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Informatization Construction of Power Grid Enterprise Management

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Abstract: In power grid enterprises, there are many objective and subjective factors, which lead to the slow development of informatization. Therefore, we must pay attention to the effective reform and improvement of China's power system. Based on the information construction of power grid enterprise management, this paper analyzes the present situation and problems of power grid enterprise information construction, studies the development trend of power grid information construction, and puts forward the countermeasures of power grid information construction.

Keywords: Power grid enterprises; Management; Information construction

1. Introduction

The construction of informatization is a complicated and difficult problem, which requires the effective integration of information in the management information system of power grid enterprises, so as to provide them with more perfect, comprehensive and valuable suggestions that are suitable for the development needs of power industry and conform to the actual situation^[1]. In recent years, with the development and progress of information technology, informatization has become a prominent feature of modern enterprises, and promoting the transformation of enterprise development with informatization has become an important trend of modern enterprise development. Power grid enterprises are important backbone enterprises of national energy security and the lifeline of national economy.

2. The power grid enterprise information construction problem analysis

2.1 Lack of subjective consciousness

Due to the relatively short time of informatization management of power grid enterprises, many employees attach importance to informatization production and despise informatization management in the process of informatization of power grid enterprises. For a long time, power enterprises have been producing under the planned economy model, and their awareness of assets is relatively weak^[2]. In recent years, with the reform of enterprise management system, the core of enterprise's strategic positioning and information management has been continuously optimized, and the development concept has changed greatly. Enterprise's management informatization and production informatization are gradually developing simultaneously, but there are still many people who think that management and production are two different systems, which makes the informatization development of enterprises have great problems and cannot meet the deeper management needs and decision-making needs^[3].

2.2 Separation of management and control system

The power system has the characteristics of real-time balance, which will lead to the separation of management and control systems. For example, in the production of enterprises, the production data are all real-time, so it is necessary to manage the production according to the real-time information. The real-time requirement of management information is relatively low, and the information technology systems adopted by the two are also different. The system of management and control is relatively separated. For example, the separation of the two in information planning. At present, power grid enterprises lack a management platform for overall dispatching automation planning and management information planning. In the long-term development work, the production control system has established a dedicated network, and the isolation mechanism between the two is relatively strict. Therefore, the real-time performance is weak, which hinders the further development of the application.

2.3 Backward management model

With the awakening of competition, service and cost awareness, the development of business information in the industry has been rela-

tively tortuous for a long time. Management mode is the basis of informatization. Without a good management mode, even the same technology and platform, the systems realized are different. That is to say, if we only stick to the original fixed Chen Xihua system and can't carry out informatization from the perspective of enterprise development, the development of enterprises will be affected and the informatization development will not be effective. At present, many power grid enterprises still lack the fund life cycle management mechanism and the overall planning of business such as planning, parts and operation and maintenance, and management innovation needs to be further improved^[4].

3. The trend analysis of power grid enterprise informatization

The first point: to achieve the goal of low-carbon development of China's power industry. Electric energy combustion is the main carbon dioxide emission in China. Under the background of environmental pollution and ecological protection, the task of emission reduction is relatively heavy, and thermal power generation is the main source of power generation in China. Realizing the informatization of power grid enterprises is to realize new energy development technologies such as photovoltaic power generation and wind power generation, which is the focus of power structure development.

The second point is to improve the optimal allocation capacity of power grid resources in China. In the development of our country, the optimal allocation of power grid resources is very important. During the "14th Five-Year Plan" period, China put forward many ideas to focus on and enhance the resource allocation of power system.

The third point: improve the performance of power grid and promote the construction of diversified services. The development focus of power grid enterprises is diversified service construction. It is essentially different from the traditional service construction. The power supply service focuses on the residents' needs of modern enterprises, taking the people's needs as an important guide for development, and making customers the final judges of products and services^[5].

4. The countermeasures analysis of power grid enterprise information construction

4.1 IBM to build a smart grid system

From the perspective of information communication platform, IBM can divide smart grid into five parts: data acquisition, data transmission, information integration, analysis and optimization, and information display, and initially realize digitalization. All kinds of intelligent sensors, power equipment, control systems and application systems in the digital connotation realize full-time monitoring and observation of the whole system. Based on a unified information platform, data integration and application are completed, and advanced IT means are provided to realize information transmission and integration of power grid enterprises. On the basis of information integration, advanced analysis is carried out, with data analysis ability supporting decision-making, and the goals of improving reliability, reducing cost, improving income and efficiency are realized.

From the point of view of data collection, data should be collected completely and comprehensively, and the existing monitoring scope of power grid should be further expanded, and comprehensive and complete data collection and analysis should be realized, which can be fed back to the power grid through comprehensive and effective analysis to better control and optimize the operation of the power grid. After the collection of information data is completed, the processed information will become more valuable. At present, different departments are generally responsible for the business systems of power grid companies. For example, the production department is responsible for power dispatching, monitoring and control, and has its own power dispatching network and other business systems. The construction of smart grid needs to break the information barrier between departments and establish information integration and sharing at the enterprise level. All departments and levels of enterprises can obtain relevant information based on their own business activities, and realize production and control, enterprise operation and management. The construction of information power grid can promote the production, operation and management of the whole value chain of power industry. For power grid enterprises, the most prominent thing is to improve the data management ability. The power grid is more complex and requires improving the data analysis ability. Users will realize two-way interaction with the power grid, thus improving customer satisfaction.

4.2 The construction of information platform model

The construction of smart grid information platform also needs to establish an information platform, mainly to realize the comprehensive information collection of power grid planning, design, construction and production services, smooth information transportation and information processing in colleges and universities, and at the same time, improve the digital automation level of equipment and business processing. For example, building a smooth management link, covering all aspects of power grid enterprises' business, improving the modernization level of management, improving the optimal allocation of resources in the whole network, effectively utilizing and comprehensively controlling risks, and timely handling. For another example, build a transparent information sharing platform, standardize the workflow of the enterprise, and let all links and businesses of the company interact, so as to better promote the development and progress of the enterprise. For another

example, make full use of the diverse and massive information potential value of smart grid, tap the value knowledge behind it, and improve the intelligent analysis and scientific decision-making level of power grid.

5. Summary

With the rapid economic and social growth and the shortage of energy resources in China, the power supply network structure is unreasonable and the grid redundancy is serious. A series of problems, such as imperfect distribution management system, restrict the improvement of management information construction level and operational efficiency of power grid enterprises. The information platform has powerful functions and wide coverage. Through the management informatization construction of power grid projects, we can realize the rational allocation of resources, reduce operating costs and improve the efficiency of power enterprises. Information exchange is smooth. Establishing a sound information platform under the environment of rapid development of information technology can help relevant departments to carry out their work better, faster and more efficiently.

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