Company profile 2025

Responsible chemical & energy leader

Hanwha TotalEnergies

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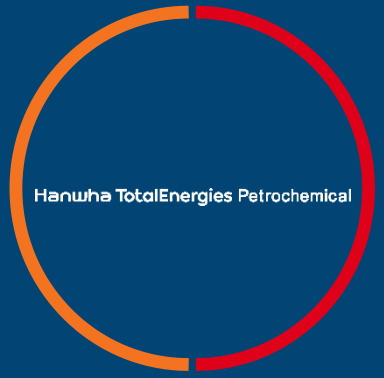
Chemical & Energy Leader
Hanwha TotalEnergies Petrochemical

Hanwha TotalEnergies Petrochemical, established in 1988, has been driving the development of South Korea's petrochemical industry through the production of high value-added chemical and energy products. Relaunched as a joint venture with TotalEnergies, **Hanwha TotalEnergies Petrochemical** is advancing as a global multi-material and energy company under the vision of a "Responsible Chemical & Energy Leader," continuously pursuing technological and product innovation as well as strategic facility investments.

Equity Ownership

50%
Hanwha Impact



50%
TotalEnergies
Holdings UK Limited

Information

Company Establishment : May, 1988
Business Areas : Base Chemical· Polymer· Energy Products
Plant Location : Daesan-eup, Seosan-si, Chungcheongnam-do
Chief Executive Officers : Sangseob Na· Thierry Boulfroy

Aromatic plant No.2

Hanwha

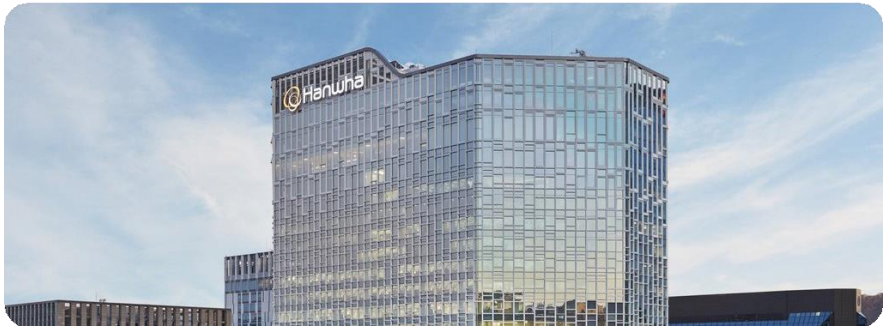
Sustainable Solutions for Tomorrow, Hanwha

Founded in 1952, Hanwha has grown into South Korea's seventh-largest business group with a balanced portfolio spanning aerospace·defense, energy·materials, finance, and retail·services. Ranked one of the 〈Fortune Global 500〉, the company operates as a multinational enterprise with a strong global network, enabling it to deliver competitive solutions and innovations that drive sustainable growth across industries and communities. Hanwha will continue to advance innovation to enrich human life and address the fundamental challenges facing humanity.

Year of Establishment	Annual Sales(2024)	Ranking in Korea (2024 consolidated assets)	Global Network
1952	87.4trillion(₩)	7th	821

Business Field

Aerospace·Mechatronics | Energy·Ocean | Finance | Retail·Service



TotalEnergies

Major Global Energy and Chemical Company, TotalEnergies

What began in 1924 as a French state-run oil refinery has evolved into one of the world's major energy and chemical companies, following successive mergers with Belgium's Petrofina SA in 1999 and France's Elf Aquitaine in 2000. Committed to providing customers with stable, clean, and competitive products, the company now engages in oil and renewable energy development while operating as a total energy service provider in more than 120 regions around the world.

Year of Establishment	Annual Sales(2024)	Number of Employees	Global Network
1924	195.6billion($)	102,887	120

Business Field

Oil exploration·production | Renewable energy·Electricity | Trading·Shipping | Refining·Petrochemicals

Key Highlight 2024

Year of Establishment
1988

Total Production Capacity
10.55million tons
Initial production capacity in 1991 ‣ 0.67 million tons

Total Area
3.3million m²

Plants
20

Total Assets
7.5trillion(₩)

Sales
11.8trillion(₩)

Number of Employees
1,884

Sales(Unit: KRW in trillions)

Total Assets(Unit: KRW in 100 miilions)

UTILITY

- Electricity — Avereage usage 370 MWh
- Steam — Avereage usage 343 Ton/hour
- Water — Avereage usage 72,900 Ton/day

- 2 piers
- 7 berths
- 8 automatic storage warehouses

History of Growth

1988-1989

- 1988.05 Founded the company
- 1989.11 Began construction of Daesan plant, Launched comprehensive research institute

1990-2002

- 1991.09 Built Daesan plant
- 1992.11 Awarded industry's first One Million Dollar Export Tower from South Korean government
- 1993.06 Built composite Polymer pilot plant
- 1994.10 Built LLDPE plant and pilot plant for catalyst manufacturing
- 1996.07 Built SM plant No.2(300,000 tons)
- 1997.07 Introduced TPM(Total Productive Maintenance), the company-wide production innovation movement
- 1997.10 Built aromatics plant No.1 (PX 400,000 tons), PTA plant, utility (Launching ceremony for complex 2)
- 2001.10 Moved Daeduck R&D center to Daesan plant to combine R&D organization

2003-2009

- 2003.05 Reached joint venture agreement with Total Group of France
- 2003.08 Launch of the Joint Venter
- 2005.06 Expanded aromatics (BTX/PX)(200,000 tons)
- 2006.04 Built H2 purification plant (PSA Unit)
- 2007.10 Expanded NCC(200 thousand tons), SM(550,000 tons), PP(250,000 tons) plant
- 2008.07 Built OCU (Olefins Conversion Unit) plant
- 2009.04 Established sales corporate in Shanghai, China

2010-2014

- 2010.04 Registered gas import business
- 2010.05 Built LPG storage tank(40,000 tons)
- 2010.09 Registered petroleum refining business
- 2010.11 Built facilities for production of petroleum including jet oil and gasoline, and for LPG shipping
- 2011.05 Secured production system to produce 1 million tons NCC ethylene annually, Built PP3 plant(80,000 tons)
- 2011.06 Expanded LDPE plant(50,000 tons)
- 2011.11 Built main building of R&D center
- 2012.01 Merged Seohae Power-Water
- 2012.07 Shipped the first gasoline for thrifty gas stations
- 2014.11 Built and expanded CFU plant (150,000 barrel/day), Aromatics plant No.2(PX 1 million tons), EVA (240,000 tons) and utilities

2015-Today

- 2015.04 Launched Hanwha Total Petrochemical (Transferred to Hanwha Group)
- 2016.05 Expanded aromatics No.1(20,000 tons)
- 2016.07 Built LPG storage tank(40,000 tons)
- 2016.10 Expanded EVA plant(30,000 tons)
- 2016.12 Awarded the Five Billion Dollar Export Tower
- 2017.02 Acquired ISRS(International Safety Rating System) Level 8
- 2017.06 Expanded CFU plant (40,000 barrel/day), Aromatics No.2(200,000 tons)
- 2018.05 Started commercial production of high purity normal heptane
- 2019.09 Expanded NCC side cracker (310,000 tons of ethylene, 130,000 tons of propylene)
- 2020.04 Built ADLPE plant for increase PE production(410,000 tons)
- 2021.03 Built PP4 plant(40,000 tons)
- 2022.04 Changed the company name to **Hanwha TotalEnergies** Petrochemical

Plant Overview

Hanwha TotalEnergies Petrochemical is South Korea's first petrochemical company to operate: an NCC(naphtha cracking center), a core facility of a petrochemical plant; a CFU(condensate fractionation unit), a petroleum refinery facility; and a BTX production facility (aromatic plant). Through vertical integration from raw materials to final production, we have achieved high production efficiency.

Key plants in the complex

Operated since 1991

1. NCC
2. C4/BTX/OCU
3. SM #1/#2
4. EO/EG
5. HD/PP/PP3
6. LD/LLD

Operated since 1997

7. ARO#1
8. PTA(Hanwha Impact)

Operated since 2014

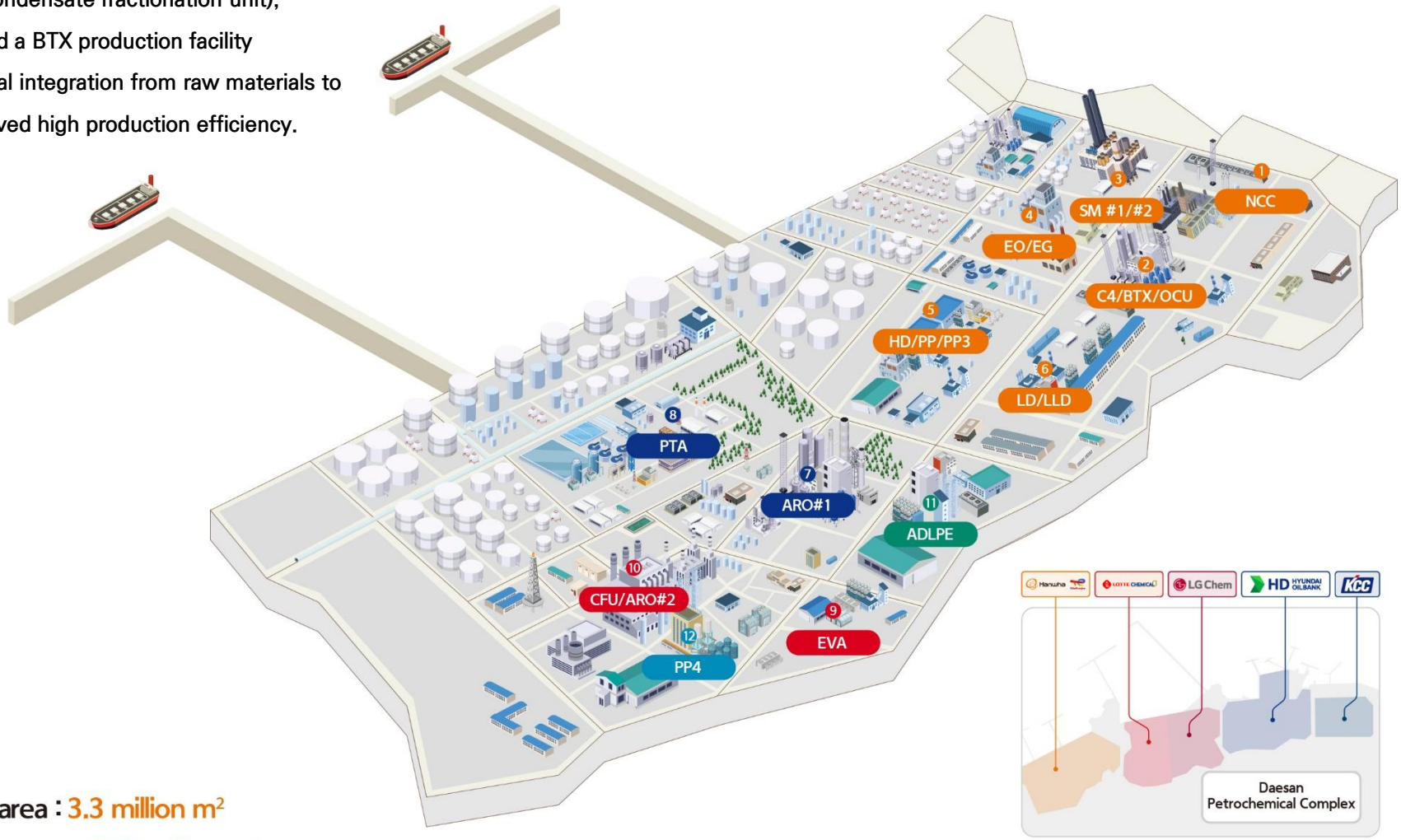
9. EVA
10. CFU/ARO#2

Operated since 2020

11. ADLPE

Operated since 2021

12. PP4



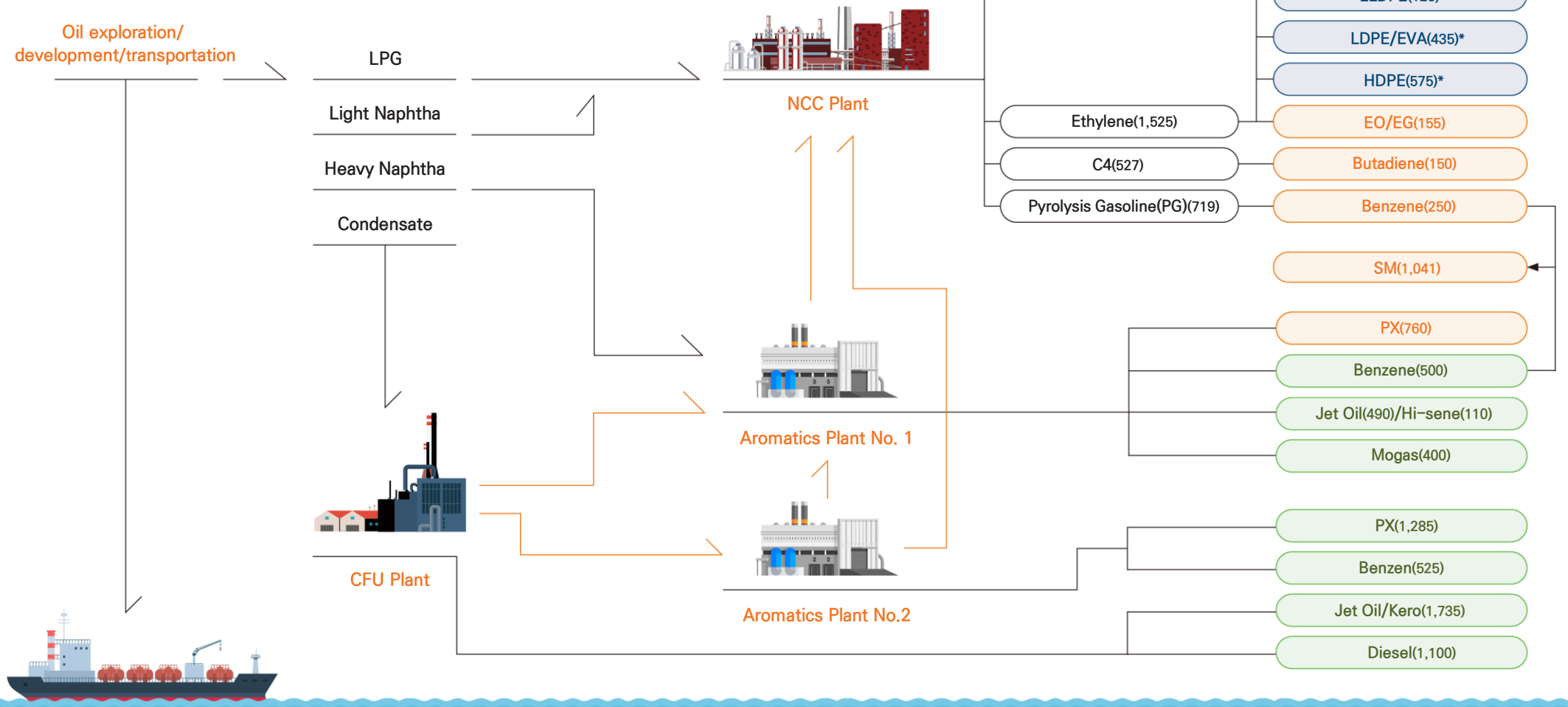
Total area : 3.3 million m²

Factory site : 2.71 million m²

Production Flow Chart

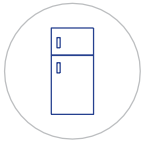
At **Hanwha TotalEnergies** Petrochemical, we operate an optimized production process by systematically integrating raw materials, energy, logistics, and equipment based on our core facilities. In addition to an efficient production process, we have secured a stable foundation for growth through a robust product portfolio, which includes polymers, base chemicals, and energy.

(Unit : 1,000 tons, 8,500 h/yr)
(*LLD, LD, HD, PP : 8,000 h/yr)



Business Area | Polymer

Utilizing Ethylene and Propylene, **Hanwha TotalEnergies Petrochemical** is leading the market for high-value-added plastic products.
From household appliances to protective films, we produce a wide range of resin products with diverse properties that are used throughout everyday life.

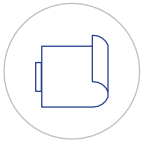


HDPE
High Density Polyethylene

Raw material for various containers and plastic boxes with excellent impact and cold resistance

LDPE
Low Density Polyethylene

Used for packaging transparent film, cable coating and disposable products with excellent processability, flexibility and transparency



LLDPE
Linear Low Density Polyethylene

Similar to LDPE but more specialized in manufacturing film with good intensity

PP
Polypropylene

With lightest density, high mechanical strength, heat resistance and transparency, used for home appliances such as irons, coffee pots as well as textile material

EVA
Ethylene Vinyl Acetate

Featuring increased density and flexibility depending on the content of vinyl acetate, used for various applications from foam molding products as sneaker outsoles to film adhesives

Business Area | Base Chemical

Hanwha TotalEnergies Petrochemical provides customers with various base chemicals of the petrochemical industry.
In particular, PX and SM have secured the largest production capacities in South Korea, achieving unparalleled scale-based competitiveness.

Business Area — polymer | Base chemical | Energy

SM
Styrene Monomer

Raw material for PS and ABS
For home appliances, also
used in synthetic rubber production
through polymerization with butadiene

EO/EG
Ethylene Oxide, Ethylene Glycol

EO, with sterilizing and insecticidal
properties, used as a gaseous disinfectant
and a raw material for synthetic detergents.
EG, produced by reacting EO with water,
used as for antifreeze or polyester products

BD
Butadiene

Raw material for
synthetic rubber
such as SBR and BR

PX
Para-Xylene

Raw material for high-purity
terephthalic acid (PTA),
an intermediate for synthetic fibers
and PET bottles

BZ
Benzene

Raw material for
styrene monomer(SM)

Business Area | Energy

By leveraging our CFU, a refinery facility, and two aromatic plants, **Hanwha TotalEnergies Petrochemical** produces a variety of high-quality energy products. We are focused on quickly expanding into energy market by strengthening high-value-added products backed by stable supplies.

LPG	Used for automobile fuel, propane gas, and butane gas burners
MOGAS	Light petroleum fuel for gasoline internal combustion engines, used in passenger cars, motorcycles, and small machinery
Jet Oil	Fuel for turbine engines in aircraft, military aircraft, and helicopters, providing stable combustion at high altitudes and excellent resistance to cold
Hi-sene	Alternative fuel oil for heat supply facilities using kerosene or diesel, offering excellent economic efficiency as an environmentally friendly fuel
S-Kerosene	High-quality white kerosene with low sulfur content, low odor and soot, and high calorific value, used as fuel for residential boilers, heaters, and grain dryers
Diesel	Heavy petroleum fuel for diesel engines used in trucks, buses, and construction equipment, featuring auto-ignition through compressed air with high fuel efficiency and power output
Bunker A	Blending of diesel and heavy fractions from the latest desulfurization facilities for high fuel efficiency, power output, low pour point and minimal impurities – usable without heating in summer (Complies with IMO sulfur oxide emission regulations)
Solvent	A hydrocarbon compounds derived from naphtha, kerosene, and other products obtained during crude oil refining as a volatile liquid used for dissolving or diluting other substances

R&D Competitiveness

Sustainable material development and energy transition

Hanwha TotalEnergies Petrochemical is striving for technological innovation to strengthen the competitiveness of current key businesses, while creating future value. The R&D center focuses on creating distinctive intellectual property for sustainable material development and energy transition by pursuing technology-intensive R&D projects and leveraging open innovation.

Growth Strategy

Eco-friendly technology

Carbon capture, sustainable transportation fuels, plastic waste recycling technology

Specialty materials

Functional materials and chemicals for future business

Catalyst· Process advancement

Ultra-high-performance catalyst and related process development

Creating added values

Improving existing materials such as next generation pipe, eco-friendly cable

IR52 Jang Young-sil Awards	Ministerial Awards	New Excellent Technology(NET)	Prime Minister's Commendation	World-Class Product of Korea
16 times	22 times	15 times	1 time	6 times

R&D Center

- Catalyst· Processing labs(R&D Building 1)
- Analytical· Physical labs(R&D Building 2)
- Material, Base Chemicals· Energy labs(R&D Building 3)
- External labs(R&D Seoul Office)

R&D Building 3 in Daesan

Business Highlight

Hanwha TotalEnergies Petrochemical produces a wide range of EVA, PE, and PP products based on advanced catalyst technology and product design expertise. Our EVA and PE products are used in solar cells, bottle caps, and many other everyday applications, enriching daily life.

EVA for solar cell

EVA· PE Ethylene Vinyl Acetate· PolyEthylene

EVA for solar cell

Featuring excellent transparency that enhances solar energy efficiency as well as ultra-high purity and low shrinkage.

- IR52 JangYoung-sil Award in the 13th week of 2016
- World-class Product of Korea in 2015

EVA for extrusion coating

Developed using proprietary polymerization technology. With high-speed processability, transparency, and adhesion, used in coating films for photographs, printing paper, and other applications.

- World-class Product of Korea in 2017

HDPE for pipe

High processability, crack resistance. Used for water and gas pipe lines.

- IR52 JangYoung-sil Award in the 12th week of 2025

HDPE for bottle caps

Applied as a cap for plastic bottles. A high value-added product that meets diverse customer needs.

- World-class Product of Korea in 2016

VPE for battery seperators

With proprietary high-performance catalyst, dramatically enhanced separator membrane processability, strength, and stability.

- IR52 Jang Young-sil Award in the 46th week of 2023

Business Highlight

Hanwha TotalEnergies Petrochemical produces strong, heat-resistant PP products that keep our daily lives safe. Our PP products are widely used across industries as materials for electrical and electronic components, automotive interior and exterior parts, and power cables.

PP for power cables

PP PolyPropylene

HIPP for electronics applications

Excellent rigidity, shock and heat resistance. Used in a wide variety of electronics that require long-term thermal stability including household appliances such as steam cleaners, coffee makers.

• World-class Product of Korea in 2018

High appearance PP for automotive applications

Used in internal and external parts including bumpers. Minimized surface defects such as flow marks and sink marks by enhancing flow properties.

• IR52 JangYoung-sil Award in the 2nd week of 2013
• World-class Product of Korea in 2017

PP of protective film for display materials

World-class quality with surface defects reduced to less than one-twentieth of standard products. Easy control of physical properties for diverse applications tailored to customer needs.

• IR52 JangYoung-sil Award in the 6th week of 2012
• World-class Product of Korea in 2019

PP for eco-friendly power cables

Developed Eco-friendly PP with high-energy efficiency and recyclability. Used for insulators, a core component of high voltage power cable. Excellent heat resistance, softness and voltage withstand capability.

• 2020 New Excellent Technology(NET) Certification

Business Highlight

Hanwha TotalEnergies Petrochemical focuses on R&D of high-activity catalysts tailored to product characteristics, enhancing cost competitiveness and product quality.
And the solvent products developed using our proprietary process technology are also applied across various industries, expanding their influence.

Eco-friendly catalyst for PP

Catalyst

Catalyst for ultra-high molecular weight PE

Developed high-temperature catalysts controlling molecular weight distribution and powder formation, achieving over three times the polymerization activity of commercial catalysts.

- IR52 JangYoung-sil Award in the 46th week of 2023

PP catalyst for enhanced copolymerization

Developed Ziegler-Natta catalyst for PP polymerization with high activity and excellent copolymerization capability, achieving over twice the activity of commercial catalysts. Used in eco-friendly PP cable applications.

- 2020 New Excellent Technology(NET) Certification

Catalyst for high-performance polymerization

Highly active, high isotactic Ziegler-Natta polymerization catalysts to improve productivity with over 3 times higher activity and uniform morphology than commercial catalysts.

- 2007 New Excellent Technology(NET) Certification
- IR52 JangYoung-sil Award in the 38th week of 2007

Eco-friendly catalyst for PP

Developed eco-friendly non-phthalate donor catalysts to respond to strengthened phthalate compound regulations. Used for materials for food, medical and infant necessities.

- IR52 JangYoung-sil Award in the 21st week of 2014

Solvent

High-purity hexane and heptane

High-purity products using our proprietary SMB technology to concentrate low-purity hexane. Applied in the production of active pharmaceutical ingredients (APIs), a key component in cutting-edge semiconductor and pharmaceutical industries.

Business Highlight

Hanwha TotalEnergies Petrochemical operates various pilot plants for the development of competitive resin products. At the same time, we drive process development based on proprietary simulations, striving to create sustainable future value.

Process

POE·LAO Pilot

Completed construction of POE pilot plants to secure high-entry-barrier manufacturing technology for raw material production, as well as LAO pilot plant to supply raw materials for POE.

Polymer Pilot

Operating two polymer pilot plants to develop a variety of products, including HDPE, LLDPE, and PP, tailored to customer needs and market trends.

New SM manufacturing process

Developed the world's first SM(Styrene Monomer) manufacturing process for improved productivity based on analysis of catalyst deactivation using computer simulation.

LD·EVA polymerization reaction simulator

Developed the simulator for ultra-high pressure tubular LD·EVA polymerization process and prediction of product properties, an essential element for developing high value-added products.

Global Network

Domestic

- Daesan Plant (Head Office) : 103, Dokgot 2-ro, Daesan-eup, Seosan-si, Chungcheongnam-do 31900, Korea
  ☎ (82)41.660.6114 | FAX (041)681.4812
- Seoul Office : INNO88 TOWER, 10-13F, 88 Yulgok-ro, Jongno-gu, Seoul 03131, Korea
- ☎ (82)2.3415.9499 | FAX (02)774.2727

Overseas

- Europe Branch (Frankfurt, Germany): Kölner Strasse 10b 65760 Eschborn Germany
  ☎ (49)6196.779.5217 | FAX (49)6196.9020.644
- Japan Branch (Tokyo): Hanwha building 1F, 10-1, Shiba 4 Chome, Minato-ku, Tokyo 108-0014, Japan
  ☎ (81)3.6369.6381 | FAX (81)3.6369.6066
- Singapore Branch: 048581 16 Raffles Quay, #14-03A Hong Leong Building, Singapore
  ☎ (65)6223.5288 | FAX (65)6223.1828
- Shanghai Trading Corporation: Room 1701, Tower A, Dawning Centre, No.500 HongBaoShi Road, Changning District, Shanghai, China
  ☎ (86)21.3209.7015 | FAX (86)21.3252.2286
- Beijing Branch : Room 2109-2110,Taikang Financial Tower, 38#Yard East 3rd ring North Road, Chaoyang District, Beijing, China
  ☎ (86)10.8587.9896 | FAX (86)10.8587.9600
- Shenzhen Branch: Room 1202, DaBaiHui Plaza, No.3086, Jintian Road, Futian District, Shenzhen, Guangdong, China
  ☎ (86)755.2399.6516 | FAX (86)755.2399.6510
- Dongguan Production Plant (China): No. 5, DaLingShan HuPan Road, DaLingShan Town, DongGuan, Guangdong, China
  ☎ (86)769.8278.1999 | FAX (86)769.8278.1998