

CREDIT OPINION

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Update

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Guam Power Authority

Update to Key Rating Factors

Summary Rating Rationale

Moody's maintains the Baa2 rating on Guam Power Authority's (GPA) outstanding revenue bonds with a stable outlook.

The Baa2 senior lien revenue bond rating reflects the authority's strong competitive position as the sole provider of electricity to residential customers on the island of Guam. In addition, GPA benefits from the presence of the U.S. military as its largest customer which provides stability to its customer and revenue base and mitigates its susceptibility to volatility in local economic conditions and energy consumption by the tourism sector. The rating also takes into account the trend of solid financial performance and coverage ratios (fixed charge coverage ratio 1.86x in fiscal year 2016). GPA continues to recover from the fire in August 2015 that destroyed its key baseload generation facilities Cabras 3 and 4 and will need to focus on renewing its aging generation facilities in the next few years.

GPA's liquidity profile is currently very strong (240 days cash on hand in fiscal year 2016), largely as a result of \$84 million in insurance proceeds received so far for the Cabras 3 and 4 fire. Bondholders benefit from a fully funded debt service fund and fully funded debt service reserve fund.

Electricity rates in Guam tend to be above those of public utilities on the mainland but are consistent with other island economies. Willingness and ability to increase rates has been adequate. The base rate was last increased in October 2013 but volatile fuel costs are recovered through a levelized energy adjustment clause (LEAC), which is adjusted semi-annually.

The rating is constrained by the island's small and concentrated economy, the vulnerability of energy rates and consumption to volatile oil prices and weather related events such as typhoons, the age of its generating facilities which are largely fueled by oil, high debt levels and potential for additional debt issuance in order to finance investments in its old generation facilities. The rating is also constrained by uncertainty regarding the costs of regulatory requirements owing to its slow speed diesel units which currently do not comply with existing Environmental Protection Agency (EPA) regulations. We understand that GPA is in discussions with the EPA to achieve compliance over time as it renews its generation facilities.

GPA operates fairly independent from the government of Guam and has no exposure to material overdue government receivables. However, we do not expect that the authority would be able to disconnect itself completely from a material deterioration in local economic conditions or financial stress at the government level.

Credit Strengths

- » Monopoly provider for electricity service on the island of Guam
- » The U.S. Navy as largest customer provides revenue stability
- » Demonstrated ability and willingness to raise rates
- » Outstanding government receivables are manageable
- » Solid 2016 financial performance resulting from an increase in customer base

Credit Challenges

- » Narrow island economy and susceptibility to weather-related event risks
- » Continued recovery from the Cabras 3 & 4 fire and necessity to renew generation units
- » Challenged to comply with Environmental Protection Agency (EPA) rules
- » High leverage and new generation facilities will require additional debt

Rating Outlook

The stable outlook incorporates our expectation that GPA will maintain adequate financial metrics and liquidity in line with historic levels while continuing its efforts to recover from the Cabras plant fire of 2015, to further diversify its fuel resources and to achieve compliance with existing EPA regulations.

Factors that Could Lead to an Upgrade

- » Increased diversity of its resource mix
- » Sustained improvements in sales from residential customers
- » Total fixed charge coverage above 1.5x on a sustainable basis

Factors that Could Lead to a Downgrade

- » Erosion of the government's financial position and liquidity or deteriorating local economic conditions that would negatively impact Guam Power's financial flexibility
- » Total fixed charge coverage below 1.1x
- » Debt ratio above 100%
- » Deteriorating liquidity profile with days cash on hand falling below historical levels of around 80-90 days
- » EPA negotiations result in material fines or higher than expected compliance costs
- » Loss of customers
- » Plant shutdown that would further reduce generation capacity

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Key Indicators

Exhibit 1

Key Indicators - Guam Power Authority

GUAM POWER AUTHORITY					
	2012	2013	2014	2015	2016
Total Sales (mWh)	1,562,795	1,565,109	1,533,323	1,539,587	1,574,340
Debt Ratio (%)	71.3	78.3	74.9	74.7	75.3
Debt Outstanding (\$'000)	566,805	616,828	667,924	635,550	606,465
Total Days Cash on Hand (days)	83	76	88	109	240
Fixed Obligation Charge Coverage (if applicable)(x)	0.90	1.15	1.24	1.47	1.86

All rates are calculated according to Moody's definition.

Source: Guam Power Authority audited financial statements, Moody's Investors Service.

Recent Developments

Incorporated into Detailed Rating Considerations.

Detailed Rating Considerations

Revenue Generating Base

MONOPOLY PROVIDER IN A SERVICE TERRITORY WITH A NARROW ECONOMY AND SUSCEPTIBILITY TO TYPHOONS

The Guam Power Authority is the sole provider of electricity to around 162,000 residents of the island of Guam, a territory of the U.S. The authority also provides electricity to around 12,000-14,000 U.S. military personnel and their dependents, which are stationed on the island. The authority is challenged to maintain a reliable electric system in an island territory that can be exposed to extreme weather events, such as typhoons.

The commercial sector is the largest electricity consumer, using more than one-third of all power. That sector includes hotels and restaurants serving tourists. The residential sector accounts for three-tenths of electricity use, and the U.S. military, one-fifth.

Guam's economy is largely dependent on the U.S. Navy and discretionary international tourism, in particular from Japan and other Asian countries such as South Korea and China amongst others. Guam's economy will likely struggle until the military relocation improves economic conditions. Tourism is expected to provide less support to the economy in 2017 due to weaker economic growth in major Asian economies. The medium-term outlook for military spending in Guam is positive given a scheduled relocation of 2,500 US Marines to Guam from Okinawa, Japan by 2021 and another 2,500 by 2026. The relocation was initially scheduled to be completed by 2017 but was delayed multiple times.

THE U.S. NAVY AS LARGEST CUSTOMER PROVIDES REVENUE STABILITY

The significant presence of the U.S. Navy provides stability to the authority's customer base and the U.S. Navy remains GPA's largest customer (around 20% of total energy sales and 16% of electric revenues in 2016). Energy sales (MWh) to the U.S. Navy have stabilized in 2016, after declining modestly in 2015 and 2014. The relocation of U.S. Marines to Guam from Okinawa, Japan would be positive for GPA.

GPA has a 10-year customer agreement with the U.S. Navy that expires in 2022 and that was last renewed in 2012. In addition, the authority recently entered into a lease agreement with the U.S. Navy that would dedicate 164 acres of military land for the development of renewable energy facilities with a 40-MW generating capacity. The land will support the third phase of GPA's renewable energy initiative, which is anticipated to yield at least 120 MW of renewable power once all three phases are complete. The renewable initiative is part of a 2008 mandate issued by the Guam Legislature, which targets 8% electricity from renewable resources by 2020 and 25% by 2035 and a 20% reduction in fossil fuel consumption by 2020.

CONTINUED RECOVERY FROM CABRAS 3 & 4 FIRE AND NECESSITY TO RENEW GENERATION UNITS

Similar to other island economies, Guam generates the majority of electricity needs with fuel oil, which needs to be shipped to the island. This exposes electricity rates and Guam's operating expenditures to the volatility of global oil market prices. Guam has around

310MW of available baseload generation capacity after the fire that destroyed baseload units Cabras 3 & 4 (78.6 MW) in August 2015. Since the fire, Guam Power added 40 MW temporary purchased power and made improvements to the existing baseload to restore derated capacity. All baseload and intermediate generating facilities in Guam (total available capacity 380 MW) are operated by contracted independent power providers. The authority only operates ten diesel peaking units with a capacity of 44 MW.

As part of Guam Power's Integrated Resource Plan (IRP), approved in October 2016, the authority is moving ahead with its plan to install 180MW of dual-fired combined cycle generation units to be commissioned by end of 2020. The 180MW of combined cycle units would be dual fired on ultra-low sulfur diesel (ULSD) and natural gas, would be operated by an independent power producer and financed by GPA. On April 20, 2017 operating permits were issued by the Guam Environment Protection Agency for Dededo Combustion Turbine Units 1 and 2. These permits allow for an additional 44 MW. Over time, GPA also seeks to retire Cabras Unit 1 and Unit 2 and convert MEC 8 and 9 to ULSD and natural gas within one year after the commission of the new combined-cycle generation. The IRP also foresees the expansion of GPA's renewable energy programs and the installation of an energy storage system. GPA currently has around 25 MW of solar energy installed and allows for net metering. As of early 2016, nearly 9 MW of distributed solar power was connected to Guam's grid.

CHALLENGED TO COMPLY WITH ENVIRONMENTAL PROTECTION AGENCY (EPA) RULES

GPA's slow speed diesel units are currently not in compliance with EPA rules and would require substantial modifications and installations of stack emissions control and continuous monitoring systems equipment. GPA expects that the new 180 MW combined cycle generation facility and retirement of Cabras 1 and 2 would put GPA in compliance with existing rules.

GPA believes that potential fines for non-compliance of the slow speed diesel units since May 3, 2013 will not be levied. However, GPA estimates that if a consent decree is not reached, it could be exposed to a liability of up to \$169 million as of March 1, 2017, which is substantial and a credit negative.

DEMONSTRATED ABILITY AND WILLINGNESS TO INCREASE RATES

Electricity rates in Guam tend to be above those of public utilities on the mainland but are consistently lower or comparable to other island economies. Island economies tend to have higher electricity costs owing to the reliance on oil-based generation facilities and the need for excess capacity. Guam's residential rates are below those on the Virgin Islands and Hawaii.

The Public Utility Commission (PUC) needs to approve all rate increases in Guam. Electricity rates consist mainly of the base rate that covers fixed costs and non-fuel operating costs and the levelized energy adjustment clause (LEAC), which accounts for fuel-related expenses, a working capital fund surcharge and renewables. The base rate adjustments are completed as needed through the PUC approval process and the LEAC is adjusted semi-annually to account for the volatility of oil prices.

The base rate was last increased October 1, 2013 and starts at around \$0.10/kWh.

In January 2017, the PUC approved an increase in the LEAC to \$0.105/kWh from \$0.0806/kWh in 2016. The LEAC rate has been declining since 2013 from its peak of \$0.209/kWh, reflecting declining oil prices. The next LEAC adjustment is expected for August 2017.

OUTSTANDING GOVERNMENT RECEIVABLES ARE MANAGEABLE

Government accounts receivables accounted for 7% of total outstanding gross receivables in 2016 and have been declining over the last few years. In contrast to other island utilities that have been impacted by delinquent receivables from governmental entities as a result of financial and economic stress at the government, government long-term receivables in Guam were paid off since 2003 when they peaked at over \$40 million. Overall doubtful receivables from all customers as a % of gross receivables (excluding insurance receivables) remain fairly high at 12.4% of gross receivables (excluding insurance receivables) in 2016. However, this reflects GPA's policy to maintain at least three years of inactive accounts as provision for bad debt allowance.

GPA'S CREDIT QUALITY IS LINKED TO THE FINANCIAL HEALTH OF THE GOVERNMENT AND LOCAL ECONOMIC CONDITIONS

While GPA operates fairly independent from the government, we do not expect that the authority would be able to disconnect itself from local economic conditions or material financial stress at the government level. A deterioration of local government finances or economic conditions could put pressure on outstanding receivables and customers' ability to pay their bills. In addition, the PUC's willingness to support rate increases could weaken during times of economic stress.

Financial and Operating Performance

SOLID 2016 FINANCIAL PERFORMANCE BENEFITED FROM INCREASE IN CUSTOMERS

Financial performance in 2016 was solid and benefited from an increase in customers and energy sales. Energy sales increased by 2.2% in 2016 to 1,574 GWH and by 0.4% in 2015 to 1,530 GWH. The number of customers increased by 1.4% to 50,207 in 2016 from 49,530 in 2015. The positive trend in 2016 was a departure from declining or stagnating customer demand in prior years.

We expect that GPA will be able to maintain a fairly stable customer profile in 2017. However, the authority remains vulnerable to modest declines in energy consumption in particular during periods of high oil prices.

We expect that GPA will maintain a minimum total fixed charge coverage ratio of around 1.3x (1.9x in 2016) even if the authority issues additional debt to renew its generation facilities in the next few years. Days cash on hand will likely remain high in the near term (240 days in 2016) thanks to the \$84 million insurance proceeds received so far and the potential for additional insurance proceeds in the future. However, we expect days cash on hand to return to historic averages of around 80-90 days in the medium term. The authority's debt ratio will likely increase from 75% in 2016 if new debt is issued but should remain well below 100%.

LIQUIDITY

CURRENT STRONG LIQUIDITY PROFILE BENEFITS FROM INSURANCE PROCEEDS FOR CABRAS 3 AND 4 FIRE

At September 30, 2016 GPA had around \$282.5 million of unrestricted and restricted cash and investments on balance sheet. We consider around \$147.6 million of these as discretionary reserves, translating into around 240 days cash on hand and a cash to debt ratio of 24%. This is a substantial improvement compared to the 89 days cash on hand GPA held on average over the last four years. The improvement is mainly driven by around \$50 million in insurance proceeds for the Cabras 3 and 4 fire as of September 30, 2016. As of June 6, 2017 GPA received insurance proceeds of \$84 million in total for the incident. Neither the cause of the explosion nor the final insurance recoveries have been determined yet. GPA's total insurance policy with Lloyd's of London amounts to \$300 million.

We expect that GPA will reinvest these insurance proceeds in the improvement and maintenance of its generation facilities over time and will likely return to historic levels of days cash on hand.

The authority had around \$65.1 million in restricted cash deposited in its debt service fund and debt service reserve funds at September 30, 2016.

Debt and Other Liabilities

DEBT STRUCTURE

HIGH LEVERAGE AND NEW GENERATION FACILITIES WILL REQUIRE ADDITIONAL DEBT

GPA had around \$595 million in senior revenue bonds outstanding and around \$39.6 million in capital lease liabilities as of September 30, 2016. The capital lease liabilities mature in 2019. All debt is fixed rate debt.

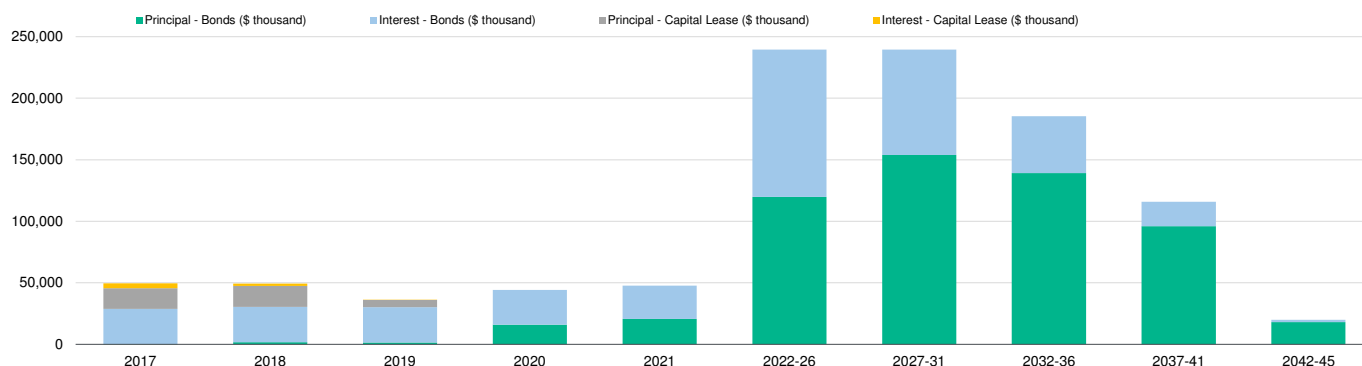
2017 Annual debt service amounts to \$28.8 million on the senior revenue and to \$20.1 million for the capital lease. Annual senior revenue bond debt service is gradually increasing over time.

We expect that the planned 180MW new combined cycle plant will likely be financed with additional debt over the next few years, although we anticipate that insurance proceeds will mitigate the increase in new indebtedness.

Exhibit 2

Bond debt service gradually increases over next few years as capital leases mature

Current debt service profile as of September 30, 2016



Source: Guam Power Authority 2016 financial statements.

DEBT-RELATED DERIVATIVES

Not applicable.

PENSIONS AND OPEB

The Guam Power Authority participates in the defined benefit pension plan of the government of Guam, the Guam Employees Retirement System. The plan is administered by the Government of Guam Retirement Fund to which the authority contributes based upon a fixed percentage of its employees' payroll. GPA contributed \$2.5 million to the plan in fiscal year 2016. The authority's share of the Government of Guam's Retirement Fund defined benefit plan's net pension liability was \$71.0 million in fiscal year 2016 based on a discount rate of 7.0%. Moody's adjusted net pension liability for fiscal year 2016 is around \$115.2 million and based on a lower discount rate. While substantial at \$115.2 million, we view GPA's adjusted net pension liability as manageable relative to its outstanding debt.

The authority participates also in Guam's Defined Contribution Retirement System. GPA's contributions to the defined contribution pension plan were \$5.1 million in fiscal year 2016. GPA also made OPEB contributions of \$4.1 million in fiscal year 2016.

Management and Governance

GPA is governed by the Consolidated Commission on Utilities (CCU), an elected five member board, which is elected by the public. The CCU is responsible for setting rates subject to regulations of the Guam PUC, providing oversight and approving GPA's bond issuances. Guam's bond issuances also require approval by the Guam Economic Development Authority, the Governor and the Legislature.

GPA operates fairly independent from Guam's central government, it does not receive any subsidies from the Government of Guam, has no tax obligations to the government and does not make any transfer payment to the Government of Guam.

Legal Security

Senior lien bonds are secured by a pledge of net revenues, subject to the prior application of such revenues for operations and maintenance expenses. Bondholders benefit from a 1.3x senior annual debt service rate covenant, a 1.2x subordinate annual debt service rate covenants, and a standard additional bonds test. Capital lease payments are subordinated to senior lien debt service.

The debt service reserve fund was funded at \$48.5 million at September 30, 2016, in excess of the required maximum annual debt service. In addition, GPA has a debt service fund (\$16.0 million at September 30, 2016). The bond documentation also requires a working capital fund, funded at least at one twelfth of the budgeted annual maintenance and operational expenses.

Use of Proceeds

Not applicable.

Obligor Profile

The Guam Power Authority (GPA) is a component unit of the Government of Guam. GPA provides electricity to residential, commercial, and governmental customers on the island of Guam and is the sole provider of electric services to around 162,000 residential customers on the island. The US Navy is GPA's largest customer.

Other Considerations - Mapping to the Grid

The grid is a reference tool that can be used to approximate credit profiles in the industry in most cases. However, the grid is a summary that does not include every rating consideration. Please see US Public Power Electric Utilities with Generation Ownership Exposure for information about the limitations inherent to the grid.

The grid indicated rating for the Guam Power Authority is Baa1 based on 3-year average credit metrics for 2014-2016. The assigned rating of Baa2 also takes into account the authority's future challenges to renew its generation profile and its linkages to the financial health of the government and economy of Guam. These considerations are only partially reflected in the methodology grid.

Exhibit 3

Rating Factors US Public Power Electric Utilities with Generation Ownership Exposure - Guam Power Authority

Factor	Subfactor	Score	Metric
1. Cost Recovery Framework Within Service Territory		Baa	
2. Willingness and Ability to Recover Costs with Sound Financial Metrics		A	
3. Generation and Power Procurement Risk Exposure		Ba	
4. Competitiveness	Rate Competitiveness	Baa	
5. Financial Strength and Liquidity	a) Adjusted days liquidity on hand (3-year avg) (days)	A	146
	b) Debt ratio (3-year avg) (%)	Baa	75%
	c) Adjusted Debt Service Coverage or Fixed Obligation Charge Coverage (3-year avg) (x)	Baa	1.52x
Preliminary Grid Indicated rating from Grid factors 1-5		Baa1	
		Notch	
6. Operational Considerations		0.0	
7. Debt Structure and Reserves		0.0	
8. Revenue Stability and Diversity		0.0	
Grid Indicated Rating:		Baa1	

Source: Guam Power Authority audited financial statements, Moody's Investors Service

Methodology

The principal methodology used in this rating was US Public Power Electric Utilities With Generation Ownership Exposure published in March 2016. Please see the Rating Methodologies page on www.moody's.com for a copy of this methodology.

RATINGS

GUAM POWER AUTHORITY

Revenue Bonds	Baa2
Rating Outlook	Stable

Source: Moody's Investors Service

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