



北控水务集团有限公司
BEIJING ENTERPRISES WATER GROUP LIMITED

Low-Carbon Operations Management Measures of BEWG

Chapter I General Principles

Article 1 Purpose

In recent years, as global warming is speeding up, the risks of extreme weather, natural disasters and food chain disruptions also increase, seriously threatening global ecology and human health.

Actively responds to China's sustainable development strategy, BEWG formulates these measures for the purpose of promoting energy conservation, improving energy use efficiency, reducing carbon emissions directly or indirectly caused during operation, and protecting and improving the environment.

Article 2 Definition and Objectives

Carbon emissions: Carbon dioxide emitted during the production and transportation of the electricity, fuel, and chemicals consumed during the operation of the project.

Objectives: To control and reduce the total amount of carbon dioxide emissions ("CDER" for short), systematically control and optimize the energy consumption, medicine consumption, and material consumption of the project, and improve the low-carbon management and operation mode of the project.

Article 3 Scope of Application

These measures are applicable to the group headquarters, five major regions, subordinate business areas and project companies, foreign-invested water environmental protection companies and overseas business. In case of conflict between the implementation of these Measures and local policy requirements, the requirements of the country or region where the measures are to be implemented shall be followed.

Article 4 Duties and Division of Work

(I) Operations Management Center

1. Organize the formulation of management systems related to low-carbon operations;
2. Promote low-carbon technology research, case summary and promotion of low-carbon operation;
3. Establish a low-carbon operation evaluation and assessment system;
4. Organize publicity, education and training for low-carbon operation;
5. Provide necessary technical support for the low-carbon operation of primary business units and project companies.

(II) Technology Center

Responsible for controlling the technological flow and equipment selection of new/renovated projects, avoiding using energy-consuming equipment.

(III) Purchasing Center

Practice the concept of green procurement, incorporate low-carbon management levels into the consideration range of supplier admission, give priority to the use of low-energy and low-polluting equipment with green materials, and select optimized logistics procedures to minimize the environmental impact.

(IV) Group Office

Implement the concept of conservation, conduct publicity, educational and training activities in water conservation management, energy-saving management, consumable management, etc., and guide all employees to develop low-carbon work habits.

(V) Primary business units

1. Guide the subordinate project companies to formulate low-carbon operation plans and supervise the implementation;



2. Develop a reward and punishment system for low-carbon operations at the management level within the scope of authorization;

3. Understand the new technology of low-carbon operations, supervise the project companies to eliminate outdated equipment and promote energy-efficient equipment in accordance with national regulations.

4. Organize project companies to carry out post-evaluation of equipment involved in low-carbon operations and optimize equipment configuration.

5. Provide necessary technical support for the low-carbon operations of the project companies

(VI) Project Companies

Responsible for the implementation of low-carbon operations, including energy consumption control, pharmaceutical dosage control, etc., evaluation of the low-carbon operation effect of the project companies according to the low-carbon operation evaluation model, and continuously improving the low-carbon operation level.

Chapter II Ways to Reduce Carbon Emissions

According to the characteristics of water projects, the project companies can reduce carbon emissions by using clean energy, carrying out energy-saving management/technical transformation, strengthening drug consumption control, and advocating green office during operation. If conditions permit, a plant-level carbon footprint assessment shall be established to optimize the path of CDER.

At the same time, they should actively pay attention to climate change and related policies, and evaluates the risks caused by climate change to project operations in order to draw up countermeasures.

Article 5 Clean Energy

For projects with large total energy consumption, the corresponding economic and technical analysis should be made combined with the water plant's own conditions to explore the feasibility of using clean energy such as photovoltaic power generation, wind power generation, and clean heating, so as to reduce primary energy consumption and corresponding carbon emissions.

Article 6 Energy Consumption Control

Energy consumption control mainly includes two methods: economic operation of equipment and energy-saving technical improvement of equipment.

The economic operation of equipment refers to the experience or method of adjusting the operation mode of equipment to make it in a state of high efficiency and energy saving by taking active and effective production management measures, which is called management energy saving. The equipment economic operation monitoring and energy efficiency evaluation system of BEWG, through the collection of energy consumption indicators and operating parameters of major energy-consuming systems, analyze the composition of energy consumption, energy efficiency level and

operating state, help operators to timely find energy-consumption problems, optimize control strategies, ensure the economic operation of equipment, and realize the maximum effect of energy conservation in water plants.

Equipment energy-saving technological transformation refers to a project of reducing equipment energy consumption by taking active and effective measures such as equipment maintenance, overhaul, resetting and technical renovation. This energy-saving method is called technical renovation of energy conservation. The technical transformation should focus on high-energy-consuming equipment, determine whether the equipment is in a high-efficiency and energy-saving operating state through operating condition analysis and energy efficiency evaluation; analyze and measure energy-saving potential, and carry out necessary energy-saving technological transformation; give priority to the use of environmentally friendly and energy-saving electrical and equipment, gradually phase out high-energy, low-energy-efficiency equipment, and actively promote the use of high-efficiency and energy-saving new products and technologies in the process of technological transformation.

Article 7 Chemicals Consumption Control

The chemicals consumed in the water treatment process emit greenhouse gases during production and transportation. Therefore, controlling the consumption of chemicals in the water treatment process can indirectly reduce carbon emissions during the operation of the water plant.

Improve the facilities for adding and measuring chemical agents, as well as the systems for the use and storage of chemical agents, centering on the operation of chemical phosphorus removal, nitrogen removal from external carbon sources, chemical agent disinfection and other chemical agent adding and processing units; implement localization of operating technical guidelines, and propose and implement rectification measures, actively implement technical transformations for the efficient

use of chemical agents, encourage the use of intelligent dosing systems, and solidify the process unit control methods to achieve the purpose of reducing the consumption of chemicals.

Article 8 Green Office

Green office refers to an office concept that advocates the behavioral pattern of saving resources and energy in office activities, develops a low-carbon habit, and thus reduces the carbon dioxide emission in the production and transportation of resources and energy. It is an important part of the national campaign of energy conservation and emission reduction.

In the process of water plant operation and management, specific green office behaviors are as follows:

1. Improve the efficiency of office equipment such as computers, printers, etc., which should be on standby for short periods of rest, and should be turned off if not use for more than 1 hour, and the power should be turned off after getting off work to avoid unnecessary power consumption.
2. When the indoor light is sufficient or there is no one for a long time, lighting equipment should be turned off.
3. The indoor air-conditioning temperature should not be lower than 26℃ in summer and not higher than 18℃ in winter.
4. Develop the habit of using toilet facilities properly, timely flush and clean the sanitary ware, and timely turn off water equipment.
5. If water leaks or broken water pipes are found in public facilities, the relevant departments shall be notified for maintenance.
6. Make full use of network resources to transfer documents and save every piece of paper. Except for some important documents, other materials shall be printed on both sides, or printed on the reverse side of waste paper.

Chapter III Evaluation and Assessment

Article 9 Evaluation of Low-carbon Operation Effect

The establishment of star ratings for operating companies is the core of the group's project management. An evaluation criterion system that covers all the concerns of operation management has been developed, and the energy saving and consumption reduction module is a part of the evaluation system.

The project companies use the group's star rating evaluation standards of energy-saving and consumption-reduction module to evaluate the current status of the project's low-carbon operation effects, make a comparison between the current score and the pass mark required by the target star ratings, dig out the potential for energy conservation and consumption reduction of the plant, and make corresponding measures to continuously improve the low-carbon operation level.

Article 10 Performance Assessment

The group incorporates the star-level enterprise creation rate of operational projects into the annual performance targets of the operation management center and the primary business units, and develops a group-level star-rating reward mechanism; the primary business units will develop corresponding star-level creation and promotion goals based on the actual situation of each project, and develop the reward and punishment plan of the business unit; the project companies consider each technological unit as the power consumption unit to analyze the energy consumption composition, decompose the target index of energy consumption, and incorporate it into the production cost performance assessment of each post. The group's goals are consistent to ensure that low-carbon operation goals are achieved.



Chapter IV Bylaws

Article 11 The interpretation of these Measures shall be vested in the Group's Operation and Management Center.

Article 12 These measures shall be implemented from the date of issuance.

(The English translation of the system is for reference only and the Chinese version shall prevail in case of any inconsistency between the Chinese version and English translation thereof)