

2022 Better Energy for Us & Earth



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2022
Better Energy for
Us & Earth



A guardian of national energy security.
A global energy company that contributes to the advancement of carbon neutrality.



KNOC will secure a stable supply of resources for national energy security and lead the era of carbon neutrality with new projects.
It will also innovate its business processes to enhance global competitiveness and expand environmental programs and community services for the early establishment of Environmental, Social, and Governance (ESG) standards.



Main Business



Through passion and willingness to take risks,
KNOC ensures national energy security
and new growth engines.

KNOC will raise the value of existing projects to better
ensure national energy security, and lead the transition to low-carbon,
green energy using its capabilities, technologies, and assets.



Exploration & Production

31 projects in **17** countries
136 thousand barrels in daily production
1,058 million barrels in reserves



Petroleum Stockpiling

9 stockpiling bases in Korea
146 million barrels of stockpiling capacity
98 million barrels of stockpiling



Trading & Information Service

— Economical gas stations —
1,266 economical gas stations
(Independant 431, ex 186, NH 649)
— Oil information service —
138 million Opinet users per year



New & Renewable Energy

— Hydrogen energy project —
Domestic and international partnerships
to lay project foundations
— CCS project —
Basic design and preliminary
feasibility study phases complete

Exploration & Production

KNOC is pursuing E&P projects at home and abroad to secure a stable supply of energy.

31 E&P projects are currently underway in **17** countries.

Domestic Projects

KNOC turned Korea's dream of becoming an oil producer into a reality by discovering quality gas reserves off the coast of Ulsan, South Korea, in 1998 and successfully developed the Donghae gas fields. In 2020, KNOC obtained the mining concession for the "Yellowtail" structure (Blocks 6-1 Middle and East) and conducted exploratory drillings in 2021. Appraisals of further prospects are also underway.

Overseas Projects

Based on the vast technologies and know-how accumulated over 40 years in the field of oil exploration, development, and production, KNOC is engaged in E&P projects all over the world. The discovery of massive oil reserves in Block 15-1, Vietnam, in 2000, marks the first achievement in foreign oil development. Since then, KNOC has laid the groundwork for long-term growth in North America, Europe, and Central Asia. Notable accomplishments include the additional discovery of quality gas reserves in Tolmount in the North Sea of the UK and the commencement of commercial production of crude oil in Haliba in the UAE.



2022 KOREA NATIONAL OIL CORPORATION

Daily production **136** thousand barrels Reserves **1,058** million barrels

● Production ● Exploration ● Development ※ As of end-2021



Petroleum Stockpiling

KNOC has pursued petroleum stockpiling projects since its foundation in 1979 to help Korea withstand oil supply crises. It will remain committed to securing a more stable oil supply in Korea and improving emergency response capabilities.



The current stockpile is equivalent to approximately **107** days of net oil imports based on IEA* standards.



*IEA : International Energy Agency



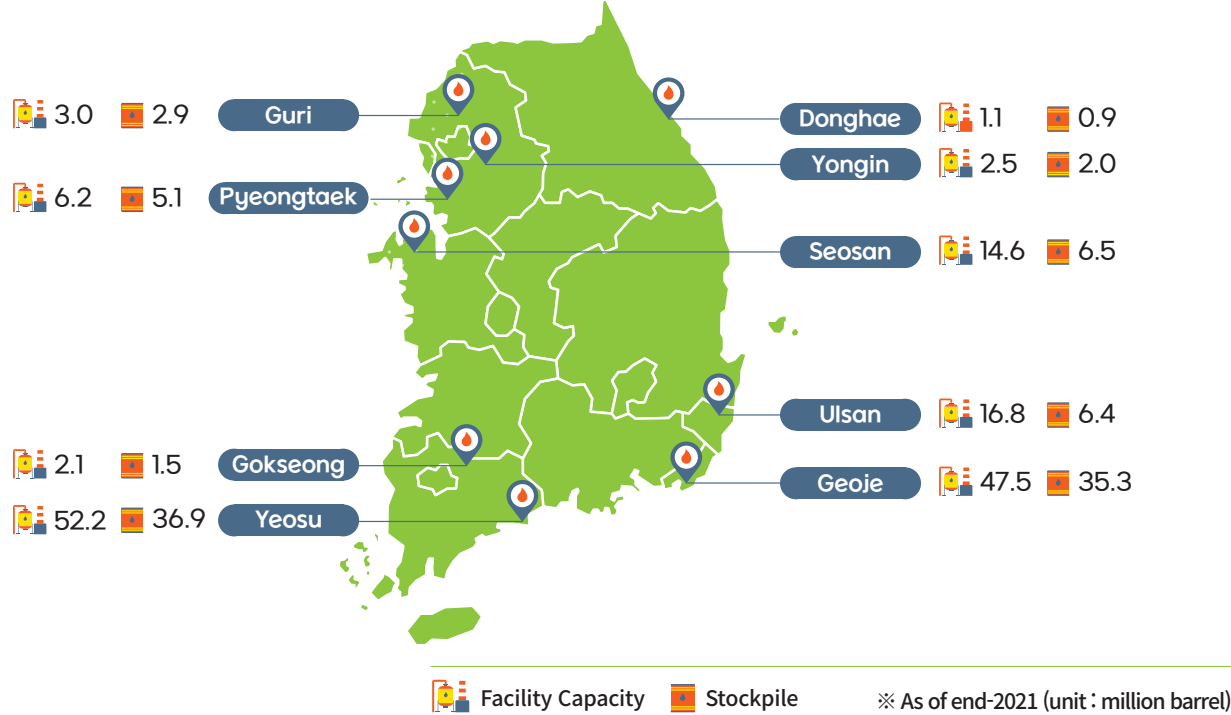
Oil Trading

Petroleum stockpiles are the basis for KNOC to engage in the trade of oil. Using the fluctuations in international oil prices, KNOC engages in the trade of crude oil, oil products, and liquified petroleum products. The proceeds are used as financial resources to increase KNOC’s own stockpile. The joint petroleum stockpiling business, which lends unoccupied storage capacities to oil producing countries and others, creates an extra income stream. The stockpiling asset lending business also aims to provide petroleum stockpiles and storage facilities to domestic refineries and other private companies in a timely manner to respond to supply disruptions.

Energy Hub

KNOC is the forerunner of the Northeast Asia energy hub initiative, which is aimed at promoting Korea to become the hub of logistics and financial transactions in oil and gas in Northeast Asia. Currently, a tank terminal with a capacity of 8.18 million barrels is in operation in Yeosu, and the North Port project, which has a tank terminal with a capacity of 4.4 million barrels, is underway in Ulsan. The business goals and model for the South Port project will be determined after the feasibility study is complete. Once a hub has been established, industries related to oil and liquified gas will thrive, and the supply of oil and liquified gas will stabilize. In addition, businesses in oil trading, logistics, and financial services will also expand, increasing many more employment.

Status of Petroleum Stockpiling



Trading & Information Service

KNOC has undertaken the economical gas station project to stably provide oil products at more affordable prices. For this, it is pursuing joint purchasing ventures of oil products and reducing distribution costs.

In this era of oil price instability, KNOC will fulfill its social responsibility of stabilizing oil prices and improving the oil distribution market.



 Economical Gas Station

2022 KOREA NATIONAL OIL CORPORATION



Economical Gas Station

The number of economical gas stations, which are aimed at providing consumers with affordable oil products by improving distribution, is on a steady rise. Since its inception, the project has contributed to the stabilization of domestic oil prices and helped reduce the burden of energy costs.

The first economical gas station started operations in 2011. As of end-2021, there are a total of 1,266 economical gas stations nationwide. The average oil price per liter at economical gas stations is 30 won cheaper than the national average.

Opinet www.opinet.co.kr

Opinet, the real-time oil price information service, helps improve the convenience of people's daily lives. An average of 380,000 users visit the website on a daily basis.

The service provides price information on approximately 11,000 gas stations and 2,000 LPG charging stations across the nation via its website, smartphone application, mobile navigation system, etc.

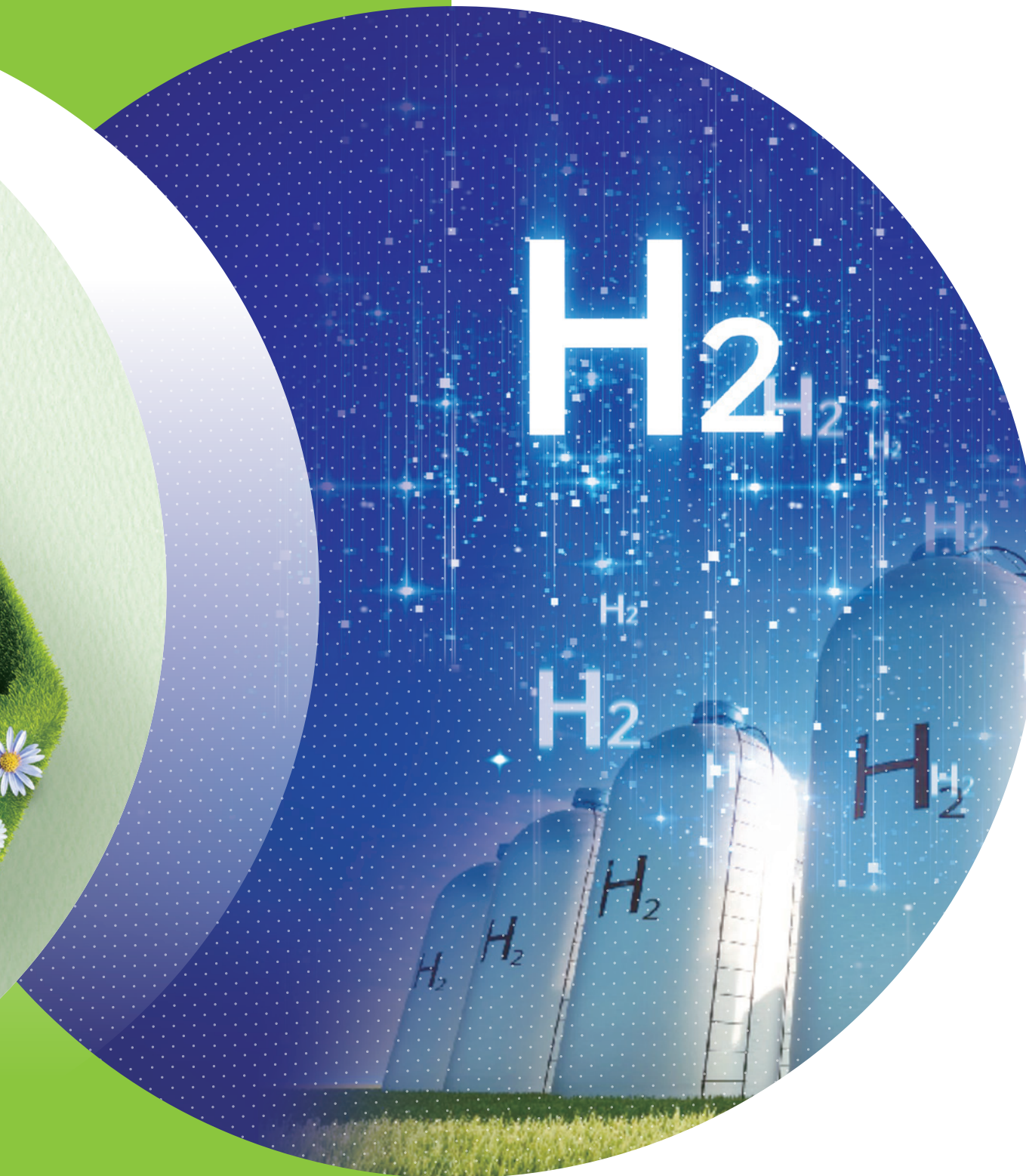
Petronet www.petronet.co.kr

KNOC operates Korea's only comprehensive oil information service, Petronet. Through its website, Petronet provides information on domestic and international oil prices, oil supply trends, the status of oil development projects, analytical resources, and many other issues for citizens, government agencies, research institutions, and private companies. This not only helps government agencies to establish oil policies and academia to conduct research projects but also improves people's daily lives.

New & Renewable Energy

KNOC actively promotes green energy projects to comply with the Korean government's Renewable Energy 3020 Plan, designed to raise the share of renewable sources to 20% by 2030.

By using its capabilities, technologies, networks, and assets, KNOC will play a leading role in Korea's shift to carbon neutrality and introduction of eco-friendly energy.



Hydrogen Energy Project

KNOC aims to establish a solid foundation for a vibrant hydrogen economy and achieve hydrogen-based energy security by producing, importing, storing, and distributing hydrogen and ammonia. In the short-term, it will seek partnerships at home and abroad, and in the long-term, it will find ways to produce blue hydrogen and ammonia by reforming natural gas and nitrogen in conjunction with carbon capture and storage(CCS) and enhanced oil recovery(EOR) projects.

CCS Project

KNOC will lead the construction and operation of domestic CO₂ storage facilities. Its CCS project to capture and store CO₂, a major cause of climate change, seeks to utilize the production wells and other facilities of Donghae gas field platforms, for which production ended in 2021.

According to the plan, the completion of the feasibility study will be followed by the construction of mid-scale demonstration facilities in 2023-2025. Thereafter, 400,000 tons of CO₂ will be injected in 2025. And in 2029, the expansion and commercial use of the facilities will be pursued with the goal of conducting the 1st phase of a large-scale demonstration.

Offshore Wind Project

KNOC is pursuing Korea's first floating offshore wind farm project with the goal of producing electricity from 2026. The project, which reuses Donghae gas field platforms to generate eco-friendly energy, is expected to increase the vitality of related industries such as shipbuilding and materials and equipment manufacturing. The project passed the preliminary feasibility test in 2021. The construction of the 200MW wind farm will be completed by 2025, and commercial operations will begin in 2026.

ESG

KNOC recently announced a new vision for safety management which places the highest priority on the safety and health of all, including its employees, on-site contract workers, and local residents.

To minimize its environmental footprint, KNOC has implemented pollution reduction programs and participated in the emissions reduction and energy targeting system for public institutions.



Safe Workplace

KNOC has maintained its zero-accident operation record for 21 consecutive years. It is also one of the few companies subject to the PSM*, with 80% of its worksites achieving the highest rate in the Labor Ministry's workplace safety evaluation. KNOC has been free of major industrial accidents for five consecutive years thanks to the CEO's firm commitment to safety, symbolized by the Active Caring and Safety Talk slogans that call for the active protection of safety not only for yourself but also for those around you.

*Process Safety Management refers to the Ministry of Employment and Labor's evaluation of workplace safety management. The evaluation is conducted in accordance with the Occupational Safety and Health Act and rates the level of worksite safety management with P (very good), S (good), M+ (not bad), or M- (bad).



Safe Society

KNOC reinforced its safety management system by establishing an emergency response plan to prepare for such crises as a protracted pandemic and abnormal weather conditions. As a result, it received the "excellence grade" in the evaluation for disaster management and a "top grade" in the evaluation for safety management for two consecutive years. To enhance its protection of oil stockpiling bases, KNOC established the anti-drone defense system which is tailored to the characteristics of each base. UAE ADNOC has expressed a keen interest in the anti-drone system, and discussions are underway on the export of the system.

Eco-friendly Management

KNOC will remain committed to the execution of the government's low-carbon, eco-friendly policies. It has laid the groundwork to reuse Donghae gas field platforms for the offshore windfarm project and the carbon capture, utilization, and storage project. Also it has been designated as a "high achiever" for reaching the emissions reduction target for ten consecutive years.

Social Contribution

KNOC is committed to becoming a caring partner of stakeholders by fulfilling its social responsibilities.

As part of its efforts to diversify job opportunities, KNOC created sports teams and employed people with disabilities as athletes to improve their employment rate. KNOC also provides support to medical workers who have been at the forefront of the COVID-19 response and small business owners who have been severely affected by the pandemic. Its social contribution activities include helping the disadvantaged pay their energy bills, providing scholarships to children from multiracial families, and "plogging," which refers to jogging and picking up litter. KNOC was cited by the Ulsan Metropolitan City for its contribution to the resolution of regional issues.