

Grand Coulee Powerplant Columbia Basin Project

Ancillary Services

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

Grand Coulee Generators

Existing Number and Capacity

Unit #	Original Capacity (kW)	Capacity Increased (kW)	Present Capacity (kW)
1	108,000	17,000	125,000
2	108,000	17,000	125,000
3	108,000	17,000	125,000
4	108,000	17,000	125,000
5	108,000	17,000	125,000
6	108,000	17,000	125,000
7	108,000	17,000	125,000
8	108,000	17,000	125,000
9	108,000	17,000	125,000
10	108,000	17,000	125,000
11	108,000	17,000	125,000
12	108,000	17,000	125,000
13	108,000	17,000	125,000
14	108,000	17,000	125,000
15	108,000	17,000	125,000
16	108,000	17,000	125,000
17	108,000	17,000	125,000
18	108,000	17,000	125,000
19	600,000	0	600,000
20	600,000	0	600,000
21	600,000	0	600,000
22	700,000	105,000	805,000
23	700,000	105,000	805,000
24	700,000	105,000	805,000
LS1	10,000	0	10,000
LS2	10,000	0	10,000
LS3	10,000	0	10,000
Total	5,874,000	621,000	6,495,000

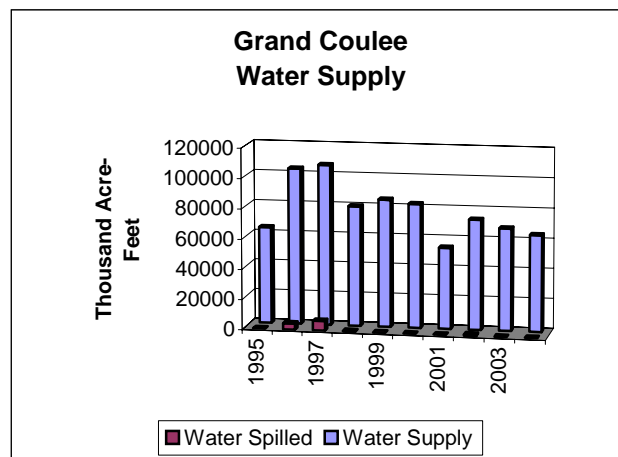
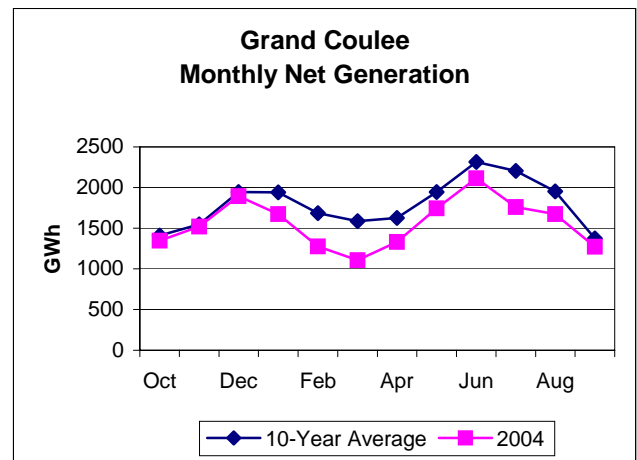
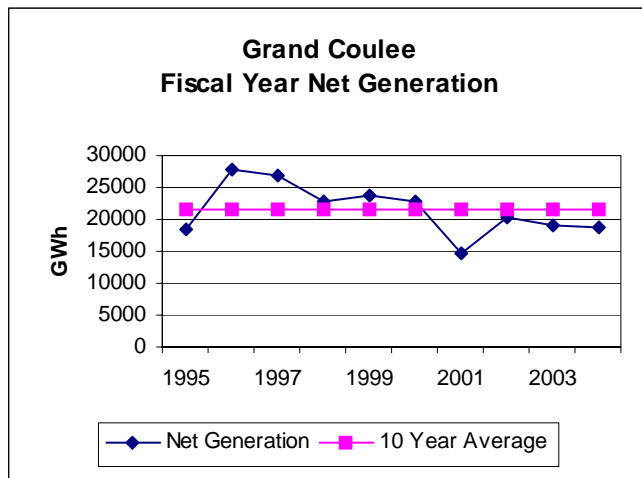
G-19, G-20, G-21 have an operating capability of 690 MW.

Grand Coulee Pump/Generators

Existing Number and Capacity

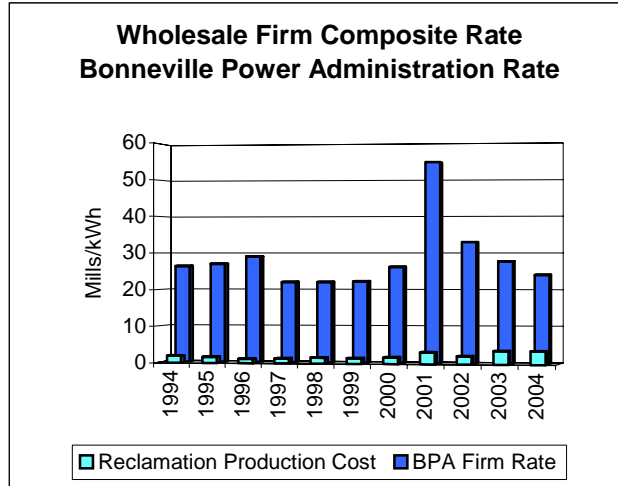
Unit #	Original Capacity (kW)	Capacity Increased (kW)	Present Capacity (kW)
PG7	50,000	0	50,000
PG8	50,000	0	50,000
PG9	53,500	0	53,500
PG10	53,500	0	53,500
PG11	53,500	0	53,500
PG12	53,500	0	53,500
Total	314,000	0	314,000

Generation

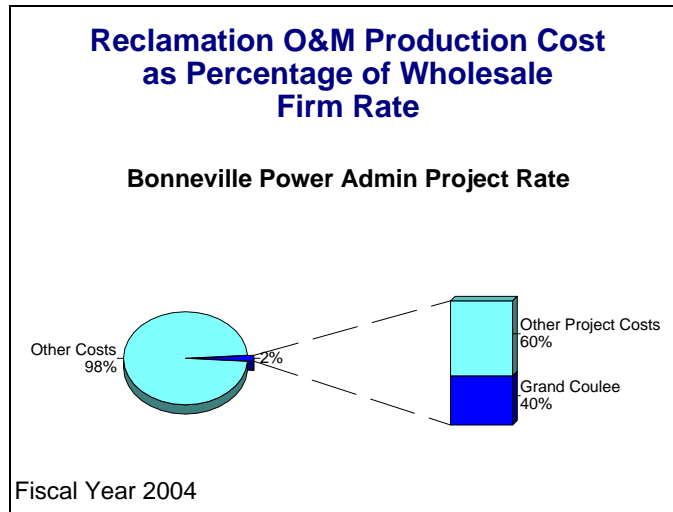


Prime Laboratory Benchmarks

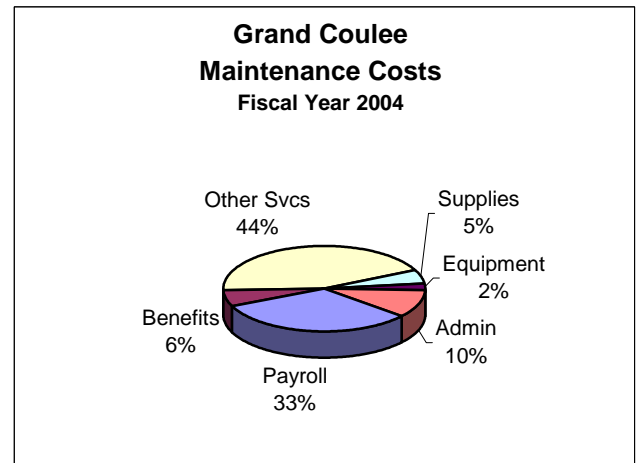
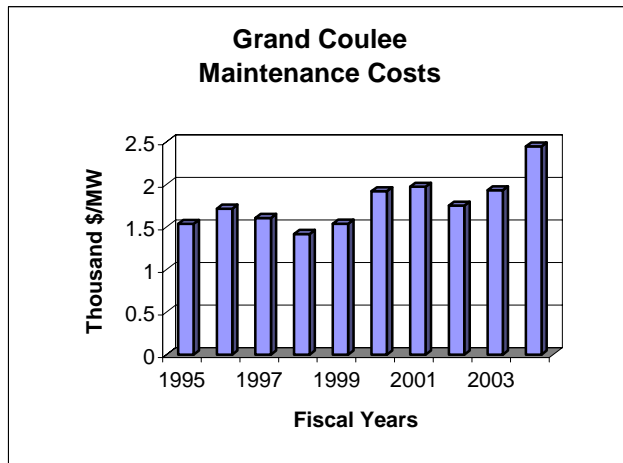
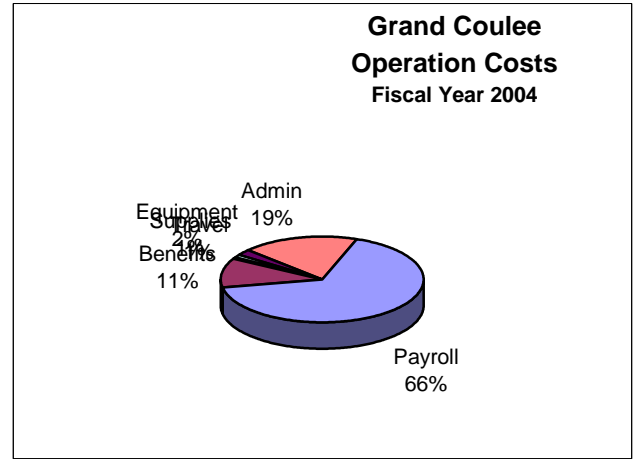
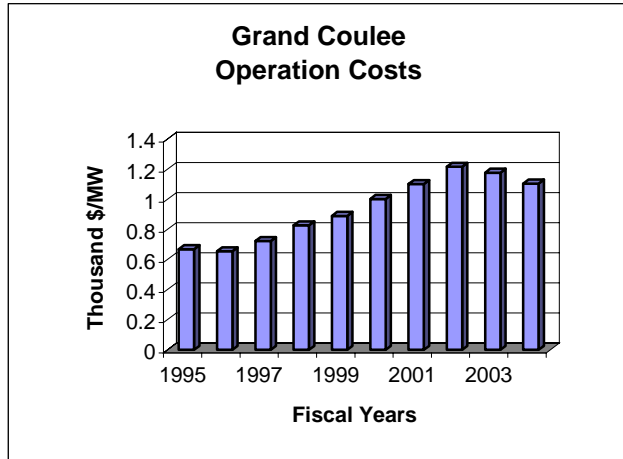
**Benchmark 1
Wholesale Firm Rate**



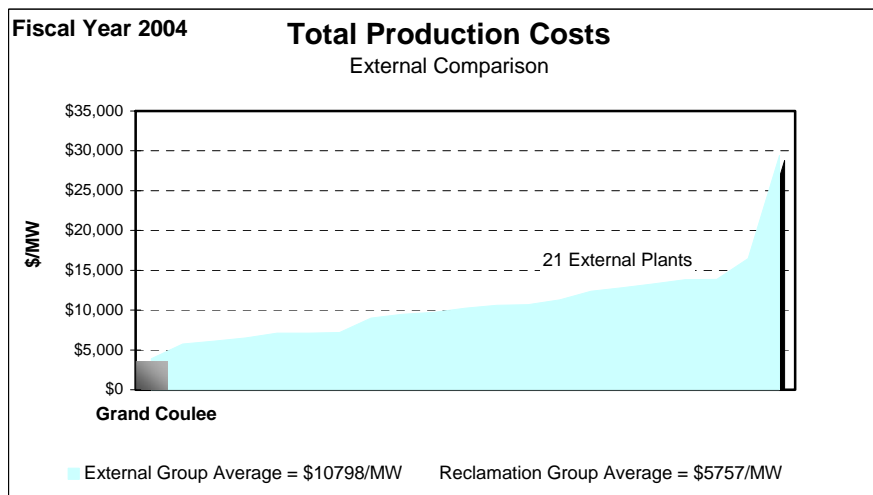
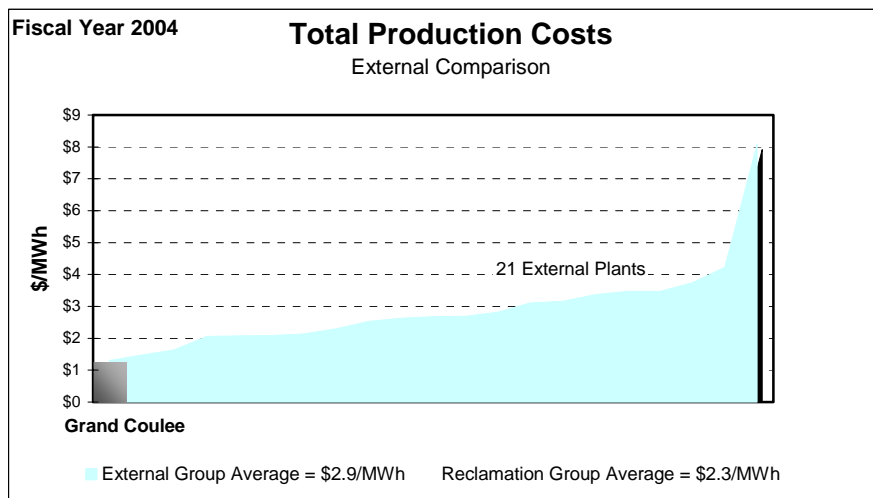
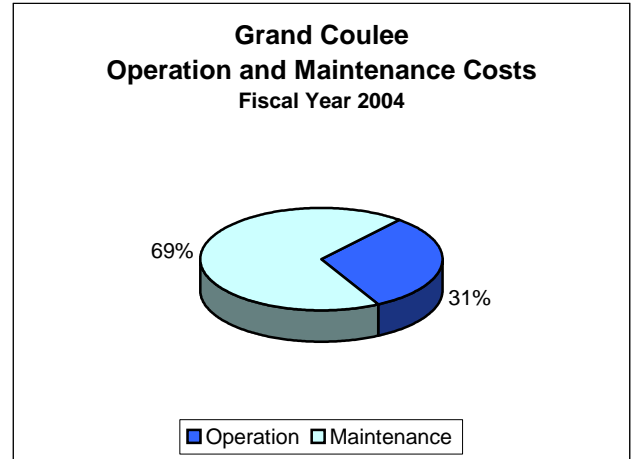
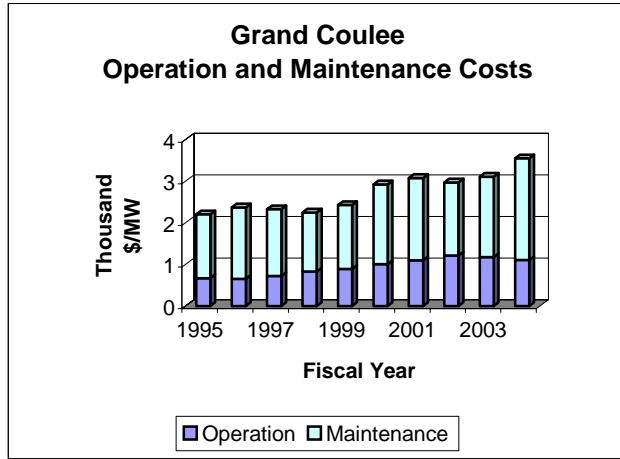
**Benchmark 2
Reclamation's Production Cost as Percentage of Wholesale Firm Rate**



**Benchmark 3
Production Cost**

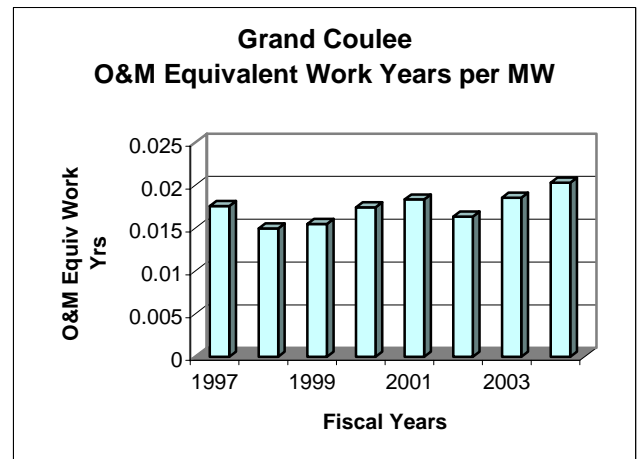
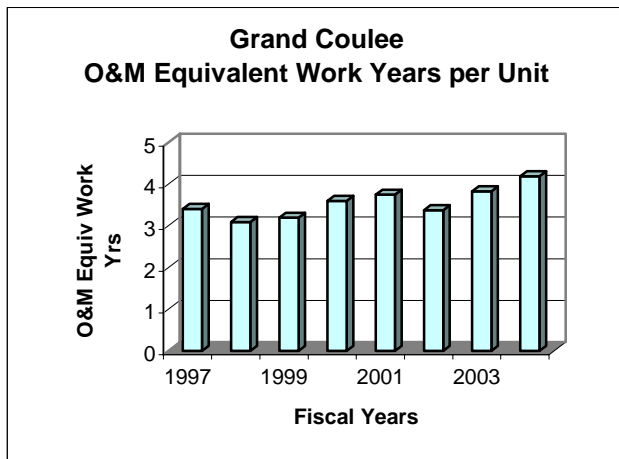
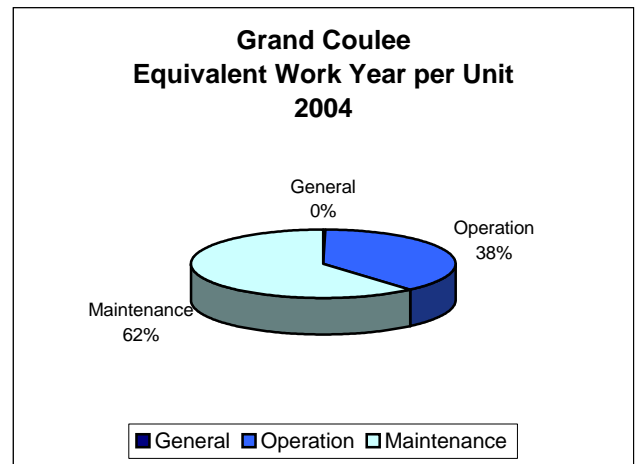
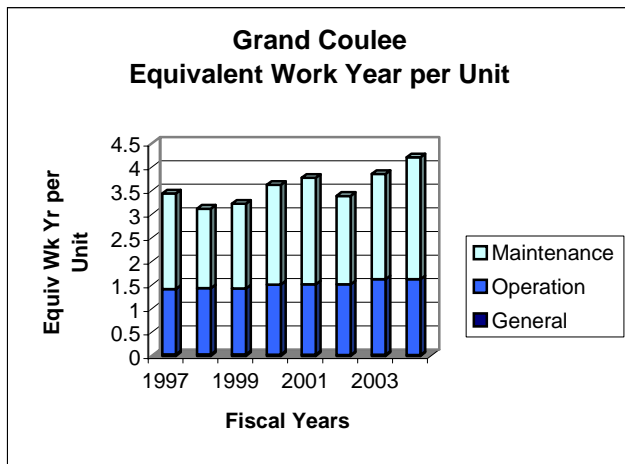


**Benchmark 3
Production Cost**

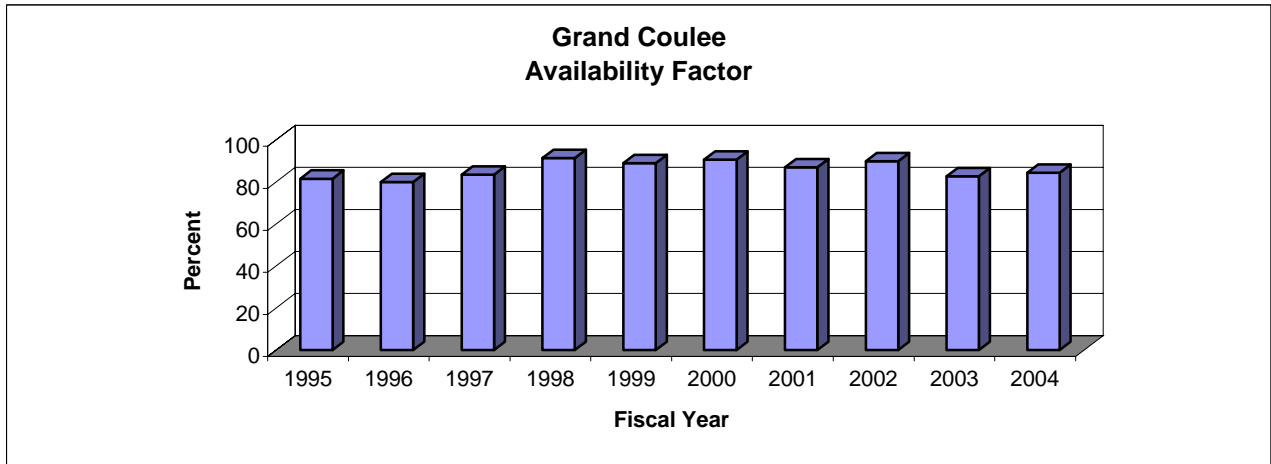


**Benchmark 4
Workforce Deployment**

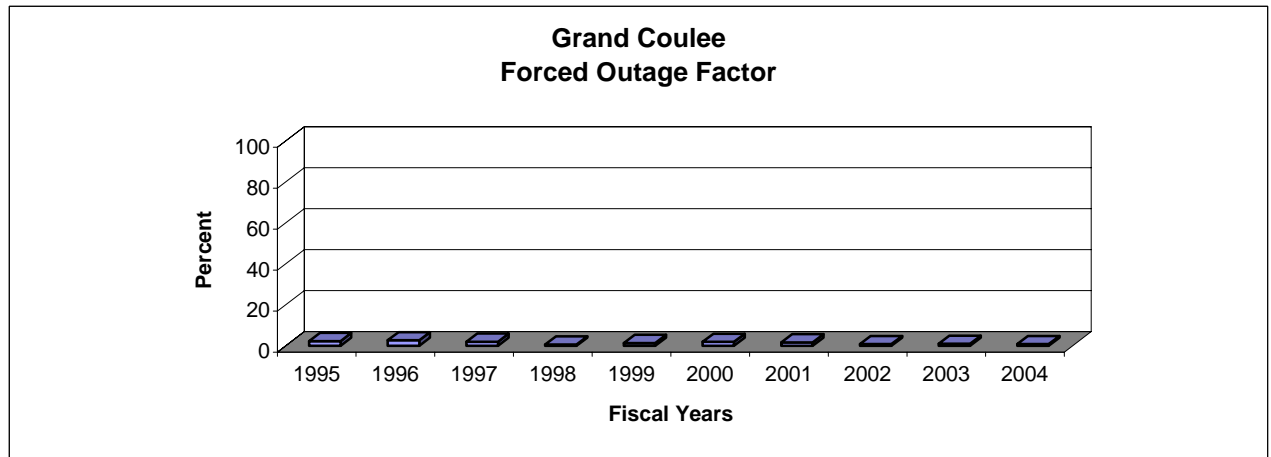
Grand Coulee 2004 Equivalent Work Year Levels						
	Equiv Work Year Charged to Powerplant	Leave Additive	Denver and Washington Equiv Work Year Additive	Total Equiv Work Year Allocated to Powerplant	Total Equiv Work Year per Generating Unit	Total Equiv Work Year per Megawatt
General	0.00	0.00	0.57	0.57	0.02	0.00
Operation	47.89	5.07	0.00	52.95	1.60	0.01
Maintenance	77.08	8.16	0.00	85.24	2.58	0.01
Total Staffing	124.97	13.22	0.57	138.76	4.20	0.02



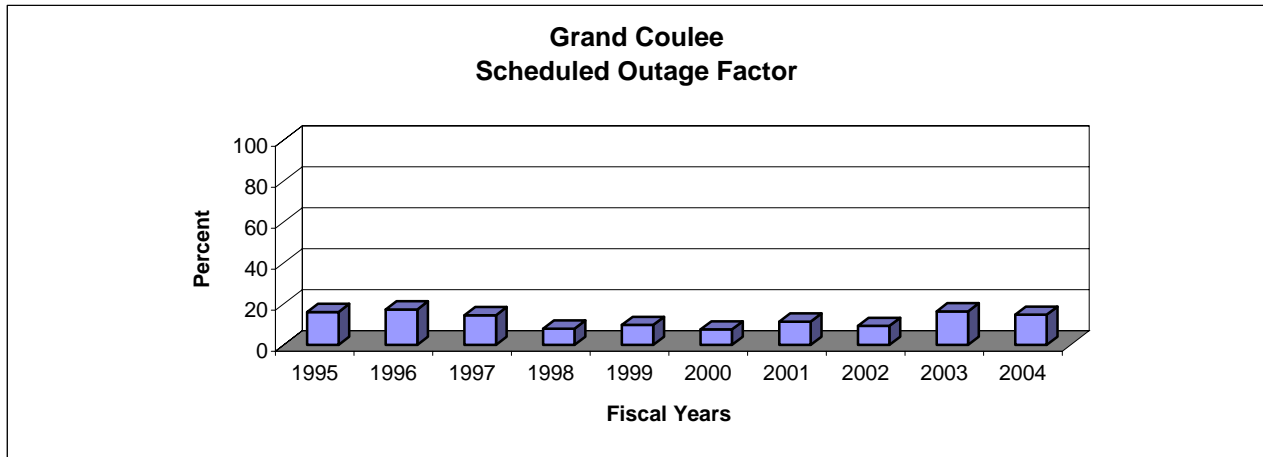
**Benchmark 5
Availability Factor**



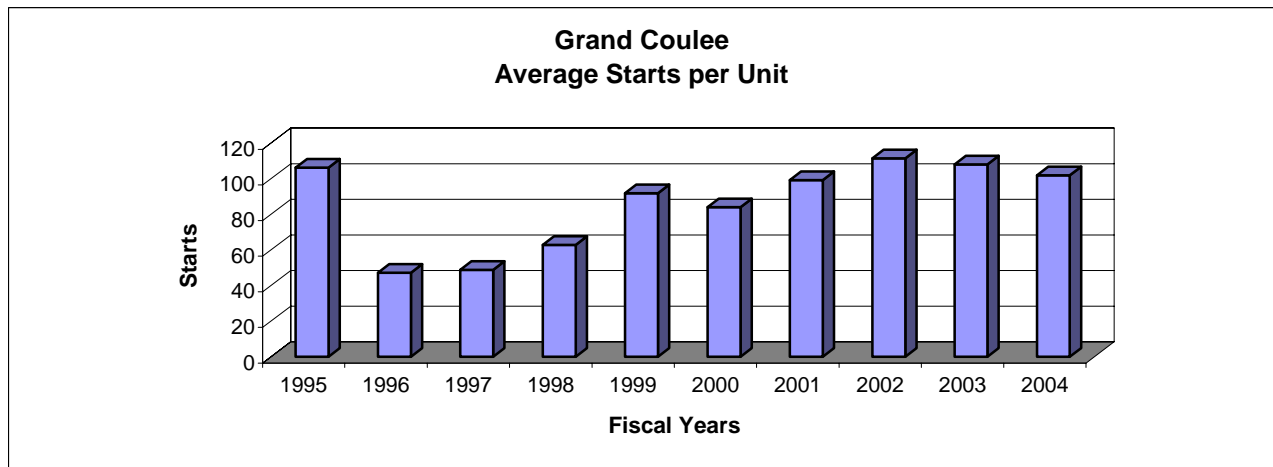
**Benchmark 6
Forced Outage Factor**



**Benchmark 7
Scheduled Outage Factor**



Starts



**Grand Coulee Powerplant
> 500 MW**

Benchmark Data Comparison					
Fiscal Year 2004	Grand Coulee Powerplant	Reclamation Average 500+ MW Group	Total Reclamation Average	Industry Average	Best Performers
Wholesale Firm Rate Mills/kWh	27.7	Not Applicable	*21.06	Not Available	Not Available
Production Cost as Percentage of Wholesale Firm Rate	0.8%	Not Applicable	13.5%	Not Applicable	Not Applicable
O&M Cost \$/MWh	1.23	1.74	2.77	2.91	1.23
O&M Costs \$/MW	3,550.75	4,684.69	7,316.97	10,798.44	2,951.22
O&M Equip Work Year per MW	0.02	0.02	0.04	Not Available	0.000
Availability Factor	84.4	86.13	86.9	**89.2	99.97
Forced Outage Factor	0.8	0.75	0.7	**1.9	0.00
Scheduled Outage Factor	14.8	13.12	12.4	**8.9	0.02

*Weighted by Net Generation

**2003 NERC Average