

**AVISTA CORP.
RESPONSE TO REQUEST FOR INFORMATION**

JURISDICTION:	WASHINGTON	DATE PREPARED:	08/28/2019
CASE NO.:	UE-190334 & UG-190335	WITNESS:	William Johnson
REQUESTER:	Public Counsel	RESPONDER:	William Johnson
TYPE:	Data Request	DEPT:	Power Supply
REQUEST NO.:	PC – 107 Supplemental	TELEPHONE:	(509) 495-4046
		EMAIL:	bill.johnson@avistacorp.com

REQUEST:

Re: Direct Testimony of William G. Johnson, Exh. WGJ-1T at 9.

- a) Provide the monthly *forecasted* AECO gas prices underlying Avista's authorized net power costs for 2018 (\$/MMBtu).
- b) Provide the monthly *forecasted* Malin gas prices underlying Avista's authorized net power costs for 2018 (\$/MMBtu).
- c) Provide the *actual* monthly average AECO gas prices underlying Avista's authorized net power costs for 2018 (\$/MMBtu).
- d) Provide the *actual* monthly average Malin gas prices underlying Avista's authorized net power costs for 2018 (\$/MMBtu).
- e) Identify the source and date for the forecasted AECO gas prices underlying Avista's authorized net power costs for 2018.
- f) Identify the source and date for the forecasted Malin gas prices underlying Avista's authorized net power costs for 2018.
- g) Does Avista plan to continue to use the same sources for forecasted AECO and Malin gas prices in future calculations of authorized net power costs as it did in its calculation of 2018 authorized net power costs? If so, explain why. If not, explain what other source Avista plans to use.
- h) Is it Avista's understanding that the described proliferation of natural gas production in the Northeast has now been accounted for in the gas price sources that Avista uses to forecast net power costs? If so, explain the basis for that understanding. If not, explain why Avista continues to rely on these gas price sources.
- i) Was the opportunity for price arbitrage associated with the difference in prices between AECO and Malin incorporated in Avista's calculation of authorized 2018 net power costs? If so, provide all workpapers containing those calculations in native format. If not, explain why not.

SUPPLEMENTAL RESPONSE: (8/28/2019)

Please see PC-DR-107 Supplemental Attachments A, B and C. PC-DR-107 Supplemental Attachments A and B are snapshots of the worksheet that estimates the forward value of gas transport optimization daily. PC-DR-107 Supplemental Attachment A shows the \$9,347,000 estimate used in the 2015 general rate cases that was included in the 2016 pro forma and formed the basis for the authorized gas transport optimization revenue for the period January through April 2018.

PC-DR-107 Supplemental Attachments B and C were used to derive the gas transport optimization revenue in the 2017 general rate case for the pro forma period May 2018 through April 2019. In the 2017 general

rate case the estimate of forward gas transport optimization revenue was tempered by the historic average and the steep increase in revenue from 2015 to 2016. Based on PC-DR-107 Supplemental Attachment B the gas transport optimization value for the May 2018 through April 2019 pro forma period was roughly \$13 million. However, the remaining open position was over 60% of available transport, meaning that the majority of value was exposed to market price movement. Also, 2016 was the first year when a large AECO/Malin spreads appeared. Gas transport value increased from \$6.2 million in 2015 to \$11.2 million in 2016. The Company was not convinced that the spreads would remain wide enough to support a \$13 million gas transport value in the pro forma period. Based on forward prices, history and price uncertainty a gas transport optimization value of \$9,000,000 was included in the pro forma.

Avista has 60,000 dth/day available for forward gas transport optimization trades. Estimates of future gas transport optimization revenue include both a market component based on forward prices applied to remaining open positions and the optimization value already entered into from actual forward transactions. Together these form the total gas transport optimization estimates shown in PC-DR-107 Supplemental Attachment A and B.

RESPONSE:

A through D

Please see PC-DR-107 Attachment A - table of 2018 monthly authorized and actual gas prices for AECO and Malin. There are no forecasted gas prices underlying the authorized net power costs. They are the 3 month average of forward prices for the pro forma period. Forward prices are the prices that can be transacted, i.e., gas can be bought or sold at those prices now for future delivery. There are no actual prices underlying the authorized net power costs as actuals are not known until after the fact.

E through F

Forward gas prices are from the ICE Exchange. The authorized prices are a 3 month average of the forward prices. For the months of January through April 2018 the authorized gas price was the 3 month average of forward prices for 2016 as of 10-16-15. For the months of May through December 2018 the authorized gas price was the 3 month average of forward prices for May 2018 through April 2019 as of 3-08-17.

G

Avista does not use forecasted gas prices in developing authorized net power costs. Gas prices are actual forward prices. Avista has no plans to move away from using the 3 month average of forward prices in the calculation of net power expense, but is open to discussion of other price methodologies.

H

Forward prices are the collective view of all market participants. Avista's understanding of what knowledge influences forward prices does not change the forward prices.

I

Gas transport optimization or the spread between AECO and Malin prices was incorporated in the authorized net power costs. For the months of January through April 2018 the authorized annual gas transport optimization revenue (included in FERC Account 547) was \$9,437,000. For the months of May

through December 2018 the authorized annual gas transport optimization revenue was \$9,000,000. See PC-107 Attachment B.

May 9, 2017													Net Change from May 8, 2017				May 8, 2017			
Value			Stats			Spreads							Value			Stats	Value			
Market	Optimiz	Total	Inventory	Roundtrips	AE-MA	AE-ST	Avg Intr	O&M	Net	Extrnlsc	Total	Market	Optimiz	Total	Inventory	Market	Optimiz	Total	Inventory	
Jan 17	\$ 1,910	\$ (749)	\$ 1,160	52,500	0.12	106.7	105.1	92.6	5.4	87.3	-34.2	53.0	\$ -	\$ -	\$ -	-	\$ 1,910	\$ (749)	\$ 1,160	52,500
Feb 17	1,049	(139)	910	52,500	0.12	70.1	63.5	58.6	5.6	53.1	-7.0	46.0	-	-	-	-	1,049	(139)	910	52,500
Mar 17	959	(41)	918	52,500	0.12	63.2	50.3	49.5	5.7	43.8	-1.9	41.9	-	-	-	-	959	(41)	918	52,500
Apr 17	1,031	(65)	966	50,000	0.25	68.9	53.2	53.6	4.9	48.7	-3.1	45.6	-	-	-	-	1,031	(65)	966	50,000
May 17	1,036	(38)	998	50,000	0.25	66.5	56.4	52.8	5.5	47.4	-1.7	45.6	31	(28)	2	-	1,006	(10)	996	50,000
Jun 17	1,145	(133)	1,012	50,000	0.25	72.9	64.9	58.7	4.6	54.1	-6.3	47.8	14	(13)	0	-	1,132	(120)	1,012	50,000
Jul 17	1,477	(386)	1,091	52,500	0.25	88.5	80.5	72.1	4.6	67.5	-17.6	49.9	64	(57)	7	-	1,413	(329)	1,084	52,500
Aug 17	1,433	(349)	1,084	52,500	0.25	86.3	78.3	70.2	4.7	65.5	-15.9	49.5	59	(53)	7	-	1,373	(296)	1,077	52,500
Sep 17	1,386	(338)	1,049	52,500	0.25	86.3	78.3	70.2	4.7	65.5	-15.9	49.5	76	(67)	9	-	1,311	(271)	1,040	52,500
Oct 17	1,300	(235)	1,065	52,500	0.25	79.3	71.3	64.1	4.8	59.4	-10.7	48.6	51	(45)	6	-	1,249	(190)	1,059	52,500
Nov 17	1,259	(170)	1,088	40,000	0.21	79.5	71.5	64.4	4.9	59.4	-8.0	51.4	44	(30)	14	-	1,214	(140)	1,074	40,000
Dec 17	1,616	(387)	1,229	40,000	0.21	96.5	88.5	79.0	5.1	73.9	-17.7	56.2	46	(31)	15	-	1,570	(356)	1,214	40,000
2017	\$ 15,601	\$ (3,031)	\$ 12,571		0.18	80.4	71.8	65.5	5.0	60.5	-11.7	48.8	\$ 385	\$ (324)	\$ 60		\$ 15,217	\$ (2,707)	\$ 12,510	
Jan 18	\$ 1,534	\$ (127)	\$ 1,407	22,500	0.17	92.3	84.3	75.3	5.2	70.1	-5.8	64.3	\$ 41	\$ (16)	\$ 25	-	\$ 1,492	\$ (111)	\$ 1,381	22,500
Feb 18	1,283	(77)	1,206	22,500	0.17	86.3	78.3	70.2	5.3	64.9	-3.9	61.0	42	(16)	26	-	1,241	(61)	1,180	22,500
Mar 18	1,325	(48)	1,277	22,500	0.17	81.0	73.0	65.6	5.1	60.5	-2.2	58.3	56	(21)	35	-	1,269	(27)	1,242	22,500
Apr 18	990	17	1,007	30,000	0.08	63.8	55.8	50.8	4.1	46.7	0.8	47.6	46	(19)	27	2,500	944	36	980	27,500
May 18	977	41	1,018	30,000	0.08	61.3	53.3	48.7	4.0	44.7	1.9	46.5	18	(5)	14	2,500	959	46	1,005	27,500
Jun 18	982	22	1,003	30,000	0.08	63.3	55.3	50.4	4.1	46.4	1.0	47.4	23	(8)	14	2,500	959	30	989	27,500
Jul 18	1,146	(43)	1,103	30,000	0.08	70.3	62.3	56.4	4.1	52.4	-2.0	50.4	19	(12)	7	2,500	1,127	(31)	1,096	27,500
Aug 18	1,174	(57)	1,117	30,000	0.08	71.8	63.8	57.7	4.1	53.6	-2.6	51.0	19	(13)	6	2,500	1,155	(44)	1,111	27,500
Sep 18	1,109	(41)	1,068	30,000	0.08	70.3	62.3	56.4	4.1	52.4	-2.0	50.4	18	(11)	7	2,500	1,091	(30)	1,061	27,500
Oct 18	1,117	(29)	1,088	30,000	0.08	68.8	60.8	55.1	4.1	51.0	-1.3	49.7	52	(26)	27	2,500	1,065	(3)	1,061	27,500
Nov 18	1,272	(53)	1,219	25,000	0.12	79.5	71.5	64.4	4.3	60.1	-2.5	57.6	32	(13)	19	-	1,240	(40)	1,201	25,000
Dec 18	1,337	(66)	1,271	25,000	0.12	81.0	73.0	65.6	4.5	61.1	-3.0	58.1	33	(14)	19	-	1,304	(53)	1,252	25,000
2018	\$ 14,245	\$ (461)	\$ 13,785		0.09	74.1	66.1	59.7	4.4	55.3	-1.8	53.5	\$ 397	\$ (173)	\$ 224		\$ 13,848	\$ (288)	\$ 13,560	
Jan 19	\$ 1,197	\$ 8	\$ 1,205	15,000	0.08	73.8	65.8	59.4	4.7	54.7	0.4	55.1	\$ 33	\$ (8)	\$ 25	-	\$ 1,164	\$ 16	\$ 1,180	15,000
Feb 19	1,095	4	1,099	15,000	0.08	74.5	66.5	60.1	4.7	55.4	0.2	55.6	25	(6)	19	-	1,069	11	1,080	15,000
Mar 19	1,249	(3)	1,245	15,000	0.08	76.2	68.3	61.6	4.5	57.1	-0.2	56.9	33	(8)	25	-	1,215	5	1,220	15,000
Apr 19	892	(9)	883	12,500	0.00	58.0	50.0	45.9	3.8	42.1	-0.4	41.7	23	(5)	18	-	869	(5)	864	12,500
May 19	928	(11)	918	12,500	0.00	58.3	50.3	46.1	3.7	42.4	-0.5	41.9	24	(5)	19	-	905	(6)	899	12,500
Jun 19	916	(14)	902	12,500	0.00	59.3	51.3	47.0	3.7	43.2	-0.7	42.6	23	(5)	18	-	893	(9)	883	12,500
Jul 19	1,072	(41)	1,032	12,500	0.00	66.0	58.0	52.8	3.8	49.0	-1.9	47.1	24	(5)	19	-	1,048	(36)	1,012	12,500
Aug 19	1,091	(45)	1,046	12,500	0.00	67.0	59.0	53.6	3.8	49.8	-2.0	47.8	24	(5)	19	-	1,067	(40)	1,027	12,500
Sep 19	1,018	(36)	983	12,500	0.00	65.0	57.0	51.9	3.8	48.1	-1.7	46.4	23	(5)	19	-	995	(31)	964	12,500
Oct 19	1,032	(33)	999	12,500	0.00	64.0	56.0	51.1	3.9	47.2	-1.5	45.7	24	(5)	19	-	1,008	(28)	980	12,500
Nov 19	1,102	-	1,102	-	0.00	70.0	62.0	56.2	4.2	52.1	0.0	52.1	23	-	23	-	1,079	-	1,079	-
Dec 19	1,089	-	1,089	-	0.00	67.8	59.8	54.3	4.5	49.8	0.0	49.8	24	-	24	-	1,065	-	1,065	-
2019	\$ 12,681	\$ (179)	\$ 12,502		0.02	66.6	58.6	53.3	4.1	49.2	-0.7	48.5	\$ 305	\$ (56)	\$ 249		\$ 12,376	\$ (123)	\$ 12,253	
Jan 20	\$ 1,167	\$ -	\$ 1,167	-	0.00	72.0	64.0	57.9	4.6	53.3	0.0	53.3	\$ 24	\$ -	\$ 24	-	\$ 1,143	\$ -	\$ 1,143	-
Feb 20	1,075	-	1,075	-	0.00	71.0	63.0	57.1	4.6	52.5	0.0	52.5	23	-	23	-	1,052	-	1,052	-
Mar 20	1,118	-	1,118	-	0.00	69.3	61.3	55.6	4.5	51.1	0.0	51.1	24	-	24	-	1,094	-	1,094	-
Apr 20	794	-	794	-	0.00	52.8	44.8	41.4	3.9	37.5	0.0	37.5	14	-	14	-	780	-	780	-
May 20	831	-	831	-	0.00	53.3	45.3	41.8	3.8	38.0	0.0	38.0	14	-	14	-	817	-	817	-
Jun 20	817	-	817	-	0.00	54.0	46.0	42.5	3.9	38.6	0.0	38.6	14	-	14	-	803	-	803	-
Jul 20	961	-	961	-	0.00	60.3	52.3	47.8	3.9	43.9	0.0	43.9	14	-	14	-	946	-	946	-
Aug 20	997	-	997	-	0.00	62.3	54.3	49.6	4.0	45.6	0.0	45.6	14	-	14	-	983	-	983	-
Sep 20	918	-	918	-	0.00	59.8	51.8	47.4	4.0	43.4	0.0	43.4	14	-	14	-	904	-	904	-
Oct 20	934	-	934	-	0.00	59.0	51.0	46.8	4.1	42.7	0.0	42.7	14	-	14	-	919	-	919	-
Nov 20	1,040	-	1,040	-	0.00	66.8	58.8	53.4	4.3	49.1	0.0	49.1	0	-	0	-	1,040	-	1,040	-
Dec 20	1,135	-	1,135	-	0.00	70.3	62.3	56.4	4.5	51.9	0.0	51.9	0	-	0	-	1,135	-	1,135	-
2020	\$ 11,787	\$ -	\$ 11,787		0.00	62.5	54.5	49.8	4.2	45.6	0.0	45.6	\$ 171	\$ -	\$ 171		\$ 11,616	\$ -	\$ 11,616	