

**Morrow Point Powerplant**  
**Colorado River Storage Project**  
**Wayne N. Aspinall Storage Unit**

**Ancillary Services**

**Morrow Point  
Ancillary Services**

Spinning Reserve	Yes
Non-Spinning Reserve	Yes
Replacement Reserve	Yes
Regulation/Load Following	Yes
Black Start	Yes
Voltage Support	Yes

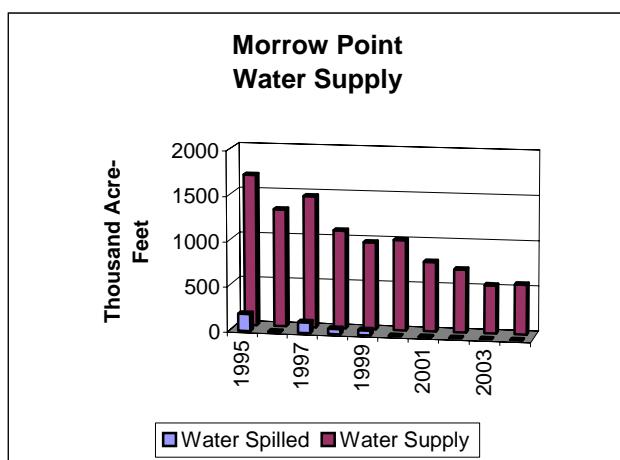
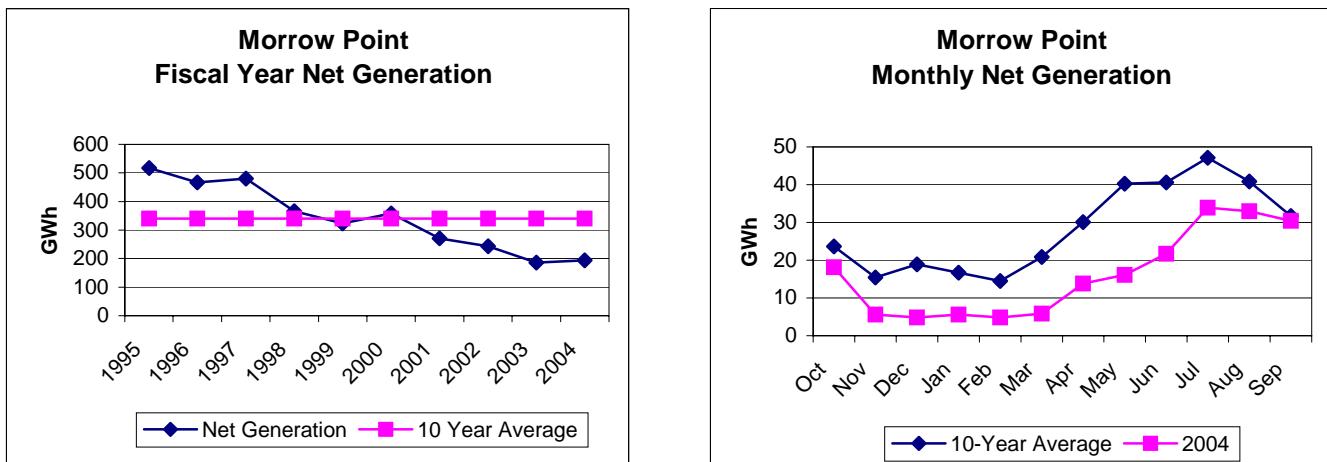
**Generators**

**Morrow Point Generators**  
Existing Number and Capacity

Unit #	Original Capacity (kW)	Capacity Increased (kW)	Present Capacity (kW)
1	60,000	26,667	86,667
2	60,000	26,667	86,667
2 Units	120,000	53,334	173,334

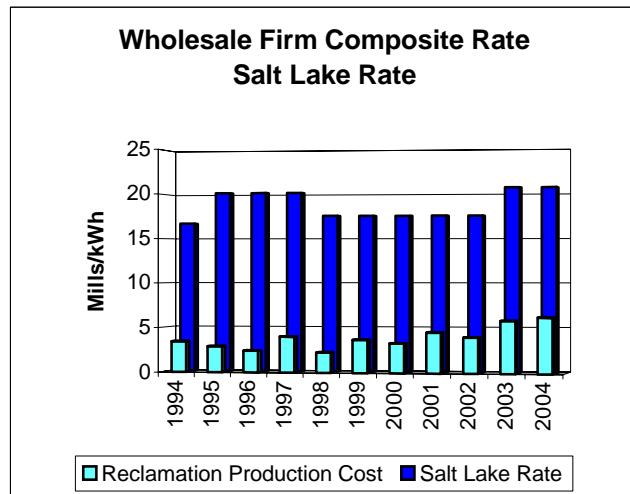
**Morrow Point Powerplant**  
**100-500 MW**

**Generation**

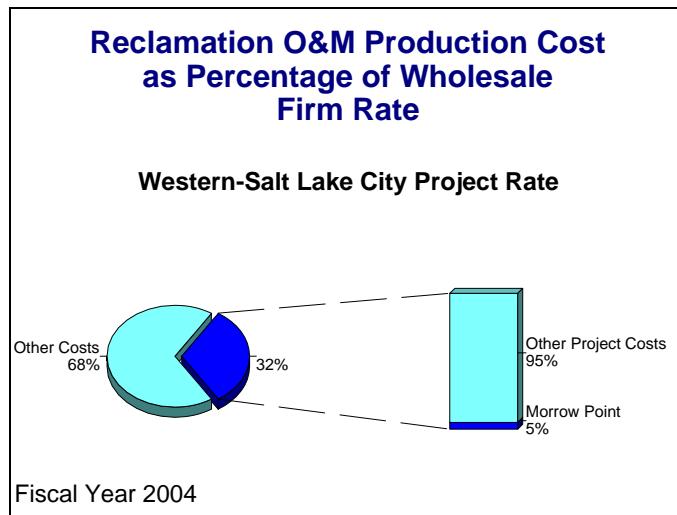


### **Prime Laboratory Benchmarks**

#### **Benchmark 1** **Wholesale Firm Rate**

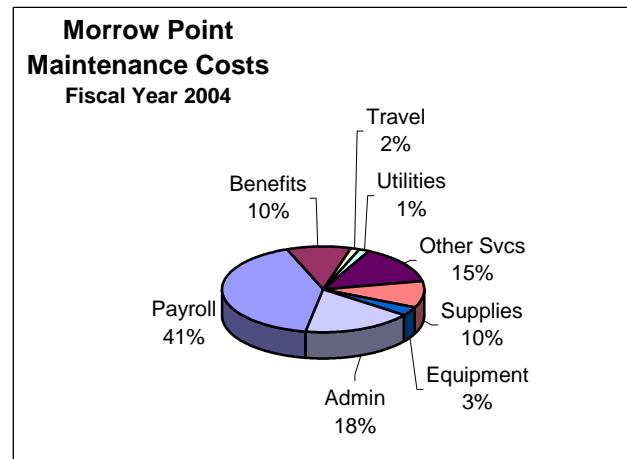
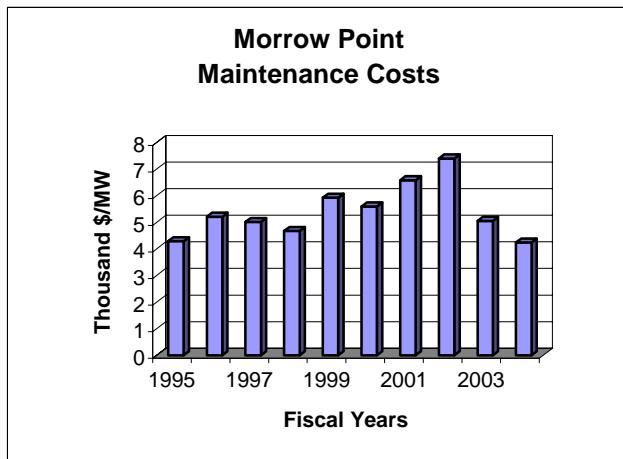
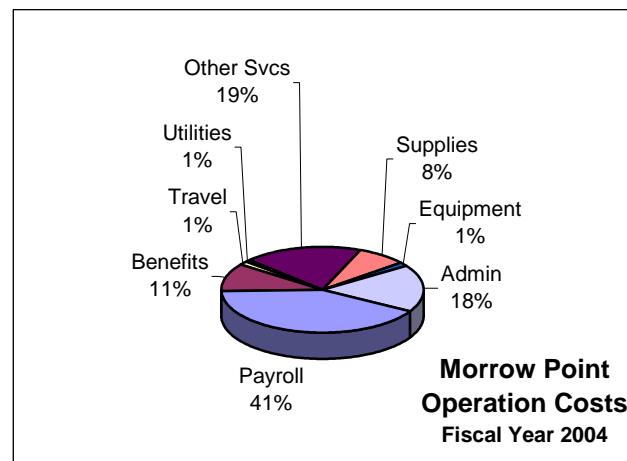
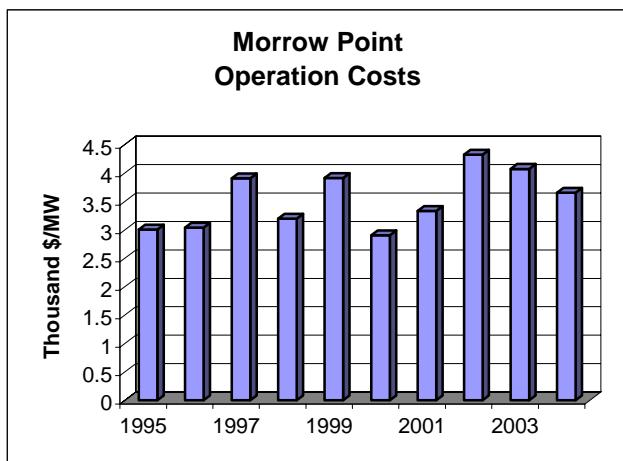


#### **Benchmark 2** **Reclamation's Production Cost as Percentage of Wholesale Firm Rate**



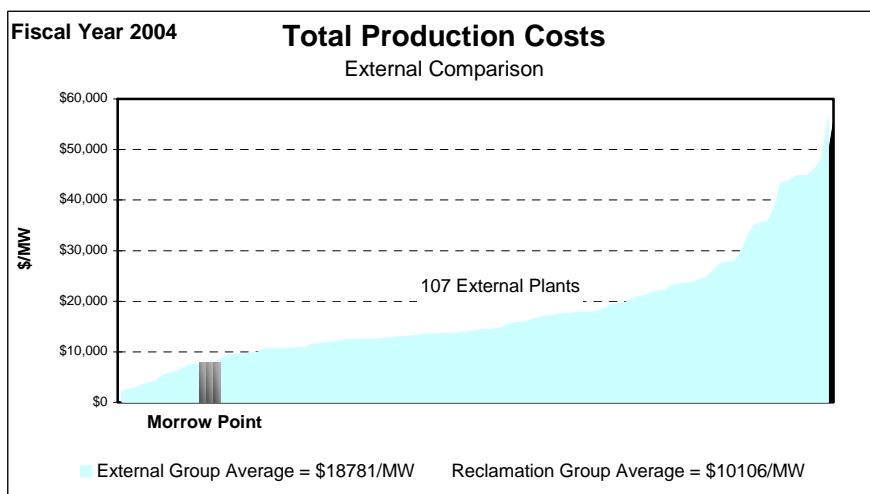
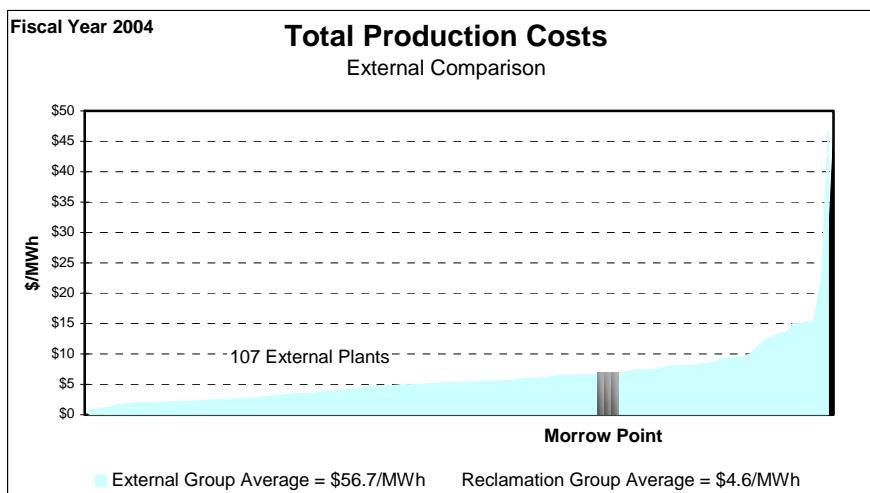
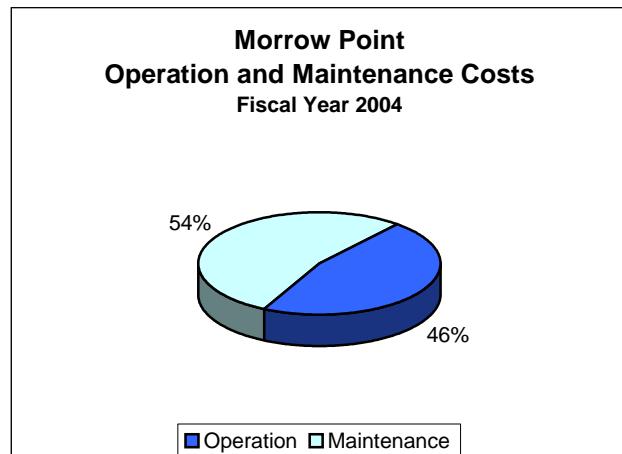
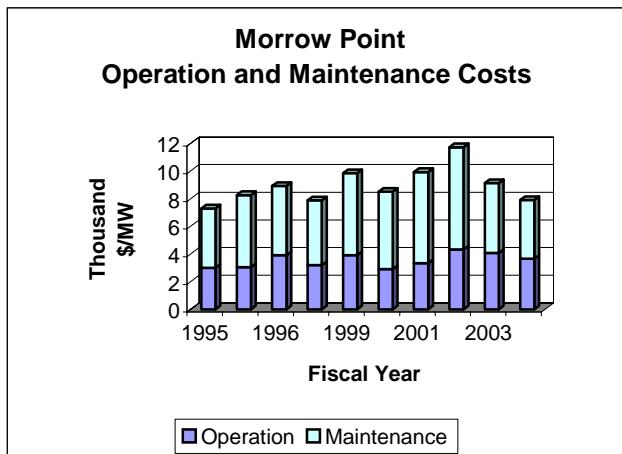
**Morrow Point Powerplant**  
**100-500 MW**

**Benchmark 3**  
**Production Cost**



**Morrow Point Powerplant**  
**100-500 MW**

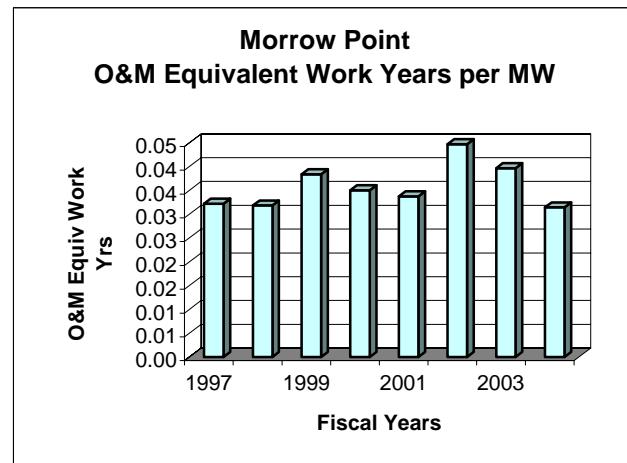
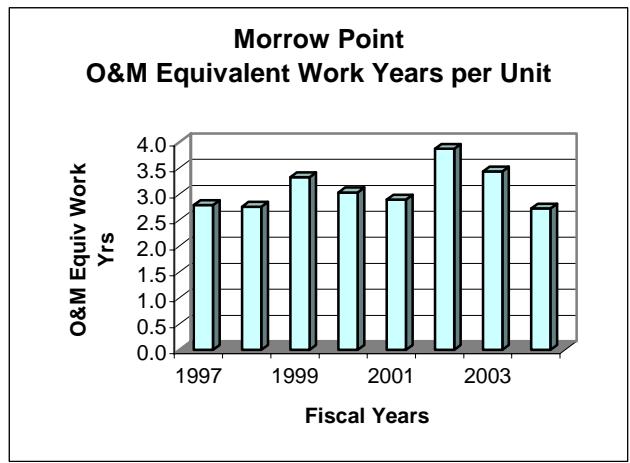
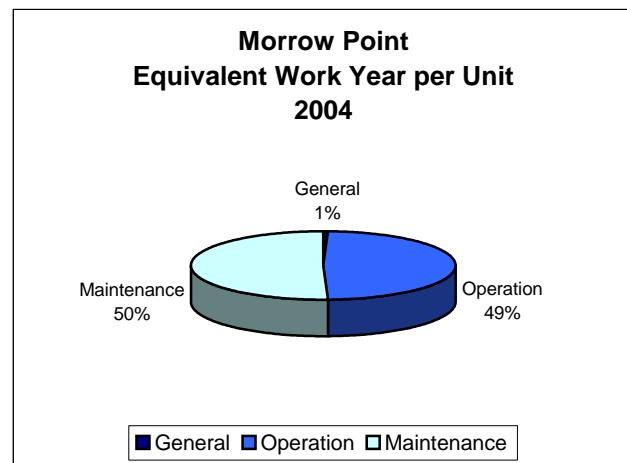
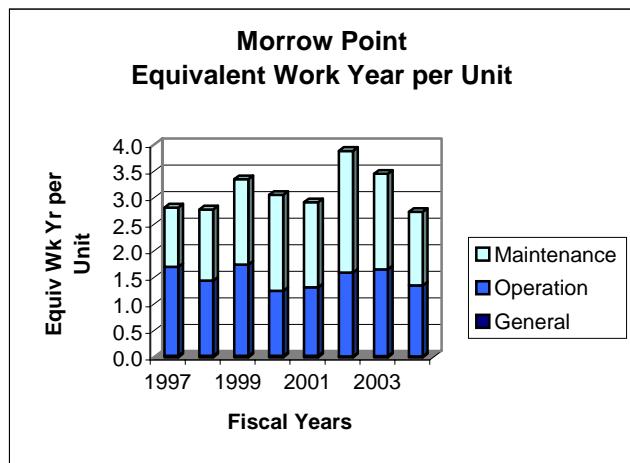
**Benchmark 3**  
**Production Cost**



**Morrow Point Powerplant**  
**100-500 MW**

**Benchmark 4**  
**Workforce Deployment**

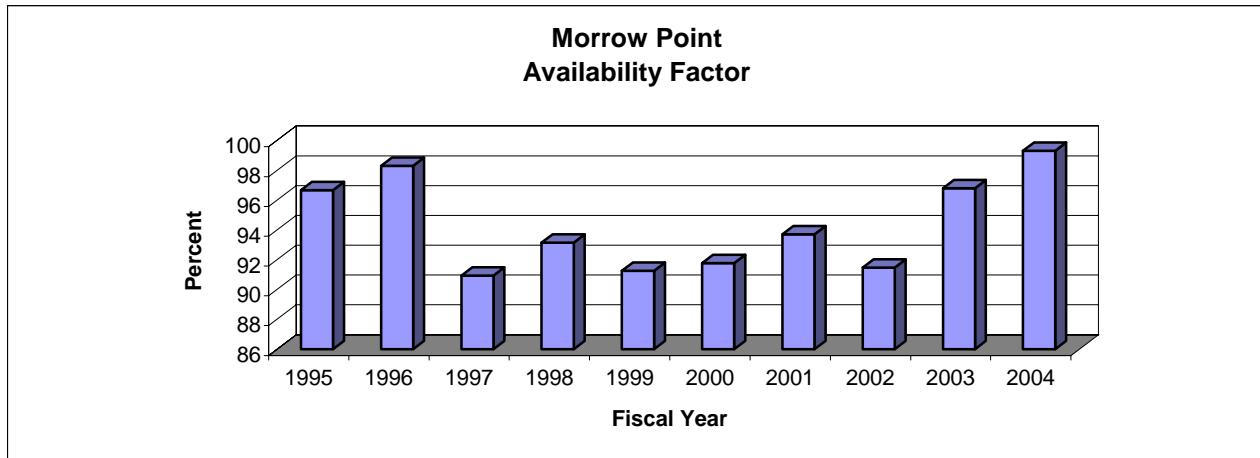
<b>Morrow Point 2004 Equivalent Work Year Levels</b>						
	Equiv Work Year Charged to Powerplant	Leave Additive	Denver and Washington Equiv Work Year Additive	Total Equiv Work Year Allocated to Powerplant	Total Equiv Work Year per Generating Unit	Total Equiv Work Year per Megawatt
General	0.00	0.00	0.03	0.03	0.02	0.00
Operation	2.40	0.27	0.00	2.67	1.34	0.02
Maintenance	2.49	0.28	0.00	2.77	1.39	0.02
Total Staffing	4.89	0.55	0.03	5.48	2.74	0.03



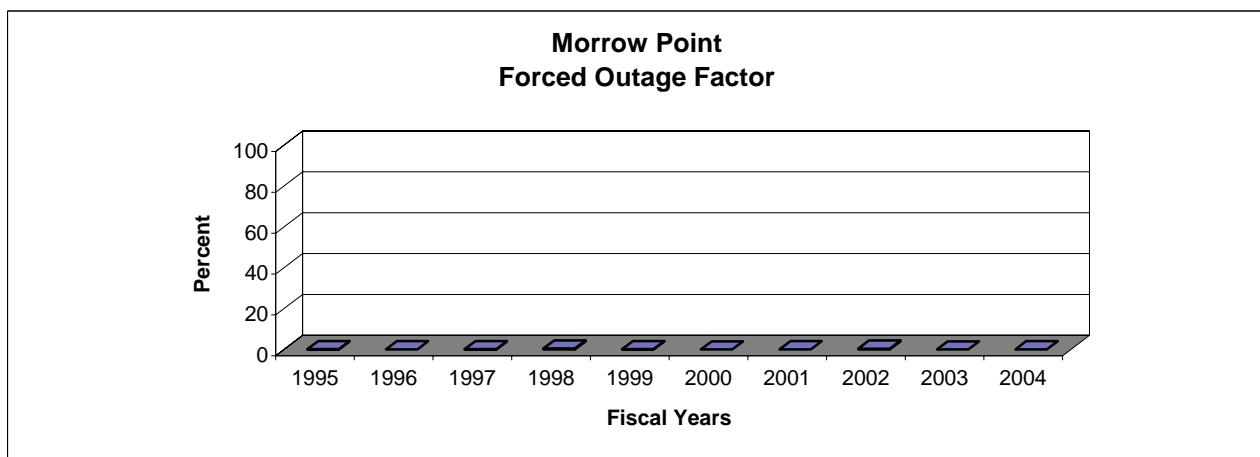
**Benchmark 5**

**Morrow Point Powerplant  
100-500 MW**

**Availability Factor**

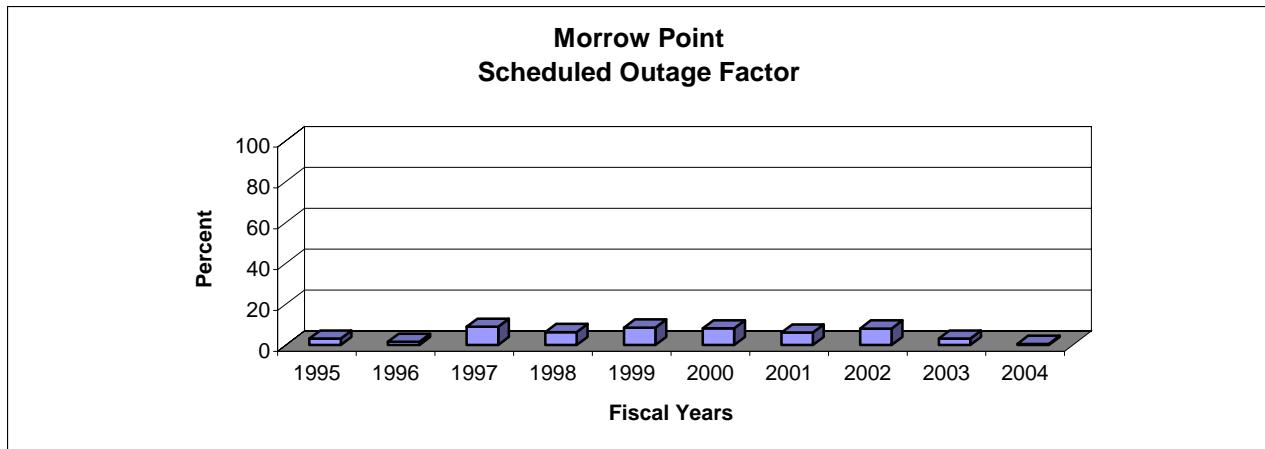


**Benchmark 6  
Forced Outage Factor**

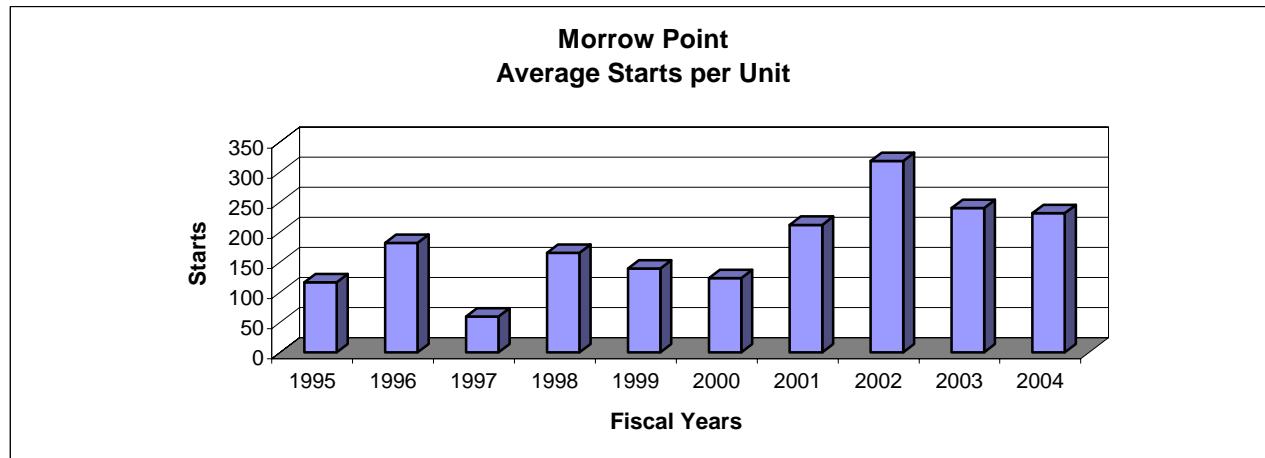


**Morrow Point Powerplant  
100-500 MW**

**Benchmark 7  
Scheduled Outage Factor**



**Starts**



**Morrow Point Powerplant  
100-500 MW**

<b>Benchmark Data Comparison</b>					
Fiscal Year 2004	Morrow Point Powerplant	Reclamation Average 100-500 MW Group	Total Reclamation Average	Industry Average	Best Performers
Wholesale Firm Rate Mills/kWh	20.7	Not Applicable	*21.06	Not Available	Not Available
Production Cost as Percentage of Wholesale Firm Rate	1.6%	Not Applicable	13.5%	Not Applicable	Not Applicable
O&M Cost \$/MWh	7.07	3.59	2.77	56.68	1.23
O&M Costs \$/MW	7,897.35	8,960.28	7,316.97	18,781.34	2,951.22
O&M Equiv Work Year per MW	0.03	0.05	0.04	Not Available	0
Availability Factor	99.3	91.0	86.9	**89.2	99.96983495
Forced Outage Factor	0.1	0.6	0.7	***1.9	0.00
Scheduled Outage Factor	0.6	8.4	12.4	**8.9	0.02

\*Weighted by Net Generation

\*\*2003 NERC Average