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INVESTMENT POLICY FOR ECO-INDUSTRIAL DEVELOPMENT: STUDY IN URBAN AREAS IN HANOI, VIETNAM

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Abstract

The National Strategy on Green Growth, for the 2011-2020 period, with a vision to 2050, emphasizes the necessity for the construction and development of green buildings, green urban zones and ecological urban areas. This is in alignment with Vietnam's aspirations for swift and sustainable urban development. As urbanization progresses on the backbone of industrialization, the establishment of functional areas and industrial parks assumes an important role in Vietnam's socioeconomic advancement through to 2030. According to data from the Department for Economic Zones Management under the Ministry of Planning and Investment, as of February 2024, Vietnam had 418 established industrial parks (IPs) with a total land area of 129,900 ha, of which the rentable industrial land area is about 89,200 ha. Among them, 298 IPs are operational and 120 IPs are under construction. The total area of leased industrial land in IPs reached about 51,300 ha, or an occupancy rate of 57.5%.

Keywords: command-based environmental regulation; market-oriented environmental regulation; voluntary environmental regulation; water use efficiency

Introduction

For a long time, the traditional industrial park model has solved many problems of centralized and safe industrial development space planning, but there are many conflicts about environmental pollution. Along with the intelligent development of the digital age, which has been increasingly demanding for convenience and ecological environment, has led to the formation of an industrial urban model. Smart and eco-industrial park.

Ecological industrial urban area includes functional areas of eco-industrial zones and smart service urban areas. A smart service urban area has the function of supporting and providing convenient and smart services for the industrial park, solving housing needs, building cultural, sports and social facilities. Other to ensure the lives of workers and residents today. These results were unveiled last week at a forum on "Fostering Sustainable Development of Industrial Parks in Vietnam".Using an economic, environmental, social and governance (EESG) framework of 19 key indicators, the Vietnam Business Council for Sustainable Development (VBCSD)

under the Vietnam Chamber of Commerce and Industry (VCCI) conducted a survey of 118 industrial parks across the country as part of the Initiative for Sustainable Trade in Vietnam (IDH Vietnam).Speaking at the event, Nguyen Quang Vinh, Vice Chairman of the VCCI, said that 30% have some understanding of the concept of eco-industrial parks and 20% have a clear understanding that sustainable industrial parks require balanced development across all four pillars of the EESG.

Of the 298 active industrial parks, 272 have wastewater treatment facilities that meet environmental standards (about 91.3% compliance), according to the VCCI report.

The sustainable industrial park model is currently being designed and managed to integrate economic development, environmental protection and social responsibility for sustainable development, she added. "Government Decree 35/2022 provides a specific criterion for the classification of eco-industrial parks, which requires that 20% of the companies in the park engage in cleaner production. There were only 22% of industrial estates have international management system certification and 77% lack company-level audit information on financial, social and environmental aspects. According to Vinh, the study revealed a number of shortcomings regarding awareness, policy development, and management of industrial parks that align with sustainable development. "Therefore, Vietnam needs policies and measures to promote the construction and operation of sustainable industrial parks. Businesses in industrial parks contribute around 50% of the country's total export turnover, helping Vietnam to run a trade surplus rather than a trade deficit and making a significant contribution to the national budget. The figures above demonstrate the critical role of industrial parks in Vietnam's socio-economic landscape. The sustainable development of industrial parks will also significantly contribute to meeting commitments to achieve net zero emissions by 2050.

Investing in the successful development of eco-industrial urban area, it is necessary to consider that industrial urban area can meet high technology, intelligence, ecological environment, no pollution ..., utilities Smart modern service city to meet the set requirements.

1. Overview of investment and development of eco-industrial urban areas

Along with the rapid urban development, in recent years industrial zones have also developed in both quantity and quality. To build industrial urban areas to meet sustainable development, based on the foundation of efficient use of energy, closed loop of materials and urban-industrial symbiosis. In other words, eco-industrial parks are implemented to achieve: eco-industrial parks include industrial functions that are effective in production and create a closed industrial ecosystem, This closed loop, when expanded with the participation of more actors related to the industrial park, will create a circular economy in the activities of the industrial park, allowing the industrial park to operate and develop. towards more sustainable, more ecological. In addition, there are service urban areas with the function of supporting ecological industrial parks, providing convenient and intelligent services for industrial parks: Housing for workers working in the industrial park. industrial parks, cultural works, amusement parks, supermarkets, sports areas ... to ensure the best living conditions for the staff working in this industrial park.

According to Martens, the possibility to develop a sustainable industrial urban area can be distinguished into two groups: The first group, the application of sustainable business processes. The second group, the application of a sustainable design. It can be said that the concepts of eco-industrial urban areas are still different, but in terms of design and relationships within the eco-industrial urban areas are: Using environmentally friendly materials, saving energy, reducing emissions, enhancing cooperation, architectural landscapes and trees, urban houses, smart service areas, entertainment, culture and sports...

Eco-industrial urban areas function as a competitive economy, providing for human needs through market mechanisms; at the same time associating with the local community, in harmony with the regional ecosystems, in accordance with the urban landscape architecture and within the carrying capacity of the earth, ensuring an urban area of services, entertainment and entertainment. harmonious location, suitable to the living conditions of residents working in the industrial park. Thus, the goal of developing eco-industrial urban areas is sustainable in terms of planning, landscape architecture, economy, society and reducing environmental pollution and providing adequate housing, entertainment and services for the residents who work there.

Objectives of developing eco-industrial urban areas:

Firstly, businesses cooperate with each other to meet common needs, including planning suitable ecological industrial urban areas, treating wastewater, solid waste or using electricity; all firms contribute within their industry, each able to provide services to other firms while focusing on specializing in its production.

Second, enterprises take advantage of all possible resources, especially from the emission sources of other enterprises.

Third, the eco-industrial urban model helps to form a synchronous technical and social infrastructure in industrial parks, improve operational efficiency, and link industrial park development with the development of industrial parks. urbanization in the locality.

Fourth, to solve the problem of housing, cultural and sports facilities and other social facilities, ensure the lives of workers in the industrial park, and develop the industrial park in a sustainable way. Contributing to reasonable population distribution in key areas with many industrial parks, developing new urban areas with synchronous technical and social infrastructure.

The development of eco-industrial urban areas is classified into the following three categories: Building environmental space: including industrial park infrastructure elements, design location, construction practice, construction maintenance, multi-purpose housing and utilities, sports and entertainment areas entertainment.

Develop and identify factors related to industrial activities: human health and environmental safety, environmental performance monitoring, innovation, modernization; energy management, environmental management techniques, internal and external activities and integration;

Building and identifying elements of community interaction: public awareness of the relationships inside and outside the industrial urban area; the active and proactive participation of the community in the formation and operation of the industrial park; industrial park contributions to local socio-economic development.

An eco-industrial park is a combination of production and services in which businesses seek and improve environmental and economic performance through cooperation in the management of environmental and financial issues. resources, including energy, water and materials, and reasonably harmonized urban areas. Therefore, the implementation of the eco-industrial urban area will be a transition and pilot process to have a reasonable direction to achieve the goal of sustainable and profitable eco-industrial urban development. specific benefits for businesses as well as employees. Thus, an eco-industrial urban area is an industrial urban area in which enterprises in the industrial park participate in cleaner production activities and effectively use resources, and have linkages and cooperation in production. production to carry out industrial symbiosis activities in order to improve the economic, environmental and social efficiency of enterprises as well as develop harmonious and reasonable service cities for residents to live and work. work there.

2. Developing a number of eco-industrial urban areas in Hanoi in the current period

a) Hanssip eco-industrial urban area, Phu Xuyen, Hanoi

Hanssip is an industrial urban complex developed in the direction of an industrial city and a smart city with full facilities for production needs and daily life. Hanssip connects profitable production and services with people's lives. It has all the conditions for invention - invention - production - trade in services, and is a safe place to live with the quality of life of the industrial revolution 4.0 - of artificial intelligence with development criteria. sustainable development that the United Nations is aiming for for people around the world.

Hanssip is located in Phu Xuyen district - Hanoi city with an area of about 640 hectares. With a very strategic location, located on the highway Phap Van - Cau Gie - Ninh Binh and the old national highway 1A, is the southern gateway of Hanoi capital, where there is a highway connecting Ho Chi Minh road with the highway. Highway 5B to Hai Phong, 120km from Hai Phong port, 60km from Noi Bai International Airport, to Northwest Vietnam and China, South Vietnam and Asian countries by very convenient highways. Hanssip focuses on attracting investment into supporting industries in the fields of: Mechanical engineering, textiles, footwear, electronics - informatics, automobile manufacturing and assembly... and a number of industries. other. Investors operating in this industrial park will receive special incentives and support from all sides throughout the operation process such as financial arrangement, labor recruitment and training, cooperation. exchange technology, orientation and link output products for businesses.

Hanssip sẽ được quy hoạch kết hợp gắn liền khu đô thị dịch vụ phức hợp đảm bảo cho chuyên gia, công nhân và gia đình họ nơi ăn, ở, sinh hoạt được gắn

kết dài lâu cùng sự phát triển của các doanh nghiệp. Hanssip sẽ là tổ hợp phức hợp công nghiệp, đô thị - dịch vụ, logistic, trung tâm thương mại, ngân hàng, y tế, trường học ... và là động lực mũi nhọn để xây dựng đô thị vệ tinh Phú Xuyên - Phú Minh theo quy hoạch Thủ đô Hà Nội tầm nhìn đến năm 2030.

b) Hoa Lac Hi-tech Park, Thach That, Hanoi

Hoa Lac Hi-tech Park was built on a large scale. Based on the model of an eco-industrial urban area, this is one of the five satellite towns of the capital. The total area of the eco-industrial urban area is up to 17,247 hectares. This project focuses on the field of science and technology, training high-quality human resources and ecological urban areas. This high-tech park is divided into the following 4 subdivisions: High-tech industrial zone, medical subdivision, National University subdivision, housing subdivision.

Hoa Lac Technological Park with the aspiration to become a model of the revenue economy small in Vietnam in the future. A smart eco-science and technology city. Attract domestic and foreign experts to research and develop. As a place to attract and create conditions for the sustainable development of investors in research, development and training. Focusing in 04 fields: Biotechnology, Information Technology, New Materials Technology and Automation Technology.

An ideal environment to attract high-quality human resources. Local and international experts can come live. To be the focal point to connect and promote cooperation between training, research and production to create Vietnamese-branded products and also a place to connect and trade between Vietnam and the region and the world.

The structure of a high-tech park in general like Hoa Lac is planned according to each subdivision, which includes:

Software Zone, area 55.93 ha, located in the peninsula. Surrounded by Tan Xa Lake. Arrange enterprises operating in the field of software production and business, providing production and business services related to information technology.

The Research and Development Park (R&D), with an area of 263.15 hectares, is located above the high-tech industrial park and surrounds the Software Park. This is where high-tech research and development and application facilities are concentrated. Train and attract experts in high-tech industries and highly qualified people for research and application work. The R&D zone will be a bridge between research and practice, a place to incubate inventions.

The Education and Training Zone, with an area of 123.53 ha, located in the North of the IZ, next to National Highway 21, is the place where universities, training and vocational training institutions are concentrated, and a place to provide professional and highly skilled workforce.

The Hi-tech Industrial Park, with an area of 391.01 ha, is located in the south of Hoa Lac Hi-Tech Park, where is the concentration of high-tech product factories and bonded warehouses.

The Central Area, with an area of 43.14 hectares, is the place where public works and services are concentrated: administrative buildings, office buildings combined with houses, conference centers, information centers, product exhibition center, museum, post office, hotel, restaurant, bank, park, square...

Mixed Zone, area 80.12 ha. This is a multi-functional service area, providing full social infrastructure: high-quality housing, civil services, commercial business, commercial center, restaurant, hotel, healthcare, model teachers, primary schools, junior high schools, high schools ... fully serve the needs and utilities of people working and living inside and outside Hoa Lac hi-tech park.

Residential Area, with an area of 75.50 ha. Functions as a green urban area close to nature. Suitable for the terrain, the natural landscape of the area, friendly with the environment. At the same time, serving the living and working needs of experts, workers, working, researching and studying in Hoa Lac hi-tech park, including high-class housing areas (villas, adjacent houses and apartments). high-class apartments), housing for workers, etc. and utility service facilities.

Recreation and sports area, with an area of 32.92 hectares. This is where the concentration of sports centers, cinemas, restaurants and amusement centers - entertainment, parks. All of them create a green environment in the area with the purpose to serve the community and have a high social value. Meeting the entertainment and sports training needs of people working in Hoa Lac hi-tech park and surrounding areas.

Tan Xa Lake and its buffer zone has an area of 150.77 ha, is a special ecological and landscape area of Hoa Lac Hi-tech Park, which is preserved and respects the inherent natural elements, with the function of Condition Lake. , spatial landscape serving scientific research of Hoa Lac high-tech park.

Traffic and technical infrastructure focal works have an area of 220.55 ha, including roads and technical infrastructure along the road in Hoa Lac Hi-tech Park. Besides, there are key technical infrastructure works such as: Operator, water supply station, wastewater treatment, backup tank for wastewater incidents, power station, backup solid waste transfer yard...

Trees cover an area of 149.37 hectares, including landscaped green strips along roadsides. The same system of trees and water surface of streams and areas in the Hi-Tech Park.

Hoa Lac Hi-Tech Park has a strategic location: The advantage of location is one of the things that can be mentioned of Hoa Lac. This place is located in the west, about 30 km from the center of Hanoi. This place is adjacent to key projects in the North. These can be mentioned as Hanoi National University, Ethnic Culture and Tourism Village of Vietnam. In terms of traffic, there is now bus route number 107 (departing from Kim Ma bus station). And bus route 74 (from My Dinh bus station to Hoa Lac Hi-tech Park. In the near future, the urban railway system No. 5 will be designed and built to help better connect the center between the center and the center. Hanoi and Hoa Lac Hi-Tech Park.

To help investors have the best conditions and incentives. With one-stop service, Hoa Lac Hi-Tech Park acts as a bridge between customers and agencies. At the same time, the government organization also helps investors avoid troublesome paperwork. Currently, Hoa Lac Hi-Tech Park has the presence of a Customs office. This part helps businesses in the Zone solve difficulties and save time in the stages of customs declaration, inspection, etc. Implementing the "one-stop, on-site" model, the Management Board has made it simple. administrative procedures. In addition, the Management Board has also developed and issued a set of administrative procedures to handle investment procedures according to the quality management system according to ISO 9001:2008.

The infrastructure has met the needs of the users here. Specifically, including: Roads, about 17.2 km of roads in the North and 2.58 km of roads in the South of Thang Long Boulevard have been built. Temporary well water source (capacity 3,000 m3/day) is provided by Viwaseen 6 Company. Completed a wastewater treatment plant with a capacity of 6,000m3/day and about 70% of the collection network volume. Currently using 2 power sources 22KV and 35KV. Regarding telecommunications, I am using telecommunications services of 3 providers: VNPT, Viettel and FPT.

Human resources, higher education, currently in Hoa Lac Hi-tech Park, there is FPT University. This is a training unit in the field of information technology with more than 4000 students currently studying. This place creates favorable conditions for students to find information technology jobs. There are also some of the following universities: Hanoi University of Science and Technology. This is a university invested by ODA capital of the Asian Development Bank - ADB and the French Government). Japan - Vietnam University. This unit is also in the process of carrying out investment and construction procedures at the Technology Park.

Located opposite Hoa Lac Hi-Tech Park is Hanoi National University. This is the largest university in the country. Consisting of 13 different affiliated universities with a total area of 1113ha. Expected upon completion of this new facility, until completion. Hanoi National University will welcome hundreds of thousands of students to study here.

3. Some solutions to improve the investment and development of eco-industrial urban areas in Hanoi

Firstly, the approved master plan and construction planning of industrial urban areas must ensure the synchronization of infrastructure inside and outside the industrial park, review existing traditional industrial parks for conversion. model of eco-industrial urban area in the coming time in order to meet the requirements of production, reduce environmental pollution, solve housing, service and entertainment problems of living residents and work in the industry. Closely combining the planning of industrial parks with urban areas, residential areas and accompanying services is a factor to ensure the rapid and sustainable development of the ecological industrial urban area.

Second, promulgate the Strategy for the development of eco-industrial urban areas of Hanoi city to 2030, with a vision to 2050. Provide orientations and solutions in the medium and long term in the development of public urban areas. eco-industry in Hanoi, in line with the socio-economic development strategy to 2030, with a vision to 2050. Hanoi city synchronously deploys the construction and improvement of the legal and investment system. to build and support investment in building new ecological industrial urban areas, converting existing industrial parks into ecological industrial urban areas.

4. Conclude

With specific targets set out: Industrial zone planning must be associated with residential area development; infrastructure must be built synchronously and modernly to meet the urbanization process; synchronous utility system to meet the specific needs of high-quality labor resources such as foreign experts, senior managers, technical experts, etc., it is certain that in the near future Hanoi will build new zones new eco-industrial urban area, converting existing industrial parks into eco-industrial urban areas to meet the requirements of production, housing, sports services and entertainment areas for residents. and work in urban areas as well as contribute to reducing the environment of the Capital.

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