and is preferred over non-catalytic operation. Various wet scrubbing methods have been developed but none seems very promising.

The situation for NO_x is the same as for other pollutants. The selection of abatement method depends on the degree of control required. A rough ranking is as follows:

Removal efficiency level, %	Process listing
90% or higher	1. Catalytic reduction[a] with more than normal amount of catalyst, preceded by combustion modifications
50-80%	1. As above, with normal amount of catalyst
	2. Combustion modifications (all types) followed by non-catalytic reduction (ammonia injection without catalyst)
	3. Combustion modifications alone (for low part of range so as to minimize boiler problems)
	4. Low-NO_x burners
Below 50%	1. Staged combustion[b]
	2. Low-NO_x burners[b]
	3. Gas recirculation (except for coal[b])

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[a] Technology has not been proven with respect to coal-fired boilers.

[b] Used in combination with others if necessary to achieve the required reduction level.

The capital costs associated with the use of combustion modification techniques for the control of NO_x emissions from thermal power plants are estimated at:

Techniques	Capital Cost	NO_x Emission Limit
Low Excess Air	$0	0.9 lb per 10^6 Btu
Staged Combustion (over-fired air)	$2-3/kW	0.7 lb per 10^6 Btu
Low-NO_x Burners	$2-$10/kW	0.4-0.5 lb per 10^6 Btu