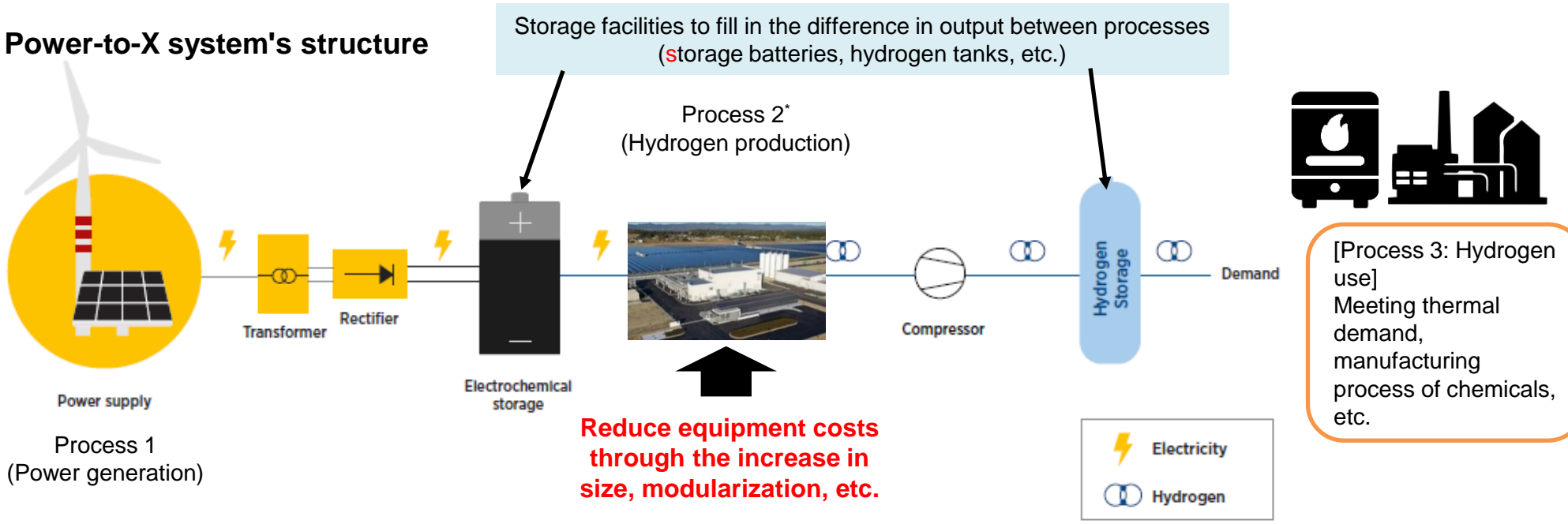


# Hydrogen Production through Water Electrolysis Using Power from Renewables

(Amount covered by the government: Up to 70 billion yen)

- Japan has one of the world's largest water electrolyzers in Fukushima, but **European countries lead** their development. Markets will be also **launched earlier in Europe and other regions where renewable energy is cheaper.**
- In order to **establish a domestic hydrogen production base** utilizing excess renewable energy and other resources, and to **gain a market share in the leading water electrolysis markets overseas**, the project will strongly support actions such as the **increase in size and modularization** of several types of water electrolyzers (alkaline electrolysis and PEM electrolysis), **the implementation of superior underlying technologies such as membranes, and the demonstration of the Power-to-X system in combination with hydrogen use. It aims to further reduce the equipment cost (as low as one-sixth of the current cost).**

## Power-to-X system's structure



In conjunction with the development of water electrolyzers, demonstration tests will be conducted in combination with the heat-related equipments such as boilers and basic chemicals manufacturing processes in order to optimize the entire system for decarbonization of the non-power sectors using renewable energy power sources, etc.

Note: Photo of the Fukushima Hydrogen Energy Research Field (image only).