

# **The City Of Glendale IRP Presentation Public Meeting**

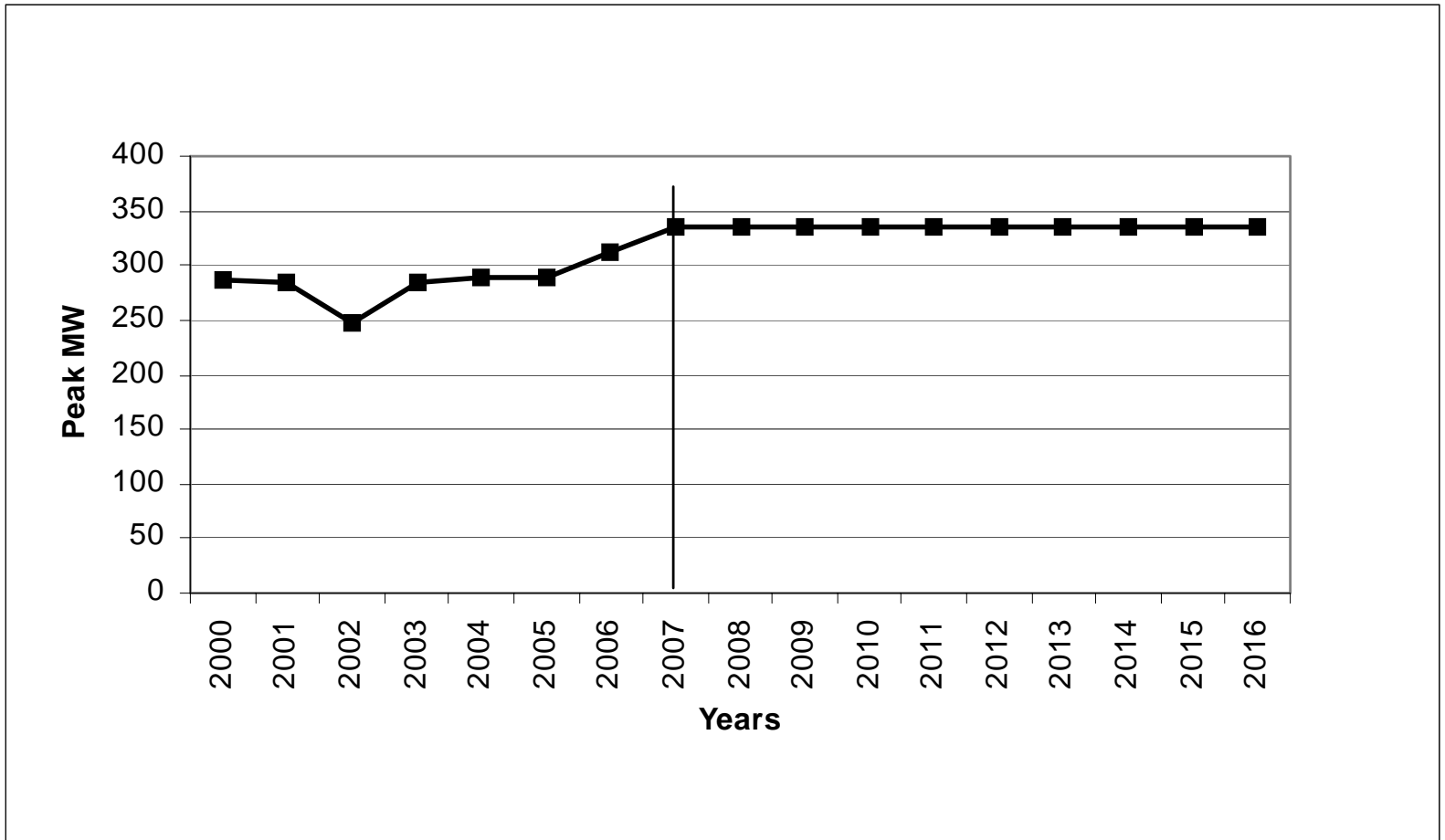
**March 5, 2007**

# **CITY OF GLENDALE 2007 INTEGRATED ELECTRIC RESOURCE PLAN**

# IRP Requirements

- **Established by EPA Act of 1992**
- **Applies to Federal Power Contractors**
- **IRP Submittals Every Five Years**
- **Public Hearing**

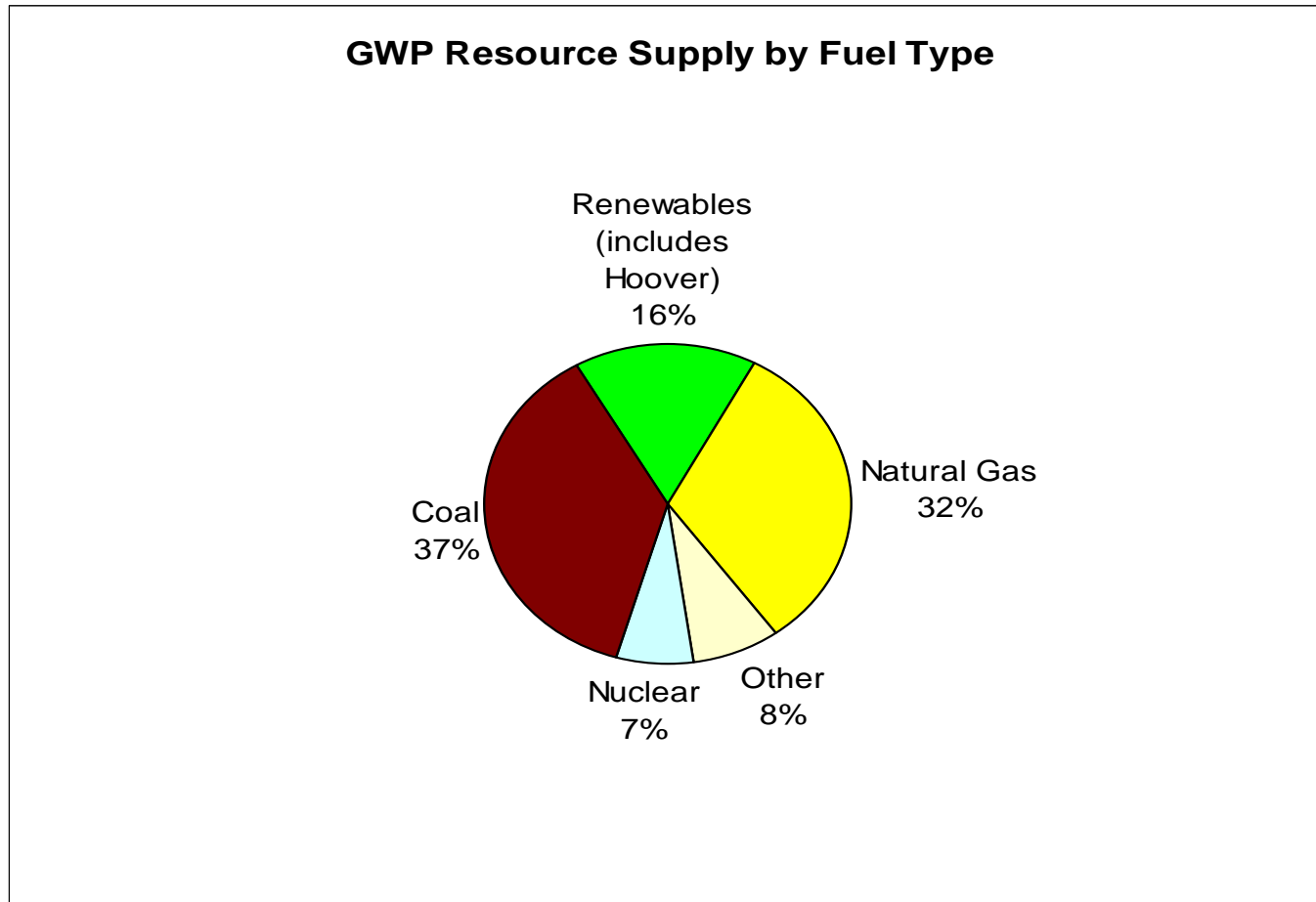
# City's System Peak Loads



# **GLENDALE PLANNING RESERVE REQUIREMENT**

- **In planning for resource needs, planners generally design their systems to meet loads if the worst single event could happen to the resource portfolio.**
- **For GWP, a single equipment failure could result in the loss of the 74 MW Grayson Power Plant's Unit 8 B/C.**
- **The City thus maintains electric resources equal to its forecasted peak load plus 74 MW.**

# City's Existing Resources Based On Energy



# Grayson Power Plant Net Generating Capacity

Unit #	Type	Net Capacity (MW)	Unit Average Plant Use Factor Factor (2004-2006)
3	Steam Turbine	18	10%
4	Steam Turbine	42	29%
5	Steam Turbine	44	18%
8A with units 1 or 2	Combined Cycle	32	13%
8B/C with units 1 or 2	Combined Cycle	74	9%
9	Gas Turbine	48	2%

# Firm Power Supply Purchase Contracts

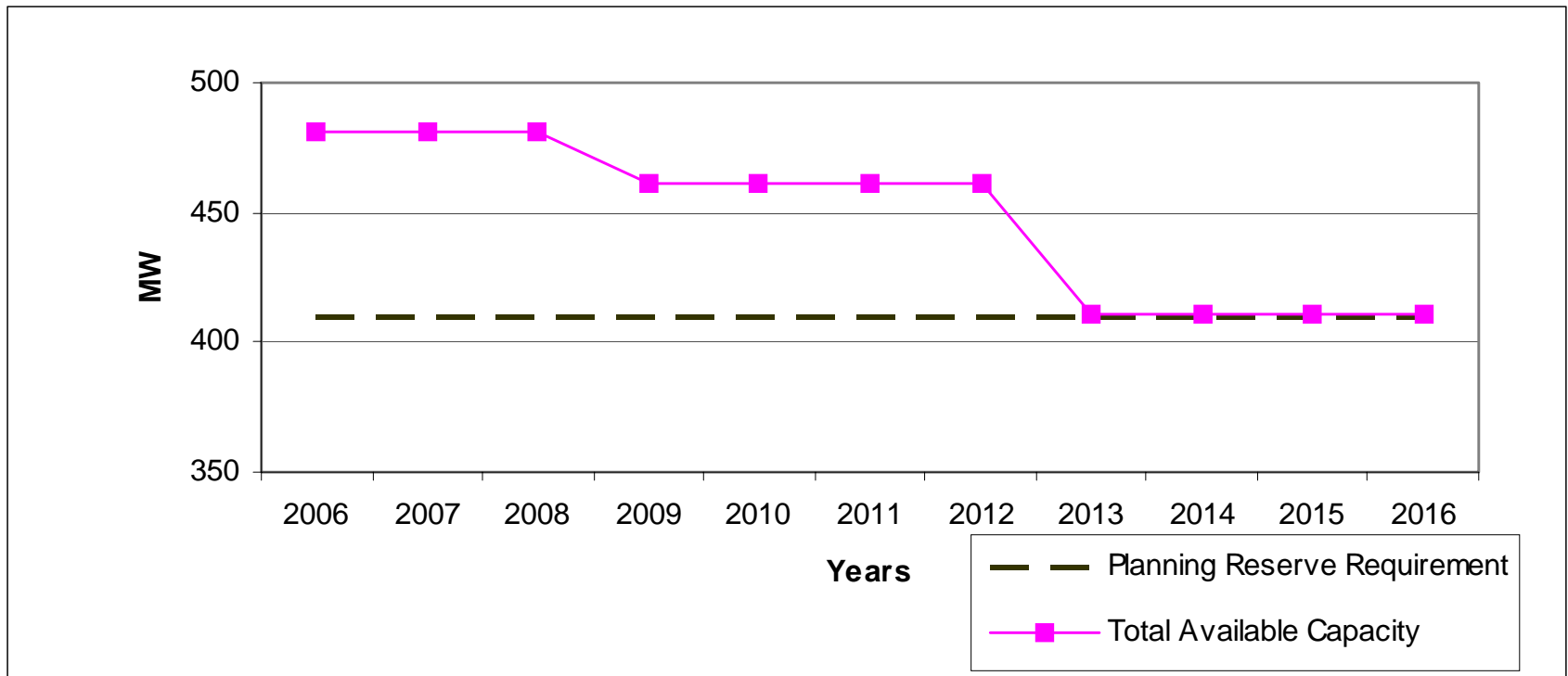
Resource	Type	Capacity (MW)	Maximum Energy (MWh/year)
Magnolia	Natural Gas	52	250,000
Palo Verde	Nuclear	10	57,000
IPP	Coal	38	241,000
San Juan #3	Coal	20	110,000
BPA	Primarily Hydro	20	73,000
PGE	Hydro/Coal/ Natural Gas	50	295,000

# Glendale Renewable Resources

<b>Resource</b>	<b>Type</b>	<b>Capacity (MW)</b>	<b>Maximum Energy (MWh/year)</b>
Hoover	Hydro	20	68,000
PPM Wind 1	Wind	3	26,208
PPM Wind 2	Wind	10	29,000
Ormat	Geothermal	1	8,400
Scholl Landfill	Landfill Gas	8	70,080



# The City's Load/Resource Balance



# Demand Side Management

- **Energy Conservation and Efficiency Programs Funded by State Mandated Public Benefit Charge since 1998**
- **Twelve active programs**
- **\$2,903,160 invested in FY 2005-2006**
- **Over \$20,000,000 since January 2000**
- **Ranked 4th in total energy savings among 39 local publicly owned utilities in FY 2005-2006**

# Demand Side Management

- **Incremental energy savings of 8,463 MWh**
- **Incremental demand reductions of 2,282 kW**
- **Estimated cumulative reductions since January 2000 - over 12,000 kW**
- **Estimated cumulative energy savings since January 2000 – over 48,000 MWh**
- **Incremental energy savings as a % of GWP's retail sales was 0.77% in FY 2005-2006**

# Implications Of Restructuring

- **Direct Access (Competition)**
- **Regional Transmission Organizations (RTO)**
- **Air & Water Quality Issues**
- **Climate Change Issues**
- **Resource Adequacy**
- **EPAct of 2005**

# Action Plan

- Assess Short-Term Resource Sales and Purchase Opportunities
- Assess Conservation and Renewable Resource Opportunities
- Monitor Industry Restructuring to Assess Impact on Resource Strategy
- Assess new resource options, including improvements at the Grayson Power Plant to improve efficiency and reliability of power supply and meet dwindling capacity margins toward the end of the planning horizon.