

# The Application of Strategy Map in China's Thermal Power Enterprises' Strategic Management

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## Abstract

The article reviews the main ideas of Strategy Map at first, and then analyzes the difficulties faced by thermal power enterprises and their development directions. Finally, we make thermal power enterprises' development strategies based on Strategy Map. We hope to provide references for thermal power enterprises.

**Keywords:** Strategy, Strategic map, New energy, Thermal power enterprise

## 1. Introduction

According to "The Twelfth Five-year Plans of National Power Industry", China's power industry development keynote is priority in hydropower, optimization of coal power, to develop nuclear power, actively promoting new energy, appropriately developing natural gas centralized power; developing distributed power generation according to local conditions. In the future, every five years, the proportion of coal power generation will be reduced by 4 to 5 percents, while wind, solar and other clean energy power will be greatly developed after 2020. Facing urgent national power restrictions, power producers actively conduct studies on business development strategy. In this paper, we argue that Strategy Map proposed by Kaplan and Norton in the last century is a suitable tool for corporate strategy design.

## 2. Application principles of strategic map in strategic management

Strategy Map connects strategic objectives with causal links in the Balanced Scorecard to describe value creation (Robert-Kaplan, David-Norton, 2005). It makes corporate causal relationship graph, viewed strategic objectives in dimensions of financial, customer, internal business process and learning and growing as the core (Robert-Kaplan, David-Norton, 2009).

Once a company established a strategic map, with its objectives, performance measures, actions and incentives correctly observing the rules, it will become a strategic focused organization (Kaplan RS, Norton DP, 2000), moving on to the targets automatically like a missile.

Business strategy is essentially a set of assumptions of causation chain. Strategic Map is a graph that describes the causal links among corporation critical success factors (Kaplan RS, Norton DP, 2004). It embeds key strategic factors in the causation chain, and connects desired outputs with output drivers, so strategic map reflects the value strategy how organizations create expected outputs with assets. (Xiang Wang, Dong Li, Baohua Xiang, 2007)

From the bottom to the top, the strategic map reflects that employees need knowledge, skills and system to build efficient internal processes. It provides specific value contents for target markets, ultimately leading to higher shareholder value. In customer dimension, companies usually choose one of three strategies including operational excellence, customer intimacy or product leadership. Strategy Map helps to describe the strategic contents in a coordinated and integrated way.

## 3. Key Competitive Factor Analysis of Power Industry

### 3.1 Characteristics of the power industry

Power link is the hub of all sorts of energy conversion to electricity, so the power industry is at the core of the whole power industrial chain. The characteristics of power industry are as follows.

1. The power products have homogeneity, unity, intangibility, and their production and consumption is at the same

time. Therefore, it is difficult for power enterprises to adopt different strategies in product market.

2. The power industry is an asset labor-intensive industry, with large investment and long recovery cycle. Because of its professional particularity, once investment assets formed, it is difficult to turn use. It has the very strong assets exclusiveness and fixed costs of precipitation, which also increases the industry entering and exiting barriers.

3. The electric power industry is all important to the national economy and the people's livelihood. It is a government control industry. Its investment and price is regulated by government in some degree, so its products have some characteristics of public product.

4. The coal power industry chain is the main form of China's power industry chain. For most electric power enterprises, the coal costs 60% of the total costs or more. So the control of coal resources is the key factor of enterprise management performance, and coal is becoming the most attention element of the power industry.

Based on the above analysis of characteristics of the electric power industry, this paper argues that China's power enterprises should pay more attention to the factor market rather than the product market, and strengthen its control on the factor market.

### *3.2 The key factor market of the power industry*

1. Coal as a representative of raw material elements. The coal resources are not renewable energy. There are some inherent characteristics in China's coal market such as short supply and reverse distribution. Coal is the most focused production material and the most sensitive factor of production to profit.

2. Capital element. The electric power enterprise is capital-intensive industry, plenty of available is the important guarantee of the sustainable and healthy development to the power enterprises.

3. High quality power supply project and concessionary projects. Good power supply project is the important innate foundation of getting benefit to the electric power enterprises, and the main factor which influences its core competitiveness. All kinds of power project shall be limited by environmental protection, resources factors, and so on. Those who have innate advantages in resources, such as solar energy, wind energy, will have more advantages in the industrial development.

4. Talents element. As personnel intensive industry, the electric power enterprise's talents is also one of the elements of the synthesis competitive capacity of enterprises; especially in the current situation where greatly developing new energy is required, talents in the newly emerging energy sector, such as nuclear power, wind power and solar energy are important resources which are competed for by each enterprise.

## **4. The main difficulties faced by thermal power enterprises during development.**

### *4.1 The great cost pressure brought by the coal-electricity contradiction*

"Coal market, electricity plan" was a long history of contradictions, and with the declining of coal resource reserve and extraction, rise of resource prices is to be a long-term trend. As the electricity coal prices soaring, the price of electricity is strictly controlled by the country. In such a situation, our country thermal power enterprises' cost pressure grows day by day; even the big five power groups have been shown the phenomenon of policy loss.

### *4.2 National government supports new energy resources, and limits thermal power development*

According to The Twelfth Five-year Plans of National Power Industry, our country's "twelfth five-year" power development's tone is fixed up: priority to the hydropower development; optimization of coal power development; developing nuclear power greatly; promoting new energy power actively; developing natural gas power moderately; developing distributed generation according to local conditions.

In the "twelfth five-year" period, in order to deal with climate change and the requirements of the development of low carbon economy, we need to reduce the construction of the thermal power, promote the implementation of the "on the big press" policy, reduce small units, and construct large units of high parameter, high efficiency, and low consumption. Temporarily, our country's installed capacity of thermal power is still rising, but the speed of the year-on-year growth has declined to a small degree, and the installed capacity of the thermal power began to fall from 2007. According to the analysis of the data shown by the plan, the installed proportion of thermal power will drop to 65% in 2020. By the end of 2009, the proportion is 74.6%. As this trend, by 2020, the installed proportion of thermal power will decline about 10%, which equals to 1% a year on average.

## **5. The strategic breakthrough of thermal power enterprises**

Facing the pressures from both the government and the market, and considering the key competition elements in

electric power industry, the author holds that, coal-fired power enterprise can take the following three ways to realize the strategic breakthrough.

### *5.1 Implementation of coal-electricity integration*

Since coal belongs to the basic resources power, thermal power company shall extend its value chain, and control coal resources via holdings, shares, procurement, and realize the coal electricity integration, so as to realize the cost savings. At the same time, because the coal power produces many byproducts, thermal power enterprise should also make full use of them, and develop coal value-added service, like using electricity byproduct to operate coal fly ash, building materials, coal logistics, cogeneration business and so on. Realize the added value out of the main business, in order to improve enterprise's overall revenue.

### *5.2 Strengthen thermal power upgrade technology*

Along with the increasing of the executive power of the energy conservation and emission reduction policy, thermal power enterprise must upgrade the original thermal power units, which produce more pollution and have more energy consumption, as soon as possible. In good finance and technology situation, give priority to the advanced technical equipment, such as IGCC in thermal power field, namely the integrated gasification combined cycle power generation, etc.

### *5.3 Expand new energy business actively, implement the transformation of power*

As the energy strategy which is newly put forward, and the construction of the intelligent power grid, every electric power enterprise should think for the power transformation positively, and develop new energy business. Search for business model innovation, and expand enterprise development space in nuclear power, wind power, photoelectricity, biomass, geothermal fields. In the new energy industry chain, power generation is just one ring, and there are still more technology and equipment link related with power generation, transmission, store, apply, which thermal power enterprises can involve in independently or in strategic alliance way.

At the same time, electric power production enterprises may size the opportunity of national construction of intelligent grid, and participate in the system development of smart grid access and control, to gain more development space.

## **6. Strategy map structure of thermal power enterprise**

According to the above analysis, this paper makes the development strategy of the thermal power enterprises visual from financial dimensions, customer dimension, the internal process dimension and the learning and growth dimensions. So the strategy implementation more directional and directive, see figure1.

### *6.1 Financial dimension*

Generally speaking, the main financial index measuring the electric power enterprise is net assets yield rate. Therefore, this article sets improving the net assets yield rate as the thermal power enterprise's strategy core financial goal. There are two ways to improve the net assets yield: one is to reduce costs, that is, productivity strategy, which can be achieved through lowering cost and improving the asset utilization to realize; another is to increase the income, which means growth strategy. To the thermal power for the enterprises, the growth reflected in two aspects which are opening source and transformation. Opening source points to improving the income of the non-electrical products; transformation means improving energy conversion structure, so as to achieve the goal of growth.

### *6.2 The customer dimension*

Customer dimension is the key to the whole strategy map, and the core of the enterprise strategy. How to improve the customer value is the concern of this dimension. To thermal power companies, power generation is the main business; electricity coal is vitals; how to control electricity coal, how to reduce the thermal power costs, how to reduce power consumption, and how to realize the sustainable development under the national energy structure adjustment is the main problem now. This paper shows three ways to enhance the value of the clients, which are coal power, coal management and development of new energy. Improving the utilization of coal is to improve asset utilization index from the financial point of view, realize the productivity of enterprise strategy further, and finally reach the ultimate goal of improving return on net assets. Similarly, the utilization of waste heat in the coal power generating and the research for value added in coal operation are both for improvement of non-electric power business benefits, so as to achieve enterprise's growth strategy. While, the development of new energy sources, such as wind, solar, biomass, nuclear power and geothermal is to convert the energy structure of the enterprise, realize the enterprise's growth strategy, and further, realize the ultimate goal of enterprise.

6.3 Internal business process dimension

Finance dimensions describe the expectations of the strategy; the customer dimensions express the directions to realize the financial indicators. But how the enterprises create these expected results? Internal dimensions make sure of few key processes, so as to achieve these results.

Like most enterprises, thermal power enterprises also shall determine the innovation, operation, customer relationship and social responsibility, these four dimensions, from internal business dimension. Innovation is to develop new business, namely to improve coal utilization and the development of new energy in the customer dimension. In operation dimension, coal-electricity integration cannot only realize cost reduction in finance dimension, but also achieve the co-production of coal and improving of the utilization ratio in customer dimension. At the same time, it is the key to realize the customer dimension to make use of various resources and the strategic alliance to control over resources, and realize the coordinated development of customer relations between upstream and downstream. As kind of energy enterprise, the development of new energy and reducing carbon emissions is also the social responsibility of the power generation enterprises.

6.4 Learning and growing dimension

This part determines the most important intangible assets to the whole strategy. Generally speaking, power generation enterprises can realize this dimension by the following several aspects: ascending human capital, skills training, information transformation, continuously improving of enterprise culture, strengthening quality management, promoting the process improvement, building the learning organization, strengthening team cooperation, and so on; so as to support and guarantee perfect realization of the development strategy of the enterprise.

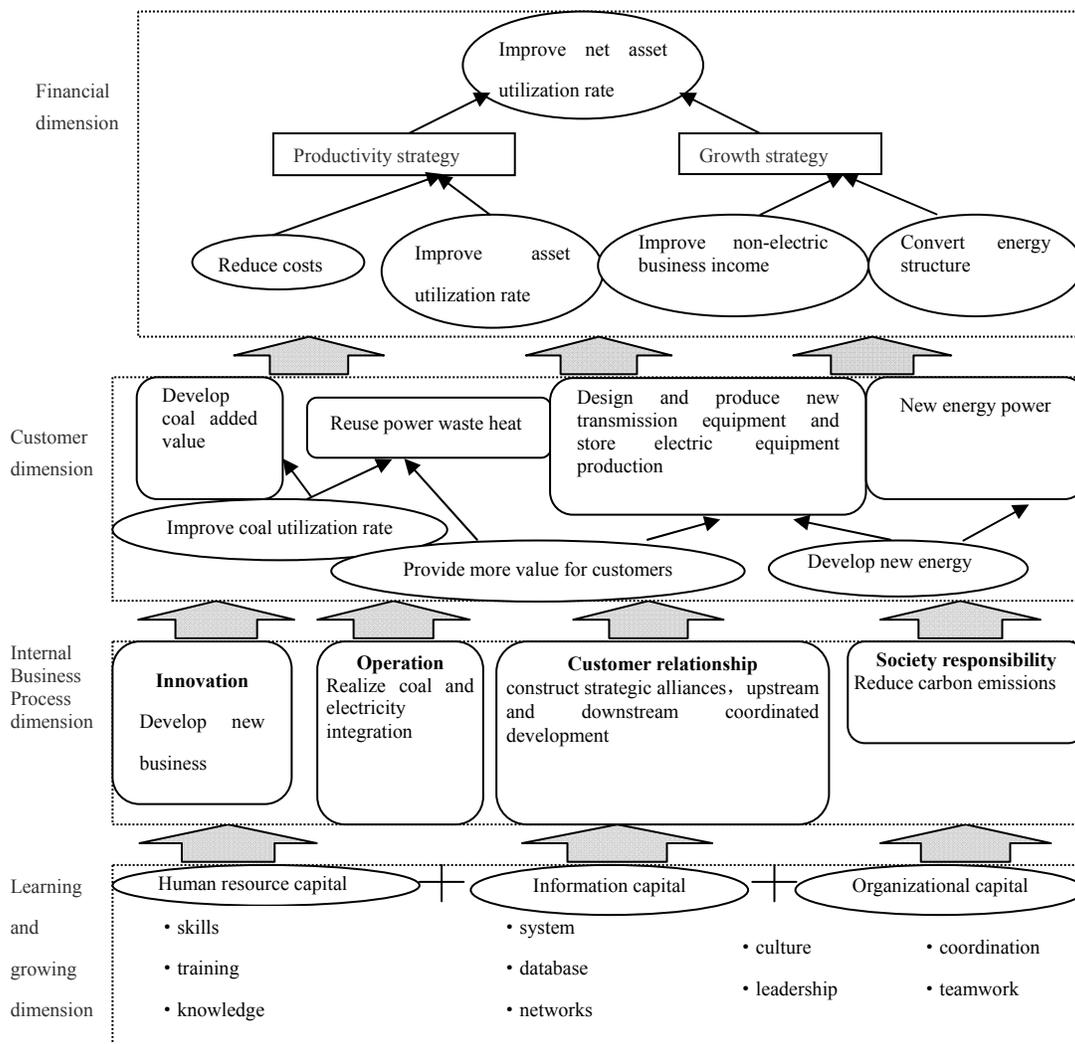


Figure 2. Strategic Map of thermo power enterprise

## 6. Conclusion

Depicting the strategic map, we can clearly determine the path of the enterprise's development. However, due to the limit of time and technology, new energy is still in the early stage. The technical level and the installed capacity have not reached a reasonable level, which leads to that the profitability of the new energy is low in the short-term. Together with the situation that the large-scale development of new energy project in domestic provinces and cities causes severe market competition, there is a certain degree of structural oversupply, thus further causing the instability of new energy profitable. Therefore, from the point of view of earnings, thermal power enterprises' new energy projects in the large scale should be behind thermal power technical reform and coal electricity integration project; from the perspective of industry layout, thermal power enterprises should work out technology research and access to resources of new energy project actively.

In addition, because strategy map derived from the balanced scorecard, they share the same theoretical basis. According to the enterprise development strategy map, we can design the corresponding evaluation indexes of the balanced scorecard. This article won't show the specific index design.

## References

- Kaplan RS, & Norton DP. (2000). *The strategy2focused organization: how balanced scorecard companies thrive in The new business environment*. Boston, MA: Harvard business School Press.
- Kaplan RS, & Norton DP. (2004). *Strategy map: converting intangible assets into tangible outcomes*. Boston, MA: Harvard Business School Press.
- Min Hao, Peng Li, & Junyun Ma. (2011). the research on the coal enterprises' performance evaluation index system based on the strategy map, *China's collective economy*, 2011.5.
- Robert·Kaplan, & David·Norton. (2005). *Translator: Junyong Liu, Weiyi Sun. Strategy map--the intangible assets for tangible results*. Guangdong economic publishing house.
- Robert·kaplan, & David·Norton. (2009). *Shanghai boyimen consulting Co., LTD. the balanced scorecard --strategic practice*, Chinese people's university press, 2009.2.
- Xiang Wang, Dong Li, & Baohua Xiang. (2007). the research based on the strategy map and BSC the enterprise integrated strategic control system, *journal of management engineering*, 2007.2.