



BUSINESS OPPORTUNITIES IN INFRASTRUCTURE

DOI Investment Conference October 2007





Guam Power Authority

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Fact Sheet

- Sole Provider of Electricity on Guam
- 46,000 customers
 - 38,000 Residential
 - 18 Metering Points Serving the Navy (DOD)
 - 13% Base Revenues from the Navy
- Projected Fiscal Year 2008 Budget
 - \$331 MM Total
 - \$178.6 MM Fuel





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Fact Sheet

- Peak Demand 281.5 MW
- Installed Generation: 552.4 MW
 - <http://www.guampowerauthority.com/operations/generation/generationmix.html>
- 663 miles of transmission and distribution lines
- 4 Bulk Power Transfer Substations
- 25 Distribution Substations
 - 594.5 MVA Installed Capacity





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Major Long-Term Contracts

- Residual Fuel Oil
- Diesel No. 2
- Cylinder Oil
- Performance Management Contracts
 - Cabras 1&2 (Out on Bid) – 132 MW
 - Cabras 3&4 – 78.6 MW
- Independent Power Producers
 - Taiwan Electrical and Mechanical Services (TEMES) – 40 MW
 - Marianas Electric Company (Osaka Gas) – 88 MW
 - Pruvient Energy Guam Inc. – 53 MW
- Potential T&D Opportunities
 - Tree Trimming
 - Substation Maintenance
 - All T&D, either mgmt only or full privatization (currently not proposed)





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Potential Project Summary Table

(x \$1,000)	
Generation System Reliability Improvement and New Supply Projects	313,800
Substation Reliability Improvement Projects	55,843
System Improvement Projects	1,890
Transmission & Distribution System Reliability Improvement Projects	126,689
Fuel Diversification or Renewable Energy Projects	140,000
Additional Fuel Reserve Storage Project	27,545
TOTAL ESTIMATE	665,767





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Generation System Reliability Improvement and New Supply Projects

(x \$1,000)	
Baseload Units – Plant Upgrades	8,600
Emergency & Peaking Units – Plant Upgrades	5,200
60 MW Baseload Design & Construction (Pending Completion of IRP and Military Buildup Input)	300,000
TOTAL ESTIMATE	313,800





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Substation Reliability Improvement Projects

(x \$1,000)	
Dededo Indoor 34.5 kV and 13.8 kV Substation and 30 MVA Transformer Upgrade	7,150
Harmon Substation Switchyard Reconstruction	1,000
Talofofo Substation 30 MVA Upgrade	933
New Orote 115 kV Substation	4,700
New Substation to Support New Power Plant	6,431
Marbo Substation Upgrade-Control System, Conversion to Indoor Switchgear & 30 MVA Transformer Upgrade	7,150
Orote Substation Upgrade-Control System, Conversion to Indoor Switchgear	10,310
Radio Barrigada Substation Upgrade-Control System, Conversion to Indoor Switchgear	6,000
Andersen Substation Upgrade-Control System, Conversion to Indoor Switchgear	7,725
Hagatna 115 kV & 34.5 kV Breaker Replacement and Protection Upgrade	2,706
Protection System Upgrades: Hagatna, Tamuning, Tumon, Piti, Anigua	1,738
TOTAL ESTIMATE	55,843





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System Improvement Projects

(x \$1,000)	
System Stability / Relay Coordination Upgrade	1,190
Substation & Distribution Capacitor Program	450
Demand Side Management Program	250
TOTAL ESTIMATE	1,890





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Transmission & Distribution System Reliability Improvement Projects

(x \$1,000)	
New Transmission Lines to Existing Substations for Improved Service & Reliability	22,535
Reconductoring of Existing Overhead Lines for Increased Capacity	2,943
Distribution System Improvements Island Wide	6,050
P003 UG Extension to Port Authority	2,894
Underground Conversion of Existing Transmission Lines Serving Military Installations	79,867
Underground Conversion of Distribution Line P332 to Andersen & Surrounding Customers	7,800
New Underground Distribution Line from Marbo Substation	4,600
TOTAL ESTIMATE	126,689





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Fuel Diversification or Renewable Energy Projects

(x \$1,000)	
20 MW Wind Farm	40,000
Guam Sea Water Air Conditioning (GSWAC) & Other Renewables	100,000
TOTAL ESTIMATE	140,000





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Additional Fuel Reserve Storage Project

(x \$1,000)	
Additional 60-day fuel oil (RFO) storage facilities	27,545
TOTAL ESTIMATE	27,545





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Opportunities





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Partnership Models

- Independent Power Producers
 - Build-Operate-Transfer
- Performance Management Contracts
 - Contracted Management and Outsourcing
 - Personnel Management Agreement
 - Operating Expense Reimbursement
 - Performance-Based and Fixed Fee Compensation
 - Negotiated Capital Improvement Projects
- Special Purpose Entity
 - Shared Equity in Project
 - Build-Operate-Transfer
 - Shared Revenues and Operating Expenses





Guam Waterworks Authority

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Fact Sheet

- \$50M Annual Budget
- 245 Employees
- 38,000 Customers
- \$337M in Total Assets
- GWA website
<http://www.guamwaterworks.org>

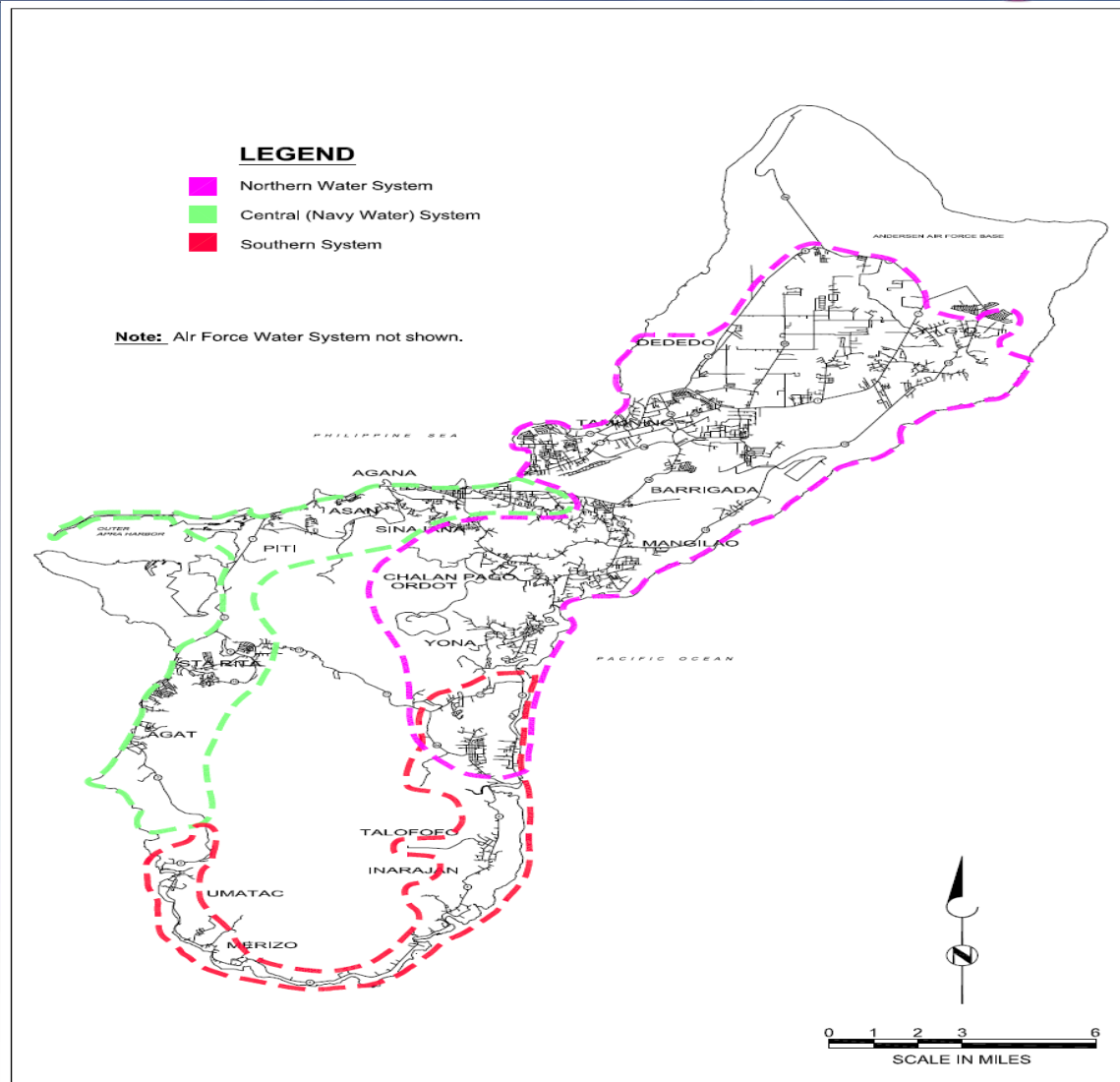


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GWA provides water service

- **3 Water Systems**
- **Extensive Facilities**
 - 121 wells, 5 springs,
 - 1 treatment plant
 - 40 reservoirs
 - 36 booster stations
 - 420 miles of pipe
- **Population served**
 - 157,000



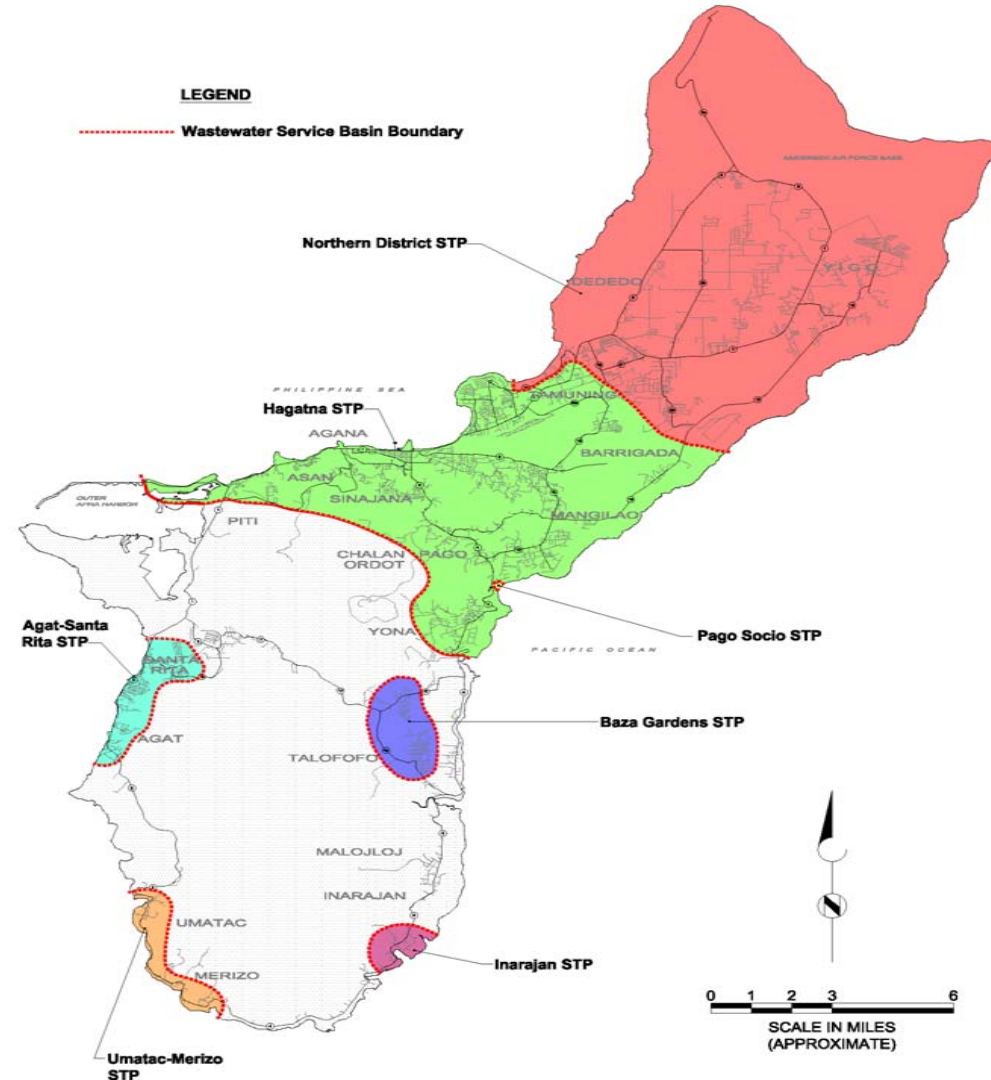


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GWA collects and treats wastewater

- **7 Service Basins**
- **Extensive Facilities**
 - 238 miles of pipe
 - 77 pumping stations
 - 7 treatment plants
 - 3 ocean outfalls
- **Population served**
 - 100,000 (58% only)
 - Treat all Air Force and part of Navy Wastewater





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- Since 2003, GWA has embarked on a major reconstruction and upgrade effort to rebuild Guam's aging water and wastewater infrastructure to improve system reliability.
- 2005: GWA secures the first \$100 Million in bond financing



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Capital Improvement Projects

- The primary objectives are to improve operations of the System and to meet the requirements of the Stipulated Order of the United States District Court.
- Projects include wastewater treatment facilities, water treatment facilities, water production and disinfection, wastewater collection system, water distribution system, and efficiency upgrades.
- GWA is in compliance with the SDWA
- USEPA has recently declared GWA's drinking water to be the safest in decades.



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Bond & EPA Funded Projects

(x \$1,000)

Water System: Production and Treatment	12,630
Wastewater Treatment and Collection	34,737
Water Distribution/Storage	21,618
Efficiency Upgrades	28,172
Miscellaneous upgrades	2,282
TOTAL	99,439



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Hagåtña Wastewater Treatment Plant Refurbishment *\$11 Million*



Completed this year. This plant was essentially non-operational for the last decade



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Hagatna and Northern Outfalls
\$18.9 Million (Completion December 2007)





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*Water Production/Treatment Upgrades
\$12.6 Million (Completion by August 2008)*





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Island-wide Water Meter Replacement \$14.6M

**CIP Goal: Reduce
Unaccounted for water**



Water Meter Replacement
With Radio Read meters





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Master Plan Completed

- **Master plan approved by CCU in February 2007**
- **Identified water and wastewater infrastructure improvements totaling nearly \$900 million over the next 25 years.**
- **The plan included a revised fee structure as well as a System Development Charge**
- **The financial plan lays out a program to continue to raise rates gradually to cover the costs of the projects**



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Master Plan for FY2008-2012

(x \$1,000)	
Water System; reservoirs, transmission & Distribution Lines	129,950
Wastewater collection capacity related	14,290
New Sewer Hookups	4,000
Wastewater collection upgrades	11,250
Wastewater Facilities Replacement, Improvements, expansion	27,840
Electrical Upgrades	7,150
GIS Upgrades	800
TOTAL ESTIMATE	195,280



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Projects Related to Military Buildup

(x \$1,000)	
Water System: Production and Treatment	22,550
Water System: Transmission, Distribution, Storage	98,360
Wastewater Treatment	60,000
Wastewater Collection	5,900
Efficiency Upgrades	5,450
TOTAL	192,260



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Total Projects to 2012 \$487 Million

(x \$1,000)	
Bond and EPA Funded	99,439
Master Plan Program	195,280
Anticipated Military Buildup	192,260
TOTAL	486,979



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Opportunities for Partnership

- CCU determined GWA needed additional resources to upgrade wastewater system and established first Private/ Public Partnership for GWA
- Veolia LLC - one of the largest wastewater service providers in the world was selected to manage GWA's Wastewater System beginning January 2007
- Employees are GWA employees, Veolia Management
- Facilities remain GWA facilities
- More Private/Public Partnerships Expected for future projects



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Infrastructure Summaries

GPA: \$660 million

GWA: \$487 million

TOTAL: \$1.15 Billion to be invested
on Guam's growth over the next decade





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A Shared Vision

- An integrated and well developed island-wide infrastructure system to support Guam's growth
- Tremendous opportunities for your business to partner with Guam
- We must leverage Japan, DOD, federal, private sector and Guam funding





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