

China makes remarkable progress in energy saving and emission reduction, and the development and utilization of renewable energy obtain gratifying achievements.

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I. Energy saving is the key measure to cope with climate change.

GHG emission results in global warming and has resulted in serious consequence on natural ecosystem, and the environment for human survival and development. Climate Change has become the hot topic concerned by international community, and is the common challenge to our human society.

From the last century since the late 80's, the international community had been making unremitting efforts to cope with climate change, and **《The United Nations Framework Convention on Climate Change》**, **《The Kyoto Protocol》** and **《The Bali roadmap》** established the basic principle and effective framework of international cooperation to deal with climate change.

Chinese government attaches great importance to climate change. In June 2007, **《The China's National Climate Change》** was officially released to public, which is China's first comprehensive climate change policy paper; The Chinese

government set up a national leading group to address climate change, with Premier Wen Jiabao as head of the leading group.

It may substantially reduce CO2 emissions through saving and reducing the utilization of fossil energy, improving energy efficiency, and developing and making use of new energy including renewable energy. Energy saving is the urgent need to cope with global climate change and is the radical measures to solve the energy environment problems.

II. China attaches great importance to energy saving and emission reduction and has made remarkable progress in recent years

Chinese government attaches great importance to energy saving work and has brought forward and enforced a series of laws/regulations and polices/measures to strengthen our energy saving work.

—On October 28, 2007, **《The China Energy Conservation Law》** was amended and passed, and was put in force on April 1, 2008. In the amended China Energy Conservation Law, it clearly stated that Resource Saving is our basic national policy. China implements the energy development strategy of placing stress on conservation and development and giving priority to energy conservation.

—In 2004, China issued the **《The China Medium and Long Term Energy Conservation Plan》** for the first time.

—In 2005, for the first time, 20% reduction of energy consumption per GDP was set to be the binding target regulated in the 11th Five-Year Plan.

—In 2006, Our State Council made **《The Resolution on Strengthening Energy Conservation Work》** .

—In September 2007, the Chinese government promulgated the **《The China Medium and Long Term Renewable Energy Development Plan》** and brought forward that by 2010 the total renewable energy consumption will account for 10% of total energy consumption and by 2020 this proportion will reach around 15%.

—In 2006, NDRC issued **《The 1000 Enterprises' Energy Saving Action 》** and determined to conduct the energy saving action towards 1000 enterprises (the enterprises with annual energy consumption of 180,000 tce or more) in 9 energy-intensity industries, including iron and steel, non-ferrous metal, coal, power, oil and petrochemical, chemical, paper making and textile industries. During the 11th Five-Year Plan, these 1000 energy-intensity enterprises will save about 0.1 billion tce.

—In July, 2006, NDRC issued the Notice on Printing and Distributing the Suggestions for Implementing **《The Ten Key Energy Conservation Projects》** . These ten key energy conservation projects include Coal-fired industrial boiler (kiln) retrofit projects, District Cogeneration Projects, Residual Heat and Pressure Utilization Projects, Petroleum Saving and Substituting Projects, Motor System

Energy Saving Projects, Energy System Optimization Projects, Building Energy Conservation Projects, Green Lighting Projects, Government Agency Energy Conservation Projects, and Energy Saving Monitoring and Testing, and Technology Service System Building Projects. It is expected that 240 million tce will be saved in the 11th Five-year Plan;

—On August 1, 2008, the State Council Order No. 531 and 530 had been announced and these two Ordinances, **《The ordinance of civil building energy saving (draft)》** and **《The ordinance of public organization energy saving (draft) 》** had been implemented since October 1, 2008.

By active energy saving policy implementation, from 2006 to 2008, our energy consumption per GDP unit accumulatively decreased by 10.1%, the accumulated saved energy reached 290 million tce. Since 2006, China's energy consumption elasticity coefficient has been down to 0.66, which reversed the situation of higher than 1 several years in a row; From 2006 to 2008, the total emission reduction of SO₂ and the chemical oxygen demand in the first were reduced by 8.59% and 6.61% respectively.

In recent years, China conducts substantial work in adjusting industrial structure and eliminating outdated production capacity and makes remarkable progress. Between 2006 and 2008, 38.26 million kilowatts of small thermal power units was shut down, 60.59 million tons of outdated iron smelting capacity, 43.47 million tons of outdated steel production capacity, and 140 million tons of

outdated cement production capacity respectively were eliminated. And from 2006 to the first half of 2009, 7467 small thermal power units was shut down and the total capacity reached 54.07 million kw, which is equivalent to 62.4 million tons of raw coal savings annually, 124 million tons of CO2 emission reduction, 1.06 million tons of SO2 emission reduction, one and half years ahead of time fulfilling the target of the 11th Five-year Plan.

In recent years, China's building energy saving and emission reduction achieved breakthrough progress. The implementation rate of implementing mandatory energy efficiency standard for our new building design was increased from 53% in 2005 to 97% in 2007, and the implementation rate of implementing mandatory energy efficiency standard for building construction was increased from 21% in 2005 to 71% in 2007.

In this year, China officially launched **《The Energy Saving Products Patronizing Public Project》**. This project is that through financial subsidies to promote ten kinds of high-efficient energy saving products including air conditioner, refrigerator, flat-panel TV, washing machine and motor with the 1st or 2nd EE rating, and the high-efficient lighting energy production and energy saving and new energy automobile are also included. Implementing **《The Energy Saving Products Patronizing Public Project》** may drive RMB 400-500 billion needs per year, which may make the market share of high-efficient energy saving products improve 10-20 percentage points and reach to 30% above, which may save 75

billion kWh electricity per year, equivalent to less construction of 15 coal-fired power plant of one million kilowatts level of coal-fired power plant level, 75 million tons of CO2 emission reduction.

The year of 2009 is the decisive year for fulfilling the energy saving and emission reduction target of the 11th Five-year Plan. In order to achieve the binding target of 20% reduction of energy consumption per GDP regulated in the 11th Five-Year Plan, 5% should be reduced in this year and next year, and we should increase the utilization rate of high-efficient energy saving products including air conditioner, refrigerator, and automobile from 5% to 30%, clearly we have limited time but arduous task.

III. China vigorously develops and utilizes renewable energy and has obtained gratifying achievements.

In September 2007, the Chinese government promulgated **《The China Medium and Long Term Renewable Energy Development Plan》** and brought forward that by 2010 the total renewable energy consumption will account for 10% of total energy consumption and by 2020 this proportion will reach around 15%. Of which, 5 million kw in 2010 and 30 million kw in 2020 for the installed capacity of wind power; 0.3 million kw in 2010 and 1.8 million kw in 2020 for the total capacity of solar energy power generation, and 5.5 million kw in 2010 and 30 million kw in 2020 for the installed capacity of biomass power generation.

In recent years, the size of wind power has been doubling increased. In 2000, the installed capacity of wind power was 0.34 million kw. In 2006 and 2007, the added new installed capacity was 3.05 million kw, with the annual average increase rate of 148%. And in 2007, the installed capacity of wind power reached 6.05 million kw, fifth in the world. By the end of 2008, the installed capacity of wind power reached 10 million kw, which had accomplished the target of wind power development regulated in **《The 11th Five-Year Renewable Energy Development Plan》** in advance. Now China is building dozens of large-scale wind power projects of 100 thousands or million kw level and will focus on the construction of three great wind power plant with 10 million kw level in Hexi Corridor in Gansu, Inner Mongolia and northern Jiangsu coastal. Developing at this speeding rate, it is expected to arrive at 20 million kw in 2010, 100 million kw in 2020, which will greatly exceed the targeted number of 30 million kw.

China is actively developing solar energy power generation and solar thermal utilization. By the end of 2007, the collector area of solar water heater reached 120 million square meters and has been ranking first in the world many years. Presently, the key technology for solar energy power generation is photovoltaic power generation. In 2007, the solar photovoltaic power generation reached 0.1 million kw, the annual production capacity of photovoltaic cells reached 1 million kw, and is the world's largest producer of photovoltaic cells. In this year, Chinese government has launched **《The Plan for Solar Energy Roof》** and **《The Golden Sun Plan》**, which will further advance the application of solar energy photovoltaic

technology to urban and rural construction.

China is actively developing its nuclear power. In 2000, the installed capacity of nuclear power was 2.1 million kw, and in 2008, this number increased to 9.1 million kw, accounting for 1.3% of the total installed capacity of power, far lower than the average rate of 16% of the total power generation of the nuclear power plants around the world. And it is expected that by 2010, our installed capacity of nuclear power will reach 12 million kw, which is equivalent to 80 million tons of CO₂ emission reduction. We will strive for the target of 40 million kw, which was regulated in **《The Medium and Long Term Nuclear Power Plan (2005-2020)》** , that nuclear power will account for over 5% of total installed capacity of power in 2020.

Presently, China's biomass power generation mainly includes agricultural and forestry waste power generation, waste generation and methane power generation. By the end of 2007, the installed capacity of biomass power generation was about 3 million kw. Biomass liquid fuel is an important substitute for oil, including fuel ethanol and bio-diesel. In 2005, the output of fuel ethanol ranked third in the world, second only to Brazil and the United States. In 2006, our annual fuel ethanol production capacity reached 1.32 million tons and it is expected that in 2010, the number will reach 5.22 million tons, which will exceed the 3 million tons' target regulated in **《The 11th Five-Year Renewable Energy Development Plan》** .

Vigorously developing methane in rural area, promoting rural renewable

energy technologies, such as solar energy and the stoves which consumes less firewood and coal. By the end of 2007, there were over 5000 medium and large scale bio-digesters in China, more than 27 million household biogas digesters, which were mainly used as fuel by farmers, each year it may replace 16 million tce, equivalent to 44 million tons of CO₂ emission reduction.

IV. To strengthen the cooperation among Northeast Asia in energy saving and emission reduction and renewable energy fields.

1. To strengthen the energy saving and emission reduction cooperation in Northeast Asia;

China owns large market with tremendous energy saving potential and China will to enhance comprehensive cooperation with the nations in Northeast Asia in the aspects of EE technology and energy saving service to explore the energy saving potentials. The main energy in China is coal, strengthening the R&D and cooperation in the technology of clean coal could reduce more CO₂ emission.

2. To strengthen the cooperation in R&D and utilization of new energy and renewable energy in Northeast Asia;

3. In order to cope with climate change, all nations in Northeast Asia should strengthen the technology cooperation in mitigation and adaptation.