

**Exh. DCG-7
Dockets UE-190334, UG-190335,
and UE-190222
Witness: David C. Gomez**

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

**AVISTA CORPORATION, d/b/a
AVISTA UTILITIES,**

Respondent.

**DOCKETS UE-190334, UG-190335,
and UE-190222 (*Consolidated*)**

**EXHIBIT TO
TESTIMONY OF**

David C. Gomez

**STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

*Idaho PUC Case No. AVU-E-03-06
Testimony of Richard L. Storro*

October 3, 2019

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IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. AVU-E-03-06

DIRECT TESTIMONY OF RICHARD L. STORRO
REPRESENTING AVISTA CORPORATION

Exhibit ___(RLS-T)

1 Q. Please state your name, employer and business address.

2 A. My name is Richard L. Storro. My business address is 1411 East Mission
3 Avenue, Spokane, Washington, and I am employed as the Director of Power Supply for
4 Avista Utilities.

5 Q. What is your educational background?

6 A. I participated in a program with the College of Idaho and the University of
7 Idaho, where upon completion I received a Bachelor of Science degree in physics from
8 the College of Idaho and a Bachelor of Science degree in electrical engineering from the
9 University of Idaho, both in 1973.

10 Q. How long have you been employed by the Company?

11 A. I started working for Avista in 1973 as a distribution engineer. I have
12 worked in various engineering positions, and have held management positions in line and
13 gas operations, system operations, hydro production and construction, and transmission. I
14 joined the Energy Resources Department as a Power Marketer in 1997 and became
15 Director of Power Supply in 2001. My primary responsibilities involve the oversight of
16 both the short-term and long-term planning and acquisition of power supply resources for
17 the Company.

18 Q. Can you please summarize your testimony?

19 A. Yes. First I provide a brief summary of the factors driving power supply
20 expenses during the review period, July 2002 through June 2003. I then provide more
21 detail for several specific items. These items include: 1) the Enron long-term contract
22 termination, 2) the Kettle Falls Bi-Fuel lease payments, 3) the delay in the online date of
23 the Coyote Springs 2 project, and 4) the purchase and sale of fixed price natural gas.

1 Q. Are you sponsoring any exhibits to be introduced in this proceeding?

2 A. Yes. I am sponsoring Exhibit Nos. ___(RLS-1) and ___(RLS-2), which
3 were prepared under my supervision and direction.

4 **SUMMARY**

5 Q. Would you please summarize the power supply expense deferrals during
6 the review period?

7 A. Yes. During the review period, Idaho's share of power supply expenses
8 exceeded the authorized level by \$25,924,662. Of that total, 90 percent or \$23,332,195
9 was deferred and the Company absorbed 10 percent or \$2,592,466.

10 Power supply expenses were higher than the authorized level due to several
11 factors. The largest factor was the sale of fixed price gas. Based on the average purchase
12 and sale price, the fixed price gas purchases added approximately \$13.1 million to
13 Idaho's share of power supply expense. Hydro generation was approximately 12.9 aMW
14 below the authorized level, which would account for approximately \$2.1 million of
15 increased expense. Colstrip and Kettle Falls together generated approximately 8 aMW
16 above the authorized. Rathdrum generated approximately 21 aMW below the authorized
17 level due in part to the relatively low price of electricity compared to natural gas costs.
18 The Company' other gas-fired generating plants, Northeast turbine, Boulder Park, and the
19 Kettle Falls combustion turbine generated 2 aMW during the period.

20 Other power supply expenses during the review period include a payment to
21 terminate a long-term power purchase with Enron and the final lease payments of \$3.7
22 million (\$1.3 million Idaho share) related to the Kettle Falls Bi-Fuel generating units.
23 The \$2.9 million Enron buyout payment (\$960,000 million Idaho share) occurred in

1 October 2002, and was recorded as a power purchase expense. The Kettle Falls Bi-Fuel
2 lease payments began in September 2001 and were included in the prior filing for the
3 review period ending June 2002.

4 Another factor driving the deferrals is the age of the authorized case. The
5 authorized case is based on the loads, contracts and resources in place for the period July
6 1999 through June 2000. During that period, the Company had several large off-system
7 power sales that generated significant revenue. Almost all of those sales have ended and,
8 as such, the revenue is reduced, which is reflected in a reduction in Account 447, Sale for
9 Resale, revenue of \$72 million on a system basis (\$24 million Idaho share). Purchased
10 power expense has also decreased from the authorized level due in part to several long-
11 term contracts ending. Purchased power expense, however, has decreased by only \$24
12 million on a system basis (\$8 million Idaho share). The Company plans to file a general
13 rate case within the next year to reset the authorized level of power supply revenues and
14 expenses.

15 ENRON CONTRACT SETTLEMENT

16 Q. Please provide a brief overview of the Enron contract buyout.

17 A. In 2001 Avista entered into a multi-year power purchase agreement with
18 Enron. After filing for bankruptcy, Enron advised counterparties that they would be
19 willing, in conjunction with the Creditors' Committee, to consider offers of settlement for
20 the outstanding contractual positions. Avista sent an original proposal for the termination
21 of the Enron Purchase that was rejected by Enron's Creditors' Committee. Subsequent
22 discussions between Avista and Enron culminated in the final settlement agreement. The
23 final agreement called for the mark-to-market value of the contract to be determined by a

1 third party market price and discounted by 11.5 percent. The calculation of the payment
2 would be performed based on prices the day prior to the bankruptcy judge approving the
3 settlement.

4 Q. How did customers benefit from the buyout?

5 A. Customers benefited in a couple of ways. First, the Company removed the
6 uncertainty of whether or not the energy would be delivered. There was little likelihood
7 that Enron could deliver the energy and if the contract was sold to another counterparty, it
8 would raise additional uncertainties as to who the counterparty would be, and its
9 creditworthiness and ability to deliver power. Second, the customers benefited by the
10 higher discount rate used to value the contract. The discount rate used to determine the
11 buyout amount was 11.5%, which is higher than Avista's discount rate and well above the
12 carrying charge rate on the PCA deferral balance. This higher discount rate resulted in a
13 \$218,000 benefit to Idaho customers. The Company also netted against the contract
14 settlement payment approximately \$1 million of a net accounts receivable owed to Avista
15 by Enron. These receivables were for transactions that had occurred in 2001, and
16 reflected revenues that the Company had already credited to customers in prior PCA
17 deferral calculations. Therefore, through this buyout, Avista preserved for customers
18 dollar for dollar recovery of these amounts owed to Avista by the bankrupt Enron.

19 **KETTLE FALLS BI-FUEL LEASE PAYMENTS**

20 Q. Please explain the lease payments for the Kettle Falls Bi-Fuel generating
21 units.

22 A. The Company made lease payments on the Kettle Falls Bi-Fuel generating
23 units from September 2001 through December 2002. An explanation of these leased

1 units, together with supporting workpapers, was provided in the prior August 2002 PCA
2 filing, and a review of these lease payments was conducted in that proceeding. The \$1.3
3 million (Idaho share) of payments during this review period represent the final lease
4 payments.

5 **COYOTE SPRINGS 2**

6 Q. Could you please provide a brief overview of the Coyote Springs 2
7 project?

8 A. Yes. The Coyote Springs 2 project began commercial operation on July 1,
9 2003 and has been operating reliably. The Company's fifty-percent share of the output
10 has been in the 115 to 125 MW range.¹ The plant was originally planned to be on-line
11 June 2002, but several issues beyond the Company's control, including the Enron
12 bankruptcy and problems with the generator step-up transformer caused a delay in the on-
13 line date of the plant.

14 Q. Please explain the impact of the bankruptcy of Enron and its subsidiary
15 NEPCO on the CS2 project construction schedule.

16 A. Enron filed for bankruptcy in late 2001. Enron ceased making funds
17 available to NEPCO to pay vendors, equipment suppliers, craft, etc. to complete the CS2
18 project. In first quarter 2002, the CS2 partners (Avista and Mirant) stepped in and took
19 over the role of CS2 EPC contractor from NEPCO. The transition process included
20 dismissing construction staff at the CS2 site and putting in place new management and

¹ The variation in the output is due primarily to the ambient air temperature, i.e., the warmer the weather, the lower the output, and vice-versa.

1 construction staffing. The replacement of NEPCO added approximately two months to
2 the project completion timeline, which was extended into August of 2002.

3 Q. Please explain the delay related to the generator step-up transformer.

4 A. The completion of the CS2 project was delayed first by a failure of the
5 original generator step-up (GSU) transformer in May of 2002 and second by damage to
6 the replacement GSU transformer that was observed upon its arrival at the project site in
7 December 2002.

8 Q. Would you please describe the circumstances of the failure of the first
9 GSU transformer?

10 A. Yes. On March 3, 2002 the GSU transformer was energized from the CS2
11 switchyard that is interconnected with the Bonneville Power Administration (BPA)
12 500kV transmission system. The generators at CS2 were not operational during that time
13 frame. On May 6, 2002 the GSU transformer experienced an internal failure, which
14 resulted in significant damage to the transformer windings and a rupture of tank.

15 Q. What steps did the CS2 partners, Avista Corporation and Mirant, take to
16 address the GSU transformer failure?

17 A. The CS2 partners investigated options for replacing the GSU transformer
18 including an investigation into whether there was a compatible spare GSU transformer
19 available from another company in the industry. One of the first options investigated was
20 to attempt to find another entity that might have an available three-phase transformer with
21 the same capacity, winding configuration and respective voltage ratings. Alternatively,
22 the CS2 partners looked for combinations of transformers that could be used together to
23 provide the necessary configurations. However, the CS2 partners were unable to locate

1 an unused transformer or transformer combination that would match up with the CS2
2 GSU transformer specifications.

3 Other alternatives explored at that time included: 1) repair of the original
4 transformer; 2) purchase of a new second transformer from Alstom; 3) purchase of a
5 new second transformer from a different vendor; 4) change the original design of CS2 to
6 allow for installation of multiple transformers.

7 Q. Which of the options did the CS2 partners select to address the
8 transformer failure?

9 A. On June 13, 2002 the CS2 partners decided to purchase a second GSU
10 transformer from Alstom. The deciding factor was the shorter lead-time for a new
11 Alstom transformer compared to a new transformer from an alternate manufacturer.
12 Alstom has over 100 years in the electrical equipment business and is one of the world's
13 leading manufacturers of electric generation, transmission and distribution equipment.
14 They have over 30,000 employees in more than 30 countries. Alstom has been
15 manufacturing transformers up to 525 kV rated voltage and 400 MVA rated power in the
16 Gebze plant for over 30 years.

17 Q. Will the CS2 partners be compensated for the failed transformer?

18 A. Work with the insurance company for the CS2 project is in progress. At
19 this time the insurers have indicated that they will pay for the replacement transformer
20 and a portion of the costs to clean up the site due to the oil spill.

21 Q. Would you please describe the circumstances related to the damage to the
22 second GSU transformer?

1 A. Yes. The second transformer arrived at the CS2 site on December 15,
2 2002. After the transformer was moved onto its foundation, Alstom personnel performed
3 an internal inspection and found that the fifth leg of the transformer core had been
4 damaged. Alstom and CS2 representatives discussed the situation and agreed that the
5 second transformer could not be repaired in the field and would need to be sent to a
6 suitable repair facility. Arrangements were made to ship the transformer to the Edison
7 ESI repair facilities in California. The repairs were completed and the transformer was
8 onsite in May 2003. The plant began commercial operation July 1, 2003 and the
9 transformer and the generating plant have been operating reliably.

10 **NATURAL GAS SALES**

11 Q. Please explain the sales related to the fixed price natural gas contracts.

12 A. In early 2001, the Company purchased approximately 48,000 decatherms
13 per day of index priced gas. Soon afterwards, the Company entered into four fixed-for-
14 floating swaps that fixed the price for a portion of the gas purchases. The gas prices are
15 fixed for 40,000 decatherms per day through October 2003 and for 20,000 decatherms per
16 day through October 2004. The average price of the 40,000 decatherms per day of fixed
17 price gas is \$6.14 per decatherm and the average price of the 20,000 per day is \$6.30 per
18 decatherm. An explanation of these transactions together with extensive supporting
19 documentation was provided in the prior August 2002 PCA filing, and a review of these
20 transactions was conducted in that proceeding.

21 Q. This natural gas was purchased for which generating plants?

22 A. When the Company purchased the gas in early 2001 it was anticipated that
23 most of it would be consumed at Coyote Springs 2, because it is the Company's most

1 efficient gas-fired plant. The deal tickets explaining the fixed-for floating swaps indeed
2 refer to gas purchased for the Coyote Springs plant. It was understood at the time
3 however, that the gas could be consumed at any of the Company's gas-fired plants,
4 including, Rathdrum, Northeast, Boulder Park, the Kettle Falls combustion turbine, and
5 Coyote Springs 2.

6 The gas was purchased with delivery rights to Malin, Coyote Springs 2 and the
7 Company's other gas-fired plants. The gas could be used at Rathdrum or also be easily be
8 laid off or diverted to the Northeast, Boulder Park and Kettle Falls CT projects. This
9 portfolio of gas-fired plants provides multiple options for Avista. Coyote will normally
10 be operated as a baseload gas-fired resource. If Coyote is unavailable then the gas can be
11 used at any of the Company's other gas-fired projects. If, on the other hand, the price of
12 electricity is less expensive than the cost of running the gas-fired plants, the gas can be
13 sold and electricity purchased.

14 As previously explained in the August 2002 filing, hedging the price of natural
15 gas was less expensive than purchasing power at the prices in the forward market. The
16 fixed price gas could be used to generate power at the Company's plants for the following
17 cost:

18	Plant	Generation 19 Cost (\$/MWh)
20	Coyote Springs 2	\$45
21	Boulder Park	\$58
22	Kettle Falls CT	\$57
23	Rathdrum	\$75
24	Northeast	\$85
25		

26 This gas was purchased at a time when the comparable cost for electricity was in
27 the range of \$75/MWh to \$117/MWh for a flat power product at the Mid Columbia.

1 While it was assumed at the time that the Company would consume the gas at
2 Coyote Springs, since it would be the Company's most efficient unit, the Company's
3 overall gas management strategy remained the same despite Coyote Springs 2 temporarily
4 not being available.

5 Q. How does the Company manage natural gas purchased for thermal
6 generation?

7 A. The overall objective of managing natural gas purchased for generation is
8 to minimize the total power supply expense of the Company. This is done by purchasing
9 the required energy to serve load at the least cost, either by purchasing gas to fuel power
10 plants or by directly purchasing electricity. Natural gas purchased for generation of
11 power is converted to MWh based on the heat rates of the most efficient and economical
12 plants available. On a daily basis, the cost to generate using gas is calculated using the
13 forward value of the gas times the heat rate of the plants plus any variable plant O&M.
14 This cost to generate is then compared to the cost of market electricity for the same
15 forward period. If the cost to purchase market electricity is lower than the cost to
16 generate at the most efficient plants available, then the gas is sold and if needed, the
17 power to replace the lost generation is purchased.

18 Each day the Company reviews its 18-month forward-looking load and resource
19 monthly imbalance position contained in the daily Position Report and the timing of the
20 purchase or sale of either natural gas or electricity for delivery in various future time
21 frames is evaluated. The Position Report incorporates the most current information on
22 expected future hydroelectric generation levels, thermal generating plant availability and
23 fueled status, and load forecasts. Monthly imbalance positions in the Position Report are

1 differentiated between heavy load hour and light load hour periods. The Company's Risk
2 Policy provides over-arching guidance to this evaluation process with respect to short and
3 long imbalance position limits. The Risk Policy volumetric limits for short and long
4 positions are larger the further one looks into future periods and more narrow in the near-
5 term months. The timing of decisions to purchase or sell either natural gas or electricity
6 in future periods are guided by the Company's Risk Policy and by an assessment of the
7 daily Position Report in combination with the economic evaluation of the relative
8 economic choice between generating with natural gas or purchasing electric power.

9 In the workpapers included with this filing, the Company has provided detailed
10 information regarding each of the natural gas sales transactions that occurred during the
11 PCA review period. The documentation for each transaction, which was prepared at the
12 time the transaction occurred, generally includes the deal ticket, a brief write-up
13 explaining the reason for the transaction, the daily Position Report showing the
14 Company's load/resource situation for the relevant period, the market prices for
15 electricity and natural gas for the period, as well as other supporting information.

16 Q. Is natural gas ever sold without purchasing market electricity?

17 A. Yes, if the Company has a surplus electric power position, selling gas may
18 create greater value than using the gas to generate electricity and selling electric power. If
19 the sale of gas and resulting decrease in generation does not require a purchase of power
20 to balance the forward position, the power would not be purchased.

21 Q. What was the benefit of selling the gas instead of using it for generation?

22 A. By selling the gas the Company lowered total power supply expense over
23 the review period. The savings can be calculated by first converting the cost of gas to a

1 cost of generation (including variable plant O&M) at the plants for which generation was
2 displaced. This cost is then compared to an actual purchase cost of power in the same
3 time frame (i.e. peak for August), for equivalent MWh. If it was not necessary to
4 purchase power, due to estimated electric surplus condition, then a quoted price for power
5 at the time of the gas sale was used. An example of how the savings are determined and
6 how the savings are recorded and included in the PCA calculations is shown in Exhibit
7 No. __ (RLS-1).

8 Gas is often sold months ahead of the delivery period. For example on June 20,
9 2002, gas was sold and power purchased for the months of November and December
10 2002. Gas volumes of 12,000 dth/day at \$3.54/dth for November and 5,000 dth/day at
11 \$3.82/dth for December were sold and power (25 MW November flat @ \$33.50/MW and
12 25 MW December LL @ \$34.00/MW) was purchased. The estimated benefit of this
13 transaction was about \$318,000, as detailed on lines 14 and 15 in Exhibit No. __ (RLS-2).

14 Based on the actual gas sales and power purchases during the review period the
15 Company estimates a reduction in power supply costs of \$11.8 million (system basis,
16 \$3.9 million Idaho share) for the 40,000 dth/day of fixed priced turbine fuel sold for the
17 July 1, 2002 through June 30, 2003 delivery period. A summary page showing the gas
18 sales and electric purchases that resulted in these savings is shown in Exhibit No.
19 __ (RLS-2).

20 Q. With higher gas prices, will the Company continue to show a cost in the
21 deferrals for the sale of gas not consumed?

22 A. Yes. The Company may continue to sell gas and purchase power
23 depending on the cost relationship between gas and electricity. In fact, in 2002, the

1 Company sold some of the fixed price gas that was to be delivered in 2003 and made
2 electric purchases to replace the energy. Because these gas sales were made before the
3 price of gas had risen substantially, the sale of the gas will show a loss. Offsetting that
4 loss, however, are power purchases at relatively low prices compared to current power
5 prices. These transactions reduced overall power supply expenses even though there is an
6 expense for the sale of the gas.

7 Q. Does that conclude your direct pre-filed testimony?

8 A. Yes.

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. AVU-E- 03-06

EXHIBIT NO. 1 (RLS-1)

NATURAL GAS SALES BENEFIT EXAMPLE

**Avista Corp.
Natural Gas Sale Benefit Example**

<u>Original Transaction (Early 2001)</u>		
Purchased 10,000 MMBtu/day of Gas at \$6/MMBtu		
Total Cost for November 2002	\$1,800,000	
At \$6/MMBtu, Rathdrum Generation Cost = \$72/MWh		
<u>Economic Benefits of Swap Transaction</u>		
Sold 10,000 MMBtu/day of Gas at \$3.50/MMBtu		
Total Gas Sale Revenues for November 2002	\$1,050,000	
Loss on the Sale of Gas	\$750,000	
At \$3.50/MMBtu, Rathdrum Generation Cost = \$42/MWh		
Cost of Purchase to 60 MW on-peak at \$35/MWh	\$873,600	
Total Gas Loss and Power Cost for November 2002	\$1,623,600	
Net Economic Benefit of Swap	\$176,400	
<u>Accounting Entries if Gas is Used to Generate</u>		
547 Fuel Consumed		\$ 1,800,000 Expense
Net Power Supply Expense		\$ 1,800,000
<u>Accounting Entries Under Swap Transaction</u>		
547 Fuel Consumed		\$ - Expense
557 Fuel Purchased (Not Consumed)		\$ 1,800,000 Expense
456 Fuel Disposed		\$ 1,050,000 Revenue
Loss on Fuel Not Consumed		\$ (750,000)
555 Purchased Power Expense		\$ 873,600 Expense
Total Power Supply Expense		\$ 1,623,600
Net Power Supply Expense Reduction		\$ 176,400

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. AVU-E-03-02

EXHIBIT NO. 2 (RLS-2)

NATURAL GAS SALES SUMMARY

Avista Corp.
Summary of Savings Obtained by Selling Fixed Priced Gas, Jul 2002 - Jun 2003
(40,000 Dth/day sold)

Line No.	Transaction Date	Deal Ticket	Delivery Months	Volume (dth/day)	Price (\$/dth)	Power Purchases Related to Sale of Gas	Savings from not Generating
1	08-Jan-02	G0270	Jul	10,000	\$2.20	No purchases made related to sale of gas due to position length	\$84,308
2	03-Apr-02	G0366	Jul	5,000	\$3.35	No purchases made related to sale of gas due to position length	\$110,927
3	04-Apr-02	G0370	Nov-Oct 03	5,000	\$3.65	No purchases made related to sale of gas due to position length	\$1,629,216
4	05-Apr-02	G0372	Nov-Oct 03	5,000	\$3.52	No purchases made related to sale of gas due to position length	\$1,385,341
5	05-Apr-02	G0373 & 374	Jul	15,000	\$3.02	No purchases made related to sale of gas due to position length	\$258,318
6	17-May-02	G0432	Jul-Oct	5,000	\$3.30	25 aMW Q3 02 @ \$39.75/MW DT 2190 & Oct 02 @ \$36.75/MW DT 2191	\$663,172
	21-May-02	G0439	Aug-Oct	5,000	\$3.06	25 aMW Aug 02 @ \$39.50/MW DT 2200, Sept 02 @ \$39.50/MW DT 2196 & Oct 02 @ \$35.75/MW DT 2195	\$528,362
7							
8	21-May-02	G0438 & 440	Nov	10,000	\$3.65	50 aMW Nov 02 @ \$35.83/MW DT 2194 & DT 2195 avg price	\$219,948
9	22-May-02	G0444	Sep-Oct	5,000	\$3.12	25 aMW Sep 02 @ 37.95 DT 2202 & Oct 02 @ \$35.90 DT 2194	\$121,568
10	23-May-02	G0446	Oct-Dec	5,000	\$3.58	25 aMW Q3 02 @ \$38.00 DT 2199	\$172,755
11	28-May-02	G0448 & 449	Oct	13,000	\$3.03	75 aMW Oct 02 @ \$35.00/MW DT 2204, 2205 & 2211 avg price	\$73,392
12	05-Jun-02	G0464	Dec	5,000	\$3.81	25 aMW Q4 02 LL @ \$30.50/MW DT 2217	\$65,929
13	19-Jun-02	G0485	July	5,000	\$2.63	No purchases made related to sale of gas due to position length	\$117,124
14	20-Jun-02	G0489	Dec	5,000	\$3.82	25 aMW Dec 02 LL @ \$34.00/MW DT 2232	\$72,304
15	20-Jun-02	G0489	Nov	12,000	\$3.54	25 aMW Nov 02 flat @ \$33.50/MW DT 2231	\$245,639
16	15-Jul-02	G0509	Sep	22,000	\$2.24	50 aMW Sep 02 @ \$24.50/MW DT 2246 & DT 2251 avg price	\$147,716
17	15-Jul-02	G0510 & 511	Aug	30,000	\$2.20	125 aMW Aug 02 @ \$21.22/MW DT 2247, 2249, 2250, 2254, 2255 avg pr	\$513,189
18	13-Aug-02	G0543	Sep	3,000	\$2.55	No purchases made related to sale of gas due to position length	\$67,257
19	10-Sep-02	G0604	Oct	4,000	\$2.99	25 aMW LL Oct 02 @ \$27.75/MW DT 2267	\$16,995
20	17-Sep-02	G0624	Dec	11,000	\$4.02	No purchases made related to sale of gas due to position length	\$193,453
21	01-Oct-02	G0660	Nov	3,000	\$3.73	25 aMW Nov 02 @ \$34.50/MW DT 2276	\$88,829
22	01-Oct-02	G0661	Oct (3-31)	3,000	\$3.48	25 aMW Oct 02 (4-31) @ \$29.25/MW DT 2276	\$103,693
	20-Nov-02	G0741	Dec	5,500	\$3.97	25 aMW HL Dec 02 @ \$36.60/MW DT 2293 & 25 aMW LL Dec 02 @ \$31.40 DT 2294	\$113,425
23							
24	18-Jul-02	G0515	Mar-Jun	5,000	\$3.39	No purchases made related to sale of gas due to position length	\$714,288
25	19-Jul-02	G0516	Apr-Jun	5,000	\$3.36	No purchases made related to sale of gas due to position length	\$565,174
26	15-Aug-02	G0552	Jan	5,000	\$3.80	No purchases made related to sale of gas due to position length	\$178,365
27	15-Aug-02	G0553	Feb	5,000	\$3.70	No purchases made related to sale of gas due to position length	\$147,418
28	15-Aug-02	G0554	Mar	5,000	\$3.53	No purchases made related to sale of gas due to position length	\$68,051
29	30-Sep-02	G0655	May-Jun	10,000	\$3.55	No purchases made related to sale of gas due to position length	\$521,647
30	30-Sep-02	G0656	May	10,000	\$3.53	No purchases made related to sale of gas due to position length	
31	10-Oct-02	G0680	Feb	3,000	\$3.93	No purchases made related to sale of gas due to position length	\$67,430
32	10-Oct-02	G0681 & 82	Jan	22,000	\$4.02	50 aMW Jan 03 @ \$39.10/MWh, DT 2279	\$561,825
33	20-Nov-02	G0743	Jan	3,000	\$4.11	25 MW HLH Jan 03 @ \$39.25/MWh, DT 2295	\$88,313
34	23-Dec-02	G0792	Feb	5,000	\$4.64	75 MW HLH Feb 03 @ \$41.25/MWh, DT 2316 & 2317	\$178,272
35	23-Dec-02	G0793	Mar	5,000	\$4.47	50 MW HLH Mar 03 @ \$41.25/MWh, DT 2314 & 2315	\$175,831
36	23-Dec-02	G0794	Apr	5,000	\$4.09	2 - 25 MW HLH Apr 03 @ \$39.00 & \$39.50/MWh, DT 2321 & 2323	\$136,243
37	31-Dec-02	G0804	Feb-Apr	5,000	\$4.15	25 MW HLH Mar & Apr 03 @ \$41.25/MWh, DT 2325	
38						25 MW HLH Mar 03 @ \$42.25/MWh, DT 2324	\$361,019
39	03-Jan-03	G0810	Feb	5,000	\$4.45	75 MW HLH Feb 03 @ \$41.25/MWh, DT 2316 & 2317	\$151,672
40	06-Jan-03	G0814	Feb	4,000	\$4.19	25 MW HLH Feb 03 @ \$41.25/MWh, DT 2318	
41						25 MW LLH Feb 03 @ \$36.00/MWh, DT 2322	
42	09-Jan-03	G0822	Mar	7,000	\$4.37	No purchases made related to sale of gas due to position length	\$141,031
43	09-Jan-03	G0823	Jun	5,000	\$4.25	No purchases made related to sale of gas due to position length	\$237,165
44	10-Jan-03	G0827	Jun	5,000	\$4.27	No purchases made related to sale of gas due to position length	\$137,286
45	14-Jan-03	G0831	Feb	3,000	\$4.50	25 MW HLH Feb 03 @ \$42.00/MWh, DT 2329	\$10,851
46	16-Jan-03	G0837	Mar	3,000	\$5.00	25 MW HLH Mar 03 @ \$45.00/MWh, DT 2335	\$30,107
47	25-Feb-03	G0859	Apr	10,000	\$4.91	50 MW HLH Apr 03 @ \$44.18/MWh, DT 2353 & 2355	
						25 MW LLH Apr 03 @ \$36.75/MWh, DT 2354	\$292,134
48	Total Savings from Selling Gas						\$11,756,982