

Comparison of Levelized CO2 Price Assumptions (2013 IRP/SCR Application, 2011 IRP, 2008 IRP)

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