BPA Sounding Board Briefing
Columbia Generating Station

February 11, 2004

Agenda

- Background
- Columbia Generating Station performance
  - Rate Case cost projections
  - Cost performance
  - Plant performance
- Benchmarking activities
- Continuing efforts
- Additional opportunities to reduce costs
- Conclusion and upcoming issues

Columbia Generating Station Background

- 1,120 MW boiling water reactor
- Owned by Energy Northwest
- Located on the DOE Hanford Site
- Began commercial operation in December 1984
- BPA purchases 100% of Columbia Generating Station's power and pays all operating costs per the Project and Net Billing agreements
- BPA's goal is that the plant be operated in a safe, reliable, and cost-effective manner such that its performance is in the top quartile of the industry relative to its peers on a sustained basis

Project: Columbia Generating Station (WNP-2) ($ in millions)	FY01	FY02	FY03	FY04	FY05	FY06	FY01-03 Average	FY03-FY06 Average	FY04-FY06 Average	FY03-FY06 Average Above (or Below) FY01	FY04-FY06 Average Above (or Below) FY01
August 2002 Forecast	$ 209.5	$ 177.7	$ 248.4	$ 233.0	$ 289.1	$ 223.0	$ 211.9	$ 248.4	$ 248.4	$ 38.8	$ 38.8
Growth Rate			*18.5%*	*31.1%*	*16.4%*	*-4.3%*					
August 28, 2003 Rate Case Forecast	$ 209.5	$ 168.1	$ 204.7	$ 216.9	$ 251.7	$ 211.0	$ 194.1	$ 221.1	$ 226.5	$ 11.6	$ 17.0
Growth Rate			*-2.3%*	*29.0%*	*22.9%*	*-2.7%*					
January 2004 Forecast	$ 209.5	$ 168.1	$ 205.2	$ 221.7	$ 251.7	$ 211.0	$ 194.3	$ 222.4	$ 228.1	$ 12.9	$ 18.6
Growth Rate			*-2.1%*	*31.9%*	*22.7%*	*-4.8%*					
January 2004 Forecast Above (or Below) August 28, 2003 Rate Case Forecast	$ -	$ -	$ 0.4	$ 4.8	$ -	$ -	$ 0.1	$ 1.3	$ 1.6	$ 1.3	$ 1.6

Strategic Objective(s) of Program Area

Summary of Tier 2 strategic objective(s) that this program area is (are) linked to:

This program is linked to Tier 2 strategic objective F2 - position PG's generating assets to meet low operating cost objectives on a sustained basis.

Bonneville's goal for Columbia is that it be operated in a safe, reliable and cost-effective manner such that its cost of power is in the lowest cost/MWh quartile relative to its peers on a sustained basis.

What is the Tier 2 target(s) for this program area for FY04?

CGS cost of power = $22.8MWh (8,943 GWh and $203.9M). Stretch target $22.1 MWh (9,248 Wh and $203.9M).

This is a cost number and does not include decommissioning or NEIL insurance and uses fuel burnup instead of fuel purchases.

The numbers in the August and November estimates are on a funding basis and include decommissioning and NEIL insurance.

Specific initiatives for FY04 relating to the specific program area.

PGC will continue to work with Energy Northwest to reduce Columbia's costs and will continue with the benchmarking efforts.

Drivers of Change

FY03: Actuals v. Aug. 28, 2003 Forecast

The difference is due to an amount that PGC had included in debt service in the August Forecast that was included in O&M by KFRO in the actual. PGC applied a $0.4M working capital adjustment to debt service in the Fourth Quarter Review forecast. KFRO applied the same adjustment to O&M causing the difference. KFRP is Bonneville Accounting Operations. Working capital adjustments are part of amended budgets and reflect excess/deficit funding received by Energy Northwest at the end of each FY.

Drivers of Change

FY01-03 v. FY04-06: Actuals v. Jan. 2004 Forecast

1) $35M has been added to FY02 to included funding for the ISFSI project. The actuals of $168.1M for FY 02 reflect debt financing of the ISFSI.
2) The odd FYs are the outage years. The growth rate has been calculated using a two-year rolling average.
3) FY05 and 06 do not reflect any increased security costs.
4) FY05 reflects increased nuclear fuel purchases per the change in fuel procurement strategy.

Drivers of Change

FY04-06: Aug. 28, 2003 Forecast v. Jan. 2004 Forecast

1) The FY04 Forecast increased from the August to November forecasts due to increased security requirements and ISFSI increases. The ISFSI increase in FY04 will decrease FY05 ISFSI costs.
2) FYs 05 and 06 were not changed in November due to delays in receiving Energy Northwest's Long Range Forecast.

Forecast Risk

1) Energy Northwest is projecting budget overruns (other than the security and ISFSI increases included in the November Forecast) in FY04 and is currently reviewing its budget to find underruns to cover the increases.
2) Energy Northwest's upcoming Long Range Forecast for its FY05-07 may be higher than the estimates used for the August and November Forecasts.

Opportunities for Improvement

1) PGC will continue its benchmarking efforts.
2) PGC will continue to work with Energy Northwest to lower costs.
3) Energy Northwest's recent benchmarking effort of CGS plus 4 single unit plants showed CGS costs (FY02) excluding fuel and outage to be below the average of the 4 plants comparison costs (FY02).
4) The average cost of power of the 4 plants used in the benchmarking effort is $2.3/MWh over the MOA top quartile. One plant was in the top quartile.

Columbia Generating Station – O&M Costs Notes to Financial Information

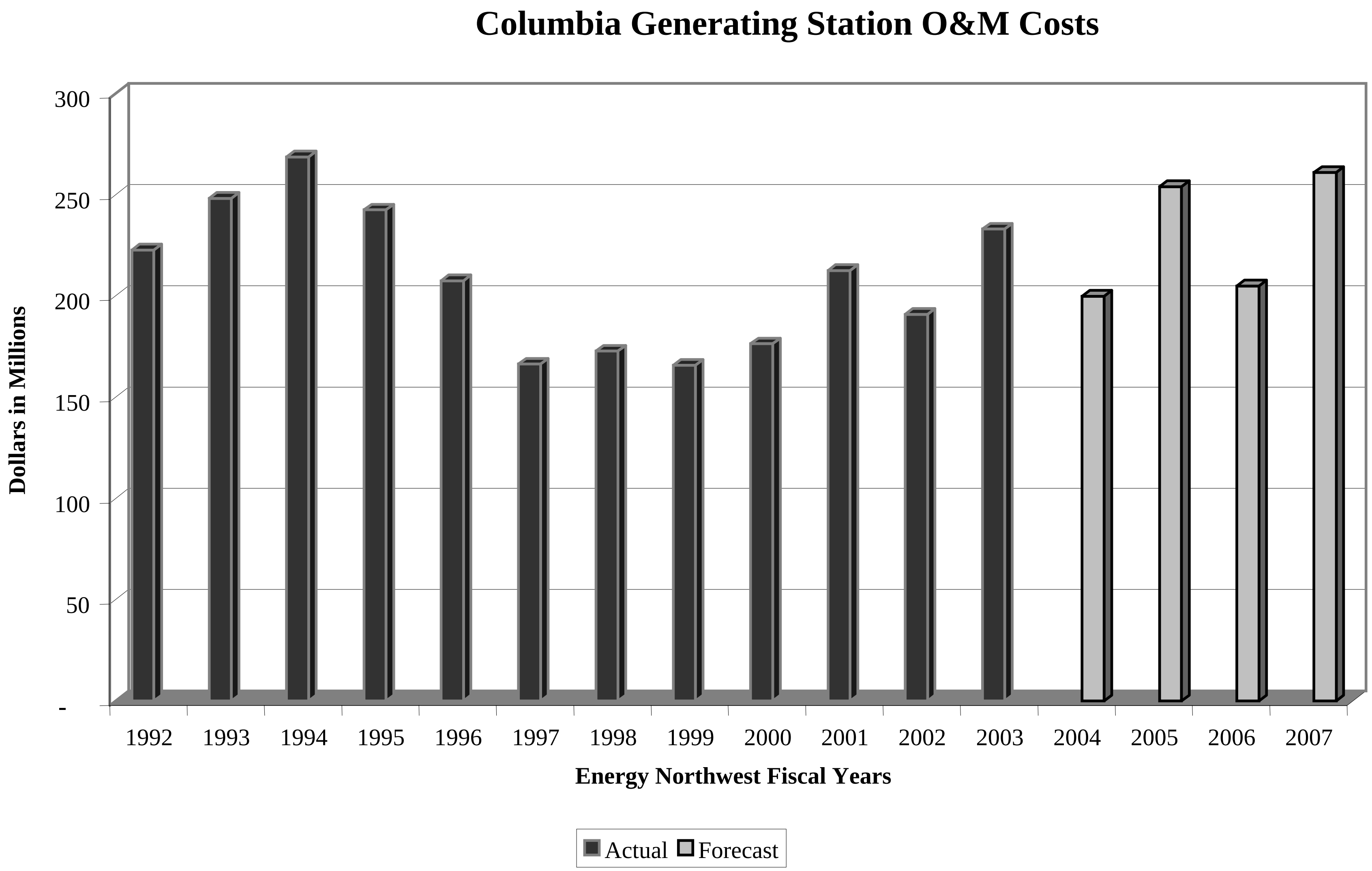
- The August 2002 Forecast
  - Based on the Energy Northwest June 2002 Long Range Forecast
  - Included a plant performance incentive fee ($3.5M per year)
  - Included condenser replacement in 2005 ($38M)
  - Used the previous fuel procurement strategy (FY-03)
- The August 28, 2003 Forecast
  - Based on Energy Northwest's FY 2004 Annual Budget and the June 2002 Long Range Forecast
  - Assumed $5M and $15M of capital would be debt financed in non-outage and outage years respectively (through FY-06)
  - Assumed condenser replacement would not be done in this rate period or would be debt financed
  - Assumed Energy Northwest $5M reduction commitment would not be met
  - Assumed additional reductions would not be met ($2.5 non-outage year, $5M outage year)
  - Assumed the new fuel procurement strategy implemented
    - $37M reduction in current rate period
    - $46M increase in next rate period
    - Net increase to BPA of $9M
  - Did not include a plant performance incentive fee
- The January 2004 Forecast
  - Same assumptions as the August 28, 2003 Forecast
  - Includes increases in FY 2004 for Security requirements ($3.2M), Independent Spent Fuel Storage Installation project (ISFSI) operations ($1M), and NEIL insurance ($0.5M)

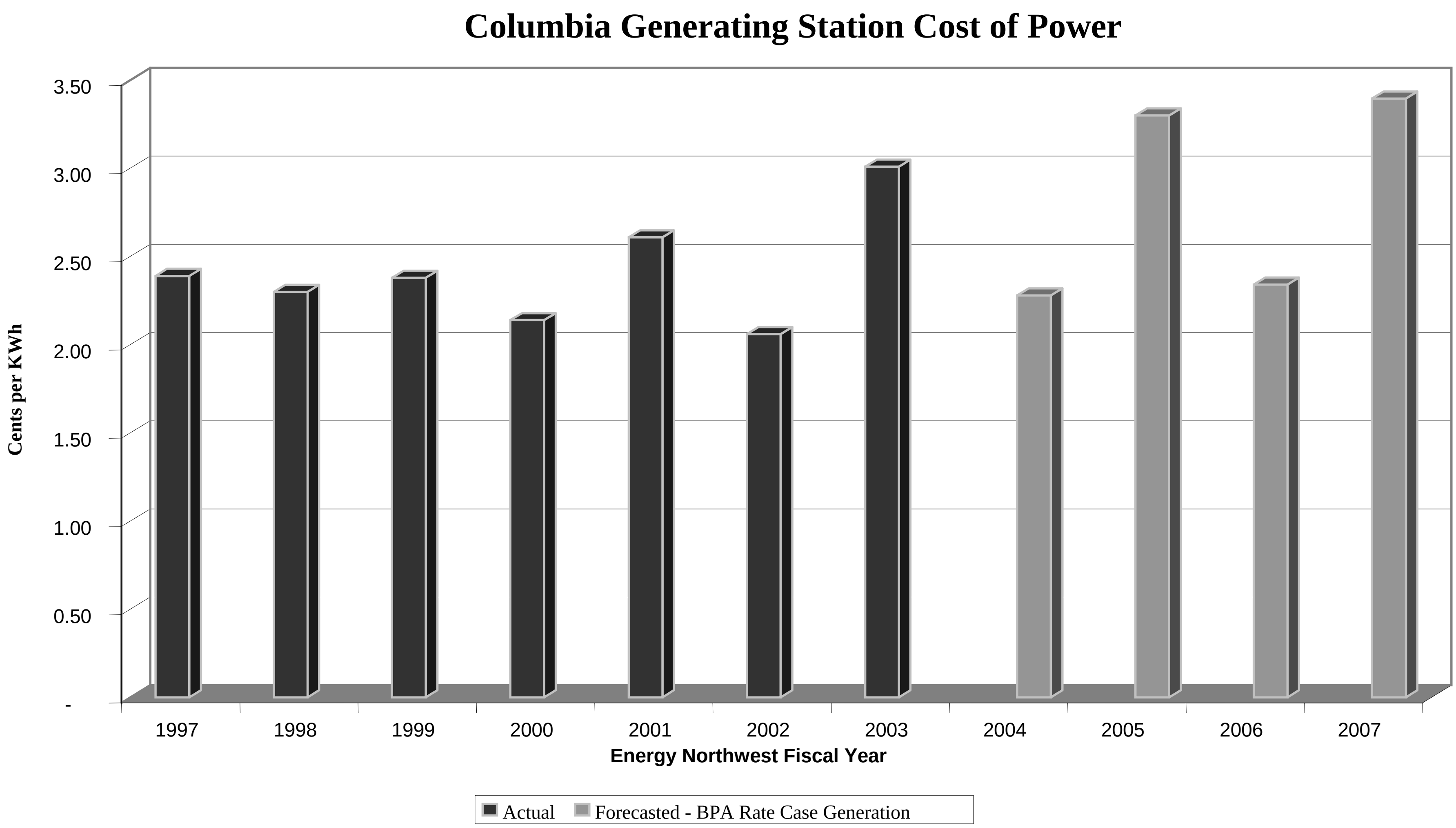
Significant Impacts to O&M

- Post 9-11 security requirements
  - Additional security costs due to 9-11 have also led to increased future budgets
    - $4M and ~$10M in Energy Northwest fiscal years 2003 and 2004 respectively
    - Increased staffing costs for the life of the plant (~ $4M per year)
- Age of CGS
  - Plant equipment obsolescence requires equipment updates
    - Difficult to find replacement parts
    - Vender support may no longer be offered
- Previous project deferrals
  - Plant equipment overhauls and in service inspections
  - Puts pressure on future budgets
  - No evidence these deferrals have led to increased outages/reduced performance
- ISFSI capital and operations
- Hydrogen water chemistry to prevent intergranular stress corrosion of the reactor vessel
- Increased employee health costs

Consequences of Cost Reductions and Deferrals

- Cost reductions taken in previous years delayed work on many projects into the 2003 and 2005 outages
  - Examples;
    - Security computer replacement
    - Kaman monitors
    - Reactor in service inspections (ISI)
- Deferrals put pressure on future budgets
- Reductions in maintenance and capital projects may impact availability and reliability


Columbia Generating Station O&M Costs
Dollars in Millions
300
250
200
150
100
50
-
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Energy Northwest Fiscal Years
Actual
Forecast


Columbia Generating Station Cost of Power
Cents per KWh
3.50
3.00
2.50
2.00
1.50
1.00
0.50
-
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Energy Northwest Fiscal Year
Actual
Forecasted - BPA Rate Case Generation

CGS Cost of Power
Energy Northwest Fiscal Years FY 2004 and 2005
Dollars in Millions

	FY 2004				FY 2005		
	Budget	Current Estimate	Variance		June 2002 Long Range Forecast	Current Target	Variance
Controllable	157.0	175.9	18.9		212.9	207.9	(5.00)
Fuel Related	42.7	42.7	-		40.6	40.6	-
Total Costs	199.7	218.6	18.9		253.5	248.5	(5.00)
Generation (GWh)	9,627	9,505	(122)		8,240	8,240	-
Cost of Power (cents/KWh)	2.07	2.30	0.23		3.08	3.02	(0.06)

The FY 2004 increase is due to project increases ($2.3M), accelerated ISFSI cask loading ($1.3M), security increases ($9.7) and GE tax issues ($5.6M). It is expected that the cash impacts will be less due the projected debt financing of the majority of security increases and the project increases. The GE tax issues are presented at the worst case level.

The FY 2005 reduction reflects the $5M target set by Energy Northwest Senior Management.

Performance

- CGS O&M costs have risen over the past several years
- Long range forecast of yearly budgets has increased
- Plant performance has declined in the past year
  - Actual CGS generation in FY 2003 of 7,738 GWh was below the plan of 8,574 GWh
  - CGS has recently had three forced outages and an extended refueling outage
  - Regulatory performance indicators have declined
    - Concerns with engineering, problem identification, and effective problem resolution
- Poor refueling outage performance
  - CGS's shortest outage during the plant lifetime has been 36 days
  - Target outage lengths have generally not been met
- EN agrees that performance at CGS has declined and has taken steps to make improvements ("Quest for Excellence")
  - Accuracy and completeness of staff work
  - Effectiveness of problem cause evaluations

Columbia Generating Station Generation in GWhs

	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06
CGS Budget Generation	7,633	7,667	7,844	7,800	7,944	7,762	8,486	9,478	8,574	9,627	8,240	9,679
CGS Actual Generation	6,863	7,703	6,961	7,502	7,245	8,260	7,996	9,262	7,738	-	-	-
Rate Case Estimated Generation	6,263	6,544	7,192	7,376	7,376	7,402	7,691	8,760	7,683	8,784	7,683	8,760

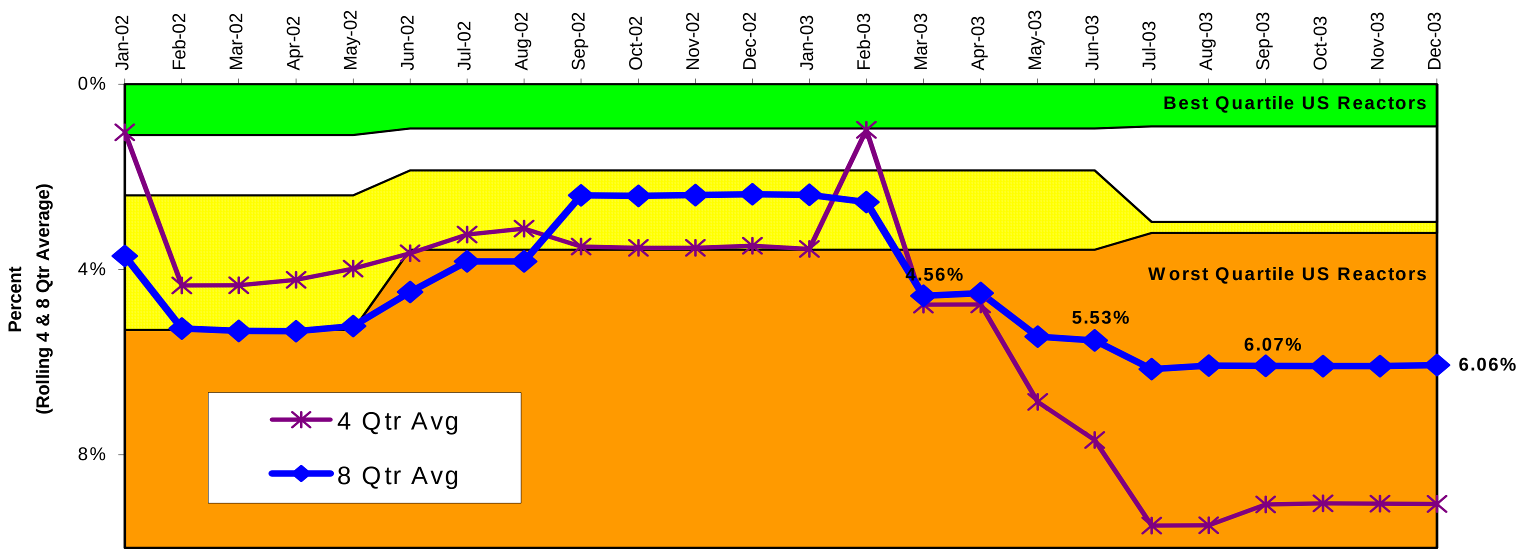
Notes:

CGS actual generation includes economic dispatch credit.
Rate case estimates are based on predicted actual generation and do not include economic dispatch credit.

CGS completed its first two-year cycle and attempts at estimating its actual generation in future years is difficult due to the limited database.
GCS actual generation has historically has lagged budgeted generation by 500 - 1000 GWh in most years.

Columbia Generating Station

WANO - Operating Period Forced Loss Rate



Benchmarking

- Both Energy Northwest and BPA have conducted benchmarking over the years to calibrate CGS's costs relative to the nuclear industry
  - Studies sometimes provide inconsistent or conflicting data
    - CGS's costs are lower than or consistent with the industry or selected plants in some studies
    - CGS cost performance in many previous years was among the best in the industry in some studies
    - CGS's costs are above the median relative to the nuclear industry in some studies

  - Some studies suggest there are areas where improvements and changes could reduce overall costs

- Five recent studies
  - Comparison report of top utilities (Estes Report – July 2002)
    - Joint BPA and Energy Northwest effort
    - Selected five single unit plants with the best overall low production costs
      - Production costs were consistent with top five plants in 1996-2000 and in 2002
    - Recommendations
      - Establish cost of power targets for outage and non-outage years based on selected plants
      - Increase generation by focusing on plant reliability and short outage durations

  - Independent assessment of costs and cost targets for CGS (Kacich Report – September 2002)
    - Reviewed Estes Report and determined it to be reasonable
    - Report Summary and Observations
      - Recent three year production cost compared favorably to industry
      - Continued monitoring of plants should be done to determine if targets should be adjusted
      - Staffing reduction opportunities should be explored

Benchmarking, continued

- Multi-Dimensional Benchmarking (Lewis Report – December 2002)
  - BPA effort shared with Energy Northwest
  - Report Summary (costs less indirects)
    - CGS's total plant costs less indirects for 1997 - 2000 were among best in the industry
    - Two year average costs (2001 and 2002; 2002 and 2003) are above average benchmark
    - Significant cost reductions possible by returning to excellent cost control achieved in 1997-2000

- Large Single Unit Stations with Independent Operator (Kucera Report – June 2003)
  - Used industry data (2002 only) corrected by benchmarking trips
  - Large current vintage single unit plants with an independent operator and consistently high performance in production with low costs
  - Report Summary
    - CGS's production costs were in line with the selected plants
    - CGS's capital cost was much lower than the selected plants

- Memorandum of Agreement Plants (MOA Plants)
  - 20 original plants; large, single units
  - For 2001 – 2002, data from 15 plants was used (two year averages used)
  - CGS cost of power varied between 2nd and 3rd quartiles; 3rd quartile for last two years

- Development of a reasonable benchmark target for CGS is underway
  - BPA effort based quantitatively and qualitatively on studies done to date

Continuing Efforts

- Energy Northwest
  - Quest for Excellence
    - Improve plant performance
  - Activity Based Management
  - Long Range Plan
    - In depth look at future projects and costs
    - Includes staffing reductions
    - Living document

- BPA
  - Benchmarking
  - Cost of power internal BPA target
  - Providing input to the Energy Northwest Long Range Plan
  - Continue to work with Energy Northwest to reduce costs

Additional Opportunities

- Financing of Nuclear Fuel purchases
  - Could range from $20 to $50 million depending on particular year
- Debt financing of large capital projects
  - Generator rotor replacement
  - Feedwater heater replacement
  - Condenser replacement
- Continued debt financing of capital additions
  - Range from $5 to $15 million depending on year

Conclusion and Upcoming Issues

- Projected Costs for CGS for FY-04 are above the Rate Case
- With the challenges facing CGS, there is little probability that significant reductions in FY-04 or FY-05 can be found
- Continued debt financing of qualified capital additions
- Debt financing of fuel inventory purchases