



Research on the Characteristic Elements and Selection Methods of Sustainable Management Demonstration Projects in Large Power Grid Enterprises

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Abstract. Sustainable management stands at the forefront of global concerns for large enterprise conglomerates. Sustainable management demonstration projects provide a reference and viable path for the sustainable growth of large enterprises, effectively translating high-quality development imperatives into practical outcomes within organizations and optimizing the comprehensive benefits of the economy, society, and the environment. This paper delves into the functional positioning of such projects, examines their salient features and core components grounded in Environmental, Social, and Governance (ESG) principles. It further outlines the principles, strategies, criteria, and pivotal considerations for selecting demonstration projects, thus offering technical guidance to major power grid enterprises in identifying sustainable management exemplars.

Keywords: Power Grid Enterprises, Sustainable Management, Demonstration Projects, Characteristic Elements, Selection Methodologies.

1 Introduction

Corporate sustainable management embodies a commitment to economic prosperity while actively embracing social responsibilities and environmental stewardship, aiming to secure the enterprise's long-term stability and growth. In the face of escalating global climate risks, the accelerated energy transition, and heightened social responsibility awareness, investors and consumers are increasingly gravitating towards enterprises that prioritize sustainability. As a result, sustainable management has risen to prominence in corporate development, garnering significant attention from both theoretical and practical circles[1]. Sustainable management demonstration projects offer a valuable reference and practical roadmap for the sustainable growth of large enterprise businesses. They aid in the implementation of high-quality development standards within enterprises, ultimately culminating in optimal economic, social, and environmental benefits. By delineating the functional positioning of these projects, this paper delves into their pivotal characteristics and fundamental elements, drawing insights from Environmental, Social, and Governance (ESG) principles. Furthermore, it out-

lines principles, strategies, standards, and crucial selection criteria, providing technical guidance to large power grid enterprises in their quest to identify and implement sustainable management demonstration projects.

2 Positioning and Core Elements of Sustainable Management Demonstration Projects in Large Power Grid Enterprises

2.1 Positioning of Sustainable Management Demonstration Projects

To guarantee the smooth execution of sustainable management initiatives, large power grid enterprises must categorize sustainable management projects as a distinct entity, operating and administering them independently. This approach, tailored to the unique characteristics of sustainable management projects, facilitates the development of tailored implementation and management processes, along with specialized tool designs. Sustainable management demonstration projects are positioned as exemplary, distinctive, and scalable projects that serve as leaders and benchmarks within the broader realm of sustainable management, representing a subset of projects that command attention and promote best practices.

2.2 Core Elements of Sustainable Management Demonstration Projects

The fundamental distinction between sustainable management demonstration projects and general projects resides in their value proposition. Sustainable management demonstration projects prioritize the harmonious alignment of "economic, social, and environmental" aspects as their core value framework, steered by the innovative development concepts of "innovation, coordination, green, openness, and sharing" and guided by the strategic ambitions of the enterprise as their value compass.

Taking the Coordination of the Three Aspects as the Core.

At the core of sustainable management for large power grid enterprises lies the harmonious integration of three pivotal aspects: economic, social, and environmental factors. The focus should be on electricity, driving the transformation of energy supply and consumption towards balanced development across these three domains. Firstly, economic development coordination is essential. By enhancing operational efficiency and quality, and strengthening the enterprise's comprehensive strength and core competitiveness, we aim to foster growth, optimization, and expansion. This ensures the preservation and appreciation of state-owned assets, effectively fulfilling the strategic support role in national economic development. This lays the foundation for sustainable management. Secondly, environmental development coordination is paramount. Recognizing that human activities and economic endeavors have profound effects on the environment, we strive to minimize adverse impacts through technological advancements, equipment upgrades, and optimization of the energy supply mix. By expanding the use of clean energy and improving energy efficiency, we drive a comprehensive green transformation in economic and social development,

powered by electricity. This is a prerequisite for sustainable management. Finally, social development coordination is the ultimate goal. Leveraging the resource advantages of the power grid platform, we cultivate new businesses, formats, and models to extend the industrial and value chains. This creates a collaborative energy internet ecosystem that is jointly built, governed, shared, and prospers, fostering the symbiotic growth of upstream and downstream enterprises within the industry chain and promoting societal progress overall. This serves as the ultimate purpose of implementing sustainable management.

Guided by New Development Concepts as Value Orientation.

Guided by the novel development concepts as its value compass, the sustainable management of prominent Chinese power grid enterprises necessitates the integration of these principles throughout the entire developmental process and across all domains. It involves executing the innovative strategy of "four revolutions and one cooperation" for energy security, and fulfilling the pledge towards "peak carbon emissions and carbon neutrality." This transformational approach aims to achieve development of superior quality, enhanced efficiency, greater equity, sustainability, and robust safety.

Firstly, leading the Growth of Sustainable Management with the Concept of Innovative Development: Under the framework of sustainable development, it is essential to identify opportunities for development, seek breakthroughs in innovation, and take the initiative in reform and development. Currently, the macroeconomic situation remains severe, and the task of power system reform is arduous. It is necessary to actively adapt to regulatory requirements, drive innovation through sustainable management, and increase efforts in upgrading service standards and optimizing service methods, promoting sustainable industry chains, developing new business models, creating new energy internet formats, and data collection and value mining. Greater emphasis should be placed on low-carbon environmental protection and improving quality and efficiency, as well as exploring new areas for profit growth to solidify the foundation for development.

Secondly, leading the Integrated Development of Sustainable Management with the Concept of Coordinated Development: Promote the upgrade of the power grid to an energy internet, accelerate the construction of a strong and intelligent grid, achieve coordinated development at all levels, adapt to the requirements of efficient and optimized resource allocation on a large scale, and reasonably optimize the layout and structure of the power industry chain to improve resource allocation efficiency. Advance the optimization and upgrading of energy and power systems to comprehensively enhance the grid's resource allocation capacity and the ability to provide safe and reliable power supply, striving to achieve coordinated development of electricity with the economy, society, and environment, providing the whole society with high-quality, clean, safe, and reliable power security.

Thirdly, leading the Harmonious Use of Resources in Sustainable Management with the Concept of Green Development: Fully leverage the pivotal role of the power grid in the aggregation, transmission, and conversion of energy, and build a solid foundation for the large-scale integration and utilization of new energy, distributed

energy, and interactive power facilities. Promote interconnection, comprehensive transformation, and utilization of various energy sources, increase the proportion of clean energy in power generation equipment, and enhance the proportion of electricity in terminal energy consumption. Reduce energy consumption in the production and consumption process, improve the comprehensive energy efficiency of the whole society, and support the actions of "peak carbon emissions and carbon neutrality." [2]

Fourthly, leading the Internal and External Linkage of Sustainable Management with the Concept of Open Development: Adhere to long-term, market-oriented, and localized operations, and insist on open development in areas such as power grid interconnection and international capacity cooperation. Implement the "Belt and Road" initiative, deepen cooperation with neighboring and related countries, promote the "going global" of nuclear power, hydropower, and ultra-high voltage power transmission technologies, and at the same time drive the "going global" of equipment, technology, and service trade, promoting cultural exchanges and integration with the countries where the projects are located.

Finally, leading the Joint Construction and Sharing of Sustainable Management with the Concept of Shared Development: In promoting sustainable management work, it is necessary to involve all parties in the industry chain, from upstream to downstream, and the participation of all employees. Apply new technologies, materials, and processes to drive the transformation and upgrading of equipment manufacturing enterprises; attract more social capital and various market entities to participate in the construction of the energy internet, creating an energy internet ecosystem that is jointly built, governed, shared, and won; adhere to people-oriented principles, care for and cherish employees, share development achievements, and improve employees' sense of value and acquisition.

Led by Corporate Strategy Implementation as Value Command.

Focusing on the implementation of corporate strategy is both a core requirement for sustainable management work and a concentrated reflection of the inherent value of sustainable management work itself [3].

Firstly, inheriting the Corporate Tenet of "People's Electricity for the People". Efforts are concentrated on optimizing the business environment and improving the "Electricity Access" index. Serving the economic and social development, addressing the issues of unbalanced and insufficient development, and fully fulfilling political, economic, social, and environmental responsibilities. Being a pioneer in the field of electricity, the concept of people-centeredness is embedded in the actions of large power grid enterprises' sustainable management.

Secondly, shouldering the Corporate Mission of "Charging for a Better Life, Empowering a Beautiful China". Remembering that the fundamental purpose of the existence and development of power grid enterprises is to serve, the manifestation of value and the resulting proactive role are reflected in "charging" and "empowering". The mission is carried on the shoulders, leveraging the characteristics and advantages of power grid enterprises, and promoting the innovative development of the enterprise with sustainable concepts.

Finally, focusing on the Strategic Positioning of "Guardian of the National Economy, Practitioner of the Energy Revolution, and Server of a Good Life". Strengthen the responsibility and role of energy and power enterprises in ensuring national energy security, grasp the responsibility and role of public utilities in meeting the needs of people for a better life and promoting the progress of social civilization. Grasping the development direction of power grid enterprises from economic, energy, and social aspects, and promoting comprehensive sustainable development.

3 Key Characteristics of Sustainable Management Demonstration Projects

Sustainable management projects originate from the practice of sustainable development concepts in the field of corporate management. Based on the requirements, connotations of sustainable development, and the characteristic elements of sustainable management projects, typical sustainable management projects possess the following five key characteristics: special individualized attributes, issue-focused value orientation, multidimensional and equally important goals, related expansion of subjects, and multi-party participation in the process.

Special Individualized Attributes: Compared to general projects, sustainable management projects have distinctive features such as naturalness, representativeness, and demonstrativeness. They embody the inherent mission of state-owned enterprises to balance economic benefits with social and environmental impacts, serve as pioneers in implementing national "dual carbon" targets, and play a leading role in demonstrating sustainable development practices to similar enterprises.

Issue-Focused Value Orientation: The implementation of sustainable management projects must revolve around solving specific issues for the enterprise or stakeholders, aiming to enhance value in economic, social, or environmental aspects. The essence of these projects is to start from particular issues or value creation, applying sustainable management concepts and project management methodologies to carry out specific activities or tasks.

Multidimensional and Equally Important Goals: The "Triple Bottom Line" theory[4] proposed by British scholar John Elkington in 1997 suggests that corporate sustainable development should consider not only the maximization of economic value but also the maximization of social and environmental values[5]. This requires large power grid enterprises to place economic, environmental, and social benefits on an equal footing and actively respond to and incorporate the demands of various stakeholders in sustainable management projects.

Related Expansion of Subjects: The stakeholders and subjects of large power grid enterprise sustainable management projects are more extensive than those of general projects. In addition to focusing on core stakeholders such as suppliers, partners, customers, and employees, sustainable management projects also need to expand horizontally to address the interests of stakeholders related to social and environmental goals, including governments, communities, public welfare organizations, competi-

tors, etc., and vertically to consider the project's current implementation and its future impact, as well as how to prevent and compensate for these impacts.

Multi-Party Participation in the Process: Multi-party participation in the process means that sustainable management projects require the close cooperation of all participants, where any failure in a single link could lead to project failure. These projects involve more complex subjects and more diverse goals, which also changes the implementation approach of sustainable projects. Unlike general projects that avoid multi-party involvement to prevent interference and human risks, sustainable projects need to attract more stakeholders to participate in the implementation, translating their demands into different forms of participation and division of responsibilities, with each stakeholder directly corresponding to the achievement of one or several minor goals, and working together to achieve the overall project goals.

4 Selection Methods for Sustainable Management Demonstration Projects in Large Power Grid Enterprises

4.1 Principles for Selecting Demonstration Projects

Large power grid enterprises regularly select outstanding sustainable management practices from projects across various professions and units. During the selection process, full consideration is given to the development orientation of "green, open, and shared" principles. The goal of sustainable development is integrated with the corporate development strategy. Projects are selected based on the principle of maximizing the development of internal resources and potential while also leveraging the benefits to society and the environment. 20 to 25 projects are chosen as sustainable management demonstration projects for promotion.

4.2 Approach to Selecting Demonstration Projects

Firstly, it is essential to integrate the "triple bottom line" of economic, social, and environmental considerations into corporate governance. Through effective corporate governance, coordinate with diverse stakeholders, aiming to maximize the development of internal resources and potential, maintain sustainable profit growth and competitive strength, while also focusing on the benefits to society and the environment to achieve overall optimality.

Secondly, the construction of demonstration projects should be guided by the strategic goals of the enterprise, combining group coordination with regional differences. On the basis of adhering to the "one company, one strategy" approach, each region should fully consider the regional positioning in national strategy, the development foundation of each region, and the differences and characteristics of each unit in sustainable development. Identify the integration points and force points of sustainable management projects with local and enterprise conditions to achieve a multi-win situation in economic, social, and environmental aspects for the locality and the enterprise.

Lastly, during the construction of demonstration projects, emphasis should be placed on the accumulation of theory, methods, and experience. For example, keep track of the latest theories, introduce innovative sustainable management tools or methods in a timely manner, continuously optimize and improve the sustainable development evaluation system, research and develop relevant effectiveness assessment models or tools, promptly summarize the outcomes of sustainable management practices, and engage in extensive internal and external communication within the enterprise.

4.3 Key Focus Areas for the Selection of Demonstration Projects

Firstly, Building a Sustainable Value Chain. Sustainable management emphasizes the collaboration between the upstream and downstream of the industry chain to jointly identify and reduce the sources of waste and share the results of efficient resource utilization. At this stage, enterprises collaborate with suppliers and retailers to develop environmentally friendly raw materials and components, reducing waste. The initial goal is usually to enhance the corporate image, but most companies can ultimately reduce costs or develop new businesses.

Secondly, Designing Sustainable Products and Services. Currently, a considerable number of consumers prefer environmentally friendly products. If a company takes the lead in redesigning existing products or developing new ones, it can gain a competitive edge over its rivals.

Thirdly, Developing New Business Models. Creating a sustainable business model merely requires reconsidering the value proposition to customers and figuring out how to provide new value. However, successful models include new ways of generating revenue as well as collaborating with other companies to jointly provide services.

Finally, Creating Cross-Sector Integration Platforms. Led by sustainable development, by implementing cross-sector integration, enterprises are driven to establish new platforms for sustainable practices, forming the driving force for serving economic development.

5 Conclusion

On the basis of sorting out the functional positioning of sustainable management demonstration projects, this paper studies and analyzes the key characteristics and core elements of sustainable management demonstration projects based on ESG. We propose the principles, ideas, standards, and key content for the selection of demonstration projects, providing technical support for large power grid enterprises to select sustainable management demonstration projects. The most core elements that distinguish sustainable management demonstration projects from general projects in large power grid enterprises are taking coordination of "economic, social, and environmental" as the value outline, the new development concept as the value orientation, and the corporate strategic goals as the value guidance. Sustainable management demon-

stration projects have five typical characteristics, which are special ,individualized attributes issue-focused value orientation, multidimensional and equally important goals, related expansion of subjects, and multi-party participation in the process. The selection of demonstration projects should focus on building a sustainable value chain, designing sustainable products and services, developing new business models, and creating cross-sector integration platforms.

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