

## Comparison of Levelized CO2 Price Assumptions (SCR Application, 2008 IRP, 2011 IRP)

YEAR	SCR Approval Application*				2008 IRP**				2011 IRP***						
	2015 \$/Short Ton****		2016 \$/Short Ton****		2008 Dollars/Short Ton****				2015 Dollars/Short Ton****			CO2 Hard Cap Emissions Shadow Prices (2015 Dollars/Short Ton)			
	Original Base	Original High	Rebuttal Base	Rebuttal High	\$45	\$70	\$100	\$45, Real Escalation	Medium	High	Low to Very High	Base Cap, Low Gas	Base Cap, Med Gas	Base Cap, High Gas	HB 3543 Med Gas
Levelized	\$ 3.96	\$ 14.34	\$ 3.97	\$ 10.74	\$ 19.25	\$ 29.94	\$ 42.77	\$ 31.90	\$ 9.19	\$ 13.86	\$ 9.84	\$ 8.46	\$ 13.51	\$ 18.72	\$ 19.27
2009					\$ -	\$ -	\$ -	\$ -							
2010					\$ -	\$ -	\$ -	\$ -							
2011					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2012	\$ -	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2013	\$ -	\$ -	\$ -	\$ -	\$ 49.44	\$ 76.91	\$ 109.87	\$ 45.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2014	\$ -	\$ -	\$ -	\$ -	\$ 50.33	\$ 78.29	\$ 111.84	\$ 52.86	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ -	\$ -	\$ -	\$ -	\$ 51.29	\$ 79.78	\$ 113.97	\$ 60.71	\$ 19.00	\$ 25.00	\$ 12.00	\$ -	\$ -	\$ -	\$ 37.00
2016	\$ -	\$ -	\$ -	\$ -	\$ 52.31	\$ 81.37	\$ 116.25	\$ 68.57	\$ 19.93	\$ 26.73	\$ 12.59	\$ 10.00	\$ 8.00	\$ 1.00	\$ 39.00
2017	\$ -	\$ -	\$ -	\$ -	\$ 53.36	\$ 83.00	\$ 118.57	\$ 76.43	\$ 20.93	\$ 28.60	\$ 13.22	\$ 11.00	\$ 24.00	\$ 16.00	\$ 35.00
2018	\$ -	\$ 33.94	\$ -	\$ -	\$ 54.43	\$ 84.66	\$ 120.95	\$ 84.29	\$ 21.97	\$ 30.60	\$ 13.88	\$ 14.00	\$ 30.00	\$ 34.00	\$ 37.00
2019	\$ -	\$ 36.25	\$ -	\$ -	\$ 55.51	\$ 86.36	\$ 123.36	\$ 92.14	\$ 23.05	\$ 32.71	\$ 14.56	\$ 15.00	\$ 34.00	\$ 39.00	\$ 40.00
2020	\$ -	\$ 38.68	\$ -	\$ 13.53	\$ 56.62	\$ 88.08	\$ 125.83	\$ 100.00	\$ 24.18	\$ 34.97	\$ 15.27	\$ 17.00	\$ 36.00	\$ 50.00	\$ 43.00
2021	\$ 16.00	\$ 41.31	\$ -	\$ 19.68	\$ 57.70	\$ 89.76	\$ 128.22	\$ 107.86	\$ 25.34	\$ 37.34	\$ 18.30	\$ 21.00	\$ 40.00	\$ 64.00	\$ 47.00
2022	\$ 16.77	\$ 44.12	\$ 16.00	\$ 26.05	\$ 58.80	\$ 91.46	\$ 130.66	\$ 115.71	\$ 26.53	\$ 39.85	\$ 21.90	\$ 24.00	\$ 43.00	\$ 71.00	\$ 55.00
2023	\$ 17.57	\$ 47.12	\$ 16.78	\$ 32.67	\$ 59.91	\$ 93.20	\$ 133.14	\$ 123.57	\$ 27.81	\$ 42.55	\$ 26.24	\$ 28.00	\$ 50.00	\$ 78.00	\$ 70.00
2024	\$ 18.42	\$ 50.32	\$ 17.61	\$ 39.52	\$ 61.05	\$ 94.97	\$ 135.67	\$ 131.43	\$ 29.14	\$ 45.45	\$ 31.43	\$ 34.00	\$ 57.00	\$ 85.00	\$ 75.00
2025	\$ 19.30	\$ 53.75	\$ 18.47	\$ 46.62	\$ 62.15	\$ 96.68	\$ 138.11	\$ 139.29	\$ 30.54	\$ 48.54	\$ 37.65	\$ 38.00	\$ 60.00	\$ 91.00	\$ 75.00
2026	\$ 20.23	\$ 57.40	\$ 19.37	\$ 49.88	\$ 63.27	\$ 98.42	\$ 140.60	\$ 147.14	\$ 32.00	\$ 51.84	\$ 45.11	\$ 47.00	\$ 64.00	\$ 94.00	\$ 77.00
2027	\$ 21.22	\$ 61.36	\$ 20.32	\$ 53.37	\$ 64.47	\$ 100.29	\$ 143.27	\$ 155.00	\$ 33.57	\$ 55.42	\$ 54.09	\$ 47.00	\$ 62.00	\$ 95.00	\$ 73.00
2028	\$ 22.26	\$ 65.59	\$ 21.32	\$ 57.11	\$ 65.70	\$ 102.19	\$ 145.99	\$ 162.86	\$ 35.22	\$ 59.24	\$ 64.85	\$ 51.00	\$ 71.00	\$ 108.00	\$ 83.00
2029	\$ 23.35	\$ 70.12	\$ 22.36	\$ 61.10					\$ 36.94	\$ 63.33	\$ 77.75	\$ 63.00	\$ 75.00	\$ 114.00	\$ 101.00
2030	\$ 24.49	\$ 74.96	\$ 23.46	\$ 65.38					\$ 38.75	\$ 67.70	\$ 93.23	\$ 47.00	\$ 61.00	\$ 78.00	\$ 78.00
2031	\$ 25.63	\$ 79.80	\$ 24.56	\$ 69.66											
2032			\$ 25.66	\$ 73.94											

\*SCR Request Optimization Period: Original Filing (2012-2030); Rebuttal Filing (2013-2030). Financial Assumptions appear to be the same as 2011 IRP other than use of a 7.15% Discount Rate.

\*\*Data Source: 2008 IRP, Volume I, page 143. Optimization Period: 2009-2028. Financial Assumptions: 2008\$/Short Ton; Discount Rate: 7.4%; Inflation rate 1.96%

\*\*\* Data Source: 2011 IRP, Volume I, page 159. Optimization Period: 2011-2030; Financial Assumptions: 2015\$/Short Ton; Discount Rate: 7.17%; Inflation Rate 1.8%

\*\*\*\* A zero carbon price forecast over the planning period was included as a low in the Application and past IRPs. To fit the price assumptions on one page, these columns are not displayed.

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2009					\$ -	\$ -	\$ -	\$ -							
2010					\$ -	\$ -	\$ -	\$ -							
2011					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2012	\$ -	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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