50-90% (high-sulphur coal)	1.	Limestone scrubbing (with physical coal cleaning where upper limit on SO_2 emission applies)
	2.	Fluidized-bed combustion[a]
	3.	Chemical coal cleaning
	4.	Low-sulphur fuel substitution (not a sulphur removal process)
	5.	Limestone injected through modified burner[b]
50-90% (low-sulphur coal)	1.	Spray drier process
	2.	Limestone scrubbing
Below 50%	1.	Physical coal cleaning
	2.	Blending with low-sulphur coal

[a]When and if developed.

[b]Under development.

Table A.2.1 summarizes the cost data available for sulfur oxide controls on thermal power plants. Physical coal cleaning costs approximately \$15 per ton of coal for high-sulfur coals (i.e., approximately \$0.22 per pound of sulfur removal). (For low-sulfur coals the price is considerably higher i.e., around \$1.88 per pound of sulfur removal).

The cost for flue gas desulphurization (FGD) ranges between \$120 - \$200 per kilowatt of installed capacity. Using lime instead of limestone raises the costs. FGD recovery processes, such as the dual alkali and Wellman-Lord processes, tend to be more expensive than wet scrubbling. Dry scrubbers cost \$120 - \$140 per kilowatt of installed capacity but the technology is still under development and the cost estimates are rising. Generally, there is a wide range in the costs of FGD systems due to site-specific variables.

NO_x Reduction

Several approaches can be used for NO_x control. Low-nitrogen fuel is one of these but is not as effective as low-sulphur fuel is for SO_2 because part of the NO_x comes from the combustion air rather than the fuel. Combustion modification, the most cost-effective method, is used to some degree. If flue gas treatment is required, injection of ammonia to reduce NO_x to nitrogen is favoured. Use of a catalyst promotes the reaction