
4th Western Micronesian
Chief Executive Summit—
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Guam Power Authority
Renewable Energy Initiative

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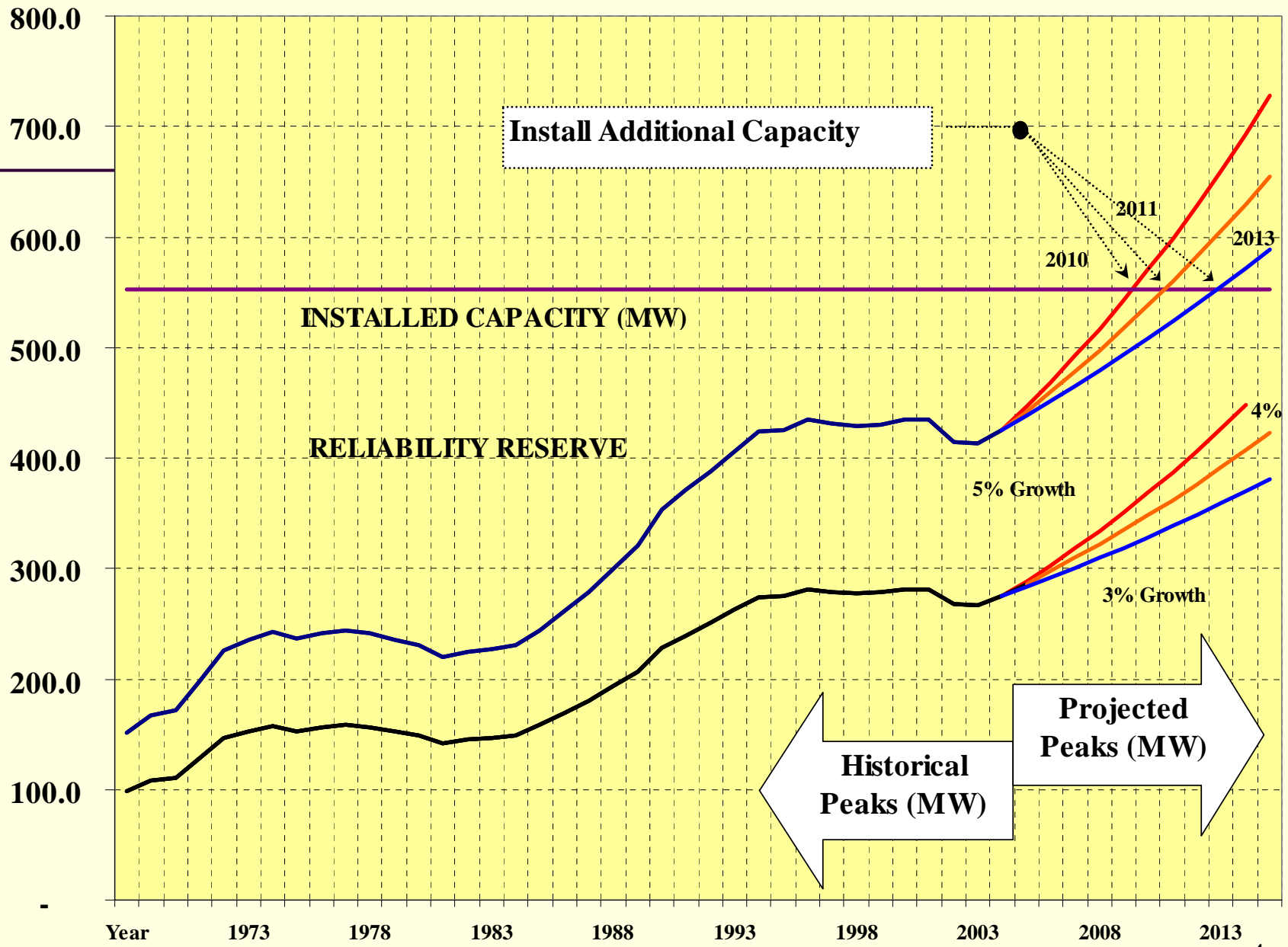
Generation Resources

- 552.4 MW Total, 281.5 MW System Peak
- 98% reserve margin

- Base Load Capacity: Privatized
 - 210.6 MW Under PMCs
 - Private Management, Public Employees, Incentives to Reduce O&M and Staffing Costs
 - 141 MW Under IPPs
 - Tango Plant staffed with Public Employees

- Reserve and Peaking Capacity
 - 40 MW Under IPP

With all the generation reserve, what's the rush for resource planning?

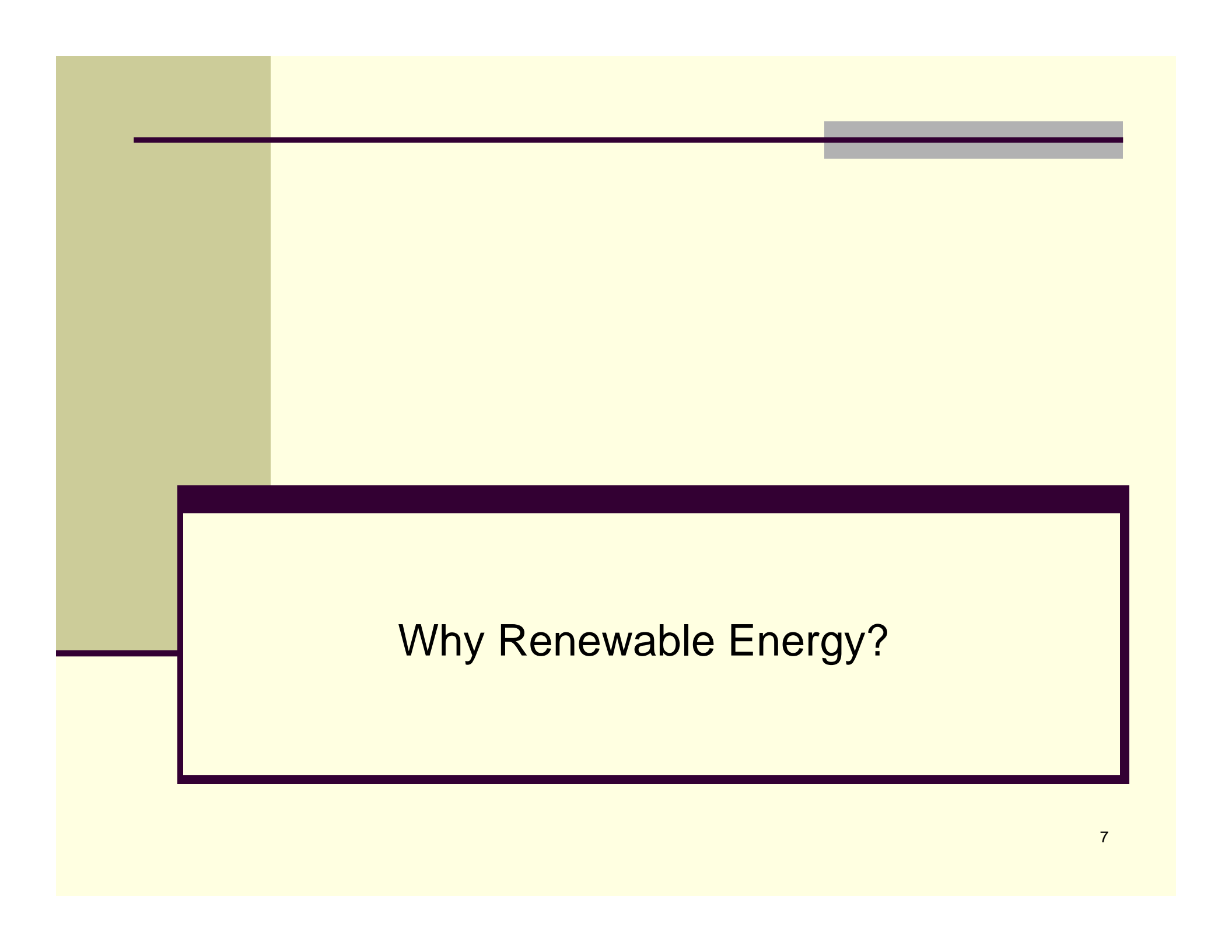


Sustainable Renewable Energy Part of Long-Range Planning

- By end of 2005
 - Load, Sales and Fuel Forecasts
 - **Integrated Resource Plan**
 - Next Base Load Unit Addition
 - Sea Water Air Conditioning Feasibility Study
 - Demand-Side Management Program Design
 - Establish an Avoided Cost to Allow for Purchase of Public/Private Sources of Renewable Electric Energy

Candidate Generation Mix

- In the Integrated Resource Plan, GPA will investigate the following technologies as candidates to meet projected energy demands:
 - Steam Turbines
 - Slow and Medium Speed Diesels
 - Conventional & Combined Cycle Combustion Turbines
 - Renewable Energy
 - Sea Water Air Conditioning
 - Wind Turbines
 - OTEC
 - Solar (Remote Off-Grid Service)
 - Fuel Diversity (LNG, Coal)
 - Demand-Side Management
 - Energy Efficient Appliances



Why Renewable Energy?

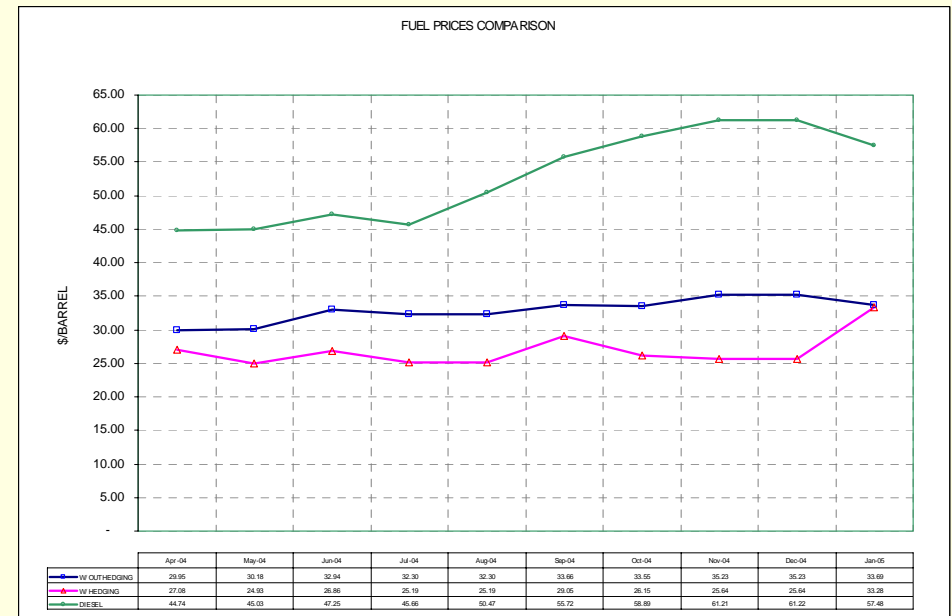
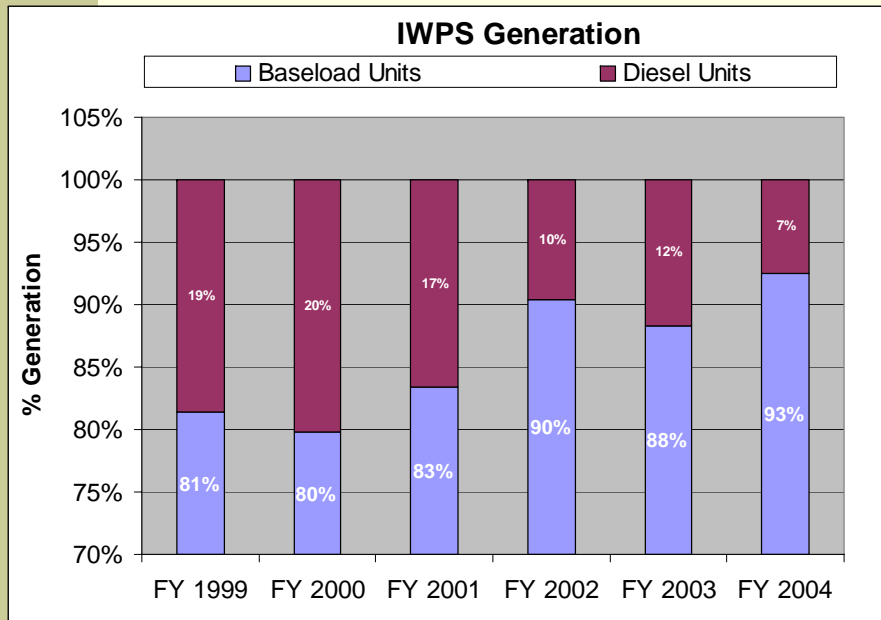
Strong, Competent Leadership has Achieved Increased Fuel Efficiencies Over Prior Management

Fuel Cost Saving

Scenario	Parameter	%	MWh	Cost (\$)
Under Current Management	Energy from RFO-fired Units	92%	3,780,701	\$ 173,870,486.60
	Energy from Diesel-Fired Units	8%	339,257	\$ 36,012,085.15
	Total	100%	4,119,959	\$ 209,882,571.75
Under Prior Management's Performance	Energy from RFO-fired Units	83%	3,419,566	\$ 157,262,234.86
	Energy from Diesel-Fired Units	17%	700,393	\$ 74,346,561.33
	Total	100%	4,119,959	\$ 231,608,796.19
Net Savings Over Prior Management				\$ 21,726,224.44

GPA is reaching the point at which increased efficiencies can no longer offset rising fuel prices.

Dilemma: Greater Efficiencies But Rising Fuel Prices



GPA is projecting 95% of Energy from Baseload Units for the Current LEAC.

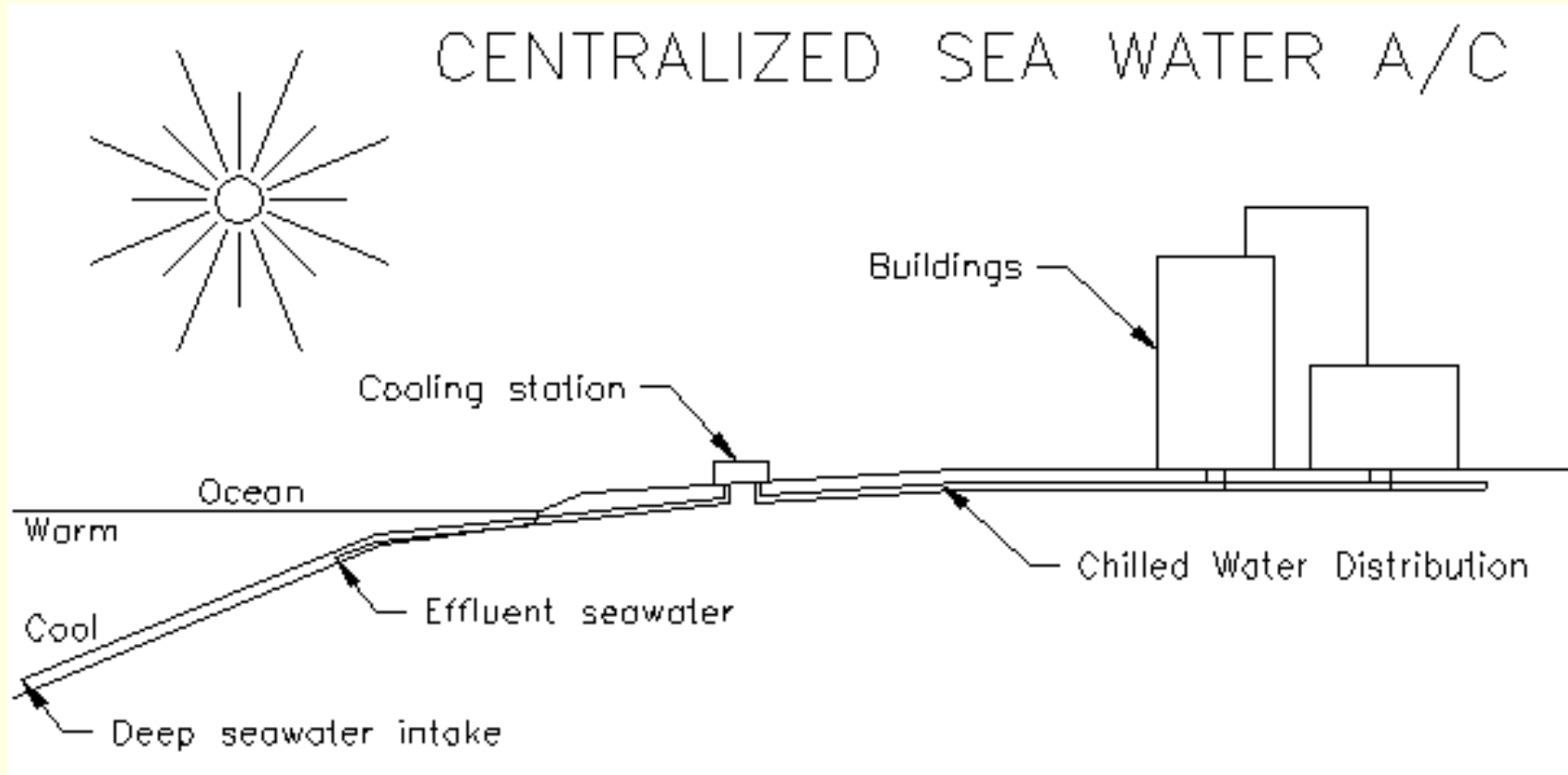
Alternative Energy Initiatives

- On-going Focus Group of Island Stakeholders
- Monthly Teleconference Between Regional and Federal Stakeholders to Update Territorial Renewable Energy Assessment
- Demand-Side Management
 - Program Re-design and Re-Deployment
- Sea Water Air Conditioning Project
 - Detailed Feasibility Study
 - Projected annual savings of over 3.2 million gallons of imported fuel
- Alternative Fuel Vehicles: Electric Vehicle Initiative
 - Meter Reader and Field Service Vehicle Pilot
- Feasibility Study for Implementing Wind Turbines at Fadian Point, the Future GPA Industrial Park
- GPA is an Economic Catalyst
 - Green Power means less dependence on foreign oil
 - Keep your money multiplying on Guam

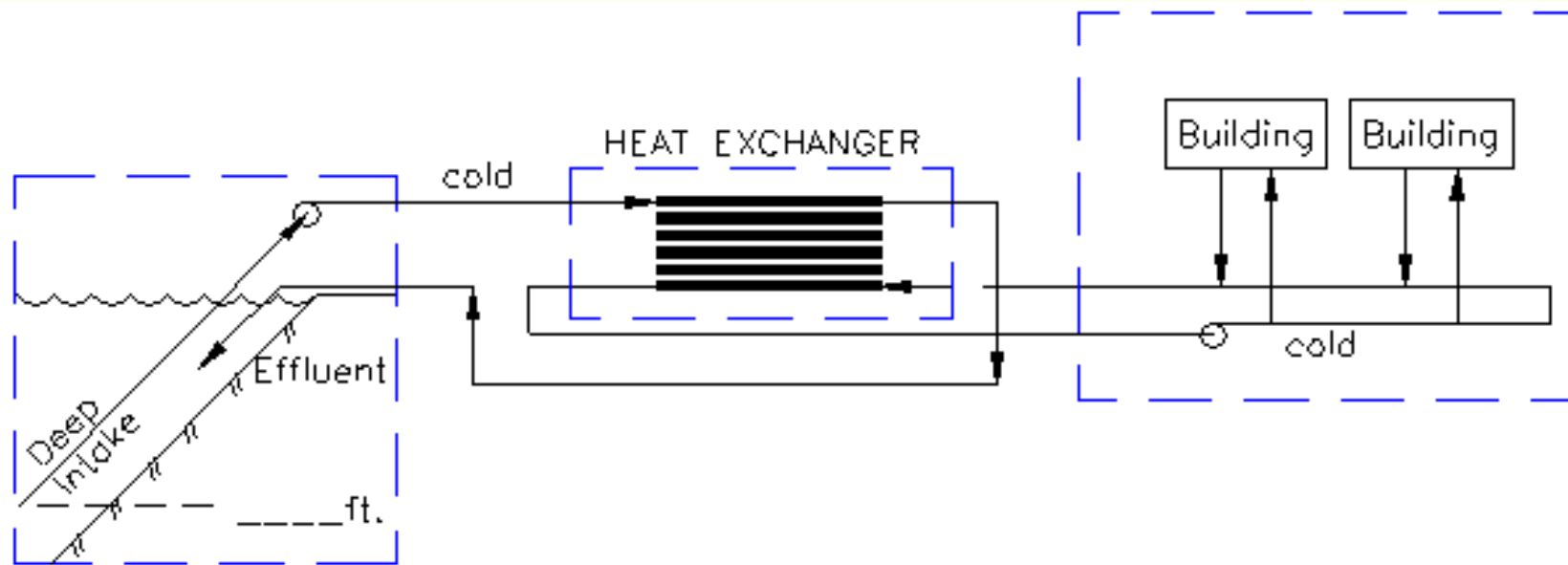
Sea Water Air Conditioning

- Provides cold air conditioning service to major hotels and business along Tumon Bay, Guam.
 - Replaces Electric Chiller Equipment
- The primary benefit is the reduction in fuel oil used by GPA to generate electric energy to operate commercial chilled water air conditioning systems.
- Feasibility Study Kick-Off Meeting May 23, 2005

Typical Sea Water Air Conditioning System



Typical Building Set up using Sea Water Air Conditioning



Long-Term Strategic Direction

- GPA and Guam shall be the focal point for Micronesia and the Western Pacific in the following areas:
 - Renewable Energy
 - Energy Efficiency
 - Electric Utility Operations and Maintenance Training
 - Utility Planning

A PDF copy of this presentation is posted at:
<http://www.guampowerauthority.com/home/index.php>

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