CPS Energy Water Requirements

Prepared for the Basin and Bay Area Stakeholder Committee
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CPS Power Plants and Water Conservation Efforts
Fuels & Technology Diversification Plan

Installed Capacity

1970
- Gas – Steam 100.0%
- 1,648 MW

1980
- Gas – Steam 75.1%
- Nuclear 17.8%
- Coal 7.1%
- 3,338 MW

1990
- Gas – Steam 61.1%
- Nuclear 17.8%
- Coal 21.1%
- 3,930 MW

2008
- Gas – Steam 37.5%
- Gas Turbine & Peakers 11.2%
- Nuclear 18.2%
- Renewables 8.5%
- Coal 24.6%
- 5,995 MW

Reuse Water

- Pioneer in use of reuse water
- Switched to reuse water in response to drought of 1950’s
- Over 281,626,176,429 gallons of Edwards Aquifer water
- Purchase 40,000 AF of water from SAWS annually
- Additional Options available for 10,000 AF based on terms of contract with SAWS
Water Use Categories 2008

Total Surface Water Requirement 2008
41470 Acre Feet

Historic Surface Water Use

Historic Water Demand in Acre Feet

Year
Acre Feet
0 5000 10000 15000 20000 25000 30000 35000 40000 45000
Edwards Water Saved

Total Water Demand 1962-2009
Total Edwards Aquifer Water Saved 281,626,336,096 Gallons

Senior Water Rights
Large Water Rights Holders
San Antonio Basin

- City of San Antonio-CPS Energy Permit 2161 12,000 AF
- City of San Antonio- CPS Energy Permit 2162 36,000 AF
- San Juan Ditch WSC Permit 1931 1,440 AF
- Bexar-Medina-Atascosa COS WCID Permit 2131 2,000 AF
- Bexar-Medina-Atascosa COS WCID Permit 2130 66,750 AF
- Bexar Metropolitan Water Dist. Permit 2134 300 AF
- Bexar Metropolitan Water Dist. Permit 4768 5,000 AF
- Julia Gannt Newton Et.Al. Permit 2194 1,020 AF

CPS Energy Water Rights

- Permit 2161 – water right for Braunig Lake
  - 12,000 AF per annum from unappropriated waters of the state
    - Arroyo Seco
    - San Antonio River
  - Pumping limits
    - Downstream flow-10 cfs at Elmendorf gage station
    - Diversion rate of 70.18 cfs or 31,500 gpm
CPS Energy Water Rights cont.

• Permit 2162 - water right for Calaveras Lake
  – Supply
    • 27,000 AF from Calaveras Creek
    • 60,000 AF of unappropriated public waters and sewage effluent
  – Consumptive Use
    • 37,000 AF
      – 36,900 AF for industrial processes
      – 100 AF for domestic use-irrigation
  – Pumping Limits
    • 112 cfs or 50,000 gpm
    • Downstream flow 10 cfs at Elmendorf gaging station

CPS Energy Water Rights cont.

• Permit 2161 A - amendment to Braunig

  – This amendment allows the use of any part or all of the water allotted for use in Braunig Lake to pumped to Calaveras Lake.

  – The total consumptive use at Calaveras Lake is still limited to 37,000 AF
Braunig Lake

Braunig Dedication
Calaveras Dam

Inlet Canal
Inverted Weir

Filling Calaveras
JT Deely Intake Structure

Sommers/Deely Outlet