

Power generation test of 100kW-class fuel cell stack

We undertake power generation tests of large-capacity fuel cell stacks that simulate actual equipment, and support our customers' stack development projects.

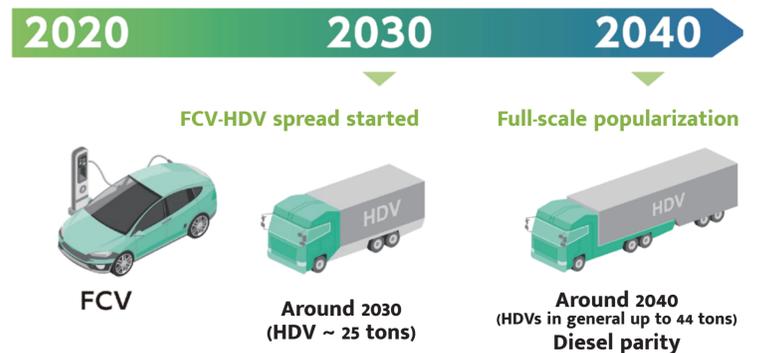
Circumstance

Expansion of fuel cell-powered mobile fleet category to large commercial mobility vehicles (HDVs)

- As the world moves toward carbon neutrality, fuel cells are expected to become increasingly widespread as a key technology for solving the global warming problem. Reducing CO₂ emissions in the transportation sector plays a particularly important role, and commercialized FCV technology is being used to expand into HDVs, primarily trucks.

Source: NEDO: Fuel Cell Roadmap for FCVs and HDVs, March 2025

- As HDVs become more widely adopted, considering the potential for larger fuel cell stacks, more detailed testing of the stacks, including the impact of heat generated by power generation, will be necessary.



Used for various applications



Source: NEDO: Hydrogen Technology Development Roadmap

Power generation test of 100kW class test equipment

Supports the development of large-capacity fuel cells with a view to HDV, supporting power generation tests up to 100kW

Introduction of 100kW-class test equipment (released in April 2014)



Equipment specifications

Item	Specification
Anode H ₂ flow rate	20~1000NLM
Anode N ₂ flow rate	5~250NLM
Cathode air flow rate	56~2800NLM
Refrigerant flow rate	20~100L/min
Gas temperature control	R.T+10~100°C
Dew point temperature control	40~90°Ctd
Refrigerant temperature control	40~80°C
Pressure control	~300kPaG
Load current	~400A

Based on the technology cultivated through the evaluation of small fuel cell stacks, the specifications are able to accommodate a wide range of conditions, including gas/refrigerant flow rate, control temperature, dew point temperature, control pressure, and load current.