

# China Desulphurization Industry Report, 2007-2008



In the recent years, China has been on the top of the world in terms of sulfur dioxide emission, which has surpassed 20 million tons annually for a few years consecutively. Of which, nearly Half of the emissions were from coal-fired power plants. During the Tenth Five-Year Plan period (2001-2005), China not only Failed to hit its target to cut the emissions by 20%, but also actually increased the emissions by 27%, making the environment protection target the only national economic assessment indicator that China missed.

In 2007, the total capacity of contracted projects of desulphurization companies was 374 million kw, of which 208 million kw was put into operation. Limestone—gypsum wet desulphurization was the most widely used method by desulphurization companies. In addition, flue gas desulphurization based circulating fluidized bed was also used to a certain extent.

### Comparison of Desulphurization Capacity between 2006 and 2007

Item		2006	2007	Y-on-Y Growth	
Contracted capacity	Registered desulphurization companies	Capacity (million kw)	276	374	35.5%
		Proportion to national total contracted capacity (%)	92.0	93.5	1.5%
	Top 20 desulphurization companies	Capacity (million kw)	261	360	37.9%
		Proportion to national total contracted capacity (%)	87	90	3%
Capacity in operation	Registered desulphurization companies	Capacity (million kw)	118	208	76.3%
		Proportion to national total capacity of desulphurization units in service (%)	73.8	77.0	3.2%
	Top 20 desulphurization companies	Capacity (million kw)	112	201	79.4%
		Proportion to national total capacity of desulphurization units in service (%)	70	75.0	4.4%

Source: Ministry of Environment Protection of the PRC

As the market has experienced full competition, so the competition pattern has basically formed. In addition, localization rate of desulphurization equipment are constantly increasing. Therefore, we believe that although gross profit margin will fall in tandem with the drop in project quotes in the future, the fall won't be big. We predict that the gross profit margin of the industry will hover at the level ranging 15% to 20%.

At the end of March of 2007, the National Development and Reform Commission and Ministry of Environment Protection jointly issued the 11th Five-Year Plan for SO<sub>2</sub> Pollution Control of Existing Coal-fired Power Plants. According to the plan, existing coal-fired power plants will cut their SO<sub>2</sub> emission by 61.4% on 2005 basis.

In the light with the plan, China's existing coal-fired power plants are required to install flue gas desulphurization units with a total capacity of 137 million kw, covering 221 projects, which will reduce 4.9 million tons of SO<sub>2</sub> emission.

Along with other measures, such as elimination of outdated production facilities, use of low sulfur content coal, energy-saving and emission reduction, it is forecast that SO<sub>2</sub> emission of existing coal-fired power plants will reduce to 5.02 million tons in 2010 from 13 million tons posted in 2005, representing a fall of 61.4 percent.

According to Several Opinions Regarding Acceleration of Shutting Down Small Thermal Power Generating Units, newly-built coal-fired generating units must be simultaneously accompanied with the construction of high-efficiency desulphurization and dust removal facilities. Except small thermal power plants to be shut down, power plants with a capacity of 135,000 kw per unit in service should complete the renovation of their desulphurization facilities as soon as possible. Coal-fired generating units, which have installed desulphurization units but have failed to meet emission standards, will not enjoy the favorable tariff for desulphurized generating units.

Thermal power industry is the major sources of SO<sub>2</sub> emission. The enforcement of the plan will play a decisive role in achieving the binding targets to cut SO<sub>2</sub> emission by 10% and improving the quality of atmospheric environment in China.

According to the plan, existing coal-fired power plants will install flue gas desulphurization units with a total capacity of 137 million kw. Supposing that the desulphurization projects need a capital input of CNY200 per kw, China's desulphurization market in the next few years will reach CNY27.4 billion.



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