

The KHI Group is making use of its experience and technology as one of the preeminent manufacturers of large hydrogen storage tanks and hydrogen transport vehicles in Japan to propose its “CO₂-free hydrogen concept.” This is our new energy concept oriented to the future of society.

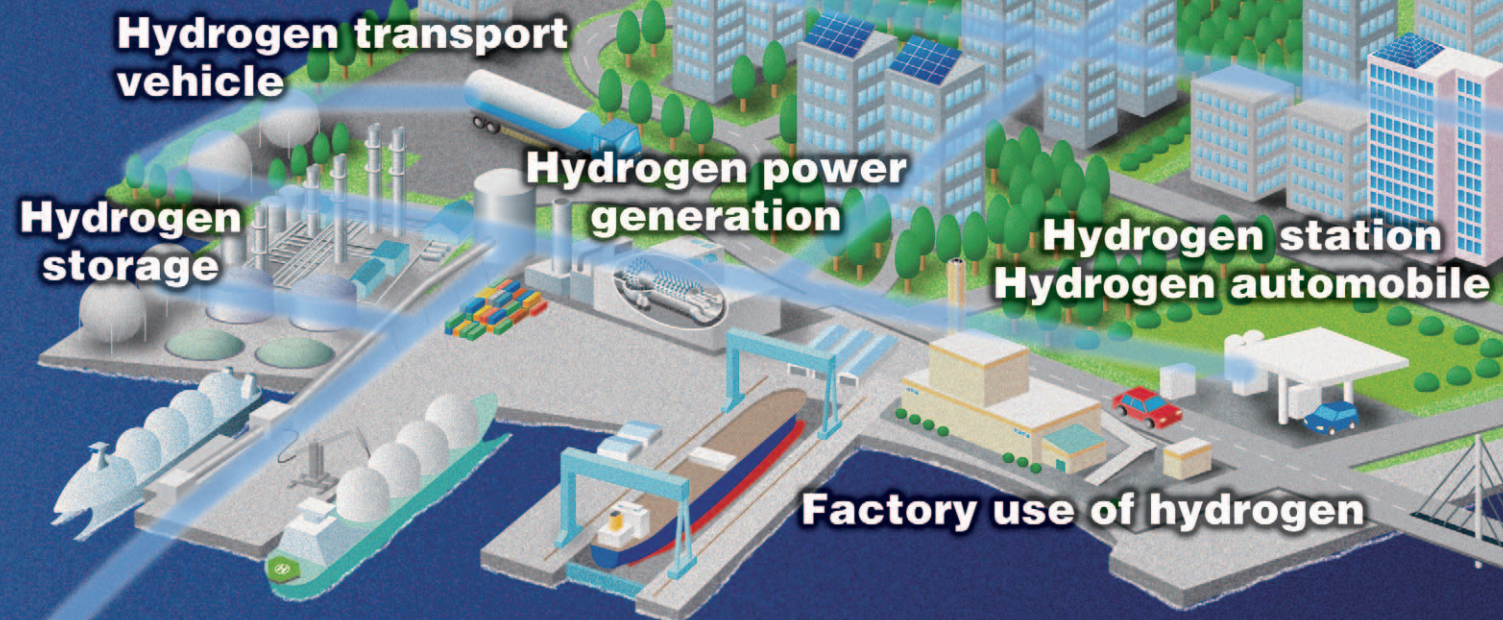
A Future for Society Created by the KHI Group

— Toward the Proposal of a “CO₂-Free Hydrogen Concept”

Looking ahead to the future of 2020 and 2030, it appears likely that worldwide energy demand will have continued increasing due to the rapid economic growth of the developing countries.

Under these circumstances, a country that is not rich in resources like Japan will have to pursue energy security while also realizing even greater CO₂ reductions in order to protect the global environment.

We are promoting one approach for resolving this situation, namely to develop CO₂-free hydrogen applications which do not emit CO₂ into the atmosphere during either produce or use.

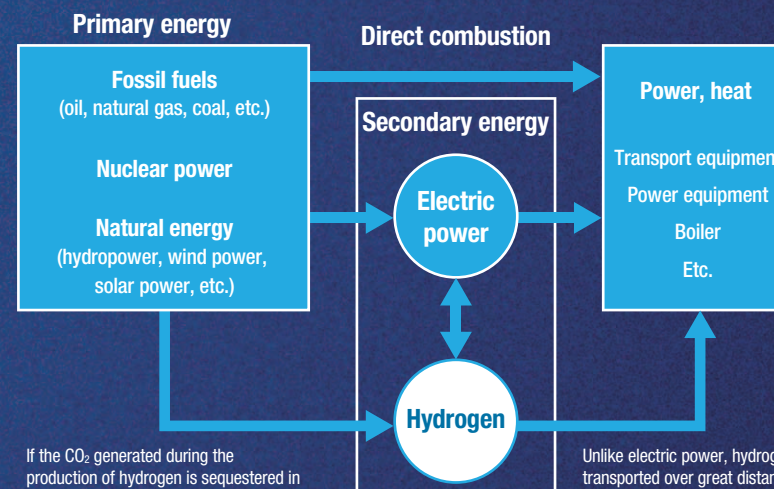


Toward the Formation of a Low-Carbon Society

On this concept, hydrogen will be made in resource-supplying countries from lignite, a low-grade coal that is hardly used. The CO₂ generated at the same time would undergo sequestration in stable geological formations of the resource-supplying countries. It is also possible to produce CO₂-free hydrogen by electrolysis of water using electricity generated by wind and solar power. The CO₂-free hydrogen obtained in this way would be transported by hydrogen transport vessels to the resource-using countries such as Japan, where it would be used for power generation and automobile fuel.

Resource-using country

Hydrogen transport vessel

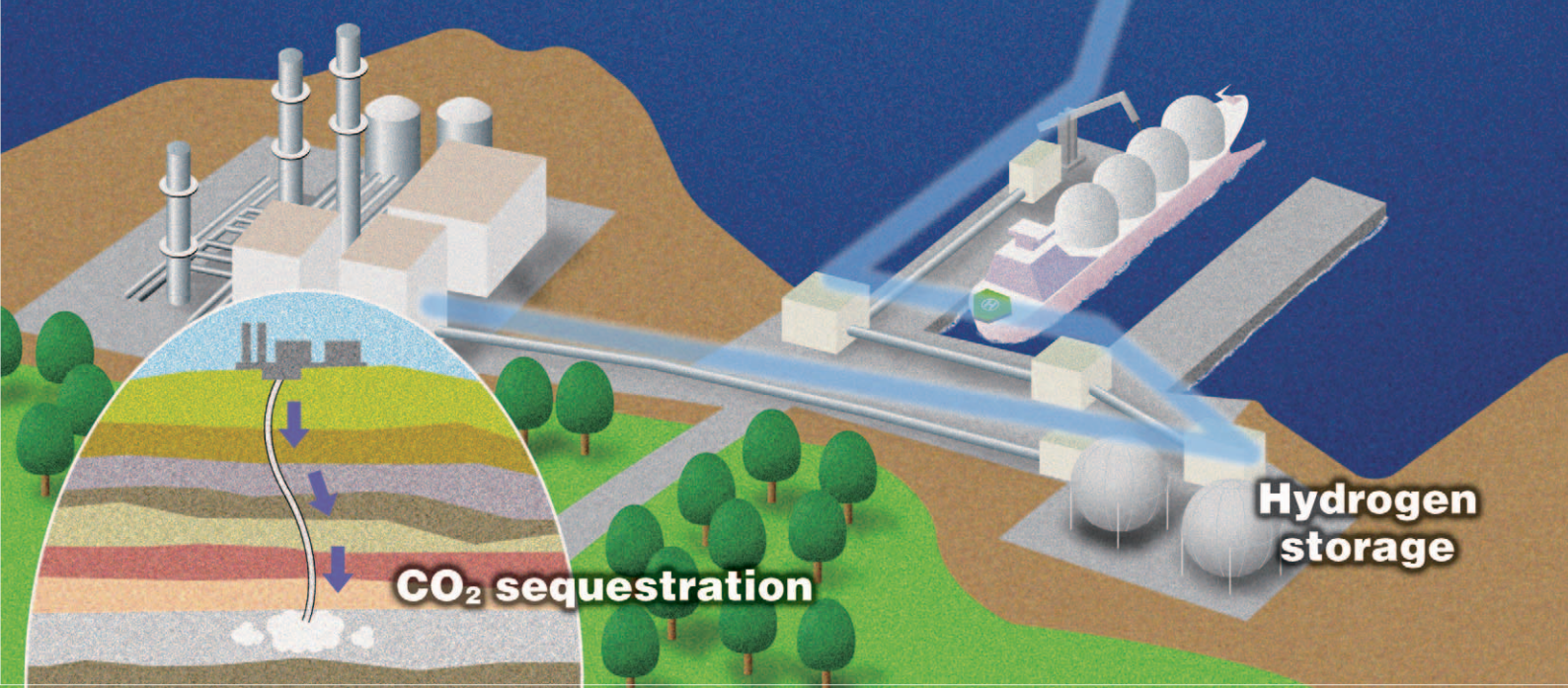


If the CO₂ generated during the production of hydrogen is sequestered in the resource-supplying country, the hydrogen can be used as a CO₂-free energy.

Unlike electric power, hydrogen can be transported over great distances with its low losses, and therefore can be used anywhere in the world.



Hydrogen production



Resource-supplying country