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BUILDING A RESOURCE-CONSERVING SOCIETY

Note by the Government of China

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I. GENERAL BACKGROUND

Since the beginning of China's reform and opening to the outside world, and especially since the acceleration of "two fundamental shifts", there has been encouraging progress in changing the economic growth pattern, with some achievements in the conservation and integrated use of resources. However, on the whole, the "extensive" growth pattern remains basically unchanged. Compared with the more advanced countries, China still faces serious problems of high and wasteful consumption of resources and environmental pollution. Rapid economic development and the growing population continue to put increasing pressure on fresh water, land, energy, mineral resources and the environment. The "11th Five-Year Plan" covers a critical period in China's efforts to build a comfortable society for the whole population and to accelerate socialist modernization. It is imperative that economic and social development be coordinated in a comprehensive manner with population, resources and the environment. The economic growth pattern needs to be shifted further towards resource conservation. In all relevant areas including production, construction, distribution and consumption, there must be consistent efforts to conserve resources, improve efficiency in their use and reduce loss and waste. Economic and social benefits are to be achieved with the least resource inputs possible.

II. GUIDING PRINCIPLES FOR BUILDING A CONSERVATION-BASED SOCIETY

A scientific approach to development must be adopted and implemented. It must place people in the centre and ensure coordinated and sustainable development. There must be equal emphasis on the development and conservation of resources, with the latter taking the priority. To achieve the fundamental shift in the economic growth pattern, resource efficiency must be the leading objective, supported by measures to conserve energy, water, materials and land. The integrated use of resources and the development of a recycling economy are two key areas, for which efforts must be made to speed up structural adjustments and promote technological progress. Moreover, the legal system and policy measures need to be further improved and public awareness of conservation further enhanced. The mechanisms and institutions for promoting the development of a conserving society need to be put in place, so that a conservation-based growth pattern may eventually take shape; and that economic and social development may be promoted and sustained by the highly efficient use and recycling of resources.

III. IMMEDIATE PRIORITIES

1. Vigorously promote energy conservation

(1) Implementation of 10 key energy conservation projects under the “Medium and Long Term Plan for Energy Conservation”. Studies and research are to be carried out for the formulation of a “Plan of Implementation of Ten key Energy Conservation Projects”. The Plan should clearly identify the key objectives, the priorities, the safeguard measures and the implementation entities of the projects. There should also be yearly implementation plans for the key national projects. In 2005, seven projects were launched. They included: oil conservation and substitution; combined electricity production; the utilization of waste heat; energy conservation in buildings; energy conservation in government agencies; “green” lighting; energy conservation monitoring and technical service system development.

(2) Energy conservation of high energy consumption sectors and industrial enterprises is a priority area. High priority is given to high energy consuming sectors, including iron and steel, nonferrous metals, coal, power generation, petrochemicals, chemical industry and construction materials, and enterprises with energy consumption exceeding 10,000 tons of coal equivalent annually. The State puts 1000 high energy consuming enterprises under its conservation scheme, which sets forth clear conservation goals and measures, and provides guidance and follow-up monitoring.

(3) Energy conservation in transport and agricultural machinery sectors are to be promoted. End-of-life motor vehicles, ships and outdated agricultural machinery will be phased out more speedily. The development of electric railroads will be expedited in order to substitute oil with electricity. Studies will be carried out to formulate detailed plans for the development of public transport system as a priority in transport development. Clean fuel motor vehicles and energy-saving agricultural machineries will be developed and promoted. The national standards on “Passenger Vehicle Fuel Consumption Limits” will be implemented, so that production of high fuel consumption vehicles can be restricted at its source. Ethanol-petrol will be steadily promoted in accordance with the pilot plans approved by the State Council.

(4) Energy conservation in newly built residential and public buildings will be promoted. Efforts will be made to speed up the promulgation of the “Circular on Strict Adherence to the Energy-Saving Design Standards for New Residential Buildings”. “The Guidelines on the Development of Energy and Land-saving Residential and Public Buildings” and the “Energy-saving Design Standards for Public Buildings” will be implemented vigorously. All newly constructed buildings must aim to achieve energy saving by 50%, and largest cities, such as Beijing and Tianjin, will take the lead in achieving energy-saving by 65%. Institutional reforms of heating-provision systems in Northern China will be deepened and renovation of existing buildings for energy saving be promoted. The

research and development of energy-saving know-how in the construction industry and the application of renewable sources of energy in construction projects will be carried out. The R&D results will be integrated and implemented in municipal model projects. Model construction projects using low or super low-energy consumption technologies and green construction projects will be launched.

(5) Energy conservation in commercial and domestic consumption will be encouraged. Efforts will be made to promote compulsory energy efficiency labeling on products, such as air-conditioners and refrigerators. Energy-saving certification will be expanded to cover more products. R&D in highly efficient and energy-saving products will be promoted and outdated products will be phased out more quickly. High-efficiency and energy-saving lighting products will be used in public facilities, hotels, department stores and residential buildings. The minimum indoor temperature standard for air-conditioning in the summer will be strictly enforced. The whole society is encouraged to keep the indoor temperature 1-2 degrees higher than usual during peak hours in the summer. In the rural areas, efforts will be made to promote the use of biogas and to develop biogas production facilities at medium and large-sized animal farms. Stoves that save firewood and coal will also be promoted.

(6) Renewable sources of energy will be developed. Efforts will be made to develop large scale hydro and wind power stations. Small hydro power plants and solar power generations will be developed where there is no coverage by the grid in Western China. In the eastern coastal region and on inhabited islands, vigorous efforts should be made to develop renewable marine sources of energy. Use of wind and solar energy will be promoted in the rural areas. Studies will be organized to investigate the potential of biomass energy and for the demonstration and popularization of such energy. Studies will also be carried out to determine quotas for renewable sources of energy and formulate price management regulations and other supportive measures and their implementation. Fuel woods will be promoted both in terms of their development and their utilization.

(7) Demand-side management of electric power will be enhanced. Demand-side management of electric power and plans for summer peak consumption will be strictly implemented. Demand-side management will focus on saving energy and improving efficiency. There should also be improved supportive rules and regulations as well as incentive policies. The best practices will be shared to guide intensified efforts at the local levels.

(8) Energy-saving technical service system will be established faster. Contract-based energy management and a energy-conservation investment guarantee mechanism will be put in place to provide comprehensive energy conservation services to enterprises, covering diagnosis, design, financing, renovation, operation and management.

2. Strengthen water conservation

(1) Promote a water-conserving society. Studies will be carried out for the formulation of documents providing guidances for the development of a water-conserving society. A nation-wide conference on the work for water-conserving society will be held at an appropriate time. Pilot projects will continue to be implemented. The priority projects in this regard include water conservation in recipient regions on the eastern and middle courses of the south-north water diversion project and water-conservation society development in Ning Xia Hui Autonomous Region. Studies will be carried out to formulate macro-level indicators for water resource distribution and micro-level quotas for water retrieving. Efforts will also be stepped up in the development of a national water rights system.

(2) Promote water conservation in cities. Water-saving products, including appliances and equipment, will be developed and promoted vigorously. Guidance will be given to local governments in their efforts to renovate water supply pipeline networks for the reduction of water leakage. Water-conservation and semi-treated water recycling facilities will be promoted in public buildings, residential zones and residential buildings. Waste water treatment and recycling will be improved and the market reform of urban water supply and sewage treatment will be accelerated.

(3) Promote water conservation in agriculture. There will be continued efforts to promote water-conserving irrigation and the application of such irrigation equipment. In medium-sized and large irrigated zones, irrigation systems will be upgraded for water conservation and pilot projects will be carried out to make tertiary irrigation canals more water-efficient. In hilly, mountainous and arid areas, support will be given to the construction of water cellars to collect and utilize rain water. Dry land farming technologies will be promoted for the development and expansion of dry land crop cultivation. More varieties of drought resistant crops will be developed and extended and cultivated on in larger areas. Pilot projects will be carried out for the development of eco-toilets in rural villages and towns.

(4) Promote technological innovation for water conservation and the utilization of sea water. Efforts will be made to promote technological renovation in high water consumption industries and for the utilization of water in mine pits as a resource. Water-deficit coastal cities will be encouraged to develop and use desalination technologies or use sea water directly.

(5) Enhance management of ground water resources. The indiscriminate and excessive retrieval of ground water will be strictly controlled. Efforts will be made to prevent and address water pollution problems, so as to reduce water shortage resulting from water quality problems.

3. Promote the conservation of raw materials

(1) Enhance management of raw material consumption in key industries. There will

be strict technical standards on design specifications, production processes, operational procedures, as well as a raw material consumption accounting system. Eco-product design and the utilization of recycled materials will be encouraged to reduce losses and waste and to improve raw material efficiency.

(2) Prolong the use-life of materials and make economical use of timber. The production of high-strength and corrosion resistant metals will be encouraged. Efforts will be made to increase the strength and use-life of materials. There will be intensified efforts in the conservation and substitution of timber. Studies will be carried out for drawing up the “Guidelines for the Promotion of Conservation and Substitution of Timber”.

(3) Study policy measures on the reduction of packing materials. The focus of the study will be placed on measures to prohibit excessive packaging. Regulatory measures for market price were introduced in 2005, in response to complaints about over-packaging of moon cakes and other commodities and bundled sales. Policy measures will be taken to encourage the transport of cement in bulk.

4. Intensify the conservation and integrated use of land

(1) Implement a strict land protection system. The land use quotas for construction purposes will be revised and improved. Land use market access system will be ameliorated. Land rehabilitation will be promoted.

(2) Carry out pilot project on stock-taking of land used for collective housing construction. Guidance will be provided to the villages and towns in the integrated planning and use of land, to promote conservation and more efficient use of land for construction in the rural areas. The “Fertile Soil Project” will be initiated to improve fertility and the more efficient use of arable land.

(3) Study and propose policy measures on the conservation and integrated use of land. The focus of the study will be placed on policy measures for the economical use of land in urban development and the integrated use of land in general and for transport facilities in particular.

(4) There will be more strictly control over using farm land for brick production. The “Circular of the State Council General Office on the Further Promotion of Innovative Wall-building Material and Energy-saving Buildings” will be implemented with more vigor. Prohibition of the use of solid bricks will be expanded to cover a second batch of cities. Relevant government agencies should, as appropriate, convene national joint tele-video conferences on the promotion of innovative wall-building material and energy-saving buildings.

5. Enhance integrated use of resources

(1) Promote the integrated use of waste. The utilization of gas in coal mines will be the focus of efforts to promote the integrated use of coal mines with accrete or associated resources. More work will be done to promote the integrated use of industrial wastes, particularly that of coal powder, tailings, gangue, metallurgical and chemical waste as well as organic waste water.

(2) Improve the recovery of recyclable resources. The focus of recovery efforts will be on recyclable metals, end-of-life tires, end-of-life and disposed home appliances and electronic products. Household waste and sludge will also be utilized as resources.

(3) Make integrated use of crop stalks to conserve agricultural resources. Efforts will be made to promote the mechanized stalk-back-to-field technology, the gasification of stalks for power generation and stalks for animal fodder. Compensation policies supporting farmer households in the integrated use of stalks will be formulated. There will be demonstration projects on using stalk and manure to maintain fertility of fields. Technologies to improve fertilizer and pesticide efficiency will be popularized and the recovery of film will be encouraged and promoted.

IV. ACCELERATE THE CREATION OF INSTITUTIONAL MECHANISMS AND A LEGAL SYSTEM FOR RESOURCE CONSERVATION

1. Enhance planning and guidance and promote industrial structural adjustment.

The building of a conservation-based society is taken as an important guiding principle in the drafting of the "11th Five-Year Plan" for National Economic and Social Development and all types of specific plans, regional planning and urban development planning. The following plans will be drafted: the "11th Five-Year Plan for Building a Water Conservation Society", "Plan for the Utilization of Sea Water", "National Plan for Water-Conserving Irrigation", "National Agricultural Development Plan for Dry Land Water-saving Cultivation", "National Program for Integrated Use of Land", "Medium and Long-term Development Plan for Renewable Energy", "Plan for Rural Biogas Projects", and the "Plan for Protective Farming Demonstration Projects". The formulation of "Tentative Regulations on Industrial Structural Adjustment" and the "Guiding Directory of Industrial Structure Adjustment" will be sped up for early promulgation. These documents will clearly identify industrial items which are encouraged, restricted and eliminated, in order to promote the development of resource-conserving industries and eliminate low-tech, high-consumption and heavily polluting industries.

2. Establish sound and comprehensive laws and regulations on resource conservation.

Efforts will be intensified to draw up and revise laws and regulations for the promotion of resource efficiency. Research will be jointly undertaken with the Financial and Economic Committee of the National People's Congress for proposed amendments to the "Law on Energy Conservation of the People's Republic of China". Key issues for the joint

study include the establishment of a strict energy conservation management system, the identification of incentive policies, the identification of law enforcement agencies and the intensification of punishment for violation. The “Law on the Promotion of a Recycling Economy of the People’s Republic of China” will be proposed jointly with the Environment and Resources Committee of the National People’s Congress. “Rules for the Implementation of the Water Retrieval Licensing System” will be revised and “Administrative Regulations on Water Use Efficiency” will be drafted. The formulation and promulgation of administrative regulations on the recovery of end-of-life home appliances will be sped up, in order to improve the recovery system and to institute a producer responsibility system. There will be enhanced efforts in oil conservation, energy conservation in construction projects, innovative wall-building materials, packaging and the recovery of packing materials and waste tires. Relevant legislation will be put in place.

3. **Improve resource conservation standards.** The “Development Plan for Standards on the Conservation and Integrated Use of Resources 2005-2007” will be drafted. Compulsory energy efficiency standards will be formulated for industrial energy consuming facilities, such as air blowers, water pumps, transformers and electromotors, as well as home appliances and office equipment. There will be efforts to study and formulate the following documents: “Fuel Consumption Limits of Light Commercial Vehicles”, “Technical Guidelines on Green Construction”, and “Checking and Acceptance Specifications on Energy Conservation Facilities of Construction Projects”. The qualifying criteria for “water-conserving cities” and standards for rain water use will be revised; the water retrieval quota system for key water consumption industries will be improved. Efforts will be stepped up to formulate and implement national standards on agricultural irrigation equipment. New land use standards will be drawn up and implemented. Evaluation and assessment standards on the integrated use of land will be instituted and village and township land use plans improved. Studies will be carried out to propose industrial standards on the development and integrated use of mineral resources. “Technical Specifications on the Use of Tailings by Mining Enterprises” will be formulated.

4. **Rationalize the pricing system of resource-type products.** The reform process, by which prices of resource-type products will be left to market forces, will be accelerated. A pricing system that reflects the scarcity of resources will be established gradually. In accordance with the decisions of the National Tele-video Conference on Water Price Reform and Water Conservation, a progressive water price system and a surcharge system for excessive water use will be put in place. Steps will be taken to carry out reform of the price system of water for agricultural use. Relevant laws will be enforced in rectifying water prices of the tertiary irrigation canal systems and bundled charges and fees will be abolished. Embezzlement of water-use payments will be prohibited. The use of peak period scheduling and seasonal pricing will be enforced and expanded. Differentiated electricity prices will continue to be used for the restricted and “to-be-eliminated” categories of activities in

high-energy consuming industries. Guidelines for the inter-connected pricing of coal and heating will be proposed and considered. The pricing system for natural gas will be reformed so that the price of natural gas relative to other products will be more rational. Price mechanisms will be used to control land use and improve land use efficiency.

5. Improving financial and taxation policies that facilitate resources saving. Efforts will be made to identify and formulate taxation policies that encourage the production and use of water-saving products and promote economic policies which favor built structure that save energy and space. We will devise regulations that encourage vehicles with less gas consumption and low emission while adjusting import-export policies on products that consumes more energy. Studies will be carried out on the reform of taxation system to improve the consumer tax scheme by levying fuel tax in due course. More support will be given from public financial sources to the government's resource-conservation management and energy-saving office renovation programs. The coverage of government procurement of energy-saving, water-saving products will be expanded gradually. Tax incentives will be improved to facilitate integrated utilization of resources and the recycling of waste materials. Based on rationalization of the present schemes of fee collection and funding, we are working on the establishment and improvement of a compensation scheme of resource development vis-à-vis ecological rehabilitation.

6. Promoting the advancement of science and technology aimed at saving resources. The national science-technology program will continue to give more emphasis to key energy-saving and recycling economy technologies and coordinate the development and demonstration of those technologies that have major duplication potentials, such as technologies of integrated use of conservation and replacement of associated mineral resources, step-by-step energy use, comprehensive waste utilization, industry-chain extension and related industry linkage in the process of recycling economy, rain and flood water collection and salt water utilization, high-efficiency water-saving irrigation and dry-land farming, recyclable materials and dismantling, integrated use of energy in processing industry, energy-saving of major mechanical and electric products, green re-production and the development and use of renewable energy. It aims at achieving major breakthrough on key technologies. The planned investment from central government's budget (including project funding from state-issued bond) will continue to support a number of large-scale resource-saving and recycling-economy projects, such as major technology demonstration, energy-saving technology development and industrialization. "Water-Saving Technology Policy Outline" will be implemented, "Energy-Saving Technology Policy Outline" will be revised, and an inventory of applicable best practices from key industries in the development of recycling economy will be compiled. We will enhance our efforts for the duplication and application of new technologies, new products and new materials.

7. Establishing resource-saving monitoring and management system. A mandatory system will be set up to eliminate obsolete techniques that require high energy and water consumption. We will improve market access system for major energy-consuming products and new buildings. Products below minimum energy-efficiency standards will be prohibited from producing, importing and marketing. Public and residential buildings below energy-saving requirements will not be allowed to be built, inspected for acceptance, put up for sales or use. If the resource concentration of the tailings of a mine is far above the required level, mandatory recovering measures must be enforced. As an extension of the 2004 joint inspection of specific resource-saving work, local monitoring centers were mobilized to check on large enterprises with annual energy consumption exceeding 10 thousand tons of coal equivalents. The northern heating areas, summer-hot-winter-cold areas, and summer-hot-winter-warm areas will be subject to large-scale inspection of the implementation of the energy-saving standards. In light of the mandatory energy-saving indicator management, and the national standard of 'passenger car fuel consumption limit', which went into force on March 1 and July 1, 2005 respectively, we will conduct random monitoring and inspection nation-wide. Special inspection will be continued to prohibit the use of solid clay bricks. Any kind of waste of resources discovered during inspections will be subject to serious disciplinary measures. We will work on setting up evaluation indicator system for recycling economy and its related statistical system. Efforts will be made to enhance and improve our statistical work on energy and water resources as well as energy and water-saving activities.

V. GOVERNMENT INSTITUTIONS SHOULD TAKE THE LEAD IN PRACTICING ECONOMY

1. Government departments at all levels should set an example and take the lead in practicing strict economy in an effort to promote a conservation-based society. It is essential to formulate "Guidelines for energy-saving in Government institutions" and set up a statistical scheme to monitor their energy consumption level. While specifying energy and water consumption quotas, the focus should be on upgrading the interior heating, air-conditioning and lighting systems in government buildings as well as energy-saving measures on official vehicles. 'Guidelines for Government Procurement of Energy-Saving Products' should be followed by giving priority to energy/water-saving products in procurement and practicing economy with office stationary in an effort to reduce expenditure. Governments at all levels, while practicing thrift in public institutions, should pay more attention to the same in the whole society. To this end, there is the need to establish a scientific evaluation system for government performance, further improve the performance evaluation mechanism of government officials by integrating resource-saving responsibility and actual performance into the target responsibilities of authorities at all

levels as well as the performance evaluation system of government officials.

2. Organize activities to promote a conservation-based society. We will work on drafting an “Implementation Program of Building a Conservation-based Society”. During the “11th Five-Year Plan”, a number of conservation-based cities, government institutions, enterprises and communities will be identified to serve as role models, and resource-saving approaches that suit China’s national conditions be explored. Experiences and best practices in this area will be documented and duplicated in a timely manner. In major industries, such as metallurgy, nonferrous metals, coal, electricity, chemicals, construction materials, paper and brewery, recycling economy pilot tests will be conducted in key areas, including comprehensive utilization of mineral product resources and biomass energies, recycling of end-of-life electric appliances, tires and paper, green reproduction as well as industrial parks and cities. By doing so we hope to develop an effective modality for recycling economy and identify its crucial technological areas and major projects. The recycling system of renewable resources will be further developed, and the concept of recycling economy will guide planning and upgrading industrial parks and creating conservation-based cities.

3. Striving to create an enabling environment for a conservation-based society. Creating a conservation-based society involves all trades of life and millions of households and calls for the active participation of the society as a whole. We will continue the “Resource Conservation” campaign around the theme of “Striving for a recycling economy for an early realization of a conservation-based society”. Arrangements will be made for news media interviews that focus on promoting good practices in resource conservation and exposing behaviors and phenomena that waste resources and severely pollute the environment. Events will be held to promote “My contributions to saving resources” among workers from mining and industrial enterprises, organize “Cherish Resources: Let’s start with us” activities in primary and secondary schools. “Green hotel” and “Green community” concept will be promoted. The central government institutions will carry out “set an example for saving resources” activities while “Reduce waste, enhance quality” activities will be organized during the national Quality Month. Efforts will also be made to give full play to, among others, national Energy-Saving Awareness Week, national Municipality Water-Saving Awareness Week as well as World Water Day, World Land Day, and World Environment Day. Furthermore, Public service announcements and writing contests are planned on the theme of saving water.