Future Electric Needs on Guam

October 18, 2007 GPA Integrated Resource Plan Stakeholder Meeting

Topics

- GPA's obligation to provide power today and in the future
- Forecasting future electric needs on Guam
 - Key assumptions and economic drivers
 - Forecasts
 - Key Uncertainties

GPA's Obligation

- GPA has an obligation to serve all customers
- Default supplier

GPA Forecast – Model I/O Flow **GVB** Historical & Moody's Guam Forecasted Moody's Tourism Data Economy.com Japan GovGuam **Projects USN/DOD Projects** DoD Quadrennial Annual/Monthly/Quarterly **Forecast** buildingindustryha 60 Minute - Peak Demand waii.com and Load Factor Electric Energy Sales By Weatherbank's Econometric Model Rate Class Revenue By Rate Class Guam Historical Recalculate Average Price of Electricity Hourly Coefficient By Rate Class Weather Data (Eviews 6.0 Program) Number of Customers **Energy Consumption By** Rate Class Compound Annual Growth Historical GPA Rates **Hourly Loads GPA Energy** Price for Each Interview of Local Experts Rate Class Chief Economist of Guam Bureau of Local Statistic (DOL) Research and Statistic Analyst of GVB President of Chamber of Commerce Historical GPA **Executive Director of Guam Contractors** Revenues & Association Baseline Sales Chief Planner of Port Authority of Guam Assumptions For Marketing and Communications Construction & Administrator for PAG Employment General Manager of GVB Growth President of Advance Management Inc. Director of Business Development of AMI Chief Financial Officer of GPA **GPA SPORD Manager**

Variables Use in Forecast

- 119 Variables
 - Weather Series Data
 - Consumer Price Index
 - Peak Demand, Energy Sales, Customer, Revenues
 - Population
 - Construction
 - Wages
 - Employment
 - Others

Assumptions

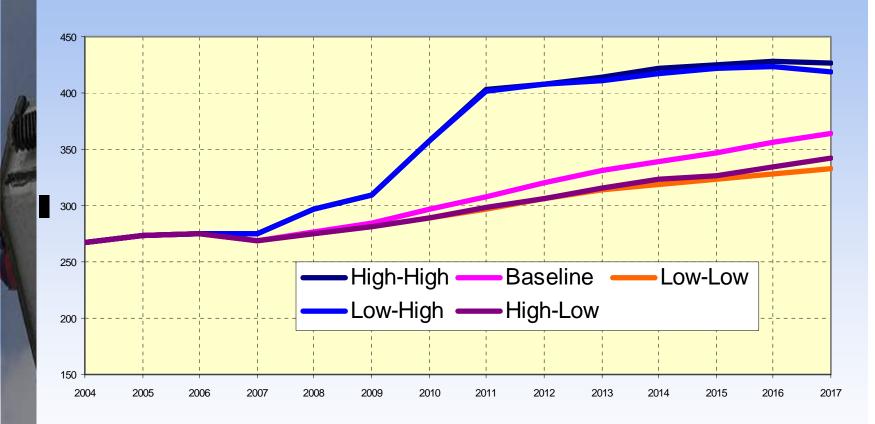
- Population
- Economic activity variables
- Construction employment effects are transitory.
 - Impact has a degree of uncertainty
 - One permanent operating or maintenance job is created for every \$1 million (2005 \$) in construction spending.
 - Guam Average Hourly Earnings In Construction (\$2005): \$11.50
 - Mainland Average Hourly Earnings In Construction (\$2005): \$37.00
 - Construction Expenditure per Construction Job: \$189,150
 - Percentage of Materials & Supplies in Construction Expenditures: 67%
 - Percentage of Labor Costs in Construction Expenditures: 33%
 - Percentage of I-94 Labor: 50%
 - Percentage of Mainland Labor: 50%
 - I-94 Workers, % of wages spent locally: 30%
 - Mainland Workers, % of wages spent locally: 50%
 - Indirect Employment Multiplier: 0.60
 - □ 0.6 jobs are created indirectly for every new infrastructure job.

Scenarios

- Baseline forecast for Guam
- A Low Tourism-High Infrastructure Development
- A High Tourism-Low Infrastructure Development
- A High Tourism-High Infrastructure Development

Latest Forecast Update

Peak Demand



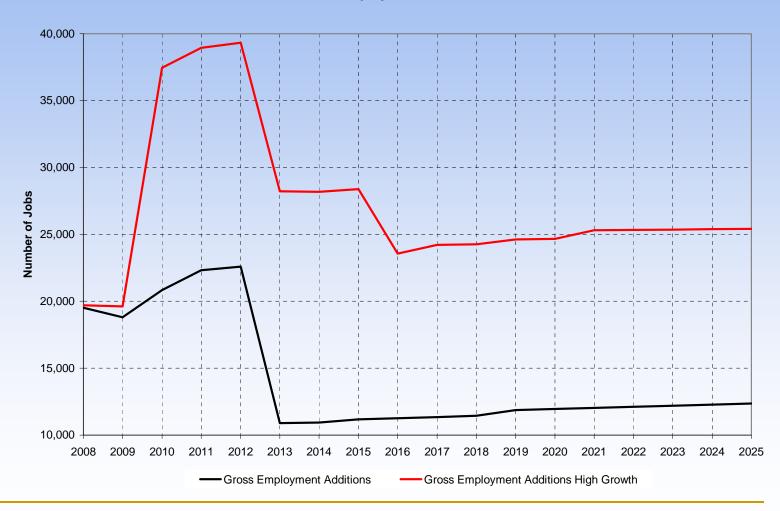
Construction Expenditures

Total Construction Expenditures

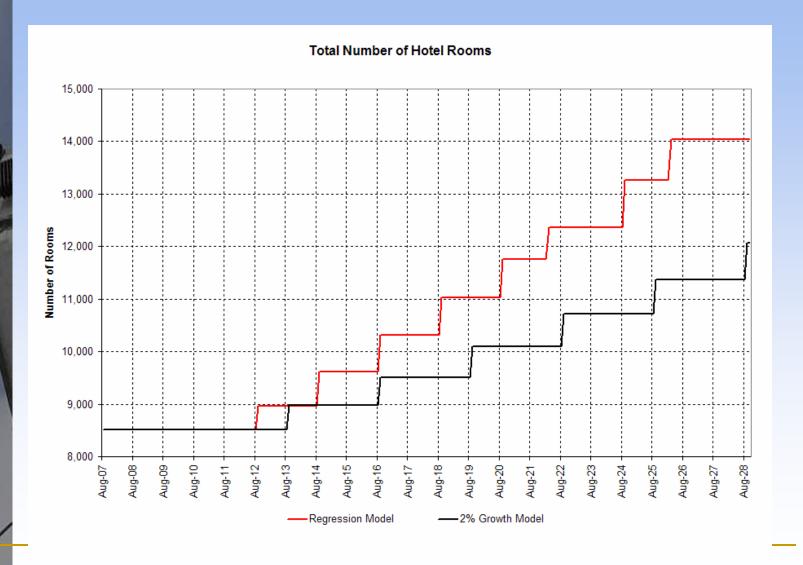


Employment Additions

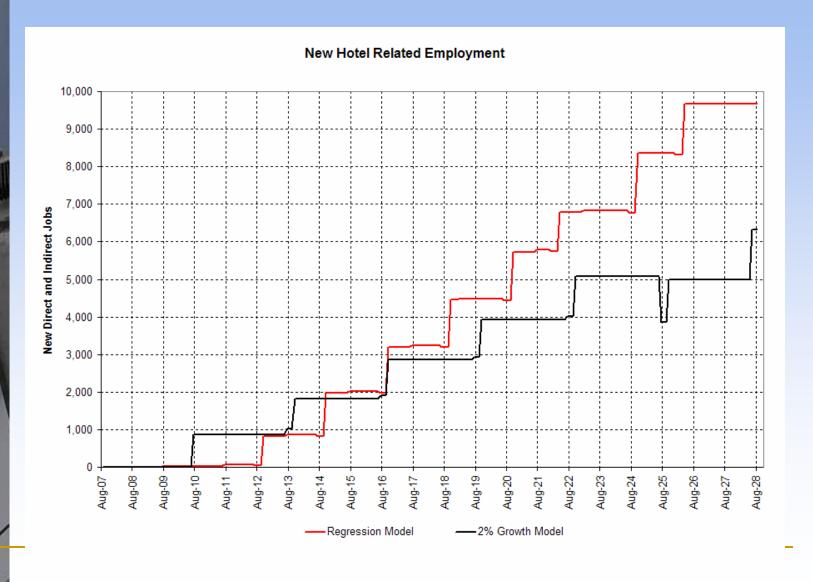
Gross Employment Additions



Hotel Room Forecast



New Hotel Related Employment



Key Uncertainties

- Timing and Cost Magnitude of DOD Buildup projects
- Inherent uncertainties in the general assumptions
- Quality of Guam economic data series
- Rising Fuel Prices
 - Elasticities
 - Demand Destruction

Questions