

Canyon Ferry Powerplant Pick-Sloan Missouri Basin Program

Ancillary Services

Canyon Ferry Ancillary Services	
Spinning Reserve	Yes
Non-Spinning Reserve	Yes
Replacement Reserve	Yes
Regulation/Load Following	No
Black Start	Yes
Voltage Support	Yes

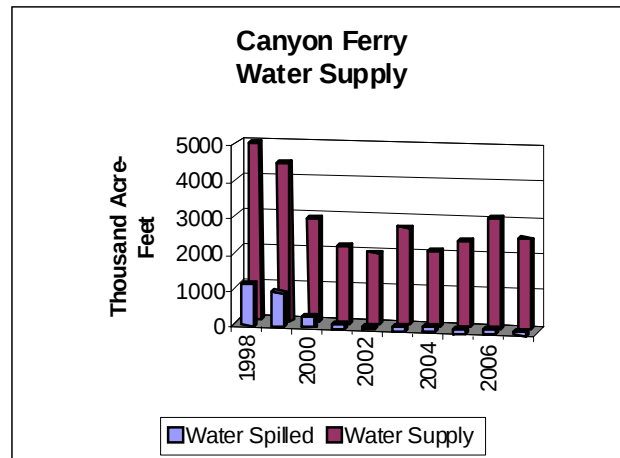
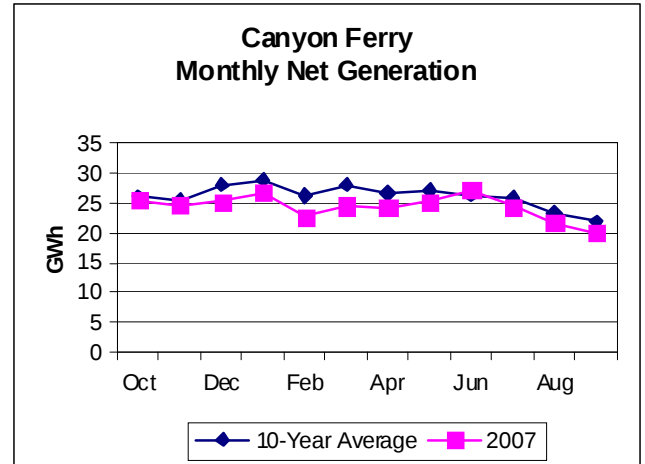
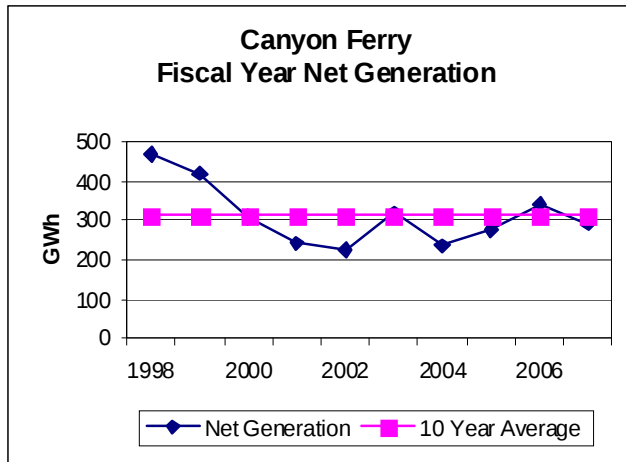
Canyon Ferry is not designated as an “official” blackstart plant, even though it has the capability.

Generators

Canyon Ferry Generators			
Existing Number and Capacity			
Unit #	Original Capacity (kW)	Capacity Increased (kW)	Present Capacity (kW)
1	16,667	-	16,667
2	16,667	-	16,667
3	16,667	-	16,667
3 units	50,000	-	50,000

Canyon Ferry Powerplant 30-100 MW

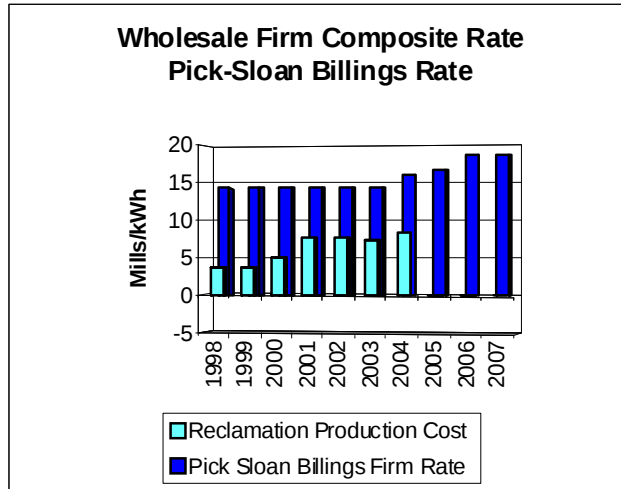
Generation



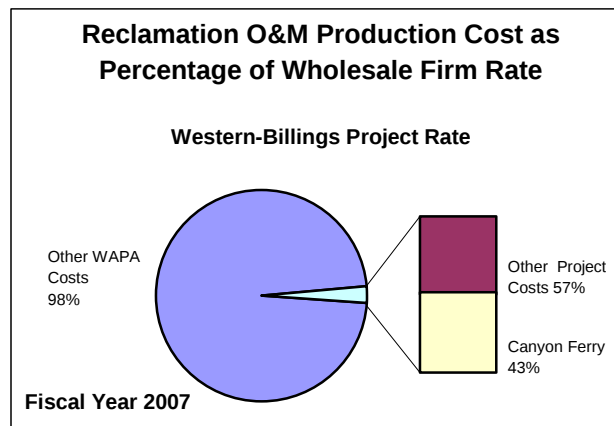
Drought conditions encountered for the sixth consecutive year.

Prime Laboratory Benchmarks

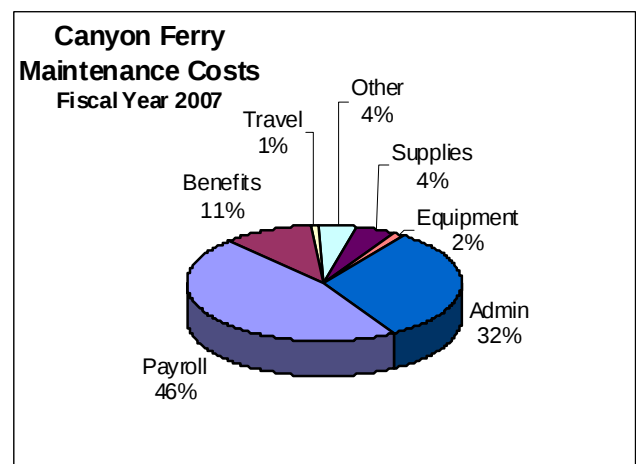
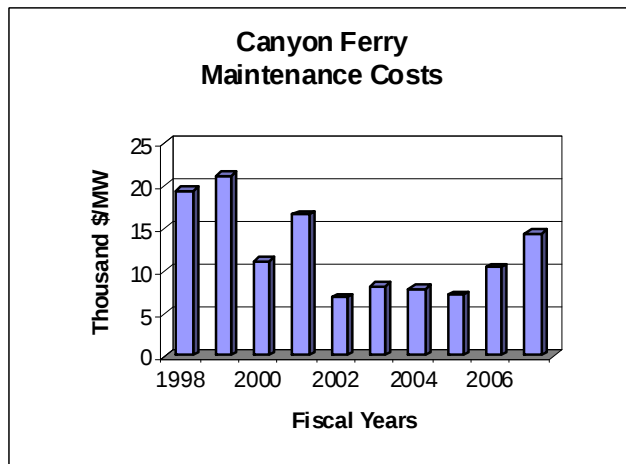
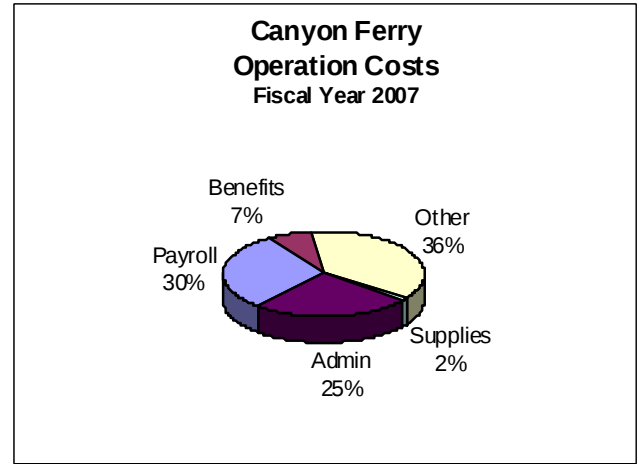
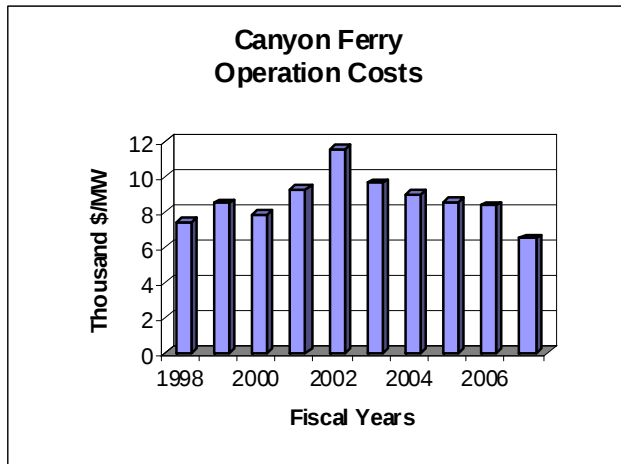
Benchmark 1 Wholesale Firm Rate



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

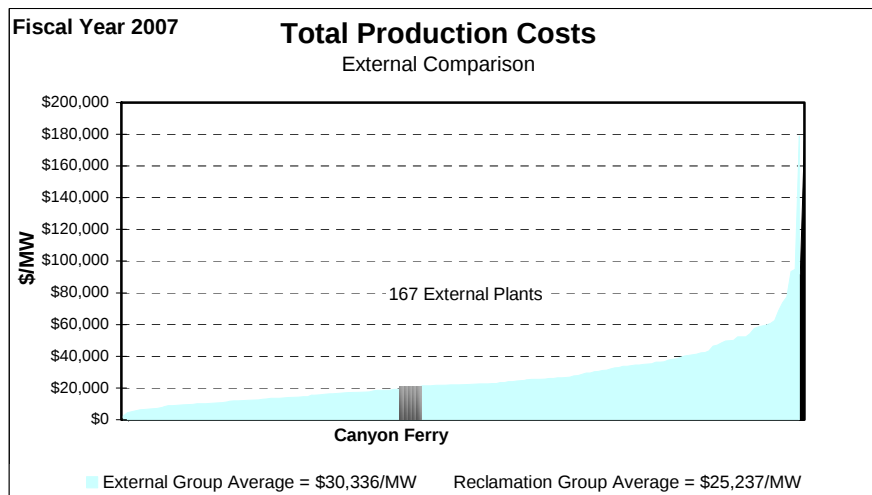
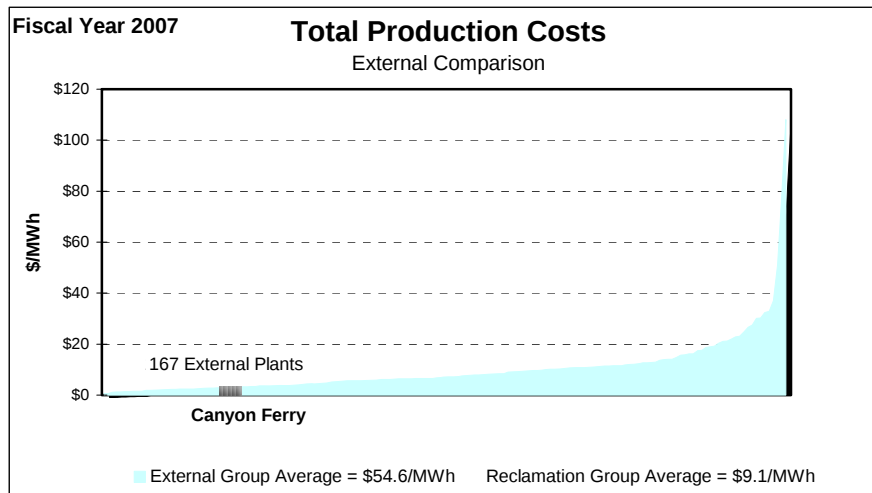
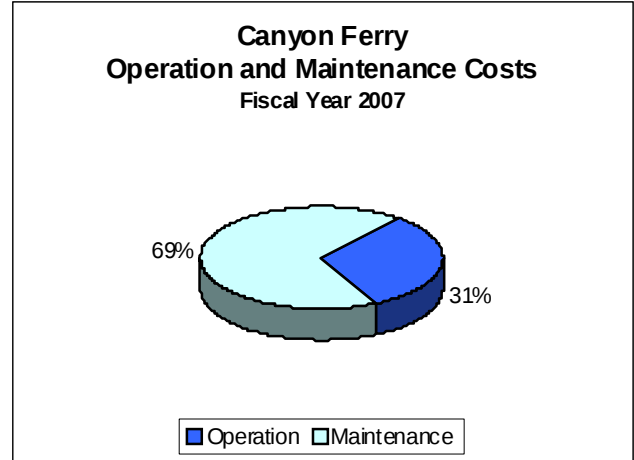
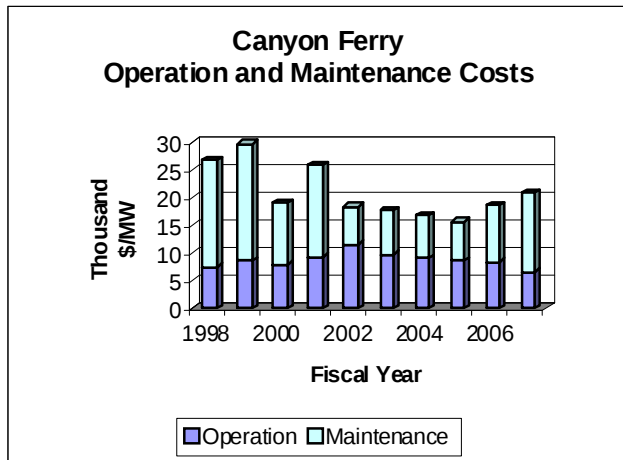


**Benchmark 3
Production Costs**



FY-1999 – FY-2001 maintenance costs include extraordinary maintenance costs for refurbishment of the powerplant penstock's fixed-wheel gates and hydraulic cylinders overhaul.

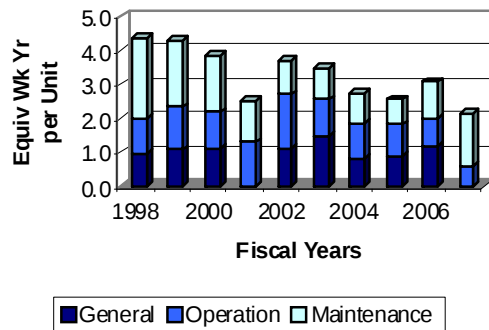
**Benchmark 3
Production Costs**



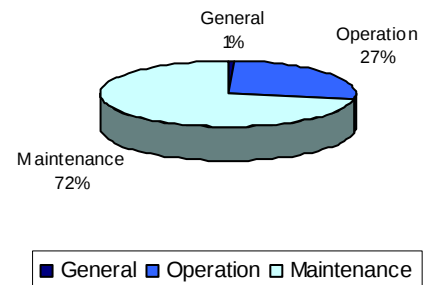
**Benchmark 4
Workforce Deployment**

Canyon Ferry FY 2007 Equivalent Work Staffing Year Levels						
	Equivalent Work Year Staffing Charged to Powerplant	Leave Additive	Denver and Washington Equivalent Work Year Staffing Additive	Total Equivalent Work Year Allocated to Powerplant	Total Equivalent Staffing Work Year per Generating Unit	Total Equivalent Work Year Staffing per Megawatt
General	0.00	0.00	0.05	0.05	0.02	0.00
Operation	1.55	0.17	0.00	1.72	0.57	0.03
Maintenance	4.16	0.47	0.00	4.63	1.54	0.09
Total Staffing	5.71	0.64	0.05	6.41	2.14	0.13

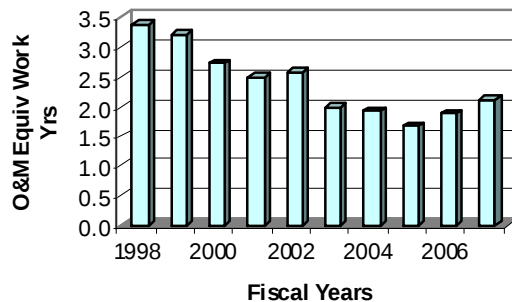
**Canyon Ferry
Equivalent Work Year per Unit**



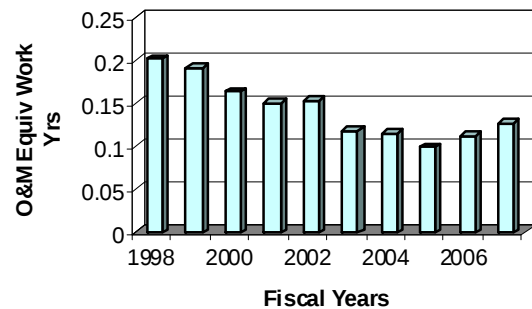
**Canyon Ferry
Equivalent Work Year per Unit
2007**



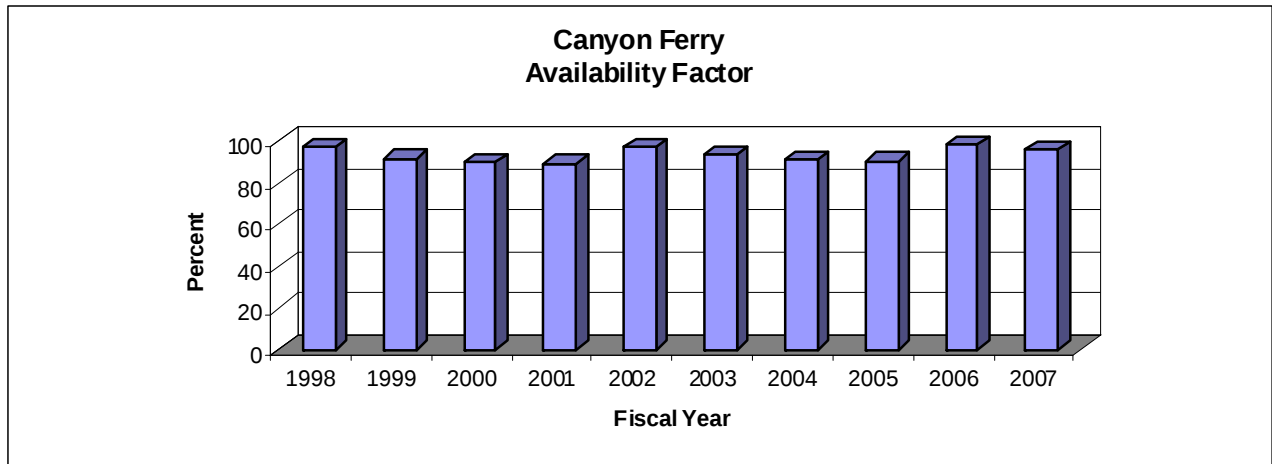
**Canyon Ferry
O&M Equivalent Work Year per Unit**



**Canyon Ferry
O&M Equivalent Work Year per MW**



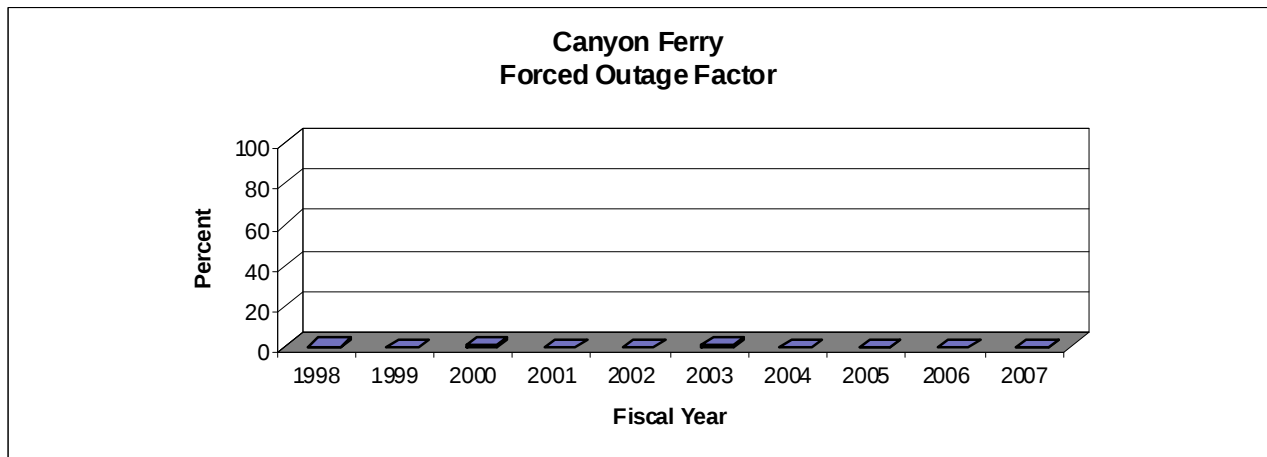
**Benchmark 5
Availability Factor**



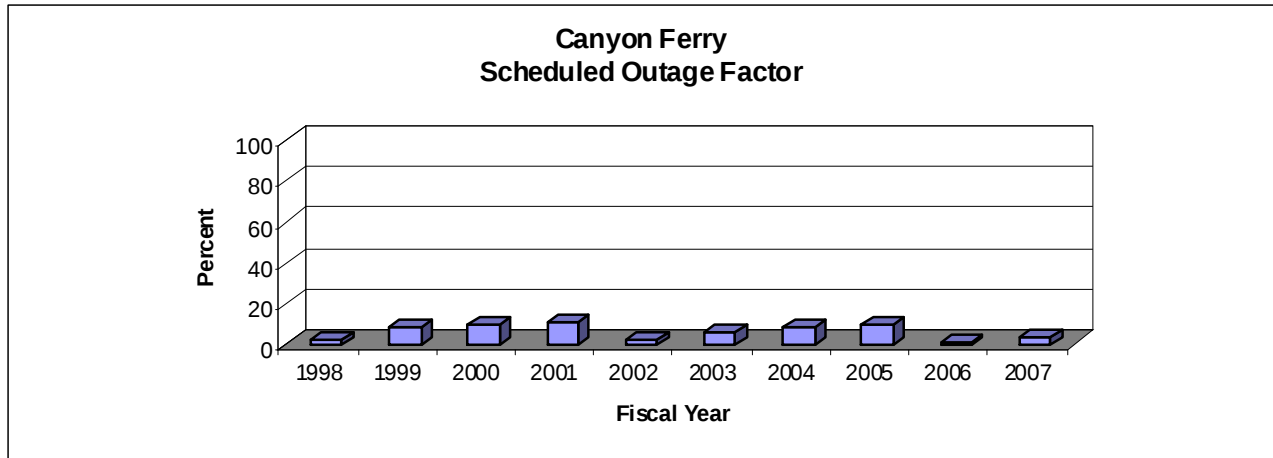
FY-1999, FY-2000, FY-2001 – Each included a 6-week extended outage for refurbishing the penstock's fixed-wheel gate and overhauling the hydraulic cylinders.

FY-2004 – Extended unit outages for low dissolved oxygen draft tube modifications and powerplant protective relaying replacement projects.

**Benchmark 6
Plant Forced Outage Factor**



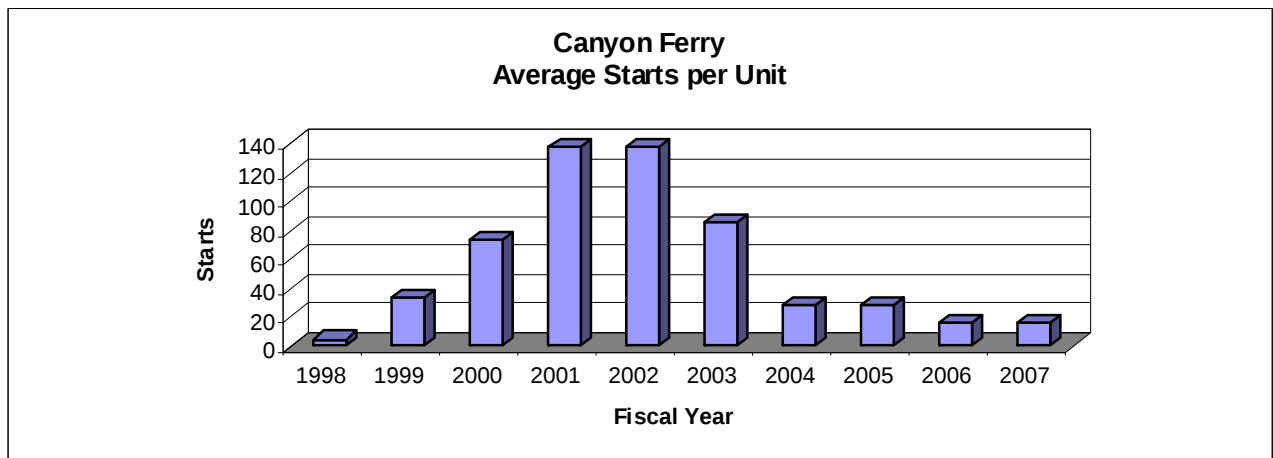
**Benchmark 7
Plant Scheduled Outage Factor**



FY-1999, FY-2000, FY-2001 – Extended unit outages for penstock fixed-wheel gates refurbishment and hydraulic cylinders overhaul.

FY-2004 – Extended unit outages for low dissolved oxygen draft tube modifications and powerplant protective relaying replacement projects.

Unit Starts



**Canyon Ferry Powerplant
30-100 MW**

Benchmark Data Comparison					
Fiscal Year 2007	Canyon Ferry Powerplant	Reclamation Average 30- 100 MW Group	Total Reclamation Average	Industry Average	Best Performers
Wholesale Firm Rate Mills/kWh	16.5	Not Applicable	*22.45	Not Available	Not Available
Production Cost as Percentage of Wholesale Firm Rate	1.09%	Not Applicable	12.1%	Not Applicable	Not Applicable
O&M Cost \$/MWh	3.56	7.85	2.76	***54.63	1.00
O&M Costs \$/MW	20,802	24,132	7,847	***30,336	2,897
O&M Equip Work Year per MW	0.13	0.10	0.03	Not Available	0.0
Availability Factor	96.0	81.3	82.3	**88.64	98.5
Forced Outage Factor	0.2	0.2	2.6	**2.61	0.0
Scheduled Outage Factor	3.8	18.5	15.1	**8.74	0.0

*Weighted by Net Generation

**2006 NERC Average

***Energy Information Administration Data

The Missouri River Basin experienced its sixth consecutive year of drought conditions in FY-2005, which resulted in below average generation (MWh).