Research on Comprehensive Evaluation of Power Generation Enterprise Human Resource

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Abstract. Most of the traditional human resource evaluations are applied to individual employees. The study object in this paper is the general state of human resources of power generation enterprise. According to the feature and actual situation of the study object, this paper established the evaluation indicator system of power generation enterprise human resource by using Delphi method. Based on the theory of fuzzy mathematics, combined with AHP and Delphi method, the multi-level fuzzy comprehensive evaluation model was established. Through the empirical study on a 330MW power plant, it indicated that using this research method can acquaint the status of human resources accurately and efficiently.

Keywords: human resource, AHP, fuzzy comprehensive evaluation.

1 Introduction

After power system reformation, the monopoly of power generation side was gradually broken down. It formed a new pattern of competition. Now, market competition is becoming increasingly into talent competition. The level and allocation mechanism of human resource has become the determinant that whether stability growth and sustainable development of enterprises can proceed smoothly or not. At the same time, it is the survival key of enterprise. As a technology-intensive enterprise, power generation enterprise has a higher demand for personnel. Otherwise, safety and production management can not be implemented. The comprehensive, objective and scientific evaluation of enterprise human resources level may help the enterprise to discover the strengths and weaknesses of its human resource. Then the enterprise can summarize experiences and lessons in time, and it can provide the basis of human resources development in the future.

Human Resource means human or labor that owned by the community and can create value for society, whose essence is the ability of human, not the people themselves. There are many multi-level factors which affect the human resources of power generation enterprise, so this paper established the human resource indicator system of power generation enterprise by using analytic hierarchy process and Delphi method. Indicator system often contains some vague or gray indicators, as the fuzzy mathematics can be a good solution to this problem, so the comprehensive evaluation
model was established based on fuzzy theory. And this paper conducted an evaluation to a power plant by using the fuzzy comprehensive evaluation method.

2 Establishment of Evaluation Indicator System

2.1 The Principle of Indicators Selection

1) Systematic principle. The evaluation of power generation enterprise human resource must reflect the situation of human resources comprehensively and systematically. Through the evaluation and analysis, power generation enterprise can discover strengths and weaknesses of human resources.

2) Scientific Principles. The independence and representative of indicator elements and the reasonable of indicator structure should be considered sufficiently. And the number of indicators should be controlled at a reasonable level.

3) Feasibility principle. In order to ensure the reliability of data, data of quantitative indicators should have statistical caliber, reasonable and feasible of designed questionnaire of qualitative indicators also should be considered.

2.2 Termination of Indicator System

The establishment of evaluation indicator system is an important step in evaluation, and it impacts rationality of evaluation results directly. Its establishment mainly contains four steps: identify object, set pre-election gather of indicators, filtrate indicator and indicator system construction, as shown in figure 1.

![Diagram](image)

Fig. 1. The process of evaluation indicator establishment

Based on the selecting principle and establishment process, combined with actual situation of enterprise, this paper established evaluation indicator system of power generation enterprise human resources by Delphi method. As shown in table 1.