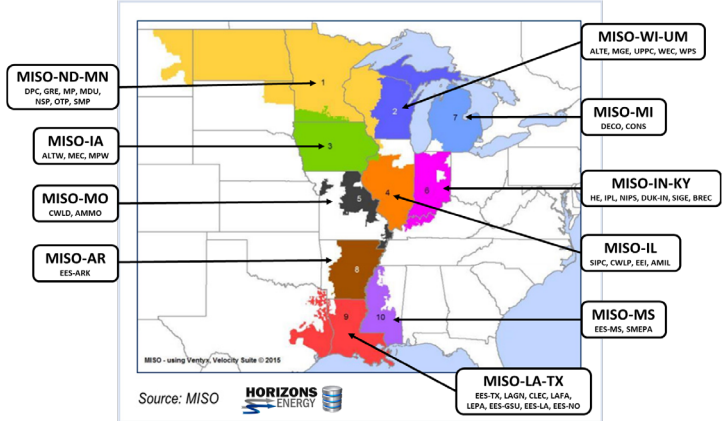
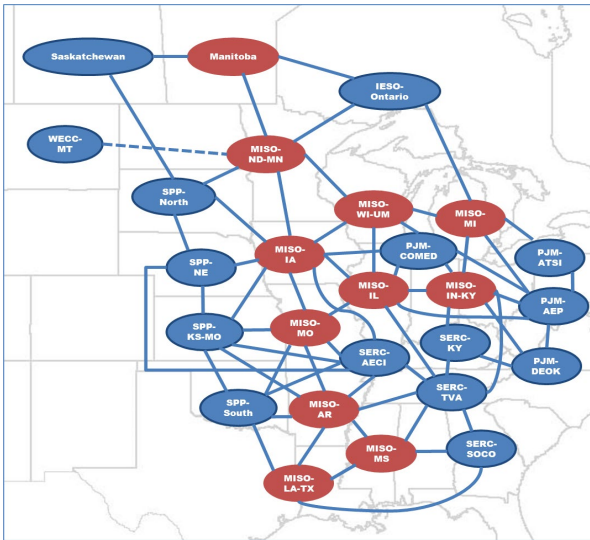
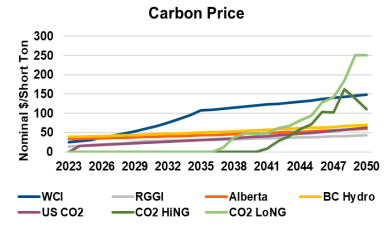
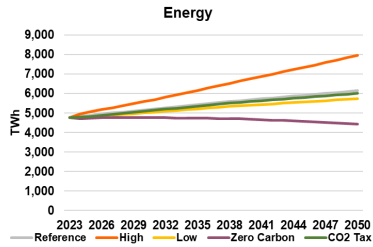
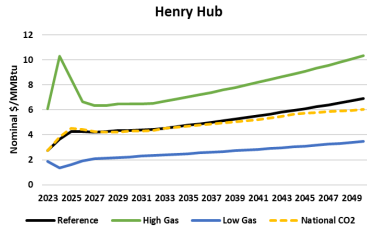
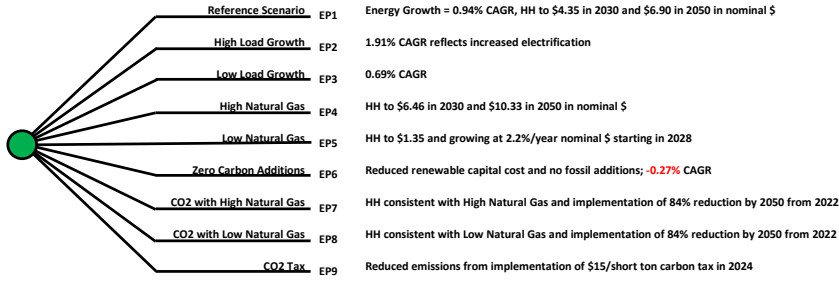


## **Appendix G**

### **Market, Fuel and Emission Price Assumptions**

	<b>Gas</b>	<b>Tech Cost</b>	<b>Carbon</b>	<b>EPA</b>
Status Quo	Base	Base	-	No
Base + EPA	Base	Base	-	No
Base + CO2 Tax + EPA	Base	Base	2028	2030
Agg. Enviro	High	Low	2028	2030
High Cost Environment	High	High	-	2030
Low Price	Low	Low	-	-

HORIZONS ENERGY SPRING 2023 SCENARIOS



MISO Zone 6

Heat Rate (MMBtu/MWh)	7.0
Fuel Emissions (lb/Btu)	117
CO Emission Rate (tons/MWh)	0.410
VOM (\$/MWh)	\$0.00

HORIZONS SPRING 2023

7x24 Implied Heat Rates (Nominal \$/MMBtu)

	Reference Scenario	High Load Growth	Low Load Growth	High NG	Low NG	Zero Carbon Additions	CO2 High NG	CO2 Low NG	US CO2 Tax	Horizons
2019										2019
2020										2020
2021										2021
2022										2022
2023	\$33.96	\$32.62	\$32.62	\$58.20	\$26.88	\$32.54	\$58.20	\$26.72	\$33.59	2023 12.43
2024	\$42.81	\$42.10	\$39.88	\$93.46	\$25.36	\$38.97	\$93.46	\$25.11	\$53.40	2024 11.78
2025	\$47.36	\$46.35	\$44.36	\$75.56	\$27.65	\$44.12	\$74.83	\$27.63	\$58.82	2025 11.18
2026	\$48.50	\$48.45	\$45.48	\$61.97	\$31.60	\$45.19	\$60.60	\$30.27	\$59.79	2026 11.35
2027	\$46.84	\$46.24	\$44.41	\$57.56	\$33.27	\$43.32	\$55.27	\$29.69	\$56.83	2027 11.10
2028	\$44.26	\$43.53	\$43.07	\$53.59	\$30.69	\$40.94	\$51.70	\$27.84	\$52.26	2028 10.45
2029	\$43.53	\$41.03	\$42.11	\$51.34	\$29.06	\$37.74	\$49.87	\$28.03	\$48.19	2029 10.05
2030	\$43.06	\$40.19	\$41.72	\$51.24	\$28.60	\$36.73	\$49.77	\$28.77	\$48.89	2030 9.89
2031	\$40.86	\$38.56	\$39.41	\$49.39	\$28.32	\$33.86	\$47.27	\$28.90	\$47.40	2031 9.33
2032	\$40.33	\$38.72	\$38.74	\$49.23	\$28.37	\$29.93	\$46.28	\$29.44	\$47.15	2032 9.12
2033	\$41.52	\$39.69	\$39.57	\$50.05	\$28.12	\$30.33	\$48.25	\$30.62	\$48.26	2033 9.16
2034	\$41.78	\$40.38	\$40.12	\$50.42	\$28.16	\$31.17	\$50.73	\$32.17	\$48.73	2034 8.99
2035	\$42.49	\$41.33	\$41.31	\$51.40	\$28.36	\$31.55	\$53.53	\$33.39	\$49.62	2035 8.92
2036	\$43.46	\$41.14	\$42.09	\$52.98	\$28.98	\$32.34	\$56.24	\$34.89	\$51.49	2036 8.90
2037	\$44.47	\$41.29	\$42.82	\$54.43	\$29.32	\$32.78	\$57.64	\$42.07	\$52.47	2037 8.88
2038	\$45.52	\$41.61	\$43.39	\$56.28	\$28.66	\$33.97	\$59.41	\$56.42	\$53.86	2038 8.87
2039	\$45.51	\$41.00	\$43.59	\$56.75	\$27.92	\$33.69	\$61.02	\$60.14	\$55.03	2039 8.65
2040	\$46.16	\$40.63	\$44.75	\$57.76	\$27.86	\$33.44	\$61.91	\$57.68	\$56.48	2040 8.57

**HORIZONS SPRING 2023**

	<b>Base</b>	<b>High Gas</b>	<b>Low Gas</b>	<b>CO2</b>
2019				
2020				
2021				
2022				
2023	\$2.73	\$6.06	\$1.89	\$2.73
2024	\$3.63	\$10.30	\$1.35	\$3.84
2025	\$4.24	\$8.48	\$1.63	\$4.50
2026	\$4.27	\$6.65	\$1.90	\$4.42
2027	\$4.22	\$6.34	\$2.10	\$4.27
2028	\$4.24	\$6.33	\$2.15	\$4.20
2029	\$4.33	\$6.47	\$2.19	\$4.23
2030	\$4.35	\$6.46	\$2.24	\$4.29
2031	\$4.38	\$6.47	\$2.29	\$4.29
2032	\$4.42	\$6.50	\$2.34	\$4.36
2033	\$4.53	\$6.68	\$2.39	\$4.51
2034	\$4.65	\$6.85	\$2.45	\$4.60
2035	\$4.76	\$7.03	\$2.50	\$4.69
2036	\$4.88	\$7.21	\$2.55	\$4.77
2037	\$5.01	\$7.40	\$2.61	\$4.86
2038	\$5.13	\$7.59	\$2.67	\$4.94
2039	\$5.26	\$7.79	\$2.73	\$5.04
2040	\$5.39	\$7.99	\$2.79	\$5.13
2041	\$5.52	\$8.20	\$2.85	\$5.22
2042	\$5.66	\$8.42	\$2.91	\$5.34
2043	\$5.80	\$8.63	\$2.97	\$5.49
2044	\$5.95	\$8.85	\$3.04	\$5.63
2045	\$6.10	\$9.09	\$3.11	\$5.73
2046	\$6.25	\$9.33	\$3.18	\$5.77
2047	\$6.41	\$9.57	\$3.25	\$5.85
2048	\$6.56	\$9.81	\$3.31	\$5.91
2049	\$6.73	\$10.07	\$3.39	\$5.93
2050	\$6.90	\$10.34	\$3.46	\$6.06

## CARBON TAX

Year	CO2 Limit		
	US CO2	High Natural Gas	Low Natural Gas
2019			
2020			
2021			
2022			
2023	\$0	\$0	\$0
2024	\$16	\$0	\$0
2025	\$17	\$0	\$0
2026	\$18	\$0	\$0
2027	\$20	\$0	\$0
2028	\$21	\$0	\$0
2029	\$22	\$0	\$0
2030	\$24	\$0	\$0
2031	\$26	\$0	\$0
2032	\$27	\$0	\$0
2033	\$28	\$0	\$0
2034	\$30	\$0	\$0
2035	\$31	\$0	\$0
2036	\$33	\$0	\$0
2037	\$34	\$0	\$11
2038	\$36	\$0	\$38
2039	\$37	\$0	\$47
2040	\$39	\$0	\$46
2041	\$41	\$8	\$49
2042	\$43	\$29	\$61
2043	\$45	\$40	\$67
2044	\$47	\$59	\$81
2045	\$50	\$71	\$94
2046	\$52	\$104	\$129
2047	\$54	\$102	\$142
2048	\$57	\$163	\$184
2049	\$60	\$138	\$250
2050	\$62	\$111	\$250

