

## Generation Division

The Generation Division of the Guam Power Authority is one of the largest divisions in the authority. It is comprised of two steam power plants, one slow speed diesel plant, four medium speed diesel plants, five combustion turbine plants, a centralized maintenance section, the water system diesel generator section, and the transportation department. In conjunction with Independent Power Producers (Pruvient, Marianas Energy Company, and Taiwan Electrical and Mechanical Engineers Services), this division manages nearly 200 employees and a total of over 550 megawatts of power plant and emergency diesel generator rating capability.

This year proved to be eventful with several power stations completing scheduled major overhauls, typhoon restoration efforts, the introduction of the new management team and elected Commissioners, the implementation of the Performance Management Contract for Cabras Steam Power Station, and the re-commissioning of the Cabras No. 3 Power Plant.

A major project completed this year was a scheduled outage for Cabras Unit #2 which began mid-September 2002. This was originally schedule as a 45-day outage that included projects such as the installation of a new turbine control system, boiler economizer tubes replacement, boiler chemical cleaning, condenser tube replacements, as well as other maintenance and replacement work for auxiliaries and electrical equipment. This outage addressed an ongoing load limit issue for Cabras Unit #2, which derated the unit to 45 megawatts. At the completion of this project, this unit was able to output 66 megawatts of power.

The Cabras 2 project coincided with the end of the intermediate management contract with Edison O&M Services that had provided management services for this steam power plant since 2001. GPA had begun negotiations with Taiwan Electrical and Mechanical Engineering Services to provide management services in the form of a Performance Management Contract for Cabras 1&2 steam power plant. This management privatization effort was in line with the Tanguisson Power Plant management contract, which is currently with Pruvient. Its main driving force was to address the major repairs and operational support required to improve this 20-year-old plant's performance.

Shortly after the startup and testing of Cabras 2 steam-turbine unit, Guam was hit with the fury of Typhoon Pongsona. The Generation Division was very fortunate that the damage was limited and did not affect the generating capability of the units. Down power lines and poles, as well as damages to the substations and switchyards may have delayed station power to some of the baseload power plants to complete standard testing and service of equipment with water and debris intrusion. The combustion turbines and medium diesel plants however were the first to come online. Once restoration efforts cleared lines for customers and increase load demand, the remaining Generation plants slowly were brought back online to provide power production to the island.

As GPA faced Typhoon Pongsona's destruction, new management was in the horizon. The agenda for this management included the repairs of the Cabras 3 and 4 slow speed diesel units to improve the system reliability and overall efficiency of the generation operations. Cabras 3 had been down since an explosion that occurred in February 2002. Cabras 4 was down since early December 2002 requiring cylinder liner replacements due to condition assessments. Burmeister and Wain Scandinavian Contractors (BWSC) was contracted to provide a technical support for the repair of the Cabras 3 and 4 units, using GPA personnel to perform these repairs. BWSC was also awarded the contract to provide residential technical service for the Cabras 3&4 power plant. Although only partial liner replacement was completed on Cabras 4 due to part availability, this unit came online in June 2003 providing 20 MW of generating capacity. Cabras 3 continues testing and performing a running program which initiated mid-October 2003.

As GPA was preparing for the startup of Cabras 3 and 4 units it was faced with piling fuel bills and insufficient fuel cost recovery. This refers the Levelized Energy Adjustment Clause of the customer power bills. Dispatching of generation units was to be analyzed and programmed for the most efficient and cost effective scenarios. GPA management required this "economic" dispatching to improve fuel usage as well as cut down on the use of expensive diesel fuel.

The Transportation section is a crucial support section for the entire Authority. Since GPA assets (power plants, power lines, substations) are widely distributed throughout the island this section must always perform to ensure that adequate vehicles and equipment are available for meters to be read, new poles to be installed, customers to get inspections, and parts to be

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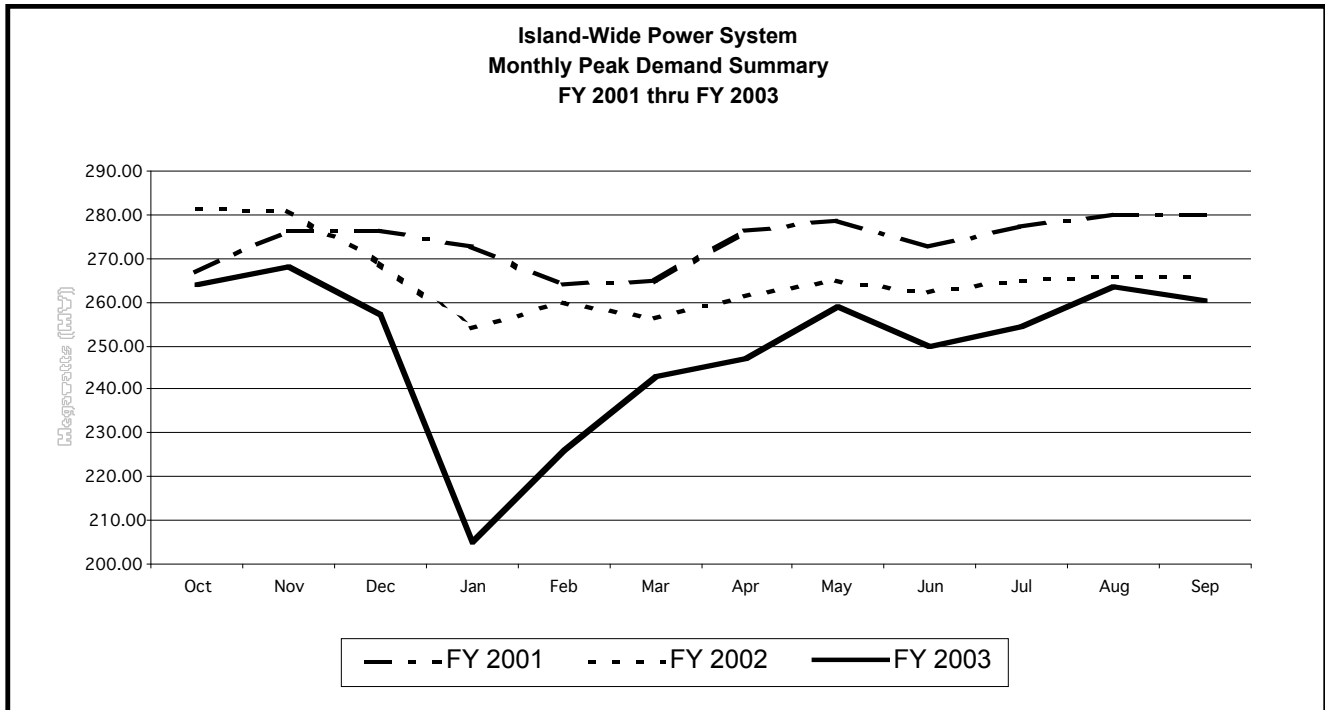
delivered. A lot of attention was focused on the management of the Transportation section when a review of the budget showed a continuous increase in operation and maintenance costs, but a decrease in fleet availability. As requested by the Consolidated Commission on Utilities, GPA drafted and solicited, through a multi-step bid process, for vendors to compete for a performance based management contract. GPA continues to improve solicitation documents to ensure a competitive bid.

One of the last major highlights of this year is the repair of the Dededo Combustion Turbine #1 unit. This unit was taken off line December 2000 for a major overhaul of the turbine package and auxiliaries. The project halted due to parts required and contract disputes. As part of GPA's commitment to ensure the reliability of the power system, this project resumed in mid-September 2003. Completion of this project awaits alignment work and is anticipating its completion by early 2004.

Maintenance and improvement projects are continual in the Generation Division. The following are some projects that GPA hopes to complete within FY 2004.

- Manenggon Power Plant Overhaul
- Cabras #2 Turbine Overhaul
- Macheche CT Turbine Repair and Power Plant Restoration
- Yigo CT Major Overhaul
- Cabras 3&4 Performance Management Contract
- Transportation Privatization

The Generation staff and management accept the challenge of FY 2004. The hardworking personnel of this section remain committed to continue seeking ways to improve and support the mission and goals of the Authority.



Typhoon Pongsona Damage - Water System Diesel Site A-32

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