

## Nanairo Hydroelectric Power Station Increases Output Boost Achieved Through Turbine Runner Replacement

Electric Power Development Co., Ltd. (J-POWER, headquartered in Chuo-ku, Tokyo; President and CEO: Hideaki Kato) has increased the maximum output of the Nanairo Hydroelectric Power Station (Kitayama Village, Higashimuro District, Wakayama Prefecture) from 82,000 kW to 85,800 kW through the replacement of the station's turbine runner.

For this project, J-POWER introduced a new turbine runner with an optimized blade shape, developed using computer technology that simulates the three-dimensional flow of water inside the turbine. As a result, the energy conversion efficiency of the water turbine generator has been improved, enabling a 3,800 kW increase in output without altering the permitted water usage conditions, including turbine head and maximum water intake. J-POWER will deliver an even greater supply of renewable energy from the upgraded power station.

J-POWER will continue to enhance power generation efficiency through ongoing innovation and technological development, while promoting new construction at undeveloped sites and comprehensive renovation of aging core facilities. Through these efforts, the J-POWER Group is working to expand its renewable energy business and achieve carbon neutrality, as stated in [J-POWER "BLUE MISSION 2050"](#).



Nanairo Dam



Installation of water turbine runner

### 1. Overview of Nanairo Hydroelectric Power Station

Location	Kitayama Village, Higashimuro District, Wakayama Prefecture
Capacity	82,000 kW → 85,800 kW
Maximum water intake	140 m <sup>3</sup> /s
Dam	Nanairo Dam (dam length: 200.8 m; height: 60 m)
Start of operation	July 1965

### 2. Map

