

Analysis of Factors Affecting Power Engineering Cost Budget Control

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Abstract: China's power engineering plays a pivotal role in the national economy. Power engineering cost budget control can not only reduce engineering costs, but also improve the quality of power engineering by strengthening supervision and management of the entire process. This article sorts out the current status and main problems of the cost of power engineering in China, analyzes several major factors affecting the cost of power engineering, and then proposes reasonable measures to optimize the cost of the project.

1. Introduction

Electric energy is an important energy resource and plays a vital role in people's daily lives. With the continuous development of China's economy, electric power resources play an important role in the process of economic construction. In order to meet the growing demand for power resources, China has increased the scale of power engineering construction. In the process of power engineering construction, due to various factors, it is difficult to control the cost of power engineering, increase the engineering cost and construction cost, and reduce the economic benefits of power engineering construction enterprises. How to reduce the influence of various factors on the cost of power engineering has become a hot topic that has attracted widespread attention from power engineering construction enterprises and all sectors of society. The budget control of the construction cost of electric power projects is of great significance for reducing construction costs and improving the economic benefits of enterprises. Therefore, the article studies the influencing factors of power engineering cost and how to reasonably control the cost budget.

2. Present Situation of Budget Management of Power Engineering Costs in China

2.1. Current Status of Power Engineering Cost Budget Management

At present, in the process of electric power engineering cost budget management, there are still some problems, which make the effect of cost budget management unsatisfactory. These issues have the following aspects.

First, the pricing rules for materials are inconsistent. The power engineering cost budget needs to be managed under a certain calculation standard, and the manpower, equipment, materials, etc. required for the project construction are estimated. For many power engineering construction units, there are problems with false reporting of material prices. In order to reduce the construction cost of the project to the greatest extent, some power engineering construction units often make false reports of material prices, which have a direct impact on the economic benefits of power companies. At the same time, there are many types of power construction materials, and the prices of different materials are different, which also adds a certain degree of difficulty to the development of power engineering cost work.

Second, the calculation of corporate expenses is not standardized. At present, the calculation of the construction volume of electric power projects is mainly based on construction drawings and design schemes. Some construction units did not formulate the cost budget according to the contract before the formal construction, or because the construction contract signed with the owner was not standardized, and eventually the project cost was higher, and these conditions were not conducive to the project cost budget. Development of work. In the actual construction process, there is still a phenomenon of falsely reporting the power engineering quantity, especially for some hidden

projects, the false reporting of the engineering quantity will have a certain impact on the construction quality of the power engineering project, and it will have a very adverse impact on the control of the construction cost.

The third is the low level of professionalism of budget staff. Power engineering budgeting is a very systematic and complicated task, which has higher requirements for budget engineers. Project budget workers must not only have a thorough and in-depth understanding of relevant laws and regulations and professional knowledge, but also have a high level of moral literacy. In short, project budget review staff should have rich practical experience and professional knowledge. However, the actual situation is that, in many current power projects in China, there is no professional engineering budget staff, or the budget staff's professionalism is seriously lacking, and their understanding of related businesses is insufficient. There are some outstanding problems in the project budget review process.

2.2. The current situation of China's power engineering cost

The first is to coordinate the relationship between the cost of power engineering and construction. It is important to coordinate the relationship between the cost of power engineering and the construction unit. Each unit has its own work content, and the budget needs a dedicated unit. However, many departments now lack strong supervision efforts, resulting in many engineering projects and budgets. Problems are not conducive to the development of engineering cost projects, and at the same time there will be quality problems in power engineering. Therefore, relevant departments should implement effective supervision methods and put forward specific requirements for the approval of power engineering projects.

Second, the cost of power engineering is at a disadvantage in the international situation. The management model of engineering budget funds in China has not yet been formally established. In the international market, the budget and management of funds usually need to be managed by a professional service organization. In foreign engineering cost services, the client of the project construction will be provided with comprehensive services, including services such as overall project budget, co-ordination or agency bidding projects, contract signing and related questions and answers. In China, we only provide services to clients in accordance with standards established by the state, and it is difficult to continue to meet the full service requirements of future engineering costs.

The third is the lack of cost control project management. Any project requires a specific assessment before construction can begin. Due to the lack of management of project cost control, China's construction of power projects often suffers from insufficient funding or overruns during the construction process, which has resulted in waste of engineering resources and affected the revenue of the power industry. Therefore, to do a good job in the overall construction hardware facilities, engineering quality, engineering construction level and other aspects of the construction cost budget has a pivotal role, it is necessary to strengthen power engineering cost control project management.

3. Major Factors Affecting Budget Control of Power Engineering Costs

The factors that affect China's power engineering cost budget can be analyzed in terms of investment estimates, project location and scale, and construction technology factors.

3.1. Impact of investment evaluation and feasibility analysis on power engineering cost.

Before construction of a power engineering project, decision-making is a crucial link. In order to ensure the rationality and scientificity of power engineering project decision-making, it is a very necessary and important task to conduct a feasibility study of power engineering projects. Based on the feasibility study, the staff will comprehensively consider the factor of project cost, estimate the investment limit according to the actual situation of the project construction, and improve and optimize the construction plan, thereby ensuring high-quality construction and reducing the project cost.

3.2. Impact of project location and scale on power engineering cost

Project location affects the cost of the entire project and the operation of the project. In order to prove the rationality and effectiveness of the site selection, the power company should comprehensively inspect the local economic development, meteorological conditions, and hydrogeological conditions to ensure that both natural and human conditions meet the actual needs of the project construction, and avoid additional costs and expenses. The project cost is kept within a reasonable range. The construction scale of electric power projects will continue to increase with people's needs. In new power projects, in order to ensure more reasonable construction costs, supercritical, high-parameter, high-capacity generators with environmental protection and energy saving effects should be used as much as possible. In order to meet people's growing demand for electricity.

3.3. Impact of construction and technical factors on power engineering cost

Power engineering has the characteristics of large scale and strong complexity. In order to improve the quality and efficiency of engineering construction, power companies need to actively introduce advanced technology and equipment, construction materials and construction personnel. It is necessary to strengthen attention to engineering construction equipment, conduct comprehensive analysis and investigation of all relevant situations of the enterprise, and strive to improve the safety, reliability and rationality of engineering construction, and avoid increasing unnecessary economic cost inputs. The construction of power engineering projects involves a very wide range. Workers must conduct a comprehensive analysis of all projects, and on the basis of ensuring the rationality, reliability and safety of power engineering, reduce the project cost as much as possible in order to improve its economic benefits and Social benefits.

4. Reasonable control measures for the quality of power engineering cost budget

Problems existing in the management of power engineering cost budgets will not only affect the effectiveness of power engineering cost budget management, but also seriously affect the construction quality and construction progress of power engineering. Therefore, the budget in the construction of electric power projects must be reasonably controlled.

4.1. Reasonably design the project cost budget

Engineering design plays an important role in the entire engineering project, and it is also a critical stage of engineering cost budget. It will affect the value coefficient of engineering cost. It should be reasonably controlled in the process of budget formulation. In the process of budget preparation, the staff should adhere to the principles of energy saving and environmental protection so that the final design plan can show good social benefits. In the process of engineering design, we must attach importance to budget design and comprehensively consider bidding and construction behaviors, so as to ensure that the final cost budget is scientific and reasonable. In the specific construction process, it is necessary to pay attention to the reasonable adjustment of the on-site visa, and to comprehensively supervise the construction stage, so that the project cost planning is more reasonable.

4.2. Improve the construction cost control mechanism

In the process of cost management, cost budget management has an important impact. Scientific and reasonable cost budget management can reduce the occurrence of cost management problems, thereby ensuring the economic benefits of engineering projects. It is necessary to pay attention to the rational formulation of the construction cost budget control mechanism, attach great importance to the continuous updating of management concepts, adopt a precautionary management concept, and carry out regulation and management based on this, so as to provide an effective reference for the regulation of budget preparation. At the same time, the budgeting of the engineering project should take into account all aspects of the project, and can comprehensively inspect all links such as preliminary guidance and post-mortem inspection, so as to reduce the existence of construction

problems and continuously improve the quality of budgeting. In the construction phase, cost management should be carried out according to the cost budget, and finally the integration of resources and unified management.

4.3. Ensure the safety of power engineering construction process

The construction of electric power engineering is inseparable from specific implementation plans and steps. Before the construction of electric power engineering, the construction team should carefully study the engineering construction drawings and carry out construction in accordance with the cost budget. The development of construction projects also requires the construction personnel to carefully operate the equipment and construction steps in accordance with the construction requirements, and carry out the construction at the appropriate time, so that the power project under construction can be carried out on time. Before construction of a power project, the person-in-charge shall obtain permission from the relevant authority for the approval of power project construction. The construction of national projects shall be carried out in accordance with the contract requirements and approved by the department in charge of each project. In the contract, the responsibilities required by both parties should be stated, and both parties should strictly implement the contract content. In the process of power engineering construction, it is also necessary to ensure that the construction process complies with legal regulations.

4.4. Perform staged budget control

At the investment decision-making stage, electric power companies should actively form a professional team, recruit talents with professional design, cost and legal knowledge, make a more reliable and accurate estimation of the funds that may need to be invested, and carry out the necessary economic evaluation to ensure the cost can be effectively controlled. In the design phase, it is necessary to start from both economic and technical aspects, to rationally design the construction plan, to ensure the optimization of technical investment and economic investment, and to achieve a win-win situation of technical and economical construction. During the construction stage, the construction process shall be managed, and the construction unit shall coordinate the relationship between the cost, the quality of the project, and the construction period to ensure the stability and order of the construction site. In addition, during construction, enterprises should do a good job of supervision and control throughout the process to avoid accidents. At the stage of completion, the staff should sort out various expenses such as financial costs, equipment costs, and management costs, and determine whether the actual settlement funds are in line with the budget. If there is a serious overspend, etc., the cause must be identified in a timely manner.

5. Conclusion

A power engineering project is a system project with a long construction period, a large amount of engineering, and a high investment. There is a close relationship between engineering cost, schedule, quality, and safety. Therefore, there are relatively many influencing factors for power engineering construction. From the influencing factors of construction, investment evaluation and feasibility analysis, project scale, project location, construction and technology, etc., may have a direct impact on project cost. The elements of. In order to achieve effective cost control, on the basis of ensuring the progress, quality, and safety of the project, the entire process of power project development should be carried out with the necessary supervision and management to ensure that the cost of each stage can be controlled to the minimum, and then the power project is realized. The whole process of cost control will improve the economic and social benefits of power companies.

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