

Effective Use of Spinning Reserve Margin



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Generation Spinning Reserve

Sub Process	GPA Today	Highly Effective Utilities
Established spinning reserve margin ensures continuous supply of power to electric grid	Currently the PSCC establishes sufficient spinning reserve, but the generation units fail to pick up electric grid needs for loss of a generation unit. This causes outages on the T&D system. The T&D system localizes the shortfall of generation through low voltage and under frequency relays.	Generation spinning reserve adequately satisfies needs of electric grid for loss of a single generation unit. No outages are experienced.

Effective Maintenance through Material Acquisition



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Parts and Materials for Reliable Generation

Sub Process	GPA Today	Highly Effective Utilities
Availability of Generation parts / material	Cabras Units #3 & #4 management indicated on-site inventory levels were too high, but dropping. They can obtain parts and material from their suppliers in a short timeframe.	Generation inventory levels are set by critical material needs analysis on each generation unit.
Storage of inventory and material	GPA's warehouse for generation inventory is not sufficient to prevent significant rust and deterioration, causing material to easily rust. Additional storage units have been acquired to store Cabras Units #3 & #4 material.	Material is securely stored to prevent theft, with sensitive material protected from the elements, such as high heat and humidity and salt spray conditions.

Effective Maintenance through Material Acquisition



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Parts and Materials for Reliable Generation

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Reorder material	There currently are no “min/max” settings used to reorder material into the warehouse.	Utilities use the “min/max” settings to trigger the automatic reorder process within their procurement application.

Promote Renewable Generation



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Drive Renewable Generation

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<p>Distributed Generation owned by others, but controlled by GPA</p>	<p>There are several generation opportunities for GPA in the near term for which they can create rates that allow them to purchase power, control the watt/VAR generation levels:</p> <ul style="list-style-type: none">➤ The new group that has recently proposed to serve power to the Mall; and,➤ The new 80 MW's of renewable generation that GPA will be soliciting of outside suppliers.	<p>Encourages “renewable” generation on their system by:</p> <ul style="list-style-type: none">➤ Issuing RFP's for new “renewable” generation;➤ The RFP's include known locations on T&D facilities where renewable distributed generation can be placed without extensive capital investment in additional T&D facilities; and,➤ Create rates and incentives that allow for control of the renewable generation for system support, i.e., it is “dispatchable” generation.

Annual Generation Maintenance Planning



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Annual Maintenance Routines

Sub Process	GPA Today	Highly Effective Utilities
Generator Annual Maintenance Plan	During the several weeks of annual overhaul on generators, there is ancillary maintenance work performed, such as relaying, metering, etc., sometimes requiring significant overtime costs.	Annual overhauls are structured in a balanced way to minimize overtime costs while also minimizing the outage duration.

Generation Automation



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Automation of Generation Facilities

Sub Process	GPA Today	Highly Effective Utilities
Remote Generation Control through the Economic Dispatch Model or AGC at PSCC.	<ul style="list-style-type: none">➤ Staffing of generation staff is 24/7 for continuous operational control➤ Automatic Generation Control (AGC) has been purchased, but not installed, due to excessive costs associated with modifications at the generation plants.	Small plants are remotely controlled and operated based upon an economic modeling scheme.

Accurately Accounting for Generation Fuel Costs



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Understanding the Cost of Doing Business

Sub Process	GPA Today	Highly Effective Utilities
Accurate cost data, such as the fuel purchased quantities for diesel fuel.	Currently the amount of fuel purchased is accomplished by utilizing a formula. This formula has been identified as having inaccuracies per Diesel Plant Supervisor and requires modifications.	Accurate pricing of all generation operating costs, including fuel quantities and costs.