

Appendix K

Pollution Control Costs

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The costs for adding flue gas desulfurization equipment (scrubbers) are specific to each plant in the model. The costs generally vary with plant size (it is less expensive for larger plants) and an assessment of the difficulty of retrofitting the specific plant. On average, scrubber retrofits cost \$195 per kilowatt (in 1997 dollars).

The cost assumptions for NO_x controls are from the U.S. Environmental Protection Agency (EPA) report, *Analyzing Electric Power Generation Under the CAAA*.⁶⁰ Table K1, reproduced from the EPA report, provides the cost and performance parameters assumed for post-combustion NO_x controls for coal-fired power plants.

Table K1. Post-Combustion NO_x Controls for Coal-Fired Power Plants

Post-Combustion Control Technology	Capital (1997 Dollars per Kilowatt)	Fixed O&M (1997 Dollars per Kilowatt per Year)	Variable O&M (1997 Mills per Kilowatthour)	Percent Gas Use	Percent Removal
SCR (Low NO _x Rate)	69.70	6.12	0.24	—	70
SCR (High NO _x Rate)	71.80	6.38	0.40	—	80
SNCR (Low NO _x Rate)	16.60	0.24	0.82	—	40
SNCR (High NO _x Rate, Cyclone)	9.60	0.14	1.27	—	35
SNCR (High NO _x Rate, Other)	19.00	0.29	0.88	—	35

Assumptions: Low NO_x Rate <0.5 lb/MMBtu; High NO_x Rate ≥0.5 lb/MMBtu. Scaling factor for coal SCR = (200/MW)^{0.35}, economies of scale assumed up to 500 MW. Scaling factor for low-NO_x coal SNCR = (200/MW)^{0.577}, economies of scale assumed up to 500 MW. Scaling factor for High NO_x Coal SNCR, cyclone = (100/MW)^{0.577}; variable O&M costs = 1.27 for ≤300 MW, 1.27 - ((MW - 300)/100) × 0.015 for >300 MW. Scaling factor for high-NO_x coal SNCR, Other = (100/MW)^{0.681}; variable O&M costs = 0.88 for ≤480 MW, 0.89 for >480 MW. Gas Reburn includes \$5.2/kW charge for pipeline.

Sources: All estimates taken from the Bechtel report, except gas reburn, which is based on the Acurex Report.

⁶⁰U.S. Environmental Protection Agency, *Analyzing Electric Power Generation Under the CAAA* (Washington, DC, March 1998).