



UTILITY DEVELOPMENT FOR THE GUAM MILITARY BUILD-UP

GUAM INDUSTRY FORUM III

28-30 Apr 2009

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Background



- In Oct. 2005, SECDEF/SECSTATE and GoJ counterparts agreed to a realignment of U.S. forces in Japan.
- In May 2006, USG and GoJ entered into the Roadmap for Realignment, which covered the implementation and associated cost sharing arrangements of the realignment.
- The Roadmap Agreement covering the realignment of Marine Corps forces from Okinawa to Guam indicate that GoJ will provide up to \$740M in loans for a Special Purpose Entity, a Public-Private Venture-like entity, to provide for utilities services to support the realignment.
- It is intended that the SPE (Utility Entity) will repay GoJ provided loans through utilities service charges imposed on utility customers.

Background



- Currently DoD is evaluating utility requirements for future DoD and Marine Corps realignment needs.
- GoJ's funding will be limited to the cost of providing services for the relocated Marines.
- It is anticipated the Utilities Entities established will utilize GoJ funding and private/commercial funding sources.
- Working with Guam's Consolidated Commission on Utilities to assure alignment with their efforts.
- Feedback received at the Guam Industry Forum III and the RFI process which will follow may require subsequent refinement of possible solutions and business models.

Goals



- Provide adequate and reliable utilities to support DoD build-up in Guam
 - Design, finance, construction, operations, and maintenance
 - Long term requirements
- Leverage private sector expertise in devising optimum utilities solutions
- Enable technical, financial and operational viability
- Create a win-win, long term solution for Guam and the Department of Defense mission on Guam
- Incorporate viable renewable alternatives

Power Requirements



- Current DoD load: 45-50 MW
- Future DoD load: 110-115 MW
- Anticipated generation shortfall: 60 -100 MW (with Reserve Margin)
- Transmission & distribution upgrades required
- Notional solution – Utility Entity to:
 - Establish an effective business relationship with GPA
 - Construct new baseload power plant
 - Implement necessary T&D upgrades (likely underground)
 - Implement a portion of generation through renewable resources
 - Conduct operations as required for life of agreement
- GPA to be the potential provider of peaking power but open to alternatives that benefit all parties

GPA Perspective



- GPA is supportive of a solution which calls for integration of Utility Entity and GPA capabilities
- Details that must be resolved to achieve integration
 - Development of a Utility Entity business model that meets CCU and PUC approval
 - Utility Entity financing of necessary infrastructure development or improvements to support expanded DoD requirements
 - Resolution of distribution locations and load numbers to enable planning for necessary T&D improvements
 - Development of a fair and equitable rate structure for any purchase of power from the Utility Entity
 - Coordinated responses to resolving renewable energy requirements

Renewable Power



- Goal 25% of DoD energy consumed
- Potentially 15-25 MW of anticipated shortfall
- Technical options being considered in Environmental Impact Statement development
 - OTEC
 - Geothermal
 - Waste-Energy (WTE)
 - Wind
 - Solar Photovoltaic
 - Biofuel Plant
 - Biomass Plant
 - Fuel Cells
 - Solar Thermal
 - Wave Energy
- Industry input sought
- Cooperative efforts with GPA encouraged
- Seeking financially viable renewable alternatives

Water Requirements



- Current DoD Island-Wide Maximum Day Demand: 18 MGD
- Future DoD Island-Wide Maximum Day Demand: 35 MGD
- Shortfall: 17 MGD
- Notional solution – Utility entity to:
 - Develop 25-30 new wells
 - Construct 4-5 water treatment plants
 - Construct 2-5 water storage facilities
 - **Potentially 1 above ground; balance elevated**
 - Construct 20-27 miles of 8”- 30” distribution lines
 - **North – South 19 miles of transmission line (may be excluded)**
 - Conduct operations as required for the life of the agreement
- Exact scope is under review, but may include operation of some portions of the Navy’s existing distribution system
- Coordination with GWA will be necessary

Wastewater Requirements



- **GWA Northern District Waste Water Treatment Plant (NDWWTP)**
 - Current capacity: 12 MGD, permitted 6MGD
 - Total current flow: 5.7 MGD
 - Current DoD flow: 1-2 MGD
 - Anticipated additional DoD flow: 3-5 MGD
 - Anticipated additional non-DoD flow: TBD

- **Notional solution – Utility entity to:**
 - **Establish an effective business relationship with GWA**
 - **Potential lease of NDWWTP**
 - **Upgrade and improve NDWWTP**
 - Headworks
 - Advanced primary treatment upgrade
 - Digesters
 - Solids dewatering
 - Disinfection systems
 - Other improvements as required
 - **Potentially upgrade, expand, and improve to secondary treatment if required by regulatory action**
 - **Conduct operations as required for the life of the agreement**

- **GWA to maintain NPDES discharge permit, with compliance requirements to be negotiated with GWA.**

GWA Perspective



- GWA is supportive of a wastewater solution which calls for Utility Entity use and expansion of existing GWA capabilities. Water solutions require more discussions with DoD.
- Details that must be resolved to achieve a wastewater solution:
 - Utility Entity financing of necessary NDWWTP expansion and improvements to support expanded DoD and civilian requirements
 - Development of a fair and equitable rate structure for any bulk service agreement covering treatment of civilian requirements
 - Development of a management and operations agreement with the Utility entity
- Points of discussion on water solutions:
 - Development of a unified approach to aquifer development and protection.
 - Development of loss reduction measures
 - A clear understanding of the aquifer capacity
 - Civilian growth demand needs to be determined

Notional Business Approaches

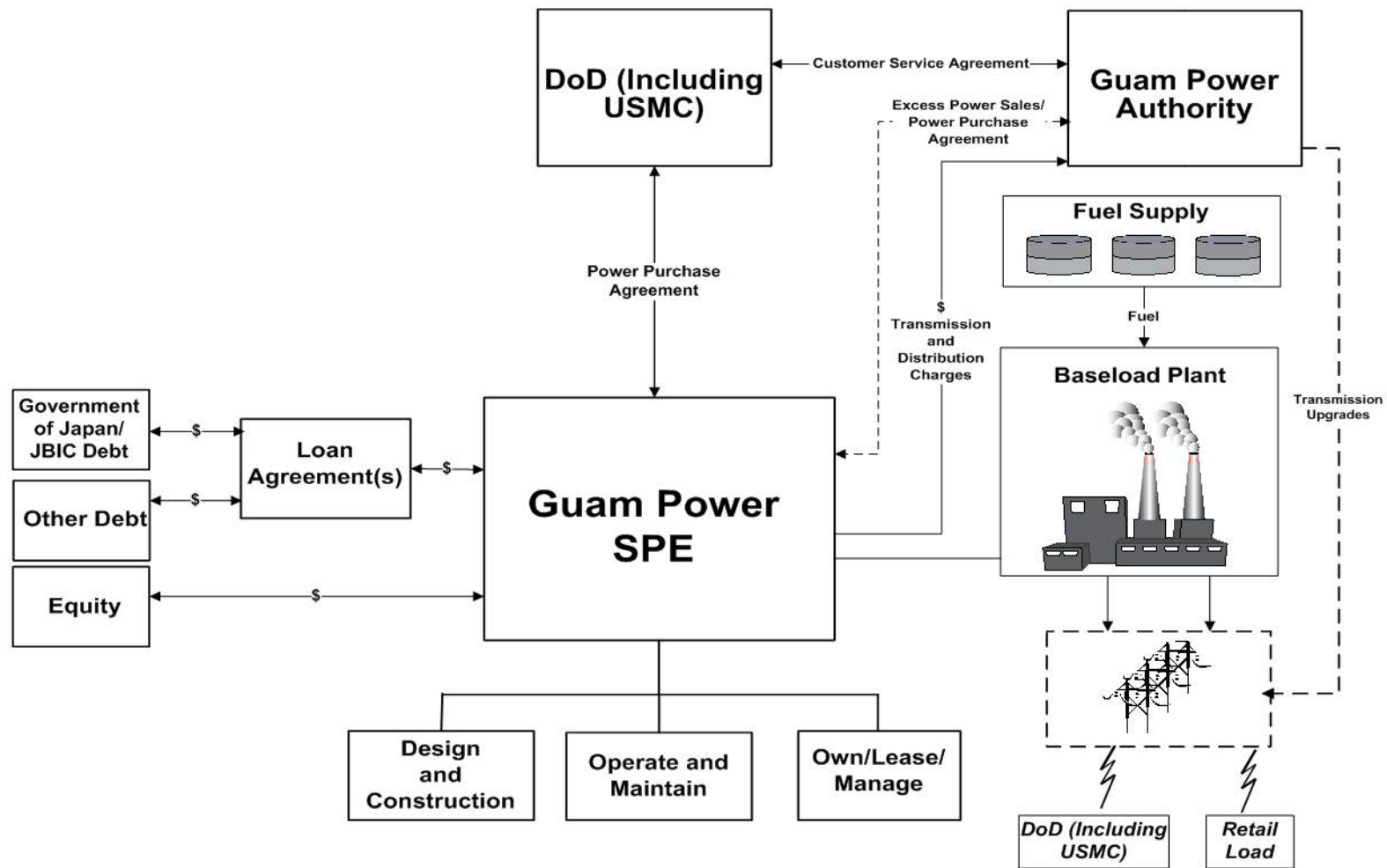


- Notional Ownership, Financing and Management Structure
 - Sample Schematic Relationships

- Notional Project Roles and Responsibilities
 - USG v Utility Entity
 - GWA/GPA v Utility Entity
 - GOJ v Utility Entity

- The approaches to follow provide a potential framework for the business arrangement, we seek industry input on the optimal solution

POWER: Notional Ownership, Financing & Management Structure



Notional Project Roles and Responsibilities



USG

- Facilitate procurement for power supply services
- Negotiate long-term power purchase agreement
- Where appropriate, assist Utility Entity in relationships with Guam authorities and regulatory agencies

GPA

- Develop dispatch arrangements with Utility Entity
- Negotiate agreement to purchase power from Utility Entity

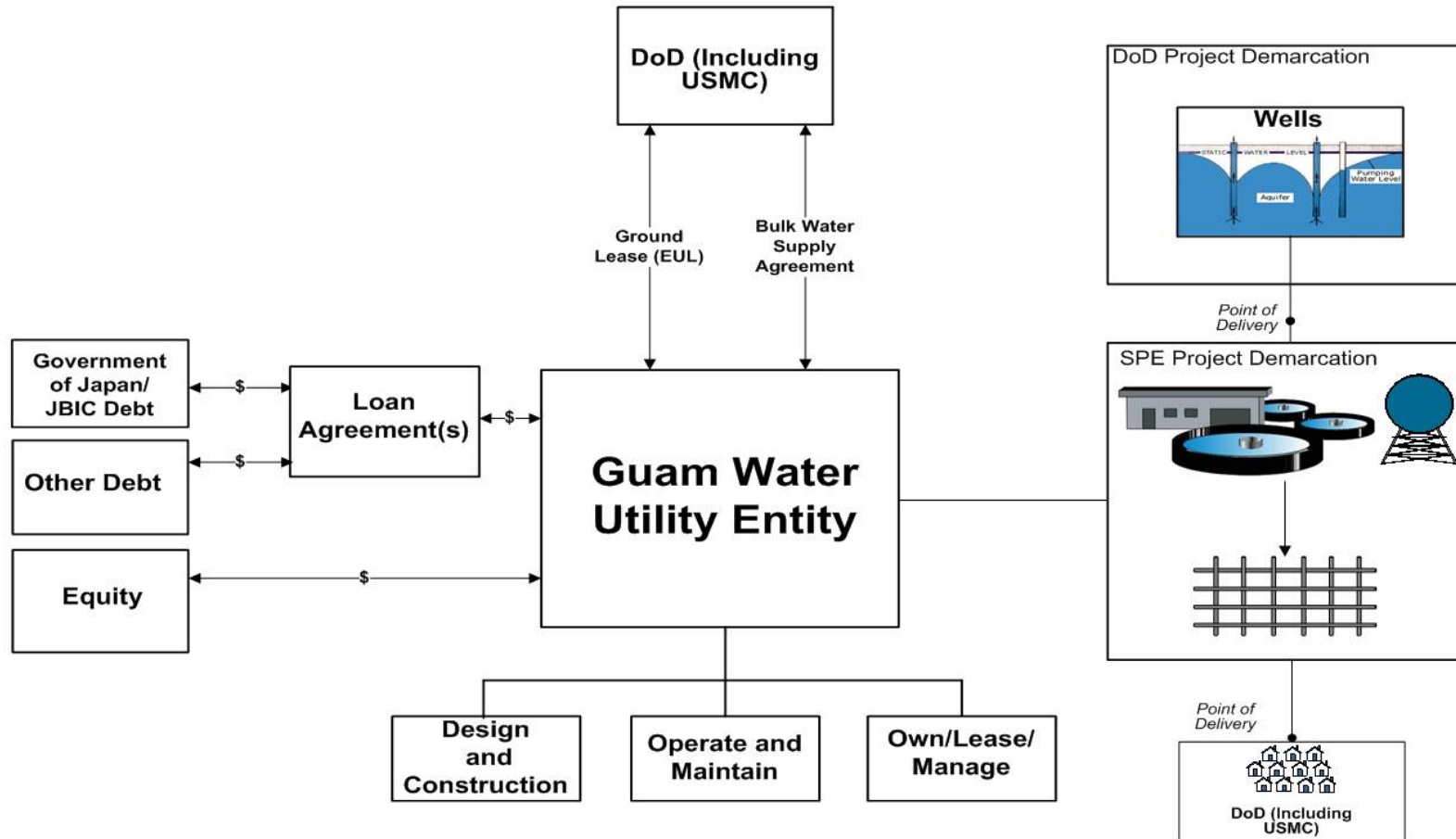
GOJ

- Provide financing to Utility Entity for USMC portion of improvements subject to due diligence

Utility Entity

- Design, finance, construct, own/lease and operate new baseload power plant to serve DoD needs
- Negotiate interconnection and other agreements with GPA to facilitate power transmission to DoD load centers
- Achieve contractually specified facility operations date
- Issue customary guarantees regarding performance and assume traditional liabilities
- Negotiate long-term fuel purchase agreement with fuel supplier

WATER: Notional Ownership, Financing & Management Structure



Notional Project Roles and Responsibilities



USG

- Facilitate procurement for water services
- Potentially drill wells
- Facilitate access to rights-of-way for utility entity to develop transmission and distribution capacity
- Negotiate long-term bulk water supply agreement for potable water services with Utility Entity
- Develop interconnect arrangements

GWA

- Develop emergency interconnect arrangements
- Possible supply to isolated GWA metered customers

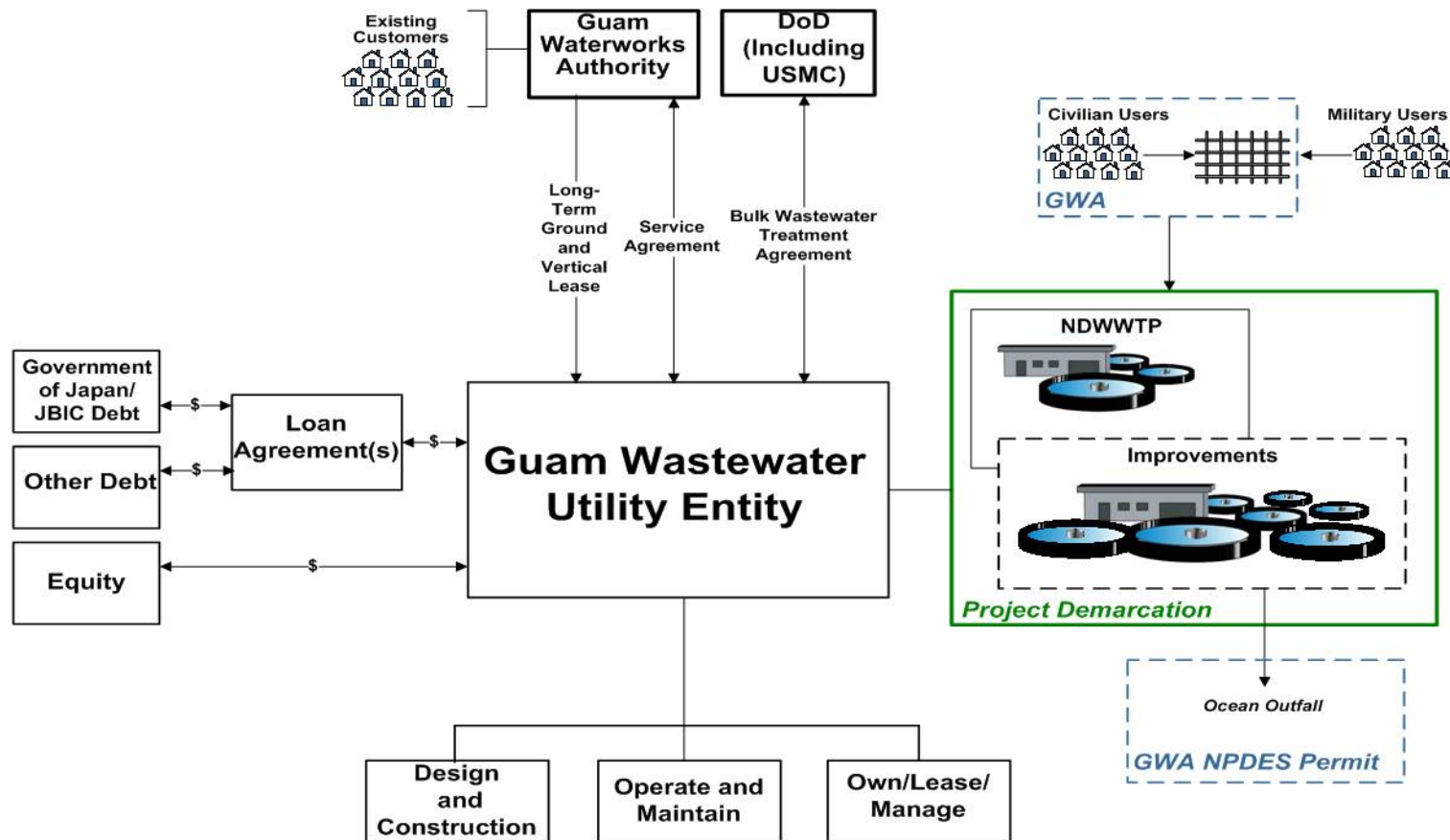
GOJ

- Provide financing to Utility Entity for USMC portion of improvements subject to due diligence

Utility Entity

- Design, finance, construct, lease/own and operate transmission, treatment and storage infrastructure for delivery of water to DoD
- Achieve contractually specified facility operations date
- Issue customary guarantees regarding performance and assume traditional liabilities

WASTEWATER: Notional Ownership, Financing & Management Structure



Notional Project Roles and Responsibilities



USG

- Facilitate procurement for wastewater treatment services
- Negotiate long-term bulk water treatment agreement for wastewater treatment services with Utility Entity
- Where appropriate, assist Utility Entity in relationships with Guam authorities and regulatory agencies

GWA

- Negotiate long-term bulk water treatment agreement for wastewater treatment services with Utility Entity

GOJ

- Provide financing to Utility Entity for USMC portion of improvements subject to due diligence

Utility Entity

- Potentially lease, design, construct, finance, improve, and operate NDWWTP to treat military and civilian flows
- Achieve contractually specified facility operations date
- Issue customary guarantees regarding performance and assume traditional liabilities

Notional Financing Sources



- GoJ/JBIC loans up to \$740M across all utilities
 - Generally, GoJ/JBIC debt may be allocated to each utility project based on USMC demand and cost
 - GOJ/JBIC loans will be subject to appropriate security packages
- Private debt
- Private equity
- Possible US MILCON

Notional Procurement Phasing



- Guam Industry Forum
- Q&A period/concept refinement
- RFI published (possibly combined with RFQ)
- Advertise RFQ
- RFQ contractor response period
- Issue RFP to shortlist – response period
- Award/Exclusive Negotiation
 - Letter of Intent
 - Begin Financing
 - Begin Permitting
 - Design Development
- Execute Business and Real Estate Documents
- Construction