### **Recognized Decarbonization Efforts**

# ■ Introduction of 6 STS Cranes with Inverter Control Systems



Cargo-handling equipment used for loading and unloading containers from ships berthed at the port.

Power output is optimized through inverter control, helping to reduce unnecessary electricity consumption.

#### ■ Conversion of 10 Yard Lighting Units to LED



Conversion to LED lighting has reduced power consumption compared to conventional sodium lamps.

## ■ Efforts to Alleviate Congestion at Terminal Gates and within Container Yards



Implementation of Hakata Port's original logistics IT system, "HiTS," has helped to ease gate congestion by allowing advance entry of cargo information and improving the management of import/export container data.

# ■ Introduction of 26 Electrified RTG Cranes



These cranes handle containers in the terminal yard. Electrification has achieved significant energy savings compared to conventional diesel-powered models.

# ■ Introduction of Port Incentive Program for Environmentally Friendly Vessels

Eligible Vessels	Incentive Details
<ul> <li>LNG-fueled vessels</li> <li>Hydrogen-fueled vessels</li> <li>Battery-powered vessels</li> <li>Ammonia-fueled vessels</li> <li>Vessels using synthetic fuels*</li> <li>(green methane, green methanol)</li> </ul>	100% discount on port dues
<ul> <li>Vessels using biofuels</li> <li>Vessels using synthetic fuels*</li> <li>(heavy fuel oil, diesel oil)</li> </ul>	Port dues discount : based on fuel mixture ratio

(Effective from April 2024)

#### **■ LNG Bunkering (Fuel Supply)**



LNG bunkering vessels enable the supply of LNG fuel to ships at Hakata Port.

<sup>\*</sup>Synthetic Fuels: Carbon-neutral fuels produced by synthesizing hydrogen  $(H_2)$  and  $CO_2$ , and reusing the emitted  $CO_2$ .