



Analysis of the role of "Online State Grid" in optimizing business environment and improving power supply service level

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Abstract. In order to promote China's economic development, improve the quality of power supply service, reduce power grid costs, and maximize the interests of enterprises, this paper discusses the role of "State Grid on the Internet" in optimizing the business environment and improving the level of power supply services. There are many problems in the process of power grid planning and construction to improve power supply service level. This paper analyzes the relevant countermeasures, which shows that the comprehensive national strength is constantly improving, the power industry has made rapid development, and China's demand for power is increasing. At present, it is necessary to do a good job in power grid construction, which can not only improve the service level of power supply, but also improve the work efficiency of power grid enterprises and maximize the interests of enterprises.

Keywords: Power supply enterprises; Electricity inspection function; Countermeasure analysis; Marketing level; Online state network

1 Introduction

With the development of economy, electric power industry has made great progress [1]. At present, the projects undertaken by CLP have spread to more than 60 countries and regions in the world, which has greatly publicized China's image and demonstrated its strength. As one of the most important tasks in power grid construction, power grid planning can improve the quality of power supply service, reduce the cost of power grid and maximize the interests of enterprises. Figure 1 shows the structure of China's power grid [2]. At the same time, with the development of economy, the demand for electric power from all walks of life becomes larger and larger, which leads to the growing scale of electric power industry. At present, the electric power industry is in a period of reform and adjustment, and many systems are imperfect. Therefore, doing a good job in power grid planning has become one of the important topics for the future development of electric power enterprises [3].

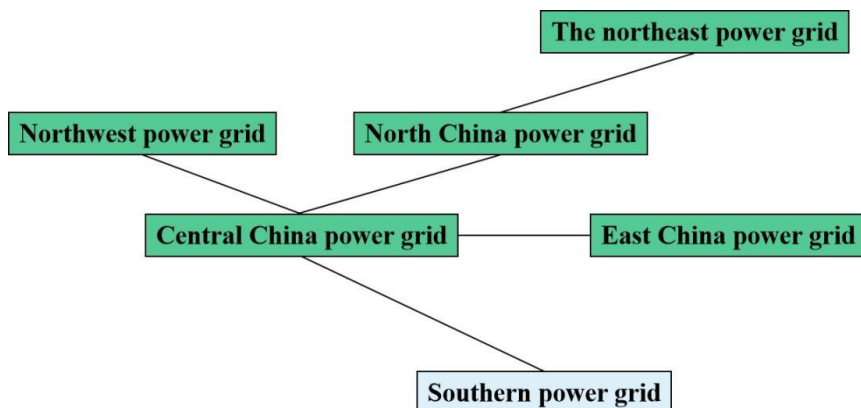


Fig. 1. Structure of China's power grid

2 Power grid construction problems

2.1 Problems in power grid planning and construction

The demand for electric power is increasing year by year, which shows the sustained and stable development of China's economy, especially in some areas with developed manufacturing and information industries. For example, in the industrial economic belts of the Pearl River Delta and the Yangtze River Delta, the growth rate of electric power load is above double digits, and some even exceed 20% [4]. Tables 1 and 2 are the highest power load records of a county in China from 2010 to 2016. From the analysis in Table 1-2, the growth of the highest power load can be analyzed from the side of China's economic development, and the development of other industries will definitely drive the increase of power demand [5]. From 2011 to 2016, power demand has been increasing, but the growth trend is very unstable. It can be clearly analyzed from the table that China had the fastest economic growth rate in 2011 and 2015 [6].

Table 1. Record of the highest power load from 2010 to 2016.

age	Maximum power load /GW
20 10	3.292
20 11	4.022
20 12	4.511
20 13	4.963
20 14	5.818
20 15	6.378
20 16	7.281

Table 2. Record of the increase from 2010 to 2016.

age	Increase/%
20 10	18
20 11	22.17
20 12	12.16
20 13	10.01
20 14	17.22
20 15	19.62
20 16	14.15

Most cities in China generally lack the overall macro and forward-looking, so they can't plan the power grid well. When the local power load increases, the power grid departments in this area begin to submit demand reports to the urban construction planning department for power grid expansion, which often makes it more difficult to build the power grid. The structural problems of power grid are prominent. The systematic, forward-looking and effective planning of power grid is insufficient [7-8]. The power grid planning mainly focuses on solving the current problems, and the overall planning of the long-term target grid and regional power supply is insufficient; The planning of power grid has little guidance for power grid construction, and the project construction scheme has been greatly adjusted in the feasibility study; The power grid planning is a secret material, and planners at all levels do not know enough about the overall work situation, and have not formed a joint force to promote the work [9].

2.2 Problems existing in the management mode of electricity inspection in power supply enterprises

At present, there are still many problems in the development of power supply enterprises. The security of power supply in enterprises is low, and there is a lack of safety management departments: the overall quality of employees is low, and they can't fully grasp the whole operation of enterprises; Enterprise technology is not up to standard, etc. All these problems hinder the development of modern power supply enterprises [10].

3 Function analysis

3.1 Optimization of power grid planning and construction mode analysis

In view of the above problems, the following measures can be taken to make up for the shortcomings of power grid construction [11-12]. Planning the lean construction of business management system; Straighten out the working mechanism of power grid planning, establish the daily working mechanism of load forecasting, and regularly

track dynamic information such as urban planning adjustment, power supply progress, major projects and industrial parks; Establish a joint coordination mechanism for planning and operation, and jointly prepare the annual peak load analysis and three-year operation mode analysis report with the operation department; Further consolidate the cooperation mode between government and enterprises, and organize the signing of strategic cooperation agreements with the government; Establish the rolling adjustment mechanism of the power grid planning project library, and carry out the adjustment of planning projects in a normal way according to the principle of unified coordination of the main distribution network, focusing on self-centered, market-oriented and solving current problems; Normalize the planning site selection and route selection, and strengthen the planning implementability; Strengthen distribution network and rural network planning, comprehensively promote the management of "one town and one book", and establish a daily maintenance mechanism for distribution network planning data [13].

3.2 Analysis of ways for power supply enterprises to strengthen the power inspection function

In view of many problems in the process of electricity inspection, enterprises should set strict standards and reasonably formulate various complete measures. The following is a concrete analysis from three aspects [14].

If any industry wants to solve practical problems, it must start from the level of consciousness and strengthen employees' attention to this problem [15]. At present, all kinds of problems existing in China's electricity inspection are due to enterprises' neglect of electricity safety, which has produced many adverse effects "[16]. This power supply enterprise must firmly establish the awareness of electricity safety and attach great importance to this problem. Furthermore, power supply enterprises should set up a marketing check-up system according to the actual demand of the market, and incorporate all kinds of power systems into this mode, so as to give full play to the macro-control role of the power consumption department and provide technical support for this monitoring system. Finally, the power supply enterprises need to put all the user information into the database, and have a comprehensive grasp of the user information, which is conducive to providing users with higher quality services. Through the feedback information from users, the relevant system measures of the enterprises can be continuously improved, and the power supply service level can be comprehensively improved [17].

When the power supply enterprise conducts electricity inspection, it needs to make a comprehensive plan for each work flow, which must be closely linked with each other, with a trace of dissatisfaction. For example, in the actual process, the quality of construction materials and main parts should be checked first, and then the quality should be evaluated according to the data. Secondly, make a record of the whole construction process. If any unreasonable problems are found, replace relevant countermeasures in time to reduce the occurrence of adverse problems afterwards. Finally, integrate the recorded materials, and comprehensively evaluate the whole construction process according to these materials. Power supply enterprises should strictly

control all work, so that the whole work flow can achieve the effect of clear division of labor [18].

The development of science provides technical support for power supply enterprises' electricity consumption inspection. In the process of electricity consumption inspection, reasonable and effective inspection methods should be adopted according to the actual situation. A variety of inspection methods have brought convenience to this work. Whether it is visual inspection or measurement with relevant instruments, the most important thing is that the professional quality of procurators must reach the standard [19]. Therefore, under the premise of relying on advanced science and technology, we should also pay attention to the professional wall training institutions for employees. Training institutions should be established according to the overall quality of employees, and they should be classified and established according to factors such as employees' business ability, service level and professional knowledge. Training should be targeted, and employees should be trained in different ways. Besides, besides training the professional knowledge of employees, we should also strengthen the training of safety awareness. No matter in the construction process or in the service process for users, relevant personnel must put safety first, and explain the relevant knowledge of electricity consumption to users while ensuring their own safety. " Finally, enterprises need to train employees' service attitude, change their service attitude, improve their service level, set up a corporate image with service as its purpose, and improve their visibility [20].

4 Conclusion

Electric power plays an important role in China's industrial development. With the rapid development of all walks of life, China's electric power industry has higher requirements accordingly. In order to develop in the fierce market environment, enterprises must have their own development direction and strong competitiveness. Under the market configuration, power supply enterprises should establish and improve relevant system measures, complete the marketing inspection system, clarify the contents, methods and processes of electricity inspection, and pay attention to the professional knowledge training of employees. The most important thing is to take electricity safety as the premise of enterprises, reduce all kinds of safety accidents, and provide the development direction for the whole power supply industry, thus promoting the bright and healthy development of the power supply industry. There are also many problems in the process of power grid planning and construction to improve the power supply service level, among which environmental problems and humanistic problems need to be considered by designers, who should be forward-looking and macroscopic. Therefore, in the process of improving power supply service level in power grid planning and construction, human factors must be considered, and sustainable development should not be ignored for the sake of development.

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