

Potential Financial Benefits Provided to Midwestern Coal-Fired Power Plants with CO2 Emissions Greater than 1 Million Tons Per Year by HR 5376, the Inflation Reduction Act of 2022

| Facility | State | 2020 CO2 Emissions | Max Annual Tax Credit @ \$85/metric ton | Coal Plant CCS Average Break Even Cost @\$55/metric ton | Coal Plant CCS Low Break Even Cost @\$40/metric ton | Coal Plant CCS High Break Even Cost @\$72/metric ton | Net Benefits Assuming Average Break Even Cost (55% margin above cost) | Net Benefits Assuming Low Break Even Cost (113% margin above cost) | Net Benefits Assuming High Break Even Cost (18% margin above cost) |
|--|-------|--------------------|---|---|---|--|---|--|--|
| Prairie State Generating Station, Marissa, IL | IL | 11,782,981 | \$1,001,553,385 | \$648,063,955 | \$471,319,240 | \$848,374,632 | \$353,489,430 | \$530,234,145 | \$153,178,753 |
| Sherco, Becker, MN | MN | 9,193,788 | \$781,471,980 | \$505,658,340 | \$367,751,520 | \$661,952,736 | \$275,813,640 | \$413,720,460 | \$119,519,244 |
| Coal Creek Station, Underwood, ND | ND | 8,653,367 | \$735,536,195 | \$475,935,185 | \$346,134,680 | \$623,042,424 | \$259,601,010 | \$389,401,515 | \$112,493,771 |
| Nebraska City Station, Nebraska City, NE | NE | 8,012,523 | \$681,064,455 | \$440,688,765 | \$320,500,920 | \$576,901,656 | \$240,375,690 | \$360,563,535 | \$104,162,799 |
| Elm Road Generating Station, Oak Creek, WI | WI | 7,021,458 | \$596,823,930 | \$386,180,190 | \$280,858,320 | \$505,544,976 | \$210,643,740 | \$315,965,610 | \$91,278,954 |
| Gerald Gentleman Station, Sutherland, NE | NE | 6,610,329 | \$561,877,965 | \$363,568,095 | \$264,413,160 | \$475,943,688 | \$198,309,870 | \$297,464,805 | \$85,934,277 |
| Antelope Valley Generating Station, Beulah, ND | ND | 6,225,608 | \$529,176,680 | \$342,408,440 | \$249,024,320 | \$448,243,776 | \$186,768,240 | \$280,152,360 | \$80,932,904 |
| Columbia Station, Pardeeville, WI | WI | 5,632,462 | \$478,759,270 | \$309,785,410 | \$225,298,480 | \$405,537,264 | \$168,973,860 | \$253,460,790 | \$73,222,006 |
| Milton R Young, Center, ND | ND | 5,053,798 | \$429,572,830 | \$277,958,890 | \$202,151,920 | \$363,873,456 | \$151,613,940 | \$227,420,910 | \$65,699,374 |
| Walter Scott Jr. Energy Center, Council Bluffs, IA | IA | 4,941,798 | \$420,052,830 | \$271,798,890 | \$197,671,920 | \$355,809,456 | \$148,253,940 | \$222,380,910 | \$64,243,374 |
| Boswell Energy Center, Cohasset, MN | MN | 4,546,539 | \$386,455,815 | \$250,059,645 | \$181,861,560 | \$327,350,808 | \$136,396,170 | \$204,594,255 | \$59,105,007 |
| Baldwin Energy Complex, Balwin, IL | IL | 4,040,793 | \$343,467,405 | \$222,243,615 | \$161,631,720 | \$290,937,096 | \$121,223,790 | \$181,835,685 | \$52,530,309 |
| Weston Generating Station, Kronenwetter, WI | WI | 3,637,353 | \$309,175,005 | \$200,054,415 | \$145,494,120 | \$261,889,416 | \$109,120,590 | \$163,680,885 | \$47,285,589 |
| Leland Olds Station, Stanton, ND | ND | 3,423,173 | \$290,969,705 | \$188,274,515 | \$136,926,920 | \$246,468,456 | \$102,695,190 | \$154,042,785 | \$44,501,249 |
| South Oak Creek Generating Station, Oak Creek, WI | WI | 3,223,817 | \$274,024,445 | \$177,309,935 | \$128,952,680 | \$232,114,824 | \$96,714,510 | \$145,071,765 | \$41,909,621 |
| E D Edwards, Bartonville, IL | IL | 3,111,013 | \$264,436,105 | \$171,105,715 | \$124,440,520 | \$223,992,936 | \$93,330,390 | \$139,995,585 | \$40,443,169 |
| Newton Generating Station, Newton, IL | IL | 2,739,617 | \$232,867,445 | \$150,678,935 | \$109,584,680 | \$197,252,424 | \$82,188,510 | \$123,282,765 | \$35,615,021 |
| Ottumwa Station, Ottumwa, IA | IA | 2,719,911 | \$231,192,435 | \$149,595,105 | \$108,796,440 | \$195,833,592 | \$81,597,330 | \$122,395,995 | \$35,358,843 |
| Coyote Generating Station, Beulah, ND | ND | 2,636,370 | \$224,091,450 | \$145,000,350 | \$105,454,800 | \$189,818,640 | \$79,091,100 | \$118,636,650 | \$34,272,810 |
| Big Stone Generating Station, Big Stone City, SD | SD | 1,882,421 | \$160,005,785 | \$103,533,155 | \$75,296,840 | \$135,534,312 | \$56,472,630 | \$84,708,945 | \$24,471,473 |
| J P Madgett Station, Alma, WI | WI | 1,672,933 | \$142,199,305 | \$92,011,315 | \$66,917,320 | \$120,451,176 | \$50,187,990 | \$75,281,985 | \$21,748,129 |
| Kincaid Generation, Kinkaid, IL | IL | 1,540,104 | \$130,908,840 | \$84,705,720 | \$61,604,160 | \$110,887,488 | \$46,203,120 | \$69,304,680 | \$20,021,352 |
| Edgewater Generating Station, Sheboygan, WI | WI | 1,173,977 | \$99,788,045 | \$64,568,735 | \$46,959,080 | \$84,526,344 | \$35,219,310 | \$52,828,965 | \$15,261,701 |
| Powerton Generating Station, Pekin, IL | IL | 1,166,075 | \$99,116,375 | \$64,134,125 | \$46,643,000 | \$83,957,400 | \$34,982,250 | \$52,473,375 | \$15,158,975 |
| Gerald Whelan Energy Center | NE | 1,107,675 | \$94,152,375 | \$60,922,125 | \$44,307,000 | \$79,752,600 | \$33,230,250 | \$49,845,375 | \$14,399,775 |
| Genoa Generating Station, Genoa, WI | WI | 1,002,633 | \$85,223,805 | \$55,144,815 | \$40,105,320 | \$72,189,576 | \$30,078,990 | \$45,118,485 | \$13,034,229 |
| Total | | 112,752,516 | \$9,583,963,860 | \$6,201,388,380 | \$4,510,100,640 | \$8,118,181,152 | \$3,382,575,480 | \$5,073,863,220 | \$1,465,782,708 |
| Illinois Total | | 24,380,583 | \$2,072,349,555 | \$1,340,932,065 | \$975,223,320 | \$1,755,401,976 | \$731,417,490 | \$1,097,126,235 | \$316,947,579 |

Emissions Data: USEPA FLIGHT Database

Emissions Year: All data is 2020 annual emissions (most recent)

CCS Cost Source: Schmelz et al., *Total cost of carbon capture and storage implemented at a regional scale: northeastern and midwestern United States*, The Royal Society Publishing, June 8, 202

Cost data on following tabs

| | | | | | | | | | |
|--------------------|--|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Iowa Total | | 7,661,709 | \$651,245,265 | \$421,393,995 | \$306,468,360 | \$551,643,048 | \$229,851,270 | \$344,776,905 | \$99,602,217 |
| Minnesota | | 13,740,327 | \$1,167,927,795 | \$755,717,985 | \$549,613,080 | \$989,303,544 | \$412,209,810 | \$618,314,715 | \$178,624,251 |
| Nebraska Total | | 15,730,527 | \$1,337,094,795 | \$865,178,985 | \$629,221,080 | \$1,132,597,944 | \$471,915,810 | \$707,873,715 | \$204,496,851 |
| North Dakota Total | | 25,992,316 | \$2,209,346,860 | \$1,429,577,380 | \$1,039,692,640 | \$1,871,446,752 | \$779,769,480 | \$1,169,654,220 | \$337,900,108 |
| South Dakota Total | | 1,882,421 | \$160,005,785 | \$103,533,155 | \$75,296,840 | \$135,534,312 | \$56,472,630 | \$84,708,945 | \$24,471,473 |
| Wisconsin Total | | 23,364,633 | \$1,985,993,805 | \$1,285,054,815 | \$934,585,320 | \$1,682,253,576 | \$700,938,990 | \$1,051,408,485 | \$303,740,229 |
| Total | | 112,752,516 | \$9,583,963,860 | \$6,201,388,380 | \$4,510,100,640 | \$8,118,181,152 | \$3,382,575,480 | \$5,073,863,220 | \$1,465,782,708 |

Coal Power Plant Carbon Sequestration Break Even Costs

Source: Schmelz et al., *Total cost of carbon capture and storage implemented at a regional scale: northeastern and midwestern United States*, The Royal Society Publishing, June 8, 2020.

| Cost Component | Average/ Representative (\$/metric ton) | Low (\$/metric ton) | High (\$/metric ton) |
|--|--|----------------------------|-----------------------------|
| CO2 Capture at Coal Power Plants | \$47 | \$37 | \$55 |
| Pipeline Transportation (Onshore 10 Mt/year) | \$3 | \$2 | \$4 |
| Storage | \$5 | \$1 | \$13 |
| Total | \$55 | \$40 | \$72 |

Natural Gas Power Plant Carbon Sequestration Break Even Costs

Source: Schmelz et al., *Total cost of carbon capture and storage implemented at a regional scale: northeastern and midwestern United States*, The Royal Society Publishing, June 8, 2020.

| Cost Component | Average/ Representative (\$/metric ton) | Low (\$/metric ton) | High (\$/metric ton) |
|--|--|----------------------------|-----------------------------|
| CO2 Capture at Natural Gas Power Plants | 76 | 49 | 114 |
| Pipeline Transportation (Onshore 10 Mt/year) | 3 | 2.3 | 3.8 |
| Storage | 5 | 1 | 13 |
| Total | 84 | 52.3 | 130.8 |