Notice of the General Office of the State Council on forwarding the green building action plan of the National Development and Reform Commission and the Ministry of Housing and Urban-Rural Development

State Council Document No. 1 (2013)

The People's Governments of all provinces, autonomous regions, and municipalities directly under the Central Government, and all ministries, commissions, and directly affiliated agencies of the State Council:

The "Green Building Action Plan" of the National Development and Reform Commission and the Ministry of Housing and Urban-Rural Development has been approved by the State Council and is now forwarded to you. Please implement it conscientiously in light of the actual situation in your region and department.

General Office of the State Council

January 1, 2013

Green Building Action Plan

National Development and Reform Commission Ministry of Housing and Urban-Rural Development

This action plan is formulated to thoroughly implement the Scientific Outlook on Development, effectively transform the urban and rural construction model and the development mode of the construction industry, improve resource utilization efficiency, achieve binding energy conservation and emission reduction targets, actively respond to global climate change, build a resource-saving and environmentally friendly society, improve the level of ecological civilization, and improve people's quality of life.

1. Fully understand the importance of launching green building actions

Green buildings are buildings that save resources, protect the environment, and reduce pollution to the maximum extent during their entire life cycle, provide people with healthy, applicable, and efficient use spaces, and coexist harmoniously with nature. Since the 11th Five-

Year Plan, my country's green building work has achieved remarkable results. The heat metering and energy-saving renovation of existing buildings have exceeded the goals and tasks of the 11th Five-Year Plan, the implementation rate of energy-saving standards for new buildings has been greatly improved, the scale of renewable energy building applications has been further expanded, and the energy-saving supervision system for state office buildings and large public buildings has been initially established. However, it also faces some prominent problems, mainly: extensive urban and rural construction models, high energy and resource consumption, low utilization efficiency, emphasis on scale rather than efficiency, emphasis on appearance rather than quality, emphasis on construction rather than management, and the service life of buildings is far lower than the designed service life.

Carrying out green building actions, guiding urban and rural construction with green, circular and low-carbon concepts, strictly implementing mandatory standards for building energy conservation, solidly promoting energy-saving renovation of existing buildings, intensively and economically utilizing resources, and improving the safety, comfort and health of buildings are of great significance and role in transforming the urban and rural construction model, breaking the bottleneck constraints of

energy resources, improving the production and living conditions of the masses, and cultivating strategic emerging industries such as energy conservation, environmental protection and new energy. We should take the green building action as an important part of implementing the scientific development concept and vigorously promoting the construction of ecological civilization, seize the historical opportunity of accelerating the development of urbanization and new rural construction in my country, and effectively promote urban and rural construction to embark on a green, circular and low-carbon scientific development track, and promote the comprehensive, coordinated and sustainable development of the economy and society.

II. Guiding ideology, main objectives and basic principles

1. Guiding ideology

Guided by Deng Xiaoping Theory, the important thought of "Three Represents" and the Scientific Outlook on Development, we will integrate ecological civilization into the entire process of urban and rural construction, seize the important strategic opportunity period of urbanization and new rural construction, establish the concept of full life cycle, effectively transform the urban and rural construction model, improve resource utilization efficiency, reasonably improve building

comfort, and comprehensively promote green building actions in terms of policies and regulations, systems and mechanisms, planning and design, standards and specifications, technology promotion, construction and operation, and industrial support, and accelerate the construction of a resource-saving and environmentally friendly society.

(2) Main objectives

1. New buildings. New urban buildings strictly implement mandatory energy-saving standards. During the 12th Five-Year Plan period, 1 billion square meters of new green buildings will be completed; by the end of 2015, 20% of new urban buildings will meet green building standards.

2. Energy-saving renovation of existing buildings. During the 12th Five-Year Plan period, the heating metering and energy-saving renovation of existing residential buildings in northern heating areas will be completed for more than 400 million square meters, the energy-saving renovation of existing residential buildings in hot summer and cold winter areas will be completed for 50 million square meters, the energy-saving renovation of public buildings and public institution office buildings will be completed for 120 million square meters, and 400,000 sets of rural dilapidated housing renovation energy-saving demonstration will be implemented. By the

end of 2020, the energy-saving renovation of urban residential buildings worth renovating in northern heating areas will be basically completed.

(3) Basic principles

1. Comprehensively promote and highlight key points. Comprehensively promote the green development of urban and rural buildings, focus on promoting government-invested buildings, affordable housing and large public buildings to take the lead in implementing green building standards, and promote energy-saving renovation of existing residential buildings in northern heating areas.

2. Adapt measures to local conditions and provide classified guidance. In light of the economic and social development level, resource endowment, climate conditions and architectural characteristics of each region, establish and improve the green building standard system, development plan and technical route, and formulate relevant policies and measures in a targeted manner.

3. Government guidance and market promotion. Use policies, plans, standards and other means to regulate the behavior of market players, comprehensively use economic means such as prices, taxation, and finance, give play to the fundamental role of the market in allocating resources, create a market environment conducive to the development of green buildings, and stimulate the

endogenous motivation of market players to design, build, and use green buildings.

4. Focus on the present and look to the long term. Establish the concept of the entire life cycle of buildings, comprehensively consider the input-output benefits, select reasonable planning, construction plans and technical measures, and effectively avoid blind high investment and resource consumption.

III. Key Tasks

1. Effectively implement energy conservation work in newly built buildings.

1. Scientifically plan urban and rural construction. In the construction of new urban areas, renewal of old cities and renovation of shanty towns, take green, energy-saving and environmental protection as the guiding ideology, establish an indicator system including the proportion of green buildings, ecological environmental protection, public transportation, renewable energy utilization, intensive land utilization, recycled water utilization, waste recycling and other contents, incorporate them into the overall plan, control detailed plan, construction detailed plan and special plan, and implement them in specific projects. Do a good job in linking urban and rural construction planning with regional energy planning, and optimize the systematic

integrated utilization of energy. Construction land should give priority to the use of urban and rural abandoned land, and actively develop and utilize underground space. Actively guide the construction of green ecological urban areas and promote the large-scale development of green buildings.

2. Vigorously promote the development of green buildings in cities and towns. Government-invested buildings such as state organs, schools, hospitals, museums, science and technology museums, and gymnasiums, affordable housing in municipalities directly under the Central Government, cities with independent planning status, and provincial capitals, as well as large public buildings such as airports, stations, hotels, restaurants, shopping malls, and office buildings with a single building area of more than 20,000 square meters, shall fully implement green building standards since 2014. Actively guide commercial real estate development projects to implement green building standards, and encourage real estate developers to build green residential communities. Effectively promote the construction of green industrial buildings. The Development and Reform Commission, the Ministry of Finance, the Ministry of Housing and Urban-Rural Development, and other departments shall revise project budgets and construction standards, and provincial

people's governments shall formulate green building project quotas and cost standards. Strictly implement the energy-saving assessment and review system for fixed asset investment projects, and strengthen the review of the implementation of green building standards for large public building projects. Strengthen the management of green building evaluation and identification, and strengthen supervision of planning, design, construction, and operation.

3. Actively promote the construction of green rural houses. Housing and urban-rural development, agriculture and other departments at all levels should strengthen the overall planning and management of rural village construction, formulate guidance opinions on the green ecological development of villages and towns, compile a collection of promotional atlases for green construction and renovation of rural houses, technical guidelines for green buildings in villages and towns, and provide free technical services. Vigorously promote energy-saving technologies for rural houses such as solar thermal utilization, thermal insulation of enclosure structures, fuel-saving and coal-saving stoves, and energy-saving kangs; earnestly promote the use of biomass energy, develop large and medium-sized biogas, and strengthen operation management and maintenance services.

Scientifically guide rural houses to implement building energy-saving standards.

4. Strictly implement mandatory standards for building energy conservation. Housing and urban-rural development departments should strictly control planning and design, strengthen planning review of building design plans and construction drawings, and ensure that urban building design stages meet energy conservation standards 100%. Strengthen supervision and inspection during the construction stage to ensure project quality and safety, and effectively improve the implementation rate of energy conservation standards. Strictly implement special acceptance for building energy conservation. For buildings that do not meet the mandatory standards, no completion acceptance report shall be issued, and they shall not be allowed to be put into use and must be rectified. Regions with conditions are encouraged to implement building energy conservation standards with higher energy efficiency levels.

(II) Vigorously promote energy-saving renovation of existing buildings.

1. Accelerate the implementation of the "Energy-saving Heating House" project. Focusing on the renovation of enclosure structures, heat metering, and heat balance of pipe networks, vigorously promote the renovation of heat

metering and energy conservation of existing residential buildings in northern heating areas. During the 12th Five-Year Plan period, more than 400 million square meters of renovation will be completed, and regions with conditions will be encouraged to exceed the task.

2. Actively promote energy-saving renovation of public buildings. Carry out energy-saving renovation of air-conditioning, heating, ventilation, lighting, hot water and other energy-using systems in large public buildings and office buildings of public institutions to improve energy efficiency and management level. Encourage the adoption of contract energy management model for renovation, and reward projects according to energy saving. Promote demonstration of energy-saving renovation of public buildings in key cities, and continue to promote the construction of "energy-saving colleges and universities". During the "12th Five-Year Plan" period, 60 million square meters of public buildings and 60 million square meters of public institution office buildings will be renovated.

3. Carry out pilot projects for energy-saving renovation of residential buildings in hot summers and cold winters and hot summers and warm winters. Focusing on building doors and windows, external sunshades, and natural ventilation, pilot projects for energy-saving

renovation of residential buildings will be carried out in hot summers and cold winters and hot summers and warm winters, and appropriate renovation models and technical routes will be explored. During the 12th Five-Year Plan period, more than 50 million square meters of renovation will be completed.

4. Innovate the working mechanism for energy-saving renovation of existing buildings. Carry out investigation and statistics on energy-saving renovation of existing buildings and formulate specific renovation plans. In the comprehensive renovation of old urban areas, urban appearance improvement, and seismic reinforcement of existing buildings, areas with conditions should carry out energy-saving renovation simultaneously. When formulating renovation plans, we must fully listen to the opinions of all parties concerned and safeguard the public's right to know, right to participate, and right to supervise. Under the premise of conditions permitting and with the consent of the owners, study the use of methods such as adding floors and expanding capacity for energy-saving renovation. Adhere to the people-oriented principle, effectively reduce nuisance to the public, and actively promote industrialized and standardized construction. The housing and urban-rural construction departments must strictly implement the project construction responsibility

system, strictly control the planning, design, construction, materials and other checkpoints, and ensure the safety, quality and efficiency of the project. After the completion of the energy-saving renovation project, the building energy efficiency evaluation should be carried out, and those that fail to meet the requirements shall not pass the final acceptance. Strengthen publicity and fully mobilize the enthusiasm of residents for energy-saving renovation.

3. Carry out transformation of urban heating systems.

Implement energy-saving transformation of urban heating systems in northern heating areas, improve heat source efficiency and pipe network insulation performance, optimize system regulation capabilities, and improve pipe network heat balance. Remove and merge low-efficiency, high-pollution small coal-fired boilers for heating, and promote heating technologies such as cogeneration, high-efficiency boilers, and industrial waste heat utilization according to local conditions. Promote "absorption heat pump" and "absorption heat exchange" technologies to improve the transportation capacity of centralized heating pipe networks. Carry out transformation of old urban heating pipe network systems to reduce pipe network heat loss and reduce power consumption of circulating water pumps.

(IV) Promote the large-scale application of renewable energy in buildings.

Actively promote the application of renewable energy such as solar energy, shallow geothermal energy, and biomass energy in buildings. Regions with suitable solar energy resources should introduce mandatory promotion policies and technical standards for the integration of solar thermal buildings before 2015, popularize the use of solar water heating, and actively promote passive solar heating. Study and improve the policy of building photovoltaic power generation, accelerate the research and development of microgrid technology and engineering demonstration, and steadily promote the application of solar photovoltaic in buildings. Rationally develop shallow geothermal energy. The Ministry of Finance and the Ministry of Housing and Urban-Rural Development will study and determine the list of areas suitable for the promotion of large-scale application of renewable energy in buildings. Carry out demonstrations of renewable energy building applications, and promote the concentrated and continuous promotion of renewable energy building applications. By the end of 2015, the newly added renewable energy building application area will be 2.5 billion square meters, and the proportion of renewable

energy consumption in demonstration areas to the total building energy consumption will reach more than 10%.

(V) Strengthen energy-saving management of public buildings.

Strengthen the work of energy consumption statistics, energy audits and energy consumption publicity for public buildings, promote energy consumption measurement and real-time monitoring, and promote the construction of energy-saving and water-saving supervision platforms for public buildings. Establish a sound system for energy audits, energy efficiency publicity and energy consumption quota management for public institutions, and strengthen the construction of energy consumption monitoring and energy-saving supervision systems. Strengthen the overall coordination of supervision platform construction, realize the sharing of monitoring data, and avoid duplication of construction. Energy efficiency evaluation and labeling should be carried out for newly built, renovated and expanded state office buildings and large public buildings. Study and establish a public building energy utilization status reporting system, and organize energy efficiency benchmarking activities in shopping malls, hotels, schools, hospitals and other industries. Implement energy consumption (electricity consumption) quota management for large public buildings, and impose punitive prices for energy (electricity) consumption exceeding the

limit. Owners and property owners of public buildings should effectively strengthen energy management and strictly implement the temperature control standards for air conditioners in public buildings. Study and carry out pilot projects for energy conservation transactions in public buildings.

(6) Accelerate the research, development and promotion of green building related technologies.

The science and technology departments should study the establishment of a special project for the development of green building technology, accelerate the research and development of common and key technologies for green buildings, focus on the energy-saving transformation of existing buildings, the application of renewable energy in buildings, water conservation and comprehensive utilization of water resources, green building materials, waste resource utilization, environmental quality control, and improving the durability of buildings. Strengthen the research on green building technical standards and specifications, and carry out integrated demonstrations of green building technologies. Relying on colleges and universities, scientific research institutions, etc., accelerate the construction of green building engineering technology centers. The development and reform and housing and urban-rural construction departments should compile a

catalog of key green building technology promotion, promote natural lighting, natural ventilation, shading, high-efficiency air conditioning, heat pumps, rainwater collection, large-scale water utilization, sound insulation and other mature technologies according to local conditions, and accelerate the popularization of high-efficiency energy-saving lighting products, fans, water pumps, water heaters, office equipment, household appliances and water-saving appliances.

(VII) Vigorously develop green building materials.

We should take local conditions into consideration, use local materials, and combine local climate characteristics and resource endowments to vigorously develop green building materials that are safe, durable, energy-saving, environmentally friendly, and easy to construct. We should accelerate the development of building insulation systems and materials with good fireproof and heat-insulating properties, and actively develop sintered hollow products, aerated concrete products, multifunctional composite integrated wall materials, integrated roofs, low-radiation coated glass, thermal insulation doors and windows, and sunshade systems. We should guide the development and utilization of high-performance concrete and high-strength steel. By the end of 2015, the use of concrete with a standard

compressive strength of more than 60 MPa will reach 10% of the total use, and the use of hot-rolled ribbed steel bars with a yield strength of more than 400 MPa will reach 45% of the total use. We should vigorously develop premixed concrete and premixed mortar. We should further promote the innovation of wall materials, restrict the use of clay products in urban areas, and prohibit the use of solid clay bricks in county towns. The development and reform, housing and urban-rural construction, industry and information technology, and quality inspection departments should study the establishment of a green building material certification system, compile a green building material product catalog, and guide and regulate market consumption. The quality inspection, housing and urban-rural development, industry and information technology departments should strengthen the quality supervision and inspection of the production, circulation and use of building materials, and prevent substandard building materials from entering the market. Actively support the development of the green building materials industry and organize green building materials industrialization demonstration.

(8) Promote the industrialization of construction.

The housing and urban-rural development departments and other departments should speed up the establishment of

a standard system for design, construction, and component production to promote the industrialization of buildings, promote the standardization of structural parts, components, and parts, enrich the types of standard parts, and improve versatility and interchangeability. Promote prefabricated and assembled concrete, steel structures and other building systems suitable for industrialized production, accelerate the development of prefabrication and assembly technologies for construction projects, and improve the level of integration of building industrialization technology. Support the construction of industrialized bases that integrate design, production, and construction, and carry out demonstration pilot projects for industrialized buildings. Actively promote full residential decoration, encourage new residential buildings to be decorated in one go or menu-style, and promote the unity of personalized decoration and industrialized decoration.

(IX) Strictly implement the building demolition management procedures.

Strengthen urban planning management and maintain the seriousness and stability of planning. The municipal people's government and the owners and users of buildings should strengthen the maintenance and management of buildings. Buildings that meet the standards of urban

planning and engineering construction and are within their normal service life shall not be demolished at will except for basic public interest needs. For the demolition of large public buildings, the relevant procedures shall be followed in advance to solicit opinions from the public and accept social supervision. The housing and urban-rural development departments shall study and improve the relevant management system for building demolition and explore the implementation of the review system for scrapped and demolished buildings. For illegal demolition, the relevant units and personnel shall be held accountable in accordance with the law.

(10) Promote the resource utilization of construction waste.

Implement the responsibility system for the treatment of construction waste, and collect, transport and treat construction waste in accordance with the principle of "whoever produces it, is responsible for it". The housing and urban-rural development, development and reform, finance, industry and information technology departments should formulate implementation plans, promote the centralized treatment and graded utilization of construction waste, accelerate the research and development and promotion of construction waste resource utilization technology and equipment, formulate technical standards for the comprehensive utilization of

construction waste, carry out demonstrations on the resource utilization of construction waste, and study the establishment of a labeling system for construction waste recycling products. Local people's governments at all levels shall be responsible for the resource utilization of waste within their administrative regions, and cities at or above the prefecture level shall set up special construction waste centralized treatment bases according to local conditions.

IV. Safeguard Measures

1. Strengthen target responsibility.

The goals and tasks of the green building action should be scientifically decomposed to the provincial people's government, and the completion of the green building action goals and the implementation of measures should be included in the provincial people's government energy conservation target responsibility evaluation and assessment system. The implementation of this action plan should be included in the performance evaluation system, and the evaluation results should be an important part of the comprehensive evaluation of leading cadres. The responsibility system and accountability system should be implemented, and units and personnel who have made outstanding contributions should be commended.

(2) Increase policy incentives.

Research and improve fiscal support policies, continue to support the construction of green buildings and green ecological urban areas, energy-saving renovation of existing buildings, energy-saving renovation of heating systems, and application of renewable energy in buildings, and research and formulate policy measures to support the development of green building materials, resource utilization of construction waste, construction industrialization, and basic capacity building. Financial funds will be awarded to buildings that meet the national green building evaluation standards of two stars or above. The Ministry of Finance and the State Administration of Taxation should study and formulate preferential tax policies to encourage real estate developers to build green buildings and guide consumers to buy green homes. Improve and improve financial services for green buildings. Financial institutions can give appropriate discounts on housing loan interest rates to consumers who purchase green homes. The land and resources department should study and formulate policies to promote the development of green buildings in land transfer, and the housing and urban-rural development department should study and formulate policies on volume ratio rewards. In the planning conditions for land bidding and auction, the

proportion of construction land for green buildings should be clarified.

(3) Improve the standard system.

Departments such as housing and urban-rural construction should improve building energy-saving standards and raise standard requirements in a scientific and reasonable manner. Improve the green building evaluation standard system, speed up the formulation (revision) of energy-saving and green building evaluation standards suitable for different climate zones and different types of buildings, complete the revision of the "Green Building Evaluation Standard" in 2013, improve the evaluation standards for residential buildings, office buildings, shopping malls, and hotels, and issue evaluation standards for public buildings such as schools, hospitals, airports, and stations. Formulate (revise) standards for green building-related engineering construction, operation management, and energy management systems as soon as possible, and compile technical guidelines and standard systems for green building regional planning. Departments of housing and urban-rural construction and development and reform should study and formulate building energy consumption limits based on actual energy consumption conditions, covering different climate zones and different types of buildings, and should

work with departments such as industry and information technology and quality inspection to improve the green building material standard system, study and formulate standards for limiting harmful substances in building decoration materials, and compile relevant standards and specifications for the comprehensive utilization of construction waste.

(IV) Deepen the reform of urban heating system.

The departments of housing and urban-rural development, development and reform, finance, quality inspection, etc. should vigorously promote the charging based on heat metering, and supervise various regions to introduce and improve heat metering prices and charging methods. Strictly implement the two-part heat price. All new buildings and existing buildings that have completed heat metering renovations will be charged based on heat metering, and the "hidden subsidy" for heating subsidies will be changed to "open subsidy". For those who have difficulty in implementing household metering, research on charging based on the heat supply of the community or building. Implement a linkage system between heat prices and coal prices and gas prices, and provide heating subsidies to low-income households. Accelerate the reform of heating enterprises, promote the market-oriented operation of heating enterprises, cultivate and

standardize the heating market, and rationalize the interests of heat sources, pipe networks, and users.

(V) Strictly supervise and manage the entire construction process.

In the planning of new urban district construction, old city renewal, and shantytown reconstruction, local people's governments at all levels should establish and strictly implement the requirements of the green construction indicator system, housing and urban-rural development departments should strengthen planning review, and land and resources departments should strengthen land transfer supervision. For projects that implement green building standards, housing and urban-rural development departments should add green building-related content to the design plan review and construction drawing design review. Construction project planning licenses and construction licenses shall not be issued for projects that fail to pass the review; supervision should be strengthened during construction to ensure that construction is carried out according to the drawings. For projects that voluntarily implement green building standards, the green star standard should be indicated when the project is established, and the construction unit should clearly indicate the performance indicators of building energy conservation and water conservation at the construction and sales sites of the house.

(6) Strengthen capacity building.

The Ministry of Housing and Urban-Rural Development shall, together with relevant departments, establish and improve the statistical system of building energy consumption, and improve the accuracy and timeliness of statistics. Strengthen the construction of green building evaluation and identification system, promote third-party evaluation, strengthen the capacity building of green building evaluation and supervision agencies, and strictly evaluate and supervise. Strengthen the training of personnel in building planning, design, construction, evaluation, and operation, and make green building knowledge an important part of continuing education and training and professional qualification examinations for engineers in related professions. Encourage colleges and universities to offer green building-related courses and strengthen the construction of related disciplines. Organize planning and design units and personnel to carry out green building planning and design competitions. Carry out extensive international exchanges and cooperation and learn from international advanced experience.

(VII) Strengthen supervision and inspection.

The implementation of the green building action will be included in the State Council's energy conservation and emission reduction inspections and construction field

inspections. Special supervision on the green building action will be carried out to severely investigate and punish illegal construction of high-energy-consuming buildings, violation of engineering construction standards, substandard building materials, failure to publicize performance indicators as required, and violation of heat metering prices and charging methods.

(8) Carry out publicity and education.

Actively publicize green building laws and regulations, policies and measures, typical cases, and advanced experiences in various forms, strengthen public opinion supervision, and create a good atmosphere for carrying out green building actions. Take green building actions as an important publicity content for activities such as National Energy Conservation Publicity Week, Science and Technology Activity Week, Urban Water Conservation Publicity Week, National Low Carbon Day, World Environment Day, and World Water Day, increase public awareness of green buildings, advocate green consumption concepts, popularize conservation knowledge, and guide the public to use energy-consuming products reasonably.

All regions and departments should implement various tasks in accordance with the deployment and requirements of the green building action plan. The National

Development and Reform Commission and the Ministry of Housing and Urban-Rural Development should strengthen comprehensive coordination and guide all regions and relevant departments to carry out their work. All regions and relevant departments should formulate corresponding green building action implementation plans as soon as possible, strengthen guidance, clarify responsibilities, and implement them vigorously to promote the accelerated transformation of urban and rural construction models and the development mode of the construction industry, and promote the construction of a resource-saving and environmentally friendly society.

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