XVIII. Environmental Operation

Environment Management System: Baosteel headquarters passed supervision audit of BSI environment management system in October 2016 according to 1SO14001: 2015 audit requirements; Baosteel Meishan Steel passed certification of BSI environment management system in January 2015 for the first time and completed renewal audit of environment management system in August 2016.

Energy Management System: The Company in July 2015 passed the audit of energy management system (GB/T23331-2012 idt ISO50001:2011 "Energy Management System Requirement") and RB/T103 -2013 "Energy Management System- Certification Requirements for Steel Companies", with the validity term to July 2017.

Clean Production Audit: In 2015, Baosteel passed second-round clean production acceptance and third-round assessment.

Energy Conservation and Emission Reduction and Complementary Energy Recycle: With regard to comprehensive energy consumption per ton, 1 kilogram standard coal has been reduced compared to annual objective and 118,500 tons of standard coal has been realized for comprehensive energy conservation. 20 energy conservation projects have been completed and 28,000 tons of standard coal for technical energy conservation has been realized. 1.91 million tons of standard coal has been recycled from waste energy in 2016. With regard to 2016 annual goal, NOX emission has reached 84.1 %, SO2 81.8% and COD 79.0%.

Comprehensive Utilization of Renewable Resources: In 2016, comprehensive utilization rate of by-product resource reached 99.1% and utilization rate of by-product resources returning to production reached 26.1%.

New Energy Technology Application Demonstration: In 2016, Baosteel Ltd. 70MWp golden sun photovoltaic power generation project produced 44.56 million KWH, equivalent to 13,000 tons of standard coal and reducing 30,000 tons of CO2 emission. Combined with environment protection projects, raw material greenhouse revamping OCOD stripe roof 2.4 MWp photovoltaic project has been set up and was scheduled to start construction in 2017.

Environmental Protection Cost of the Company: The cost includes expenditure cost and capitalization cost. Pollutants emission reduction have been vigorously advanced in recent years. Proportion of total operation and depreciation cost for environmental protection facilities in expenditure items continued to remain high, reaching 75.1% in 2016. The Company's environmental protection costs in recent years are listed in the following table:

Environmental Protection Cost Composition

Unit: RMB 100 million

Category	Items	2012	2013	2014	2015	2016
Expensed projects & costs	Discharge fee, fee for system audit, environmental monitoring fee, facility operation fee, facility depreciation charge, labor fee, fee for transporting hazardous substances, fee for landscaping, fee for disposal of solid waste, investment in new projects and updating and expanding existing projects, research investment, and others	28.49	22.47	23.98	24.64	23.87
Capitalized projects & costs	Investment in new environmental protection projects and on updating and expanding existing projects and other supporting projects	4.23	4.81	8.03	13.74	15.90

In 2016, the Company's major indicators for energy saving and environmental protection remained at international advanced level:

Main Technical Indicators of Energy Saving and Emission Reduction

Items	Unit	2012	2013	2014	2015	2016
Fresh water consumption per ton of steel	%	85.6	80.2	77.7	70.7	70.2
Total amount of the recovered waste energy	%	111.1	96.3	93.7	94.7	95.1
Comprehensive energy consumption per ton of steel	%	98.7	99.0	98.5	96.0	96.0
SO_2 emissions per ton of steel	%	35.7	30.1	26.6	23.9	22.3
COD emissions per ton of steel	%	62.2	60.0	60.0	54.9	53.8
Overall utilization rate of industrial solid waste	%	98.9	98.9	99.2	99.4	99.1

Note: The first five indexes indicate the indexes progress. The data given in the Table means the ratio of performance value that year against that in 2008.
The sixth index "overall utilization rate of industrial solid waste" is the performance value that year.