

**Fremont Canyon Powerplant**  
**30-100 MW**

**Ancillary Services**

**Fremont Canyon  
Ancillary Services**

Spinning Reserve	Yes
Non-Spinning Reserve	Yes
Replacement Reserve	Yes
Regulation/Load Following	Yes
Black Start	No
Voltage Support	Yes

**Generators**

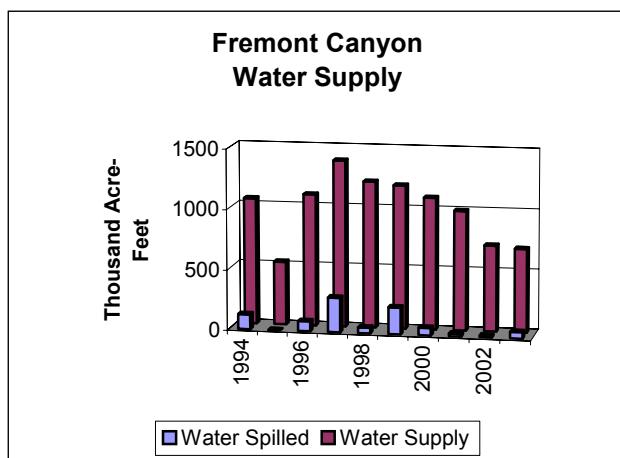
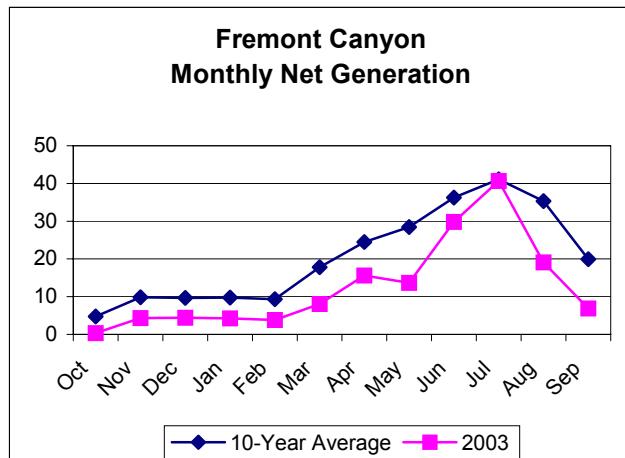
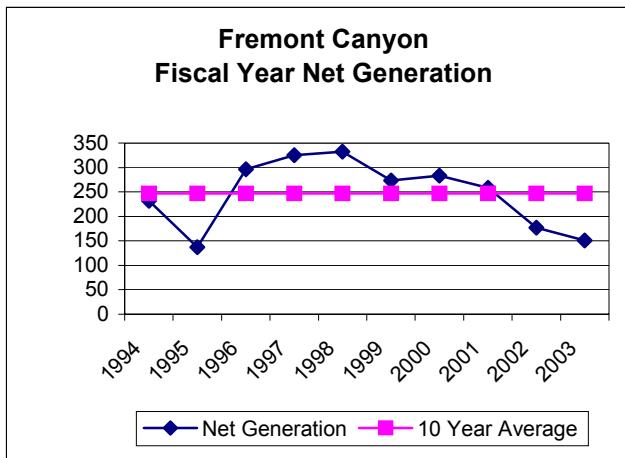
**Fremont Canyon Generators**

Existing Number and Capacity

Unit #	Original Capacity (kW)	Capacity Increased (kW)	Present Capacity (kW)
1	24,000	9,400	33,400
2	24,000	9,400	33,400
2 Units	48,000	18,800	66,800

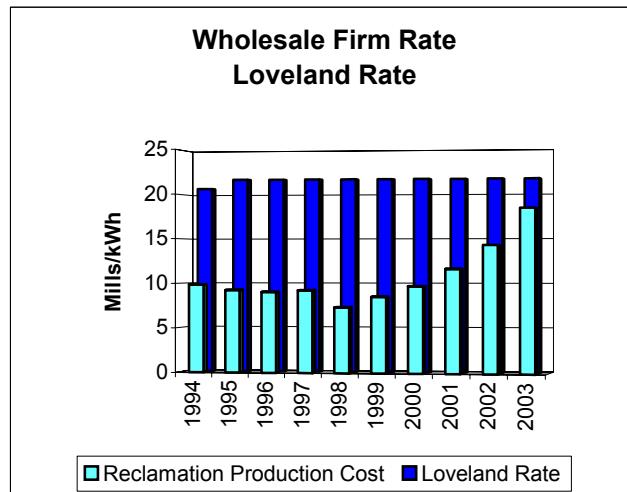
**Fremont Canyon Powerplant**  
**30-100 MW**

**Generation**

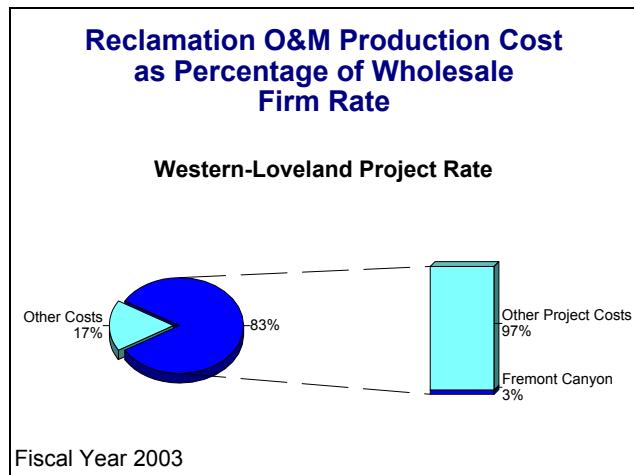


### Prime Laboratory Benchmarks

#### Benchmark 1 Wholesale Firm Rate

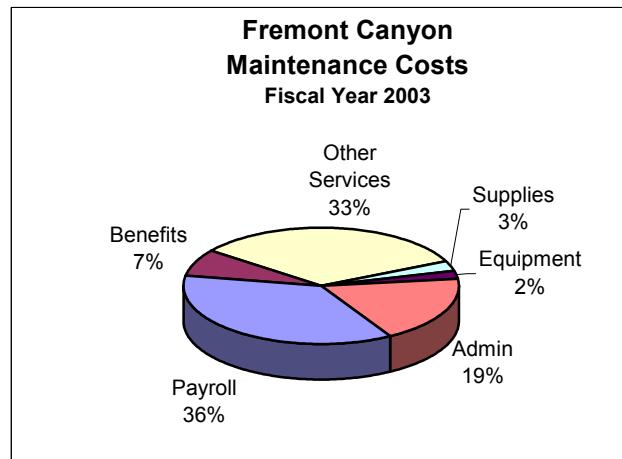
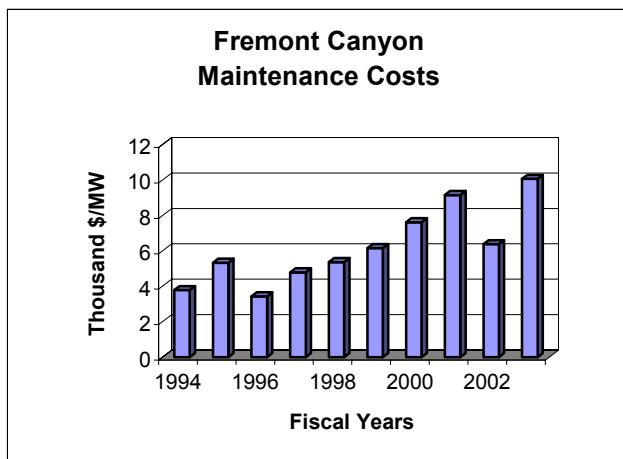
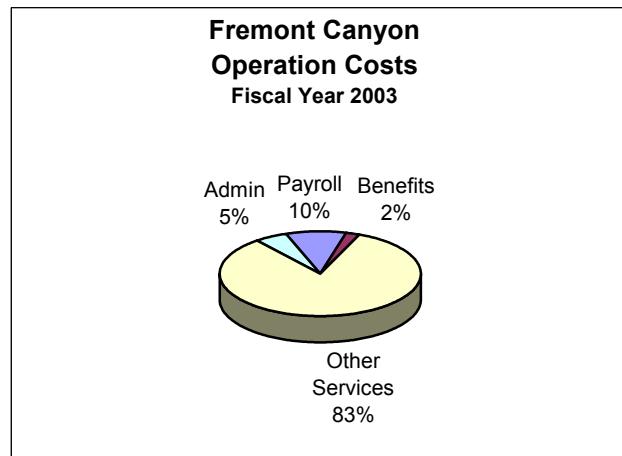
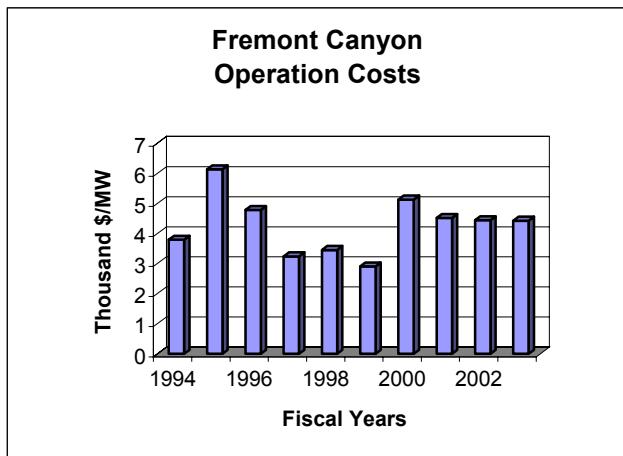


#### Benchmark 2 Reclamation's Production Cost as Percentage of Wholesale Firm Rate



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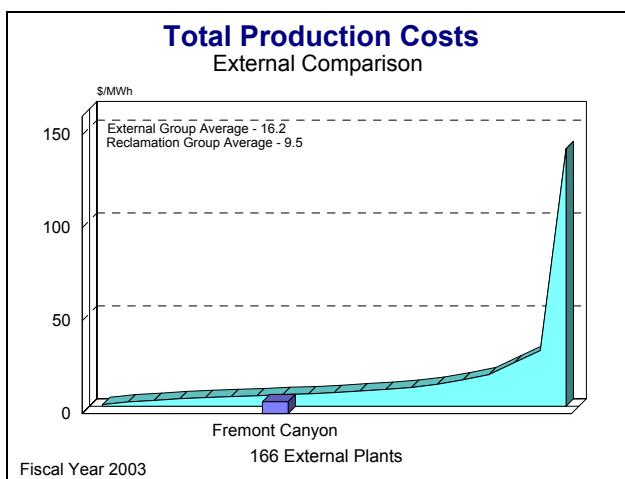
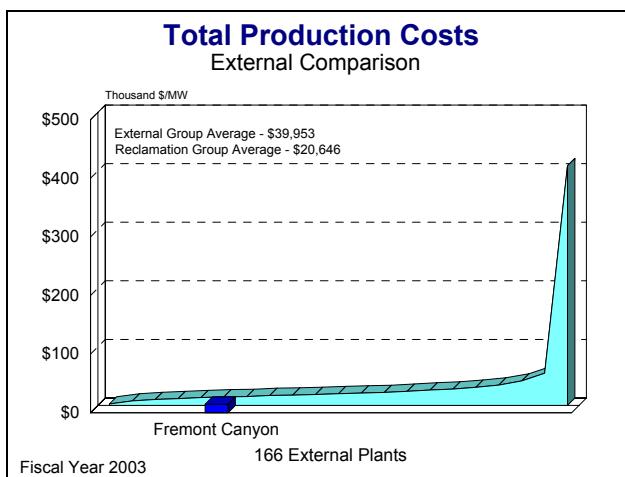
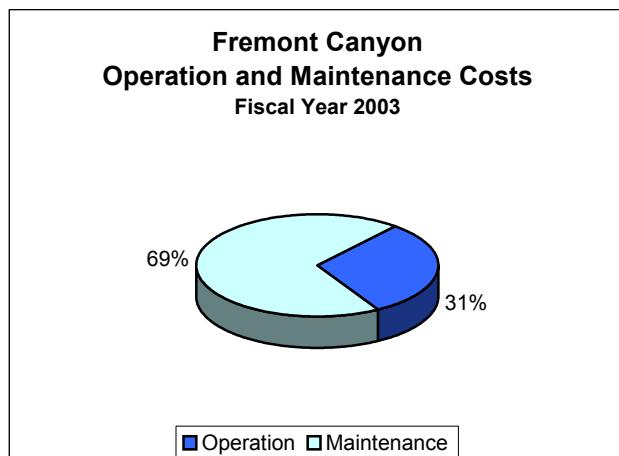
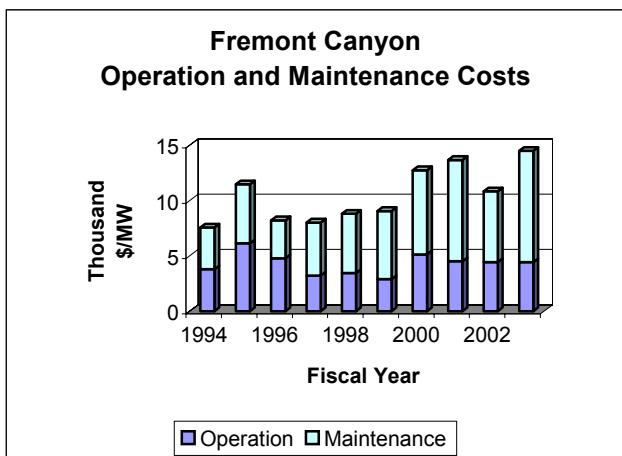
**Benchmark 3**  
**Production Cost**



FY-03 – Maintenance costs include replacement of Unit 1 power cables.

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

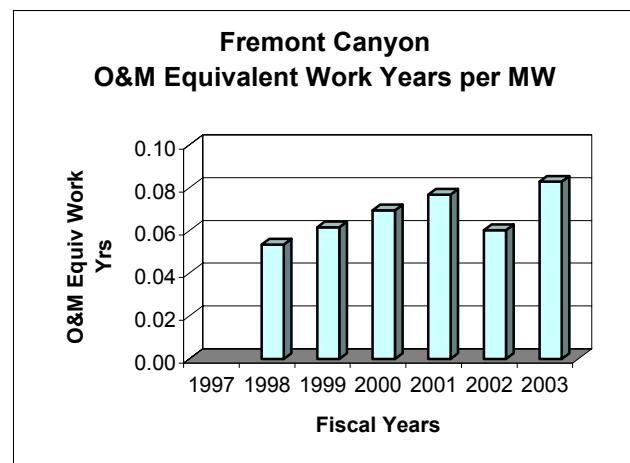
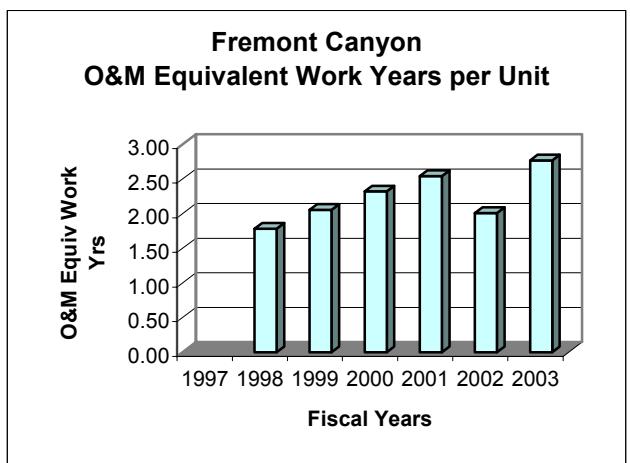
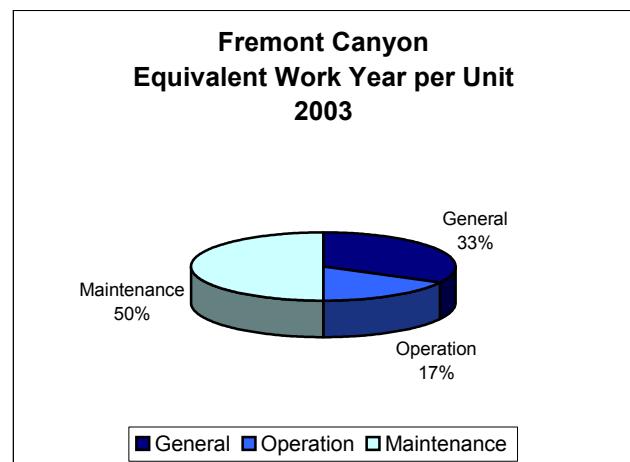
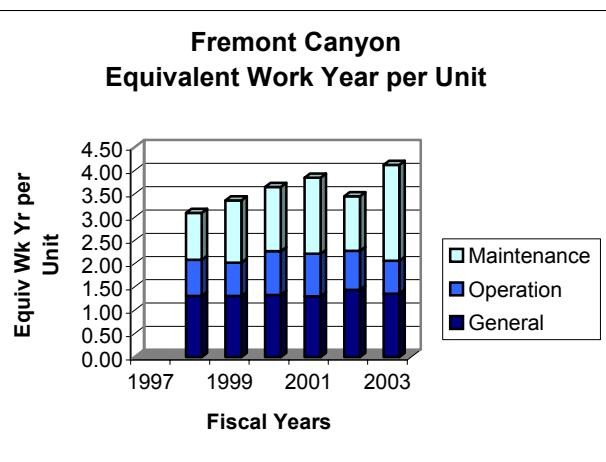


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**30-100 MW**

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

**Fremont Canyon  
2003 Equivalent  
Work Year Levels**

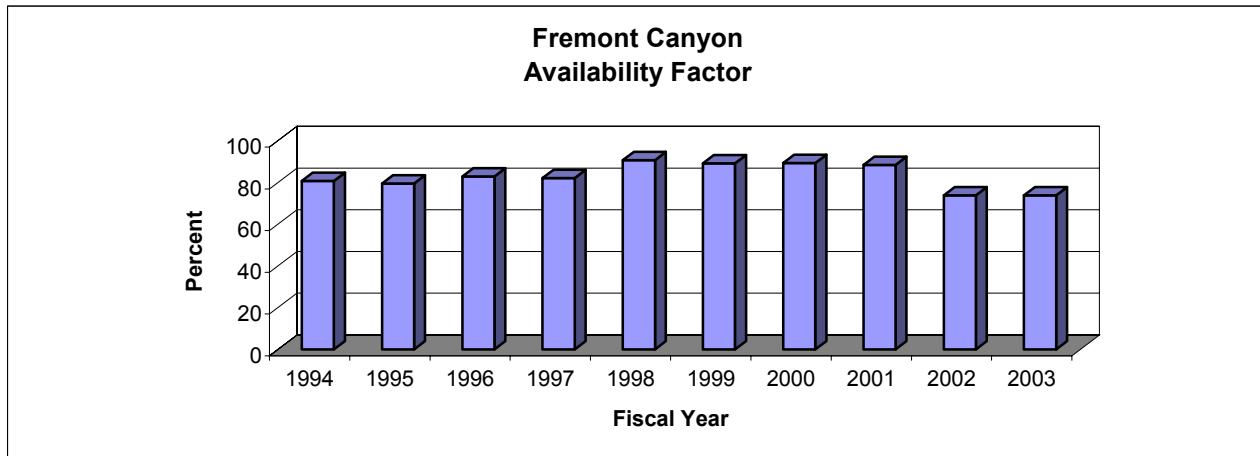
	Equiv Work Year Charged to Powerplant	Leave Additive	Denver and Washington Equiv Work Year Additive	Total Equiv Work Year Allocated to Powerplant	Total Equiv Work year per Generating Unit	Total Equiv Work Year per Megawatt
General	2.41	0.26	0.04	2.71	1.35	0.04
Operation	1.27	0.14	0	1.41	0.71	0.02
Maintenance	3.72	0.4	0	4.12	2.06	0.062
Total Staffing	7.4	0.79	0.04	8.24	4.12	0.12



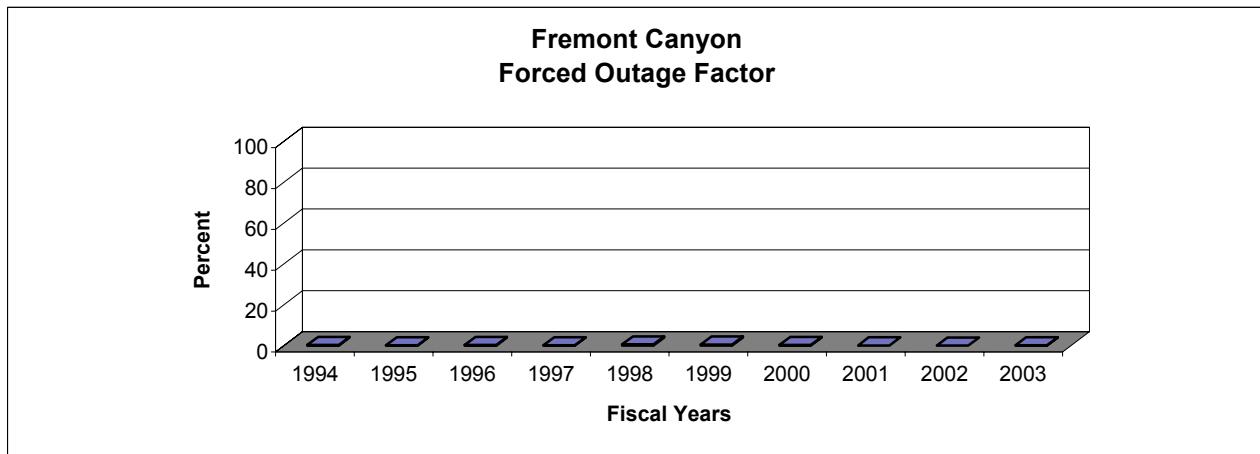
Distributive Accounts not available for FY-97

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**Benchmark 5  
Availability Factor**

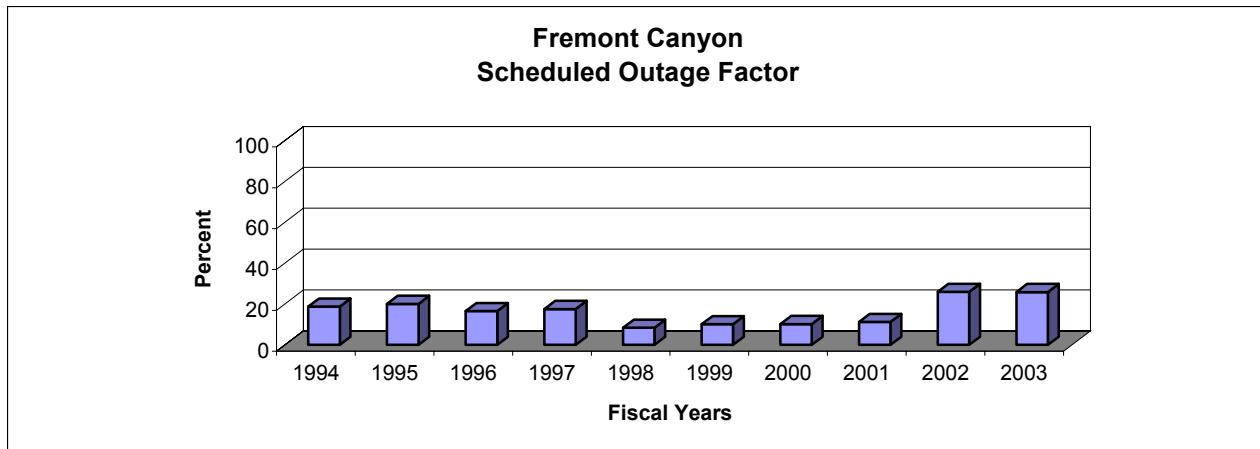


**Benchmark 6  
Forced Outage Factor**



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**Benchmark 7**  
**Scheduled Outage Factor**

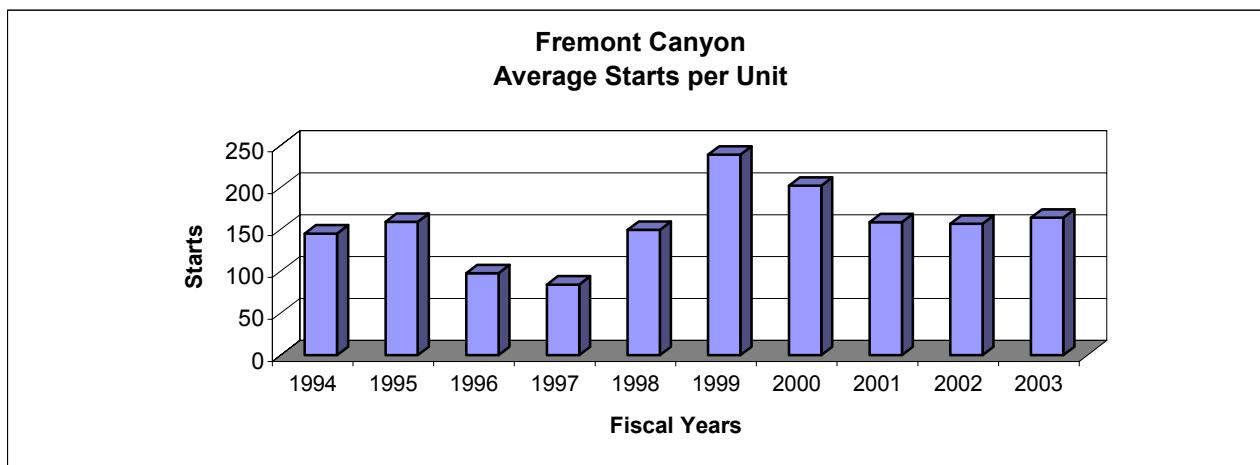


FY 91 to FY 97 - Extended maintenance

FY 02- Extended outage for significant draft tube and runner cavitation repairs to Unit 2 plus interruption of annual maintenance to complete critical maintenance at other facilities.

FY 03 - Extended outage for significant re-contouring of turbine runner buckets for Units 1 and 2.

**Starts**



## Benchmark Data Comparison

Fiscal Year 2003	Fremont Canyon Powerplant	Reclamation Average 30-100 MW Group	Total Reclamation Average	Industry Average	Best Performers
<b>Wholesale Firm Rate Mills/kWh</b>	21.7	Not Applicable	*23.1	Not Available	Not Available
<b>Production Cost as Percentage of Wholesale Firm Rate</b>	2.82%	Not Applicable	12.0%	Not Applicable	Not Applicable
<b>O&amp;M Cost \$/MWh</b>	6.4	7.6	2.7	16.2	1.1
<b>O&amp;M Costs \$/MW</b>	14,496	19,010	7,315	39,953	3,108
<b>O&amp;M Equiv Work Year per MW</b>	0.08	0.1	0.04	Not Available	0.010
<b>Availability Factor</b>	73.9	84.3	83.6	**88.9	99.1
<b>Forced Outage Factor</b>	0.2	0.5	1.5	**2.4	0.0
<b>Scheduled Outage Factor</b>	25.9	15.3	14.9	**8.7	0.0

\*Weighted by Net Generation

\*\*2002 NERC Average