

Analysis of Financial and Tax Policies to Support the Development of New Energy Industry

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ABSTRACT. The development of new energy is of great significance to a country. Although China's energy development has entered a new stage from total expansion to improving quality and efficiency, the situation of energy sustainable development and environmental protection is still grim. The new energy revolution is not a simple energy problem, but a major issue related to the country's economic operation and overall national strength. In order to effectively promote the revolution of energy production, safety and consumption, and speed up the adjustment of the energy structure dominated by fossil energy to the direction of clean energy, this paper gives financial and tax policy suggestions for the development of new energy industry from the aspects of government purchase, subsidies, taxes, etc.

1. INTRODUCTION

The world is material, and energy is the material basis for the development of human society. Since ancient times, among the seven things that ordinary people have opened the door of, "fuel, rice, oil, salt, soy, vinegar, and tea", "fuel" has been ranked first. Since the reform and opening up, especially with the promotion of industrialization and urbanization, China's total energy consumption and production have increased significantly. Global warming and lack of resources have become indisputable facts [1]. To solve the problem of shortage of fossil energy and pollution of the environment, developing new energy has become an urgent task in front of us [2].

2.DEMAND AND SUPPLY OF ENERGY IN CHINA

In 2018, China's total energy consumption was 4640 million tons of standard coal, a year-on-year increase of 3.4%, and the total production was 3770 million tons of standard coal, a year-on-year increase of 5.2%. Whether it's demand or supply, coal in traditional energy is the main position. In 2018, the gap between China's total energy consumption and total production is 87 million tons of standard coal. The huge gap between demand and supply needs to rely on the import of large amounts of energy to meet the balance of supply and demand. The largest energy imports are coal and crude oil. It can be seen from table 1 that in the past decade, the total energy production and consumption in China have been increasing year by year, but the gap between them has also been increasing year by year.

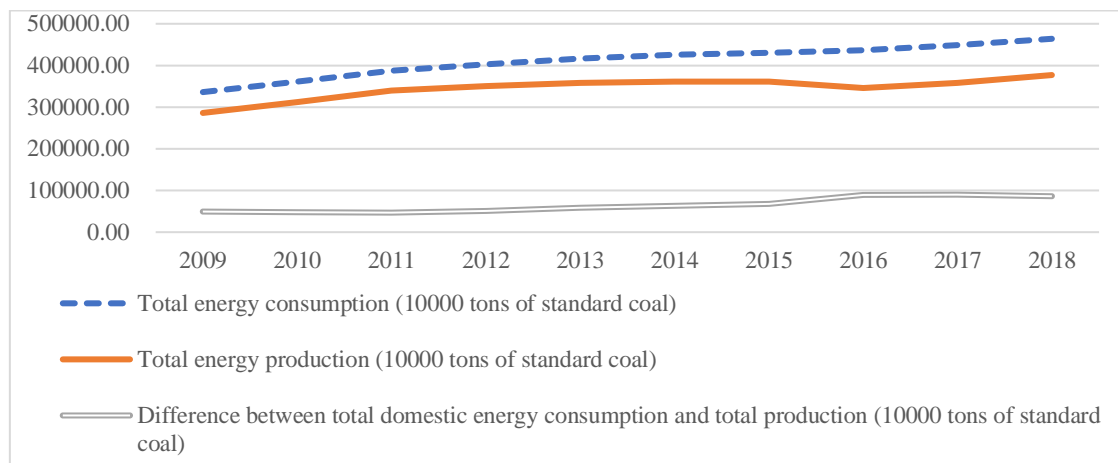
From Figure 1, it can be seen that in the past decade, China's total energy consumption, total production and the difference between them have shown an increasing trend year by year.

Table 1. China's total energy consumption, production and import in the past decade

time	Total energy consumption (10000 tons of standard coal)	Growth rate of total energy consumption	Total energy production (10000 tons of standard coal)	Growth rate of total energy production	Difference between total domestic energy consumption and total production (10000 tons of standard coal)	Growth rate of the difference between total domestic energy consumption and total production
2009	336126.00		286092.22		50033.78	

2010	360648.00	7.30	312124.75	9.10	48523.25	-3.02
2011	387043.00	7.32	340177.51	8.99	46865.49	-3.42
2012	402138.00	3.90	351040.75	3.19	51097.25	9.03
2013	416913.00	3.67	358783.76	2.21	58129.24	13.76
2014	425806.00	2.13	361866.00	0.86	63940.00	10.00
2015	429905.00	0.96	361476.00	-0.11	68429.00	7.02
2016	435819.00	1.38	346037.31	-4.27	89781.69	31.20
2017	448529.00	2.92	358500.00	3.60	90029.00	0.28
2018	464000.00	3.45	377000.00	5.16	87000.00	-3.36

Data are calculated and sorted out according to China Statistical Yearbook



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Figure 1. Trend chart of total energy consumption, total production and the difference between the two in recent ten years in China

3. Great Strategic Significance of Developing New Energy Industry

New energy refers to renewable energy developed and utilized on the basis of new technology, including solar energy, biomass energy, wind energy, geothermal energy, wave energy, ocean current energy and tidal energy.

In terms of the total amount of traditional energy, China is rich in fossil energy reserves. However, China has a population of 1.4 billion, and the per capita resource share of coal and oil is far lower than the world average. Among them, the per capita resource share of coal is about half of the world average, while that of oil is only 7.7% [3]. Every year, China needs to import a large number of coal and crude oil from abroad to meet the needs of production and life. In addition, because the traditional energy is not renewable, especially oil, known as the blood of modern industry, it will one day be exhausted by exploitation. Most of the oil producing countries in the world have bargaining power in the field of energy, and the net oil importing countries have natural advantages in the game based on resource power. In order to avoid the energy risk, from the perspective of long-term development, China, as a major oil importing country, must strengthen its efforts to find and develop oil substitutes. In addition, the use of fossil energy has greatly damaged the natural environment for human survival. In the process of fossil energy consumption, the emission of carbon dioxide and other greenhouse gases promotes global warming, and some other gases will cause air pollution and water pollution.

Today's world energy pattern is facing a great change that hasn't happened in a century. The contradiction of energy sustainable development is increasingly prominent, and the new energy transformation is in a critical period. Global energy development presents low carbon and clean energy. China is the largest energy producer and consumer in the world. In the context of global energy reform, China's energy pattern and supply-demand relationship are undergoing profound changes.

On October 22, 2019, the Taiyuan energy low carbon development forum was held. General

Secretary Xi Jinping emphasized in his congratulatory message that energy and low-carbon development is of vital importance. China has been actively promoting energy consumption, supply, technology and system revolution. The 13th Five Year Plan period is crucial for China's energy transformation and development. Although China's energy development has entered a new stage from total expansion to improving quality and efficiency, the situation of energy sustainable development and environmental protection is still grim. The current development of China's energy industry is in a critical period: the deep-seated problems of the market structure and market system, the problems of scientific and technological innovation, and the problems of extensive development mode need to be solved. Therefore, China should make a major strategic plan for energy development as soon as possible, study and adjust the layout of major energy productivity, and establish the "14th five year plan" and future energy development plan as soon as possible.

4. Policy Suggestion

At present, the Ministry of finance has set up a special fund for renewable energy development. In 2018, the special fund for supporting the development of renewable energy industry reached 5965.77 million yuan. In terms of the support principle of special funds, management measures and methods for use, and effect assessment, systems and Implementation Rules shall be formed. In the context of tax reduction and fee reduction, and the country's financial situation is not rich, the limited support funds are spent effectively.

The development of new energy industry has higher requirements for technology, and technical barriers are also one of the main factors affecting the development of new energy industry. In the process of production and operation, new energy enterprises need to invest a lot of human and material resources in scientific and technological research and development, and bear high risks at the same time. And new energy enterprises have positive externalities, so the government should use fiscal and tax policies to support them. The Chinese government attaches more and more importance to scientific research, and the investment is increasing year by year. In 2018, the national financial science and technology expenditure was 832.665 billion yuan, an increase of 14.58% year on year. This shows the strength of the state's support for scientific and technological innovation. According to different industries and enterprises, the government should set up a certain amount of special funds for R & D expenses for new energy enterprises, focusing on supporting new energy development projects such as solar energy, wind energy, bioenergy and tidal energy, which are difficult to operate effectively only by market mechanism, especially high-tech and state-owned brands with independent intellectual property rights, and gradually after the formation of market competition conditions Sign out.

In the early stage of the development of new energy industry, due to the influence of price, habits and other factors, there is a time process for the public to accept the new things, resulting in the phenomenon of oversupply of new energy industry products. As the leader of social development, the government gives priority to new energy products when purchasing, which can help the new energy industry to improve sales to a certain extent. Through strengthening the procurement and publicity of new energy industry products, guide consumers to support the use of new energy, change the traditional concept of new energy, and promote the sales of new energy industry products. In addition, the individual subsidy policy should also be implemented for consumers who purchase new energy products, so as to reduce the cost of consumers' purchase of new energy products. In addition, consumers who use new energy products can be subsidized with electricity price, for example, consumers who buy new energy vehicles can be given preferential electricity price, so as to promote the development of new energy from the consumption terminal.

There are two ways for the government to encourage the development of the new energy industry: one is to reduce the tax rate of the new energy industry, while increasing the tax rate of the traditional fossil energy industry, so as to relatively reduce the cost of new energy development, so that it has a price advantage in the market competition. For the enterprises with outstanding innovation ability in the new energy industry, when the enterprise income tax is levied, the R & D expenses can be directly deducted according to a certain proportion. The other is to levy fuel tax, carbon tax and emission tax

(fee) on the traditional fossil energy industry, which makes the traditional fossil energy industry at a disadvantage in the competition, and finally gradually replaced by the new energy industry. According to the data of the National Bureau of statistics, in 2018, the national financial expenditure for environmental protection was 629.761 billion yuan, an increase of 12.11% year on year, which shows the determination of the state to strengthen environmental protection and governance. In the future, China can no longer follow the old road of pollution first and then treatment. For enterprises that use fossil energy to discharge sulfur dioxide and smoke and dust in large quantities, which cause serious pollution, they should strictly levy pollution tax (fee), but force enterprises to give priority to the use of renewable energy.

5. conclusion

The new energy industry has a high degree of policy sensitivity [4]. New energy enterprises are capital intensive enterprises, which have the characteristics of high initial investment, long return cycle, many technical barriers and high financing risk. The new energy industry often has strong dependence on policies. From the above discussion, in order to ensure the better development of new energy industry in the future, the Chinese government should support the new energy industry by means of government purchase, subsidy, tax and other means [5].

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