Exploration and Thinking on the Integrated Model of Overseas Investment, Construction and Operation of Chinese Electric Power Enterprises

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Abstract. With the advancement and implementation of the "One Belt, One Road" strategy, Chinese companies are paying more attention to the pursuit of mutual benefit and win-win development concepts overseas. The "integration of investment, construction, and operation" model that integrates project investment, planning, design, construction, and operation and maintenance has become an important transformation direction for power companies' overseas investment and a strategic choice for Chinese companies to deeply integrate into the local market and achieve sustainable development.

1. The Characteristics of the Integration of Investment, Construction and Operation of Power Enterprises

The integrated mode of construction and operation of electric power enterprises is the unity of electric power design, construction, equipment suppliers, operating enterprises, and financing institutions to give full play to their respective advantages to establish overseas operation and maintenance alliances and create a stable "overseas construction and operation integration alliance". The long-term goal of integration of construction and operation is to achieve localized operations.

At present, the investment business of Chinese enterprises has just begun, and they are mainly concentrated in Asia, Africa and other countries. Not only are they faced with a lack of investment and development experience, but the project environment is far more complex than that in China, and the requirements for project risk control are very high.

On May 14, 2018, the State Grid Corporation of China and the National Transmission Corporation of Pakistan signed a service agreement for Murrah DC transmission engineering. The Murrah DC transmission project is a priority project under the framework of the China-Pakistan Economic Corridor. It is Pakistan's first DC transmission project and the first landed project opened to foreign investment in Pakistan's power transmission and transformation field. Nearly 80% of the projects adopt my country's technical standards, which will drive the export of my country's electromechanical equipment and.

① Wu Wen. Grasp the right to speak in the "Chinese Standard" of UHV DC Transmission Projects[J]. Power Supply Enterprise Management, 2018, No.188(04):78-78.
technical services by about 6.7 billion yuan, which can create 5,000 to 7,000 jobs for the local area. It plays an important role in alleviating the power shortage in central Pakistan, improving the structure of the power grid and improving the power supply quality of the power grid.

2. The Main Advantages and Disadvantages of the Integrated Model of Investment, Construction and Operation

The integration model of investment, construction and operation is suitable for areas with high trade barriers, weak power technology and equipment infrastructure, and low barriers to entry and localization requirements. The main advantages of this model are as follows.

One is to deeply integrate the local market. Fundamental changes have taken place in the project structure, capital investment, implementation environment, development cycle, and contract structure of the "integrated investment, construction and business" project, which also puts forward higher requirements for the contractor's ability to integrate global resources. The implementation of the "integrated investment, construction and business" project by Chinese companies has just begun, and the corresponding institutional system and business model are not yet mature. There are few successful cases of implementation, and the risks of localized operation of the project have not yet been fully revealed. This requires Chinese companies to establish the concept of sustainable development, become familiar with, master, and integrate into the local environment as soon as possible, make full use of local resources, and enhance their ability to sustainably operate overseas.

The second is to expand profitability. With the implementation of the “Belt and Road”, the principle of “consulting, sharing, and co-construction” has penetrated into the enterprise. In the past, Chinese enterprises handed over their projects after completion and were no longer responsible for follow-up operation and maintenance. Not only did the profit chain be short, but it was also not conducive to giving full play to the application of the project. Some benefits. National ministries and commissions are also actively promoting the expansion of enterprises to the upstream and downstream of the industrial chain, exploring the construction and operation of integrated construction and operation projects in the form of grouping.

The third is to reduce operating costs. For Chinese enterprises, developing the business of "integration of investment, construction and operation" is a requirement for enterprises to actively adapt to the international engineering market and realize their transformation and upgrading. At present, my country's labor cost is rising rapidly, and it has no advantage compared with overseas labor. Moreover, many countries now tend to limit the number of Chinese expatriates in order to ensure employment in their own countries. This also requires companies to make full use of local resources, thereby reducing business operating costs. At the same time, the implementation of the "integration of investment, construction and business" project, rooted in the local area, is of great significance for the company to expand its business scope, study the local market in depth, and explore more market opportunities. It is more conducive to the formation of a community of interests between the company and the local area and establishes a stable and sustainable company. The basis of development.

The fourth is to promote the socio-economic development of the project location. For the country where the project is located, launching the "integration of investment, construction and business" business will help strengthen the local economic endogenous development momentum and hematopoietic capacity. Therefore, in the process of “going global”, Chinese enterprises, especially central enterprises, should actively respond to the goal of “win-win cooperation and common development” advocated by the country’s “One Belt and One Road” initiative, teach people how to fish,
and promote local economic, social and social development®. The symbiotic development of the environment highlights the image of responsible Chinese companies and enhances the local government, communities, people and other relevant parties’ sense of identification with Chinese companies.

However, the integration of investment, construction and operation mainly faces two disadvantages®. First, the overseas risks are higher. The complexity of the political and economic environment and the uncertainty of the implementation environment of international power technology and equipment projects have also increased the difficulty of the implementation of the "integrated investment, construction and business" project. The second is the difficulty of cooperating with local government and labor. In particular, countries along the “Belt and Road” generally lack advanced management experience and excellent engineering talents. The integrated model of investment, construction and operation faces the issue of synergy with local labor.

3. Countermeasures and Suggestions for Electric Power Enterprises to Implement Integration of Investment, Construction and Operation Overseas

The first is to coordinate the whole process of project development and attach importance to high value-added links. In the process of overseas project development, focus on high-value-added planning, design, investment and financing, and operations to achieve the extension of the industrial chain to high-end areas, which is conducive to the gradual extension from low-value-added links to high-value-added areas.

The second is to realize the risk management and control of the whole life cycle of the project. The "integration of investment, construction and business" project involves a wide range, long cycle, and high risk. Electric power technology and equipment companies must use technical and business risk management and control capabilities to accurately and deeply identify and control the essential risks of projects from investment project selection, construction process indicator control, and operation. For example, in the early stage of the project, through the accurate definition and analysis of the project plan and financial indicator risk from the technical level, it provides support for the project business negotiation. For the unfamiliar part of the company, with the help of the professional ability and experience of an internationally renowned law firm or accounting firm, through "professional people do professional things", the possibility of project success can be improved.

The third is to integrate resources to build an integrated platform for the industrial chain®. During the implementation of overseas projects, electric power technology and equipment companies should give full play to their integrated advantages in design, construction, supervision, manufacturing, and operation, and lead the group’s key enterprises to participate in project construction, realizing the previous planning, survey, and design. To cover the entire industry chain from mid-term construction and construction to later operation and management. The project is led by the investor, supported by the design unit, construction unit and project operation and maintenance team, forming an "integrated investment, construction and operation" platform to ensure the rapid and smooth construction of the project.

The fourth is to build a strong project operation team. Continuous operation is an important feature of "investment and construction" projects, and it is also a source of successful profits for the project. Through a variety of training methods, a group of high-quality and professional local operation teams are formed, which can not only improve operation capabilities, reduce operation costs, but also create

® Li Jing. Research on Financing Management Innovation in the Process of Grid Enterprises’ Overseas Investment, Construction and Operation Integration[J]. International Engineering and Labor Services, 2020(8):49-51.
® Zhu Fengfeng, Hu Hao, Tang Ning. The bottleneck and countermeasures of "integration of investment, construction and business" in China's foreign contracting projects[J]. Modern Management Science, 2019, No.312(03):99-101.
® Zhou Jiayi, Wu Chao. Strategic choice to realize sustainable development——Experience and suggestions of China Power Construction's "integration of investment, construction and operation"[J]. International Engineering and Labor Service, 2017.
local employment opportunities, improve the level of local engineering and technology, and gain recognition from local people.

4. Conclusion

The integration model of investment, construction and operation is suitable for areas with high trade barriers, weak power technology and equipment infrastructure, low entry barriers and low localization requirements, such as Egypt, Algeria, Vietnam, Myanmar and other Middle East and Southeast Asian countries. Locally. Chinese companies should adopt appropriate models for overseas investment based on local policies, economy, infrastructure and other macro conditions.

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