METI
Kansai Bureau of Economy, Trade and Industry

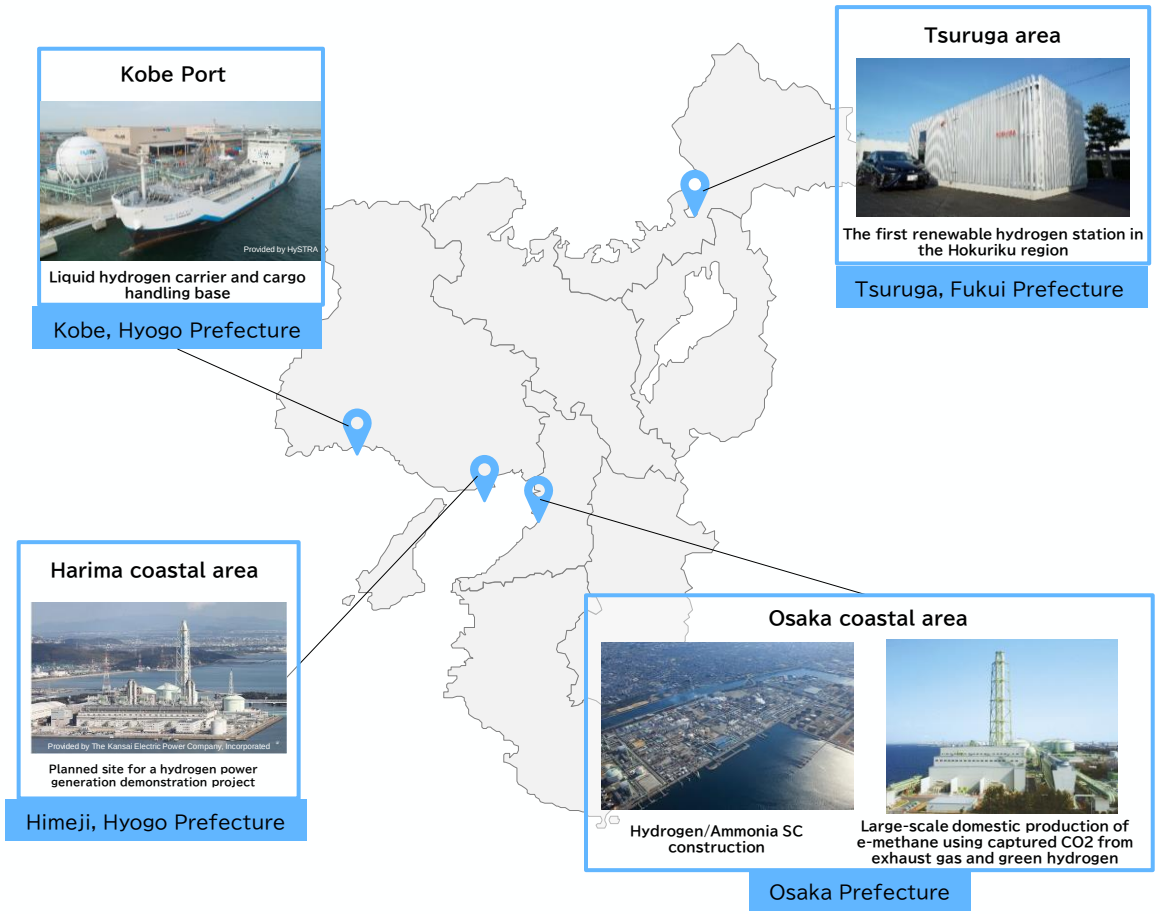
Hydrogen Utilization Promotion Project by METI-Kansai

Carbon Neutrality Promotion Office, METI-Kansai

Green Innovation (Hydrogen)

- Kansai is home to many manufacturing companies, including heavy industries in port areas, and has high potential for the demand and supply of hydrogen.
- Various companies in Kansai are developing technologies in the hydrogen field by using their core technologies and are leading the country in many hydrogen-related demonstration projects.

Port areas in Kansai working toward carbon neutrality



Current projects for public implementation of hydrogen in various parts of Kansai

The world's first facility capable of consistently validating technologies from hydrogen production to power generation is now in operation

○Mitsubishi Heavy Industries, Ltd. Takasago City, Hyogo Prefecture

In order to achieve the early commercialization of hydrogen power generation, MHI has established the Takasago Hydrogen Park within its Takasago Machinery Works, where development, design, manufacturing, and validation facilities are located. The park is the world's first facility for consistently validating technologies from hydrogen production to power generation, in which hydrogen production tests and hydrogen power generation tests at a large-scale validation facility are currently conducted.

Demonstration of an international liquid hydrogen supply chain model

○Kawasaki Heavy Industries, Ltd. × Iwatani Corporation × Shell Japan Ltd. Kobe City, Hyogo Prefecture

The CO_2-free Hydrogen Energy Supply-chain Technology Research Association (HySTRA) has successfully conducted a technology demonstration using the world's first liquid hydrogen carrier "Suiso Frontier" to transport liquid hydrogen, including hydrogen derived from brown coal, from Australia to Japan, and unload it at the liquid hydrogen cargo handling terminal "Hy touch Kobe" (Kobe City).

Japan's first commercial liquid hydrogen production plant

○Hydro Edge Co., Ltd. Sakai City, Osaka Prefecture

Hydro Edge began commercial operation in 2006 as Japan's first commercial liquid hydrogen production plant, contributing to a stable supply of liquid hydrogen in the country. Expansion work was carried out in 2020, and the plant's annual liquid hydrogen production capacity has reached 60 million m^3, making it the largest plant of its kind in Japan.

Demonstration of RE100 solutions using hydrogen

○Panasonic Corporation Kusatsu City, Shiga Prefecture

Panasonic's H2 KIBOU FIELD is a demonstration facility for "RE100 solutions", in which aiming to use 100% of the power for site operations generated from renewable resources by using a self-sustaining power system that combines 99 5-kW pure hydrogen fuel cell generators and photovoltaic generators (approx. 570 kW) as well as lithium-ion storage batteries (approx. 1.1 MWh). It has been in operation since April 15, 2022.

Hydrogen fuel cell ship in action at Expo 2025 Osaka, Kansai, Japan

○Iwatani Corporation Osaka City, Osaka Prefecture

A hydrogen fuel cell ship runs on hybrid power of electricity generated by fuel cells and plug-in power. It uses only hydrogen and oxygen from the air, and emits zero CO_2 during operation. At Expo 2025 Osaka, Kansai, Japan, the first passenger service on a hydrogen fuel cell ship in Japan is scheduled to operate (from Nakanoshima Gate to Universal City Port to the Expo 2025 venue).

Hydrogen Utilization Promotion Project

- METI-Kansai collaborates with companies, local governments, and research institutions to contribute to the promotion of a hydrogen society.

Events to promote interaction among stakeholders

－We hold events to facilitate business matching among hydrogen-related industries and promote interaction among stakeholders.

- Scene from a previous event





Expansion of the hydrogen-related industry

－We collaborate with hydrogen supplier companies and present practical utilization examples in everyday life to foster enthusiasm for the hydrogen-related industry in the Kansai region.

Support for establishing facilities

－We provide information on policies such as the Hydrogen Society Promotion Act to support the establishment of facilities related to the supply and utilization of hydrogen and other resources.

Hydrogen-Related Businesses in the Kansai Region

- METI-Kansai has created and published *Hydrogen-Related Businesses in the Kansai Region*, which introduces an overview of companies based in the Kansai region that are active in the hydrogen sector, as well as the strengths of their technologies and services.