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New and Old Kinetic Energy Conversion Mode and Development Path Based on the Carrying Capacity of Land Resources in Tai'an

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***Abstract*—The carrying capacity of land resources is the main influencing factor of regional core competitiveness, an important condition for sustainable economic and social development, and an important supporting factor for the conversion of old and new kinetic energy. This paper discusses the different development path modes of new and old kinetic energy conversion in Tai'an, and puts forward countermeasures for the conversion of new and old kinetic energy based on the carrying capacity of land resources. It is of great practical significance to further promote the economic development and social stability of Tai'an.**

***Index Terms*—Carrying capacity of land resources; old and new kinetic energy conversion; path mode**

I. INTRODUCTION

Land resources are the products of nature, but also the means of living and labor objects of human survival, not only people's survival depends on land resources, but also the economic construction and development of the country and society also depend on this, but the total amount of land resources is limited. With the large and rapid growth of population, a variety of resources and energy are facing the problem of overexploitation, use and consumption, and the resulting ecological and environmental damage and other problems are becoming more and more prominent. Tai'an is an economic and population city with an important strategic position in the country, with a high intensity of land resource utilization, with the approval of the overall plan for the construction of Tai'an's new and old kinetic energy conversion comprehensive pilot zone, the carrying capacity of land resources may be weakened. Therefore, it is particularly important to establish a scientific and complete comprehensive evaluation system for the carrying capacity of land resources, which not only responds to national policies, but also strongly ensures the smooth conversion of new and old kinetic energy in Tai'an.

II. THE DEVELOPMENT PATH MODEL OF NEW AND OLD KINETIC ENERGY CONVERSION IN TAI'AN

(1) Key areas drive the development path model

Through the comprehensive evaluation of Tai'an City, Feicheng City, Xintai City, Ningyang County and Dongping County, it is found that the comprehensive level of land resources carrying capacity of Tai'an City, Feicheng City and Xintai City is high, and it has a good economic development status and land resource carrying capacity, which is an important foundation to support the conversion of old and new kinetic energy, and is also an important guarantee for promoting the city's better and faster economic transformation and upgrading. In addition, in terms of spatial layout, the three cities also constitute a "grand triangle pattern", which is not only conducive to giving play to their respective advantages, radiating to drive the surrounding development, but also supporting each other at the city-wide level, integrating and interacting, and accelerating the formation of new competitive advantages in Tai'an. At the same time, it is necessary to give full play to the radiation and driving role of the three core leading cities to the surrounding areas, fully integrate resources, energy, industry and infrastructure and other elements, promote coordinated development, coordinated development and linkage development, and vigorously improve the level of economic integration development.

(2) Regional characteristic function development path model

Whether it is from the perspective of transforming traditional industries, resolving excess industries, or developing emerging industries and building demonstration zones, most industries have the feasibility of landing, but the plasticity of industrial development after landing is difficult to judge. Therefore, each prefecture and city should find the positioning and development direction of the appropriate city according to the current resource advantages, actual development situation and prospects, combined with relevant planning guidance and policy support, and form a functional development path model with regional characteristics. In view of the existing industrial situation and regional characteristics of various cities and cities, leading industries or advantageous industries should be regarded as regional characteristic industries for specialized development. Nowadays, most of the leading industries have seen insufficient development momentum or negative economic growth, excluding the influence of objective factors such as international factors, the overcapacity of the industry, low efficiency of enterprises and low added value of products are the main influencing factors. Similarly, regional characteristic industries often face the dilemma of

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overcapacity, serious pollution, high production costs and low economic benefits, and enterprises and governments need to accelerate scientific and technological innovation, continuously improve technology and process flow in traditional industries and specialty industries, and accelerate the pace of optimizing old kinetic energy and cultivating new kinetic energy. [7] discussed about Intelligent Sensor Network for Vehicle Maintenance System. Modern automobiles are no longer mere mechanical devices; they are pervasively monitored through various sensor networks & using integrated circuits and microprocessor based design and control techniques while this transformation has driven major advancements in efficiency and safety. In the existing system the stress was given on the safety of the vehicle, modification in the physical structure of the vehicle but the proposed system introduces essential concept in the field of automobile industry. It is an interfacing of the advanced technologies like Embedded Systems and the Automobile world. This "Intelligent Sensor Network for Vehicle Maintenance System" is best suitable for vehicle security as well as for vehicle's maintenance. Further it also supports advanced feature of GSM module interfacing. Through this concept in case of any emergency or accident the system will automatically sense and records the different parameters like LPG gas level, Engine Temperature, present speed and etc. so that at the time of investigation this parameters may play important role to find out the possible reasons of the accident. Further, in case of accident & in case of stealing of vehicle GSM module will send SMS to the Police, insurance company as well as to the family members. [8] discussed about an eye blinking sensor. Nowadays heart attack patients are increasing day by day."Though it is tough to save the heart attack patients, we can increase the statistics of saving the life of patients & the life of others whom they are responsible for. The main design of this project is to track the heart attack of patients who are suffering from any attacks during driving and send them a medical need & thereby to stop the vehicle to ensure that the persons along them are safe from accident. Here, an eye blinking sensor is used to sense the blinking of the eye. spO2 sensor checks the pulse rate of the patient. Both are connected to micro controller.If eye blinking gets stopped then the signal is sent to the controller to make an alarm through the buffer. If spO2 sensor senses a variation in pulse or low oxygen content in blood, it may results in heart failure and therefore the controller stops the motor of the vehicle. Then Tarang F4 transmitter is used to send the vehicle number & the mobile number of the patient to a nearest medical station within 25 km for medical aid. The pulse rate monitored via LCD .The Tarang F4 receiver receives the signal and passes through controller and the number gets displayed in the LCD screen and an alarm is produced through a buzzer as soon the signal is received.

(3) Integration, interaction, and coordinated development path model

There is an imbalance in the development of Tai'an region, and the gap is large. Therefore, in the process of implementing the conversion of new and old kinetic energy, we should pay attention to optimizing the layout of regional development, and the ultimate goal is to achieve coordinated regional development. While allowing the rational adjustment of administrative divisions, Tai'an City, Feicheng City and Xintai City are the main engines for the conversion of new and old kinetic energy, and specific areas of other cities are supplemented, which together constitute the core scope of the pilot area, with both division of labor and cooperation, strengthening the overall planning and planning of various developments, and striving to build multiple economic growth points, which is conducive to tapping the overall benefits, promoting the balanced and full development of the region, and forming a joint force for the conversion of new and old kinetic energy in the region.

The development of characteristic industries requires the support of regional unique geographical location, resource endowment, etc., and regional joint development is required for industries that are generally suitable for development, and the result of separate battles can only cause unnecessary duplicate construction and serious waste of resources. Through the overall cultivation of advantageous industries and the development of emerging industries, the development of integrated interaction and coordinated development path mode is adopted to allow industrial clusters to develop and increase economic benefits. At present, there is a big gap between Tai'an's industrial layout, linkage, upstream and downstream supporting facilities and the south. If the pilot zone will innovate the regional coordinated development mechanism, integrate forces to make the advantageous areas bigger and stronger, form a dislocation development pattern, change homogeneous competition into industrial division of labor and cooperation, form a new pattern of regional integration and interaction, and strengthen the overall competitiveness of the province.

III. COUNTERMEASURES FOR THE CONVERSION OF OLD AND NEW KINETIC ENERGY BASED ON THE CARRYING CAPACITY OF LAND RESOURCES

(1) Optimize the allocation of land resources to provide planning guarantee for the conversion of new and old kinetic energy

1) Based on the main functional area planning, coordinate all kinds of spatial planning and promote multi-plan integration. Accelerate the preparation of municipal and county-level territorial spatial plans, and develop, utilize and rectify land resources in accordance with laws and regulations, so that land resources can be used efficiently. Optimize the overall land use plan, gradually form a new pattern of land use with concentrated industry, scale and factors, and intensive land use, and promote the integrated and coordinated development of urban and rural areas, regions, villages and towns.

2) Optimize the spatial layout of the comprehensive test area for new and old kinetic energy conversion. Based on the

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comprehensive evaluation of the carrying capacity of land resources, the planning of the new and old kinetic energy conversion comprehensive pilot zone should strengthen the coordination and connection with economic and social development, ecological environmental protection, urban and rural planning and other relevant plans, and rationally layout the spatial distribution of construction land. Give play to the leading role of planning control and control, promote the optimization of urban and rural, regional and industrial spatial layout, and provide spatial guarantee for the conversion of new and old kinetic energy.

3) Solidly carry out rural revitalization work and optimize the allocation of land resources. Land resources are the basic and material guarantee for the promotion of the rural revitalization strategy. County-level governments are allowed to adjust the layout of land use according to the characteristics of agricultural and rural land use activities, rationally arrange industrial land for rural revitalization and land for key projects, and allow all localities to provide targeted land policies for supporting the development of rural revitalization industries.

(2) Control the incremental inventory and adjust the flow to expand the land space for the conversion of new and old kinetic energy

1) Further promote the redevelopment of low-efficiency land in cities and towns. With the rapid social and economic development of Tai'an, the urbanization process is accelerating, the contradiction between land supply and demand is becoming increasingly acute, which is incompatible with the carrying capacity of land, and there is a large number of inefficient land in the town, which has great potential for revitalization and utilization, further improves the carrying capacity of land resources, increases the potential of land resource supply, and expands the land space for the conversion of new and old kinetic energy.

2) Explore and promote the three-dimensional development of underground space. Through the formulation of underground space land use policies, the improvement of benchmark land prices, parcel assessment, confirmation of rights registration and other policies, the adoption of underground transportation, underground commercial services and other comprehensive utilization methods. For example, Tai'an City implements preferential policies for underground space land used for commercial offices, leisure and entertainment, and vigorously supports the development and utilization of underground space.

3) Revitalize the rural stock of construction land. The land circulation policy is an institutional guarantee for revitalizing the rural stock of construction land, allowing the market to participate in the process of land transfer, and effectively optimizing the land operation process. Revitalize and utilize the existing homesteads and the existing operational construction land, and develop in the direction of diversification.

4) Strictly control the scale of new construction land and support the high-quality development of the real economy. According to the actual needs of urban development, the overall land use plan and the annual land use plan, link the new land use with the revitalization of the stock land, balance the relationship between stock and increment, and reasonably determine the scale of new urban construction land.

(3) Strengthen land science and technology and institutions

1) Promote land science and technology innovation, land science and technology innovation is the real productivity of land resource utilization and protection. Strengthen land science and technology innovation in Tai'an, comprehensively considering the current situation of land science and technology development, food security and ecological civilization construction. Promote land science and technology innovation with land engineering technology as the center, focusing on improving the quality of cultivated land, land ecological restoration, intensive and economical utilization, and land consolidation technological innovation.

2) Strengthening the construction of land informatization is an important guarantee for improving the quality and efficiency of land management, and it is also a strong guarantee for the conversion of old and new kinetic energy. On the basis of comprehensively grasping the current situation and characteristics of land resources utilization, actively promote the construction of the "one map" project of land resources, and strengthen the application of data and land information results; Strengthen the construction of land information infrastructure and government affairs management, realize the smooth flow of land data between enterprises and industries and between various service fields, and improve the level of informatization of land resources work.

3) Innovate land system reform, take economic growth as the center, and promote supply-side structural reform. Reform land management, expropriation and reserve systems, effectively guarantee land for the development of the new economy, and provide land space for the conversion of old and new kinetic energy. First of all, deepen the reform of decentralization, management and service, delegate some land resources approval rights to pilot areas, and improve the level of management services.

(4) Formulate and implement industrial development support policies to provide a good policy environment for kinetic energy conversion

1) Exemption from urban land use tax. For enterprises to reduce and reduce land use tax fees during the process of resolving excess capacity replacement to form new kinetic energy. In addition, in order to promote major projects for the conversion of new and old kinetic energy, if there are difficulties in supporting the land use tax of enterprises, they can apply for hardship relief.

2) Support the comprehensive transformation of old industrial areas. For comprehensive renovation projects in old and middle-aged industrial zones in urban areas, where the transfer or change of use of the originally allocated land use right is involved, as long as the conditions for the transfer by agreement are met, the land use procedures may be handled by way of transfer by agreement. In the development of industrial real estate in industrial parks, the division and transfer of the right to use standard factory buildings and

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state-owned construction land is allowed without changing the function and land use.

3) Reasonably arrange the demand for land for the elderly care and rehabilitation industry. It is necessary to fully consider the existence of social forces, use the model of market-oriented application, and actively encourage social forces to open old-age, medical, rehabilitation and other institutions. For non-profit integrated medical and nursing care institutions, the allocation method may be adopted to ensure the supply of land; For for-profit integrated medical and nursing care institutions, land shall be guaranteed by leasing, transfer, or other paid means, and the establishment of medical institutions by old-age institutions may take the relevant requirements for the construction of medical service facilities in the project as a condition for land transfer, and it is clear that it cannot be divided and transferred.

4) Implement the flexible term land supply model. At present, when China's work land is transferred, land-using enterprises need to pay a land transfer fee for 50 years. This not only puts serious financial pressure on land-using enterprises, but also is very likely to cause waste of land resources. After the government implements flexible industrial land supply for enterprises, it not only solves the above problems, but also reduces the impact of low-efficiency land and low level of intensive utilization.

IV. Conclusion

According to the overall layout of the conversion of new and old kinetic energy and the comprehensive evaluation of the carrying capacity of land resources in Tai'an, this paper discusses three different development path modes of the transformation of new and old kinetic energy in Tai'an: the development path model of key areas, the development path model of regional characteristic functions, and the integrated interactive and coordinated development path model. On the basis of the comprehensive evaluation of the carrying capacity of land resources, from the aspects of optimizing the land use structure, effectively revitalizing land resources, strengthening land science and technology innovation and supporting industrial transformation, the new and old kinetic energy conversion countermeasures based on the carrying capacity of land resources are proposed: optimize the land use structure and provide planning guarantee for the conversion of new and old kinetic energy; Control the incremental inventory and adjust the flow to expand the land space for the conversion of new and old kinetic energy; Strengthen land science and technology and institutional innovation to provide technical support for the conversion of old and new kinetic energy; Formulate and implement industrial development support policies to provide a good policy environment for kinetic energy conversion.

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