

# **Hoover Powerplant Boulder Canyon Project**

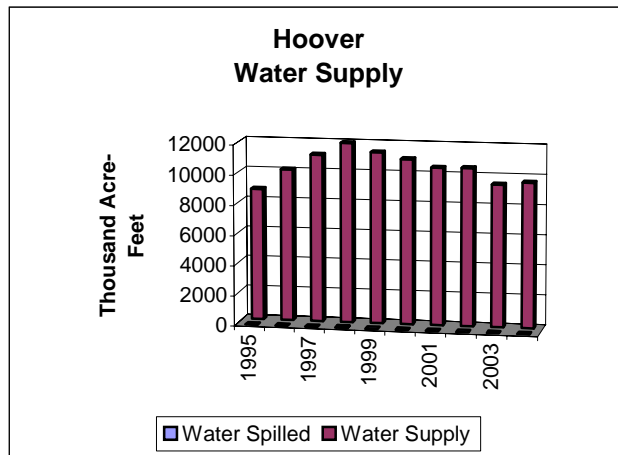
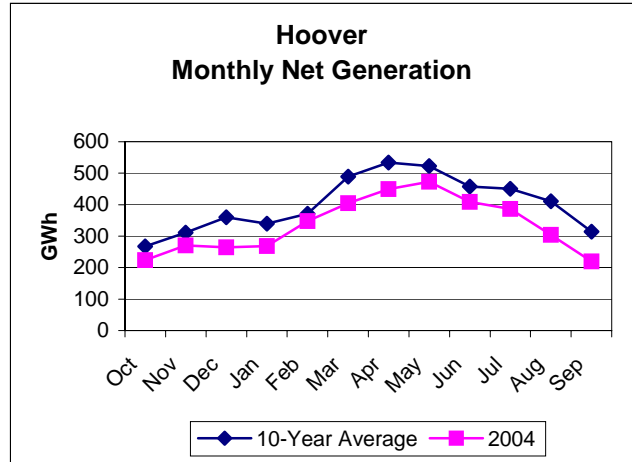
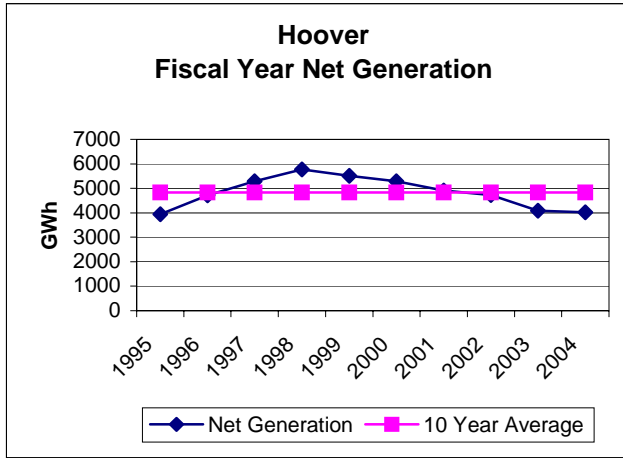
## **Ancillary Services**

<b>Hoover Ancillary Services</b>	
Spinning Reserve	Yes
Non-Spinning Reserve	Yes
Replacement Reserve	Yes
Regulation/Load Following	Yes
Black Start	Yes
Voltage Support*	Yes

\*Customers supply voltage support needed for delivery of capacity and energy to their load centers.

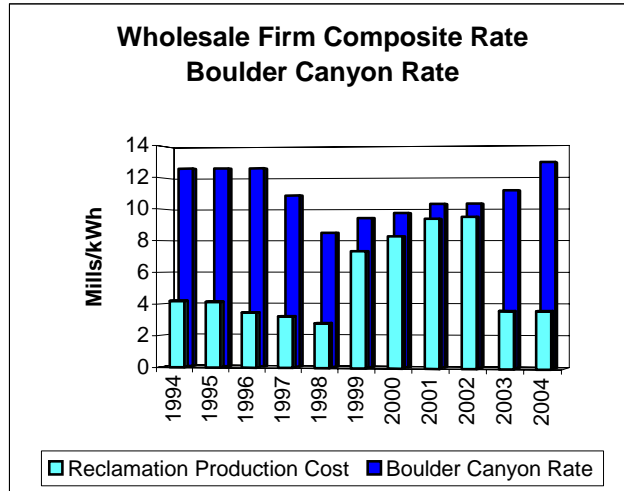


**Generation**

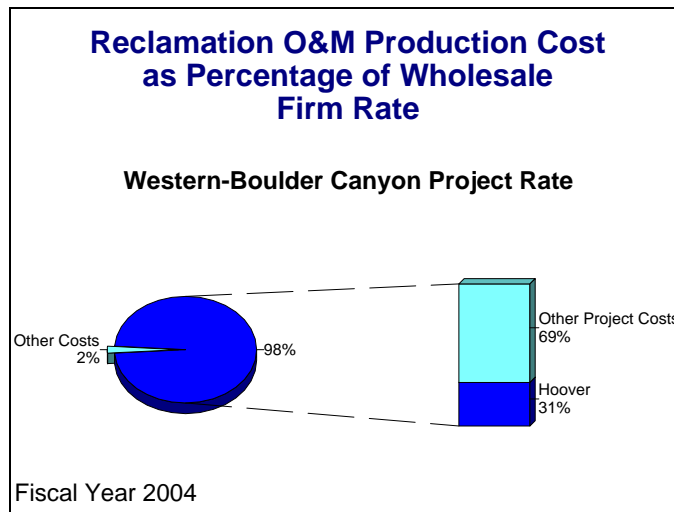


**Prime Laboratory Benchmarks**

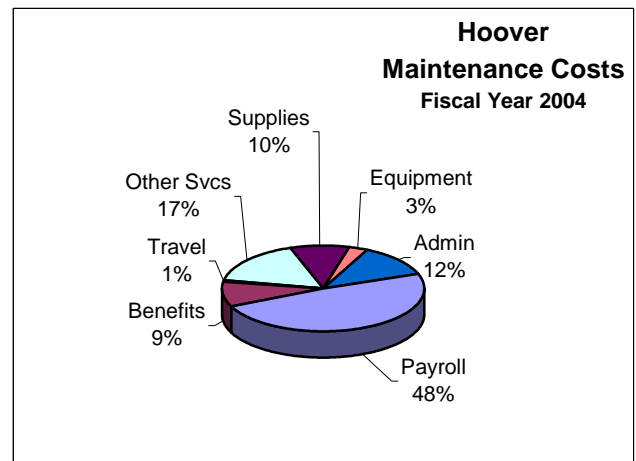
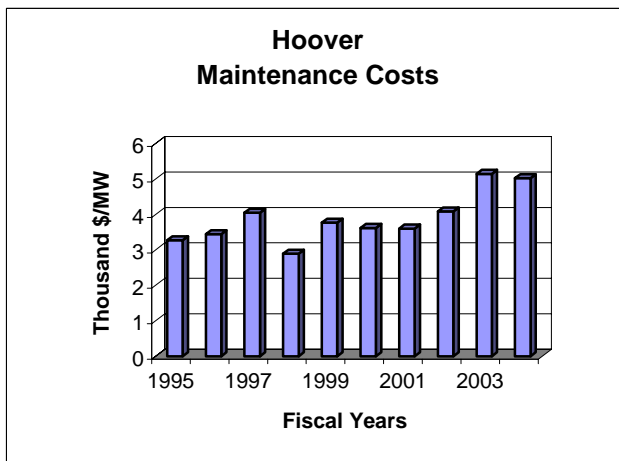
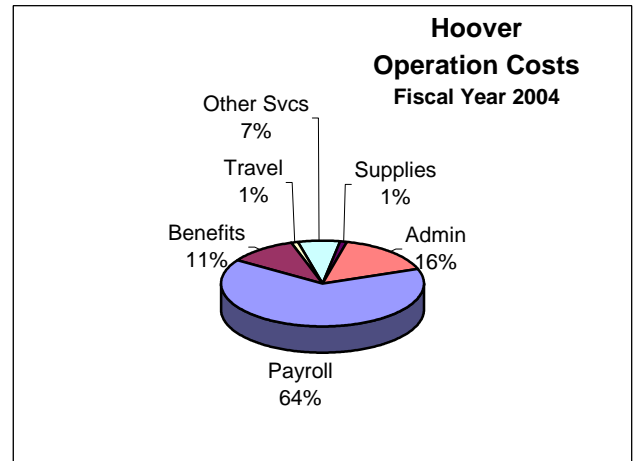
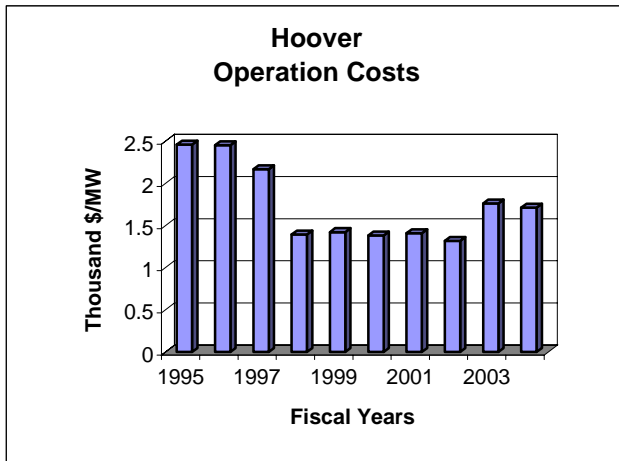
**Benchmark 1  
Wholesale Firm Rate**



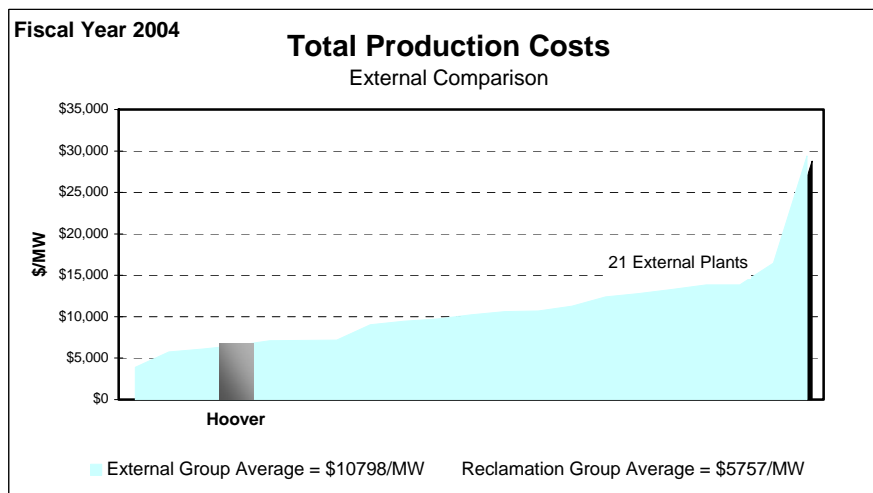
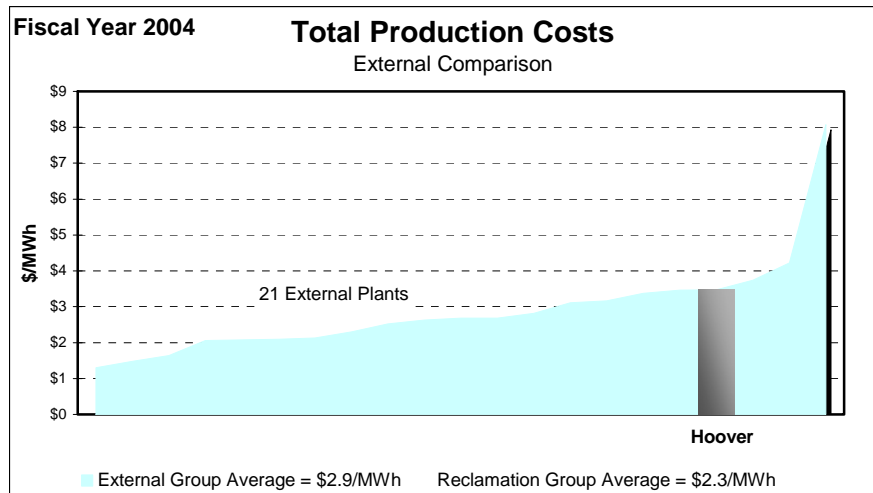
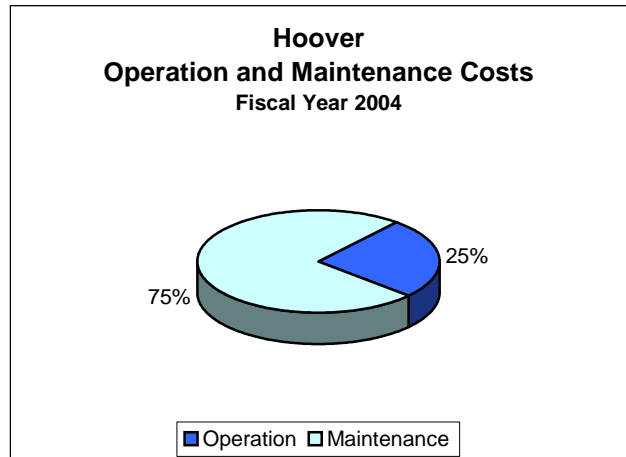
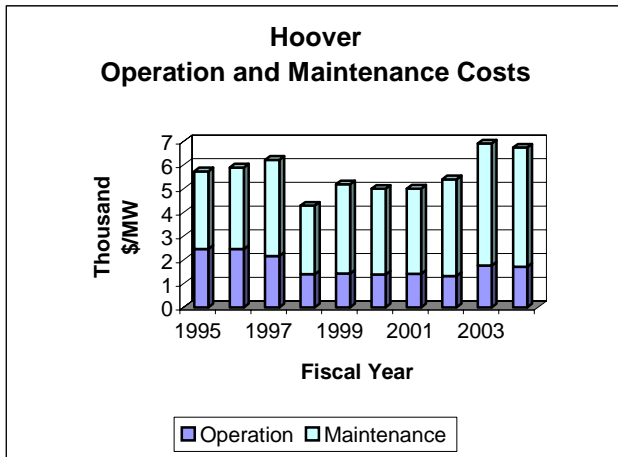
**Benchmark 2  
Reclamation's Production Cost as Percentage of Wholesale Firm Rate**



**Benchmark 3  
Production Cost**

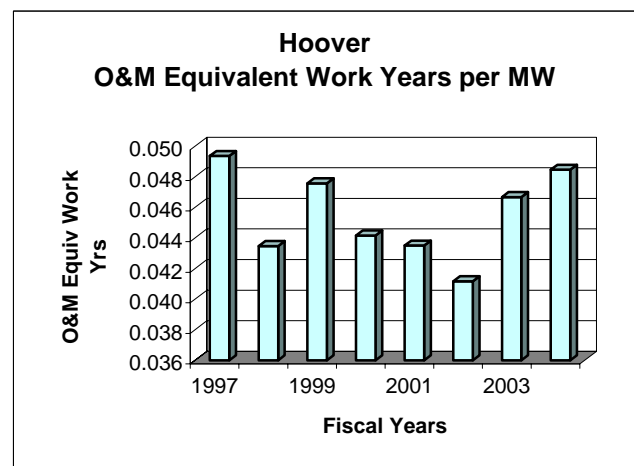
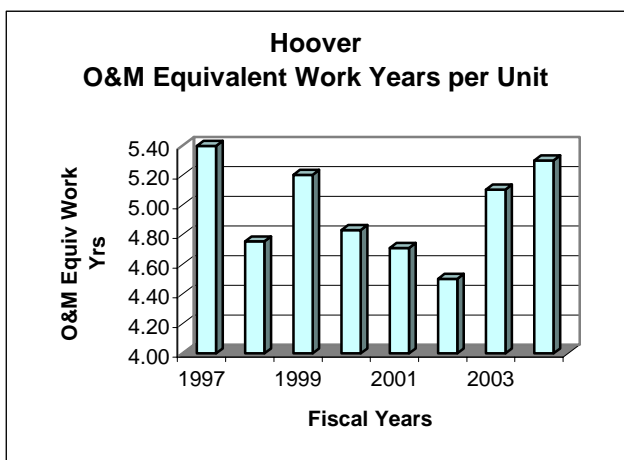
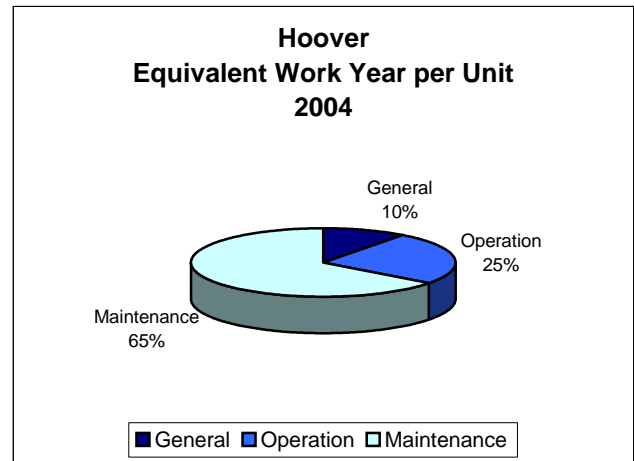
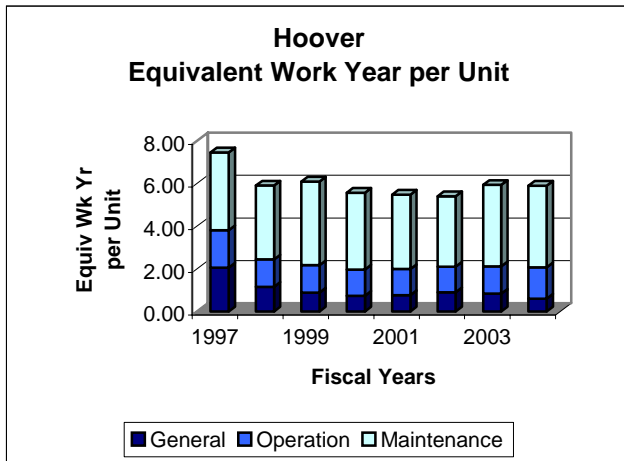


**Benchmark 3  
Production Cost**

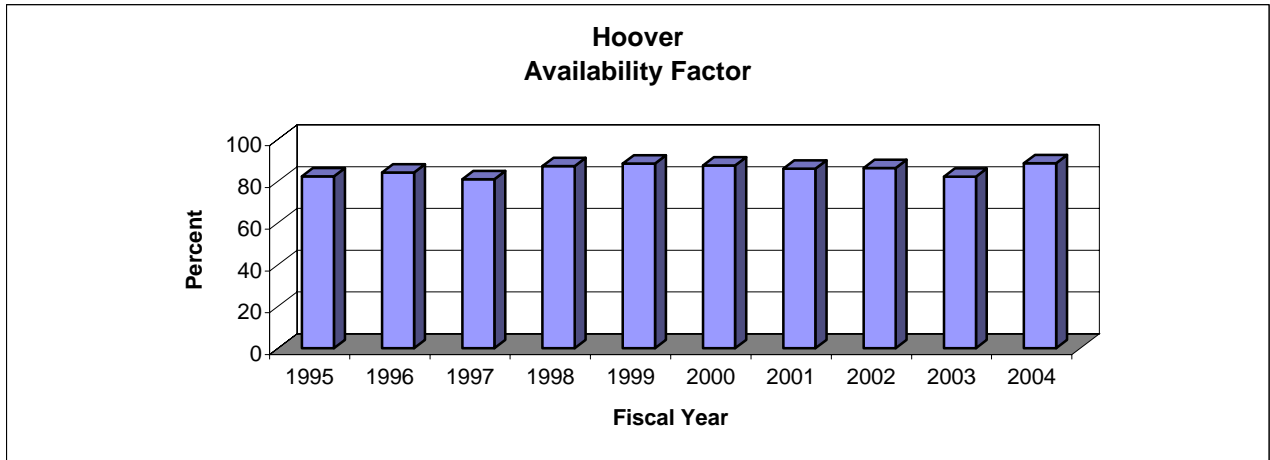


Benchmark 4  
Workforce Deployment

Hoover 2004 Equivalent Work Year Levels						
	Equiv Work Year Charged to Powerplant	Leave Additive	Denver and Washington Equiv Work Year Additive	Total Equiv Work Year Allocated to Powerplant	Total Equiv Work Year per Generating Unit	Total Equiv Work Year per Megawatt
General	9.98	1.06	0.33	11.37	0.60	0.01
Operation	25.38	2.69	0.00	28.07	1.48	0.01
Maintenance	65.68	6.96	0.00	72.64	3.82	0.03
Total Staffing	101.04	10.71	0.33	112.07	5.90	0.05

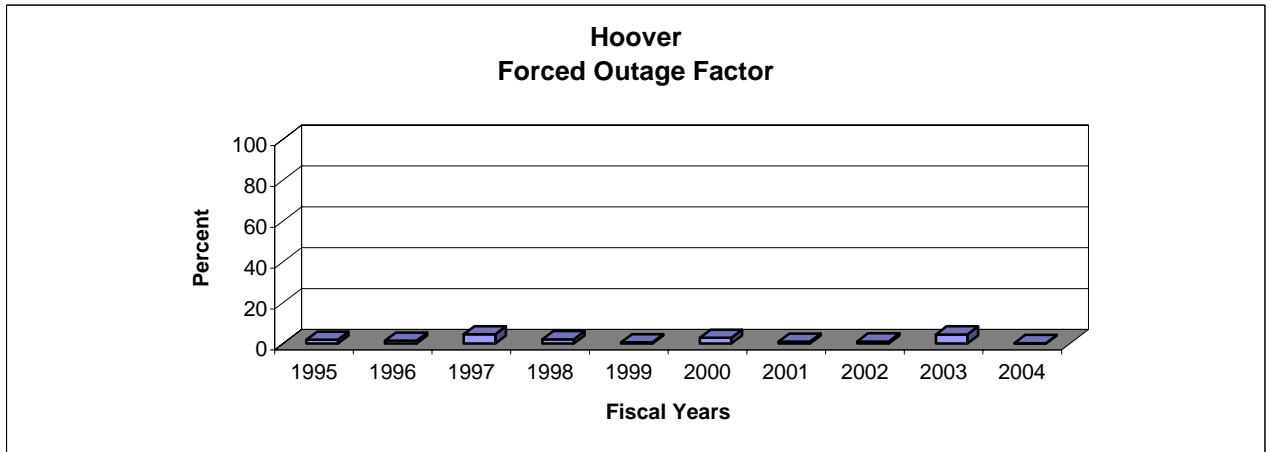


**Benchmark 5  
Availability Factor**

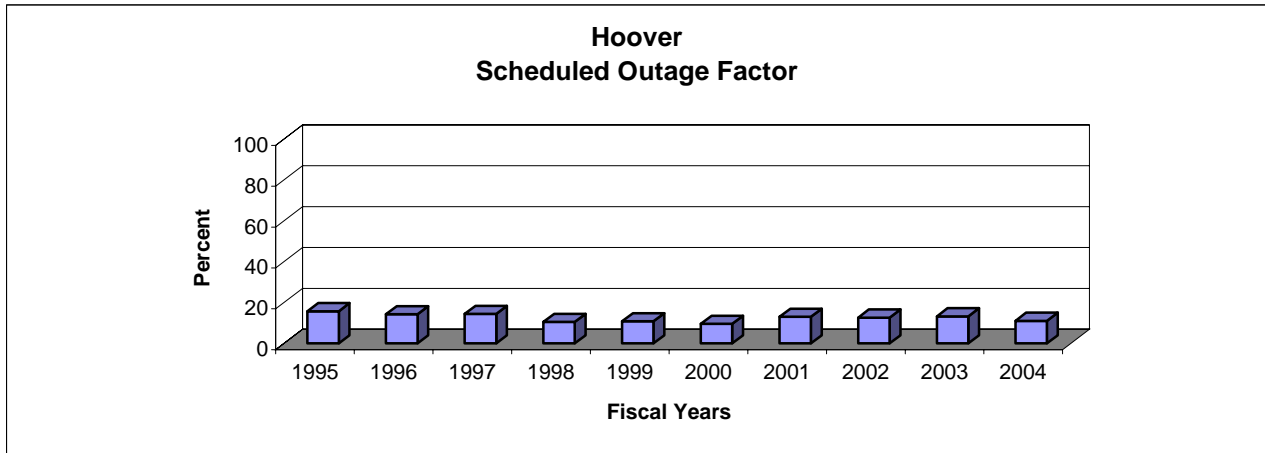


FY-1999 to FY-2012 – Turbine overhauls – Program ongoing

**Benchmark 6  
Forced Outage Factor**

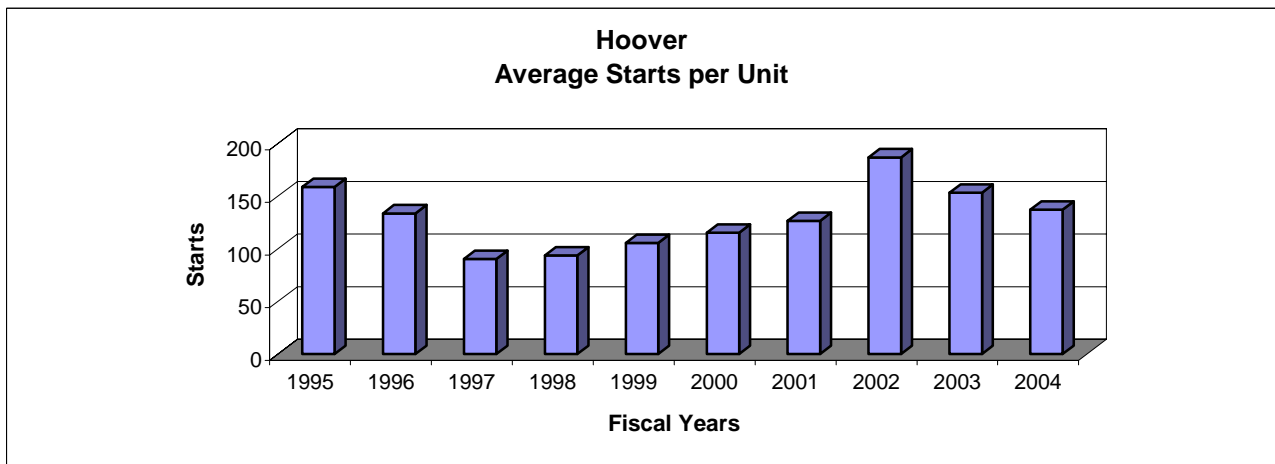


**Benchmark 7  
Scheduled Outage Factor**



FY-89 through FY-95 - Unit uprating program ongoing  
FY-1999 to FY-2012 – Turbine overhauls – Program ongoing

**Starts**



FY-2002 increase due to deregulation.

<b>Benchmark Data Comparison</b>					
<b>Fiscal Year 2004</b>	<b>Hoover Powerplant</b>	<b>Reclamation Average 500+ MW Group</b>	<b>Total Reclamation Average</b>	<b>Industry Average</b>	<b>Best Performers</b>
<b>Wholesale Firm Rate Mills/kWh</b>	11.2	Not Applicable	*21.06	Not Available	Not Available
<b>Production Cost as Percentage of Wholesale Firm Rate</b>	30.1%	Not Applicable	13.5%	Not Applicable	Not Applicable
<b>O&amp;M Cost \$/MWh</b>	3.48	1.74	2.77	2.91	1.23
<b>O&amp;M Costs \$/MW</b>	6,736.37	4,684.69	7,316.97	10,798.44	2,951.22
<b>O&amp;M Equip Work Year per MW</b>	0.05	0.02	0.04	Not Available	0.000
<b>Availability Factor</b>	88.7	86.13	86.9	**89.2	99.97
<b>Forced Outage Factor</b>	0.3	0.75	0.7	**1.9	0.00
<b>Scheduled Outage Factor</b>	11.1	13.12	12.4	**8.9	0.02

\*Weighted by Net Generation

\*\*2003 NERC Average