



Nam Cau Kien Industrial Park: Development orientation towards the circular economy model

Industry is one of the important sectors of the economy with growing demand. In Vietnam, the Industrial Park (IP) Management Board has regulations on increasingly high environmental protection standards. Therefore, businesses have been innovating technology to minimize environmental pollution and increase production value towards sustainable development. On the occasion of Vietnamese Entrepreneurs' Day (13th October 2023), Environment Magazine had an interview with Dr. Phạm Hồng Điệp - Chairman of Shinec Joint Stock Company (Investor of Nam Cau Kien IP) about extended producer responsibility (EPR), implementation of circular economy and roadmap to reduce greenhouse gas emissions, helping businesses develop sustainably and create a more customer-friendly image.



▲ Dr. Phạm Hồng Điệp - Chairman of Shinec Joint Stock Company (Investor of Nam Cau Kien IP)

***The Law on Environmental Protection (LEP) 2020 and the Decree guiding its implementation stipulate the waste recycling responsibility of producing and importing organizations and individuals. As a business investing in IPs, how do you evaluate the role and responsibility of businesses in implementing EPR regulations?**

Dr. Phạm Hồng Điệp: EPR is defined as an “approach to environmental protection policy whereby the producer responsibility for a product extends to the disposal stage of the product’s life cycle” (guidelines for implementing the United Nations Basel Convention 2019). In the EPR mechanism, for product packaging, the responsibility of relevant businesses is not only limited to ensuring health and safety after the product is sold, but also needs to ensure product packaging reused or recycled, that does not pollute the air, soil, rivers and oceans.

By exercising corporate responsibility, post-production packaging increases recovery and recycling rates, contributing to reducing the amount of non-recyclable packaging released into the environment, while increasing the attraction of waste recycling and treatment businesses in Vietnam.

In 2020, the LEP No. 72/2020/QH14 was approved by the National Assembly on 17th November 2020 (effective from 1st January 2022), which stipulates in more detail, and synchronizes the system to promote EPR in Viet Nam. Article 54: Responsibility for waste recycling of producing and importing organizations and individuals; Article 55: Responsibility for waste collecting and treating of producing and importing organizations and individuals; Article 54: Responsibility for waste recycling of producing and importing organizations and individuals: Organizations and individuals producing and importing products and packaging with recycling value must carry out recycling according to mandatory recycling ratio and specifications, except for products and packaging that are exported, or temporarily imported, re-exported, or produced, imported for research, study, or testing purposes; Article 55: Responsibility for waste collecting and treating of producing and importing organizations and individuals: Organizations and individuals producing, importing products, packaging containing toxic substances that are difficult to recycle or that cause difficulties in collection and treatment must make financial contributions to support activities specified in Clause 3 of this Article, except for products exported or temporarily imported for re-export or produced, imported for research, study or testing purposes.



At Nam Cau Kien IP, there are industrial sectors related to waste recycling and treatment. Businesses demonstrate their responsibility through the formation of industrial symbiotic chains. Businesses are responsible for collecting and transferring waste to waste treatment facilities right in the IP, not only demonstrating their responsibility to handle the post-production phase of the product, but also contributing to minimizing pollution thanks to the cycle within the IP, reducing logistics costs, and treated waste is collected more quickly.

The responsibility of business is carried out within the business, recycling, extending the product life cycle or cooperating with the outside through capable businesses to form symbiotic chains inside and outside the IP. The role of circular economy in businesses in EPR is essential, jointly implementing responsibility with product manufacturing businesses.

IP investor plays an important role in indirectly forming awareness and implementing actions to fulfil the responsibility of each business. Through a community of sharing and cooperation between businesses, symbiotic chains are gradually formed. One business's waste will become another business's raw material, creating more useful and environmentally friendly products, bringing higher value compared to disposal or treatment at a longer range without industrial symbiosis in the IP.

****With the goal of regenerating energy, saving resources, and implementing circular economy, how has the Company currently implemented these activities?***

Dr. Phạm Hồng Điệp: At Nam Cau Kien IP, we build and develop with the orientation of an ecological IP following a circular economy model. Up to now, Nam Cau Kien IP has fully met the criteria of ecological IPs and circular economy with the formation of industrial symbiotic chains, industrial symbiosis between businesses and the IP, and investment in service infrastructure, meeting prescribed criteria.

One of the lines of industrial symbiosis that is formed and developed is renewable energy, optimally exploiting clean, green energy sources and recirculating wastewater treatment to help save natural resources. With the solar power system, we have piloted installation at the Company Office since 2020. Up to now, the results have not only reduced electricity consumption but

also reduced costs by 90%; it also contributes to reducing electricity used from fossil fuels, thereby indirectly cutting the amount of CO₂ generated in the IP.

Our goal is to be carbon neutral by 2030. One of the proposed plans is to green rooftop solar power over the entire factory roof area across the IP with an expected capacity of up to 40 MW. This is a big goal in implementing the commitment on life and CO₂ emissions of the IP, contributing to Việt Nam's commitment to net zero emissions. However, currently we are stuck with a number of policies related to supporting businesses in project implementation as well as regulations and procedures related to standards for applying regulations on fire prevention, fire fighting, related costs, investment subjects, ownership, grid connection, battery storage... Although the National Power Development Plan VIII was launched to encourage renewable energy projects, actual implementation is still very difficult.

Regarding the water resources saving project, with the characteristics of IPs having businesses that use a large amount of water in a day, recently we have taken advantage of that water source to water plants and wash roads. However, to be more effective in extending the life cycle of that water source as well as meeting the needs of businesses, it is necessary to add clean water sources for production while still meeting regulatory standards and at a more reasonable cost. We have researched and implemented a wastewater recirculation project with the goal of supplying clean water for production to investors.

By reusing and circulating over 70% of the water generated, we can satisfy the needs of very large consuming businesses, reduce water costs for those businesses by up to 15% and still ensure product quality as well as production line. However, we are also facing issues related to state regulations on the water recirculation sector, applicable standards, and related tax policy regulations. Although businesses are very supportive and confident in encouraging the IP to develop water circulation for production. However, to bring multifaceted benefits to all parties, the State needs to have clear regulations on circulating water quality so that businesses can "remove" the fear of using circulating water sources without specific instructions as currently.

**** It is known that according to the roadmap, the domestic carbon credit exchange will operate on a pilot basis from 2025 and officially operate in 2028. This is in accordance with the general emission reduction roadmap and regulations that businesses are required to develop emission reduction plans from 2026 onwards. So how is Shinec Joint Stock Company prepared, especially issues related to greenhouse gas inventory, calculation of emission reduction and energy savings...?***

Dr. Phạm Hồng Điệp: For Shinec Company, there are no production activities that emit greenhouse gases in terms of industrial production. Currently, it is not yet time to deploy it into transactions, so preparing the



readiness of businesses is extremely important. We deploy a series of activities such as research, training, and communication, cooperation with units in assessing the emission levels of businesses, participating in consulting activities to support technology from domestic and international partners on CO₂ reduction.

Therefore, with the goal of carbon neutrality, cooperation with businesses as well as proactive investment in infrastructure is essential. The carbon credit exchange is still new to businesses. Raising awareness and understanding is important, in addition, the IP and businesses have proactively researched to reassess the businesses' carbon emission sources in every stage of production and disposal. With guidance from State agencies and partners, we are conducting an assessment and building a roadmap to improve the system and buy and sell credits based on allowed quota.

For IPs, investment in infrastructure is emphasized such as building ecological works by increasing the proportion of multi-layered trees, restoring biodiversity, and cooperating in investing in carbon emission reduction works like solar energy. Connect the business community to contribute to common works or proactively invest in own businesses. Thanks to that, the proportion of ecological and environmentally friendly works increase.

*** To deploy technologically innovative businesses that meet "green" standards, what suggestions and recommendations do you have for the authorities?**

Dr. Phạm Hồng Điệp: The digital technology age is extremely important, especially green digital technology to reach quickly and on a wide scale is extremely essential in the rapid and sustainable development of ecological IPs and circular economy, and combating climate change.

Therefore, state management agencies need to quickly promulgate regulations and policies related to green sector development such as the development of circular economy ecological industry. Based on that, businesses have the basis to build sets of ecological standards applicable to businesses, through more effective synchronization of technology applications. In addition, there is also a need for financial credit packages to support small and medium-sized enterprises in accessing digital technology.

To successfully deploy digital technology, first of all, the business itself needs to be structurally re-modelled in a unified way in terms of processes, methods, and scope of implementing sustainable development in applying an advanced technology to become a tool to support each business's implementation. It is necessary to clearly see the benefits from seamless, interconnected information, anytime, anywhere, and to evaluate the effectiveness of the implementation not only of the business itself but also the management and governance of the entire IP to have a clear view, consulting to support the business community for sustainable development.

*** Thank you very much!**

NAM HUNG

The voluntary carbon market (VCM) - a tool help mobilize public sector finance towards nature - based solutions (NbS)

Scientists said if global average temperatures surpass pre - industrial levels by more than 1.5°C, it would lead to far more serious impacts on people, wildlife and ecosystems. However, avoiding this scenario is not achievable without sustained and rapid industrial decarbonization. So, we need NbS, which can provide up to 30% of the mitigation required by 2030 in order to keep the 1.5°C target in reach.

The powerful tool at our disposal can mobilize private sector finance and channel it toward NbS in the Global South, where it is most needed, which is the VCM, where companies or individuals can buy carbon credits as part of their own plan to meet their climate goals. The VCM can help mobilize public sector finance towards NbS, particularly in the Global South where it is most urgently needed. When we outlined five reasons why forest carbon credits are critical to climate action, we found that the fact is that we won't achieve our global climate targets without nature, and we won't protect and restore nature at the scale required without carbon markets.

The VCM is currently the most effective way for them to address these emissions by mobilizing billions of dollars in private sector finance every year and also helps make up the US\$ 4.1 trillion financing gap in nature by 2050. Such finance is additional to that pledged by governments. The value of the global VCM topped US\$ 1 billion for the first time in 2021 and could be worth between US\$ 5 - 30 billion per year by 2030, with perhaps two thirds of this channelled into NbS, filling existing gaps in climate finance for nature. However, in the last three years, only 1.2% of the annual cost effective potential of NbS has been unlocked by the VCM.