

Spring Water Conference

February 21, 2013

Anaheim Public Utilities

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Anaheim Service Territory

- Serves 340,000 residents
- Serves 15,000 businesses
- Serves up to 140,000 daily visitors during summer
- Service area of 50 square miles
- Elevation of service area 60 - 1,200 ft



Anaheim's Water Needs

- Currently: 65,000 acre-ft per year
-- That's 21 billion gallons per year
- Approximately 65% of water comes from underground aquifers from as deep as 1500 feet
- Approximately 35% is imported from Northern California and the Colorado River

Supply Capacity

- 18 Active Water Wells
- 1 Filtration Plant
- 8 MWD Connections
- 20 Interconnections (emergency only)
 - Garden Grove, Orange, Fullerton,
Golden State Water Co.,
& Yorba Linda Water District

Anaheim's Electric Needs

- System Peak: 550 MW
- Energy : 2,400 GWh
- Total Capacity : 684 MW conventional
- 124 MW from renewable sources
- 60% from Coal
- 20% Hydro and Gas
- 20% Renewable Energy Sources
 - Landfill Gas
 - Geothermal
 - Small Hydro
 - Wind

Electricity Usage by Water

- We use power at the following water facilities:
 - production wells and low elevation pump stations (combined 84% of total kwh);
 - high elevation pump stations (11% of total); and
 - Lenain Treatment Plant and Water Recycling Demonstration Plant (combined 5% of total).

Electrical costs represents 13.8% (or \$4.1 million) of our total water supply cost budget (\$30 million).

Water Use by Electric

- Water is provided to Anaheim's two peaking power plants to help reduce emissions at the sites as well as increase output
 - Kraemer (42 MW) facility uses potable water and provides \$80,000 in water revenues
 - Canyon (190 MW) facility uses GWRS water and provides \$90,000 in water revenues
 - Both must be demineralized for the combustion process
 - Canyon is the first industrial application for GWRS water supplies

Benefits of Joint Utilities under one Roof

- Water can plan electric expenses based on internal information
 - Long-term power supply forecasts
 - Financial outlook/electric rate forecast providing Water Division inputs for long-term planning
- Administrative/Overhead expenses can be shared
- Operational/financial impacts thru new legislation affecting electric division (walk across the hall)

Keeping Water in the Loop on CAISO Summer Reliability

- Electric Division participation in “Summer Assessment” available in May
- Internal electric needs are fully resourced
- Participation in daily ‘peak alert’ /peak day calls
- Monitoring system emergency levels
- Water Department can voluntarily (Stage 3 Rolling outage) drop up to 7 MW of power going to:
 - 4 Pump stations
 - 8 wells
 - Max MWD connections, allowing 3 other wells to shut down

Managing Environmental Legislation

- SBX 1-2 requiring 33% renewable by 2020
 - Electric Division meeting 20% target by 2013
 - Current Power Supply costs are \$255 million
 - Additional \$45 million in expenditures required by 2020
 - Rate impact over the next 8 years; 8 -10% increase
- AB 32 statewide reduction of GHG to 1990 levels by 2020
 - Vertically integrated ; coal energy represents 60% of the supply portfolio
 - Sufficient GHG allowances provided to meet retail energy needs with minimal impact to budget

Electric Mandates Impact to Water Division

- SBX 1-2 rate impact over the next 8 years; 8 -10% increase;
 - Electric costs to the Water Division will increase by \$400,000 during that time period.
- AB 32 statewide reduction of GHG to 1990 levels by 2020
 - Vertically integrated ; coal energy represents 60% of the supply portfolio
 - Sufficient GHG allowances provided to meet retail energy needs with minimal impact to budget



QUESTIONS?