

Miryang National Nano-Convergence Industrial Complex, Designated as a Smart Green Industrial Complex

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- *Saemangeum, designated as the 3rd smart green industrial complex following the designation of Yulha, Daegu*
- *Future type industrial complex pursuing low-carbon and environment-friendly energy, smart infrastructure and eco-friendliness*
- *Discovery of diversified linked projects and promotion plan through private-government-public collaboration*

Ministry of Land, Infrastructure, and Transport (MOLIT, Minister WON Hee-ryong) disclosed that Miryang National Nano-Convergence Industrial Complex was designated as smart green industrial complex*.

* As a future-type industrial complex pursuing digitalization, energy independency and environment-friendliness of resident companies, infrastructure, and residential, support and public facilities, etc., it needs to reduce CO₂ emission by more than 25%.

<Overview of Miryang Nano-Convergence Smart Green National Industrial Complex>

Location	Bird's-eye-view
	
<ul style="list-style-type: none"> ▪(Location) General region of Gamcheon-ri, etc. of Bubuk-myeon, Miryang-si ▪(Developer) Korea Land & Housing Corporation(LH) 	<ul style="list-style-type: none"> ▪(Project period) 2017 ~ 2024 ▪(Project area) 1,655,566m²

Miryang National Nano-Convergence Industrial Complex, after having been designated as an industrial complex in May 2017, is currently undergoing establishment construction works (70% completed) and sales of the lot, etc. Korea Land & Housing Corporation, the project developer, established basic plan (proposal) for the smart green industrial complex to request designation of smart green industrial complex in December last year.

Accordingly, the MOLIT finally designated ‘Miryang Nano-Convergence as a smart green industrial complex’ after having undergone discussions with relevant institutions (February), and deliberation and resolution by the Industrial Location Policy Deliberation Committee (March).

This designation of Miryang Nano-Convergence as a smart green industrial complex is the 3rd case of designation following the designations of Saemangeum National Industrial Complex and Daegu Yulha Advanced Urban Industrial Complex last year, and signifies that smart green industrial complex is gradually being proliferated.

Need for improvement of core space for national economic growth and issues problems such as high energy consumption and environment*, etc. has been presented for traditional industrial complexes.

* Industrial complex (%): (Area of national land) 1.4, (greenhouse gas emission) 45.1, (fine dust) 38 and (wastes) 19.0

The MOLIT has been establishing smart green industrial complex by building up smart infrastructures including new & renewable energy, transportation and distribution, etc. from the stage of newly establishing industrial complexes since '21 to solve such problems.


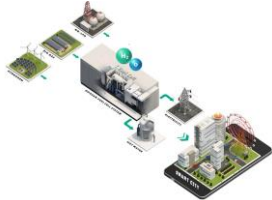


The Korea Land & Housing Corporation is establishing the basic smart green industrial complex plan based on 3 core strategies of energy independency, digitalization and environment-friendliness, and key plans of Miryang Nano-Convergence Smart Green Industrial Complex are as follows.

First, as the strategy for energy independency, new and renewable energy generation including solar power generation facility (20MW) installed on the roof of community facilities and hydrogen fuel cell power plant (15MW), etc. is planned to reduce carbon dioxide (CO₂) emission by more than 25%.

Moreover, energy storage system (ESS) for stable power operation and management, and digital energy management platform for prediction and real-time analysis of total energy consumption within the industrial complex will be installed.

In particular, Miryang City entered into tripartite business agreement to pursue project for establishment of hydrogen fuel cell power plant and installation of energy storage system among public energy institution (KEPCO and Korea East West Power), project developer (LH) and local autonomous government (Gyeongnam-do and Miryang-si) (September '21).





In addition, carbon emission will be reduced by recycling waste heat generated from hydrogen fuel cell, ESS and industrial processes as source of energy by establishing circulation system for utilization of waste heat.

Roof-type solar power generation	Fuel-cell power plant	Energy storage system (ESS)	Digital energy management platform
			

Second, as the strategy for digitalization, efficiency and safety of transportation will be enhanced through establishment of smart transportation safety infrastructure* including personal motility, and combined hydrogen and electrics charging stations, etc.

* Smart pedestrian cross, smart pole, smart media board and safety surveillance of public zones (smart CCTV), etc.

Establish Digital Twin Center that utilizes cutting-edge ICT and Integrated Safety System that detects and responds to risk situations through real-time collection and monitoring of various information within the industrial complex.



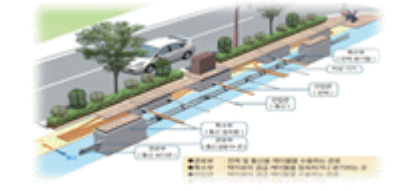
Smart life environment	Personal mobility	Digital Twin Center	Integrated safety system
			

Third, as the strategy for environment-friendly, establish pleasant production activity space including harmony with surrounding environment and improvement of environment within the industrial complex, and space aimed at promoting cultivation of sentiments of the workers.

Fine dust barrier forest for reduction and prevention of influx of fine dust into the industrial complex will be established and project for undergrounding of transmission lines* to improve outer appearances of and prevention of natural disasters in the complex will be pursued.

* Underground installation of cables that supply electric power and telecommunication, etc.

In addition, low-impact development (LID) technique for utilization of facility to use rainwater, greenification of buildings and installation of water permeable paving to predict and reduce impact on natural ecology will be introduced.

Fine dust barrier forest	Low-impact development	Undergrounding of transmission lines
		

Reduce CO₂ emission by about 26% and accomplish energy independency rate of 14% through the plan to establish Miryang Nano-Convergence Smart Green Industrial Complex.

* CO₂ emission: 393,743 TCO₂/year, Reduction: 102,794 TCO₂/year ⇒ Emission reduction rate: Approximately 26.1%
Energy generation: 27,777 TOE/year, Consumption: 191,563 TOE/year ⇒ Energy independency rate: Approximately 14.5%

New and renewable energy generation business operators will be secured, environment-friendly project will be supported with the budget of Miryang City and digital project budget will be procured through securing of relevant public competition projects by the central department to establish the Miryang National Nano-Convergence Industrial Complex as a smart green industrial complex.

KIM Jeong-hee, Director General for Territorial Policy of MOLIT, stated that, “We will be responding to global environmental regulations, which will be increasingly more reinforced in the future, through establishment of smart green industrial complex, which will support productivity of companies including pleasant rest areas.”

Adding, “We will put our utmost efforts for successful settlement and proliferation of smart green industrial complex in the future, and we look forward to the establishment of industrial complex as a venue that leads carbon neutrality and innovative growth.”



Ref.

Overview of Miryang Nano-Convergence Smart Green Industrial Complex Project

1. Overview

A. Name: Miryang Nano-Convergence Smart Green Industrial Complex

B. Location: General regions of Naei-dong, and Gamcheon-ri and Unjeon-ri of Bubuk-myeon, Miryang-si, Gyeongnam

C. Land area: 1,655,566m²

D. Project period: July 2017 ~ October 2024

*Complex will be established by '24 while recyclable energy generation estate and operational system will be established by '30

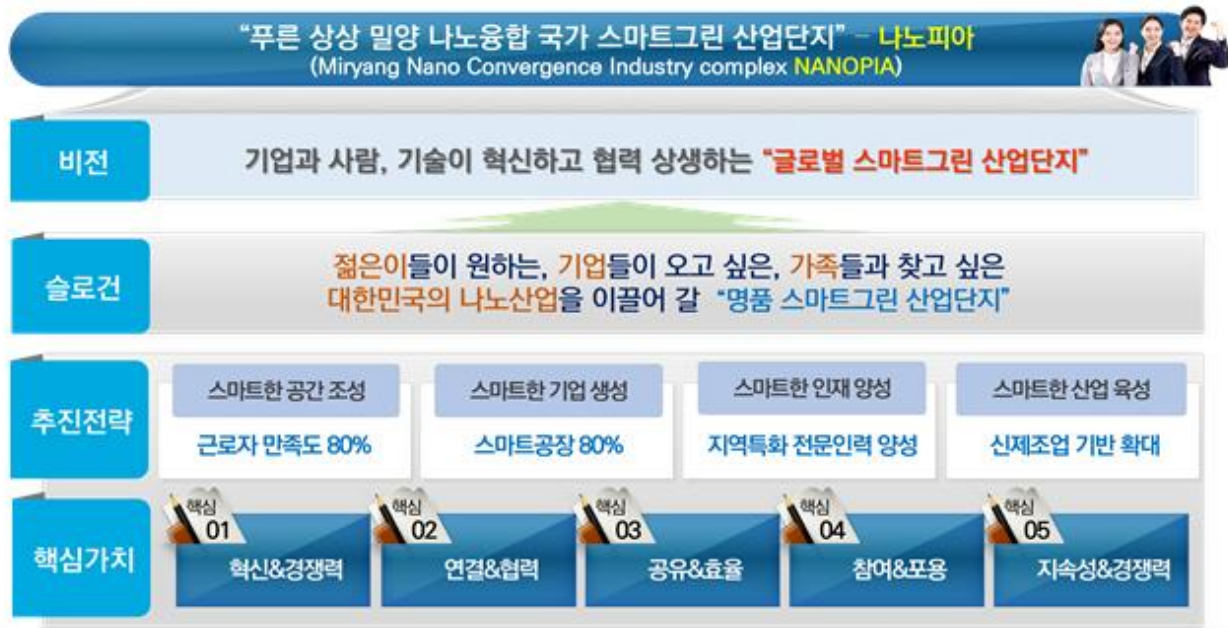
E. Purposes of the project

○ Establish smart green industrial complex based on low-carbon and environment-friendly energy, and data-based highly efficient energy management strategy

○ Lead development of specialized industrial technologies in preparation for the 4th industrial revolution and creation of new future industrial through activation of materials, components and equipment industries

F. Project developer: Korea Land & Housing Corporation

2. Goal and strategies to be pursued



3. Key contents of the basic plan for smart green industrial complex (proposal)

- (Energy independency) Plan to reduce carbon emission by 26.1% through new and renewable energy*, etc.

* (New & renewable) Solar power (5,833toe/year), fuel cell (2,1870toe/ year), geothermal (74toe/year), etc.

- (Digitalization) Establish smart distribution center, smart life environment* and energy management platform

* Smart pedestrian cross, safety surveillance of public zones (smart CCTV), public Wi-Fi and smart pole, etc.

- (Environment-friendly) Introduce fine dust barrier forest*, hydrogen and electric charging stations, and introduction of low-impact development techniques

* Establish forest to reduce fine dust and green space for workers (A=15,572m², 1.51km, 8,527 trees)

- (Human new deal) Establish supportive residence linked with workplace (300 units), center for enjoyment of happiness for youth (startup support center, shared office and humanities cafe, etc.) and youth SOC (library and gym)

