



# Research on the models and elements of assessing the operational effectiveness of the organization of electric energy enterprises

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**Abstract.** Under the influence of power system reform, the production and operation environment of power and energy-related enterprises has changed to a certain extent, and the company's strategy has been transformed accordingly, and the operational effectiveness of the organization is related to the achievement of organizational goals. This paper draws on the organizational effectiveness dashboard model and selects eight evaluation dimensions based on the four evaluation perspectives of "external, internal, rigid, and flexible": goal strategy, customer orientation, internal control, communication and coordination, organizational structure, talent team, change and innovation, and culture construction. By analyzing different dimensions, 19 organizational effectiveness assessment elements were selected to analyze organizational effectiveness.

**Keywords:** power and energy companies; organizational effectiveness; organizational effectiveness dashboard

## 1 Introduction

With the deepening of the electric power system reform, the business development environment of electric energy enterprises has changed profoundly, and the enterprises have to conform to the reform direction and set new strategic goals. The organizational structure needs to serve the company's strategy, and the operational effectiveness of the organization after the strategic transformation is related to the realization of the transformation goals. Based on this, this paper draws on the organizational effectiveness dashboard model to study the dimensions and elements of organizational effectiveness assessment in the strategic transformation of electric power and energy enterprises, providing a theoretical basis and a framework of ideas for the scientific construction of the assessment model.

## 2 Assessment Model

The organizational effectiveness dashboard model has four dimensions: internal, external, flexible and rigid; two crossover to form four secondary dimensions, namely, implementation, adaptation, synergy and control; and then refined into eight variables, thus forming a complete "aspect-dimension-variable" overall assessment model, as shown in Figure 1 below.



**Fig. 1.** Organizational Effectiveness Assessment Dashboard

The organizational effectiveness assessment dashboard is as simple and intuitive as a car dashboard, and has three main functions in assessing organizational effectiveness: monitoring function, diagnostic function, and identification and analysis function. The advantages of this method are that it is simple and intuitive, easy to compare the organization's operational effectiveness, comprehensive assessment dimensions, and timely intervention if problems are identified. The disadvantage is that the trade-offs of the eight sub-dimensions of the four assessment dimensions need to be reasonably determined by the organization, otherwise it may lead to the key factors affecting organizational effectiveness cannot be effectively controlled. Organizational effectiveness assessment dashboard is suitable for the organization in the process of achieving strategic goals, the organization to conduct regular assessment of the internal and external environment and organizational operation.

### 3 The assessment of organizational effectiveness of power energy enterprises and the framework of elements

According to the organizational effectiveness dashboard model, the organizational structure effectiveness assessment is set from four perspectives: external, internal, flexible and rigid, and eight dimensions: goal strategy, customer orientation, internal control, communication and collaboration, organizational structure, talent team, change and innovation, and culture building [1].

#### 3.1 Assessment dimensions and element selection based on external perspective

The business of electric power and energy enterprises is related to the energy supply services of the country and people's livelihood, and the objectives of strategy implementation are mainly examined through annual target achievement, performance assessment results, and the degree of strategy implementation. At the same time, electric power energy enterprises should fully consider the needs put forward by electric power customers and local governments for electric power business, and be oriented by customer needs. Therefore, the dimensions and elements of organizational effectiveness assessment based on external perspective are selected as shown in Table 1.

**Table 1.** Selection of external perspective assessment dimensions for organizational effectiveness of electric energy enterprises

Assessment Perspectives	Assessment Dimensions	Assessment Elements
External	Targeted Strategy	Annual target achievement, performance assessment indicators
		Strategy implementation
	Customer Orientation	Government demand
		Customer Service

##### (1) Target Strategy

Under the evaluation dimension of target strategy, the elements of "annual target achievement" and "performance assessment index" can reflect the decision making and implementation of the target strategy from the annual target achievement of power and energy enterprises and the relevant performance assessment index of power and energy enterprises at all levels. Implementation, timely reflection in the process of achieving corporate goals in the organization's operational effectiveness, to facilitate timely adjustments. The element of "strategy implementation" can reflect the degree of achievement of the strategic objectives of the enterprise from the macroscopic situation, but it is usually difficult to explain the progress of achieving the strategic objectives in the form of data [2]. The annual target achievement and performance evaluation indicators are quantitative indicators, while the strategy implementation elements are qualitative indicators.

##### (2) Customer orientation

As the guarantor of the national economy and the practitioner of the energy revolution, electric energy enterprises play a backbone role in ensuring national energy security and promoting energy transformation. Providing convenient and guaranteed power support to the government and customers is the basic goal orientation. Under the customer-oriented assessment dimension, two assessment elements are selected for the customer needs of power and energy enterprises: "government needs" and "customer service". The indicators of "government demand" and "customer service" are quantitative indicators.

### 3.2 Assessment dimensions and element selection based on internal perspective

The business model of electric energy enterprises has matured, so more attention is paid to the improvement of internal control of enterprises, focusing on the construction of the system system, emphasizing management norms, with safe production and legal compliance as important goals and control bottom line. At the same time, it focuses on the internal cross-departmental business process operation and communication and coordination of the corresponding capacity building, emphasizing synergistic efficiency. Therefore, the dimensions and elements of organizational effectiveness assessment based on external perspective are selected as shown in Table 2.

**Table 2.** Selection of dimensions for assessing the organizational effectiveness of electric energy enterprises from the internal perspective

Assessment Perspectives	Assessment Dimensions	Assessment Elements
Internal	Internal Control	System
		Safety production
		Legal Compliance
	Communication Synergy	Business Process
		Collaborative Response

#### (1) Internal Control

Under the internal control assessment dimension, the completeness of the "system" reflects the standardization and effectiveness of the enterprise's rules and regulations, providing the organization with more reasonable and effective work standard setting and management. Electricity and energy-related businesses are hazardous, so it is important to ensure "safe production", which is an important goal in the operation of electric energy enterprises. The element of "legal compliance" can reflect the violation of company regulations or laws and regulations in operation, business and decision-making, and is the bottom line of enterprise control. The "system system" is a qualitative indicator, while "safety production" and "legal compliance" are quantitative indicators.

#### (2) Collaborative Synergy

If the division of authority and responsibility is unclear and the work is restricted by each other, it will not only delay the work progress, but also reduce the internal satisfaction of employees and the effectiveness of the enterprise. Under the dimension of communication and collaboration assessment [3], two assessment elements are selected: "business process" and "collaboration response" according to the basic process of departmental collaboration. The former is to sort out the workflow and provide guidance for cross-departmental collaboration, while the latter reflects the efficiency and effectiveness of collaboration for later improvement. The elements of "business process" and "collaboration response" are both qualitative indicators.

### 3.3 Assessment dimensions and element selection based on rigidity perspective

The organizational structure of electric energy enterprises is stable, and it needs to pay attention to the institutional setting of each department, the division of functions, and whether the management level is streamlined and efficient. At the same time, power energy enterprises are both labor-intensive and technology-intensive, with mainly operational talents, which poses new challenges to the enterprise's talent cultivation ability, talent incentive mechanism and optimization of team structure. Therefore, the dimensions and elements of organizational effectiveness assessment based on rigidity perspective are selected as shown in Table 3.

**Table 3.** Selection of assessment dimensions for rigid perspective of organizational effectiveness of electric energy enterprises

Assessment Perspectives	Assessment Dimensions	Assessment Elements
Rigidity	Organizational Structure	Organizational structure, division of responsibilities
		Management Level
	Talent Team	Skills training
		Incentive mechanism construction
		Team Structure Optimization

#### (1) Organizational structure

Under the dimension of organizational structure assessment, it can reflect the standardization, rationality and streamlining of the organization of the enterprise according to the elements of "organization setting and division of responsibilities", and it can also understand whether the operation of each organization of the enterprise is smooth; if the division of responsibilities is clear, the responsibilities of each post are clear, and the authority and responsibilities are clear [4]. The "management level" can reflect whether the organization's hierarchical settings and the boundaries of authority and responsibility at each level are reasonable and clear, and a reasonable management

range can control the risk of a long management chain and improve the management efficiency of the organization. The "organization setting and division of responsibilities" is a qualitative indicator, and the "management level" is a quantitative indicator.

(2) Talent team

Under the talent team assessment dimension, three assessment elements are selected: "skill cultivation", "incentive mechanism construction" and "team structure optimization". For the enterprise, the cultivation of high-quality talents who are in the front line of the job, skilled in expertise and technology, have excellent operational skills and can solve problems in work practice is a must for future development of the enterprise; at the same time, the incentive allocation mechanism is improved and a talent incentive mechanism is built to meet the strategic needs, so as to stimulate employees' motivation and discover talents from within; the ratio of management talents and skilled talents in the team is Reasonable, to achieve the goal of team structure optimization. The "training of skilled talents" is the qualitative index, and the "incentive mechanism construction" and "team structure optimization" are the quantitative indexes.

**3.4 Assessment dimensions and element selection based on flexible perspective**

Electricity and energy enterprises should adapt to the reform and development of electricity reform, decentralization and three reforms, focus on self-optimization and adjustment, focus on technological innovation and management innovation, emphasize on new technology application and management transformation, focus on corporate culture construction, focus on leadership team competence quality improvement, team cohesion, strategy and cultural identity. Therefore, the dimensions and elements of organizational effectiveness assessment based on rigid perspective are selected as shown in Table 4.

**Table 4.** Selection of assessment dimensions for rigid perspective of organizational effectiveness of electric energy enterprises

Assessment Perspectives	Assessment Dimensions	Assessment Elements
Flexibility	Change and Innovation	Reform on the ground
		Technology Management Innovation
	Culture Building	Leadership
		Team Cohesion
		Cultural Identity

(1) Change innovation

Under the dimension of change and innovation assessment, the assessment element of "implementation of reform" can reflect the ability of technology innovation of the enterprise, which can quickly turn the latest technological achievements into real

productivity and obtain considerable benefits for the enterprise, and can provide accumulation for the next technological breakthrough [5]. "Technical management innovation" can reflect the management style, method and business-related innovation of the organization, and use it to use enterprise resources in a planned and reasonable manner to improve the operational efficiency of the enterprise. The "reform implementation" is a qualitative indicator, and the "technical management innovation" is a quantitative indicator.

#### (2) Culture building

Under the culture construction assessment dimension, the assessment element of "leadership" mainly examines the work and effectiveness of the leadership team as well as the internal evaluation and recognition of the leadership team, which can stimulate the potential of employees and improve work efficiency [6]. The "team cohesion" can show the cohesion and centripetal force cultivation and development of employees in the organization and the development of party building work to improve the attractiveness of the enterprise to employees. "Cultural identity" reflects the recognition, satisfaction and resonance of the corporate culture and its construction by the employees. When the employees accept and agree with the corporate culture, it will improve the operational efficiency of the organization [7]. "Leadership", "team cohesion" and "cultural identity" are all qualitative indicators.

## 4 Conclusion

The Organisational Effectiveness Dashboard exhibits three qualities in the selection of indicators for assessing organisational effectiveness. First, multi-perspective assessment - more attention is paid to the assessment of organisational effectiveness from multiple perspectives and multiple assessment dimensions. The second is the expansion of indicators - that is, the evaluation indicators are extended to the whole process of organisational strategic management, with particular emphasis on the selection of indicators in complex environments. Thirdly, innovation is valued - the role played by innovation in the enterprise is emphasized, and the assessment of intangible capital such as "technology" and "innovation" is increasingly emphasized.

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