

Appendix E
Current & Alternative
Resources
2018 WA IRP

Appendix E - Introduction

The purpose of this document is to provide the supply and transport data that was ultimately decided by SENDOUT as the preferred portfolio. This document also provides Cascade's current transportation contracts, a high-level overview of alternative scenarios and sensitivities, as well as the Hedging Plan.

Pages 3-26 includes the supply decisions of the preferred portfolio. This shows the total monthly commodity cost, the monthly amount in MDT's of supply it took, and the cost per dekatherm of that gas.

Pages 27-224 includes the D1 reservation rate for the transportation, the cost to transport each dekatherm, the fuel-in-kind loss rate, and the Maximum Daily Quantity (MDQ) for each contract in the preferred portfolio.

Pages 225-262 includes Cascades working document of the Companies current transportation contracts.

Pages 263-291 includes a high-level overview of the results from Cascade's different Scenarios and Sensitivities. Each scenario or sensitivity shows what is included and excluded, the NPV 20-year costs, average cost per therm, max year unserved demand, total served demand, and the classes of unserved demand.

Page 292 shows the candidate portfolios that were tested under Cascade's Supply Resource Optimization Process as discussed in Section 8 – Resource Integration.

Pages 293-312 includes Cascade's Hedging Plan that was filed with WUTC on September 28th, 2018 under Docket UG-180825.

Supply	Data Item	2019	2020	2021	2022	2023	2024
AECO FIXED	Commodity Cost (\$000)	\$ -	\$ 1,636	\$ 9,442	\$ 10,650	\$ 13,923	\$ 13,910
AECO FIXED	Take: Monthly by Supply (MDT)	-	370	2,134	2,375	3,065	3,024
AECO FIXED	Unit Commodity Cost (\$/dth)	-	4.43	4.43	4.48	4.54	4.60
AECO FIXEDW	Commodity Cost (\$000)	-	-	-	3,641	9,105	9,366
AECO FIXEDW	Take: Monthly by Supply (MDT)	-	-	-	734	1,815	1,846
AECO FIXEDW	Unit Commodity Cost (\$/dth)	-	-	-	4.96	5.02	5.07
AECO INDEX	Commodity Cost (\$000)	\$ 1,153	\$ 8,138	-	-	-	-
AECO INDEX	Take: Monthly by Supply (MDT)	660	1,842	-	-	-	-
AECO INDEX	Unit Commodity Cost (\$/dth)	1.75	4.42	-	-	-	-
AECO INDEXW	Commodity Cost (\$000)	\$ 1,111	\$ 6,831	\$ 11,211	\$ 6,904	-	-
AECO INDEXW	Take: Monthly by Supply (MDT)	594	1,489	2,401	1,429	-	-
AECO INDEXW	Unit Commodity Cost (\$/dth)	1.87	4.59	4.67	4.83	-	-
AECO INDEXW	Commodity Cost (\$000)	\$ 2,143	\$ 4,644	\$ 4,668	\$ 4,792	\$ 4,938	\$ 5,103
AECO INDEXW	Take: Monthly by Supply (MDT)	883	910	905	905	905	910
AECO INDEXW	Unit Commodity Cost (\$/dth)	2.43	5.10	5.16	5.30	5.46	5.61
AECO INDEXW	Commodity Cost (\$000)	-	-	-	-	-	-
AECO INDEXW	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
AECO INDEXW	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
AECO INDEXW	Commodity Cost (\$000)	-	-	-	-	-	-
AECO INDEXW	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
AECO INDEXW	Unit Commodity Cost (\$/dth)	109	-	-	-	-	-
AECO INDEXW	Take: Monthly by Supply (MDT)	42	-	-	-	-	-
AECO INDEXW	Unit Commodity Cost (\$/dth)	2.60	-	-	-	-	-

Supply	Data Item	2019	2020	2021	2022	2023	2024
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 273	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	107	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.57	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 2,421	\$ 899	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	1,225	455	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 1.98	\$ 1.98	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 3,074	\$ 12,006	\$ 9,678	\$ 8,372	\$ 7,528	\$ 7,984
HUNT DAY S	Take: Monthly by Supply (MDT)	1,442	2,457	1,949	1,638	1,423	1,469
HUNT DAY S	Unit Commodity Cost (\$/dth)	\$ 2.13	\$ 4.89	\$ 4.97	\$ 5.11	\$ 5.29	\$ 5.43
HUNT DAY W	Commodity Cost (\$000)	\$ 3,898	\$ 17,029	\$ 13,393	\$ 13,847	\$ 19,130	\$ 13,093
HUNT DAY W	Take: Monthly by Supply (MDT)	1,599	3,450	2,744	2,740	3,609	2,425
HUNT DAY W	Unit Commodity Cost (\$/dth)	\$ 2.44	\$ 4.94	\$ 4.88	\$ 5.05	\$ 5.30	\$ 5.40
HUNT FIXED	Commodity Cost (\$000)	\$ 22,033	\$ 51,797	\$ 62,051	\$ 65,779	\$ 66,630	\$ 67,667
HUNT FIXED	Take: Monthly by Supply (MDT)	11,030	11,647	13,953	14,600	14,600	14,640
HUNT FIXED	Unit Commodity Cost (\$/dth)	\$ 2.00	\$ 4.45	\$ 4.45	\$ 4.51	\$ 4.56	\$ 4.62

Supply	Data Item	2019	2020	2021	2022	2023	2024
HUNT FIXEDW	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ 13,131	\$ 33,075
HUNT FIXEDW	Take: Monthly by Supply (MDT)	-	-	-	-	2,440	6,080
HUNT FIXEDW	Unit Commodity Cost (\$/dth)	-	-	-	-	5.38	5.44
HUNT INDEX	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HUNT INDEX	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
HUNT INDEX	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
HUNT INDEXXW	Commodity Cost (\$000)	\$ 9,692	\$ 19,217	\$ 30,431	\$ 18,021	\$ -	\$ -
HUNT INDEXXW	Take: Monthly by Supply (MDT)	4,059	3,767	6,040	3,600	-	-
HUNT INDEXXW	Unit Commodity Cost (\$/dth)	2.39	5.10	5.04	5.01	-	-
HUNT PEAK	Commodity Cost (\$000)	\$ 98	\$ 8,694	\$ 1,754	\$ 1,147	\$ 15,386	\$ 992
HUNT PEAK	Take: Monthly by Supply (MDT)	37	1,758	359	227	2,905	184
HUNT PEAK	Unit Commodity Cost (\$/dth)	2.63	4.95	4.89	5.05	5.30	5.39
	Commodity Cost (\$000)	\$ 1,133	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	600	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	1.89	-	-	-	-	-
	Commodity Cost (\$000)	\$ 851	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	360	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	2.36	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ 804	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	295	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	2.73	-	-	-	-	-

Supply	Data Item	2019	2020	2021	2022	2023	2024
[REDACTED]	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ 144	\$ 64	\$ 76	\$ 88	\$ 104	\$ 111
	Take: Monthly by Supply (MDT)	36	9	11	12	14	15
	Unit Commodity Cost (\$/dth)	\$ 4.04	\$ 6.84	\$ 6.97	\$ 7.17	\$ 7.32	\$ 7.50
	Commodity Cost (\$000)	\$ 457	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	168	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.73	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
[REDACTED]	Commodity Cost (\$000)	\$ 832	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	292	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.85	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 407	\$ 807	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	153	303	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.67	\$ 2.67	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 81	\$ 650	\$ 1,060	\$ 784	\$ 55	\$ 57
	Take: Monthly by Supply (MDT)	33	126	203	146	10	10
	Unit Commodity Cost (\$/dth)	\$ 2.41	\$ 5.17	\$ 5.23	\$ 5.37	\$ 5.52	\$ 5.69
OPAL DAY W	Commodity Cost (\$000)						
OPAL DAY W	Take: Monthly by Supply (MDT)						
OPAL DAY W	Unit Commodity Cost (\$/dth)						

Supply	Data Item	2019	2020	2021	2022	2023	2024
OPAL FIXEDW OPAL FIXEDW OPAL FIXEDW [REDACTED]	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 696	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	295	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.36	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 2,396	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	1,042	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.30	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Take: Monthly by Supply (MDT)	-	-	-	-	-	-	
Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Commodity Cost (\$000)	\$ 2,102	\$ -	\$ -	\$ -	\$ -	\$ -	
Take: Monthly by Supply (MDT)	900	-	-	-	-	-	
Unit Commodity Cost (\$/dth)	\$ 2.34	\$ -	\$ -	\$ -	\$ -	\$ -	
Commodity Cost (\$000)	\$ 1,706	\$ 669	\$ -	\$ -	\$ -	\$ -	
Take: Monthly by Supply (MDT)	765	300	-	-	-	-	
Unit Commodity Cost (\$/dth)	\$ 2.23	\$ 2.23	\$ -	\$ -	\$ -	\$ -	

Supply	Data Item	2019	2020	2021	2022	2023	2024
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 15	\$ 281	\$ 13	\$ 866	\$ 221	\$ 299
ROCK DAY S	Take: Monthly by Supply (MDT)	6	55	3	167	41	54
ROCK DAY S	Unit Commodity Cost (\$/dth)	\$ 2.32	\$ 5.13	\$ 5.21	\$ 5.18	\$ 5.41	\$ 5.55
ROCK DAY W	Commodity Cost (\$000)	\$ 8,418	\$ 11,607	\$ 13,398	\$ 24,641	\$ 9,441	\$ 9,766
ROCK DAY W	Take: Monthly by Supply (MDT)	3,556	2,260	2,571	4,631	1,718	1,725
ROCK DAY W	Unit Commodity Cost (\$/dth)	\$ 2.37	\$ 5.14	\$ 5.21	\$ 5.32	\$ 5.50	\$ 5.66
ROCK FIXED	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ROCK FIXED	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
ROCK FIXED	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ROCK FIXEDW	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ 2,940	\$ 7,471
ROCK FIXEDW	Take: Monthly by Supply (MDT)	-	-	-	-	539	1,355
ROCK FIXEDW	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ 5.45	\$ 5.51
ROCK INDEX	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ROCK INDEX	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
ROCK INDEX	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Supply	Data Item	2019	2020	2021	2022	2023	2024
ROCK INDEXW	Commodity Cost (\$000)	\$ 836	\$ 2,821	\$ -	\$ 362	\$ 558	\$ -
ROCK INDEXW	Take: Monthly by Supply (MDT)	368	549	-	69	102	-
ROCK INDEXW	Unit Commodity Cost (\$/dth)	2.27	5.14	-	5.24	5.47	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ 950	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	393	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	2.42	-	-	-	-	-
	Commodity Cost (\$000)	\$ 463	\$ 463	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	155	155	-	-	-	-
	Unit Commodity Cost (\$/dth)	2.99	2.99	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Supply	Data Item	2019	2020	2021	2022	2023	2024
	Commodity Cost (\$000)	\$ 1,866	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	600	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 3.11	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 544	\$ 2,074	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	305	455	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 1.78	\$ 4.56	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 606	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	295	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.06	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 964	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	392	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.46	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 398	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	140	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ 2.84	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MDT)	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Supply	Data Item	2025	2026	2027	2028	2029	2030	2031
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HUNT DAY S	Commodity Cost (\$000)	\$ 8,409	\$ 9,000	\$ 9,159	\$ 9,038	\$ 8,569	\$ 8,714	\$ 8,878
HUNT DAY S	Take: Monthly by Supply (MIDT)	1,496	1,564	1,554	1,493	1,393	1,386	1,387
HUNT DAY S	Unit Commodity Cost (\$/dth)	\$ 5.62	\$ 5.75	\$ 5.89	\$ 6.05	\$ 6.15	\$ 6.29	\$ 6.40
HUNT DAY W	Commodity Cost (\$000)	\$ 13,214	\$ 12,896	\$ 12,887	\$ 11,919	\$ 12,627	\$ 13,680	\$ 14,324
HUNT DAY W	Take: Monthly by Supply (MIDT)	2,369	2,249	2,186	1,967	2,045	2,167	2,227
HUNT DAY W	Unit Commodity Cost (\$/dth)	\$ 5.58	\$ 5.73	\$ 5.90	\$ 6.06	\$ 6.18	\$ 6.31	\$ 6.43
HUNT FIXED	Commodity Cost (\$000)	\$ 68,230	\$ 68,371	\$ 68,076	\$ 68,587	\$ 69,846	\$ 70,356	\$ 70,757
HUNT FIXED	Take: Monthly by Supply (MIDT)	14,578	14,428	14,191	14,126	14,385	14,318	14,231
HUNT FIXED	Unit Commodity Cost (\$/dth)	\$ 4.68	\$ 4.74	\$ 4.80	\$ 4.86	\$ 4.86	\$ 4.91	\$ 4.97

Supply	Data Item	2025	2026	2027	2028	2029	2030	2031
HUNT FIXEDW	Commodity Cost (\$000)	\$ 33,210	\$ 33,562	\$ 33,914	\$ 34,493	\$ 34,266	\$ 34,619	\$ 34,971
HUNT FIXEDW	Take: Monthly by Supply (MIDT)	6,040	6,040	6,040	6,080	6,040	6,040	6,040
HUNT FIXEDW	Unit Commodity Cost (\$/dth)	5.50	5.56	5.61	5.67	5.67	5.73	5.79
HUNT INDEX	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HUNT INDEX	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
HUNT INDEX	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
HUNT INDEXXW	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HUNT INDEXXW	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
HUNT INDEXXW	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
HUNT PEAK	Commodity Cost (\$000)	\$ 807	\$ 924	\$ 1,053	\$ 1,183	\$ 930	\$ 963	\$ 1,023
HUNT PEAK	Take: Monthly by Supply (MIDT)	146	162	180	196	151	153	160
HUNT PEAK	Unit Commodity Cost (\$/dth)	5.54	5.69	5.85	6.04	6.15	6.28	6.40
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-

Supply	Data Item	2025	2026	2027	2028	2029	2030	2031
[REDACTED]	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ 125	\$ 145	\$ 161	\$ 175	\$ 78	\$ 85	\$ 119
	Take: Monthly by Supply (MIDT)	16	18	20	21	9	10	14
	Unit Commodity Cost (\$/dth)	\$ 7.70	\$ 7.86	\$ 8.04	\$ 8.22	\$ 8.34	\$ 8.46	\$ 8.60
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
[REDACTED]	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	[REDACTED]	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-
Unit Commodity Cost (\$/dth)		-	-	-	-	-	-	-
Commodity Cost (\$000)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Take: Monthly by Supply (MIDT)		-	-	-	-	-	-	-
Unit Commodity Cost (\$/dth)		-	-	-	-	-	-	-
Commodity Cost (\$000)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Take: Monthly by Supply (MIDT)		-	-	-	-	-	-	-
Unit Commodity Cost (\$/dth)		-	-	-	-	-	-	-
Commodity Cost (\$000)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
OPAL DAY W		Commodity Cost (\$000)	\$ 59	\$ 74	\$ 108	\$ 152	\$ 197	\$ 252
	Take: Monthly by Supply (MIDT)	10	12	18	24	31	38	64
	Unit Commodity Cost (\$/dth)	\$ 5.85	\$ 5.99	\$ 6.16	\$ 6.31	\$ 6.42	\$ 6.58	\$ 6.72

Supply	Data Item	2025	2026	2027	2028	2029	2030	2031
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Supply	Data Item	2032	2033	2034	2035	2036	2037	2038
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)							
	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HUNT DAY S	Commodity Cost (\$000)	\$ 9,126	\$ 9,680	\$ 9,929	\$ 9,616	\$ 9,890	\$ 10,446	\$ 1,190
HUNT DAY S	Take: Monthly by Supply (MIDT)	1,393	1,443	1,450	1,388	1,403	1,466	168
HUNT DAY S	Unit Commodity Cost (\$/dth)	\$ 6.55	\$ 6.71	\$ 6.85	\$ 6.93	\$ 7.05	\$ 7.13	\$ 7.09
HUNT DAY W	Commodity Cost (\$000)	\$ 15,616	\$ 15,485	\$ 16,238	\$ 14,464	\$ 14,573	\$ 14,448	\$ 20,235
HUNT DAY W	Take: Monthly by Supply (MIDT)	2,378	2,290	2,347	2,052	2,040	2,001	2,768
HUNT DAY W	Unit Commodity Cost (\$/dth)	\$ 6.57	\$ 6.76	\$ 6.92	\$ 7.05	\$ 7.14	\$ 7.22	\$ 7.31
HUNT FIXED	Commodity Cost (\$000)	\$ 71,486	\$ 70,740	\$ 71,447	\$ 73,493	\$ 74,440	\$ 74,977	\$ 71,277
HUNT FIXED	Take: Monthly by Supply (MIDT)	14,211	13,902	13,881	14,119	14,142	14,088	13,393
HUNT FIXED	Unit Commodity Cost (\$/dth)	\$ 5.03	\$ 5.09	\$ 5.15	\$ 5.21	\$ 5.26	\$ 5.32	\$ 5.32

Supply	Data Item	2032	2033	2034	2035	2036	2037	2038
[REDACTED]	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ 225	\$ 250	\$ 280	\$ 169	\$ 180	\$ 339	\$ 210
	Take: Monthly by Supply (MIDT)	26	28	31	18	19	36	22
	Unit Commodity Cost (\$/dth)	\$ 8.74	\$ 8.89	\$ 9.02	\$ 9.30	\$ 9.44	\$ 9.52	\$ 9.60
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
[REDACTED]	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
	Unit Commodity Cost (\$/dth)	-	-	-	-	-	-	-
	Commodity Cost (\$000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Take: Monthly by Supply (MIDT)	-	-	-	-	-	-	-
OPAL DAY W	Unit Commodity Cost (\$/dth)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commodity Cost (\$000)	\$ 879	\$ 979	\$ 1,173	\$ 905	\$ 1,146	\$ 2,909	\$ 2,107
	Take: Monthly by Supply (MIDT)	128	139	163	125	155	388	279
OPAL DAY W	Unit Commodity Cost (\$/dth)	\$ 6.87	\$ 7.05	\$ 7.18	\$ 7.25	\$ 7.39	\$ 7.50	\$ 7.55

Transport	9/1/2022	10/1/2022	11/1/2022	12/1/2022	1/1/2023	2/1/2023	3/1/2023	4/1/2023	5/1/2023	6/1/2023	7/1/2023
BEND INCRM	\$	6.95	7.18	7.18	7.18	7.18	7.18	6.95	7.18	6.95	7.18
BEND_INCRM \$	\$	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272
BEND_INCRM (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
BEND_INCRM \$	\$	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272
BEND_INCRM S	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
BEND_INCRM S	\$	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
CHEM INCRM	\$	0.008311	0.008311	0.008311	0.008311	0.008311	0.008311	0.008311	0.008311	0.008311	0.008311
CHEM_INCRM	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
CHEM_INCRM	\$	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272
CHEM_INCRM	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
CHEM_INCRM	\$	1.51	1.57	1.57	1.57	1.41	1.57	1.51	1.57	1.51	1.57
CHEM_INCRM	\$	1.51	1.57	1.57	1.57	1.41	1.57	1.51	1.57	1.51	1.57
CHEM_INCRM	3,126	3,126	3,126	3,126	3,126	3,126	3,126	3,126	3,126	3,126	3,126
CHEM_INCRM	\$	1.51	1.57	1.57	1.57	1.41	1.57	1.51	1.57	1.51	1.57
CHEM_INCRM	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583
CHEM_INCRM	\$	7.55	7.81	7.55	7.81	7.05	7.81	7.55	7.81	7.55	7.81
CHEM_INCRM	\$	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016
CHEM_INCRM	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
CHEM_INCRM	\$	5.36	5.54	5.36	5.54	5.00	5.54	5.36	5.54	5.36	5.54
CHEM_INCRM	\$	0.004002	0.004002	0.004002	0.004002	0.004002	0.004002	0.004002	0.004002	0.004002	0.004002
CHEM_INCRM	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
CHEM_INCRM	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
CHEM_INCRM	\$	5.36	5.54	5.36	5.54	5.00	5.54	5.36	5.54	5.36	5.54
CHEM_INCRM	\$	0.005319	0.005319	0.005319	0.005319	0.005319	0.005319	0.005319	0.005319	0.005319	0.005319
CHEM_INCRM	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
CHEM_INCRM	\$	2.44	2.52	2.44	2.52	2.28	2.52	2.44	2.52	2.44	2.52
CHEM_INCRM	\$	0.001733	0.001733	0.001733	0.001733	0.001733	0.001733	0.001733	0.001733	0.001733	0.001733
CHEM_INCRM	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
CHEM_INCRM	11,558	11,558	11,558	11,558	11,558	11,558	11,558	11,558	11,558	11,558	11,558
CHEM_INCRM	\$	4.57	4.72	4.57	4.72	4.26	4.72	4.57	4.72	4.57	4.72
CHEM_INCRM	\$	0.004347	0.004347	0.004347	0.004347	0.004347	0.004347	0.004347	0.004347	0.004347	0.004347
CHEM_INCRM	200	200	200	200	200	200	200	200	200	200	200
CHEM_INCRM	\$	4.71	4.87	4.71	4.87	4.40	4.87	4.71	4.87	4.71	4.87
CHEM_INCRM	\$	0.004524	0.004524	0.004524	0.004524	0.004524	0.004524	0.004524	0.004524	0.004524	0.004524
CHEM_INCRM	232	232	232	232	232	232	232	232	232	232	232
CHEM_INCRM	\$	6.37	6.58	6.37	6.58	6.37	6.58	6.37	6.58	6.37	6.58
CHEM_INCRM	\$	0.006563	0.006563	0.006563	0.006563	0.006563	0.006563	0.006563	0.006563	0.006563	0.006563
CHEM_INCRM	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078	2,078
CHEM_INCRM	\$	6.59	6.81	6.59	6.81	6.15	6.81	6.59	6.81	6.59	6.81
CHEM_INCRM	\$	0.006830	0.006830	0.006830	0.006830	0.006830	0.006830	0.006830	0.006830	0.006830	0.006830
CHEM_INCRM	2,984	2,984	2,984	2,984	2,984	2,984	2,984	2,984	2,984	2,984	2,984
CHEM_INCRM	\$	6.74	6.96	6.74	6.96	6.29	6.96	6.74	6.96	6.74	6.96
CHEM_INCRM	\$	0.007013	0.007013	0.007013	0.007013	0.007013	0.007013	0.007013	0.007013	0.007013	0.007013
CHEM_INCRM	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734
CHEM_INCRM	\$	6.95	7.18	6.95	7.18	6.49	7.18	6.95	7.18	6.95	7.18
CHEM_INCRM	\$	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272	0.007272
CHEM_INCRM	8,927	8,927	8,927	8,927	8,927	8,927	8,927	8,927	8,927	8,927	8,927
CHEM_INCRM	\$	7.14	7.38	7.14	7.38	6.66	7.38	7.14	7.38	7.14	7.38
CHEM_INCRM	\$	0.007507	0.007507	0.007507	0.007507	0.007507	0.007507	0.007507	0.007507	0.007507	0.007507
CHEM_INCRM	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189
CHEM_INCRM	\$	7.33	7.58	7.33	7.58	6.84	7.58	7.33	7.58	7.33	7.58
CHEM_INCRM	\$	0.007742	0.007742	0.007742	0.007742	0.007742	0.007742	0.007742	0.007742	0.007742	0.007742
CHEM_INCRM	45	45	45	45	45	45	45	45	45	45	45
CHEM_INCRM	\$	7.55	7.81	7.55	7.81	7.05	7.81	7.55	7.81	7.55	7.81
CHEM_INCRM	\$	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016	0.008016
CHEM_INCRM	313	313	313	313	313	313	313	313	313	313	313
CHEM_INCRM	\$	7.79	8.05	7.79	8.05	7.28	8.05	7.79	8.05	7.79	8.05
CHEM_INCRM	\$	7.79	8.05	7.79	8.05	7.28	8.05	7.79	8.05	7.79	8.05

Transport	5/1/2026	6/1/2026	7/1/2026	8/1/2026	9/1/2026	10/1/2026	11/1/2026	12/1/2026	1/1/2027	2/1/2027	3/1/2027		
BEND_INCRM	\$	7.18	\$	7.18	\$	6.95	\$	7.18	\$	7.18	\$	6.49	7.18
BEND_INCRM \$	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	0.007272
BEND_INCRM %	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
BEND_INCRM	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	0.007272
BEND_INCRM S	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
BEND_INCRM \$	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
CHEM_INCRM	\$	0.26	\$	0.26	\$	0.26	\$	0.26	\$	0.26	\$	0.26	0.26
CHEM_INCRM \$	\$	0.008311	\$	0.008311	\$	0.008311	\$	0.008311	\$	0.008311	\$	0.008311	0.008311
CHEM_INCRM %	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
CHEM_INCRM	\$	0.008311	\$	0.008311	\$	0.008311	\$	0.008311	\$	0.008311	\$	0.008311	0.008311
CHEM_INCRM S	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
CHEM_INCRM \$	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
FTLSF51	\$	1.57	\$	1.57	\$	1.57	\$	1.57	\$	1.57	\$	1.41	1.57
FTLSF51	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	0.004002
FTLSF52	\$	1.57	\$	1.57	\$	1.57	\$	1.57	\$	1.57	\$	1.41	1.57
FTLSF52	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	0.004002
FTLSF53	\$	3.126	\$	3.126	\$	3.126	\$	3.126	\$	3.126	\$	3.126	3.126
FTLSF53	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	0.005319
GILC_INCRM	\$	7.81	\$	7.55	\$	7.81	\$	7.81	\$	7.81	\$	7.05	7.81
GILC_INCRM	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	0.008016
GILC_INCRM	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GILC_INCRM	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	0.008016
GILC_INCRM S	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL13687	\$	5.54	\$	5.36	\$	5.54	\$	5.36	\$	5.54	\$	5.00	5.54
GTNL13687	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	\$	0.004002	0.004002
GTNL13688	\$	10,000	\$	10,000	\$	10,000	\$	10,000	\$	10,000	\$	10,000	10,000
GTNL13688	\$	5.54	\$	5.36	\$	5.54	\$	5.36	\$	5.54	\$	5.00	5.54
GTNL13688	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	0.005319
GTNL13688	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL13688	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	\$	0.005319	0.005319
GTNL13688 S	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL13688	\$	5,000	\$	5,000	\$	5,000	\$	5,000	\$	5,000	\$	5,000	5,000
GTNL17019	\$	2.52	\$	2.44	\$	2.52	\$	2.44	\$	2.52	\$	2.28	2.52
GTNL17019	\$	0.001733	\$	0.001733	\$	0.001733	\$	0.001733	\$	0.001733	\$	0.001733	0.001733
GTNL17019	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL17019	\$	11,558	\$	11,558	\$	11,558	\$	11,558	\$	11,558	\$	11,558	11,558
GTNL17021	\$	4.72	\$	4.57	\$	4.72	\$	4.57	\$	4.72	\$	4.26	4.72
GTNL17021	\$	0.004347	\$	0.004347	\$	0.004347	\$	0.004347	\$	0.004347	\$	0.004347	0.004347
GTNL17021	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL17021	\$	200	\$	200	\$	200	\$	200	\$	200	\$	200	200
GTNL17022	\$	4.87	\$	4.71	\$	4.87	\$	4.71	\$	4.87	\$	4.40	4.87
GTNL17022	\$	0.004524	\$	0.004524	\$	0.004524	\$	0.004524	\$	0.004524	\$	0.004524	0.004524
GTNL17022	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL17022	\$	232	\$	232	\$	232	\$	232	\$	232	\$	232	232
GTNL17023	\$	6.58	\$	6.37	\$	6.58	\$	6.37	\$	6.58	\$	5.95	6.58
GTNL17023	\$	0.006563	\$	0.006563	\$	0.006563	\$	0.006563	\$	0.006563	\$	0.006563	0.006563
GTNL17025	\$	2,078	\$	2,078	\$	2,078	\$	2,078	\$	2,409	\$	2,409	2,409
GTNL17025	\$	6.81	\$	6.59	\$	6.81	\$	6.59	\$	6.81	\$	6.15	6.81
GTNL17025	\$	0.006830	\$	0.006830	\$	0.006830	\$	0.006830	\$	0.006830	\$	0.006830	0.006830
GTNL17026	\$	2,984	\$	2,984	\$	2,984	\$	3,811	\$	3,811	\$	3,811	3,811
GTNL17026	\$	6.96	\$	6.74	\$	6.96	\$	6.74	\$	6.96	\$	6.29	6.96
GTNL17026	\$	0.007013	\$	0.007013	\$	0.007013	\$	0.007013	\$	0.007013	\$	0.007013	0.007013
GTNL17026	\$	2,734	\$	2,734	\$	2,734	\$	3,396	\$	3,396	\$	3,396	3,396
GTNL17028	\$	7.18	\$	6.95	\$	7.18	\$	6.95	\$	7.18	\$	6.49	7.18
GTNL17028	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	\$	0.007272	0.007272
GTNL17028	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL17028	\$	8,927	\$	8,927	\$	8,927	\$	13,064	\$	13,064	\$	13,064	13,064
GTNL17031	\$	7.38	\$	7.14	\$	7.38	\$	7.14	\$	7.38	\$	6.66	7.38
GTNL17031	\$	0.007507	\$	0.007507	\$	0.007507	\$	0.007507	\$	0.007507	\$	0.007507	0.007507
GTNL17031	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL17031	\$	2,189	\$	2,189	\$	2,189	\$	3,430	\$	3,430	\$	3,430	3,430
GTNL17033	\$	7.58	\$	7.33	\$	7.58	\$	7.33	\$	7.58	\$	6.84	7.58
GTNL17033	\$	0.007742	\$	0.007742	\$	0.007742	\$	0.007742	\$	0.007742	\$	0.007742	0.007742
GTNL17033	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL17033	\$	45	\$	45	\$	45	\$	45	\$	45	\$	45	45
GTNL17034	\$	7.81	\$	7.55	\$	7.81	\$	7.55	\$	7.81	\$	7.05	7.81
GTNL17034	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	\$	0.008016	0.008016
GTNL17034	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNL17034	\$	313	\$	313	\$	313	\$	561	\$	561	\$	561	561
GTNL17036	\$	8.05	\$	7.79	\$	8.05	\$	7.79	\$	8.05	\$	7.28	8.05

Transport	3/1/2028	4/1/2028	5/1/2028	6/1/2028	7/1/2028	8/1/2028	9/1/2028	10/1/2028	11/1/2028	12/1/2028	1/1/2029
Transport											
GTNL7036	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311
GTNL7036	Rate: Transportation by Transport (\$/dth)										
GTNL7036	First of Month MIDQ by Transport (dth)	75	75	75	75	75	75	75	75	75	75
GTNL7037	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31
GTNL7037	Rate: D1 by Transport (\$/dth/mo)										
GTNL7037	Rate: Transportation by Transport (\$/dth)	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799
GTNL7037	First of Month MIDQ by Transport (dth)	20,380	20,380	-	-	-	-	-	20,380	20,380	20,380
GTNL8057	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31
GTNL8057	Rate: D1 by Transport (\$/dth/mo)										
GTNL8057	Rate: Transportation by Transport (\$/dth)	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799
GTNL8057	First of Month MIDQ by Transport (dth)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
GTNSTANBND	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANCHEM	First of Month MIDQ by Transport (dth)	43,644	39,507	19,127	19,127	19,127	19,127	19,127	43,644	43,644	43,644
GTNSTANCHEM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANGILC	First of Month MIDQ by Transport (dth)	30,655	30,655	10,275	10,275	10,275	10,275	10,275	30,655	30,655	30,655
GTNSTANGILC	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANGLI	First of Month MIDQ by Transport (dth)	31,141	30,893	10,513	10,513	10,513	10,513	10,513	31,141	31,141	31,141
GTNSTANGLI	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANLAPI	First of Month MIDQ by Transport (dth)	30,625	30,625	10,245	10,245	10,245	10,245	10,245	30,625	30,625	30,625
GTNSTANLAPI	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANMADR	First of Month MIDQ by Transport (dth)	32,989	32,658	12,278	12,278	12,278	12,278	12,278	32,989	32,989	32,989
GTNSTANMADR	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANNBND	First of Month MIDQ by Transport (dth)	43,644	39,507	19,127	19,127	19,127	19,127	19,127	43,644	43,644	43,644
GTNSTANNBND	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANPRNG	First of Month MIDQ by Transport (dth)	30,580	30,580	10,200	10,200	10,200	10,200	10,200	30,580	30,580	30,580
GTNSTANPRNG	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANPRVL	First of Month MIDQ by Transport (dth)	34,391	33,564	13,184	13,184	13,184	13,184	13,184	34,391	34,391	34,391
GTNSTANPRVL	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANRDEM	First of Month MIDQ by Transport (dth)	33,976	33,314	12,934	12,934	12,934	12,934	12,934	33,976	33,976	33,976
GTNSTANRDEM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANSTNP	First of Month MIDQ by Transport (dth)	30,812	30,812	10,432	10,432	10,432	10,432	10,432	30,812	30,812	30,812
GTNSTANSTNP	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANSTEA	First of Month MIDQ by Transport (dth)	34,010	32,769	12,389	12,389	12,389	12,389	12,389	34,010	34,010	34,010
GTNSTANSTEA	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNTOTFLATS	First of Month MIDQ by Transport (dth)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
GTNTOTFLATS	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
HUNT_TO_NWPN	Rate: D1 by Transport (\$/dth/mo)	\$ 12.18	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11.79	\$ 12.18	\$ 12.18
JP TO STAN	Rate: Transportation by Transport (\$/dth)	\$ 0.008320	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.008320	\$ 0.008320	\$ 0.008320
JP TO STAN	Fuel by Transport (%)	1.160%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.160%	1.160%	1.160%
JP TO STAN	First of Month MIDQ by Transport (dth)	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960
JP TO STAN	Rate: D1 by Transport (\$/dth/mo)	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289
LAPI INCRM	Rate: D1 by Transport (\$/dth/mo)	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.58
LAPI INCRM	Rate: Transportation by Transport (\$/dth)	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742
LAPI INCRM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
LAPI_INCRM S	First of Month MIDQ by Transport (dth)	-	-	-	-	-	-	-	-	-	-
LAPI_INCRM S	Rate: Transportation by Transport (\$/dth)	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742
LAPI_INCRM S	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
MADR_INCRM	Rate: D1 by Transport (\$/dth/mo)	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.58
MADR_INCRM	Rate: Transportation by Transport (\$/dth)	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563
MADR_INCRM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
MADR_INCRM	First of Month MIDQ by Transport (dth)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
MDDOSMSPLOP	First of Month MIDQ by Transport (dth)	13,840	13,840	13,840	13,840	13,840	13,840	13,840	13,840	13,840	13,840
MDDOSTAN	First of Month MIDQ by Transport (dth)	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704
MDDOZ10	First of Month MIDQ by Transport (dth)	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757
MDDOZ11	First of Month MIDQ by Transport (dth)	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203
MDDOZ20	First of Month MIDQ by Transport (dth)	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247
MDDOZ24	First of Month MIDQ by Transport (dth)	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640
MDDOZ26	First of Month MIDQ by Transport (dth)	41,502	41,502	41,502	41,502	41,502	41,502	41,502	41,502	41,502	41,502
MDDOZ35	First of Month MIDQ by Transport (dth)	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856
MDDOZ3W	First of Month MIDQ by Transport (dth)	24,415	24,415	24,415	24,415	24,415	24,415	24,415	24,415	24,415	24,415
MDDOZMEO	First of Month MIDQ by Transport (dth)	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670
MDDOZMEW	Rate: D1 by Transport (\$/dth/mo)	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 7.12
NBND INCRM	Rate: D1 by Transport (\$/dth/mo)	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 7.12

Table with columns for Data Item, Transport, and dates from 3/1/2028 to 1/1/2029. Rows list various fuel and transport items (e.g., Fuel by Transport, First of Month MDQ by Transport) with corresponding values for each date.

Transport	Data Item	2/1/2029	3/1/2029	4/1/2029	5/1/2029	6/1/2029	7/1/2029	8/1/2029	9/1/2029	10/1/2029	11/1/2029	12/1/2029
GTNL7036	Rate: Transportation by Transport (\$/dth)											
GTNL7036	First of Month MIDQ by Transport (dth)	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75
GTNL7037	Rate: D1 by Transport (\$/dth/mo)	\$ 8.41	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31
GTNL7037	Rate: Transportation by Transport (\$/dth)	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380	\$ 20,380
GTNL7037	First of Month MIDQ by Transport (dth)	\$ 8.41	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31
GTNL8057	Rate: Transportation by Transport (\$/dth)	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
GTNL8057	First of Month MIDQ by Transport (dth)	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%
GTNSTANBND	Fuel by Transport (%)	43,644	43,644	39,507	19,127	19,127	19,127	19,127	19,127	19,127	43,644	43,644
GTNSTANCHEM	Fuel by Transport (%)	30,655	30,655	30,655	10,275	10,275	10,275	10,275	10,275	10,275	30,655	30,655
GTNSTANCHEM	Rate: Transportation by Transport (\$/dth)	\$ 31,141	\$ 31,141	\$ 30,893	\$ 10,513	\$ 10,513	\$ 10,513	\$ 10,513	\$ 10,513	\$ 10,513	\$ 31,141	\$ 31,141
GTNSTANGILC	Fuel by Transport (%)	30,625	30,625	30,625	10,245	10,245	10,245	10,245	10,245	10,245	30,625	30,625
GTNSTANLAPI	Rate: Transportation by Transport (\$/dth)	\$ 32,989	\$ 32,989	\$ 32,658	\$ 12,278	\$ 12,278	\$ 12,278	\$ 12,278	\$ 12,278	\$ 12,278	\$ 32,989	\$ 32,989
GTNSTANMADR	Fuel by Transport (%)	43,644	43,644	39,507	19,127	19,127	19,127	19,127	19,127	19,127	43,644	43,644
GTNSTANNBND	Rate: Transportation by Transport (\$/dth)	\$ 30,580	\$ 30,580	\$ 30,580	\$ 10,200	\$ 10,200	\$ 10,200	\$ 10,200	\$ 10,200	\$ 10,200	\$ 30,580	\$ 30,580
GTNSTANPRNG	Fuel by Transport (%)	34,391	34,391	33,564	13,184	13,184	13,184	13,184	13,184	13,184	34,391	34,391
GTNSTANPRVL	Fuel by Transport (%)	33,976	33,976	33,314	12,934	12,934	12,934	12,934	12,934	12,934	33,976	33,976
GTNSTANRDM	Rate: Transportation by Transport (\$/dth)	\$ 30,812	\$ 30,812	\$ 30,812	\$ 10,432	\$ 10,432	\$ 10,432	\$ 10,432	\$ 10,432	\$ 10,432	\$ 30,812	\$ 30,812
GTNSTANSNTP	Fuel by Transport (%)	34,010	34,010	32,769	12,389	12,389	12,389	12,389	12,389	12,389	34,010	34,010
GTNSTANSTEA	Fuel by Transport (%)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
GTNSTANSTEA	Rate: Transportation by Transport (\$/dth)	\$ 11.00	\$ 12.18	\$ 12.18	\$ 11.79	\$ 11.79	\$ 11.79	\$ 11.79	\$ 11.79	\$ 11.79	\$ 11.79	\$ 12.18
GTNTOTFLATS	Rate: Transportation by Transport (\$/dth)	\$ 1.160%	\$ 1.160%	\$ 0.000%	\$ 0.000%	\$ 0.000%	\$ 0.000%	\$ 0.000%	\$ 0.000%	\$ 0.000%	\$ 1.160%	\$ 1.160%
GTNTOTFLATS	Fuel by Transport (%)	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960
HUNT_TO_NWPN	Rate: Transportation by Transport (\$/dth)	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289	\$ 50,289
JP TO STAN	Rate: D1 by Transport (\$/dth/mo)	\$ 6.84	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.58
JP TO STAN	Rate: Transportation by Transport (\$/dth)	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%
JP TO STAN	Fuel by Transport (%)	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291
LAPI_INCRM S	Rate: Transportation by Transport (\$/dth)	\$ 5.95	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.58
LAPI_INCRM S	Fuel by Transport (%)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
MADR_INCRM	Rate: Transportation by Transport (\$/dth)	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%	\$ 0.005%
MADR_INCRM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
MADR_INCRM	Rate: Transportation by Transport (\$/dth)	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704	\$ 15,704
MADR_INCRM	Fuel by Transport (%)	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757
MDDOSMSRPLP	Rate: Transportation by Transport (\$/dth)	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203	\$ 56,203
MDDOSTAN	Fuel by Transport (%)	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247
MDDOZ10	Rate: Transportation by Transport (\$/dth)	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840	\$ 13,840
MDDOZ10	Fuel by Transport (%)	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704
MDDOZ11	Rate: Transportation by Transport (\$/dth)	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757	\$ 31,757
MDDOZ20	Fuel by Transport (%)	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203
MDDOZ24	Rate: Transportation by Transport (\$/dth)	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247	\$ 14,247
MDDOZ26	Fuel by Transport (%)	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640
MDDOZ35	Rate: Transportation by Transport (\$/dth)	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502	\$ 41,502
MDDOZ3W	Fuel by Transport (%)	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856
MDDOZMEO	Rate: Transportation by Transport (\$/dth)	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415	\$ 24,415
MDDOZMEW	Fuel by Transport (%)	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670
NBND_INCRM	Rate: D1 by Transport (\$/dth/mo)	\$ 6.43	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12

Transport	Data Item	2/1/2029	3/1/2029	4/1/2029	5/1/2029	6/1/2029	7/1/2029	8/1/2029	9/1/2029	10/1/2029	11/1/2029	12/1/2029
STEA INCRM	First of Month MDQ by Transport (dth)	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291
WCFI2583B00	Rate: D1 by Transport (\$/dth/mo)	10.94	11.73	11.73	12.12	12.12	12.12	12.12	11.73	12.12	11.73	12.12
WCFI2583B00	First of Month MDQ by Transport (dth)	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
		\$								\$		\$

Transport	Data Item	4/1/2038	5/1/2038	6/1/2038	7/1/2038	8/1/2038	9/1/2038	10/1/2038	11/1/2038	12/1/2038
GTNL7036	Rate: Transportation by Transport (\$/dth)	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311	\$ 0.008311
GTN17036	First of Month MDQ by Transport (dth)	75	75	75	75	75	75	75	75	75
GTN17037	Rate: D1 by Transport (\$/dth/mo)	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31
GTN17037	Rate: Transportation by Transport (\$/dth)	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799
GTN17037	First of Month MDQ by Transport (dth)	20,380	-	-	-	-	-	-	20,380	20,380
GTN18057	Rate: D1 by Transport (\$/dth/mo)	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.31	\$ 9.01	\$ 9.31	\$ 9.01	\$ 9.31
GTN18057	Rate: Transportation by Transport (\$/dth)	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799	\$ 0.009799
GTN18057	First of Month MDQ by Transport (dth)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
GTNSTANBND	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANBND	First of Month MDQ by Transport (dth)	39,507	19,127	19,127	19,127	19,127	19,127	19,127	43,644	43,644
GTNSTANCHEM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANCHEM	First of Month MDQ by Transport (dth)	30,655	10,275	10,275	10,275	10,275	10,275	10,275	30,655	30,655
GTNSTANGILC	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANGILC	First of Month MDQ by Transport (dth)	30,893	10,513	10,513	10,513	10,513	10,513	10,513	31,141	31,141
GTNSTANLAPI	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANLAPI	First of Month MDQ by Transport (dth)	30,625	10,245	10,245	10,245	10,245	10,245	10,245	30,625	30,625
GTNSTANNADR	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANNADR	First of Month MDQ by Transport (dth)	32,658	12,278	12,278	12,278	12,278	12,278	12,278	32,989	32,989
GTNSTANNBND	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANNBND	First of Month MDQ by Transport (dth)	39,507	19,127	19,127	19,127	19,127	19,127	19,127	43,644	43,644
GTNSTANPRNG	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANPRNG	First of Month MDQ by Transport (dth)	30,580	10,200	10,200	10,200	10,200	10,200	10,200	30,580	30,580
GTNSTANPRVL	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANPRVL	First of Month MDQ by Transport (dth)	33,564	13,184	13,184	13,184	13,184	13,184	13,184	34,391	34,391
GTNSTANRDM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANRDM	First of Month MDQ by Transport (dth)	33,314	12,934	12,934	12,934	12,934	12,934	12,934	33,976	33,976
GTNSTANSNP	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANSNP	First of Month MDQ by Transport (dth)	30,812	10,432	10,432	10,432	10,432	10,432	10,432	30,812	30,812
GTNSTANSTEA	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTANSTEA	First of Month MDQ by Transport (dth)	32,769	12,389	12,389	12,389	12,389	12,389	12,389	34,010	34,010
GTNSTOTFLATS	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
GTNSTOTFLATS	First of Month MDQ by Transport (dth)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
HUNT_TO_NWPN	First of Month MDQ by Transport (dth)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
JP to STAN	Rate: D1 by Transport (\$/dth/mo)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JP to STAN	Rate: Transportation by Transport (\$/dth)	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742
JP to STAN	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
JP to STAN	First of Month MDQ by Transport (dth)	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960
JP to STAN	First of Month MDQ by Transport (dth)	50,289	50,289	50,289	50,289	50,289	50,289	50,289	50,289	50,289
JPOUT	Rate: D1 by Transport (\$/dth/mo)	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.58	\$ 7.33	\$ 7.33	\$ 7.58
LAPI INCRM	Rate: Transportation by Transport (\$/dth)	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742
LAPI INCRM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
LAPI INCRM	First of Month MDQ by Transport (dth)	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291
LAPI_INCRM S	Rate: Transportation by Transport (\$/dth)	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742	\$ 0.007742
LAPI_INCRM S	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
LAPI_INCRM S	First of Month MDQ by Transport (dth)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
MADR_INCRM	Rate: D1 by Transport (\$/dth/mo)	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.58	\$ 6.37	\$ 6.37	\$ 6.58
MADR_INCRM	Rate: Transportation by Transport (\$/dth)	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563	\$ 0.006563
MADR_INCRM	Fuel by Transport (%)	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
MADR_INCRM	First of Month MDQ by Transport (dth)	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291	1,291
MDDOSMSSPIOP	First of Month MDQ by Transport (dth)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
MDDOSTAN	First of Month MDQ by Transport (dth)	13,840	13,840	13,840	13,840	13,840	13,840	13,840	13,840	13,840
MDDOZ10	First of Month MDQ by Transport (dth)	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704	15,704
MDDOZ11	First of Month MDQ by Transport (dth)	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757	31,757
MDDOZ20	First of Month MDQ by Transport (dth)	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203	56,203
MDDOZ24	First of Month MDQ by Transport (dth)	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247	14,247
MDDOZ26	First of Month MDQ by Transport (dth)	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640
MDDOZ35	First of Month MDQ by Transport (dth)	41,502	41,502	41,502	41,502	41,502	41,502	41,502	41,502	41,502
MDDOZ3W	First of Month MDQ by Transport (dth)	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856	62,856
MDDOZMEO	First of Month MDQ by Transport (dth)	24,415	24,415	24,415	24,415	24,415	24,415	24,415	24,415	24,415
MDDOZMEW	First of Month MDQ by Transport (dth)	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670	25,670
NBND INCRM	Rate: D1 by Transport (\$/dth/mo)	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 7.12	\$ 6.89	\$ 6.89	\$ 7.12

CONTRACT DESCRIPTION	RECEIPT	DELIVERY	PIPELINE	COST ALLOCATION	TERMINATION DATE	RATE PER DAY	MDQ
TF-1 Contract #100002 April 31, 1991	all rec	all del	NWP	Principal	10/31/2032	0.39294	205123
Contract #135384 (P/Bremerton), March 26, 2007 (permanently released 4/2016)	jackson prairie	bremerton/mt vernon	NWP	Washington	10/31/2029	0.00000	
Contract #135558 (Sumas/Prtld), 4/1/2007)	sumas	stanfield/portland west	NWP	system	4/30/2023	0.39294	25,400
Contract 139382 Sumas/Sedro Wooley	sumas	sedro wooley	NWP	Washington	10/31/2050	0.39294	6,191
Contract 139383 Sumas/Sedro Wooley	sumas	sedro wooley	NWP	Washington	10/31/2050	0.39294	1,050
Contract 139384 Sumas/Sedro Wooley	sumas	sedro wooley	NWP	Washington	10/31/2050	0.39294	3,259
Contract #100134 January 15,1993	sumas/ignacio	burbank/yakima/aberdeen	NWP	Washington	11/30/2022	0.39294	330
Contract #100149 February 15,1996	sumas/ignacio	walla walla	NWP	Washington	11/30/2022	0.39294	75
Contract #100150 May 15, 1996	sumas/ignacio	menan starch	NWP	Washington	11/30/2022	0.39294	160
Contract #100064 May 8, 1995	sumas	hermiston/pasco	NWP	system	3/31/2023	0.39294	1,078
Weyer Release Contract #132329 July 1, 2004	sumas	kern river	NWP	system	1/31/2023	0.39294	5,000
Contract #139090 June 2, 2011	sumas	plymouth/umatilla/bellingham	NWP	system	3/31/2052	0.39294	27,063
Contract #139637 January 1, 2013	sumas	hermiston/oak harbor/selah	NWP	system	10/31/2050	0.39294	7,241
Contract #139630 August 28, 2012	stanfield	durkee/pendelton/mission	NWP	Oregon	10/31/2050	0.39294	7,450
Contract #140047, November 1, 2014	sumas	bellingham/ferndale	NWP	Washington	10/31/2034	0.39294	15,000
Contract #140748, April 1, 2015	Opal	Portland West/Scappoose	NWP	Oregon	3/31/2031	0.39294	1,000
Contract #140751, November 1, 2015 (segmented, base contract 140748)	stanfield	Portland West/Scappoose	NWP	Oregon	3/31/2031	0.39294	1,000
Contract #140752, November 1, 2015 (segmented, base contract 140748)	stanfield	Portland West/Scappoose	NWP	Oregon	3/31/2031	0.39294	1,000

PARK AND BALANCE

Clay Basin Park & Loan #135675	clay basin	clay basin	NWP	system	12/31/2098	0.00000	0
Jackson Prairie Park & Loan #131179	jackson prairie	jackson prairie	NWP	system	12/31/2098	0.00000	0
Clay Basin Park & Loan #129152	clay basin	clay basin	NWP	system	12/31/2098	0.00000	0

TF-2

Contract #100302 TF-2 January 12, 1994	jackson prairie	Stanfield, Wenatchee, Longview, Kennewick	NWP	system	10/31/2022	0.39294	16,789
Contract #100304 TF-2 January 12, 1994	plymouth		NWP	system	3/31/2023	0.39294	60,000
Jackson Prairie Expansion Precident Agreement # 135365 SGS-2F	jackson prairie	jackson prairie	NWP	system	10/31/2060	0.04056	30,000
Contract # 100401 SGS-2F	jackson prairie	jackson prairie	NWP	system	10/31/2019	0.01562	16,789
Contract #100601 LS-2F	plymouth	plymouth	NWP	system	10/31/2019	0.02587	60,000
Contract #140857 LS-2F	plymouth	plymouth	NWP	system	3/31/2023	0.02587	18,125
Contract #139627 TF-2	jackson prairie	bellingham	NWP	Washington	3/31/2020	0.39294	489
Contract #141193 TF-2	plymouth	plymouth	NWP	Washington	3/31/2023	0.39294	10,675
Contract #139624 TF-2	jackson prairie	bellingham	NWP	Washington	3/31/2020	0.39294	282
Contract #139622 SGS-2F	jackson prairie	jackson prairie	NWP	system	3/31/2026	0.01562	3,500
Contract #139626 SGS-2F	jackson prairie	jackson prairie	NWP	system	3/31/2020	0.01562	6,077

GTN

2003 Expansion, #17037 (#08488 & #02812 formerly), 5/12/2015	kingsgate	malin	GTN	Oregon	10/31/2028	0.30020	23,980
Firm Transportation #17019 (#00179, October 7, 1993), 5/12/2015	kingsgate	Spokane NPC	GTN	Oregon	10/31/2023	0.08139	11,558
Firm Transportation #17021 (#00179, October 7, 1993), 5/12/2015	kingsgate	Kosmos Farm	GTN	Oregon	10/31/2023	0.15229	200
Firm Transportation #17022 (#00179, October 7, 1993), 5/12/2015	kingsgate	Stanfield City	GTN	Oregon	10/31/2023	0.15711	232
Firm Transportation #17023 (#00179, October 7, 1993), 5/12/2015	kingsgate	Madras	GTN	Oregon	10/31/2023	0.21240	2,078
Firm Transportation #17025 (#00179, October 7, 1993), 5/12/2015	kingsgate	Prineville	GTN	Oregon	10/31/2023	0.21962	2,984
Firm Transportation #17026 (#00179, October 7, 1993), 5/12/2015	kingsgate	Redmond	GTN	Oregon	10/31/2023	0.22462	2,734
Firm Transportation #17028 (#00179, October 7, 1993), 5/12/2015	kingsgate	Bend	GTN	Oregon	10/31/2023	0.23165	8,927
Firm Transportation #17031 (#00179, October 7, 1993), 5/12/2016	kingsgate	Stearns	GTN	Oregon	10/31/2023	0.23802	2,189
Firm Transportation #17033 (#00179, October 7, 1993), 5/12/2015	kingsgate	LaPine	GTN	Oregon	10/31/2023	0.24441	45

CONTRACT						COST	TERMINATION	RATE
Firm Transportation #17034 (#00179, October 7, 1993), 5/12/2015	kingsgate	Gilchrist	GTN	Oregon	10/31/2023	0.25181	313	
Firm Transportation #17036 (#00179, October 7, 1993), 5/12/2015	kingsgate	Chemult	GTN	Oregon	10/31/2023	0.25983	75	
Firm Transportation #17023 (#00152, December 1, 1997)	kingsgate	Madras	GTN	Oregon	10/31/2023	0.21240	331	
Firm Transportation #17025 (#00152, December 1, 1997)	kingsgate	Prineville	GTN	Oregon	10/31/2023	0.21962	827	
Firm Transportation #17026 (#00152, December 1, 1997)	kingsgate	Redmond	GTN	Oregon	10/31/2023	0.22462	662	
Firm Transportation #17028 (#00152, December 1, 1997)	kingsgate	Bend	GTN	Oregon	10/31/2023	0.23165	4,137	
Firm Transportation #17031 (#00152, December 1, 1997)	kingsgate	Stearns	GTN	Oregon	10/31/2023	0.23802	1,241	
Firm Transportation #17034 (#00152, December 1, 1997)	kingsgate	Gilchrist	GTN	Oregon	10/31/2023	0.25181	248	
Firm Backhaul Transportation #12094/13687 4/1/2018 - 10/31/2039	turquoise flats	stanfield	GTN	Oregon	10/31/2039	0.17867	10,000	
Firm Backhaul Transportation #13688 11/1/14 - 10/31/39	turquoise flats	stanfield	GTN	Oregon	10/31/2039	0.17867	5,000	
Firm Transportation #18507 (December 1, 2017)	kingsgate	malin	GTN	Oregon	10/31/2032	0.30020		

NOVA AND FOOTHILLS

2002 Service Agreement November 2, 2002 (CNG FS-2)	AB/C border	kingsgate	ANG	Oregon	10/31/2019	0.05631	3,126
Service Agreement (ANG) September 11, 2001 (#CNG FS-3)	AB/C border	kingsgate	ANG	Oregon	10/31/2028	0.05631	21,583
Service Agreement (NOVA) September 4, 2001 (#2003039348-1)	NIT	AB/C border	NOVA	Oregon	10/31/2028	0.11385	21,973
FS-1 Transportation (ANG) June 12, 1991 (CNG FS-1)	AB/C border	kingsgate	ANG	Oregon	10/31/2023	0.05631	7,602

ENBRIDGE

Westcoast Service Agreement January 3, 2002 (#FI-2583-B-013)	station 2	huntingdon	WESTCOAST	Washington	10/31/2024	0.31641	20,000
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RUBY PIPELINE LLC

Firm Service Agreement #61036000B, November 1, 2014	pearl creek	turquoise flats	RUBY	system	10/31/2039	0.75000	15,000
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CONTRACT	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20
Firm Transportation #17034 (#00179, October 7, 1993), 5/12/2015	313	313	313	313	313	313	313	313	313	313	313	313	313	313
Firm Transportation #17036 (#00179, October 7, 1993), 5/12/2015	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Firm Transportation #17023 (#00152, December 1, 1997)	331	331	331											
Firm Transportation #17025 (#00152, December 1, 1997)	827	827	827											
Firm Transportation #17026 (#00152, December 1, 1997)	662	662	662											
Firm Transportation #17028 (#00152, December 1, 1997)	4,137	4,137	4,137											
Firm Transportation #17031 (#00152, December 1, 1997)	1,241	1,241	1,241											
Firm Transportation #17034 (#00152, December 1, 1997)	248	248	248											
Firm Backhaul Transportation #12094/13687 4/1/2018 - 10/31/2039	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Firm Backhaul Transportation #13688 11/1/14 - 10/31/39	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Firm Transportation #18507 (December 1, 2017)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

NOVA AND FOOTHILLS

2002 Service Agreement November 2, 2002 (CNG FS-2)														
Service Agreement (ANG) September 11, 2001 (#CNG FS-3)	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583	21,583
Service Agreement (NOVA) September 4, 2001 (#2003039348-1)	21,973	21,973	21,973	21,973	21,973	21,973	21,973	21,973	21,973	21,973	21,973	21,973	21,973	21,973
FS-1 Transportation (ANG) June 12, 1991 (CNG FS-1)	7,602	7,602	7,602								7,602	7,602	7,602	7,602

ENBRIDGE

Westcoast Service Agreement January 3, 2002 (#F1-2583-B-013)	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
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RUBY PIPELINE LLC

Firm Service Agreement #61036000B, November 1, 2014	15,000	15,000	15,000	15,000							15,000	15,000	15,000	15,000
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CONTRACT DESCRIPTION	Nov-38		Dec-38
	30	31	
TF-1 Contract #100002 April 31, 1991			
Contract #135384 (JP/Bremerton), March 26, 2007 (permanently released 4/2016)			
Contract #135558 (Sumas/Prtld), 4/1/2007)			
Contract 139382 Sumas/Sedro Wooley	6,191	6,191	
Contract 139383 Sumas/Sedro Wooley	1,050	1,050	
Contract 139384 Sumas/Sedro Wooley	3,259	3,259	
Contract #100134 January 15,1993			
Contract #100149 February 15,1996			
Contract #100150 May 15, 1996			
Contract #100064 May 8, 1995			
Weyer Release Contract #132329 July 1, 2004			
Contract #139090 June 2, 2011	27,063	27,063	
Contract #139637 January 1, 2013	7,241	7,241	
Contract #139630 August 28, 2012	7,450	7,450	
Contract #140047, November 1, 2014			
Contract #140748, April 1, 2015			
Contract #140751, November 1, 2015 (segmented, base contract 140748)			
Contract #140752, November 1, 2015 (segmented, base contract 140748)			

PARK AND BALANCE

Clay Basin Park & Loan #135675			
Jackson Prairie Park & Loan #131179			
Clay Basin Park & Loan #129152			

TF-2

Contract #100302 TF-2 January 12, 1994			
Contract #100304 TF-2 January 12, 1994			
Jackson Prairie Expansion Precident Agreement # 135365 SGS-2F	30,000	30,000	
Contract # 100401 SGS-2F			
Contract #100601 LS-2F			
Contract #140857 LS-2F			
Contract #139627 TF-2			
Contract #141193 TF-2			
Contract #139624 TF-2			
Contract #139622 SGS-2F	3,500	3,500	
Contract #139626 SGS-2F			

GTN

2003 Expansion, #17037 (#08488 & #02812 formerly), 5/12/2015			
Firm Transportation #17019 (#00179, October 7, 1993), 5/12/2015			
Firm Transportation #17021 (#00179, October 7, 1993), 5/12/2015			
Firm Transportation #17022 (#00179, October 7, 1993), 5/12/2015			
Firm Transportation #17023 (#00179, October 7, 1993), 5/12/2015			
Firm Transportation #17025 (#00179, October 7, 1993), 5/12/2015			
Firm Transportation #17026 (#00179, October 7, 1993), 5/12/2015			
Firm Transportation #17028 (#00179, October 7, 1993), 5/12/2015			
Firm Transportation #17031 (#00179, October 7, 1993), 5/12/2016			
Firm Transportation #17033 (#00179, October 7, 1993), 5/12/2015			

CONTRACT	Nov-38	Dec-38
Firm Transportation #17034 (#00179, October 7, 1993), 5/12/2015		
Firm Transportation #17036 (#00179, October 7, 1993), 5/12/2015		
Firm Transportation #17023 (#00152, December 1, 1997)		
Firm Transportation #17025 (#00152, December 1, 1997)		
Firm Transportation #17026 (#00152, December 1, 1997)		
Firm Transportation #17028 (#00152, December 1, 1997)		
Firm Transportation #17031 (#00152, December 1, 1997)		
Firm Transportation #17034 (#00152, December 1, 1997)		
Firm Backhaul Transportation #12094/13687 4/1/2018 - 10/31/2039	10,000	10,000
Firm Backhaul Transportation #13688 11/1/14 - 10/31/39	5,000	5,000
Firm Transportation #18507 (December 1, 2017)		

NOVA AND FOOTHILLS

2002 Service Agreement November 2, 2002 (CNG FS-2)		
Service Agreement (ANG) September 11, 2001 (#CNG FS-3)		
Service Agreement (NOVA) September 4, 2001 (#2003039348-1)		
FS-1 Transportation (ANG) June 12, 1991 (CNG FS-1)		

ENBRIDGE

Westcoast Service Agreement January 3, 2002 (#FI-2583-B-013)		
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RUBY PIPELINE LLC

Firm Service Agreement #61036000B, November 1, 2014	15,000	15,000
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SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand
As-Is	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. No new elements considered. All items in GREEN were available resources and were selected. All items in GOLD were available resources but not selected. All items in RED mean those elements were excluded from the scenario.						
	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak				
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak				
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak				
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S				
	Current Foothills	PLY-1	KINGSGATE BASE				OR101-1199603
	Current Ruby	PLY-2	OPAL BASE				OR104-5410678
			KERN WINTER				OR105-421570
			STAT2 BASE				OR111-171252
							OR170-752159
	Incremental NGTL	Ryckman Crk Storage	Opal Incrm Supply				WA502-400729
	Incremental GTN N-S	Gill Ranch Storage	BioNaturalGas	4,839,607,778.81	0.660293	136,683,677	7,329,490,024
	NWP I-5 Mainline EXP	Mist Storage	Resource Mix - 3 Basins				WA504-71807588
	Incremental Ruby	Wild Goose Storage					WA505-9259355
NWP Wen lateral EXP	Aeco Hub Storage					WA511-10303050	
Incremental Foothills	Magnum Storage					WA512-19055	
NWP Z20 lateral EXP	Clay Basin Storage					WA570-1735496	
T-South-So Crossing						WA577-95880	
Trails West (Palomar)							
Bremerton/Shelton							
NWP East OR Mainline EXP							
Incremental GTN S-N							
Incremental Enbridge							
Pacific Connector							

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand	
GTN Only Incremental NGTL Incremental GTN N-S NWP I-5 Mainline EXP Incremental Ruby NWP Wen lateral EXP Incremental Foothills NWP Z20 lateral EXP T-South-So Crossing Trails West (Palomar) Bremerton/Shelton NWP East OR Mainline EXP Incremental GTN S-N Incremental Enbridge Pacific Connector	KEY ELEMENTS IN SENDOUT SCENARIO Current Station2 Current NOVA Current GTN Current NWP Current Foothills Current Ruby	AECO Base/Fixed, Winter, Day W/S, Peak SUMAS Base/Fixed, Winter, Day W/S, Peak ROCKIES Base/Fixed, Winter, Day W/S, Peak HUNT Base/Fixed, Winter, Day W/S KINGSGATE BASE OPAL BASE KERN WINTER STAT2 BASE	4,853,228,024.90 0.661977	1,551	7,331,416,078	OR101-0 OR104-0 OR105-0 OR111-0 OR170-1551 WA502-0 WA503-0 WA504-0 WA505-0 WA511-0 WA512-0 WA570-0 WA577-0	
	Ryckman Crk Storage Gill Ranch Storage Mist Storage Wild Goose Storage Aeco Hub Storage Magnum Storage Clay Basin Storage	Opal Incrm Supply BioNaturalGas Resource Mix - 3 Basins					

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand	
GTN with Storage	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. No new elements considered. All items in GREEN were available resources and were selected. All items in GOLD were available resources but not selected. All items in RED mean those elements were excluded from the scenario.		4,850,641,481.93	0.661624	1,551	7,331,416,078		
	KEY ELEMENTS IN SENDOUT SCENARIO							
	Current Station2	JP1						AECO Base/Fixed, Winter, Day W/S, Peak
	Current NOVA	JP2						SUMAS Base/Fixed, Winter, Day W/S, Peak
	Current GTN	JP3						ROCKIES Base/Fixed, Winter, Day W/S, Peak
	Current NWP	JP4						HUNT Base/Fixed, Winter, Day W/S
	Current Foothills	PLY-1						KINGSGATE BASE
	Current Ruby	PLY-2						OPAL BASE
								KERN WINTER
								STAT2 BASE
	Incremental NGTL	Ryckman Crk Storage						Opal Incrm Supply
	Incremental GTN N-S	Gill Ranch Storage						BioNaturalGas
	NWP I-5 Mainline EXP	Mist Storage						Resource Mix - 3 Basins
	Incremental Ruby	Wild Goose Storage						
	NWP Wen lateral EXP	Aeco Hub Storage						
	Incremental Foothills	Magnum Storage						
	NWP Z20 lateral EXP	Clay Basin Storage						
	T-South-So Crossing							
	Trails West (Palomar)							
Bremerton/Shelton								
NWP East OR Mainline EXP								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO	KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand	
NWP Only	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. No new elements considered. All items in GREEN were available resources and were selected. All items in GOLD were available resources but not selected. All items in RED mean those elements were excluded from the scenario.	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak					
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak					
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak					
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S					
	Current Foothills	PLY-1	KINGSGATE BASE				OR101-0	
	Current Ruby	PLY-2	OPAL BASE				OR104-206974	
			KERN WINTER				OR105-23063	
			STAT2 BASE				OR111-7525	
							OR170-1551	
	Incremental NGTL	Ryckman Crk Storage	Opal Incrm Supply	4,873,132,874.02	0.664867	239,112	7,329,490,016	WA502-0
	Incremental GTN N-S	Gill Ranch Storage	BioNaturalGas					WA503-0
	NWP I-5 Mainline EXP	Mist Storage	Resource Mix - 3 Basins					WA504-0
	Incremental Ruby	Wild Goose Storage						WA505-0
	NWP Wen lateral EXP	Aeco Hub Storage						WA511-0
Incremental Foothills	Magnum Storage						WA512-0	
NWP Z20 lateral EXP	Clay Basin Storage						WA570-0	
T-South-So Crossing							WA577-0	
Trails West (Palomar)								
NWP East OR Mainline EXP								
Bremerton Shelton								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO	KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand
NWP with Storage	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. No new elements considered. All items in GREEN were available resources and were selected. All items in GOLD were available resources but not selected. All items in RED mean those elements were excluded from the scenario.	KEY ELEMENTS IN SENDOUT SCENARIO					
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak				
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak				
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak				
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S				
	Current Foothills	PLY-1	KINGSGATE BASE				OR101-0
	Current Ruby	PLY-2	OPAL BASE				OR104-206974
			KERN WINTER				OR105-23063
			STAT2 BASE				OR111-7525
							OR170-1551
	Incremental NGTL	Ryckman Crk Storage	Opal Incrm Supply				WA502-0
	Incremental GTN N-S	Gill Ranch Storage	BioNaturalGas	4,871,791,125.49	0.664684	239,112	7,329,490,015
	NWP I-5 Mainline EXP	Mist Storage	Resource Mix - 3 Basins				WA503-0
	Incremental Ruby	Wild Goose Storage					WA504-0
	NWP Wen lateral EXP	Aeco Hub Storage					WA505-0
	Incremental Foothills	Magnum Storage					WA511-0
	NWP Z20 lateral EXP	Clay Basin Storage					WA512-0
T-South-So Crossing						WA570-0	
Trails West (Palomar)						WA577-0	
NWP East OR Mainline EXP							
Bremerton Shelton							
Incremental GTN S-N							
Incremental Enbridge Pacific Connector							

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO	KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand
	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. No new elements considered. All items in GREEN were available resources and were selected. All items in GOLD were available resources but not selected. All items in RED mean those elements were excluded from the scenario.						
	KEY ELEMENTS IN SENDOUT SCENARIO	KEY ELEMENTS IN SENDOUT SCENARIO					
	Current Station2	JP1					
	Current NOVA	JP2					
	Current GTN	JP3					
	Current NWP	JP4					
	Current Foothills	PLY-1					OR101-0
	Current Ruby	PLY-2					OR104-206974
							OR105-23063
							OR111-7525
							OR170-1551
							WA502-0
Storage Only	Incremental NGTL	Ryckman Crk Storage	4,846,113,000.49	0.661180	239,112	7,329,490,016	WA503-0
	Incremental GTN N-S	Gill Ranch Storage					WA504-0
	NWP I-5 Mainline EXP	Mist Storage					WA505-0
	Incremental Ruby	Wild Goose Storage					WA511-0
	NWP Wen lateral EXP	Aeco Hub Storage					WA512-0
	Incremental Foothills	Magnum Storage					WA570-0
	NWP Z20 lateral EXP	Clay Basin Storage					WA577-0
	T-South-So Crossing						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Bremerton Shelton						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand
Top Ranking Candidate Portfolio	KEY ELEMENTS IN SENDOUT SCENARIO Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. No new elements considered. All items in GREEN were available resources and were selected. All items in GOLD were available resources but not selected. All items in RED mean those elements were excluded from the scenario.						
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak				
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak				
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak				
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S				
	Current Foothills	PLY-1	KINGSGATE BASE				
	Current Ruby	PLY-2	OPAL BASE				
			KERN WINTER				OR105-0
			STAT2 BASE				OR111-0
				4,899,113,981	0.668236	3,313	7,331,409,397
		Incremental NGTL	Ryckman Crk Storage				OR170-1551
		Incremental GTN N-S	Gill Ranch Storage				WA503-0
		NWP I-5 Mainline EXP	Mist Storage				WA504-0
	Incremental Ruby	Wild Goose Storage				WA505-0	
	NWP Wen lateral EXP	Aeco Hub Storage				WA511-0	
	Incremental Foothills	Magnum Storage				WA570-1762	
	NWP Z20 lateral EXP	Clay Basin Storage				WA577-0	
	T-South-So Crossing						
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO				NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak	JP2					
No Evergreen	Medium Load Growth, Medium Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	Current NOVA	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak					
		Current GTN	JP4	HUNT Base/Fixed, Winter, Day W/S					
		Current Foothills	PLY-1	KINGSGATE BASE					OR101-1199603
		Current Ruby	PLY-2	OPAL BASE					OR104-5410678
				KERN WINTER					OR105-421570
				STAT2 BASE					OR111-171252
									OR170-752159
		Incremental NGTL	Ryckman Crk Storage	Opal Incrm Supply				6,511,882,220	WA502-400729
		Incremental GTN N-S	Gill Ranch Storage	BioNaturalGas					WA503-35107262
		NWP I-5 Mainline EXP	Mist Storage	Resource Mix - 3 Basins			136,683,677		WA504-71807588
	Incremental Ruby	Wild Goose Storage						WA505-9259355	
	NWP Wen lateral EXP	Aeco Hub Storage						WA511-10303050	
	Incremental Foothills	Magnum Storage						WA512-19055	
	NWP Z20 lateral EXP	Clay Basin Storage						WA570-1735496	
	T-South-So Crossing							WA577-95880	
	Bremerton/Shelton								
	Trails West (Palomar)								
	NWP East OR Mainline EXP								
	Incremental GTN S-N								
	Incremental Enbridge								
	Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)																																									
High Growth, Medium Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	<p>KEY ELEMENTS IN SENDOUT SCENARIO</p> <table border="1"> <tr><td>Current Station2</td><td>JP1</td><td>AECO Base/Fixed, Winter, Day W/S, Peak</td></tr> <tr><td>Current NOVA</td><td>JP2</td><td>SUMAS Base/Fixed, Winter, Day W/S, Peak</td></tr> <tr><td>Current GTN</td><td>JP3</td><td>ROCKIES Base/Fixed, Winter, Day W/S, Peak</td></tr> <tr><td>Current NWP</td><td>JP4</td><td>HUNT Base/Fixed, Winter, Day W/S</td></tr> <tr><td>Current Foothills</td><td>PLY-1</td><td>KINGSGATE BASE</td></tr> <tr><td>Current Ruby</td><td>PLY-2</td><td>OPAL BASE</td></tr> <tr><td></td><td></td><td>KERN WINTER</td></tr> <tr><td></td><td></td><td>STAT2 BASE</td></tr> </table>		Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S	Current Foothills	PLY-1	KINGSGATE BASE	Current Ruby	PLY-2	OPAL BASE			KERN WINTER			STAT2 BASE	5,210,895,656	0.663403	618,589	7,854,797,133	OR101-0 OR104-193804 OR105-33417 OR111-20083 OR170-19919 WA502-0 WA503-0 WA504-166396 WA505-83992 WA511-94475 WA512-0 WA570-6115 WA577-388																	
Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak																																														
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Incremental NGTL	<i>Ryckman Crk Storage</i>	<i>Opal Incrm Supply</i>																																														
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SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO	KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
Low Growth	Low Load Growth, Medium Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak					
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak					
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak					
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S					
	Current Foothills	PLY-1	KINGSGATE BASE				OR101-0	
	Current Ruby	PLY-2	OPAL BASE				OR104-0	
			KERN WINTER				OR105-0	
			STAT2 BASE				OR111-0	
							OR170-0	
							WA502-0	
				4,623,709,804	0.673675	0	6,863,417,854	WA503-0
		Incremental NGTL	Ryckman Crk Storage					WA504-0
		Incremental GTN N-S	Gill Ranch Storage					WA505-0
	NWP I-5 Mainline EXP	Mist Storage					WA511-0	
	Incremental Ruby	Wild Goose Storage					WA512-0	
	NWP Wen lateral EXP	Aeco Hub Storage					WA570-0	
	Incremental Foothills	Magnum Storage					WA577-0	
	NWP Z20 lateral EXP	Clay Basin Storage						
	T-South-So Crossing							
	Bremerton/Shelton							
	Trails West (Palomar)							
	NWP East OR Mainline EXP							
	Incremental GTN S-N							
	Incremental Enbridge							
	Pacific Connector							

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
0% Environmental Adder	KEY ELEMENTS IN SENDOUT SCENARIO		4,993,048,905	0.681048	3,313	7,331,417,833	OR101-0 OR104-0 OR105-0 OR111-0 OR170-1551 WA502-0 WA503-0 WA504-0 WA505-0 WA511-0 WA512-0 WA570-1762 WA577-0	
	Medium Load Growth, Stochastic Pricing Environment w/ 0% Environmental Adder, Medium Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited							
	Current Station2	JP1						AECO Base/Fixed, Winter, Day W/S, Peak
	Current NOVA	JP2						SUMAS Base/Fixed, Winter, Day W/S, Peak
	Current GTN	JP3						ROCKIES Base/Fixed, Winter, Day W/S, Peak
	Current NWP	JP4						HUNT Base/Fixed, Winter, Day W/S
	Current Foothills	PLY-1						KINGSGATE BASE
	Current Ruby	PLY-2						OPAL BASE
								KERN WINTER
								STAT2 BASE
	Incremental NGTL							Ryckman Crk Storage
	Incremental GTN N-S							Gill Ranch Storage
	NWP I-5 Mainline EXP							Mist Storage
	Incremental Ruby							Wild Goose Storage
NWP Wen lateral EXP		Aeco Hub Storage						
Incremental Foothills		Magnum Storage						
NWP Z20 lateral EXP		Clay Basin Storage						
T-South-So Crossing								
Bremerton/Shelton								
Trails West (Palomar)								
NWP East OR Mainline EXP								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								
		Opal Incrm Supply						
		BioNaturalGas						
		Resource Mix - 3 Basins						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
20% Environmental Adder	KEY ELEMENTS IN SENDOUT SCENARIO		5,110,320,555	0.697044	3,313	7,331,417,833	OR101-0 OR104-0 OR105-0 OR111-0 OR170-1551 WA502-0 WA503-0 WA504-0 WA505-0 WA511-0 WA512-0 WA570-1762 WA577-0	
	Medium Load Growth, Stochastic Pricing Environment w/ 20% Environmental Adder, Medium Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited							
	Current Station2	JP1						AECO Base/Fixed, Winter, Day W/S, Peak
	Current NOVA	JP2						SUMAS Base/Fixed, Winter, Day W/S, Peak
	Current GTN	JP3						ROCKIES Base/Fixed, Winter, Day W/S, Peak
	Current NWP	JP4						HUNT Base/Fixed, Winter, Day W/S
	Current Foothills	PLY-1						KINGSGATE BASE
	Current Ruby	PLY-2						OPAL BASE
								KERN WINTER
								STAT2 BASE
	Incremental NGTL							Ryckman Crk Storage
	Incremental GTN N-S							Gill Ranch Storage
	NWP I-5 Mainline EXP							Mist Storage
	Incremental Ruby							Wild Goose Storage
NWP Wen lateral EXP		Aeco Hub Storage						
Incremental Foothills		Magnum Storage						
NWP Z20 lateral EXP		Clay Basin Storage						
T-South-So Crossing								
Bremerton/Shelton								
Trails West (Palomar)								
NWP East OR Mainline EXP								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								
		Opal Incrm Supply						
		BioNaturalGas						
		Resource Mix - 3 Basins						

KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
SCENARIO NAME	Medium Load Growth, Stochastic Pricing Environment w/ 30% Environmental Adder, Medium Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited					
	KEY ELEMENTS IN SENDOUT SCENARIO					
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak			
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak			
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak			
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S			
	Current Foothills	PLY-1	KINGSGATE BASE			OR101-0
	Current Ruby	PLY-2	OPAL BASE			OR104-0
			KERN WINTER			OR105-0
			STAT2 BASE			OR111-0
						OR170-1551
	Incremental NGTL		Ryckman Crk Storage			WA502-0
	Incremental GTN N-S		Gill Ranch Storage			WA503-0
	NWP I-5 Mainline EXP		Mist Storage			WA504-0
	Incremental Ruby		Wild Goose Storage			WA505-0
NWP Wen lateral EXP		Aeco Hub Storage			WA511-0	
Incremental Foothills		Magnum Storage			WA512-0	
NWP Z20 lateral EXP		Clay Basin Storage			WA570-1762	
T-South-So Crossing					WA577-0	
Bremerton/Shelton						
Trails West (Palomar)						
NWP East OR Mainline EXP						
Incremental GTN S-N						
Incremental Enbridge						
Pacific Connector						
30% Environmental Adder			0.703485	3,313	7,331,417,833	
		5,157,545,031				

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	KEY ELEMENTS IN SENDOUT SCENARIO AECO Base/Fixed, Winter, Day W/S, Peak SUMAS Base/Fixed, Winter, Day W/S, Peak ROCKIES Base/Fixed, Winter, Day W/S, Peak HUNT Base/Fixed, Winter, Day W/S KINGSGATE BASE OPAL BASE KERN WINTER STAT2 BASE						
	Current Station2	JP1					
	Current NOVA	JP2					
	Current GTN	JP3					
	Current NWP	JP4					
	Current Foothills	PLY-1					OR101-37724
	Current Ruby	PLY-2					OR104-276086
							OR105-30529
							OR111-18710
							OR170-19919
							WA502-0
No Alberta	Incremental NGTL	Ryckman Crk Storage	4,941,709,528	0.674600	557,315	7,325,393,812	WA503-0
	Incremental GTN N-S	Gill Ranch Storage					WA504-0
	NWP I-5 Mainline EXP	Mist Storage					WA505-78556
	Incremental Ruby	Wild Goose Storage					WA511-89287
	NWP Wen lateral EXP	Aeco Hub Storage					WA512-0
	Incremental Foothills	Magnum Storage					WA570-6115
	NWP Z20 lateral EXP	Clay Basin Storage					WA577-388
	T-South-So Crossing						
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
No BC	KEY ELEMENTS IN SENDOUT SCENARIO		4,658,068,904	0.706776	44,037,510	6,590,585,315	OR101-0 OR104-1969525 OR105-414123 OR111-548326 OR170-1058981 WA502-49454 WA503-0 WA504-26818692 WA505-5688208 WA511-6327236 WA512-3623 WA570-1117073 WA577-42271	
	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1						AECO Base/Fixed, Winter, Day W/S, Peak
	Current NOVA	JP2						SUMAS Base/Fixed, Winter, Day W/S, Peak
	Current GTN	JP3						ROCKIES Base/Fixed, Winter, Day W/S, Peak
	Current NWP	JP4						HUNT Base/Fixed, Winter, Day W/S
	Current Foothills	PLY-1						KINGSGATE BASE
	Current Ruby	PLY-2						OPAL BASE
								KERN WINTER
								STAT2 BASE
	Incremental NGTL							Opal Incrm Supply
	Incremental GTN N-S	Ryckman Crk Storage						BioNaturalGas
	NWP I-5 Mainline EXP	Gill Ranch Storage						Resource Mix - 3 Basins
	Incremental Ruby	Mist Storage						
	NWP Wen lateral EXP	Wild Goose Storage						
	Incremental Foothills	Aeco Hub Storage						
	NWP Z20 lateral EXP	Magnum Storage						
T-South-So Crossing	Clay Basin Storage							
Bremerton/Shelton								
Trails West (Palomar)								
NWP East OR Mainline EXP								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited						
	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1					
	Current NOVA	JP2					
	Current GTN	JP3					
	Current NWP	JP4					
	Current Foothills	PLY-1					
	Current Ruby	PLY-2					OR101-0
							OR104-343148
							OR105-289753
							OR111-394560
							OR170-986748
							WA502-0
No Rockies	Incremental NGTL		4,830,949,022	0.667046	11,038,321	7,242,306,454	WA503-0
	Incremental GTN N-S	Ryckman Crk Storage					WA504-410445
	NWP I-5 Mainline EXP	Gill Ranch Storage					WA505-3518701
	Incremental Ruby	Mist Storage					WA511-4031291
	NWP Wen lateral EXP	Wild Goose Storage					WA512-146
	Incremental Foothills	Aeco Hub Storage					WA570-1024448
	NWP Z20 lateral EXP	Magnum Storage					WA577-39081
	T-South-So Crossing	Clay Basin Storage					
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
Limit Alberta	Medium Load Growth, Medium Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited					
	KEY ELEMENTS IN SENDOUT SCENARIO					
	Current Station2	JP1				
	Current NOVA	JP2				
	Current GTN	JP3				
	Current NWP	JP4				
	Current Foothills	PLY-1				OR101-0
	Current Ruby	PLY-2				OR104-0
						OR105-0
						OR111-0
						OR170-1551
						WA502-0
	Incremental NGTL	Ryckman Crk Storage				WA503-0
	Incremental GTN N-S	Gill Ranch Storage				WA504-0
NWP I-5 Mainline EXP	Mist Storage				WA505-0	
Incremental Ruby	Wild Goose Storage				WA511-0	
NWP Wen lateral EXP	Aeco Hub Storage				WA512-0	
Incremental Foothills	Magnum Storage				WA570-1762	
NWP Z20 lateral EXP	Clay Basin Storage				WA577-0	
T-South-So Crossing						
Bremerton/Shelton						
Trails West (Palomar)						
NWP East OR Mainline EXP						
Incremental GTN S-N						
Incremental Enbridge						
Pacific Connector						
		4,900,271,228	0.668394	3,313	7,331,409,397	

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
			AECO Base/Fixed, Winter, Day W/S, Peak					
	Current Station2	JP1	SUMAS Base/Fixed, Winter, Day W/S, Peak					
	Current NOVA	JP2	ROCKIES Base/Fixed, Winter, Day W/S, Peak					
	Current GTN	JP3	HUNT Base/Fixed, Winter, Day W/S					
	Current NWP	JP4	KINGSGATE BASE					OR101-0
	Current Foothills	PLY-1	OPAL BASE					OR104-0
	Current Ruby	PLY-2	KERN WINTER					OR105-0
			STAT2 BASE					OR111-0
Limit BC	Incremental NGTL	Ryckman Crk Storage	Opal Incrm Supply	4,909,309,169	0.669627	3,313	7,331,409,397	OR170-1551
	Incremental GTN N-S	Gill Ranch Storage	BioNaturalGas					WA502-0
	NWP I-5 Mainline EXP	Mist Storage	Resource Mix - 3 Basins					WA503-0
	Incremental Ruby	Wild Goose Storage						WA504-0
	NWP Wen lateral EXP	Aeco Hub Storage						WA505-0
	Incremental Foothills	Magnum Storage						WA511-0
	NWP Z20 lateral EXP	Clay Basin Storage						WA512-0
	T-South-So Crossing							WA570-1762
	Bremerton/Shelton							WA577-0
	Trails West (Palomar)							
	NWP East OR Mainline EXP							
	Incremental GTN S-N							
	Incremental Enbridge							
	Pacific Connector							

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
Limit Rockies	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited							
	KEY ELEMENTS IN SENDOUT SCENARIO							
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak					
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak					
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak					
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S					
	Current Foothills	PLY-1	KINGSGATE BASE				OR101-0	
	Current Ruby	PLY-2	OPAL BASE				OR104-0	
			KERN WINTER				OR105-0	
			STAT2 BASE				OR111-0	
	Incremental NGTL		Opal Incrm Supply				WA502-0	
	Incremental GTN N-S	Ryckman Crk Storage	BioNaturalGas	4,921,122,448	0.671238	3,313	7,331,409,397	WA503-0
	NWP I-5 Mainline EXP	Gill Ranch Storage	Resource Mix - 3 Basins					WA504-0
	Incremental Ruby	Mist Storage						WA505-0
NWP Wen lateral EXP	Wild Goose Storage						WA511-0	
Incremental Foothills	Aeco Hub Storage						WA512-0	
NWP Z20 lateral EXP	Magnum Storage						WA570-1762	
T-South-So Crossing	Clay Basin Storage						WA577-0	
Bremerton/Shelton								
Trails West (Palomar)								
NWP East OR Mainline EXP								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
Medium Load Growth, Medium Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	KEY ELEMENTS IN SENDOUT SCENARIO						
Current Station2	JP1	<i>AECO Base/Fixed, Winter, Day W/S, Peak</i>					
Current NOVA	JP2	<i>SUMAS Base/Fixed, Winter, Day W/S, Peak</i>					
Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak					
Current NWP	JP4	<i>HUNT Base/Fixed, Winter, Day W/S</i>					
Current Foothills	PLY-1	<i>KINGSGATE BASE</i>					OR101-0
Current Ruby	PLY-2	OPAL BASE					OR104-0
		KERN WINTER					OR105-0
		<i>STAT2 BASE</i>					OR111-0
							OR170-1551
Incremental NGTL		Ryckman Crk Storage					WA502-0
Incremental GTN N-S		Gill Ranch Storage					WA503-0
NWP I-5 Mainline EXP		Mist Storage	4,915,778,285	0.670509	3,313	7,331,409,397	WA504-0
Incremental Ruby		Wild Goose Storage					WA505-0
NWP Wen lateral EXP		Aeco Hub Storage					WA511-0
Incremental Foothills		Magnum Storage					WA512-0
NWP Z20 lateral EXP		Clay Basin Storage					WA570-1762
T-South-So Crossing							WA577-0
Bremerton/Shelton							
Trails West (Palomar)							
NWP East OR Mainline EXP							
Incremental GTN S-N							
Incremental Enbridge							
Pacific Connector							
Limit Canada		Opal Incrm Supply BioNaturalGas Resource Mix - 3 Basins					

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited						
	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1					
	Current NOVA	JP2					
	Current GTN	JP3					
	Current NWP	JP4					
	Current Foothills	PLY-1					OR101-0
	Current Ruby	PLY-2					OR104-180567
							OR105-30529
							OR111-18710
							OR170-19919
							WA502-0
No JP	Incremental NGTL	Ryckman Crk Storage					WA503-0
	Incremental GTN N-S	Gill Ranch Storage					WA504-94655
	NWP I-5 Mainline EXP	Mist Storage	4,926,893,937	0.672500	521,368	7,326,239,154	WA505-81166
	Incremental Ruby	Wild Goose Storage					WA511-89318
	NWP Wen lateral EXP	Aeco Hub Storage					WA512-0
	Incremental Foothills	Magnum Storage					WA570-6115
	NWP Z20 lateral EXP	Clay Basin Storage					WA577-388
	T-South-So Crossing						
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited						
	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1					
	Current NOVA	JP2					
	Current GTN	JP3					
	Current NWP	JP4					
	Current Foothills	PLY-1					OR101-0
	Current Ruby	PLY-2					OR104-198893
							OR105-30529
							OR111-18710
							OR170-19919
							WA502-0
No Ply	Incremental NGTL	Ryckman Crk Storage	4,892,979,368	0.668248	733,176	7,322,103,051	WA503-0
	Incremental GTN N-S	Gill Ranch Storage					WA504-288137
	NWP I-5 Mainline EXP	Mist Storage					WA505-81166
	Incremental Ruby	Wild Goose Storage					WA511-89318
	NWP Wen lateral EXP	Aeco Hub Storage					WA512-0
	Incremental Foothills	Magnum Storage					WA570-6115
	NWP Z20 lateral EXP	Clay Basin Storage					WA577-388
	T-South-So Crossing						
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	KEY ELEMENTS IN SENDOUT SCENARIO						
Medium Load Growth, Medium Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	Current Station2	JP1					
	Current NOVA	JP2					
	Current GTN	JP3					
	Current NWP	JP4					
	Current Foothills	PLY-1					OR101-0
	Current Ruby	PLY-2					OR104-307201
							OR105-30529
							OR111-18710
							OR170-19919
							WA502-0
No JP or Ply	Incremental NGTL		4,925,541,918	0.673719	1,356,123	7,310,977,075	WA503-0
	Incremental GTN N-S	Ryckman Crk Storage					WA504-802631
	NWP I-5 Mainline EXP	Gill Ranch Storage					WA505-81166
	Incremental Ruby	Mist Storage					WA511-89318
	NWP Wen lateral EXP	Wild Goose Storage					WA512-146
	Incremental Foothills	Aeco Hub Storage					WA570-6115
	NWP Z20 lateral EXP	Magnum Storage					WA577-388
	T-South-So Crossing	Clay Basin Storage					
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO	KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
Limit JP	KEY ELEMENTS IN SENDOUT SCENARIO		4,904,134,687	0.669166	382,310	7,328,726,948	OR101-0 OR104-136164 OR105-30529 OR111-18710 OR170-19919 WA502-0 WA503-0 WA504-0 WA505-81166 WA511-89318 WA512-0 WA570-6115 WA577-388	
	Current Station2	JP1 AECO Base/Fixed, Winter, Day W/S, Peak						
	Current NOVA	JP2 SUMAS Base/Fixed, Winter, Day W/S, Peak						
	Current GTN	JP3 ROCKIES Base/Fixed, Winter, Day W/S, Peak						
	Current NWP	JP4 HUNT Base/Fixed, Winter, Day W/S						
	Current Foothills	PLY-1 KINGSGATE BASE						
	Current Ruby	PLY-2 OPAL BASE						
		KERN WINTER						
		STAT2 BASE						
	Incremental NGTL	Ryckman Crk Storage						Opal Incrm Supply
	Incremental GTN N-S	Gill Ranch Storage						BioNaturalGas
	NWP I-5 Mainline EXP	Mist Storage						Resource Mix - 3 Basins
	Incremental Ruby	Wild Goose Storage						
	NWP Wen lateral EXP	Aeco Hub Storage						
Incremental Foothills	Magnum Storage							
NWP Z20 lateral EXP	Clay Basin Storage							
T-South-So Crossing								
Bremerton/Shelton								
Trails West (Palomar)								
NWP East OR Mainline EXP								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited						
	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1					
	Current NOVA	JP2					
	Current GTN	JP3					
	Current NWP	JP4					
	Current Foothills	PLY-1					OR101-0
	Current Ruby	PLY-2					OR104-198893
							OR105-30529
							OR111-18710
							OR170-19919
							WA502-0
Limit Ply	Incremental NGTL	Ryckman Crk Storage	4,896,316,722	0.668355	541,152	7,325,921,248	WA503-0
	Incremental GTN N-S	Gill Ranch Storage					WA504-96113
	NWP I-5 Mainline EXP	Mist Storage					WA505-81166
	Incremental Ruby	Wild Goose Storage					WA511-89318
	NWP Wen lateral EXP	Aeco Hub Storage					WA512-0
	Incremental Foothills	Magnum Storage					WA570-6115
	NWP Z20 lateral EXP	Clay Basin Storage					WA577-388
	T-South-So Crossing						
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
Medium Load Growth, Medium Pricing Environment. Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak				
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak				
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak				
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S				
	Current Foothills	PLY-1	KINGSGATE BASE				OR101-0
	Current Ruby	PLY-2	OPAL BASE				OR104-207358
			KERN WINTER				OR105-30529
			STAT2 BASE				OR111-18710
							OR170-19919
							WA502-0
	Incremental NGTL						WA503-0
	Incremental GTN N-S	Ryckman Crk Storage					WA504-504863
	NWP I-5 Mainline EXP	Gill Ranch Storage					WA505-81166
Incremental Ruby	Mist Storage					WA511-89318	
NWP Wen lateral EXP	Wild Goose Storage					WA512-141	
Incremental Foothills	Aeco Hub Storage					WA570-6115	
NWP Z20 lateral EXP	Magnum Storage					WA577-388	
T-South-So Crossing	Clay Basin Storage						
Bremerton/Shelton							
Trails West (Palomar)							
NWP East OR Mainline EXP							
Incremental GTN S-N							
Incremental Enbridge							
Pacific Connector							
Limit JP and Ply	Opal Incrm Supply						
	BioNaturalGas						
	Resource Mix - 3 Basins						
			4,925,541,918	0.673719	958,508	7,310,977,075	

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
High Price	KEY ELEMENTS IN SENDOUT SCENARIO		4,930,179,139	0.672474	3,313	7,331,409,397	OR101-0 OR104-0 OR105-0 OR111-0 OR170-1551 WA502-0 WA503-0 WA504-0 WA505-0 WA511-0 WA512-0 WA570-1762 WA577-0	
	Medium Load Growth, High Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited	KEY ELEMENTS IN SENDOUT SCENARIO						
	Current Station2	JP1						AECO Base/Fixed, Winter, Day W/S, Peak
	Current NOVA	JP2						SUMAS Base/Fixed, Winter, Day W/S, Peak
	Current GTN	JP3						ROCKIES Base/Fixed, Winter, Day W/S, Peak
	Current NWP	JP4						HUNT Base/Fixed, Winter, Day W/S
	Current Foothills	PLY-1						KINGSGATE BASE
	Current Ruby	PLY-2						OPAL BASE
								KERN WINTER
								STAT2 BASE
	Incremental NGTL	Ryckman Crk Storage						Opal Incrm Supply
	Incremental GTN N-S	Gill Ranch Storage						BioNaturalGas
	NWP I-5 Mainline EXP	Mist Storage						Resource Mix - 3 Basins
Incremental Ruby	Wild Goose Storage							
NWP Wen lateral EXP	Aeco Hub Storage							
Incremental Foothills	Magnum Storage							
NWP Z20 lateral EXP	Clay Basin Storage							
T-South-So Crossing								
Bremerton/Shelton								
Trails West (Palomar)								
NWP East OR Mainline EXP								
Incremental GTN S-N								
Incremental Enbridge								
Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		KEY ELEMENTS IN SENDOUT SCENARIO	NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)	
Low Price	Medium Load Growth, Low Pricing Environment, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited								
	KEY ELEMENTS IN SENDOUT SCENARIO								
	Current Station2	JP1	AECO Base/Fixed, Winter, Day W/S, Peak						
	Current NOVA	JP2	SUMAS Base/Fixed, Winter, Day W/S, Peak						
	Current GTN	JP3	ROCKIES Base/Fixed, Winter, Day W/S, Peak						
	Current NWP	JP4	HUNT Base/Fixed, Winter, Day W/S						
	Current Foothills	PLY-1	KINGSGATE BASE					OR101-0	
	Current Ruby	PLY-2	OPAL BASE					OR104-0	
			KERN WINTER					OR105-0	
			STAT2 BASE					OR111-0	
								OR170-1551	
					4,854,344,008	0.662130	3,313	7,331,409,397	WA502-0 WA503-0 WA504-0 WA505-0 WA511-0 WA512-0 WA570-1762 WA577-0
		Incremental NGTL	Ryckman Crk Storage	Opal Incrm Supply					
	Incremental GTN N-S	Gill Ranch Storage	BioNaturalGas						
	NWP I-5 Mainline EXP	Mist Storage	Resource Mix - 3 Basins						
	Incremental Ruby	Wild Goose Storage							
	NWP Wen lateral EXP	Aeco Hub Storage							
	Incremental Foothills	Magnum Storage							
	NWP Z20 lateral EXP	Clay Basin Storage							
	T-South-So Crossing								
	Bremerton/Shelton								
	Trails West (Palomar)								
	NWP East OR Mainline EXP								
	Incremental GTN S-N								
	Incremental Enbridge								
	Pacific Connector								

SCENARIO NAME	KEY ELEMENTS IN SENDOUT SCENARIO		NPV 20 Year Costs in \$000s	Average Cost Per Therm	Max Year Unserved Demand (Therms)	Total Served Demand (Therms)	Class of Unserved Demand (Therms)
	Current Station2	JP1					
Medium Load Growth, Medium Pricing Environment with high volatility, Stochastic Weather, SCC w/ 3% Discount Rate Carbon Forecast. All elements considered. All items in RED mean those elements were excluded from the scenario. Items in BLUE were limited		AECO Base/Fixed, Winter, Day W/S, Peak					
	Current NOVA	SUMAS Base/Fixed, Winter, Day W/S, Peak					
	Current GTN	ROCKIES Base/Fixed, Winter, Day W/S, Peak					
	Current NWP	HUNT Base/Fixed, Winter, Day W/S					
	Current Foothills	KINGSGATE BASE					OR101-0
	Current Ruby	OPAL BASE					OR104-0
		KERN WINTER					OR105-0
		STAT2 BASE					OR111-0
							OR170-1551
High Volatility	Incremental NGTL	Ryckman Crk Storage	4,747,123,656	0.647505	3,313	7,331,409,397	WA502-0
	Incremental GTN N-S	Gill Ranch Storage					WA503-0
	NWP I-5 Mainline EXP	Mist Storage					WA504-0
	Incremental Ruby	Wild Goose Storage					WA505-0
	NWP Wen lateral EXP	Aeco Hub Storage					WA511-0
	Incremental Foothills	Magnum Storage					WA512-0
	NWP Z20 lateral EXP	Clay Basin Storage					WA570-1762
	T-South-So Crossing						WA577-0
	Bremerton/Shelton						
	Trails West (Palomar)						
	NWP East OR Mainline EXP						
	Incremental GTN S-N						
	Incremental Enbridge						
	Pacific Connector						
		Opal Incrm Supply					
		BioNaturalGas					
		Resource Mix - 3 Basins					

Deterministic All In	GTN Only	GTN with Storage	NWP Only	NWP with Storage	Storage Only
Bremerton Shelton Realignment	Incremental GTN Capacity From Stanfield - 8,369 Dth by 2028, 12,115 Dth by 2038	Incremental GTN Capacity From Stanfield - 8,369 Dth by 2028, 12,115 Dth by 2038	Bremerton Shelton Realignment	Bremerton Shelton Realignment	Spire Storage - 1,000 Dth in 2019
Incremental GTN Capacity From Stanfield - 8,369 Dth by 2028, 22,533 Dth by 2038	Incremental GTN Capacity from Kingsgate - 3,380 Dth by 2038	Incremental GTN Capacity from Kingsgate - 3,380 Dth by 2038		Spire Storage - 1,000 Dth in 2019	
Incremental GTN Capacity from Kingsgate - 1,291 Dth by 2038	Incremental Nova - 11,710 Dth by 2038	Incremental Nova - 11,710 Dth by 2038 Spire Storage - 1,000 Dth in 2019			
Monintor Incremental Nova Spire Storage - 1,000 Dth in 2019					



In the Community to Serve®

CASCADE NATURAL GAS ANNUAL HEDGING PLAN

(UG-_____)

SEPTEMBER 28, 2018

Table of Contents

I.	Overview/Purpose	1
II.	Current Portfolio and Hedging Design	3
III.	Reviewing Risk and Benchmarking Hedge Cost	5
IV.	Proposed CNGC Hedging Program	6
V.	Data Driven Analysis	10
VI.	Transition Plan	13
VII.	Conclusion.....	14

I. Overview/Purpose

On March 13, 2017, the Washington Utilities and Transportation Commission (WUTC) issued its Policy and Interpretative Statement on Local Distribution Companies’ (LDCs) Natural Gas Hedging Practices in Docket UG-132019. This statement provided guidance on how LDCs should develop and implement more robust risk management strategies, analyses, and reporting related to hedging activities.

In Docket UG-132019, the WUTC reviewed hedging practices by utilities in the State of Washington and found that local LDCs experienced opportunity costs associated with price risk mitigation techniques upwards of \$1.1 billion over a ten-year period. The WUTC discovered that many of these costs were caused by adherence to programmatic “set-it-and-forget-it” price risk mitigation techniques (herein called hedging or hedging strategies) that did not respond well to the downward trending market which prevailed in recent years. The WUTC concluded that, while hedging is necessary to limit upside price risk, an effective program should also give flexibility that can mitigate downside hedge losses by adjusting to changing market conditions. To achieve this goal, the Commission identified a need for a risk-responsive hedge plan with a robust analytical framework. Satisfying the Commission’s natural gas risk management goal is the purpose of the work associated with this document.

Cascade Natural Gas (Cascade, CNGC, or Company) is responsible for obtaining natural gas from suppliers and delivering it to customers. Natural gas is a volatile commodity by nature and unexpected price spikes can cause a drastic increase to the cost of gas, adversely impacting consumers. For this reason, utility companies are actively involved in using risk management techniques, like natural gas hedging, to mitigate price risk.

Cascade’s Gas Supply Oversight Committee (GSOC) oversees the Company’s gas supply purchasing and hedging strategy. Members of GSOC include Company senior management from Gas Supply, Regulatory, Finance and Operations. In preparing the Company’s hedging document, Cascade has relied on the following points when interpreting the WUTC hedging policy statement:

- WUTC affirmed its preference that natural gas LDCs utilize risk responsive hedging practices.
- Hedging practices should not be speculative in nature. Hedging is an activity designed to reduce price uncertainty, not an attempt to realize profits based on predictions of anticipated market movements.
- The Commission believes that while there is no right mix of methods that may be applied unilaterally due to utility specific operations, LDCs must reasonably plan for market volatility and appropriately react to balance ratepayer exposure to hedging losses. This includes recognizing dual protection from upside price risk and downside hedging loss, along with annual validation of acceptable hedging outcomes.
- Based on the WUTC hedging policy statement the Company is aware that the WUTC views the Gettings White Paper as a resource in helping LDCs develop more robust risk management programs. While Cascade has considered portions of the White Paper to inform the Company's enhanced risk management strategies, analysis and reporting, Cascade has hired a consultant, Gelber & Associates, to assist the Company in developing the proper risk responsive process and analyses.
- WUTC expects LDCs to make reasonable progress in developing a more sophisticated risk management framework, targeting the submission of the 2019 PGA filing to contain plans that exhibit the full hedging strategy to implement for 2020 and beyond.

With the assistance of Gelber & Associates (G&A or Gelber), an energy consulting firm with 30 years of experience in utility hedging, CNGC has reexamined its hedging practices to develop a hedging plan that uses a data-driven approach, and provides the flexibility to manage both upside price risk and downside hedge loss risk.

The purpose of Cascade's 2018 Hedging Plan is to describe the Company's most recently completed hedging year strategy, provide an overview of comparison of executed prices vs the market at the time, describe the conditions affecting the Nov18-Oct19 portfolio and hedging design, ending with an update of the Company's hedging policy implementation plan to meet the objectives outlined in the WUTC hedging policy statement.

Gelber & Associates has been working in close coordination with the CNGC Utility Hedging Project Team to design and implement processes and analytics to comply with the Washington Utility and Transportation Commission UG-132019 policy statement while simultaneously complying with Oregon Public Utility Commission UM-1286 PGA integrated hedging guidelines. The goal of the Project Team is to receive Acknowledgement from the WUTC regarding the appropriateness of the proposed hedging plan structure.

WUTC's Docket UG-132019 requires that hedging programs steer away from inflexible, programmatic practices employed previously become more "risk responsive" and "data driven". WUTC requires an annual hedging plan submission that demonstrate risk responsive strategies in addition to retrospective hedge reporting. Gelber believes and Cascade concurs that the use of a diversified portfolio of hedging instruments including swaps, call options, and fixed-price physicals is the appropriate design criteria to satisfy Commission requirements.

The hedging plan will require annual corporate approval from the GSOC after reviewing the plan's prior year performance and establishing guidelines for purchases in the coming year. While the proposed plan seeks to institute a risk-responsive framework for future hedge purchases, exceptions

to the plan may occur based on changing market conditions. All exceptions will be concisely memorialized before they occur. All features, costs, and cash flows associated with the hedging program are expected to receive proper treatment by the PGA and the rate base.

Cascade believes this hedging policy implementation plan will lead to a more robust risk management analysis, execution, review and reporting, with an eye towards substantive overview of hedging methodologies and reviewing said strategy to identify opportunities for continuous improvement in meeting the Company's risk mitigation objectives.

II. Current Portfolio and Hedging Design

The most significant expense to ratepayers is the gas that the Company purchases to meet customer demand. Cascade recovers only the allowed gas costs from its ratepayers. Allowed gas costs are determined by the state utility commissions. In determining allowable gas costs, the Commissions expect Cascade to employ prudent business practices and have a balanced, diverse and flexible portfolio in place to ensure customers are paying a reasonable price for the gas. Failure to do this may cause the Commissions to disallow recovery of imprudent gas costs within Cascade's rates. Cascade constantly seeks methods to ensure price stability for customers.

Fixed Price Physicals and Risk Management

Because the price Cascade pays for gas is subject to market conditions, the Company participates in hedging techniques within designated parameters to minimize the risk of losses or assumption of liabilities from commodity prices.

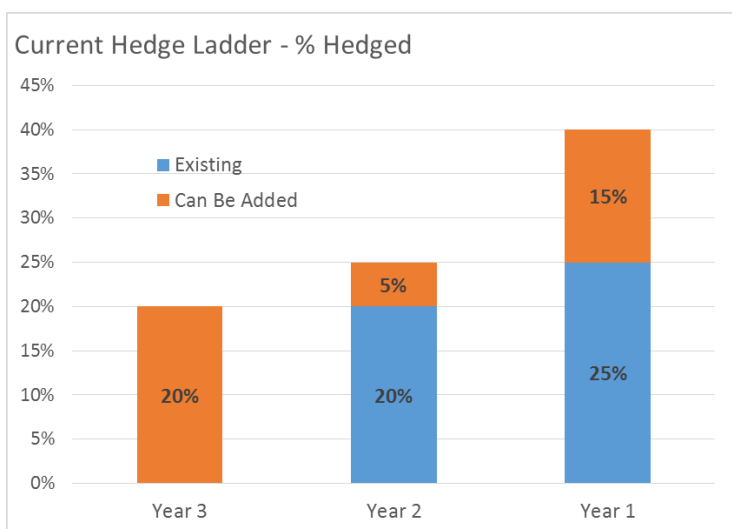
In Cascade's view, risk is associated with business objectives and the external environment. The number of possible strategies to deal with risk is almost infinite. Risk can be categorized as to whether the risk is one to be avoided, one to be accepted and controlled, or a risk left uncontrolled. When a risk is high impact with a high likelihood of occurrence, it is probably too high in relation to the reward and should be avoided. It is reasonable to accept business risks that can be managed and controlled. For some risk, the measurable impact is low and the risk may not be worth controlling at all. These are risks where Cascade can absorb a loss with little effect to ratepayers. Cascade's current policy is directed toward those risks that are considered manageable, controllable and worth the potential reward. The manageable risk requires acceptable analysis of the possible side effects on the financial position compared to the potential rewards.

The current hedging plan for CNGC, approved by GSOC in the spring of 2018, is comprised of 100% physical purchases in a ladder design in which hedges are added and accumulated every year prior to the final consumption of the gas. The natural gas is considered hedged when its price is locked-in and scheduled for delivery in the physical market using a fixed-price physical purchase. The program currently allows up to 20% of expected purchases to be hedged three years prior to delivery, up to 25% hedged two years prior, and up to 40% hedged the year prior to the final consumption of the gas. The portfolio percentage of fixed priced purchases is defined in the Cascade Natural Gas NOV17-OCT18 PGA Hedging Plan dated September 28, 2017.

The gas supply portfolio design is overseen by the GSOC. GSOC determines the framework for the portfolio design including the allowable percentage of fixed-priced purchases. The execution of the portfolio and the hedging plan is accomplished primarily by the Supervisor of Gas Supply, under the

leadership of the Manager of Gas Control & Supply for the Western Region. Either the Supervisor or Manager can execute purchases under the current plan (under the proposed plan they will retain this function), as well as the ability designate a backup within Gas Supply with the responsibility to execute trades in the event of their absence. The Manager of Supply Resource Planning functions as compliance manager regarding the WUTC's UG-132019 policy statement. This team is overseen by the Director, Gas Supply—Utility Group.

As depicted in the chart below, the structure of the current plan is as follows: Year 1 is currently hedged at 25% (blue bars) which leaves 15% (orange bar) of additional hedges that can be added for Year 1. Year Two is currently hedged at 10% which leaves 15% that of additional hedges that can be added for Year 2. (For clarity, when Year 2 becomes Year 1, the hedge percentage will increase from a maximum of 25% to a maximum of 40% unless overridden by the GSOC portfolio design discussed previously). Year 3 is currently unhedged which leaves 20% of additional hedges that can be added for Year 3.



Additional characteristics of the current strategy are described below:

- Stay the course. Portfolio procurement for 2018 should continue with same guidance as 2017's plan. This is the most reasonable action while the Company works with Gelber & Associates to identify modifications to future portfolio and hedging designs for GSOC to consider.
- Annual load expectation (Nov-Oct) is approximately 30,000,000 dekatherms, consistent with recent load history.
- Portfolio procurement design based on a declining percentage each year, accordingly: Year 1: approximately 80% of annual load expectation; Year 2: 40%, Year 3: 20%.
- Portfolio must contain a variety of parties, locations, contract volume and terms.
- Considerations of structured products, caps, floors, derivatives, etc. are not to exceed 5% of overall contract supply target. These items are principally used as a potential offset to fixed priced physicals being "out of the money".

- GSOC can always modify the plan to include additional years if a significant discount price materializes.
- GSOC may make further modifications to this portfolio plan based on the results of the Company’s hedging initiative to be in compliance with WUTC docket UG-132019.

Figure 1 provides a summary of the elements of the supply portfolio design. Figure 2 provides an overview of the planned hedge targets. Please see Appendix B for the listing of hedges that were in effect during 2017, as well as a comparison of fixed price to the monthly settled price.

	Nov18-Oct19	Nov19-Oct20	Nov20-Oct21	TOTALS
Current Notional Supplies Under Contract				
RFP Notional Supplies Planned				
Total Notional Base Supplies (Current + RFP)				
Base Load (5 yr Avg Core Sendcom)				
Percentage of Base Load vs expected Base Supplies				
GSOC Guideline Target (up to 80 yr 1, 40 yr 2, 30 yr 3 of 5 yr Avg Sendcom)				

	Nov18-Oct19	Nov19-Oct20	Nov20-Oct21
Total Base (Current + RFP) Fixed			
Base Load Fixed or Hedged			
GSOC Guideline of 5 yr Avg Sendcom			

III. Reviewing Risk and Benchmarking Hedge Cost

The cost of hedging can vary greatly. The cost of hedging has been a focus of the Commission concern about hedge losses. The purpose of this section is to address the cost of hedging and the concerns of Commissions, and to discuss performance for hedging review.

The primary tools that utilities use for hedging include swaps, call options, physical fixed-price purchases, and storage. For this discussion the use of call options will be discussed. Through the purchase of call options, utilities can hedge their entire natural gas portfolio. For utilities, call options cap price increases, and at the same time allows utilities to benefit from falling prices. However, utilities must pay the call option premium (price of the call option). The premium of call options is dynamic. The premium cost is market driven and the mathematics around the theoretical premium value is complex, generally discussed in terms of the Black-Scholes formula. Nonetheless, the cost of at the money (ATM) natural gas call options in today’s market is mostly a function of the price of the gas to be purchased, volatility, and time until expiration. In today’s market, the cost of an ATM call option purchased by utilities for the coming winter is under 50 cents per dekatherm. This price may of course vary depending on variety of factors including time to expiration. As mentioned, the premium is market driven. This call option premium with a cost of 50 cents can cover the cost of hedging the utility’s exposure to upward price movements. In this way, the cost of the hedging program is capped at the cost of the call option premiums regardless if the market rises or falls. In terms of creating a metric, this identifiable hedge cost of for using call options can be applied to other hedging products. The cost of purchasing ATM options serves as a benchmark for the cost of a hedge program.

As indicated earlier, for purposes of risk responsiveness and risk measurement, the daily gas and the storage gas is excluded from the risk report. Under the current portfolio design, daily gas is 20% of the utility procurement design. The daily gas is for system swing, system balancing, and dependent on weather vagaries and other operating conditions. For this reason, counting daily gas in market exposure and hedging is not relevant. For storage, the supply is only used for peaking loads when customers require and must have gas supplies when delivery systems are otherwise overloaded. These volumes should also be exempt from risk measurement and hedging.

IV. Proposed CNGC Hedging Program

The proposed CNGC Hedging Program will utilize a three-year forward ladder structure covering 12 months per year. The ladder is a declining percentage for the future hedge years with maximum and minimum percentage volume purchases in each year. Hedge purchases are currently anticipated to occur at regular intervals (e.g. once per month) with the flexibility to delay or accelerate purchases in accordance with current market conditions. Data driven analysis done primarily in Microsoft Excel will demonstrate the financial impacts of both higher and lower prices at different CNGC supply basins and pertinent market hubs.

The philosophy behind the recommended CNGC Hedging Plan is to accomplish several simultaneous goals:

- Provide essential price protection against adverse price increases which have detrimental impacts for CNGC customers.
- Modify the existing program to be more “risk-responsive”: adjusting to changing market conditions for natural gas and in compliance with the Washington Utility and Transportation Commission’s Policy Statement UG-132019.
- Reduce hedge losses and more proactively respond to a falling market.
- Coordinate hedge design features with appropriate Cascade personnel.

In addition to fixed-price physical purchases, Gelber has recommended that Cascade use a level of financial instruments to offset and hedge physical gas purchases that are not fixed. The primary financial instruments to use would be the swap and the call option.

At this time, CNGC does not use financials hedging products such as swaps or call options. The use of financials will likely necessitate various corporate approvals, the creation of new credit facilities, and modifying procedures and other requisite back office controls. Gelber believes that financials can offer potential cost savings for certain types of hedging, further demonstrating Cascade’s commitment to the advancement of a risk responsive program that is in compliance with the WUTC’s expectations. In addition, financials give Cascade more choices on how to hedge and run the program by offering the ability to use physical and financial purchases concurrently. Gas may be hedged using fixed-price physicals, financial swaps, or financial call options and every type of hedge is combined to determine the hedge percentage. In deciding between the financial and physical products, cost will be a major consideration. While Gelber recommends the use of financial instruments, it is possible to implement the proposed hedging program with only the use of physical purchases.

At the beginning of the PGA season the Gas Supply group will provide GSOC with a hedging plan for the coming buying year. The submission of the hedging plan is to occur prior to the start of the planning year on April 1st of each year. The hedging year runs from April 1st to March 31st and the rollover occurs on the trading day closest to or on March 10 just prior to the start of the new hedging year. On the rollover date, the prior Year 1 goes away, Year 2 becomes Year 1, Year 3 becomes the Year 2, and a Year 3 is added. To clarify, after the rollover date on March 11, the coming April through March are to be included into Year 1 and so forth for the subsequent years. The hedging plan sets out a vision for how the coming year's buying program will go. The Plan will include the following:

- A brief review of the prior year's hedging activities and results.
- A CNGC procurement book snapshot that shows volumes of gas hedged, dates that hedges were executed, the delivery months prior hedges, prior hedges compared to the current market price, volumes of gas left to be hedged, as well as risk analysis for unhedged volumes still exposed to price risk. The Resource Planning group will provide the trade book snapshot using trade data supplied by the Gas Supply team. A working mock-up of the procurement book snapshot will be generated before the new hedging plan is implemented.
- The limits, on both on the low and high end, presenting how much can be hedged for the coming season.
- A preliminary look at the hedging plan for the upcoming year.
 - Potential market opportunities and risks for the coming buying season.
 - The major market factors affecting prices for the coming year.
 - How the hedging plan and percentages may change over time.
 - Basin location risk (otherwise known as basis risk).
- Disclosure of who will be primary and who will be secondary in the performance of hedge execution, who is responsible for deal capture and confirmation.

The hedging program envisions having the GSOC review and then acknowledge, modify, or reject the percentage bands at least once per year at a time appropriate to the hedging cycle. Along with their review and determination, the GSOC will be provided with an executive summary for the coming annual hedging plans and percentages. The hedge program administrators can make marginal exceptions to the hedging plan without specific GSOC authorization as long as the exception is within the hedging plan's overall structure and GSOC is notified within 72 hours after the exception occurs. All exceptions will be memorialized into an exception document. GSOC will be consulted prior to major changes to the hedging plan. Actions that can be taken both with and without GSOC authorization will be established in writing by GSOC at the time they approve the portfolio design. All decisions, both data and market-driven, will be documented and memorialized. This is designed to be compliant with the WUTC Docket UG-132019 and allows for internal transparency and potential data requests by regulators in the event of a prudency review or a PGA hearing.

Hedging purchases for one year out are expected to occur a minimum of once a quarter but more typically once a month. Generally, once a quarter purchases or hedge purchases are reserved for locations such as AECO where the volumes are relatively small, and markets could be illiquid or inefficient for the size of the hedge transaction. Otherwise, hedges will occur monthly per market guidance and analytical framework.

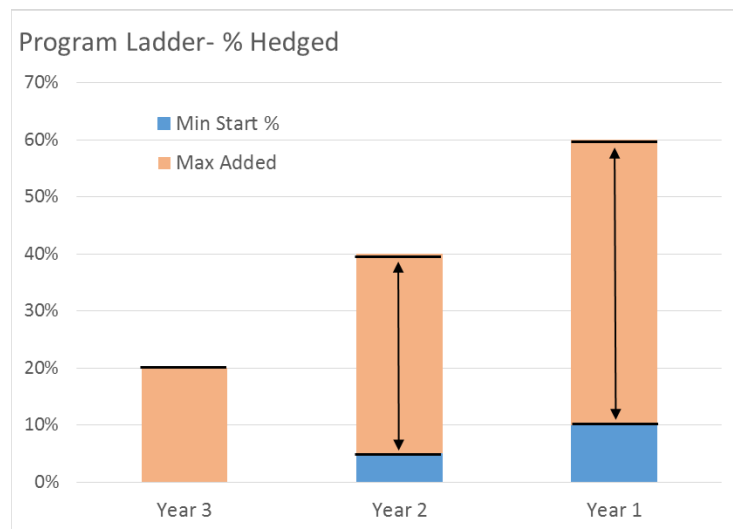
As in the current plan, the hedge book will continue to utilize a three-year forward-looking ladder. The ladder will identify a percentage range for purchases to be made within each year. Data driven

analysis and input from market knowledgeable personnel will then be used to identify the hedge percentage goal for each year with the ability to risk responsively adjust the chosen percentages within the range established by the minimum and maximum allowable volumes. Hedging decisions, which are supported by analytics, will be memorialized into a file for later retrieval as necessary for management review, regulatory request, or staff training. The ranges are designed to act as maximum and minimum purchase boundaries within the program. In general, the program goal is to remove price risk on behalf of customers by purchasing larger volumes when prices are historically low and to avoid making excessive purchases when prices are historically high to minimize hedge loss risk. The greater flexibility of the hedge program allows CNGC to be more risk-responsive to changing prices.

A description of the percentage ranges is provided below. Figure 3 provides a graphical representation of these ranges.

- Year Three – hedge such that by the end of the year the cumulative hedge is between 5% and 20%
- Year Two – hedge such that by the end of the year the cumulative hedge is between 10% and 40%
- Year One – hedge such that by the end of the year the cumulative hedge is between 15% and 60%
- Hedge percentages may include physical fixed-price purchases, financial swaps, call options or a combination of the aforementioned products.

Figure 3 – Proposed Hedge Program Ladder



For years beyond three years, no fixed-price purchases or natural gas hedges are currently designed or anticipated. However, if market conditions become favorable for long-term future purchases or investment in reserve sources such as biogas become viable beyond the current buying window, an exception may be filed with the WUTC to modify the framework of the existing plan.

The volume of gas to be hedged against is CNGC’s expected core purchases under normal weather conditions as provided by the resource planning group. Figure 4 displays these volumes.

Figure 4 – Expected Core Purchases under Normal Weather

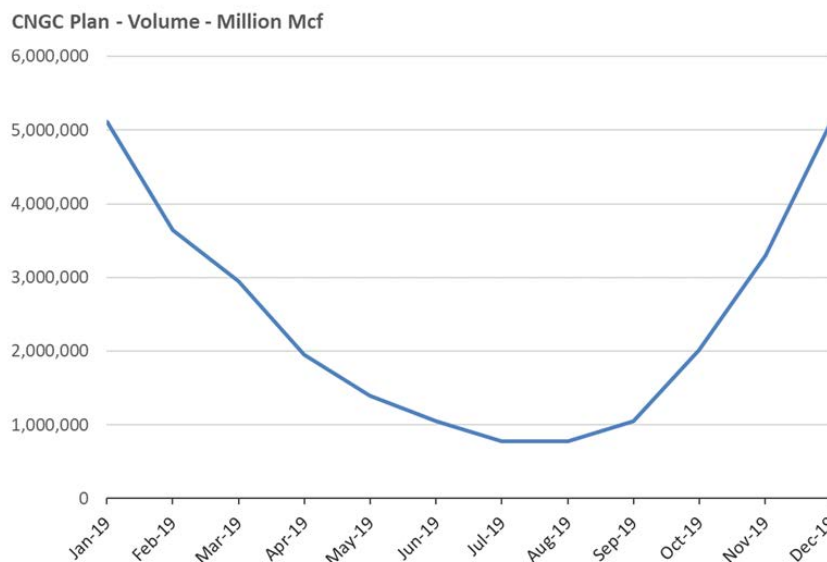


Figure 4 is the basis for CNGC volume usage and the associated hedge percentages in million cubic feet per month. The volume usage is called “Core Sendcom” and is a useful way to summarize CNGC’s monthly gas requirements. As expected, CNGC’s monthly gas requirements form a “U” shape with high Core Sendcom volumes in the colder months and low Core Sendcom in the warmer months. CNGC’s core customers are mostly residential and commercial customers. Non-core customers are large industrial and power generation customers who buy their own natural gas and use CNGC primarily for pipeline transportation to their burner tip on the utility distribution system.

Over time as markets change and customer needs evolve, it is possible that the market will become sometimes unfavorable, or conversely favorable, such that the hedging program laid out in this Plan may need to be modified. For example, the minimum volume may need to be lowered or the maximum volume raised. Other such program evolutions are likely over time. Program exceptions and modifications are anticipated for this program. Indeed, in order to be risk responsive, the program must be able to respond to the changing risk conditions. Possibly, the market’s changing condition can be short term in nature such as a price spike. Or, changing conditions may be broader based and a more permanent feature such as the supply changes associated with three-dimensional seismic or horizontal drilling.

The plan will require that all mandatory exception documents be concise, providing justification for short term market adjustments or opportunities. Also, the program’s basic structure and features will be reviewed by GSOC no less than every year for appropriateness. All program changes will be written into the structure outlined in this document and commensurate authority approvals will be obtained for major program changes.

Initially, G&A will provide a monthly hedge guidance document. Over time, the guidance document will evolve and eventually CNGC personnel will take over the generation of the guidance document,

consistent with GSOC's long term plan. Please see Appendix A for an example of this guidance document.

V. Data Driven Analysis

Analytical Support from Resource Planning

The CNGC hedging plan is supported by a data driven framework. This framework is comprised of analytics contained mostly in Microsoft Excel. Excel is the platform of choice due to its ubiquitous usage which can be maintained by existing personnel and adjust to certain personnel changes. The opportunity and appropriateness of adopting other platforms will be considered over time as warranted by changing technology, experience, and data sets.

CNGC customer risk measurement is calculated using the volume estimates set forth in the IRP, taking into considerations of usage estimates from the Sendcom Excel workbook that is maintained by Gas Control. The risk measurement spreadsheet shows fixed priced purchased volumes, call option purchases, fixed-floating swaps, physical fixed priced purchases, unbought anticipated gas volumes as well as gas purchases at variable pricing.

The projected CNGC customer risk measurement will maintain the ability to model the impact of prospective upward and downward price changes to quantify price risk exposure under uncertain market conditions. Potential high and lower prices are quantified using market derived volatility calculation over varying time horizons. The more volatile the market becomes the more price risk customers will have. It seems self-evident that utility customers are more financially impacted by the exposure to higher prices and generally benefit from lower prices. Even in the eventuality that the hedge book reaches 51% hedged or greater (the current maximum is 60%), it remains in the customers best interests to have the price continue to fall for the unhedged portion. The CNGC risk measurement portion of the data-driven framework is one of the key features of achieving the WUTC's policy goal of minimizing a customer's loss exposure on hedged volumes due to declining price.

The foundation of a data driven framework to support CNGC's hedging plan involves keeping an accurate inventory of all hedges made. This includes physical volumes hedged with fixed-price purchases, as well as all volumes hedged using financial swaps and call options. While tracking these trades, CNGC will keep an up to date calculation of the weighted cost of gas (WCOG) of purchases in a format that can be easily compared to the current market price of those hedges. This will give CNGC a consolidated, net position view on these trades and how they compare to the current market. Using the IRP Sendcom forecast to project future usage, CNGC will track the difference between volumes hedged at a known fixed price against unhedged volumes currently in which the price floats (changes) with the market. These floating volumes present an upside price risk to CNGC's customers because of the potential for prices to increase before expiration. Conversely, a downside loss risk exists on the portion of CNGC's portfolio that is hedged at a fixed price, due to the potential for prices to fall before the gas is consumed in the future. The hedged to unhedged volumes comparisons along with the net market position of the hedge volumes make up the trade book snapshot. Using calculated market volatilities and time left until expiration, the total Value at Risk (VaR) of

CNGC's portfolio can be calculated for different confidence intervals and time horizons. Quantifying current mark to market positions and the remaining value at risk for the portfolio will be the foundation for establishing further risk metrics that will allow CNGC to build a data-driven hedging program.

The resource planning group will provide all members of the gas supply group with pertinent analytical information on a periodic basis. This includes a trade book snap shot that shows the net position (to the current market) of the executed trades in the book. In addition, the resource planning group will provide a variety of risk metrics for the book. Risk metrics as defined by CNGC, in consultation with Gelber, will include comparisons to performance benchmarks, prevailing market price, and a measure of the exposure price for unpurchased volume. Both the upside risk and downside risk at CNGC's various supply basins will be quantified and measured. Through these metrics, to be performed at least once annually, CNGC will attempt to develop a "risk awareness" associated with its supply basins compared with the prevailing market. Further, the resource planning group will provide Gas Supply with internal and external market intelligence that establishes key market drivers. Market drivers may include current storage levels, weather forecasts, production forecasts, and other fundamental factors. Full development of the specific metrics and relevant information used will be an ongoing process and will be allowed to evolve and change as necessary with the market.

Correlations between the supply basins and Henry Hub NYMEX

Cascade purchases gas from that are priced off of the SUMAS, Northwest Rockies, and AECO gas basins. If Cascade is to utilize financial hedges, transactions may possibly be based on the NYMEX (New York Mercantile Exchange) natural gas market that has a benchmark location in Henry Hub, Louisiana. Therefore, it is important to study the relations and correlations between CNGC basin locations and NYMEX Henry Hub along with the basin locations with each other. Understanding the pricing relationships is critical for making trading book snapshots and calculating risk metrics such as VaR. In addition, the analysis is important in the selecting appropriate locations and potentially in the use of call options.

The price correlations are calculated using historical prices and will need to be maintained and updated (likely once or twice a year). In recent years, the correlation between NYMEX Henry Hub and Northwest Rockies has been strong. However, the correlation between NYMEX Henry Hub and SUMAS has been weaker and the correlation between NYMEX Henry Hub and AECO is weaker still. When Cascade purchases gas from a basin that has a weak correlation with NYMEX Henry Hub Cascade may need to make an accompanying location basis transaction to account for basin location risk. These basin locations or "basis" trades can be made on NYMEX and other financial exchanges.

NYMEX liquidity and therefore its cost efficiency and price transparency are the features of NYMEX hedging. However, without effective correlations, NYMEX hedging will not qualify for hedge accounting treatment. A combination of NYMEX hedges paired up with basis hedges could potentially mitigate the lack of correlation for AECO volumes.

Status of Align ETRM

Cascade currently uses an energy trading and transactional system/gas management system called Align. Align is a software application from FIS Global. Cascade currently uses the Align functionality as the repository for contracting, pricing, volume, nominating, measurement and settlement of physical

supplies. Align has a risk management component called ETRM, which Cascade has purchased. The Company has been investigating whether Align can be used strictly for transactional reporting. Align is a complex system and has required further business case analysis than was anticipated in the 2017 Annual Hedge Plan. An analysis of Align is still in progress and the Company hopes to finalize the potential long-term use of the ETRM module during 2019. The Company has determined that mark-to-market, value-at-risk (VaR) and other analytics will primarily be developed using Microsoft Excel.

Annual Retrospective Reporting

WUTC UG-132019 requires compliance with an annual reporting requirement as well as a hedging strategy review and modification requirement. The CNGC hedging plan will be compliant with both requirements. Retrospective reporting will be done in synchronicity with an annual presentation to the WUTC. The proposed program is designed to create informative content in a PowerPoint presentation to be given to the WUTC, as may be required for future acknowledgement proceedings.

Until the Commission is able to provide more guidance regarding the hedge plan acknowledgment process, in addition to the annual hedging plan filing, the Company proposes the scheduling of a WUTC information workshop. The Company envisions that as the proposed plan begins to be executed, the retrospective reporting is designed, per UG-132019, to be informative as to a narrative of the utility's perspective on the execution of the prior year's hedging strategy. Further, the report will provide insight about whether the metrics and tolerances identified in the previous year's plan continue to be appropriate and how CNGC's retrospective evaluation has directed modification to the upcoming year's hedging plan.

CNGC Hedging Program changes emanating from the retrospective review will be documented and memorialized for regulatory compliance as required by the WUTC. In this memorialization, specific program changes to be enacted will be identified and rationale for the changes will be stated.

OPUC considerations

The OPUC has guidelines for hedging program review embedded within the PGA review process. Each year the OPUC review's CNGC's gas procurement activities as a part of approving the PGA (Purchase Gas Adjustment). The OPUC PGA review process has been on-going on an annual basis for a long-time. The Oregon PGA process will continue to contain a session on utility hedging to which CNGC will give required hedging plan retrospective performance reports and prospective hedging evaluation and strategy. Reports and strategies may be labeled as confidential, and as such, may be excluded from public review.

Following the annual retrospective review of the hedging program with the WUTC as well as yearly program review with GSOC, suggested modifications will be integrated and implemented for the subsequent hedging year.

VI. Transition Plan

The current hedging plan is well underway for year 2018 through January of 2019. No changes to the current hedging plan will occur until after January 31, 2019. The existing hedging plan will be maintained and executed in its current format through January 31, 2019.

A transition period will begin after January 31, 2019, when the new hedging program contemplated in this Utility Hedging Program Design will be implemented in compliance with WUTC's Policy and Interpretive Statement UG-132019 and the hedging expectations identified in the OPUC PGA UM-1286 document. The new utility hedging program will use a modified and more flexible version of the existing ladder for hedge transactions in the supply basins at Sumas, AECO, and NW Rockies.

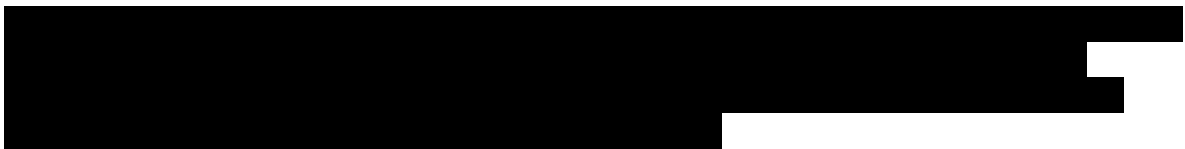
To transition to the newly constructed hedge plan, purchases in years two and three of the current hedging plan will be rolled into the new hedging plan and account for a base percentage of purchases in those years. CNGC will then begin layering in additional purchases of both physical and financial hedges in accordance with the more flexible, risk-responsive percentage guidelines outlined in the structure of the new plan.

The revamped hedging program will use a combination of fixed-priced physical gas purchases and financial instruments such as call options and swaps in a cost effective and risk-responsive manner. The use of financial instruments (calls and swaps) is contingent upon GSOC support and adequate credit facilities for the anticipated transactions.

Contingencies, Approvals, & Acknowledgement

The hedging plan anticipated herein will require credit facilities from banks and other counterparties. Credit facilities are necessary to assure counterparties that a transaction with CNGC is not subject to counterparty risk such as default risk or failure to perform. The potential hedge book could be comprised by fixed-priced physicals, swaps, and call options or any combination of the three. As management and markets change over time, other types of transactions may prove to be appropriate and added to the list of possible hedge transactions potentially requiring or alleviating credit requirements.

Without the necessary credit facilities in place, the proposed CNGC hedging plan would require significant adjustment from the current design, relying more on commercial good-will and other facilities already in place for CNGC's current physicals-only hedging program. It is essential that CNGC senior executives and the GSOC understand the requirements for credit facilities to the extent required by potential counterparties. Credit will be managed by CNGC's Accounting & Finance staffs in Bismarck, ND, and Kennewick, WA. Any additional credit management reports are anticipated to be created within the CNGC organization prior to final hedge plan implementation in late 2019.



Credit for physical natural gas purchases is currently being provided by the physical gas suppliers. These suppliers are typically seasoned and sophisticated trading companies. Cascade has executed NAESB contracts with over twenty physical natural gas suppliers.

Several of Cascade's physical gas suppliers are known to have an active and sophisticated trading and hedging operation with substantial operations. These parties could be able and possibly may be willing to extend additional credit lines to facilitate the CNGC hedging program and its swaps and options anticipated herein. Conversations with these suppliers are expected to be ongoing.

GSOC and other senior level executives are actively involved in this project. In addition to periodic written updates, the project team and Gelber have made presentations to GSOC. GSOC must authorize this plan before the full development and implementation of this proposed approach. The final development of the described hedging program and the anticipated training of CNGC staff is contingent upon the sign-off of appropriate senior executives and securing necessary credit facilities. There are several layers of sign-off incorporated into the project schedule.

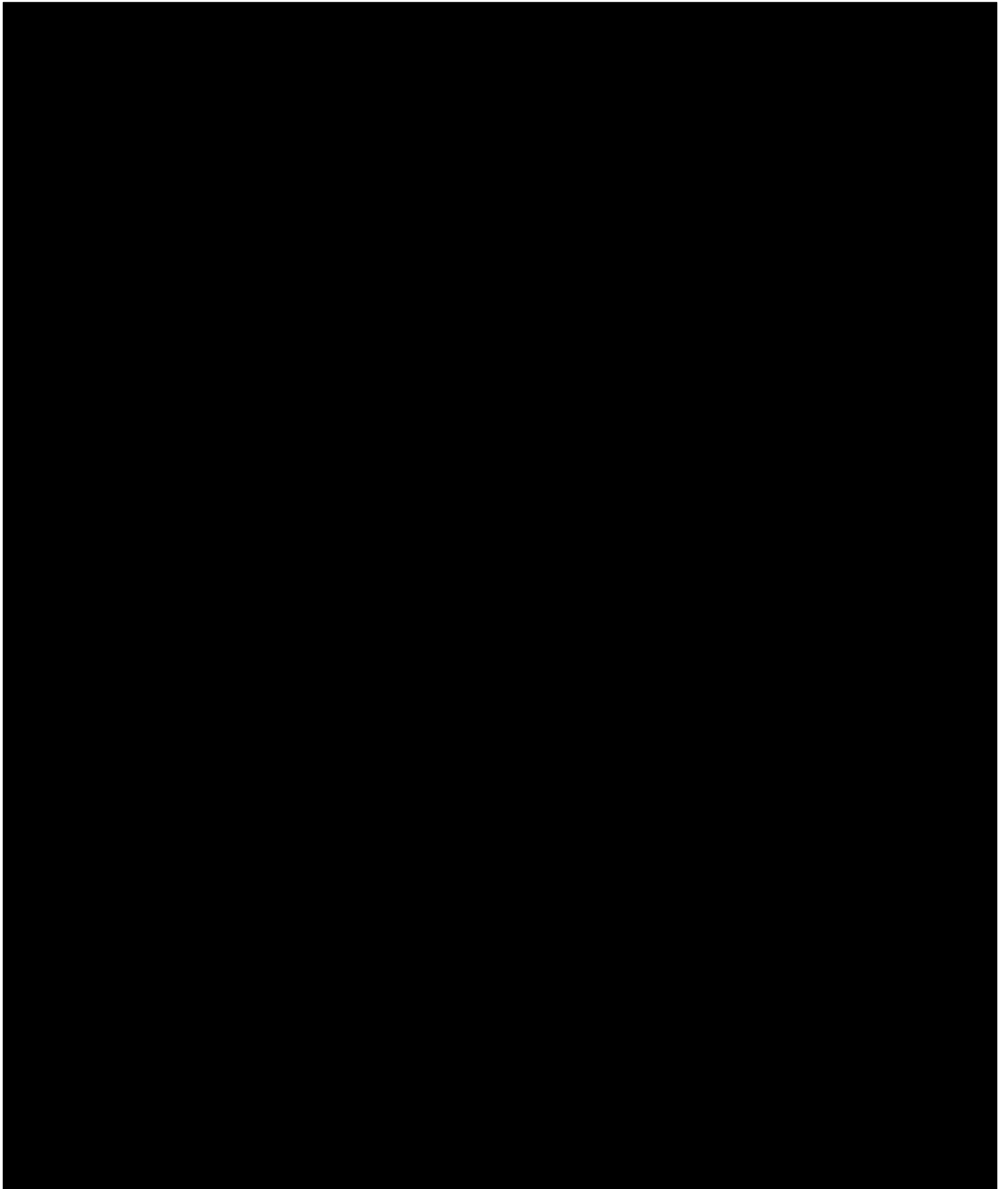
VII. Conclusion

The proposed hedge plan will continue to hedge using a three-year forward-looking ladder but establishes maximum and minimum percentage boundaries that allow hedge volumes to adjust to market conditions more flexibly. In addition, the prospective hedge plan advocates the use of financial instruments such as swaps and call option to improve flexibility and reduce cost of hedging. The proposed framework for hedging also establishes basic analytics and metrics that can be periodically updated to maintain a "risk awareness" of current market conditions associated with hedging.

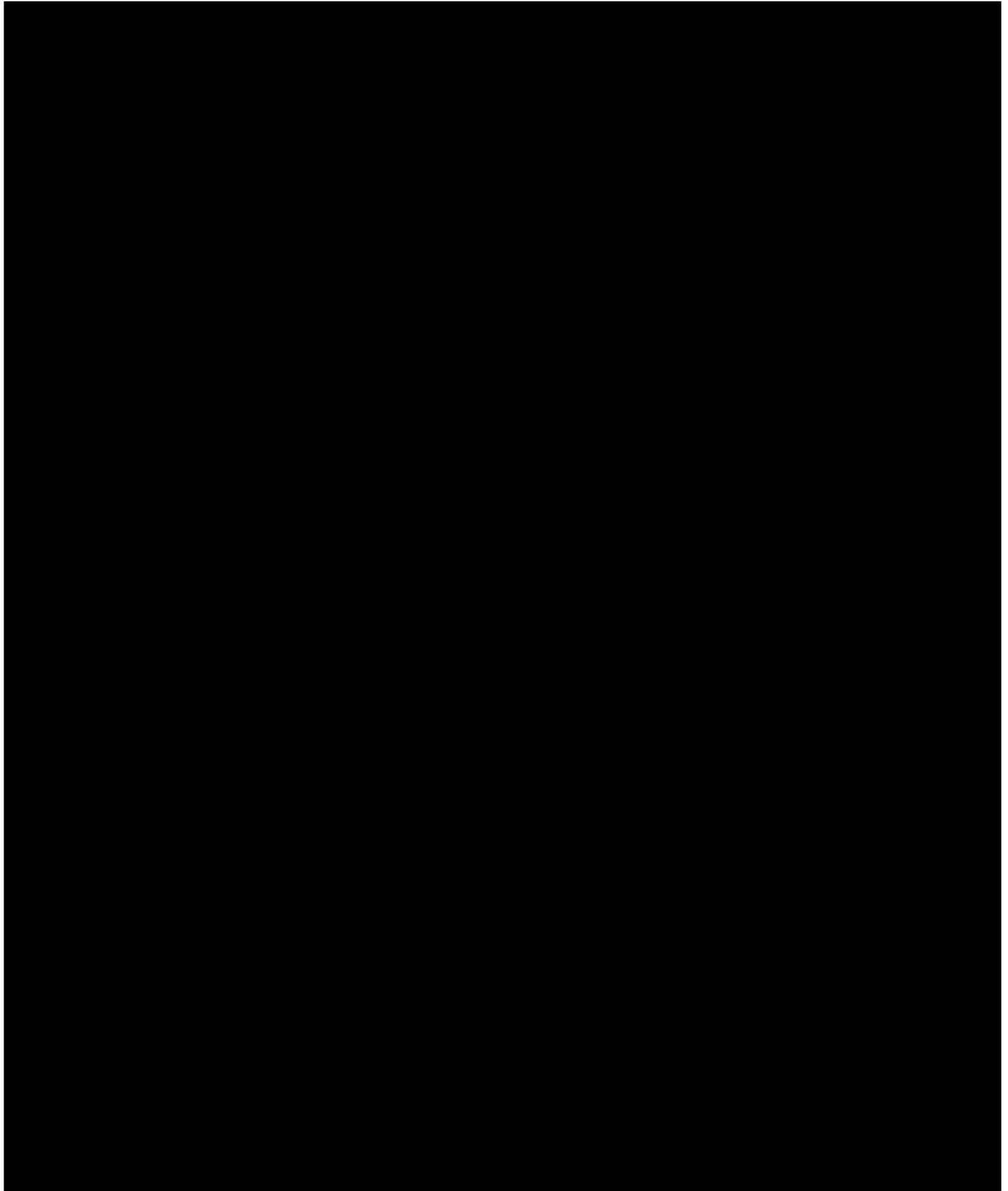
The CNGC Hedging Program will be compliant with WUTC UG-132019 and OPUC UM-1286. The transition from the current Program to the revised Program is targeted to occur after the current planning year that ends in March 2019. The revised program will be flexible in order to be risk responsive and will be data driven. The Program will be supported by annual reporting and decision memorialization.

Working with Gelber & Associates, the Company believes it has made notable progress in developing a more robust and risk responsive hedging program. As Cascade pledged in the 2017 Hedging Plan, this 2018 Hedging Plan contains a more detailed explanation of the Company's hedging program risk responsive philosophy components and design. With the design phase of the project nearing completion the Company still anticipates that the fully executed enhanced hedging strategy will be in place by the filing of the 2019 Annual Hedging Plan.

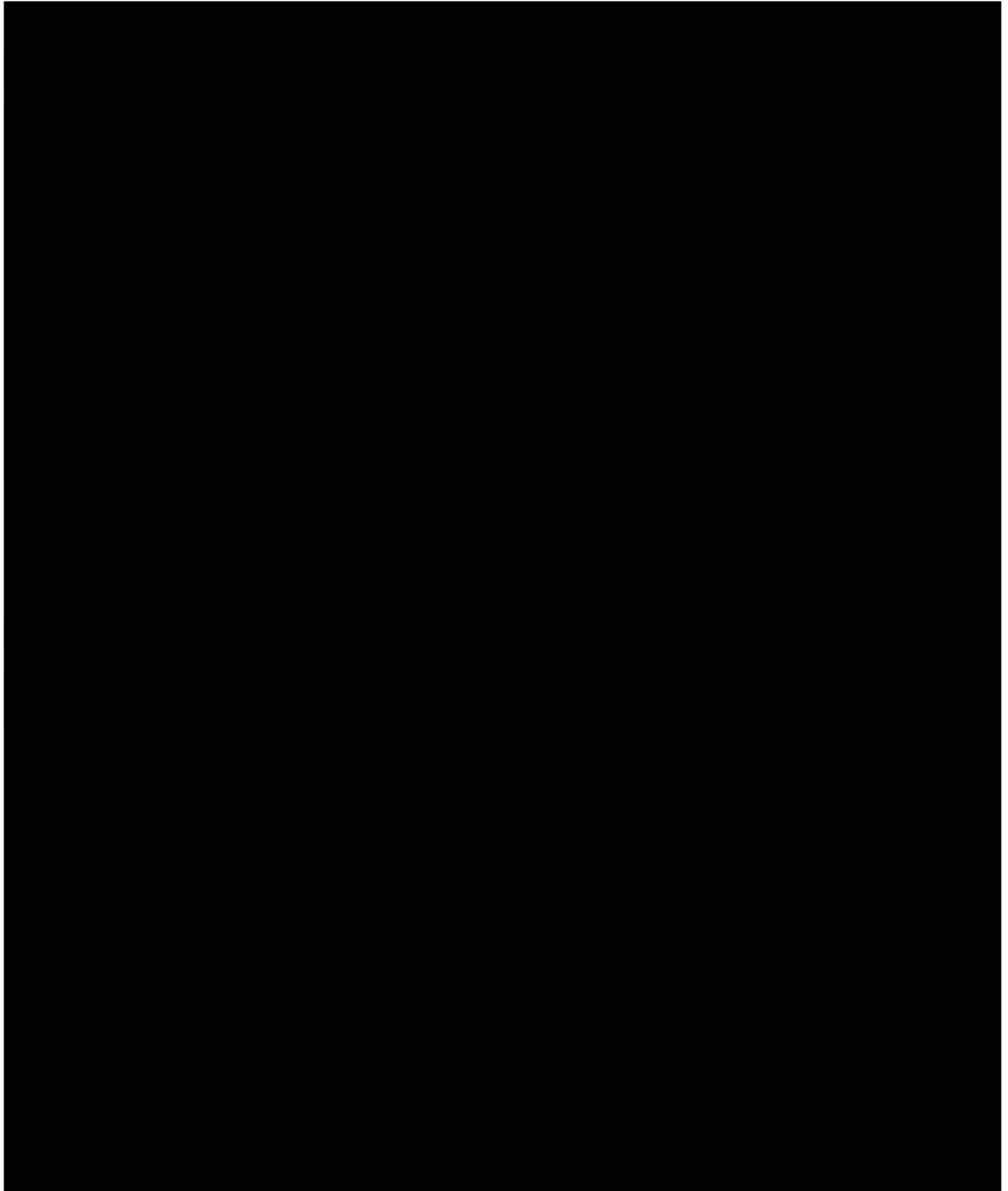
Appendix A: Example of Guidance Document



Appendix A: Example of Guidance Document



Appendix B: Hedge Transactions ending in 2017



Appendix B: Hedge Transactions ending in 2017

