September 30, 2018 and 2017, GPA reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

| | 2018 | | 2017 | |
|---|---|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Changes of assumptions | $ 10,852,660 | $ 12,507,272 | $ 13,736,990 | $ - |
| Contributions subsequent to the measurement date | 2,945,357 | - | 2,884,459 | - |
| Changes in proportion and difference between GPA contributions and proportionate share of contributions | - | 2,296,772 | - | 1,363,744 |
| | $ 13,798,017 | $ 14,804,044 | $ 16,621,449 | $ 1,363,744 |

(6) Other Post-Employment Benefits, Continued

D. OPEB Liability, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB, Continued:

Deferred outflows resulting from contributions subsequent to measurement date will be recognized as reduction of the OPEB liability in the following year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at September 30, 2018 will be recognized in OPEB expense as follows:

| Year Ended September 30 | |
|---|---|
| 2019 | $ (303,461) |
| 2020 | (303,461) |
| 2021 | (303,461) |
| 2022 | (303,461) |
| 2023 | (2,682,909) |
| Thereafter | (54,631) |
| | $ (3,951,384) |

(7) Noncurrent Liabilities

A. Long-term Debt

Long-term debt at September 30, 2018 and 2017 is as follows:

| | 2018 | 2017 |
|---|---|---|
| 2017 Series Revenue Refunding Bonds, initial face value of $148,670,000, 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 $135,000 in October 2018, increasing to a final payment of $16,800,000 in October 2040. | $ 148,670,000 | $ - |
| 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. | 75,160,000 | 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. | 339,360,000 | 339,830,000 |

(7) Noncurrent Liabilities, Continued

A. Long-term Debt, Continued

| | 2018 | 2017 |
|---|---|---|
| 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. Refinanced in December 2017. | - | 150,440,000 |
| Total long-term debt | 563,190,000 | 566,740,000 |
| Less current maturities | (1,630,000) | (1,780,000) |
| | 561,560,000 | 564,960,000 |
| Add premium on 2017, 2014 and 2012 bonds | 43,321,434 | 29,002,672 |
| Less discount on 2010 bonds | - | (3,393,810) |
| Total bonds | \$ 604,881,434 | \$ 590,568,862 |

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 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, 2017, and pay costs of issuance.

Proceeds of the 2017 Series Revenue Refunding Bonds were used to refund GPA's 2010 Series Senior Revenue Bonds and to pay costs of issuance.

All gross revenues of GPA have been pledged to repay the 2010, 2012, 2014 and 2017 series bonds principal and interest. For the years ended September 30, 2018 and 2017, the debt service for the 2010, 2012, 2014 and 2017 series bonds was \$28,084,161 and \$30,532,400, respectively, or approximately 7% and 9%, respectively, of pledged gross revenues.

Premium and discount associated with the 2010, 2012, 2014 and 2017 series bonds at September 30, 2018 and 2017 are being amortized on the effective interest method over the life of the applicable debt.

(7) Noncurrent Liabilities, Continued

A. Long-term Debt, Continued

As of September 30, 2018, future maturities of long-term debt are as follows:

| Year Ending September 30, | Principal | Interest | Total Debt Service |
|---|---|---|---|
| 2019 | $ 1,630,000 | $ 28,066,939 | $ 29,696,939 |
| 2020 | 16,130,000 | 27,624,528 | 43,754,528 |
| 2021 | 20,515,000 | 26,708,625 | 47,223,625 |
| 2022 | 21,540,000 | 25,657,250 | 47,197,250 |
| 2023 | 22,705,000 | 24,551,125 | 47,256,125 |
| 2024 through 2028 | 132,695,000 | 103,977,125 | 236,672,125 |
| 2029 through 2033 | 157,575,000 | 66,979,125 | 224,554,125 |
| 2034 through 2038 | 112,725,000 | 30,917,875 | 143,642,875 |
| 2039 through 2043 | 68,190,000 | 8,459,650 | 76,649,650 |
| 2044 through 2045 | 9,485,000 | 458,475 | 9,943,475 |
| | $ 563,190,000 | $ 343,400,717 | $ 906,590,717 |

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.

In December 2017, GPA refunded its 2010 Series bonds through the issuance of the 2017 Series bonds. At the time of refunding, the 2010 Series bonds had a principal balance outstanding of $150,440,000. 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 uninvested 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 2010 Series bonds. The advance refunding met the requirements of an in-substance defeasance and the 2010 bonds were removed from GPA's financial statements. At September 30, 2018, bonds outstanding of $150,440,000 are considered defeased. The advance refunding resulted in a loss on defeasance totaling $18,390,430 representing the difference between the reacquisition price and the carrying amount of the 2010 bonds. Although the advance refunding resulted in the recognition of an accounting loss, GPA in effect reduced its aggregate debt service payments by $11,528,439 over the next twenty-two years and obtained an economic gain (difference between the present values of the old debt and the new debt service payments) of $7,773,490.

(7) Noncurrent Liabilities, Continued

A. Long-term Debt, Continued

The loss on refunding of the bonds is being amortized using the effective interest method over the average remaining life of the old bonds which approximated the average life of the new bonds. The unamortized balance of the loss on refunding of the 1993 and 1999 Series bonds is $9,834,607 and $11,076,064 as of September 30, 2018 and 2017, respectively. The unamortized balance of the loss on refunding of the 2010 Series bonds is $17,259,029 as of September 30, 2018.

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 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.

The following summarizes the unearned revenues and unamortized costs on the forward delivery contract at September 30, 2018 and 2017:

| | 2018 | 2017 |
|---|---|---|
| Unearned forward delivery contract revenues | $ 8,760,514 | $ 8,760,514 |
| Accumulated amortization | (7,008,461) | (6,424,443) |
| | $ 1,752,053 | $ 2,336,071 |
| Unamortized forward delivery contract costs | $ 2,390,265 | $ 2,390,265 |
| Accumulated amortization | (1,912,268) | (1,752,908) |
| | $ 477,997 | $ 637,357 |

## (7) Noncurrent Liabilities, Continued

### B. Long-term Liabilities, Continued

Changes in long-term liabilities were as follows:

| | Outstanding October 1, 2017 (as restated) | Increases | Decreases | Outstanding September 30, 2018 | Current |
|---|---|---|---|---|---|
| 2010 Series Senior bonds | $ 150,440,000 | $ - | $(150,440,000) | $ - | $ - |
| 2012 Series Senior bonds | 339,830,000 | - | (470,000) | 339,360,000 | 120,000 |
| 2014 Series Senior bonds | 76,470,000 | - | (1,310,000) | 75,160,000 | 1,375,000 |
| 2017 Series Senior bonds | - | 148,670,000 | - | 148,670,000 | 135,000 |
| Unamortized premium on bonds | 29,002,672 | 17,876,459 | (3,557,697) | 43,321,434 | - |
| Unamortized discount on bonds | (3,393,810) | - | 3,393,810 | - | - |
| Obligations under capital leases | 47,759,025 | - | (23,337,008) | 24,422,017 | 13,613,066 |
| DCRS sick leave liability | 4,008,397 | - | (2,677,246) | 1,331,151 | - |
| Employees' annual leave | 3,131,657 | 2,678,897 | (2,505,301) | 3,305,253 | 2,101,168 |
| Net pension liability | 85,875,217 | - | (9,320,482) | 76,554,735 | - |
| OPEB liability | 154,134,007 | 11,030,942 | (19,209,088) | 145,955,861 | - |
| Customer advances for construction | 369,180 | 16,113 | - | 385,293 | - |
| | $ 887,626,345 | $ 180,272,411 | $(209,433,012) | $ 858,465,744 | $ 17,344,234 |

| | Outstanding October 1, 2016 (as restated) | Increases | Decreases | Outstanding September 30, 2017 (as restated) | Current |
|---|---|---|---|---|---|
| 2010 Series Senior bonds | $ 150,440,000 | $ - | $ - | $ 150,440,000 | $ - |
| 2012 Series Senior bonds | 339,945,000 | - | (115,000) | 339,830,000 | 470,000 |
| 2014 Series Senior bonds | 76,470,000 | - | - | 76,470,000 | 1,310,000 |
| Unamortized premium on bonds | 31,824,124 | - | (2,821,452) | 29,002,672 | - |
| Unamortized discount on bonds | (3,506,346) | - | 112,536 | (3,393,810) | - |
| Obligations under capital leases | 39,609,962 | 29,466,516 | (21,317,453) | 47,759,025 | 23,330,193 |
| DCRS sick leave liability | 3,436,738 | 571,659 | - | 4,008,397 | - |
| Employees' annual leave | 3,212,561 | 3,033,434 | (3,114,338) | 3,131,657 | 2,045,201 |
| Net pension liability | 88,899,619 | - | (3,024,402) | 85,875,217 | - |
| OPEB liability | 131,843,267 | 25,110,969 | (2,820,229) | 154,134,007 | - |
| Customer advances for construction | 319,321 | 53,683 | (3,824) | 369,180 | - |
| | $ 862,494,246 | $ 58,236,261 | $ (33,104,162) | $ 887,626,345 | $ 27,155,394 |

## (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.

(8) Agreements with the U.S. Navy, Continued

On August 1, 2012, GPA and the Navy entered into a Utility Services Contract (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. During the years ended September 30, 2018 and 2017, GPA billed the Navy $59,119,199 and $54,904,634, respectively, for sales of electricity under the USC. Receivables from the Navy were $3,340,899 and $4,020,017 at September 30, 2018 and 2017, respectively.

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, 2018, no work has commenced on this BOA.

On September 12, 2016, GPA and the Navy entered into a lease agreement to lease a portion of the land controlled by the Navy to construct and operate a renewable energy plant. The lease will not be effective until GPA secures the renewable energy contract. No lease payment is due or accruing until then.

(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. Two extensions were made on the contract, the last extension expired on November 30, 2018.

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 December 2017, GPA exercised the options and extended the contracts through December 31, 2018.

Performance Management Contracts

GPA entered into a Performance Management Contract (PMC) for the operation and maintenance of the Cabras 1 and 2 generators, which became effective on October 1, 2010. The PMC is 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. The extension was exercised and the PMC expires on September 30, 2020.

(9) Commitments and Contingencies, Continued

Performance Management Contracts, Continued

GPA entered into a PMC for the Dededo, Macheche and Yigo combustion turbine power plants 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, 2018, the minimum future fixed management fees are as follows:

| Year Ending September 30, | Amount |
|---|---|
| 2019 | $ 2,449,963 |
| 2020 | 2,515,840 |
| 2021 | 293,203 |
| | $ 5,259,006 |

Fuel Bulk Storage Facility Contract

In September 2017, GPA entered into an agreement for the management and operations of its fuel bulk storage facility. The agreement is for two years ending September 30, 2019 with an option to extend the contract for three additional one-year terms. At September 30, 2018, the minimum future management fees for the year ending September 30, 2019 are $532,057.

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, which was extended for ten years.

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, 2022.

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

At September 30, 2018, future minimum lease payments for operating leases are as follows:

| Year Ending September 30, | Amount |
|---|---|
| 2019 | $ 1,840,086 |
| 2020 | 1,895,598 |
| 2021 | 1,926,902 |
| 2022 | 1,833,929 |
| 2023 | 5,105 |
| | $ 7,501,620 |

Rent expense under the aforementioned agreements totaled $1,773,744 and $1,709,954 during the years ended September 30, 2018 and 2017, respectively.

(9) Commitments and Contingencies, Continued

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 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, 2018, the minimum future renewable energy purchases are as follows:

| Year Ending September 30, | Amount |
|---|---|
| 2019 | $ 9,157,338 |
| 2020 | 9,162,071 |
| 2021 | 9,171,682 |
| 2022 | 9,200,983 |
| 2023 | 9,196,204 |
| 2024 through 2028 | 46,092,908 |
| 2029 through 2033 | 46,086,152 |
| 2034 through 2038 | 46,760,812 |
| 2039 through 2041 | 19,572,811 |
| | $ 204,400,961 |

In August 2018, GPA executed three renewable energy purchase agreements to purchase a total of 120 MW of solar renewable energy. The commercial operation dates of the solar plants are not yet established.

Capital Commitments

As of September 30, 2018, GPA has various on-going construction contracts with a total contract price of $40 million, of which $16 million is recorded in construction work in progress.

Letters of Credit

As of September 30, 2018, GPA has a $35 million uncollateralized revolving documentary letter of credit for purchases of fuel. There was an outstanding commitment of $20 million under the standby letter of credit at September 30, 2018.

As of September 30, 2018, GPA has $1.8 million standby letter of credit, collateralized by a certificate of deposit of the same amount, to guarantee any payments due under the temporary power services contract. There was no outstanding commitment under the standby letter of credit at September 30, 2018.

Self-Insurance

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

(9) Commitments and Contingencies, Continued

Self-Insurance, Continued

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.

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.

The self-insurance fund, included in cash and cash equivalents held by GPA, was $19,258,353 and $19,251,372 at September 30, 2018 and 2017, respectively.

Litigation

GPA has several asserted and unasserted claims outstanding as of September 30, 2018. 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.

U.S. 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 $37,500 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.

(9) Commitments and Contingencies, Continued

Renewable Energy Contracts, Continued

U.S. Environmental Protection Agency, Continued

Cabras 3 and 4 power plants are no longer subject to compliance due to an explosion and fire in August 2015 (see note 10). As of September 30, 2018, 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 $243 million as of September 30, 2018. 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 $37,500 per unit per day. GPA obtained PUC approval to early terminate the associated energy conversion agreement of the Tanguisson unit. 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.

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.

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, 2018 and 2017. 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, 2018 and therefore, no liability or other impact has been recognized in the accompanying financial statements.

(9) Commitments and Contingencies, Continued

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 30, 2018 and 2017, 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.

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 4 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. 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 plants becomes operational. GPA recorded additional depreciation expense of approximately $6.2 million and $3.7 million during the years ended September 30, 2018 and 2017, respectively, 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 was a total loss. It was later determined that repair of the Cabras 3 generator was economically infeasible. As a result, both the Cabras 3 and 4 generators and related facilities and equipment were written down to zero value at September 30, 2016.

In February 2018, GPA entered into a final insurance settlement of $126 million. GPA applied the insurance recoveries against actual damage incurred and repair costs, and presented these as an extraordinary item in the accompanying financial statements.

The cumulative extraordinary gain estimated as of September 30, 2017 and finalized as of September 30, 2018 is computed as follows:

| | 2018 | 2017 |
|---|---|---|
| Insurance recoveries | $ 125,884,342 | $ 125,884,342 |
| Impairment of Cabras 3 and 4 | (52,873,884) | (52,873,884) |
| Temporary power services | (14,334,094) | (13,923,247) |
| Repair and other costs | (22,190,069) | (24,780,107) |
| Administrative charges | (4,904,209) | (4,645,452) |
| Clean-up costs | (1,018,075) | (1,018,075) |
| Fuel recovery | (4,600,000) | (4,600,000) |
| Provision for inventory obsolescence | (1,069,158) | (1,069,158) |
| Revenue loss | (2,730,560) | (2,730,560) |
| Extraordinary gain | $ 22,164,293 | $ 20,243,859 |

(11) Related Party Transactions and Balances

During the years ended September 30, 2018 and 2017, GPA billed GovGuam agencies $55,108,243 and $48,761,147, respectively, for sales of electricity. Receivables from GovGuam agencies were $5,663,115 and $4,977,262 at September 30, 2018 and 2017, 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, 2018 and 2017 were $14,686,636 and $12,073,592, respectively. Outstanding receivables were $1,137,558 and $1,083,783 at September 30, 2018 and 2017, respectively, which are included in the GovGuam agencies receivable mentioned above.

(11) Related Party Transactions and Balances, Continued

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 costs for providing said services. Total billings by GPA to GWA for administrative expenses and cost reimbursements were $145,583 and $147,538 for the years ended September 30, 2018 and 2017, respectively. Outstanding receivables totaled $148,169 and $60,520 at September 30, 2018 and 2017, respectively, and were included in other receivables (see note 3).

Effective October 1, 2015, GPA and GWA implemented an 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 $409,406 and $454,941 for the years ended September 30, 2018 and 2017, respectively. Outstanding receivables were $69,524 and $36,678 at September 30, 2018 and 2017, respectively, 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 $1,798,395 and $493,549 for the years ended September 30, 2018 and 2017, respectively. The amount due to GWA at September 30, 2018 and 2017 was $438,872 and $505,031, 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.

(12) Restricted Net Position

At September 30, 2018 and 2017, net position was restricted for the following purposes:

| | 2018 | 2017 |
|---|---|---|
| Debt service | $ 3,945,052 | $ 3,685,679 |
| Budgeted maintenance and operating expenses | 14,719,830 | 10,472,662 |
| Demand Side Management Program and projects | 1,085,472 | 1,074,491 |
| | $ 19,750,354 | $ 15,232,832 |

(13) Subsequent Events

In January 2019, ownership of the remaining power plant under the energy conversion agreement (see note 4) was transferred to GPA. GPA entered into an agreement with the same company to continue to manage and operate the power plant for a period of five years. GPA will pay a monthly recapitalization fee consisting of payments for capital and performance improvement projects, operations and maintenance costs, 4% cost of money and 10% contingency.

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

Notes to Financial Statements
September 30, 2018 and 2017

(14) Utility Plant

A summary of changes in capital assets for the years ended September 30, 2018 and 2017 were as follows:

| 2018 | Estimated Useful Lives in Years | Beginning Balance October 1, 2017 | Transfers and Additions | Transfers and Deletions | Ending Balance September 30, 2018 |
|---|---|---|---|---|---|
| Depreciable: | | | | | |
| Steam production plant | 25 - 50 | $ 123,516,355 | $ 120,896 | (245,693) $ | 123,391,558 |
| Other production plant | 25 | 225,026,426 | 28,279,306 | (3,051,496) | 250,254,236 |
| Transmission plant | 30 - 45 | 182,300,247 | 1,217,521 | - | 183,517,768 |
| Distribution plant | 25 - 45 | 225,771,235 | 4,859,184 | (347,536) | 230,282,883 |
| General plant | 3 - 60 | 95,607,360 | 6,107,112 | (1,102,615) | 100,611,857 |
| Production plant under capital lease | 20 - 40 | 184,849,243 | - | (21,763,412) | 163,085,831 |
| | | 1,037,070,866 | 40,584,019 | (26,510,752) | 1,051,144,133 |
| Accumulated depreciation | | (561,851,071) | (37,184,133) | 1,586,561 | (597,448,643) |
| | | 475,219,795 | 3,399,886 | (24,924,191) | 453,695,490 |
| Non-depreciable: | | | | | |
| Land and land rights | | 1,072,236 | 10,998,321 | - | 12,070,557 |
| Construction work in progress | | 18,480,173 | 42,330,515 | (32,789,398) | 28,021,290 |
| | | 19,552,409 | 53,328,836 | (32,789,398) | 40,091,847 |
| | | $ 494,772,204 | $ 56,728,722 | $ (57,713,589) $ | 493,787,337 |

| 2017 | Estimated Useful Lives in Years | Beginning Balance October 1, 2015 | Transfers and Additions | Transfers and Deletions | Ending Balance September 30, 2017 |
|---|---|---|---|---|---|
| Depreciable: | | | | | |
| Steam production plant | 25 - 50 | $ 116,221,073 | $ 7,786,668 | (491,386) $ | 123,516,355 |
| Other production plant | 25 | 225,201,904 | 17,570,519 | (17,745,997) | 225,026,426 |
| Transmission plant | 30 - 45 | 178,576,835 | 4,590,737 | (867,325) | 182,300,247 |
| Distribution plant | 25 - 45 | 220,981,069 | 6,170,868 | (1,380,702) | 225,771,235 |
| General plant | 3 - 60 | 93,158,754 | 5,255,343 | (2,806,737) | 95,607,360 |
| Production plant under capital lease | 20 - 40 | 155,382,727 | 29,466,516 | - | 184,849,243 |
| | | 989,522,362 | 70,840,651 | (23,292,147) | 1,037,070,866 |
| Accumulated depreciation | | (540,262,573) | (44,291,589) | 22,703,091 | (561,851,071) |
| | | 449,259,789 | 26,549,062 | (589,056) | 475,219,795 |
| Non-depreciable: | | | | | |
| Land and land rights | | 1,072,236 | - | - | 1,072,236 |
| Construction work in progress | | 17,206,430 | 61,099,405 | (59,825,662) | 18,480,173 |
| | | 18,278,666 | 61,099,405 | (59,825,662) | 19,552,409 |
| | | $ 467,538,455 | $ 87,648,467 | $ (60,414,718) $ | 494,772,204 |

**GUAM POWER AUTHORITY**
**(A Component Unit of the Government of Guam)**

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

Defined Benefit Plan

| | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| Total Government of Guam net pension liability | $ 1,142,249,393 | $ 1,368,645,126 | $ 1,436,814,230 | $ 1,246,306,754 | $ 1,303,304,636 |
| Guam Power Authority's (GPA's) proportionate share of the net pension liability | $ 58,849,896 | $ 71,113,926 | $ 74,504,797 | $ 67,025,973 | $ 77,870,353 |
| GPA's proportion of the net pension liability | 5.15% | 5.20% | 5.19% | 5.38% | 5.97% |
| GPA's covered-employee payroll** | $ 26,188,178 | $ 26,308,182 | $ 26,516,476 | $ 27,155,671 | $ 27,505,038 |
| GPA's proportionate share of the net pension liability as percentage of its covered employee payroll | 224.72% | 270.31% | 280.98% | 246.82% | 283.11% |
| Plan fiduciary net position as a percentage of the total pension liability | 60.63% | 54.62% | 52.32% | 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**
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Required Supplemental Information (Unaudited)
Schedule of Proportional Share of the Net Pension Liability
Last 10 Fiscal Years*

Ad Hoc COLA/Supplemental Annuity Plan for DB Retirees

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| Total Government of Guam net pension liability*** | $ 288,147,121 | $ 229,486,687 | $ 235,799,709 |
| Guam Power Authority's (GPA's) proportionate share of the net pension liability | $ 13,986,942 | $ 10,942,403 | $ 11,002,776 |
| GPA's proportion of the net pension liability | 4.85% | 4.77% | 4.67% |
| GPA's covered-employee payroll** | $ 24,673,401 | $ 24,142,501 | $ 23,861,140 |
| GPA's proportionate share of the net pension liability as percentage of its covered employee payroll | 56.69% | 45.32% | 46.11% |

* 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.
*** No assets accumulated in a trust to pay benefits.

See Accompanying Independent Auditors' Report.

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

Ad Hoc COLA Plan for DCRS Retirees

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| Total Government of Guam net pension liability*** | $ 62,445,490 | $ 61,688,067 | $ 52,115,736 |
| Guam Power Authority's (GPA's) proportionate share of the net pension liability | $ 3,717,897 | $ 3,818,888 | $ 3,392,046 |
| GPA's proportion of the net pension liability | 5.95% | 6.19% | 6.51% |
| GPA's covered-employee payroll** | $ 22,433,189 | $ 22,600,153 | $ 23,164,094 |
| GPA's proportionate share of the net pension liability as percentage of its covered employee payroll | 16.57% | 16.90% | 14.64% |

* 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.
*** No assets accumulated in a trust to pay benefits.

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*

| | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| Statutorily required contribution | $ 6,458,402 | $ 6,474,792 | $ 6,993,365 | $ 7,249,568 | $ 7,375,045 |
| Contributions in relation to the statutorily required contribution | 6,454,286 | 6,464,756 | 6,974,715 | 7,212,224 | 7,285,774 |
| Contribution (excess) deficiency | $ 4,116 | $ 10,036 | $ 18,650 | $ 37,344 | $ 89,271 |
| GPA's covered-employee payroll ** | $ 26,188,178 | $ 26,308,182 | $ 26,516,476 | $ 27,155,671 | $ 27,505,038 |
| Contribution as a percentage of covered-employee payroll | 24.65% | 24.57% | 26.30% | 26.56% | 26.49% |

* 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**
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Required Supplemental Information (Unaudited)
Schedule of Changes in the Proportional Share of the Total OPEB Liability and Related Ratios
Last 10 Fiscal Years*

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| Service cost | $ 4,181,160 | $ 3,281,051 | |
| Interest | 4,805,542 | 4,969,757 | |
| Change of assumptions | (14,827,646) | 16,377,134 | |
| Benefit payments | (2,337,202) | (2,337,202) | |
| Net change in OPEB liability | (8,178,146) | 22,290,740 | |
| OPEB liability, beginning | 154,134,007 | 131,843,267 | |
| OPEB liability, ending | $ 145,955,861 | $ 154,134,007 | $ 131,843,267 |
| Covered-employee payroll as of valuation date | $ 25,806,659 | $ 25,806,659 | |
| OPEB liability as a percentage of covered-employee payroll | 565.57% | 597.26% | |
| Notes to schedule: | | | |
| *Discount rate* | 3.630% | 3.058% | 3.710% |

*Change in benefit terms:*
None.

*Change of assumptions:*
Discount rate has changed from respective measurement dates.

* This data is presented for those years for which information is available.
** No assets accumulated in a trust to pay the benefits.

See Accompanying Independent Auditors' Report.

**GUAM POWER AUTHORITY**
**(A Component Unit of the Government of Guam)**

Required Supplemental Information (Unaudited)
Schedule of Proportional Share of the Total OPEB Liability
Last 10 Fiscal Years*

| | 2018 | 2017 |
|---|---|---|
| Total OPEB liability ** | $ 2,431,048,672 | $ 2,532,753,040 |
| GPA's proportionate share of the total OPEB liability | $ 145,955,861 | $ 154,134,007 |
| GPA's proportion of the total OPEB liability | 6.00% | 6.09% |
| GPA's covered-employee payroll | $ 25,806,659 | $ 25,806,659 |
| GPA's proportionate share of the total OPEB liability as percentage of its covered-employee payroll | 565.57% | 597.26% |

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

** No assets accumulated in a trust to pay the benefits.

See Accompanying Independent Auditors' Report.

**GUAM POWER AUTHORITY**
**(A Component Unit of the Government of Guam)**

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

| | 2018 | 2017 |
|---|---|---|
| Actuarially determined contribution | $ 4,181,160 | $ 10,762,017 |
| Contributions in relation to the actuarially determined contribution | 2,337,202 | 2,337,202 |
| Contribution deficiency | $ 1,843,958 | $ 8,424,815 |
| Covered-employee payroll as of valuation date | $ 25,806,659 | $ 25,806,659 |
| Contributions as a percentage of covered-employee payroll | 9.06% | 9.06% |

Notes to schedule:

*Valuation date:*

Actuarially determined contributions rates are calculated as of September 30, 2016.

*Method and assumptions used to determine contributions rates:*

| | |
|---|---|
| Actuarial cost method: | Entry age normal. |
| Amortization method: | Level dollar amount on an open amortization period for pay-as-you-go funding. |
| Amortization period: | 30 years |
| Inflation: | 3% |
| Healthcare cost trend rates: | 8% initial, decreasing 0.25% per year to an ultimate rate of 4.5% |
| Salary increase: | 4.5% to 7.5% |
| Mortality (Healthy Retiree): | RP-2000 Combined Healthy Mortality Table, set forward 4 years and 1 year for males and females, respectively. |
| Mortality (Disabled Retiree): | RP-2000 Disabled Mortality Table for males and females. |

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

See Accompanying Independent Auditors' Report.

**GUAM POWER AUTHORITY**
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Schedule of Sales of Electricity
Years Ended September 30, 2018 and 2017

| | 2018 | 2017 |
|---|---|---|
| Commercial | $ 146,278,001 | $ 126,806,297 |
| Residential | 117,823,431 | 100,601,978 |
| Government of Guam | 55,108,243 | 48,761,147 |
| U.S. Navy | 59,119,199 | 54,904,634 |
| | $ 378,328,874 | $ 331,074,056 |
| Annual Electric Sales in kWh | | |
| Commercial | 573,872,719 | 589,527,624 |
| Residential | 495,346,749 | 506,335,602 |
| Government of Guam | 181,923,229 | 185,678,816 |
| U.S. Navy | 306,460,172 | 318,585,901 |
| Other | 9,449,275 | 9,965,068 |
| | 1,567,052,144 | 1,610,093,011 |

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, 2018 and 2017

| | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Administrative and General: | | |
| Salaries and wages: | | |
| Regular pay | $ 5,740,084 | $ 5,077,260 |
| Overtime | 52,003 | 58,624 |
| Premium pay | 3,387 | 2,863 |
| Benefits | 1,835,127 | 2,369,552 |
| Pension adjustment | 2,176,126 | 8,099,602 |
| OPEB adjustment | 3,019,736 | 9,853,264 |
| Sick leave adjustment | (2,677,246) | - |
| Total salaries and wages | 10,149,217 | 25,461,165 |
| Retiree healthcare and other benefits | 8,085,585 | 2,884,459 |
| Insurance | 7,340,487 | 7,254,358 |
| Contract | 5,288,085 | 4,074,378 |
| Utilities | 2,357,039 | 1,858,396 |
| Travel | 338,664 | 252,407 |
| Training | 157,658 | 226,188 |
| Operating supplies | 104,355 | 116,870 |
| Other administrative expenses | 82,404 | 87,240 |
| Trustee fee | 80,058 | 68,395 |
| Office supplies | 66,374 | 90,238 |
| Overhead allocations | 8,970 | 7,982 |
| Completed work orders | (295,404) | (1,950) |
| Miscellaneous | 207,946 | (42,753) |
| Total administrative and general | $ 33,971,438 | $ 42,337,373 |
| Customer Accounting: | | |
| Salaries and wages: | | |
| Regular pay | $ 2,105,173 | $ 1,896,223 |
| Overtime | 44,900 | 96,431 |
| Premium pay | 5,098 | 6,111 |
| Benefits | 160,701 | 140,322 |
| Total salaries and wages | 2,315,872 | 2,139,087 |
| Demand-side management program | 1,528,403 | 658,450 |
| Collection fee | 1,088,398 | 755,944 |
| Contracts | 376,221 | 18,926 |
| Communications | 284,396 | 314,555 |
| Overhead allocations | 46,999 | 46,786 |
| Office supplies | 23,022 | 228,244 |
| Completed work orders | 8,435 | 129,507 |
| Miscellaneous | 4,656 | 4,848 |
| Total customer accounting | $ 5,676,402 | $ 4,296,347 |

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, 2018 and 2017

| | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Fuel: | | |
| Salaries and wages: | | |
| Regular pay | $ 138,911 | $ 96,449 |
| Overtime | 7,849 | 7,853 |
| Premium pay | 225 | 316 |
| Benefits | 308 | 51 |
| Total salaries and wages | 147,293 | 104,669 |
| Fuel | 217,419,746 | 166,321,441 |
| Total fuel costs | $ 217,567,039 | $ 166,426,110 |
| Other Production: | | |
| Salaries and wages: | | |
| Regular pay | $ 7,880,985 | $ 7,626,659 |
| Overtime | 1,099,425 | 808,904 |
| Premium pay | 169,596 | 166,878 |
| Benefits | 730,058 | 621,219 |
| Total salaries and wages | 9,880,064 | 9,223,660 |
| Contract | 5,080,569 | 6,646,314 |
| Completed work orders | 1,781,588 | 1,231,619 |
| Operating supplies | 557,278 | 545,550 |
| Overhead allocations | 102,295 | 105,438 |
| Office supplies | 12,745 | 9,482 |
| Total other production | $ 17,414,539 | $ 17,762,063 |
| Transmission and Distribution: | | |
| Salaries and wages: | | |
| Regular pay | $ 7,097,396 | $ 7,017,466 |
| Overtime | 319,196 | 336,227 |
| Premium pay | 73,350 | 71,713 |
| Benefits | 508,328 | 436,612 |
| Total salaries and wages | 7,998,270 | 7,862,018 |
| Overhead allocations | 1,959,404 | 1,800,633 |
| Contract | 1,349,250 | 963,728 |
| Operating supplies | 601,629 | 819,491 |
| Completed work orders | 392,785 | 283,522 |
| Office supplies | 36,804 | 20,231 |
| Total transmission and distribution | $ 12,338,142 | $ 11,749,623 |

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, 2018 and 2017

| | 2018 | 2017 As Restated (Note 1) |
|---|---|---|
| Salaries and wages: | | |
| Regular pay | $ 22,962,549 | $ 21,714,057 |
| Overtime | 1,523,373 | 1,308,039 |
| Premium pay | 251,656 | 247,881 |
| Benefits | 3,234,522 | 3,567,756 |
| Pension adjustment | 2,176,126 | 8,099,602 |
| OPEB adjustment | 3,019,736 | 9,853,264 |
| Sick leave adjustment | (2,677,246) | - |
| Total salaries and wages | $ 30,490,716 | $ 44,790,599 |

See Accompanying Independent Auditors' Report.

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

Employees by Department
Years Ended September 30, 2018 and 2017

| | 2018 | |
|---|---|---|
| | Full Time Employees (b) | PL 28-150 Section 45b Category Personnel Services (a) |
| Department: | | |
| Board | 2 | $ 244,764 |
| Executive | 17 | 801,687 |
| Administration | 24 | 2,547,319 |
| Finance | 40 | 2,710,870 |
| Planning and Regulatory | 8 | 837,328 |
| Property and Facilities | 9 | 481,352 |
| Purchasing and Supply Management | 21 | 679,038 |
| Customer Service | 38 | 1,767,953 |
| Engineering | 37 | 2,208,183 |
| Generation | 128 | 10,098,937 |
| Strategic Planning and Operation Research and Development | 9 | 868,293 |
| Power System Control Center | 22 | 1,656,278 |
| Transportation | 11 | 80,172 |
| Transmission and Distribution | 98 | 5,166,052 |
| Total full time employees | 464 | 30,148,226 |
| OPEB adjustment | | 3,019,736 |
| Sick leave adjustment for change in retirement plan | | (2,677,246) |
| | | $ 30,490,716 |

| | 2017, As Restated (Note 1) | |
|---|---|---|
| | Full Time Employees (b) | PL 28-150 Section 45b Category Personnel Services (a) |
| Department: | | |
| Board | 2 | $ 177,491 |
| Executive | 18 | 568,903 |
| Administration | 25 | 1,879,711 |
| Finance | 42 | 2,089,545 |
| Planning and Regulatory | 7 | 711,888 |
| Property and Facilities | 9 | 385,921 |
| Purchasing and Supply Management | 21 | 540,095 |
| Customer Service | 35 | 1,630,173 |
| Engineering | 37 | 1,981,197 |
| Generation | 140 | 9,102,360 |
| Strategic Planning and Operation Research and Development | 10 | 709,897 |
| Power System Control Center | 21 | 1,690,128 |
| Transportation | 9 | 46,833 |
| Transmission and Distribution | 100 | 4,977,846 |
| Total full time employees | 476 | 26,491,988 |
| Pension adjustment | | 8,099,602 |
| OPEB adjustment | | 9,853,264 |
| Apprentice and summer engineering | | 345,745 |
| | | $ 44,790,599 |

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.

# Acknowledgements


| | |
|---|---|
| The Honorable Edward Baza Calvo | Governor of Guam |
| The Honorable Raymond S. Tenorio | Lt. Governor of Guam |

**Consolidated Commission on Utilities**

| | |
|---|---|
| Joseph “Joey” T. Duenas | Chairman |
| Francis E. Santos | Vice Chairman |
| J. George Bamba | Secretary |
| Dr. Judith “Judi” T. Guthertz | Treasurer |
| Simon A. Sanchez, II | Member |

**Guam Power Authority Leadership and Management Team**

| | |
|---|---|
| John M. Benavente, P.E. | General Manager |
| John J.E. Kim, CPA | Chief Financial Officer |
| Melinda C. Mafnas, P.E. | Assistant General Manager of Operations |
| John J. Cruz, Jr., P.E. | Assistant General Manager of Engineering & Technical Services |
| Beatrice P. Limtiaco | Assistant General Manager of Administration |
| D. Graham Botha | Staff Attorney |
| Joven G. Acosta, P.E. | Manager of Engineering |
| Jennifer G. Sablan, P.E. | Manager of Strategic Planning & Operations Research |
| Francisco C. Santos | Manager of Power Systems Control Center |
| Ronald C. Okada | Manager of Generation |
| Francis I. Cruz | Assistant Manager of Generation |
| Anselmo M. Manibusan | Manager of Transmission & Distribution |
| Enrique Z. Quidachay | Assistant Manager of Transmission & Distribution |
| Kenneth J. Gutierrez | Safety Administrator |
| Artemio S. Perez | Communications Manager |
| Sylvia L. Ipanag | Environmental Manager |
| Jerald A. Guzman | Facilities Manager |
| Jimmy D. Pangelinan | Fleet Support Services Manager |
| Maripaz N. Perez | Internal Auditor |
| Pamela R. Aguigui | Chief Budget Officer |
| Mercy A.F. Castro | Utility Services Administrator |
| Richard L. Bersamin | Assistant Manager of Customer Services |
| Julie L. Quinata | Personnel Services Administrator |
| Jamie L.C. Pangelinan | Supply Management Administrator |
| Melvyn C. Kwek | Chief Information Technology Officer |

**Writers and Editors**

| | |
|---|---|
| Artemio S. Perez | Communications Manager |
| Patricia L. Diego | Program Coordinator III |

| | |
|---|---|
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| | |
|---|---|
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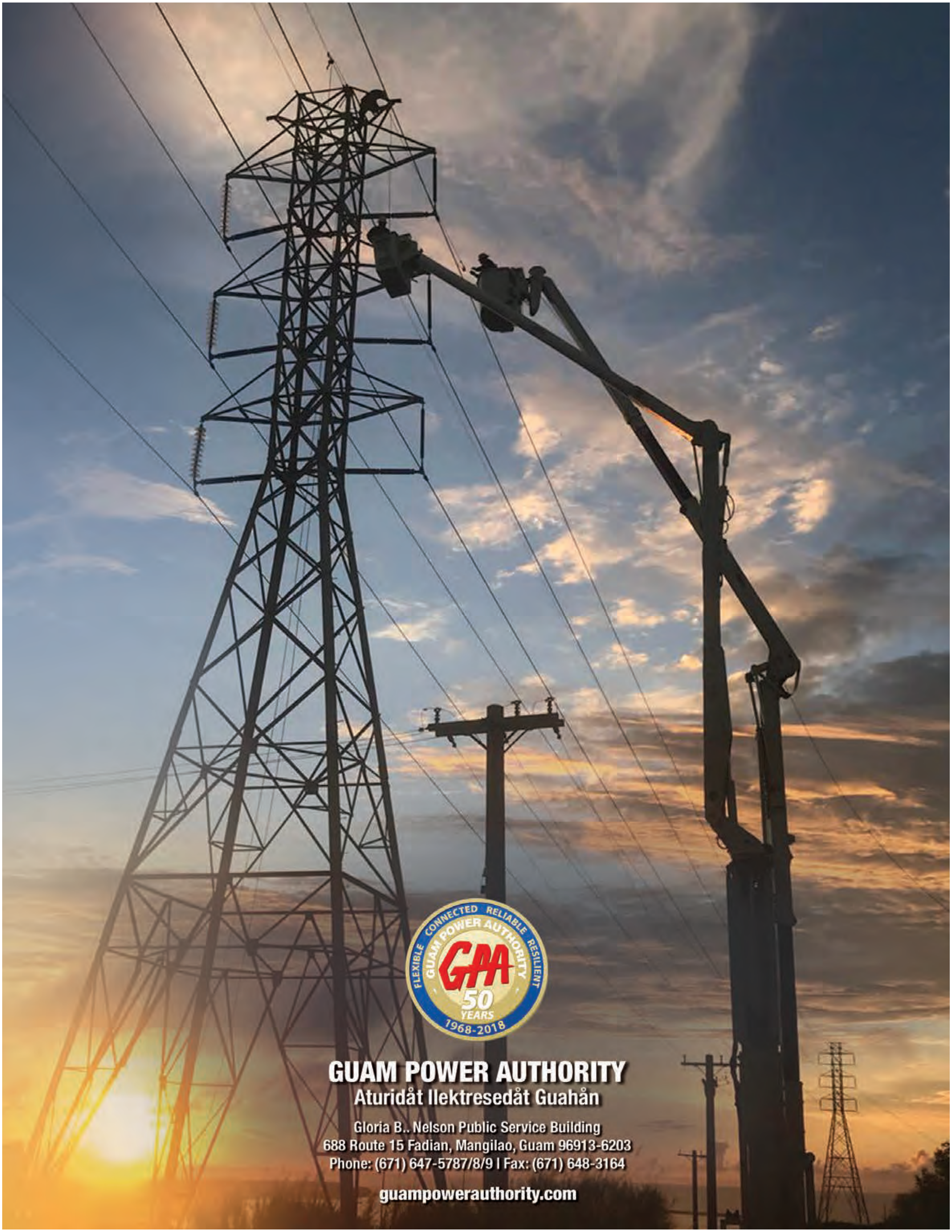
# The Gloria B. Nelson Public Service Building

Over the years, GPA has implemented various cost-cutting strategies with building its own energy efficient facility in Fadian, Mangilao.

After many years of establishing and moving offices from various leased facilities, GPA planned, designed and constructed the $30 million LEED-certified Gloria B. Nelson Public Service Building in 2015. Attaining LEED Silver Certification at Fadian is significant as the Authority promotes awareness for using energy efficiently to save on costs.

The silver LEED certification requires continual efforts to reduce electrical power demand by 20 to 30 percent and reduces water use by 40 to 50 percent. Reduction in these areas on these systems will translate into the building's longer life span and lower maintenance and replacement costs. Lower demand on resources translates directly into cost savings. Cost savings passed on to ratepayers is one way of adding value to our service.

The building is dedicated to Gloria Borja Nelson (1935-2012) in tribute to her lifetime of invaluable public service to Guam. An advocate for public service, education, social reform and family, she served on the Consolidated Commission on Utilities from 2005 to 2012.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GPA
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1968-2018
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