

# Research on Electronic Business Marketing Strategy of Electric Power Companies in Jilin Province under the Background of Economic Transformation

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**ABSTRACT.** *E-commerce, which is a new technical measure, provides new thinking for the Innovation of companies that provide electric energy. Currently, power companies are in a period of economic transformation. In order to become the world's leading power supply companies, we must closely follow the progressive management conception and measure, integrate the management services of companies into the Internet society. In view of the power supply system advantages of Jilin Province, this paper puts forward some power supply schemes for the power supply companies in Jilin Province. Based on the actual operation of power supply companies in Jilin Province, this paper designs the network and structure pattern for power companies, and finally obtains the program of e-commerce website of these kinds of companies.*

**KEYWORDS:** *E-commerce, Power Supply Enterprise, Marketing Management, Marketing Strategy*

## 1. Introduction

In order to regulate bidding and tendering activities, protect our nation and social interests, and the regulate the action of the parties involved in bidding and tendering, accelerate economic efficiency, and ensure project quality, our government formally implemented the "Law of the People's Republic of China on Bidding and Bidding" on January 1, 2000. The power industry is developing rapidly, and the companies begun to use bidding method to purchase power equipment and materials. In order to realize the marketization of electricity, China's electricity market, especially the power supply system, must be completely open. The relevant power companies have begun to adopt the intensive management of raw and processed materials simultaneously. Take a power company as an example: the

company purchased the project unit by itself without any centralized procurement during 2002 -2004; from 2005 to 2010, the company adopted different levels of centralized bidding procurement according to different projects, partially realizing the integration of procurement process. Intensive management refers to centralization, collection of human resources, financial resources, management and other production factors for unified allocation, so as to achieve cost reduction and efficient management, so as to enable companies to concentrate their core forces and obtain the advantages of sustainable competition. The development goal of China's "Twelfth Five Year Plan" period is to build a world leading SCM system. In the current situation, power companies need to formulate relevant e-commerce strategies according to the actual needs of companies and the market, build the material resource management system of power enterprises, and realize the centralized operation and management system that can cover the whole region and realize supervision. In order to achieve the goal of energy efficiency management of electric power companies, it is necessary to use these e-commerce platforms to achieve the goal of scientific management. [1, 2].

## **2. E-commerce Procedures for Power Supply Companies**

### ***2.1 Requirements of Jilin Power Supply Companies on the Electricity Market***

The marketization of power resources is a new model for the development of power resource scheduling in our country, which can better promote energy conservation and emission reduction, realize energy conservation and environmental protection policies, and improve the economic benefits of power plants. However, the power market should not only focus on its own construction and development, but also must obey the national overall economic construction. Power market includes six elements: market subject, market object, market carrier, market price, market rules and market supervision. According to the principle of "risk sharing and benefit sharing", or through market-oriented trading, determine the power transmission and receiving price and price, and establish the corresponding price adjustment mechanism. The market-oriented electricity trading can lower the threshold of entering the market, fully liberalize the entry of high-tech and strategic new industries into the market, and is not limited by the annual electricity consumption threshold. Research on how to effectively link up the market bidding mechanism and the power generation capacity of major power plants, then it can better serve the national construction.

At present, China's power market trading system is gradually improved, the market openness and activity has been significantly improved, the market has played a role in the allocation of resources, and the market environment is healthy. The construction of power market has achieved initial results, and the scale of market-oriented transactions has gradually expanded. Many provinces and cities have established power trading centers, built standardized and unified power markets, transformed energy advantages into power advantages, built trading platforms for power generation enterprises, power sales enterprises, and power users,

so as to meet the growing demand for electricity trading. In terms of power trading business, it is separated from other business of power grid companies. It has independent financial accounting and is responsible for its own profits and losses. It operates under the supervision of the government. The daily business of trading institutions is not interfered by factors other than market entities and is not for profit-making purposes.

From the market structure chart, we can see that due to the increase of trading institutions and retail companies, it is different from the current business model. Before the reform, the structure of the power market consists of generation, transmission, distribution and the relationship between electricity sales and consumers. The vertical monopoly structure is adopted in the power market. There is only one Power Company responsible for generating, transmitting, distributing and selling electricity in a region, and the power company monopolizes all information and users. After the reform, the main body of the market includes: power generation enterprises, trading institutions, power grid enterprises, electricity sellers and power users. The power market adopts the structure of wholesale competition, and distribution companies, large users and power producers can choose from each other. The transaction cost of the whole market will increase, but the industry resources will be more reasonable allocation.

The trading institution is the main connection point between the market entities. The power generation enterprises, the power selling entities and the direct trading users conduct quotation and trading in the power trading center. The form of transaction includes bilateral transaction or bidding transaction. The advantage of bilateral transaction is the flexibility of contract terms, transaction time and place. Competitive trading has obvious advantages in transaction speed, which is suitable for the market with high demand for time. In the whole market structure, there are two dimensions of relationship chain. One is the business flow of market transaction, the other is the power flow of electricity transmission. Power flow refers to that all kinds of power generation enterprises send power to the power grid and distribute it to all kinds of power users through the transmission and distribution network. Business flow refers to the business relationship of each market entity in the process of market transaction.

Therefore, when the competitive power supply system is fully realized, the current operation mode will change, and all power supply companies will have equal status, every user also has more choices. They can choose where to buy electricity from market middlemen, rather than from power supply companies. Users will choose who has the best price and service.

## ***2.2 E-commerce Programs for Jilin Province Power Enterprises***

### ***2.2.1 Open bank account***

Users can go to bank or log in the network station of the power supply company to go through the electricity use procedures before applying for the electricity

business. First, users need to open an account at any local bank and save money. Then, go to the network station of the power company to open an account. There is an agreement between the bank and the power supply company, you can directly log on to the network station of the power supply company to handle related matters.

### ***2.2.2 Open online account***

The user shall register on the network station of the power supply company and fill in relevant information, such as user's relevant information, user's account number and bank account number. Different materials should be provided according to the requirements of individuals and units. Individual users only need to submit the original and copy of house property certificate and ID card of householder. Unit customers need to submit: electricity application report, legal representative ID card, organization code certificate, industrial and commercial tax registration certificate, land use certificate, project approval documents and feasibility study report and so on. Online payment is convenient for users to use and save time and energy. Users can pay online after login on the network station of the relevant company.

### ***2.2.3 Submit device and wiring diagrams***

When applying for electricity business, users can apply online and pay relevant fees without going to the site. After receiving the application on the Internet, the company will first make an appointment with the user, and send someone to the user's home to check according to the plan to determine the nature of electricity consumption. Then, according to the actual situation, it will determine the capacity of the meter and the line scheme, and solve the existing problems with the user on site.

### ***2.2.4 Electrical device installation***

After receiving the survey task, the customer service manager shall organize relevant departments to the site for investigation. According to the site survey results, the preliminary power supply access scheme, metering scheme and billing scheme shall be formulated, and the relevant departments shall be organized to review to form the final power supply scheme. After the approval scheme is drawn up, it shall be submitted to relevant departments for approval according to the approval conditions (according to voltage level, transformer capacity, etc.), and the approval opinions shall be signed. Reply to the power supply scheme, and give a written reply to the customer according to the approved power supply scheme.

### ***2.2.5 Fault recovery system and warranty***

In order to realize the efficient operation of power resources, it is necessary to establish the corresponding troubleshooting mechanism. In the use process, it is

necessary to improve the relevant technology to ensure that the maintenance results are more accurate, promote the benign development of the power system and better serve the users. Failure warranty includes two parts: one is planned warranty, the other is emergency warranty. The manager shall maintain the determined area according to the specified plan and inform the user through the Internet. In case of emergency, users can choose to repair online or dial.

### **3. Establishment of E-commerce Platform for Jilin Province Electric Power Companies**

#### ***3.1 Overall Construction***

Compared with the traditional power material procurement mode, e-commerce platform has the following advantages: 1. It reduces the cost, improves the work efficiency of price comparison procurement, simplifies the approval process, and reduces the project operation cycle. 2. Competition can make rational allocation of resources and facilitate equal competition. 3. Increase the transparency of work, standardize the process of inquiry and price comparison, and prevent unfair competition. The design principle of e-commerce platform is to establish an operation platform for realizing the whole process of electronic, programmed and standardized management.

The structure of e-commerce platform should be divided into e-commerce website and enterprise ERP system. The data sources of internal and external network systems are consistent. The system automatically completes the whole process of purchasing business, including inquiry, quotation, quotation submission, etc. In the system, the buyer compares the price and performance of the supplier, selects the appropriate supplier and determines the procurement scheme. The system can track the electronic order and bidding information online. All the data are recorded in the system and can be queried at any time. The e-commerce platform and ERP of the company are connected seamlessly to realize digital procurement from plan application, approval, inquiry, purchase and payment. It standardizes the process of business procurement, reduces the cost and promotes the innovation of production and operation.

#### ***3.2 Risk Analysis and Safety Requirements***

E-commerce refers to a new business operation mode, which realizes online shopping of consumers, online transaction and online electronic payment between merchants and various business activities under the open network environment. Its message flow has the characteristics of openness and coordination. There are special requirements for its safety [3-5].

### **3.2.1 Usability**

Usability is the key to evaluate whether the website satisfies customers. A website must be available before it can evaluate other aspects. The usability of a website means that the website can efficiently provide users with satisfactory transactions or electronic services, increase the sales volume of the website, and make the website have a competitive advantage. The usability design of business website includes clear and intuitive page layout, so that users can quickly find information; good navigation design is the key to website success; standard and simple search engine can help users accurately locate information. Due to denial of service, malicious or accidental deletion of data, this safety requirement faces the risk of service interruption

### **3.2.2 Privacy**

E-commerce is built in an open network. Private news such as quotation and inquiry is transmitted and stored in the computer. On the network, hackers steal business information from the data packets with low security coefficient through network eavesdropping tools, and then modify the data in series, or invade the computer and implant malicious software. The corresponding information will be sent to the actual participants. In order to prevent the property loss caused by information theft and interception, corresponding technology is needed to ensure the security.

### **3.2.3 Legitimacy of identity**

The actors of e-commerce platform mainly include: tenders, managers, bid evaluation experts, etc., and they have different rights. The platform should provide a service mechanism, both parties can conduct identity authentication. Power companies and government management departments need to cooperate closely with the bidding website, build a rounded and correct supplier data pool, enhance the qualification examination standards of online bidders, prevent their identity risk from being forged, and safeguard the interests of the bidders.

In the bidding process, there may be some situations, such as the bidding documents issued by enterprises are tampered with, leading to the bidding enterprises refusing to recognize their bidding behaviors and contents, or sending the bidding documents containing confidential contents to the forged server. In order to avoid the loss caused by these illegal activities, technology& digital certificate is needed to avoid it.

#### **4. Analysis of E-commerce Marketing Strategy for Power Companies**

##### ***4.1 Creative Thinking***

With the rapid development of energy in the future, technological innovation is becoming more and more important. This requires the power companies to unswervingly implement the new development concept of innovation, coordination, environment, open and sharing, change the traditional old concept, keep pace with the times, be brave in innovation, and promote the high-quality development of energy and power. Power companies should focus on the construction of the party and actively explore new marketing management models by using modern Internet technology. In addition, we should accelerate scientific and technological innovation and promote industrial transformation and upgrading. We will promote technological innovation and institutional innovation in the field of energy and power related digital economy and new materials

##### ***4.2 Customer Centered Concept***

Take the customer as the center, provides the high quality service for the customer as the first. In terms of charging, customer service should be divided into different charging windows in different regions, and be responsible for collecting various operating expenses, and the charging should be unified. People pay more and more attention to the price standard system. There are many unreasonable places in the traditional pricing standard, and the cost plus pricing standard is inconsistent with the current social development rules. The ideal price setting mechanism should be decided by the market. However, power commodity is a special commodity, and the price of electricity is related to all aspects of national economy and people's life. Therefore, the price of electricity is subject to the government's intervention and the supervision of relevant departments. Let users use electricity in the friendly way, cooperate with new energy consumption in the friendly way, discover the value of users with mechanism, and realize its value with the market.

##### ***4.3 Improve the Service Level of Power Marketing***

Electric power industry is the basic industry of national economic development in China, and occupies an important position in the development of national economy. The service improvement includes improving the services of State Grid, power selling enterprises and power generation enterprises. Establish a new electricity trading market with Chinese characteristics. The State Grid should take advantage of its own technical and resource advantages to provide high-quality services, do a good job in trading platform services, and establish and improve fair competition in the power trading market services. The main purpose of power sales companies is to provide high quality services. When power users choose electricity selling enterprises, the condition is to see the quality of service. The service of power generation enterprises is to reduce the cost of power generation, reasonably

plan the regional layout of power generation enterprises and clean energy power generation construction. Therefore, it is necessary to comprehensively analyze the market development situation, predict the future development trend, grasp the internal law and context of market development, so as to adjust the business operation of the power market accordingly. According to the future market situation, scientific and reasonable planning, so as to expand the sales market and better serve the users.

## 5. Conclusion

The application of e-commerce platform improves the efficiency of power product bidding. The intensive management strategy of network material supply chain requires network companies to deploy e-commerce platform. Network security is very important. Power marketing is to meet people's power consumption demand. Power enterprises provide power products and corresponding services through their business activities, so as to increase the benefits of enterprises and achieve enterprise goals. In the face of the rapid development of e-commerce and the opportunity of China's power system reform, Jilin electric power enterprises should actively participate in the research, constantly innovate and practice, and realize their own development.

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