

Analysis of Alternative Mercury Control Strategies

Table 3. Mercury Removal Factors

Configuration			2010 EIA Capacity (gigawatts)	EIA Percent Removal			EPA Percent Removal		
SO ₂ Control	Particulate Control	NO _x Control		Bit Coal	Sub Coal	Lignite Coal	Bit Coal	Sub Coal	Lignite Coal
None	BH	---	11	89	73	0	89	73	0
Wet	BH	None	10	95	73	36	97	73	0
Wet	BH	SCR	0	90	73	36	90	85	44
Dry	BH	---	7	95	25	0	95	25	0
None	CSE	---	92	36	3	0	36	3	0
Wet	CSE	None	30	66	27	42	66	16	44
Wet	CSE	SCR	82	90	27	42	90	66	44
Dry	CSE	---	8	36	35	0	36	35	0
None	HSE/Oth	---	31	10	6	0	10	6	0
Wet	HSE/Oth	None	13	42	20	0	42	20	0
Wet	HSE/Oth	SCR	18	58	24	36	90	25	0
Dry	HSE/Oth	---	6	40	15	0	40	15	0

Notes: SO₂ Controls – Wet = Wet Scrubber and Dry = Dry Scrubber. Particulate Controls, BH = fabric filter/baghouse, CSE = cold side electrostatic precipitator, HSE = hot side electro static precipitator, NO_x Controls, SCR = selective catalytic reduction, --- = not applicable, Bit = bituminous coal, Sub = subbituminous coal. The NO_x control system is not assumed to enhance mercury removal unless a wet scrubber is present, so it is left blank in such configurations.

Sources: EPA factors, <http://www.epa.gov/clearskies/technical.html>. EIA factors not from EPA: Lignite factors, Mercury Control Technologies for Coal-Fired Power Plants, presented by the Office of Fossil Energy on July 8, 2003. Bituminous coal mercury removal for a Wet/ HSE/Oth /SCR configured plant, Table EMF1, Analysis of Mercury Control Cost and Performance, Office of Fossil Energy & National Energy Technology Laboratory, U.S. Department of Energy, January 2003, Washington, DC.

Table 4. Cases Prepared

Case Mnemonic	Description
PCAIR	AEO2005 Reference case plus NO _x and SO ₂ emission caps from the proposed Clear Air Interstate Rule (CAIR).
Mercury Control Cases	
EPA-Cap	pCAIR plus EPA's proposed 15-ton cap and trade program for mercury.
EPA-MACT	pCAIR plus EPA's proposed MACT standard for mercury taking affect in 2008.
MACT90	pCAIR plus a 90-percent MACT for mercury taking affect in 2008 with ACI available and able to achieve up to 90 percent removal for all coals.
MACT90SL80	pCAIR plus a 90-percent MACT for mercury taking affect in 2008, where it is assumed that the maximum achievable mercury removal for plants using subbituminous and lignite coals is 80 percent.
MACT90NoACI	pCAIR plus a 90-percent MACT for mercury taking affect in 2008, where it is assumed that ACI technology is not available through 2025.

Source: Energy Information Administration, Office of Integrated Analysis and Forecasting