Global Hydrogen Policy Tracker - South Korea

Hydrogen Developments

| Contents |
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| To generate table of contents, right-click here and select **Update Field.** |

Implementation stage

**June 2024**: Korea and Japan held the first Korea-Japan Hydrogen Cooperation Dialogue meeting on 14 June 2024, which was a follow-up to the Korea-Japan summit talks in May 2024 and previous bilateral efforts and discussions. The countries agreed to deepen cooperation in clean hydrogen and hydrogen derivatives / compounds to achieve their nationally determined contributions and secure energy security. They also decided to seek ways for bilateral private-led hydrogen supply chain cooperation. The two sides also agreed to establish the following three working groups:

Working group on carbon intensity and its certification;

Working group on collaboration on codes and standards for mobility and others; and

Working group on the safety of hydrogen.

Sources:

[**Korea and Japan hold 1st Hydrogen Cooperation Dialogue meeting**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1901/view)

[**First Japan-ROK Hydrogen and Its Derivatives such as Ammonia Cooperation Dialogue Held**](https://www.meti.go.jp/english/press/2024/0614_002.html)

**May 2024**: The Korean Ministry of Trade, Industry and Energy announced on 24 May 2024 that Korea is launching the world's first clean hydrogen power bidding market. The clean hydrogen power bidding market is a market for supplying and buying electricity produced by harnessing clean hydrogen. Participants are allowed to harness power generators using only hydrogen that fulfills the domestic clean hydrogen certification standards. This year's annual bidding volume is 6,500 GWh with a contract period of 15 years. Commercial operation must begin by 2028, following three years of preparation period plus one year of grace period. The bid notification period will be 24 weeks. The winning bidder will be selected in December 2024.

Source: [**Korea launches world's first clean hydrogen power bidding market**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1859/view?pageIndex=1&amp;bbsCdN=2)

**February 2024**: In June 2023, pursuant to the amendments to the Act on the Promotion of Hydrogen Economy and the Safety Control of Hydrogen, the Korean government opened the world's first "hydrogen power bidding market", a market for supply and purchase of electric power generated using hydrogen or hydrogen compounds (e.g., ammonia). The hydrogen power market will consist of two branches: the "general hydrogen power market" ("General H2 Market") and the "clean hydrogen power market" ("Clean H2 Market"). Korea Power Exchange will serve as the manger and operator of the hydrogen power market and the relevant bidding process. The "hydrogen power generation companies" (as defined under the Act on the Promotion of Hydrogen Economy and the Safety Control of Hydrogen), which meet certain requirements with respect to financial, technical and other capabilities and qualifications, are qualified to submit bids for supply of electric power through the hydrogen power market. The Clean H2 Market is scheduled to launch in the first half of 2024. Power generators in Korea will be required to purchase the following amounts of hydrogen electricity based on the following timelines:

2025: General H2 Market 1,300 GWh

2026: General H2 Market 2,600 GWh

2027: General H2 Market: 3,900 GWh; Clean H2 Market: 3,500 GWh

2028: General H2 Market: 5,200 GWh; Clean H2 Market: 9,500 GWh

Two auctions in the General H2 Market were held in 2023.

The Korean government is implementing a clean hydrogen portfolio standards (CHPS) though this power market and incentives for the General H2 Market will be based on a contract-for-differences (CfD) approach and for Clean H2 Market will be based on a feed-in-premium (FIP) approach.

Source: [**보도·참고자료 < 보도자료 < 알림·뉴스 산업통상자원부 홈페이지 (motie.go.kr)**](https://www.motie.go.kr/kor/article/ATCL3f49a5a8c/167344/view?mno=&amp;pageIndex=2&amp;rowPageC=0&amp;displayAuthor=&amp;searchCategory=0&amp;startDtD=2023-05-21&amp;endDtD=2023-08-22&amp;searchCondition=1&amp;searchKeyword=%EC%88%98%EC%86%8C)

**February 2024**: In the Emergency Economy Ministerial Meeting on 8 February 2024 the Ministry of Trade, Industry and Energy announced the measures for hands-on regulatory innovation to nurture Korea into a global hydrogen powerhouse. The five key areas for regulatory improvement include production, distribution and utilization of hydrogen. There will be a public-private joint consultative group for hydrogen industry regulatory innovation. The regulatory innovation measures will help companies build global competitiveness and contribute to timely establishment of infrastructure for Korea's clean hydrogen ecosystem scheduled for activation in 2027.

Source: [**MOTIE to push regulatory innovation to nurture Korea into global hydrogen powerhouse**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1666/view)

**December 2023**:  On 18 December 2023, the Korean government held the sixth Hydrogen Economy Committee meeting chaired by Prime Minister Han Duck-soo. Major policy directions for accelerating the transition to a clean hydrogen ecosystem and nurturing the hydrogen industry were announced:

Clean hydrogen certification management system for production and import of hydrogen which provides incentives when the amount of greenhouse gas emissions falls under a certain level in accordance with the Hydrogen Economy Promotion and Hydrogen Safety Management Act. The standard for certification as clean hydrogen (being GHG emissions of 4 kg or less per every 1 kg of hydrogen) and relevant procedures, certificate system and support measures were set. The launch of the Clean Hydrogen Production Standard is expected in 2024.

Hydrogen MPE (materials, parts, equipment) industry nurturing strategy. Measures are anticipated to achieve 80% localization of the top 10 strategic areas' MPEs by 2030 and nurture 20 top global MPE companies.

Measures for expanding distribution of FCEVs (fuel cell electric vehicles) to reach the goal of distributing 0.3 million units of FCEVs and establish over 660 hydrogen charging stations by 2030.

National priority hydrogen R&D centre management measures.

Three memorandums of understanding were entered between major domestic and overseas hydrogen companies.

It was noted that the government designated hydrogen as the national strategic technology in December 2023, opened the world's first hydrogen power bidding market in June 2023 and during the same year, agreed to push hydrogen cooperation with governments and companies of the US, Saudi Arabia, Japan and other countries to foster the clean hydrogen ecosystem and nurture the hydrogen industry.

Sources:

[**Korea to push forward transition to clean hydrogen ecosystem**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1619/view)

[**보도자료 - 과학기술정보통신부 (msit.go.kr)**](https://www.msit.go.kr/bbs/view.do?sCode=user&amp;mId=113&amp;mPid=238&amp;pageIndex=93&amp;bbsSeqNo=94&amp;nttSeqNo=3183868&amp;searchOpt=ALL&amp;searchTxt=)

**October 2023**: The Ministry of Trade, Industry and Energy (MOTIE) announced on 22 October 2023 that, at the Korea-Saudi summit meeting in Riyadh, a number of energy institutions, companies and MOTIE entered two agreements and five memorandums of understanding (MOUs) with Saudi counterparts, including the “Korea-Saudi Hydrogen Oasis Cooperation Initiative” MOU between the two countries’ governments for expanding mutual cooperation in clean hydrogen. The Joint Statement by the two governments noted the cooperation agreement on clean hydrogen between Korean companies and the Saudi Public Investment Fund and the first commercial shipment of clean ammonia produced by Saudi Arabia to Korea.

Sources:

[**Korea and Saudi agree to widen scope of clean hydrogen cooperation**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1476/view)

[**Joint Statement on the Occasion of the State Visit to the Kingdom of Saudi Arabia by President of the Republic of Korea**](https://www.spa.gov.sa/en/N1985091)

**November 2023:** The Ministry of Trade, Industry and Energy announced on 14 November 2023 that the proposal for an amendment to the Hydrogen Economy Promotion and Hydrogen Safety Management Act has passed the Cabinet meeting's deliberation and resolution process, enabling the government to move to establish a clean hydrogen certification system.

Source: [**Korea to roll out clean hydrogen certification system**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1533/view?pageIndex=41&amp;bbsCdN=2)

**August 2023:** The first batch of general hydrogen power generation according to Clean Hydrogen Portfolio Standard (CHPS) was auctioned off. Its total amount was 715 GWh, a half of annual quota (1.3 TWh), and awarded to 5 fuel cell power generation businesses. Winners of the other half of the general hydrogen section will be called in November. Auction for the clean hydrogen section (3.5 TWh) is due in the first quarter of 2024, along with the general (1.3 TWh) section.

Source: [**IPHE Country Update September 2023: Republic of Korea**](https://www.iphe.net/_files/ugd/45185a_fa8f7540bb4d453691174dfe9c2a3b62.pdf)

**April 2023**: The Ministry of Trade, Industry and Energy announced on 26 April 2023 that Korea and the US held a "Korea-US High-Tech Industry & Clean Energy Partnership" memorandum of understanding (MOU) signing ceremony on 25 April 2023 where 23 MOUs for stronger forward-looking Korea-US high-tech cooperation were signed. The focus of Korea-US cooperation will be on hydrogen-ammonia blending technology and CCUS. A clean hydrogen supply chain MOU was signed between Korean and US companies.

Source: [**Korea and U.S. sign 23 MOUs for high-tech, hydrogen & SMR cooperation**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1263/view)

**March 2023:** Draft rules for Clean Hydrogen Portfolio Standard (**CHPS**) were published. Under CHPS, power retailers are assigned annual amount of electricity produced out of hydrogen/ammonia which they are obliged to purchase. CHPS has two separate sections of “general” and “clean”.

Source: [**IPHE Country Update March 2023: Republic of Korea**](https://www.iphe.net/_files/ugd/45185a_d9a4323a5a644e27baa55a6889250157.pdf)

**November 2022:**

On 9 November 2022, Prime Minster Han Duck-soo announced new hydrogen economy policy directions aimed at establishing a clean hydrogen supply chain and nurturing a world-leading hydrogen industry. There are three growth strategies ("3UP"):

"Scale-Up": expand the clean hydrogen ecosystem by establishing a global supply chain and creating large-scale demand in terms of power generation and transportation.

"Build-Up": establish a legal framework for the distribution infrastructure for accelerating clean hydrogen utilization. This also includes building the world's largest liquid hydrogen plant and fueling station, and an ammonia and liquid hydrogen receiving terminal and installing a hydrogen pipeline. Plans also include opening a hydrogen bid market, lifting regulatory burdens to boost the hydrogen business and introducing a clean hydrogen certification system.

"Level Up": technological innovation to become the world-leading hydrogen powerhouse.

To realize the above, the Ministry of Trade, Industry and Energy (MOTIE) will be in charge of fostering a clean hydrogen ecosystem. The action plan includes the goal of producing 30,000 hydrogen-powered commercial vehicles by 2030, building 70 liquid hydrogen fueling stations and increasing the share of clean hydrogen in the country's energy mix up to 7.1% by 2036. The MOTIE will also develop Korea into a global hydrogen powerhouse by securing advanced technologies and 10 top-ranked items and nurturing 600 hydrogen-focused companies by 2030.

Sources:

[**Government announces new policies to boost hydrogen industry**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/1120/view?pageIndex=105&amp;bbsCdN=2)

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**November 2021:**Australia and the Republic of Korea will collaborate as part of a new Zero Emissions Technology Partnership. Prime Minister Scott Morrison of Australia and President Moon Jae-in of the Republic of Korea agreed on the partnership during bilateral talks at the G20 summit in Rome, ahead of COP26 in Glasgow. Both jurisdictions will work together to encourage the development, commercialization, and use of low and zero-emission technology, including clean hydrogen, hydrogen fuel cell electric vehicles, and hydrogen power generation. The Republic of Korea has also agreed to support research on hydrogen supply chains between companies from the two countries.

Sources:

[**Australian Hydrogen News (November 2021)**](https://mailchi.mp/industry.gov.au/australian-hydrogen-news-nov-2021?e=9720369bce)

[**Strengthening low emissions technology cooperation with the Republic of Korea**](https://www.minister.industry.gov.au/ministers/taylor/media-releases/strengthening-low-emissions-technology-cooperation-republic-korea)

**November 2021:** TheBasic Plan for Implementing the Hydrogen Economy of Korea was announced. It revises the Hydrogen Economy Roadmap of 2019 by establishing a comprehensive strategy for the entire life cycle of clean hydrogen production-distribution-utilization. National targets such as hydrogen supply of 3.9 million tons in 2030 and 27.9 million tons in 2050 were set.

Source: [**IPHE Country Update April 2022: Republic of Korea**](https://www.iphe.net/_files/ugd/45185a_f26dbd8af3404d1baf608eb0986d428f.pdf)

**June 2021:** Revision of the Hydrogen Economy Promotion and Hydrogen Safety Management Act was proposed in June 2021 to establish "Clean Hydrogen Energy Portfolio Standards" and national clean hydrogen certification system.

Source:[**IPHE (International Partnership for Hydrogen and Fuel Cells in the Economy) Country Update June 2021: Republic of Korea**](https://www.iphe.net/_files/ugd/45185a_8abe73ecf60a4104b049be7feec1e3b8.pdf)

**February 2021:** The Hydrogen Economy Promotion and Hydrogen Safety Management Act entered into force in February 2021.

Source: [**Statutes of the Republic of Korea (klri.re.kr)**](https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=66594&amp;type=sogan&amp;key=13)

**January 2020:** The bill on the Hydrogen Economy Promotion and Hydrogen Safety Management was passed by the national assembly of the Republic of Korea in January 2020.

Source: [**보도·참고자료 < 보도자료 < 알림·뉴스 산업통상자원부 홈페이지 (motie.go.kr)**](https://www.motie.go.kr/kor/article/ATCL3f49a5a8c/162558/view?mno=&amp;pageIndex=22&amp;rowPageC=0&amp;displayAuthor=&amp;searchCategory=0&amp;schClear=on&amp;startDtD=&amp;endDtD=&amp;searchCondition=1&amp;searchKeyword=%EC%88%98%EC%86%8C)

**February 2020:** The US Fuel Cell and Hydrogen Energy Association (FCHEA) and the Korean Hydrogen Convergence Alliance (H2KOREA), the organization representing the public/private hydrogen fuel-cell industry of the Republic of Korea, have entered into a memorandum of understanding (MOU) to promote bilateral collaboration for the development of hydrogen energy sectors and improve international hydrogen industry cooperation. This collaboration to promote hydrogen energy will include co-hosting or supporting regular meetings and seminars; exchanging information; promoting coordination among private and public sectors; and developing and promoting policies for the growth of the hydrogen industry.

Source: [**FCHEA and H2Korea sign MOU**](https://static1.squarespace.com/static/53ab1feee4b0bef0179a1563/t/5e41d1c9e14f6e738f12e9a3/1581371849638/H2%2BKorea%2BMOU%2BPress%2BRelease.pdf)

**October 2019:** The government announced it is planning to build three hydrogen-powered cities by 2022 with a selection of cities to host test areas to be announced by December 2019. Hydrogen will be used in these cities as fuel for cooling, heating, electricity and transportation.

Sources:

[**Selected three clean and healthy hydrogen pilot cities within the year**](http://www.molit.go.kr/USR/NEWS/m_71/dtl.jsp?lcmspage=3&amp;id=95082893)

[**South Korea is building 3 hydrogen-powered cities for 2022**](https://www.weforum.org/agenda/2019/11/south-korea-green-energy-hydrogen-future-city-fossil-fuel-renewables/)

**October 2019:** The government announced three key strategies to accelerate the development of its car industry into the future and four specific action plans to achieve these goals. The action plans included seeking to become a leading player in the green car industry which had a specific aim to build a total of 660 hydrogen refuelling stations by 2030 and 15,000 electric recharging stations by 2025. Drivers will be able to access a hydrogen station within 20 minutes of any major city or 75 kilometers of any expressway by 2030.

Source: [**Korea unveils three key strategies to accelerate the future development of the car industry**](https://english.motie.go.kr/eng/article/EATCLdfa319ada/742/view?pageIndex=150&amp;bbsCdN=2)

**January 2019:** The government announced its Hydrogen Economy Roadmap and Ulsan's Future Energy Strategy, with a primary focus on leading the hydrogen vehicles and fuel cell industry, as well as establishing a system for hydrogen production and distribution. Specifically, the Roadmap outlines the goal of producing 6.2 million fuel cell electric vehicles and rolling out at least 1,200 refilling stations by 2040. Additionally, the plan aims to roll out on the street at least 35 hydrogen buses in 2019 ramping this number up to 2,000 by 2022 and 60,000 by 2040. In terms of the energy sector, the roadmap outlines an objective to supply 15 GW of fuel cell for power generation by 2040.

Sources:

[**Korea announces roadmap to lead in hydrogen**](https://fuelcellsworks.com/news/korean-government-announces-roadmap-to-become-the-world-leader-in-the-hydrogen-economy/)

[**Korea Hydrogen Economy Roadmap 2040 – Policies - IEA**](https://www.iea.org/policies/6566-korea-hydrogen-economy-roadmap-2040)

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[**Hydrogen Economy Roadmap of Korea**](https://h2council.com.au/wp-content/uploads/2022/10/KOR-Hydrogen-Economy-Roadmap-of-Korea_REV-Jan19.pdf)

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