

# **Regulations of Shanghai Municipality on Construction-Related Energy Conservation**

(Adopted at the 21<sup>st</sup> Session of the Standing Committee of the 13<sup>th</sup> Shanghai  
Municipal People's Congress on September 17, 2010)

## **Chapter I General Provisions**

### **Article 1**

With a view to strengthening this Municipality's administration of construction-related energy conservation, reducing construction-related energy consumption, and improving energy efficiency in construction, these Regulations are formulated in accordance with the Energy Conservation Law of the People's Republic of China, the Construction Law of the People's Republic of China, the Regulations on Energy Conservation in Civil Buildings, and other relevant laws and administrative regulations, and in the light of the actual circumstances of this Municipality.

### **Article 2**

These Regulations shall apply to construction-related energy conservation and related supervisory and administrative activities within the jurisdiction of this Municipality.

### **Article 3**

"Construction-related energy conservation" in these Regulations means the activities and effective measures taken to reduce energy consumption and increase energy efficiency in the construction, renovation and use of civil buildings and in the construction of industrial buildings and urban infrastructure projects in accordance with the requirements of relevant laws, rules, regulations and technical standards.

### **Article 4**

The municipal construction department shall be responsible for the supervision and administration of construction-related energy conservation in this Municipality, and the Municipal Construction Market Office (hereinafter referred to as the MCMO) shall be responsible for the specific administrative work thereof as well as for imposing administrative penalties within its powers delegated hereby.

The district/county construction departments shall be responsible for the supervision and administration of construction-related energy conservation within their respective jurisdictions in line with their respective functions and duties.

The municipal and district/county departments of development & reform, government offices administration, planning, finance, statistics, quality and technical supervision, housing

administration, commerce, tourism, education, and public health shall assist and cooperate in the implementation of these Regulations within their respective functions and duties.

#### **Article 5**

The people's governments at all levels of this Municipality shall strengthen their leadership role in the work of construction-related energy conservation, actively cultivate the market of construction-related energy conservation services, improve the service network of construction-related energy conservation, encourage the development and application of construction-related energy conservation technologies, promote international exchange and cooperation in construction-related energy conservation, make government-invested construction projects models in energy conservation, and organize relevant departments for publicity and education programs regarding construction-related energy conservation.

The work of construction-related energy conservation shall be part of the examination and evaluation on the energy efficiency performance of the municipal construction department and the district/county people's governments, and this Municipality shall conduct examination and assessment to see whether the set targets of construction-related energy conservation are met and whether construction-related energy conservation measures are implemented.

## **Chapter II General Rules**

#### **Article 6**

The municipal construction department shall make a plan of construction-related energy conservation for this Municipality in accordance with its long- and medium-term plan for energy conservation and in the light of the actual needs of urban construction and economic development. Such plan shall be submitted to the Municipal People's Government for approval before being implemented.

#### **Article 7**

In preparing the detailed urban plan, the layout, shape and orientation of a building shall be determined according to the energy conservation requirements for civil buildings, with the features of the surrounding buildings taken into consideration.

When examining the design of a civil construction project, the municipal and district/county planning departments shall consult the construction department at the same level as to whether the design meets the mandatory energy conservation standards for civil buildings. No planning permit shall be issued for a building whose design fails to meet such mandatory standards.

Where an investment on a civil construction project needs to be examined or verified for approval, the municipal and district/county departments of development & reform shall conduct examination on the aspects of construction-related energy conservation; if they fail to meet the mandatory standards of energy conservation for civil buildings, the project shall not be approved.

#### **Article 8**

With respect to cladding structures, energy systems of buildings, the application of renewable energy in buildings, the renovation of existing civil buildings for the sake of energy conservation, the municipal

construction department may formulate and make known to the public local standards of construction-related energy conservation which are higher than the national or industrial standards, in the light of the climate and economic development level of this Municipality and by adhering to the principles of state-of-the-art technology and economic feasibility.

In areas where there are no national or industrial standards for energy consumption, such as in construction activities, the municipal construction department shall formulate local standards for construction-related energy conservation.

#### **Article 9**

The development, design, examination, construction, inspection and supervision units of construction projects shall implement the national and local mandatory standards of construction-related energy conservation.

If the local mandatory standards for construction-related energy conservation are higher than the national or industrial standards, the local mandatory standards shall be implemented.

#### **Article 10**

This Municipality shall encourage the development of new energy conservation construction materials and the promotion of new energy efficient construction technologies and processes.

The municipal construction department shall put the energy efficient construction materials into the municipal catalog that divides construction materials into three categories: encouraged, restricted or prohibited.

Energy efficient construction materials that are listed under the “encouraged category” shall be the first choice for construction projects of this Municipality.

No construction materials of high energy consumption that are listed under the “prohibited category” shall be used for the construction projects of this Municipality.

#### **Article 11**

This Municipality shall encourage the research on using in construction solar energy, geothermal energy, wind energy, biomass energy and other forms of renewable energy, as well as the demonstration and popularization of such uses.

For projects of new public buildings or residential buildings no higher than six-storey which require a design of hot-water supply system, the development unit shall design and install according to a uniform plan a solar water heating system that meets relevant standards. Development units shall also be encouraged to design and install a solar water heating system for seven-storey-or-higher residential buildings.

For projects of new government buildings or big public buildings, the development unit shall have a system designed and installed according to a uniform plan for using renewable energy that meets relevant energy efficiency standards.

#### **Article 12**

Within one year after the inspection-upon-completion of a newly-constructed government building or big public building, or within one year after the inspection-upon-completion of the energy-conservation renovation of such building, the development unit shall entrust an energy efficiency assessment agency to make an energy efficiency assessment of the building, and post an energy assessment sign at an eye-catching place of the building based on the result of the energy efficiency assessment.

In the following cases, the owner of any of the buildings mentioned above shall procure a reassessment of the building's energy efficiency and post the energy efficiency assessment sign accordingly:

1. the buildings' cladding structure has been renovated;
2. the building's main energy consuming equipment has been replaced; or
3. the building's energy efficiency assessment sign expires.

Development units or owners of other buildings shall be encouraged to procure energy efficiency assessment and post the energy efficiency assessment signs.

### **Chapter III Energy Conservation for New Buildings**

#### **Article 13**

Development units shall comply with the energy conservation laws, rules, regulations and mandatory energy conservation standards for civil buildings. They shall not tell design units or construction units, expressly or by implication, to violate the mandatory energy conservation standards for civil buildings in making designs and doing construction work. Nor shall they change without proper approval any aspects of energy conservation in the construction drawings and design documents of the project.

The supervision unit shall cause the construction unit to make corrections when it finds any deviations from the mandatory energy conservation standards for civil buildings. If the construction unit refuses to make corrections, the supervision unit shall report to the development unit in a timely manner, as well as to the relevant administrative department.

#### **Article 14**

In making designs the design unit shall comply with the energy conservation laws, rules, regulations and mandatory standards for civil buildings. The design documents shall contain aspects of energy conservation that meet relevant requirements.

#### **Article 15**

Examination agencies of construction drawings and design documents shall examine the aspects of energy conservation thereof according to the mandatory energy conservation standards for civil buildings. If such drawings and documents pass the examination, the examination agency shall promptly produce an examination report.

The energy conservation aspects in the examination report regarding a project's construction drawings and design documents shall be signed by the examiner, and be confirmed by the seal of the examination

agency. Examination agencies of construction drawings and design documents shall not issue false examination reports.

Aspects of the energy conservation in the design that have passed the examination shall not be altered without authorization. If alteration is necessary, reexamination shall be conducted according to the original examination procedures.

#### **Article 16**

The development unit shall entrust a qualified project quality testing agency to sample and test before witness the energy efficient construction materials at the construction site and to conduct on-site testing of the construction project.

The project quality testing agency shall conduct testing according to the construction-related energy conservation standards, and instantly input the testing data into this Municipality's information system of construction project testing and supervision. Upon completion of the testing, the project quality testing agency shall release testing reports via the information system. No false testing reports shall be released by such testing agency.

#### **Article 17**

The MCMO and the district/county construction departments shall inspect and supervise the testing of energy efficient construction materials by means of testing data examination, spot checks and comparison tests.

The MCMO shall analyze the relevant data in this Municipality's information system of construction project testing and supervision, and publicize regularly a status report on the quality testing of energy efficient construction materials.

#### **Article 18**

The construction unit shall not use substandard energy efficient conservation materials.

The MCMO and the district/county construction departments may spot check the energy efficient conservation materials that are at the construction site. In the course of such spot checking, the construction unit shall provide relevant information truthfully and cooperate in the on-site sampling.

#### **Article 19**

Where the development unit organizes the inspection-upon-completion of a construction project, aspects of energy conservation shall be taken care of. The acceptance report made after such inspection shall contain information regarding the inspection of the project's energy conservation aspects.

#### **Article 20**

The development unit shall make known to the public, at the sites of construction and sale, the project's energy conservation capacity and measures, as well as protections required therefor, according to the construction drawings and design documents that have passed the examination.

When selling a new civil building, the development unit shall set forth in the sales contract the building's energy consumption index, energy conservation measures and protection requirements, and the warranty period of the building's heat preservation work and other relevant information. When a new civil building is delivered for use, the development unit shall set forth in the user's manual the following:

1. the cladding structures and instructions on the protection and maintenance thereof;
2. the status of the building's energy consumption system and instructions on its use; and
3. the status of the building's renewable energy system and instructions on the protection and use thereof.

When the development unit applies for permission to sell or deliver a building, the municipal and district/county housing departments shall check the sales contract and the user's manual to see whether they contain information about construction-related energy conservation.

#### **Article 21**

The municipal construction department shall provide construction unit's energy consumption standards for civil construction projects, industrial projects and urban infrastructure projects according to this Municipality's plan of construction-related energy conservation and the overall goals of reducing construction units' energy consumption. Such standards shall be used as benchmarks for assessing the construction units' energy efficiency.

The standards of construction units' energy consumption shall be revised from time to time in the light of the actual situation.

#### **Article 22**

A construction unit shall establish rules for reducing energy consumption, set a goal of and make a plan for energy conservation, and specify its tasks in each project it undertakes for attainment of the goal.

When preparing the construction drawings of a project, the construction unit shall set forth the relevant technical measures for reducing its energy consumption, and ensure that the construction of the project meets the standards of energy efficiency.

The construction unit shall keep a running account of its energy consumption for each construction project, and make a good statistical analysis report regarding its energy efficiency.

#### **Article 23**

The MCMO and the district/county construction departments shall supervise and inspect the construction unit's implementation of energy conservation measures, and offer advice for addressing existing problems and improving energy efficiency.

#### **Article 24**

Construction units shall submit reports of its energy consumption to the MCMO or the district/county construction department as required. The municipal construction department shall summarize such reports and send the summary to the municipal statistics department.

The municipal statistics department shall regularly release to the public information regarding construction units' energy consumption.

#### **Article 25**

Projects of reconstruction or expansion that involve cladding structures or energy use system of buildings shall be governed by the provisions in laws and regulations on construction-related energy conservation applicable to new buildings and the mandatory energy conservation standards for civil buildings.

## **Chapter IV Energy Conservation Renovation of Existing Civil Buildings**

### **Article 26**

This Municipality shall renovate for the sake of energy conservation the different types of the existing civil buildings step by step and in a well planned way, in the light of the actual circumstances of this Municipality, including its level of economic and social development and the geographical and climate conditions. In renovating the existing civil buildings, this Municipality shall encourage the design and installation of renewable energy supply systems, such as the solar energy systems.

### **Article 27**

The municipal departments of housing administration, government offices administration, commerce, tourism, education, and public health shall duly investigate and analyze relevant facts of existing civil buildings according to their respective functions and duties, and submit the investigation and analysis reports to the municipal construction department.

On the basis of the plan of construction-related energy conservation and the investigation and analysis report about existing civil buildings, the municipal construction department shall formulate an energy conservation renovation plan for the existing civil buildings with help from other relevant departments, and submit such plan to the Municipal People's Government for approval. The energy conservation renovation plan for the existing civil buildings shall be implemented by the relevant departments according to their respective functions and duties.

The energy conservation renovation plan for the existing government buildings shall be formulated by the municipal department of government offices administration together with the municipal construction department.

### **Article 28**

Government buildings and public buildings invested by or mainly invested by the government that fail to meet the mandatory energy conservation standards for civil buildings shall be renovated for the sake of energy conservation.

In renovating government buildings for the sake of energy conservation, this Municipality shall encourage the use of the energy management contract (EMC).

### **Article 29**

If government subsidy is granted for the renovation of residential apartment complexes, for house repairs and build-outs or improvements of public buildings, energy conservation renovation shall be undertaken concurrently. The development unit shall make clear the specific measures and expenses of the energy conservation renovation on the basis of the mandatory energy conservation standards for renovating existing civil buildings.

The development unit shall solicit the opinions of the interested parties with respect to the measures of energy conservation renovation mentioned above.

### **Article 30**

The development unit shall make an energy conservation renovation plan for a project of renovating an existing civil building for the purpose of conserving energy, and shall use as first choice economically feasible energy conservation technologies and devices such as external sun shades, renovation of doors and windows, and heat resistant curtain walls.

## **Chapter V Maintenance of Energy Conservation Facilities in Civil Buildings and Supervision over Their Energy Consumption**

### **Article 31**

When building out or improving a civil building for which energy conservation measures have been taken, the development unit shall take necessary protective measures against any damage to the heat-insulation system of the building's cladding structures, the energy supply system, and the renewable energy supply system.

### **Article 32**

Owners of civil buildings shall be responsible for the daily maintenance of the buildings' energy conservation facilities which are designed and installed according to a uniform plan, and ensure that such facilities are in good condition. If any energy conservation facility is found to have been damaged and unable to satisfy the energy conservation standards, the owner shall make repair or replacement in a timely manner.

Shared energy conservation facilities in a building shall be covered by the services of the authorized property management entity, and the property management service contract shall have provisions to that effect.

### **Article 33**

When building new government buildings or big public buildings, or renovating existing government buildings or big public buildings for the purpose of energy conservation, the development unit shall have metering devices installed for the different forms of energy consumed. Such devices shall be connected to this Municipality's information system for monitoring energy consumption of buildings.

The above-mentioned owners or users of buildings shall ensure that the metering devices for the different forms of energy are properly installed, and shall transmit relevant energy consumption data as required.

### **Article 34**

Owners or the authorized property management entities of government buildings or big public buildings shall regularly submit reports to the municipal construction department on the status of energy use of the previous year. Such reports shall contain information regarding the total consumption of energy of the previous year, the amount of each form of energy consumed, relevant information about the energy conservation management system, the measures adopted for energy conservation, and effects thereof.

### **Article 35**

The municipal and district/county construction departments may examine the energy consumption in operating civil buildings by means of an energy audit. Owners or authorized property management entities shall cooperate with such audits. The result of such examination shall be released to the public in accordance with relevant provisions.

The municipal government offices administration department shall be responsible for examining the energy consumption in operating government buildings. The municipal government offices administration department shall send a copy of the examination report to the municipal construction department.

Owners or authorized management entities of buildings which are found with low energy efficiency shall promptly improve their energy conservation management system, see to it that the energy conservation measures are properly implemented, and raise the level of energy efficiency.

## Chapter VI Incentives

### **Article 36**

The municipal and district/county people's governments shall set aside from the energy conservation fund an amount for construction-related energy conservation, which shall be used as follows:

1. as incentives for model projects of civil buildings whose energy conservation devices surpass the current standards of energy conservation;
2. for energy conservation renovation of existing civil buildings such as residential buildings;
3. to promote the use of renewable energy supply systems in buildings; and
4. for other activities that promote energy conservation in buildings.

The procedures of using and managing the energy conservation fund shall be formulated by the municipal construction department together with the municipal development & reform department and the municipal finance department.

### **Article 37**

The expense for energy conservation renovation of government buildings shall be listed in and strictly controlled by the financial budget of the people's government at the same level.

The government shall give appropriate subsidies for the energy conservation renovation of residential buildings and non-profit public buildings.

### **Article 38**

Projects of civil building energy conservation shall be given preferential tax treatment in accordance with the law.

Financial institutions shall be encouraged to provide credit support for projects of civil building energy conservation in accordance with relevant provisions of the State.

### **Article 39**

The municipal and district/county people's governments shall formulate preferential policies to encourage the investment of non-governmental funds to promote the use of renewable energy systems in

buildings, the energy conservation renovation of existing civil buildings, and model projects of civil buildings.

**Article 40**

When it is necessary to use in a construction project new energy conservation technologies, processes or materials for which there are no corresponding standards, the municipal construction department shall arrange for relevant experts and professional service providers to make a technical feasibility study thereof. If upon such study the new technologies, processes or materials are found to satisfy the energy conservation requirements and the standards of quality safety, they may be used in the construction project.

If the new energy conservation technologies, processes or materials are technically mature, they may be duly incorporated into the local energy conservation standards for buildings.

**Article 41**

The municipal construction department shall satisfactorily disseminate and popularize the energy management contract, and provide service to and release information about the EMC enterprises on this Municipality's information system for monitoring the energy efficiency of buildings.

This Municipality encourages the investment of non-governmental funds on energy conservation renovation of existing civil buildings by the EMC method.

Energy conservation service providers shall be entitled to monetary support, preferential tax treatment, and financing services in accordance with relevant provisions of the State and this Municipality when they undertake projects of energy conservation renovation of existing civil buildings by the EMC method.

**Article 42**

Development units shall be encouraged to build green buildings that surpass the current energy conservation standards in accordance with the requirements of conserving energy, water, land and materials as well as the requirements of environmental protection, and apply for the green building label given by the State after evaluation.

## Chapter VII Legal Liability

**Article 43**

Where laws, rules or regulations have provisions regarding penalties for violations of these Regulations, such provisions shall prevail.

**Article 44**

If the development unit does any of the following in violation of these Regulations, the MCMO or the district/county construction department shall impose penalties according to the following provisions:

1. for failing to install solar water heating systems or renewable energy systems as required in Clause 2 or 3 of Article 11, the development unit shall be ordered to make corrections within a time limit and may receive a fine of not less than 50,000 yuan but not more than 500,000 yuan;
2. for telling the design unit or construction unit, expressly or by implication, to violate the mandatory energy conservation standards for civil buildings in making designs and doing construction work, or for

changing without authorization any aspects of energy conservation in the construction drawings or design documents as required in Clause 1 of Article 13, the development unit shall be ordered to make corrections within a time limit and receive a fine of not less than 200,000 yuan but not more than 500,000 yuan; or

3. for failing to publicize energy conservation information at the project's sites of construction or sales as required in Clause 1 of Article 20, the development unit shall be ordered to make corrections within a time limit; if it fails to make corrections within the time limit, it shall receive a fine of not less than 10,000 yuan but not more than 30,000 yuan.

#### **Article 45**

If the design unit fails to comply with the energy conservation laws, rules, regulations or mandatory standards for civil building in their designs as required in Article 14 hereof, the MCMO shall order it to make corrections within a time limit and impose a fine of not less than 100,000 yuan but not more than 300,000 yuan; if the non-compliance is serious, the municipal construction department shall order it to suspend operations for rectification, lower its qualification grade or revoke its qualification certificate; if the design unit has caused losses, it shall be held liable for compensations as provided by law.

#### **Article 46**

If the examination agency of construction drawings and design documents issues a false examination report in violation of Clause 2 of Article 15 hereof, the MCMO shall order it to make corrections within a time limit and may impose a fine of 30,000 yuan; illegal gains, if any, shall be confiscated; if the case is serious, the municipal construction department shall revoke its approval of the examination agency in accordance with relevant provisions.

#### **Article 47**

If the project's quality testing agency does any of the following in violation of Clause 2 of Article 16 hereof, the MCMO shall order it to make corrections within a time limit; if it fails to do so, it shall receive a fine of not less than 10,000 yuan but not more than 30,000 yuan:

1. failing to apply the construction-related energy conservation standards when conducting the testing;
2. failing to input the testing data into the information system of construction project testing and supervision in a timely manner;
3. failing to issue the testing report via the information system of construction project testing and supervision; or
4. issuing a false testing report.

#### **Article 48**

If the construction unit does any of the following in violation of these Regulations, it shall be penalized by the MCMO or the district/county construction department according to the following provisions:

1. for using substandard energy conservation materials for a construction project in violation of Clause 1 of Article 18 hereof, the construction unit shall be ordered to make corrections within a time limit and

may receive a fine of not less than 20,000 yuan but not more than 200,000 yuan; the person-in-charge and the person directly liable shall receive a fine of not less than 5,000 yuan but not more than 50,000 yuan;

2. for failing to take measures and causing the construction unit's energy efficiency falling below the energy consumption standards for construction units in violation of Clause 2 of Article 22 hereof, the construction unit may receive a fine of not less than 10,000 yuan but not more than 100,000 yuan; or

3. for failing to have a running account of its energy consumption for the construction projects, or failing to make a satisfactory statistical analysis report of its energy consumption, the construction unit shall be ordered to make corrections within a time limit and may receive a fine of not less than 10,000 yuan but not more than 30,000 yuan.

#### **Article 49**

If an employee of the municipal construction department, the MCMO, the district/county construction department or other relevant administrative departments does any of the following in violation of these Regulations, the employer unit or its superior administrative department shall duly impose administrative penalties on him or her, if the act constitutes a crime, he/she shall be prosecuted for criminal liability:

1. giving administrative permits or imposing administrative penalties in violation of law;
2. failing to perform the duty of supervision and inspection as required hereunder;
3. failing to promptly investigate or punish illegal acts upon discovery thereof, or covering up or conniving at illegal acts, which causes consequences; or
4. other acts of neglecting one's duties, abusing one's powers, or committing frauds for personal gains.

### **Chapter VIII Supplementary Provisions**

#### **Article 50**

Relevant terms in these Regulations are defined as follows:

1. "Civil buildings" means residential buildings and public buildings that are not used for productive activities, including houses and apartment buildings, office buildings, schools, shops, hotels, and hospitals;

2. "Industrial buildings" means buildings of all kinds used for production, including workshops, living facilities, and warehouses;

3. "Urban infrastructure" is the generic term for construction or social projects of infrastructure that are necessary for the existence and growth of a city. They include construction projects of roads, tunnels, bridges, rail transport systems, water supply and drainage systems, afforestation, water conservancy, and ports.

4. "Large public building" means a public building with the floor space of no less than 20,000 square meters;

5. "Energy efficiency assessment" means testing and computing the indexes that reflect a building's energy consumption and the efficiency of its energy use system and assessing the level of such indexes;

6. "Sampling and testing before witness" means the activities of the construction unit's employee responsible for testing who takes samples from the objects of the testing in the presence of witnesses

representing the development unit and the supervision unit in accordance with relevant technical standards and specifications and sends such samples to a qualified testing agency for testing; and

7. “Green buildings” refers to buildings which in their life cycle are capable of minimizing consumption of resources (energy, land, water and materials), protecting the environment and reducing pollution, and which are congenial and space-efficient, allowing people to live healthily and in harmony with nature.

**Article 51**

Villagers in the rural areas shall be encouraged to use energy conservation methods in building homes and temporary buildings.

**Article 52**

These Regulations shall be effective as of January 1, 2011.