

Integrated Resource Plan

Appendix 5A

Market Forecast Data Table

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Natural Gas Price Data Table

Table 1 Natural Gas Price Forecast Scenarios
 (Real 2012 US\$/MMBTU at Sumas)

Market Scenario	1	2	3	4	5
	Mid Electricity Mid GHG (Regional) Mid Gas	Low Electricity Low GHG (Regional) Low Gas	High Electricity High GHG (Regional) High Gas	Mid Electricity Mid GHG (Regional/Nat'l) Mid Gas	High Electricity High GHG (Regional/Nat'l) High Gas
2014	3.7	2.9	4.8	3.8	4.8
2015	3.7	2.8	4.9	3.8	4.9
2016	3.9	2.8	5.0	3.9	5.0
2017	4.0	2.9	5.3	4.0	5.3
2018	4.1	2.9	5.4	4.2	5.4
2019	4.2	2.9	5.6	4.3	5.6
2020	4.2	2.9	5.7	4.5	5.7
2021	4.3	2.9	5.9	4.7	5.9
2022	4.5	2.9	6.2	4.9	6.2
2023	4.6	3.0	6.4	5.3	6.4
2024	4.8	3.0	6.8	5.5	6.8
2025	4.9	3.0	7.0	5.6	7.0
2026	5.0	3.0	7.2	5.8	7.2
2027	5.1	3.0	7.4	6.0	7.4
2028	5.2	3.0	7.5	6.0	7.5
2029	5.2	2.9	7.6	6.0	7.6
2030	5.2	2.9	7.7	6.0	7.7
2031	5.3	2.9	7.9	6.1	7.9
2032	5.4	2.9	8.2	6.2	8.2
2033	5.6	2.9	8.5	6.4	8.5
2034	5.7	2.9	8.8	6.6	8.8
2035	5.9	2.9	9.1	6.7	9.1
2036	6.0	2.9	9.3	6.7	9.3
2037	6.1	2.9	9.4	6.8	9.4
2038	6.1	2.9	9.5	6.9	9.5
2039	6.2	3.0	9.6	6.9	9.6
2040	6.2	3.0	9.7	7.0	9.7

GHG Price Data Tables

Table 2 GHG Price Forecasts by Market Scenario for B.C. (Real C\$2012 per Tonne of CO₂e)

Market Scenario	1	2	3	4	5
	Mid Electricity Mid GHG (Regional) Mid Gas	Low Electricity Low GHG (Regional) Low Gas	High Electricity High GHG (Regional) High Gas	Mid Electricity Mid GHG (Regional/Nat'l) Mid Gas	High Electricity High GHG (Regional/Nat'l) High Gas
2014	30.0	30.0	30.0	30.0	30.0
2015	30.0	30.0	30.0	30.0	30.0
2016	30.0	30.0	30.0	30.0	30.0
2017	30.0	30.0	30.0	30.0	30.0
2018	30.0	30.0	30.0	30.0	30.0
2019	30.0	30.0	30.0	30.0	30.0
2020	30.0	30.0	30.0	30.0	30.0
2021	30.0	30.0	30.0	30.0	30.0
2022	30.0	30.0	30.0	28.0	45.6
2023	30.0	30.0	30.0	26.3	63.0
2024	30.0	30.0	30.0	25.2	82.4
2025	30.0	30.0	30.0	25.3	103.9
2026	30.0	30.0	30.0	27.6	108.1
2027	30.0	30.0	30.0	30.3	112.4
2028	30.0	30.0	30.0	33.4	116.9
2029	30.0	30.0	30.0	36.7	121.6
2030	30.0	30.0	30.0	40.4	126.4
2031	30.0	30.0	30.0	44.4	131.5
2032	30.0	30.0	30.0	48.9	136.8
2033	30.0	30.0	30.0	53.7	142.2
2034	30.0	30.0	30.0	54.3	143.7
2035	30.0	30.0	30.0	54.8	145.1
2036	30.0	30.0	30.0	55.4	146.5
2037	30.0	30.0	30.0	55.9	148.0
2038	30.0	30.0	30.0	56.5	149.5
2039	30.0	30.0	30.0	57.1	151.0
2040	30.0	30.0	30.0	57.6	152.5

Table 3 GHG Price Forecasts by Market Scenario for California (Real C\$2012 per Tonne of CO2e)

Market Scenario	1	2	3	4	5
	Mid Electricity Mid GHG (Regional) Mid Gas	Low Electricity Low GHG (Regional) Low Gas	High Electricity High GHG (Regional) High Gas	Mid Electricity Mid GHG (Regional/Nat'l) Mid Gas	High Electricity High GHG (Regional/Nat'l) High Gas
2014	19.5	12.3	67.5	19.5	67.5
2015	21.9	12.8	70.2	21.9	70.2
2016	24.7	13.3	73.0	24.7	73.0
2017	28.2	13.8	75.9	28.2	75.9
2018	32.4	14.4	79.0	32.4	79.0
2019	36.6	14.9	82.1	36.6	82.1
2020	39.9	15.5	85.4	39.9	85.4
2021	42.3	16.2	88.8	42.3	88.8
2022	44.0	16.8	92.4	38.5	92.4
2023	44.9	17.5	96.1	33.7	96.1
2024	45.8	18.2	99.9	29.2	99.9
2025	46.7	18.9	103.9	25.3	103.9
2026	47.6	19.7	108.1	27.6	108.1
2027	48.6	20.4	112.4	30.3	112.4
2028	49.5	21.3	116.9	33.4	116.9
2029	50.5	22.1	121.6	36.7	121.6
2030	51.5	23.0	126.4	40.4	126.4
2031	52.6	23.9	131.5	44.4	131.5
2032	53.6	24.9	136.8	48.9	136.8
2033	54.7	25.9	142.2	53.7	142.2
2034	55.2	26.1	143.7	54.3	143.7
2035	55.8	26.4	145.1	54.8	145.1
2036	56.4	26.6	146.5	55.4	146.5
2037	56.9	26.9	148.0	55.9	148.0
2038	57.5	27.2	149.5	56.5	149.5
2039	58.1	27.5	151.0	57.1	151.0
2040	58.6	27.7	152.5	57.6	152.5

**Table 4 GHG Price Forecasts by Market Scenario
for Rest of the WECC (Real C\$2012 per
Tonne of CO2e)**

Market Scenario	1	2	3	4	5
	Mid Electricity Mid GHG (Regional) Mid Gas	Low Electricity Low GHG (Regional) Low Gas	High Electricity High GHG (Regional) High Gas	Mid Electricity Mid GHG (Regional/Nat'l) Mid Gas	High Electricity High GHG (Regional/Nat'l) High Gas
2014	0.0	0.0	0.0	0.0	0.0
2015	0.0	0.0	0.0	0.0	0.0
2016	0.0	0.0	0.0	0.0	0.0
2017	0.0	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0	0.0
2020	0.0	0.0	0.0	0.0	0.0
2021	0.0	0.0	0.0	0.0	0.0
2022	0.0	0.0	0.0	5.5	23.1
2023	0.0	0.0	0.0	11.3	48.0
2024	0.0	0.0	0.0	17.7	74.9
2025	0.0	0.0	0.0	25.3	103.9
2026	0.0	0.0	0.0	27.6	108.1
2027	0.0	0.0	0.0	30.3	112.4
2028	0.0	0.0	0.0	33.4	116.9
2029	0.0	0.0	0.0	36.7	121.6
2030	0.0	0.0	0.0	40.4	126.4
2031	0.0	0.0	0.0	44.4	131.5
2032	0.0	0.0	0.0	48.9	136.8
2033	0.0	0.0	0.0	53.7	142.2
2034	0.0	0.0	0.0	54.3	143.7
2035	0.0	0.0	0.0	54.8	145.1
2036	0.0	0.0	0.0	55.4	146.5
2037	0.0	0.0	0.0	55.9	148.0
2038	0.0	0.0	0.0	56.5	149.5
2039	0.0	0.0	0.0	57.1	151.0
2040	0.0	0.0	0.0	57.6	152.5

Electricity Price Data Tables

Table 5 Electricity Price Forecasts by Market Scenario (Real 2012 US\$/MWh at Mid-C)

Market Scenario	1	2	3	4	5
	Mid Electricity Mid GHG (Regional) Mid Gas	Low Electricity Low GHG (Regional) Low Gas	High Electricity High GHG (Regional) High Gas	Mid Electricity Mid GHG (Regional/Nat'l) Mid Gas	High Electricity High GHG (Regional/Nat'l) High Gas
2014	25.0	21.9	31.1	25.0	31.1
2015	25.5	21.7	31.9	25.5	31.9
2016	25.8	21.2	32.0	25.8	32.0
2017	27.1	22.0	33.4	27.1	33.4
2018	27.1	21.7	33.9	27.1	33.9
2019	28.0	22.1	35.5	28.0	35.5
2020	28.0	21.9	36.0	28.0	36.0
2021	29.3	22.5	37.3	29.3	37.3
2022	30.1	22.7	38.8	30.9	41.3
2023	31.8	23.2	41.7	35.5	52.1
2024	33.0	23.7	43.4	41.8	68.6
2025	34.2	24.0	45.4	50.3	91.2
2026	34.9	24.1	46.7	52.2	95.1
2027	36.0	24.3	48.6	54.7	98.9
2028	36.3	24.0	50.2	56.8	101.8
2029	37.2	23.9	51.1	58.8	106.1
2030	37.6	23.8	52.7	60.1	109.3
2031	38.6	24.0	54.7	62.6	112.0
2032	39.9	24.0	57.0	65.6	116.0
2033	41.5	24.4	60.1	69.3	122.0
2034	42.8	25.1	61.9	71.5	125.7
2035	44.6	26.2	64.5	74.5	131.0
2036	45.7	26.9	66.2	76.4	134.3
2037	47.8	28.1	69.1	79.8	140.3
2038	48.4	28.4	70.0	80.8	142.1
2039	48.9	28.7	70.7	81.6	143.5
2040	49.3	29.0	71.4	82.4	144.9

Table 6 B.C. Buy Electricity Market Price Forecasts by Market Scenario (Real 2012 US\$/MWh at B.C. Border)¹

Market Scenario	1	2	3	4	5
	Mid Electricity Mid GHG (Regional) Mid Gas	Low Electricity Low GHG (Regional) Low Gas	High Electricity High GHG (Regional) High Gas	Mid Electricity Mid GHG (Regional/Nat'l) Mid Gas	High Electricity High GHG (Regional/Nat'l) High Gas
2014	29.8	26.6	36.0	29.8	36.0
2015	30.3	26.5	36.9	30.3	36.9
2016	30.6	25.9	36.9	30.6	36.9
2017	31.9	26.8	38.4	31.9	38.4
2018	31.9	26.4	38.8	31.9	38.8
2019	32.9	26.8	40.5	32.9	40.5
2020	32.9	26.6	41.0	32.9	41.0
2021	34.2	27.2	42.4	34.2	42.4
2022	35.0	27.5	43.8	35.9	46.4
2023	36.7	28.0	46.8	40.5	57.4
2024	38.0	28.5	48.6	47.0	74.3
2025	39.2	28.7	50.6	55.6	97.3
2026	39.8	28.9	51.9	57.5	101.2
2027	41.0	29.1	53.9	60.1	105.1
2028	41.3	28.8	55.5	62.2	108.0
2029	42.2	28.7	56.4	64.2	112.5
2030	42.6	28.6	58.0	65.6	115.7
2031	43.7	28.8	60.1	68.1	118.5
2032	44.9	28.7	62.4	71.2	122.6
2033	46.6	29.2	65.6	75.0	128.6
2034	47.9	29.9	67.4	77.2	132.4
2035	49.8	31.0	70.1	80.2	137.8
2036	50.9	31.7	71.8	82.2	141.2
2037	53.0	32.9	74.8	85.6	147.3
2038	53.6	33.3	75.7	86.7	149.1
2039	54.1	33.6	76.4	87.5	150.6
2040	54.6	33.9	77.1	88.3	152.0

¹ Based on Electricity Price Forecast at Mid-C shown in Table 5 plus wheeling and losses to B.C. Border

**Table 7 B.C. Sell Electricity Market Price
Forecasts by Market Scenario (Real 2012
US\$/MWh at B.C. Border)²**

Market Scenario	1	2	3	4	5
	Mid Electricity Mid GHG (Regional) Mid Gas	Low Electricity Low GHG (Regional) Low Gas	High Electricity High GHG (Regional) High Gas	Mid Electricity Mid GHG (Regional/Nat'l) Mid Gas	High Electricity High GHG (Regional/Nat'l) High Gas
2014	20.2	17.1	26.2	20.2	26.2
2015	20.7	17.0	27.0	20.7	27.0
2016	21.0	16.4	27.0	21.0	27.0
2017	22.2	17.3	28.5	22.2	28.5
2018	22.2	16.9	28.9	22.2	28.9
2019	23.2	17.3	30.4	23.2	30.4
2020	23.2	17.1	31.0	23.2	31.0
2021	24.4	17.7	32.3	24.4	32.3
2022	25.1	17.9	33.7	26.0	36.2
2023	26.8	18.5	36.6	30.5	46.8
2024	28.1	19.0	38.3	36.7	63.0
2025	29.2	19.2	40.2	45.1	85.2
2026	29.9	19.3	41.5	46.9	88.9
2027	31.0	19.5	43.4	49.3	92.7
2028	31.3	19.3	44.9	51.4	95.5
2029	32.2	19.1	45.8	53.4	99.8
2030	32.5	19.1	47.3	54.6	102.9
2031	33.6	19.2	49.3	57.1	105.6
2032	34.8	19.2	51.6	60.0	109.5
2033	36.4	19.6	54.6	63.7	115.3
2034	37.7	20.3	56.4	65.8	119.0
2035	39.4	21.4	59.0	68.8	124.2
2036	40.5	22.0	60.6	70.6	127.4
2037	42.5	23.2	63.5	73.9	133.3
2038	43.1	23.5	64.3	74.9	135.0
2039	43.6	23.8	65.0	75.7	136.4
2040	44.1	24.1	65.7	76.5	137.8

² Based on Electricity Price Forecast at Mid-C shown in Table 5 less wheeling and losses to B.C. Border