

## Heart Mountain Powerplant Shoshone Project

### Ancillary Services

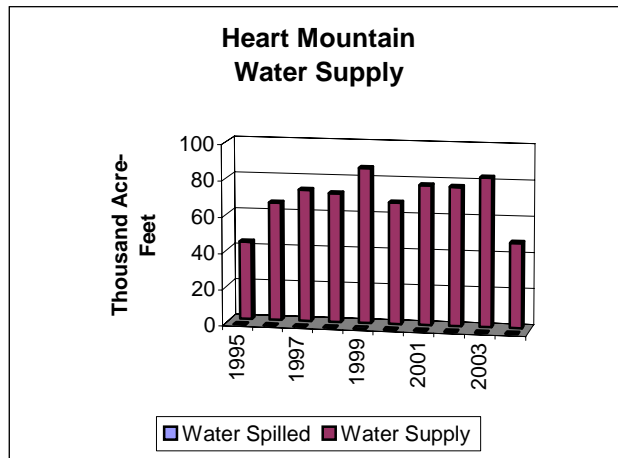
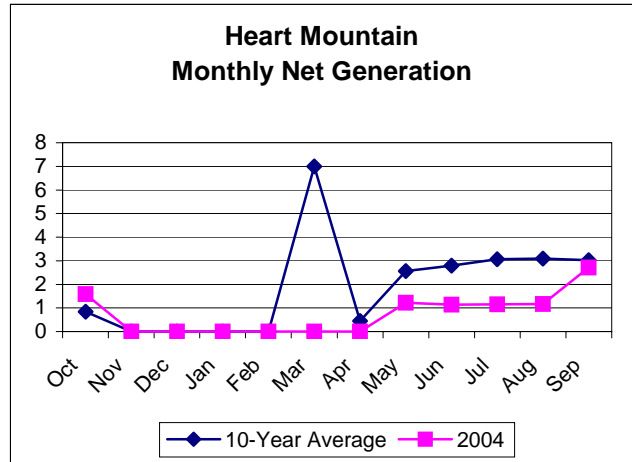
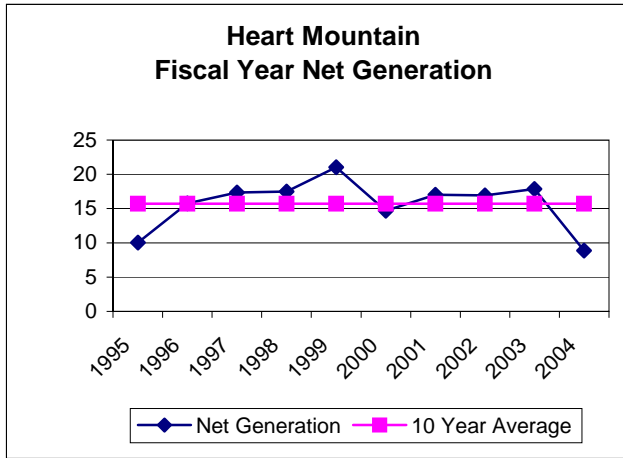
Heart Mountain Ancillary Services	
Spinning Reserve	No
Non-Spinning Reserve	No
Replacement Reserve	No
Regulation/Load Following	No
Black Start	No
Voltage Support	Yes

### Generators

Heart Mountain Generators Existing Number and Capacity			
Unit #	Original Capacity (kW)	Capacity Increased (kW)	Present Capacity (kW)
1	5,000	0	5,000
Total 1	5,000	0	5,000

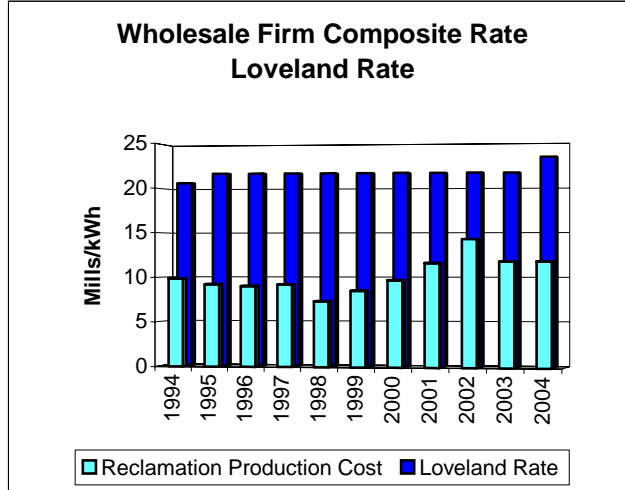
# Heart Mountain Powerplant Seasonal

## Generation

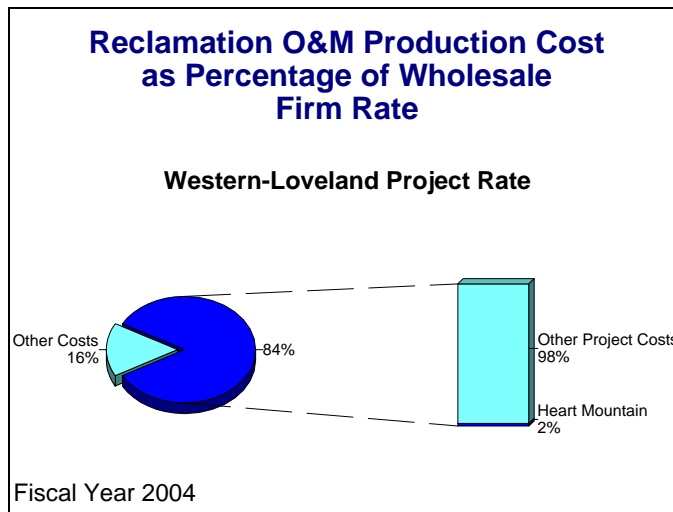


**Prime Laboratory Benchmarks**

**Benchmark 1  
Wholesale Firm Rate**

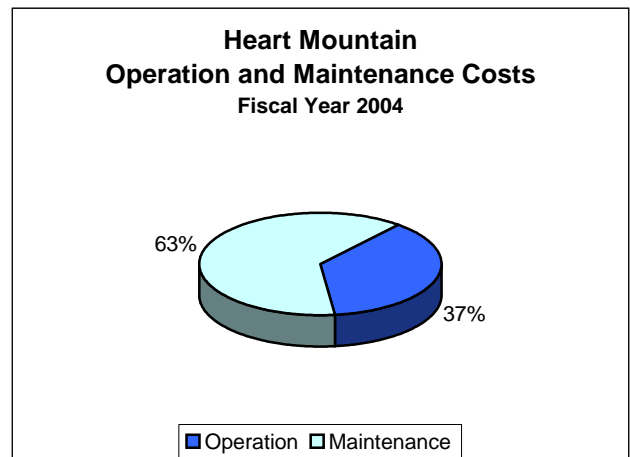
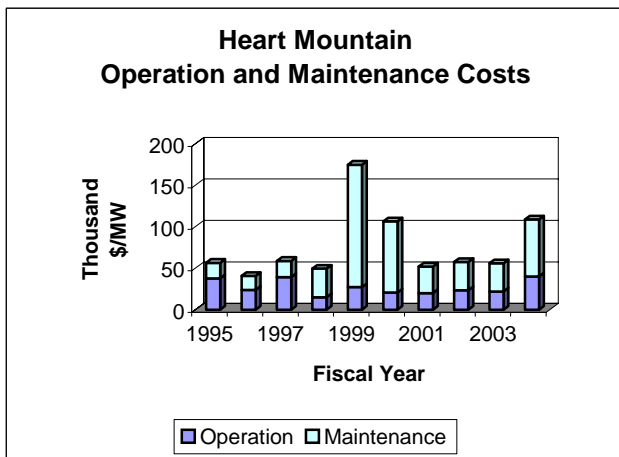
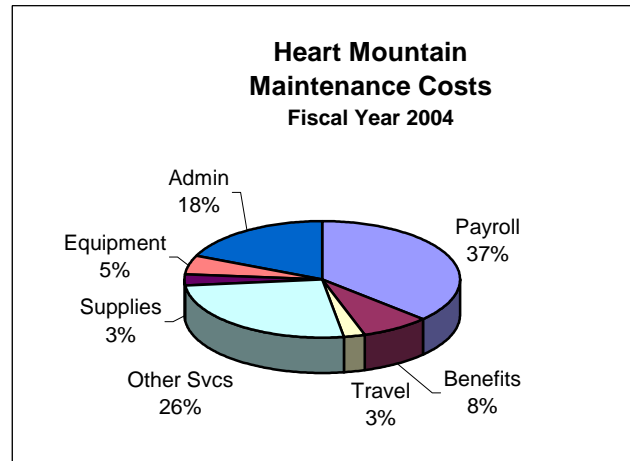
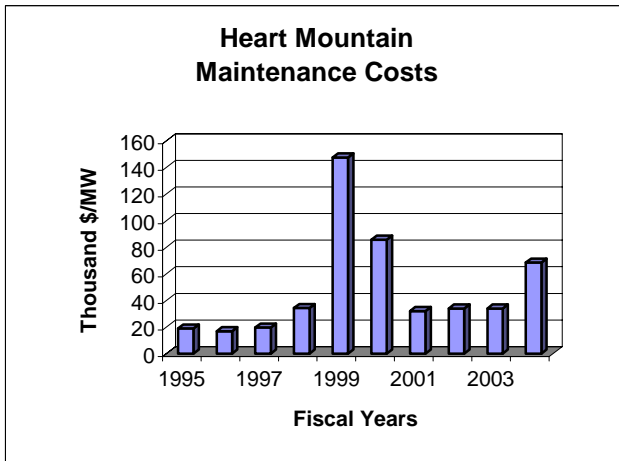
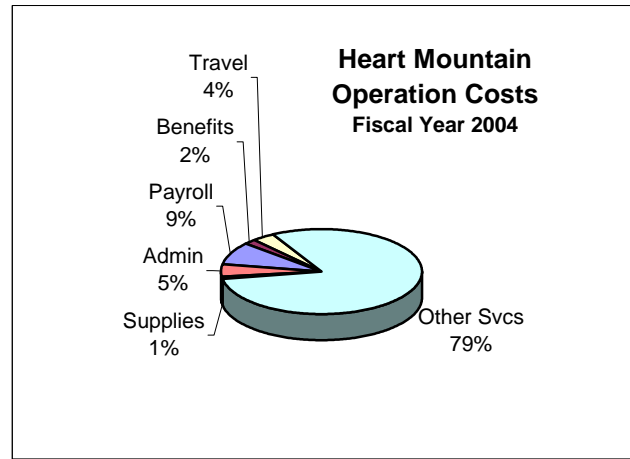
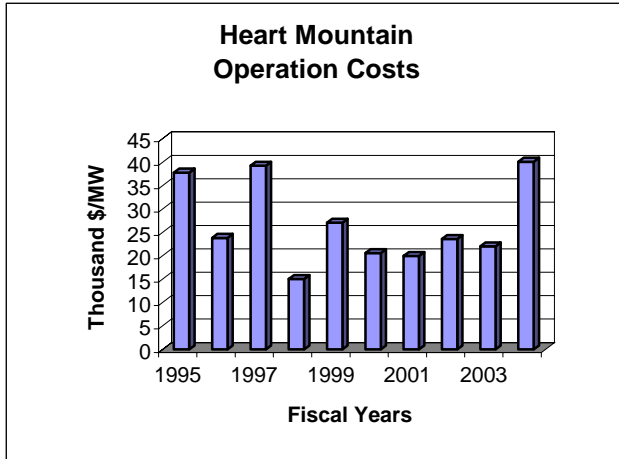


**Benchmark 2  
Reclamation's Production Cost as Percentage of Wholesale Firm Rate**



# Heart Mountain Powerplant Seasonal

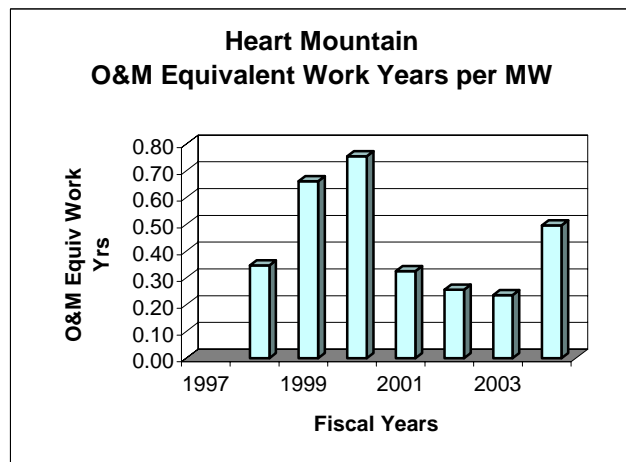
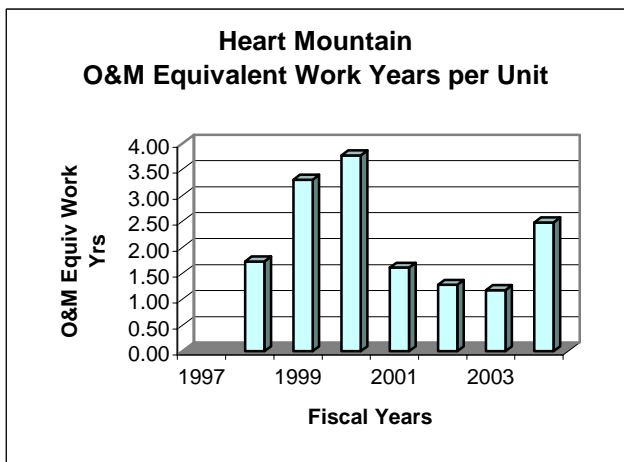
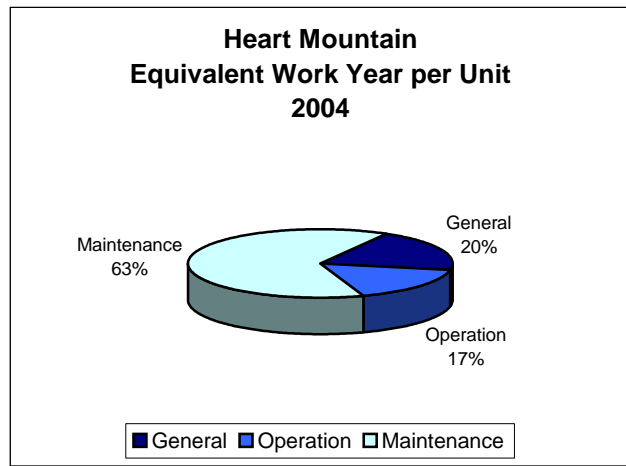
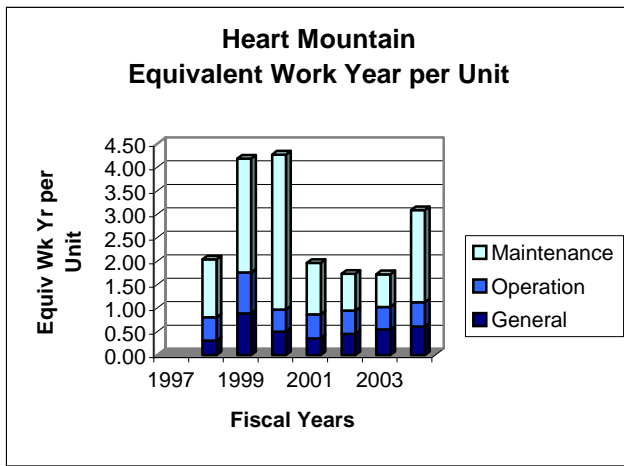
## Benchmark 3 Production Cost



FY-99 – Penstock repairs and slope stabilization  
 FY-00 – Wicket gate repairs accomplished.

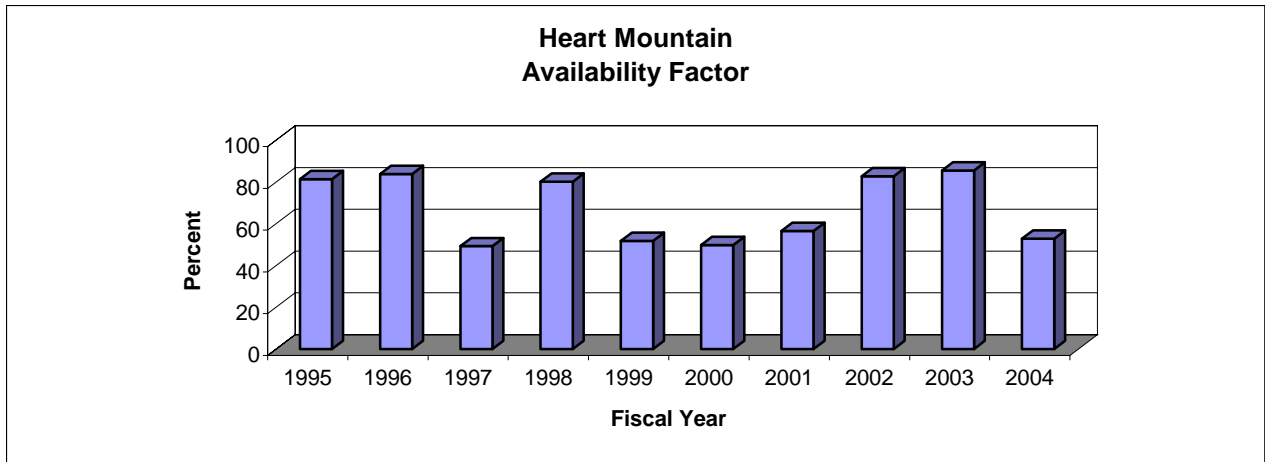
**Benchmark 4  
Workforce Deployment**

<b>Heart Mountain 2004 Equivalent Work Year Levels</b>						
	<b>Equiv Work Year Charged to Powerplant</b>	<b>Leave Additive</b>	<b>Denver and Washington Equiv Work Year Additive</b>	<b>Total Equiv Work Year Allocated to Powerplant</b>	<b>Total Equiv Work Year per Generating Unit</b>	<b>Total Equiv Work Year per Megawatt</b>
General	0.53	0.06	0.02	0.61	0.61	0.12
Operation	0.46	0.05	0.00	0.52	0.52	0.10
Maintenance	1.76	0.20	0.00	1.96	1.96	0.39
Total Staffing	2.75	0.32	0.02	3.08	3.08	0.62



Distributive Accounts not available for FY-97

**Benchmark 5  
Availability Factor**



FY-97 - Governor and wicket gate repairs

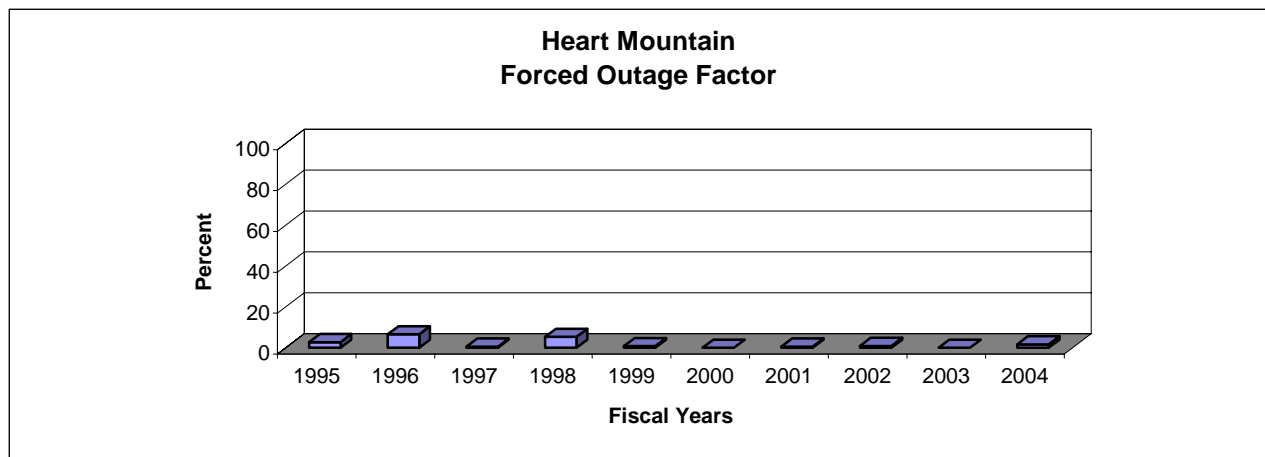
FY-98 - Penstock and wicket gate repairs

FY-99 - Penstock repairs and slope stabilization

FY-00 - Wicket gate repairs.

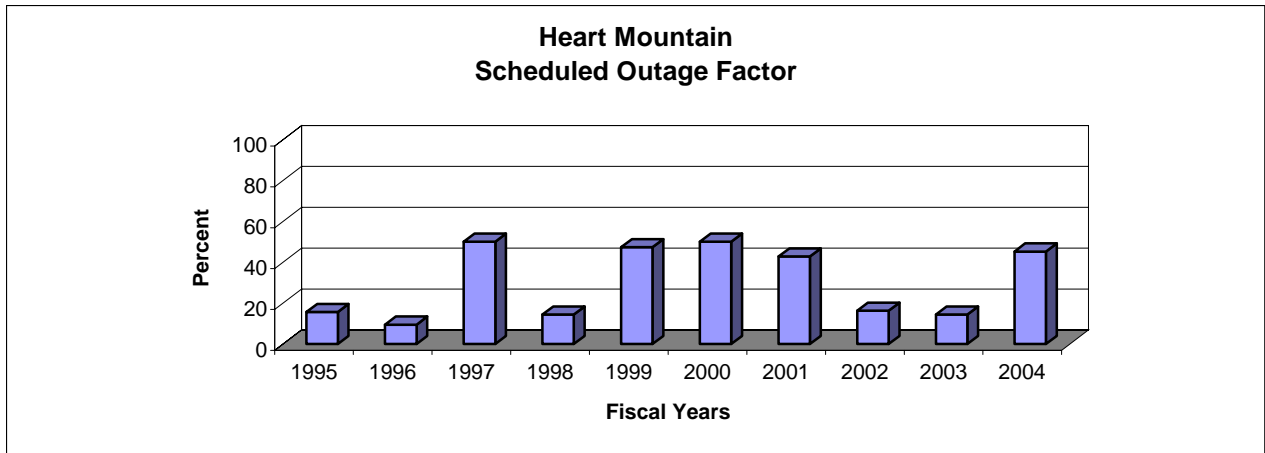
FY-01- Buffalo Bill Powerplant penstock and Spirit Mountain sleeve valve re-coating resulted in an extended outage at this plant

**Benchmark 6  
Forced Outage Factor**



FY-94 - Thrust bearing problem

**Benchmark 7  
Scheduled Outage Factor**



FY-97 - Governor and wicket gate repairs

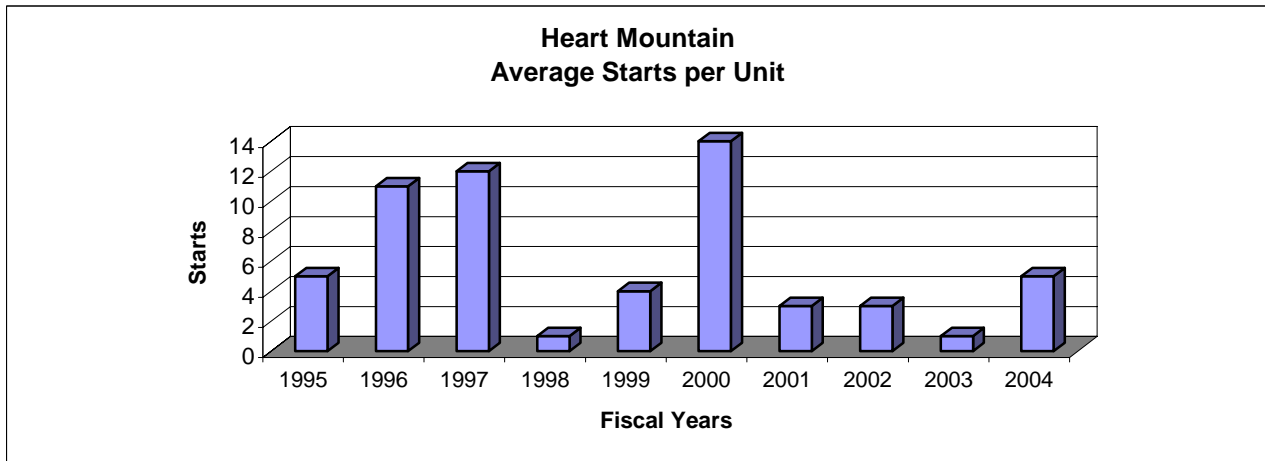
FY-98 - Penstock and wicket gate repairs

FY-99 - Penstock repairs and slope stabilization

FY-00 - Wicket gate repairs.

FY-01- Buffalo Bill Powerplant penstock and Spirit Mountain sleeve valve re-coating resulted in an extended outage at this plant

**Starts**



**Heart Mountain Powerplant  
Seasonal**

<b>Benchmark Data Comparison</b>				
<b>Fiscal Year 2004</b>	<b>Heart Mountain Powerplant</b>	<b>Total Reclamation Average</b>	<b>Industry Average</b>	<b>Best Performers</b>
<b>Wholesale Firm Rate Mills/kWh</b>	21.7	*21.06	Not Available	Not Available
<b>Production Cost as Percentage of Wholesale Firm Rate</b>	1.5%	13.5%	Not Applicable	Not Applicable
<b>O&amp;M Cost \$/MWh</b>	61.41	2.77	Not Applicable	1.23
<b>O&amp;M Costs \$/MW</b>	108,563.34	7,316.97	Not Applicable	2,951.22
<b>O&amp;M Equip Work Year per MW</b>	0.50	0.04	Not Available	0.000
<b>Availability Factor</b>	53.0	86.9	**89.2	99.97
<b>Forced Outage Factor</b>	1.71	0.7	**1.9	0.00
<b>Scheduled Outage Factor</b>	45.3	12.4	**8.9	0.02

\*Weighted by Net Generation

\*\*2003 NERC Average