

Hoover Powerplant Boulder Canyon Project

Ancillary Services

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

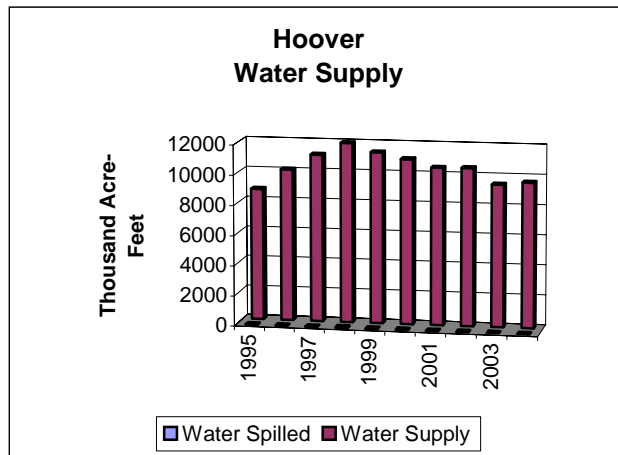
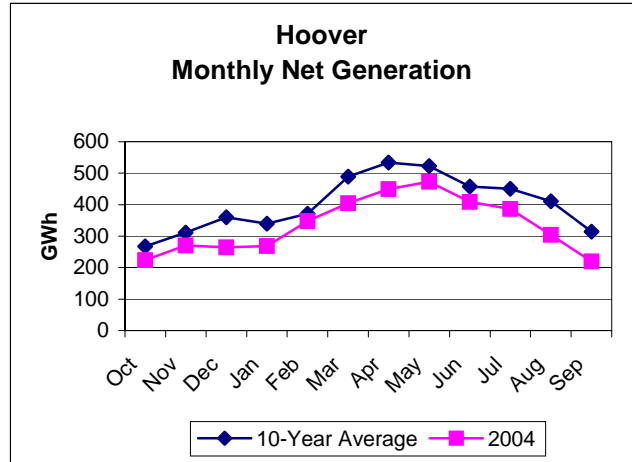
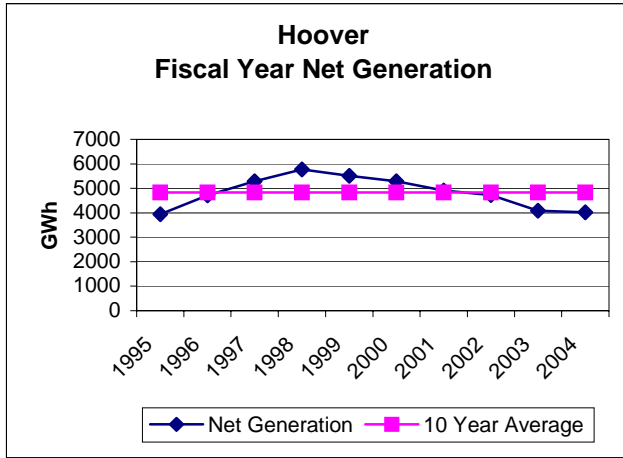
*Customers supply voltage support needed for delivery of capacity and energy to their load centers.

Hoover Generators

Existing Number and Capacity

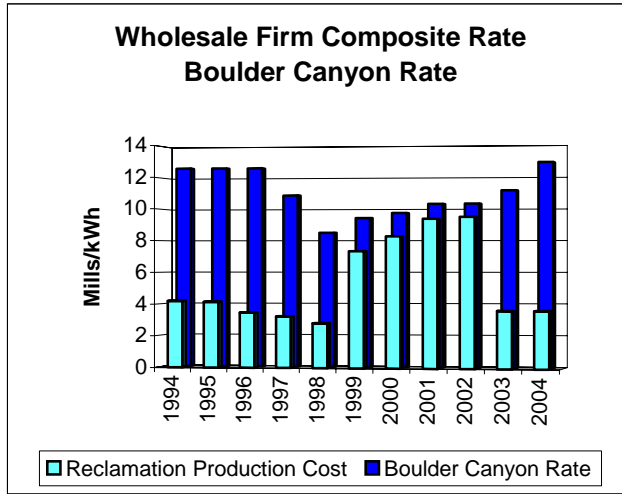
Unit #	Original Capacity (kW)	Capacity Increased (kW)	Present Capacity (kW)
A0	2,400	0	2,400
A1	82,500	47,500	130,000
A2	82,500	47,500	130,000
A3	82,500	47,500	130,000
A4	82,500	44,500	130,000
A5	82,500	47,500	127,000
A6	82,500	47,500	130,000
A7	82,500	47,500	130,000
A8	40,000	21,500	61,500
A9	50,000	18,500	68,500
N0	2,400	0	2,400
N1	82,500	47,500	130,000
N2	82,500	47,500	130,000
N3	82,500	47,500	130,000
N4	82,500	47,500	130,000
N5	82,500	47,500	130,000
N6	82,500	47,500	130,000
N7	82,500	44,500	127,000
N8	95,000	35,000	130,000
Total	1,344,800	734,000	2,078,800

Generation

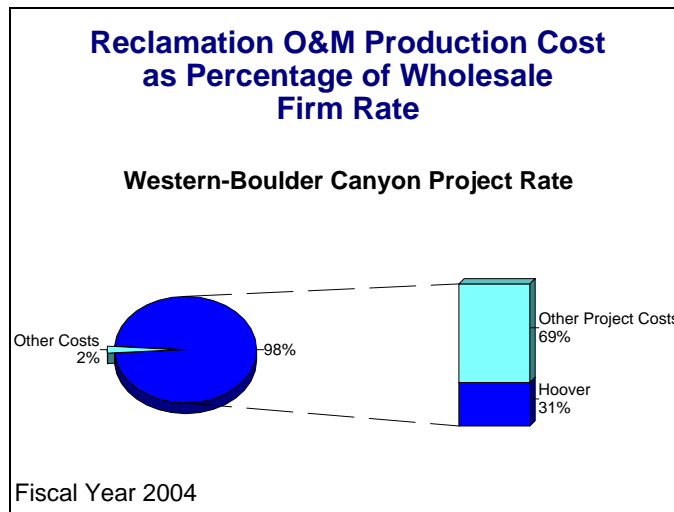


Prime Laboratory Benchmarks

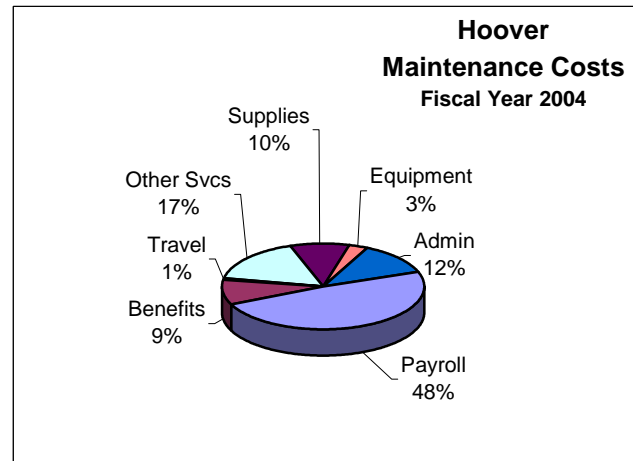
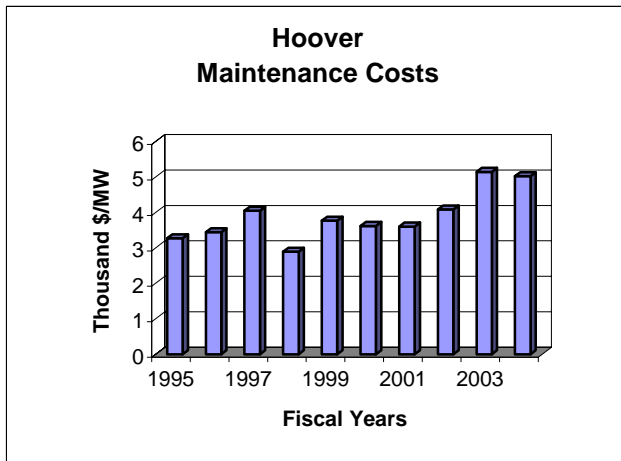
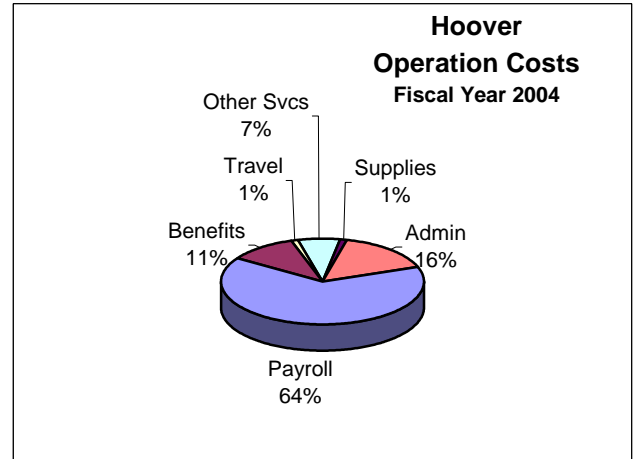
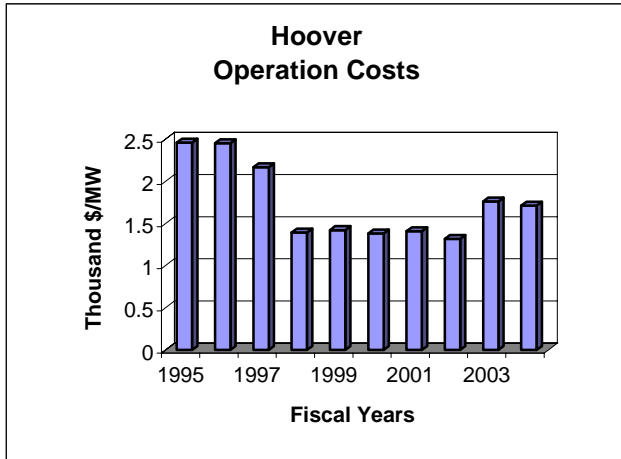
**Benchmark 1
Wholesale Firm Rate**



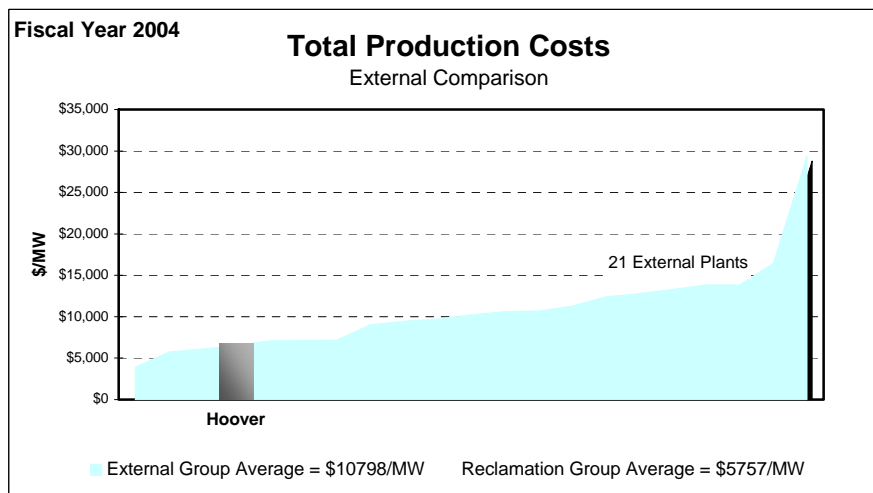
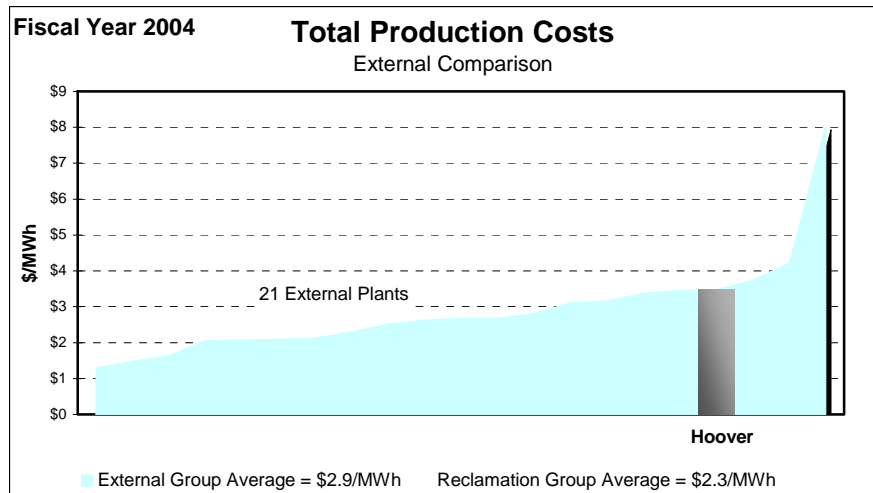
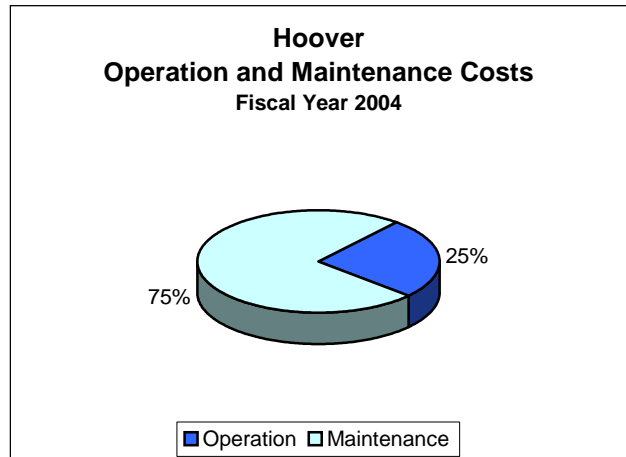
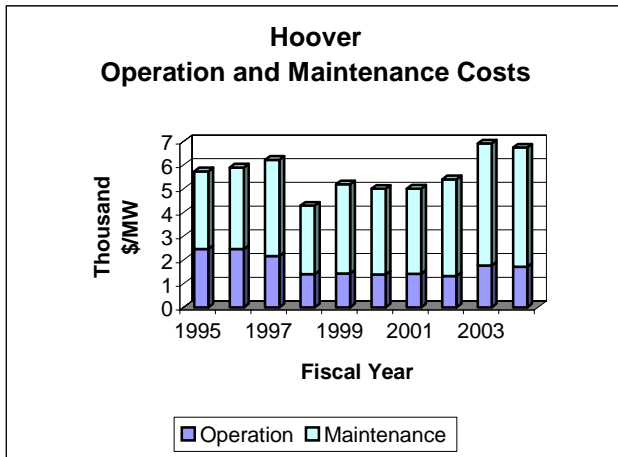
**Benchmark 2
Reclamation's Production Cost as Percentage of Wholesale Firm Rate**



**Benchmark 3
Production Cost**

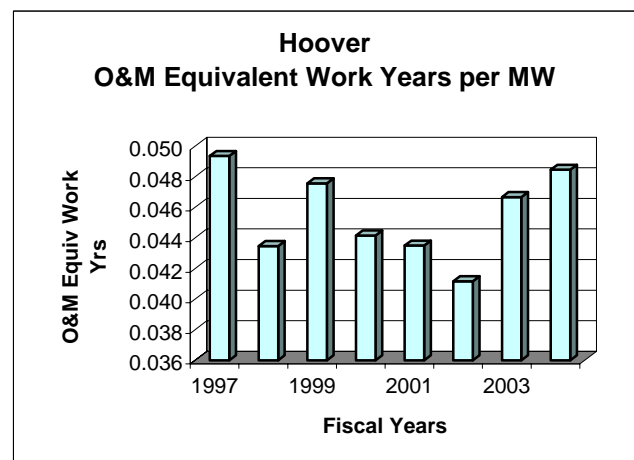
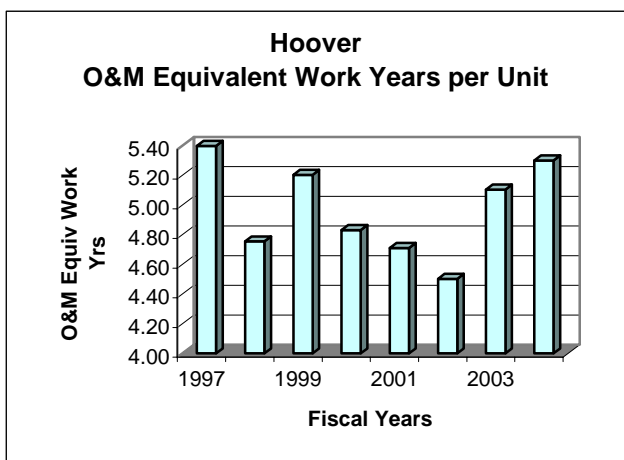
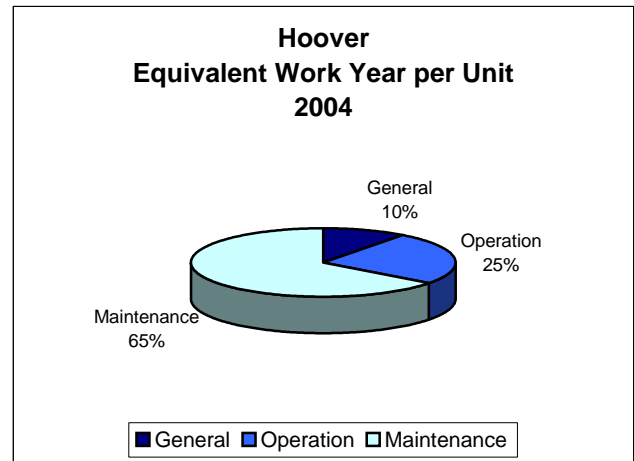
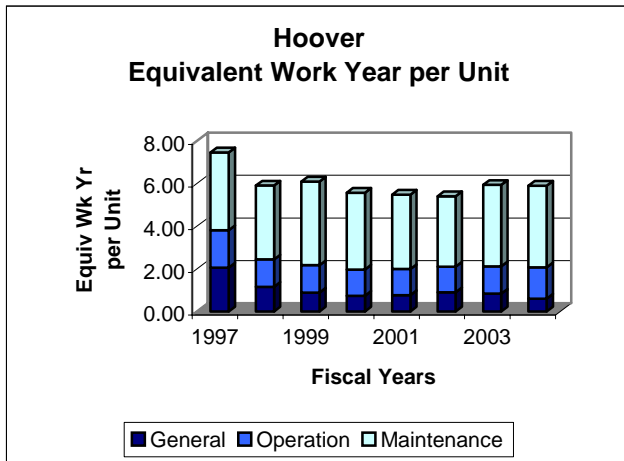


**Benchmark 3
Production Cost**

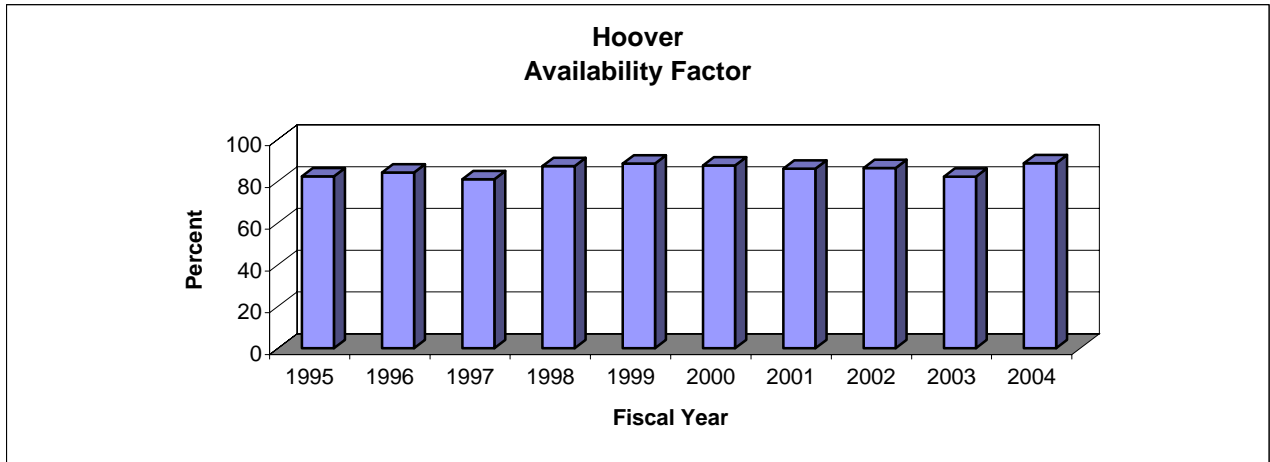


Benchmark 4
Workforce Deployment

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

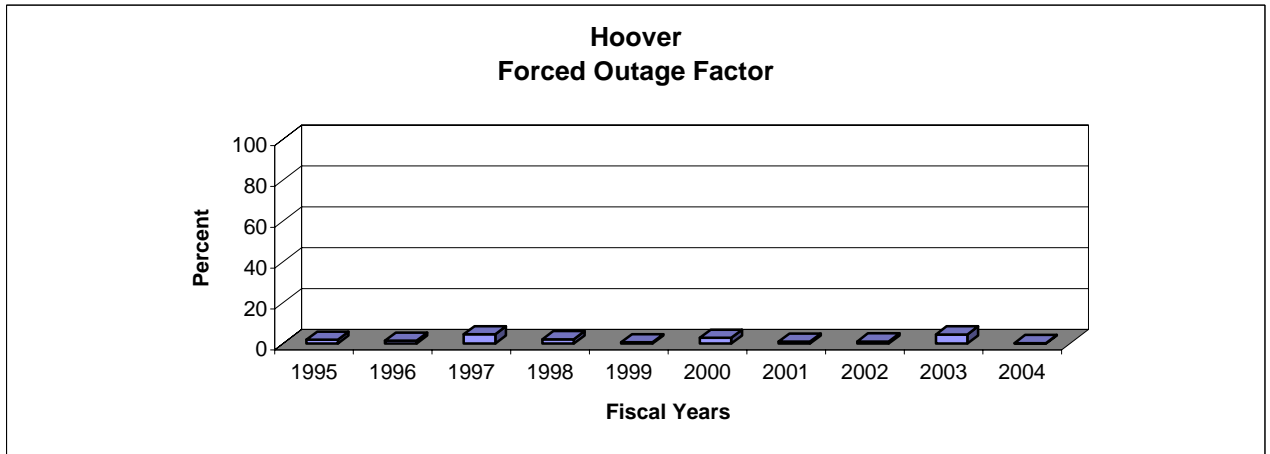


**Benchmark 5
Availability Factor**

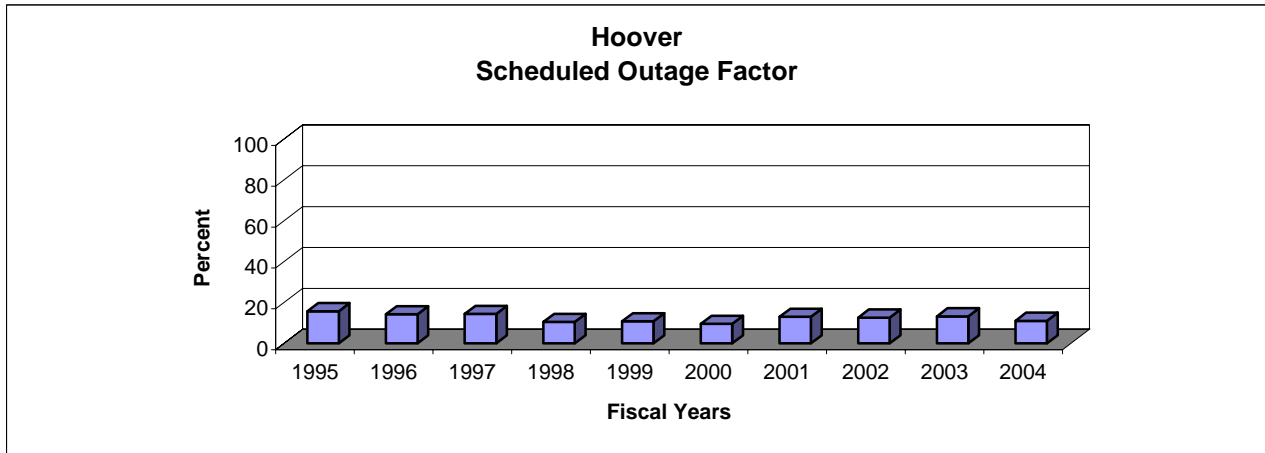


FY-1999 to FY-2012 – Turbine overhauls – Program ongoing

**Benchmark 6
Forced Outage Factor**

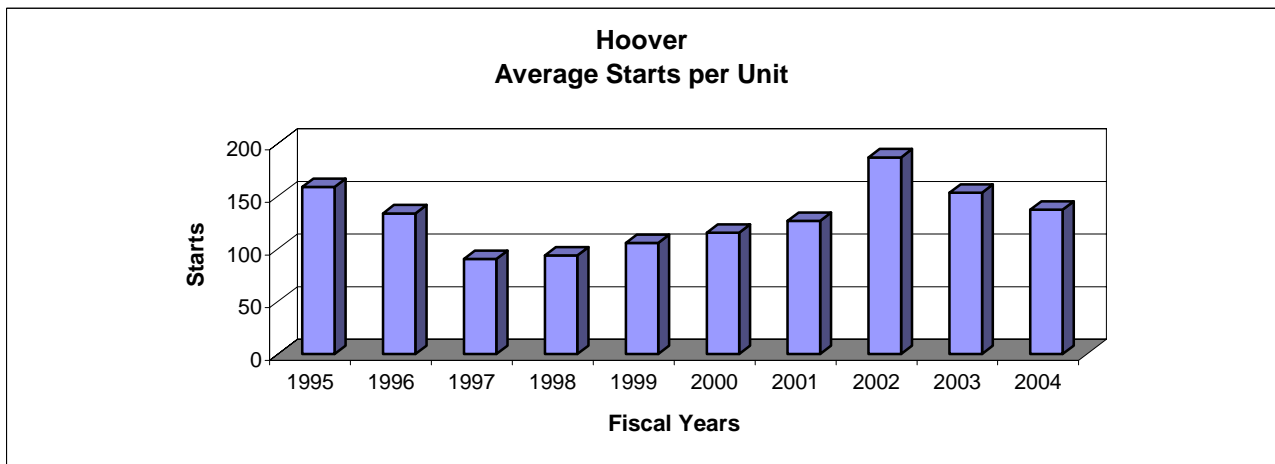


**Benchmark 7
Scheduled Outage Factor**



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.

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

*Weighted by Net Generation

**2003 NERC Average