

# Analysis of Corporate Decisions Considering Low-carbon Transition

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**Abstract:** This paper analyses the practice of green development and autonomous low-carbon transformation of enterprises, mainly through the literature to analyse the importance of low-carbon transformation of enterprises as well as various factors affecting low-carbon transformation of enterprises. It is argued that in addition to the influence of their own enterprise structure, the low-carbon transition of enterprises will be affected by the demand of consumers and service providers, the level of government low-carbon subsidies and low-carbon transition technology. It also puts forward relevant suggestions for low-carbon transition. This paper proposes the establishment of low-carbon transition partners, the establishment of diversified multi-channel financing methods, the sound consumer experience service function, and the realisation of enterprise scale.

**Keywords:** Green development; low-carbon transition; low-carbon transition partners.

## 1. Introduction

In recent years, the climate crisis has gradually become a common challenge facing humankind, and green development and low-carbon transformation have gradually become hot topics. It is necessary to accelerate the green transformation of the development mode; promote in-depth prevention and control of environmental pollution; enhance the diversity, stability and sustainability of ecosystems; and actively and steadily push forward carbon peaking and carbon neutrality.

All industries are actively practising green development, gradually carrying out their own green development and low-carbon transformation, while consumers will gradually consider green enterprises and commodities. For enterprises, carbon dioxide emission source enterprises need to provide more low-carbon transformation technology, for the general public to gradually improve people's awareness of green low-carbon environmental protection, so that consumers are more willing to buy green low-carbon products, the formation of public awareness of low-carbon environmental protection.

However, low-carbon transition is by no means an easy task, in the external environment of increased competition at the same time, their own internal low-carbon transition will inevitably increase costs. Therefore, it is of great practical significance to explore the strategy of low-carbon transformation of enterprises.

## 2. Literature References

Academic research on low-carbon transition of enterprises practicing green development is mainly analysed by arguing the importance of low-carbon transition and the factors affecting low-carbon transition of enterprises.

Many scholars have argued for the importance of low-carbon transition from different perspectives. Jonathan Busch discuss low-carbon industrial strategies, the important role in achieving low-carbon transition, elaborate elements of a more systematic low-carbon industrial strategy, provide a task-oriented approach, and emphasise the need for a low-carbon and circular economy[1]. Tingting Zhou conduct a trend of

carbon emissions from the urban and rural construction sector to modelling and using structural adjustment to provide carbon reduction capacity for it, providing a scientific basis and reference for the green and low-carbon development path of urban and rural construction[2].

Based on the research on low-carbon transition of enterprises, many scholars believe that there are various factors that can affect the process of low-carbon transition of enterprises. Chunyan Liang assessed the performance of energy enterprises through the TOPSIS method, and concluded that the media attention can positively affect the energy transition of enterprises and indirectly promote the process of low-carbon transition of enterprises[3]. Qiguang An and Yingshuang Shi used two methods to balance the digitalisation level of enterprises and text analysis word frequency statistics, and showed that the digitalisation of enterprises can effectively reduce the level of carbon emissions[4].

Xiaoqian Liu employed the difference-in-differences approach to investigate how NPSDRC affects the transformation of enterprises in resource-based cities and the role of Fintech adoption in this[5]. Wenwen Zhou believe that government intervention can motivate enterprises to carry out low-carbon transformation, and that low-carbon technology innovation is the key for enterprises to realise energy saving and emission reduction, so it is necessary to accelerate the low-carbon technology innovation of enterprises[6].

It can be seen that in the case of enterprises considering practicing green development and low-carbon transformation, the low-carbon transformation of products will inevitably increase costs. Based on this, this paper analyses the importance of low-carbon transformation of enterprises as well as the factors affecting low-carbon transformation of enterprises, and puts forward suggestions as well as references to low-carbon transformation of enterprises.

## 3. Factors Affecting the Low-carbon Transition of Enterprises

Most businesses are considering a low-carbon transition for sustainability. Low-carbon transition involves not only

restructuring traditional industries and planning new low-carbon transition strategies, but also changing the traditional consumption patterns of consumers and service providers. Through framework adjustments and technological innovations, companies can progressively improve energy efficiency, save energy and promote a corporate shift towards low energy consumption, high energy efficiency and low carbon emissions.

Enterprises choose low-carbon transition and low-carbon transition process is affected by many factors. First, the impact of the enterprise's own structure. Enterprises to carry out low-carbon transformation is not a complete low-carbon, complete transformation, need to consider the enterprise's own production capacity structure and enterprise management structure, on the basis of their own framework, found that can be low-carbon transformation of the region or product, and combined with their own advantages, to avoid disadvantages, to carry out low-carbon transformation.

Second, the influence of consumer and service provider demand. Enterprises carry out low-carbon transformation, the purpose is for sustainable development and corporate profitability, so the products of enterprises after low-carbon transformation must meet the needs of consumers and service providers in order to gradually capture the market and gain profits.

Thirdly, the impact of the government's low-carbon subsidy level. Most of the enterprises have formed their own traditional profit model, in the face of green low-carbon call, and will not have too much enthusiasm and initiative. Enterprises prefer smooth development to risk-taking. Even if enterprises carry out low-carbon transformation, they are in a passive state at the initial stage of low-carbon transformation due to factors such as lack of experience and shortage of funds, so their transformation may not be successful, or worse, it may lead to losses incurred by the enterprises themselves. Therefore, the need for government low-carbon subsidies to mobilise the enthusiasm of enterprises in low-carbon transition, while providing financial security for low-carbon transition enterprises.

Fourth, the impact of low-carbon transition technology. Enterprises before the low-carbon transition not only need to explore whether the low-carbon transition technology is in line with the development of their own business transformation, but also to consider whether the cost of introducing low-carbon transition technology can be afforded, as well as to create value for the later.

It is of practical significance to study the impact of factors on the low-carbon transition of enterprises and make recommendations.

#### **4. Conclusion and Recommendations**

This paper puts forward the following suggestions for the early stages of development of enterprises practising green development and low-carbon transformation:

1. Establishment of low-carbon transition partners. The low-carbon transition technology and the sewage charges for dealing with the decarbonisation of products faced by enterprises at the initial stage of low-carbon transition require a large amount of human and financial resources, and the upfront costs are high. In addition, the input of low-carbon transition technology may not be able to one-time success or be able to adapt to the enterprise product decarbonisation, this uncertainty brings a certain risk, once the enterprise low-carbon transition is not suitable or even failure, then the cost

of the initial investment will be wasted.

Therefore, low-carbon transition partners can be established. Firstly, similar enterprises can establish cooperative relationship, share low-carbon transformation technology, share resources with partner enterprises, cooperate and complement each other, and jointly carry out the preliminary investment of low-carbon transformation, which can gradually improve the development strategy of low-carbon transformation of their own enterprises while dispersing the risk; secondly, geographically similar enterprises can use a unified product sewage system, share the cost of product sewage, and maintain the low-carbon product sewage system together. Secondly, geographically close enterprises can use a unified product sewage system, share product sewage fees, and jointly maintain a low-carbon product sewage system, which reduces the waste of manpower and financial resources and also realises inter-enterprise collaborative management, which is more capable of identifying problems in the sewage system as well as improvement suggestions. The establishment of a low carbon transition partnership provides an important cornerstone for cost savings in the early stages of low carbon transition development.

2. Establish diversified and multi-channel financing methods. The level of government subsidies to low-carbon transition enterprises to a certain extent will have a negative impact on the enterprise, the government low-carbon subsidies is not a long-term solution, if the enterprise low-carbon transition stage, the government low-carbon subsidies can not keep up with the financial needs of the enterprise transition, then it will bring the problem of financial constraints or even shortages to the enterprise, even if part of the enterprise does not exist, but the government's behaviour of low-carbon subsidies is not a constant stream, the low-carbon transition enterprises need to be prepared in advance to cope with the lack of external capital injection problem. Therefore, low-carbon transition enterprises need to save for a rainy day, layout in advance to cope with the problem of insufficient external capital injection.

In order to compensate for this impact, enterprises need more diversified and multi-channel financing methods. First, for large-scale enterprises in low-carbon transformation, they can broaden market financing channels through cooperation, equity participation and other diversified ways to increase the injection of external funds, and at the same time, they can also achieve the purpose of multi-party risk-sharing; second, for small-scale enterprises in low-carbon transformation, they should tend to look for investors to increase external funds, and establish a diversified, multi-channel financing method to increase funds for enterprises in low-carbon transformation. Security.

3. Sound consumer experience services. The level of government low-carbon subsidies has a negative impact on the demand for a company's products, and a long-term view of government low-carbon subsidy behaviour is in fact at the expense of overdrafting future demand in the sector. Even if an enterprise succeeds in making a low-carbon transition, but demand is insufficient and the lack of a market makes it difficult for the enterprise to make a profit, then a transition that is unprofitable for the enterprise is a failed transition. In order to increase demand for low-carbon products, companies need to improve consumer experience services and consumer engagement.

First of all, in the enterprise to start the low-carbon

transition in the early stage, you can increase the publicity efforts to increase consumers, service providers for the enterprise's low-carbon transition of the degree of awareness; Secondly, sound consumer service experience function, so that consumers involved in the enterprise's low-carbon transformation of the action, for example, so that consumers, service providers to the enterprise's low-carbon transition process for the visit as well as the evaluation of the feedback to increase the consumer's sense of participation and satisfaction; Finally, to the consumers, service providers to show the differences of the enterprise's low-carbon products, so that they themselves to explore the advantages of low-carbon products. Finally, consumers and service providers should be shown the differences of low-carbon products, so that they can discover the advantages of low-carbon products. Even though the market is ever-changing and consumer preferences are uncertain, in recent years, green and low-carbon products have become popular and are reflected in every aspect of our lives, so consumers may be inclined to choose green and sustainable products when they make their choices. If the enterprise to guide consumers, service providers themselves to explore the advantages of low-carbon products, not only can highlight the advantages of the enterprise's low-carbon products at the same time, but also increase the degree of consumers, service providers for the impression of the low-carbon products to increase the rate of re-selection, improve consumer satisfaction.

4. Achieving scale. The human, material and financial resources involved in the process of low-carbon transition are incalculable, and once the transition fails, the costs of a large investment will never be recovered. Even if the enterprise transformation success, but also have the government low-carbon subsidies as well as external financial support, but a single enterprise wants to long-term profitability is still a long way to go, the enterprise is facing the pressure of long-term profit shortfalls, and need to invest for a long time in order to have a stable, sustainable profitability.

In order to alleviate this pressure, enterprises can gradually standardise the low-carbon development management of their

own enterprises after the success of low-carbon transformation, improve the low-carbon transformation of their own enterprises as well as the low-carbon development system, strengthen the organisation of the post-carbon transformation maintenance, structure the low-carbon development procedures, refine the responsibilities, and gradually establish standardised low-carbon products to form a standardised low-carbon enterprise. When a certain market scale is reached, low-carbon enterprises can reduce or even eliminate financial pressure, form a scale system, and ultimately achieve sustainable profitability.

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