

## Procurement Plan for Electric Power Facilities

(Category: Equipment and materials for hydro power stations)

(All of information of this plan are subject to change without notice. There may be cases that procurement procedure are in progress at time of release of this plan.)

NO.	Description and Specifications			Quantity	Unit	Requesting Office/Station	Month of quotation	Month of delivery	Conditions of Delivery
1	transformers for substations (500/220 kV)	Transformer (220 kV or more)	11/220 kV, 283 MVA, 87 dB, oil-guiding water-cooling type (stand-alone), normal salt resistant	1	set	Ohira Pumped Storage Power Station	Feb-2025	Apr-2027	Installation, adjustment and field test
2	distribution panel for substations	Railway tracks, on-site main transformer protection panel	Railway tracks, onsite main transformer x 1 side	1	set	Koshikano Hydro Power Station	Oct-2023	Dec-2024	Free on Truck
3	distribution panel for substations	Transformer protection panel	For 66 kV, 1 bank	1	panel	Jikumaru Hydro Power Station	Jun-2023	Apr-2024	Free on Truck
4	distribution panel for substations	Transformer protection panel	6.6/66 kV	1	panel	Chinda Hydro Power Station	Jul-2023	Aug-2024	Free on Truck
5	distribution panel for substations	Transformer protection panel	11/66 kV	1	panel	Kurokawa No.1 Hydro Power Station	Oct-2024	Sep-2025	Free on Truck
6	distribution panel for substations	Power distribution panel (on-site panel)	AC on-site panel x 1 side, DC on-site panel x 1 side	1	set	Machida No.2 Hydro Power Station	Jan-2024	Jul-2024	Free on Truck
7	distribution panel for substations	Power distribution panel (on-site panel)	AC on-site panel x 1 side, DC on-site panel x 1 side	1	set	Machida No.1 Hydro Power Station	May-2024	Nov-2024	Free on Truck
8	distribution panel for substations	Power distribution panel (on-site panel)	AC on-site panel x 1 side, DC on-site panel x 1 side	1	set	Honjogawa Hydro Power Station	Jun-2024	Jun-2025	Free on Truck
9	distribution panel for substations	Power distribution panel (on-site panel)	AC on-site panel x 1 side, DC on-site panel x 1 side	1	set	Koyamagawa Hydro Power Station	Sep-2024	Sep-2025	Free on Truck
10	distribution panel for substations	Power distribution panel (on-site panel)	AC on-site panel x 1 side, DC on-site panel x 1 side	1	set	Miyado Hydro Power Station	Sep-2024	May-2025	Free on Truck
11	Circuit breakers for substations (110/66 kV)	Circuit breaker	110 kV, 1,200 A, 20 kA, 5 cycles, general use (A), GCB	1	set	Oyodogawa No.1 Hydro Power Station	Jan-2024	Oct-2024	Free on Truck
12	Protection relay facilities for substations (110/66 kV)	66 kV DZ	66 kV, railway tracks, protection panel (51, 64, 67G, 67S)	1	panel	Shiramizutaki Hydro Power Station	Oct-2023	Oct-2024	Free on Truck
13	Protection relay facilities for substations (110/66 kV)	Transformer protective device	Transformer protection panel x 1 side	1	panel	Shiramizutaki Hydro Power Station	Oct-2023	Oct-2024	Free on Truck
14	DC power supply equipment (storage battery · battery charger)	DC power unit (storage batteries and rectifiers)	Rectifier: 30 A, storage battery: MSE (long-life type) 200 Ah x 52 cells	1	set	Machida No.2 Hydro Power Station	Dec-2023	Sep-2024	Installation and adjustment
15	DC power supply equipment (storage battery · battery charger)	DC power unit (storage batteries and rectifiers)	Rectifier: 30 A, storage battery: MSE (long-life type) 200 Ah x 52 cells	1	set	Machida No.1 Hydro Power Station	May-2024	Nov-2024	Installation and adjustment
16	DC power supply equipment (storage battery · battery charger)	DC power unit (storage batteries and rectifiers)	Thyristor type, 30 A, 210 Ah, cubicle storage	1	set	Wanigawa Hydro Power Station	May-2024	Apr-2025	Installation, adjustment and field test
17	DC power supply equipment (storage battery · battery charger)	DC power unit (storage batteries and rectifiers)	Rectifier: 30 A, storage battery: MSE (long-life type) 200 Ah x 52 cells	1	set	Miyado Hydro Power Station	Sep-2024	May-2025	Installation and adjustment
18	Equipment and materials for hydro power plants (generator)	Initial excitation circuit breaker	AC air circuit breaker (voltage: 600 V, current: 1500 A, short time current: 50 kA)	1	set	Ohira Pumped Storage Power Station	Sep-2024	Mar-2026	Free on Truck
19	Equipment and materials for hydro power plants (generator)	Generator control panel, etc.	Generator control panel (2 sides), generator protection panel (1 side), electric plant server interconnection unit (1 side), maintenance tool, etc.	1	set	Itsukigawa Hydro Power Station	Sep-2024	Mar-2026	Free on Truck
20	Equipment and materials for hydro power plants (generator)	Exciter panel	Excitation device panel (1 side)	1	set	Itsukigawa Hydro Power Station	Sep-2024	Mar-2026	Free on Truck

## Procurement Plan for Electric Power Facilities

(Category: Equipment and materials for hydro power stations)

(All of information of this plan are subject to change without notice. There may be cases that procurement procedure are in progress at time of release of this plan.)

NO.	Description and Specifications		Quantity	Unit	Requesting Office/Station	Month of quotation	Month of delivery	Conditions of Delivery	
21	equipment and materials for hydro power stations (electrical equipment)	Control center	Auxiliary equipment control center (B1 x 3 sides, B2 x 4 sides, B3 x 4 sides)	1	set	Ohira Pumped Storage Power Station	Sep-2024	Jan-2026	Completion of test
22	equipment and materials for hydro power stations (electrical equipment)	Control center	Common auxiliary equipment control center (B1 x 4 sides, B3 x 2 sides)	1	set	Ohira Pumped Storage Power Station	Jul-2024	Nov-2025	Completion of test
23	equipment and materials for hydro power stations (electrical equipment)	Portable power distribution box (7.2 kV)	7.2 kV , 1200 A , 20 kA, power distribution box (parallel CB, including existing power distribution box modifications)	1	set	Furuyashiki Hydro Power Station	Jun-2023	Feb-2024	Free on Truck
24	Equipment and materials for hydro power plants (water turbine)	Power distribution board for hydraulic turbine generator (automatic control panel, power converter panel, common ground control panel, etc.)	Automatic control panel and others: total of 50 sides	1	set	Omarugawa Pumped Storage Power Station	Apr-2025	Nov-2026	Completion of test
25	Equipment and materials for hydro power plants (water turbine)	Power distribution board for hydraulic turbine generator (automatic control board, etc.)	Automatic control panel and others: total of 21 sides	1	set	Omarugawa Pumped Storage Power Station	Apr-2026	Nov-2027	Completion of test
26	Equipment and materials for hydro power plants (water turbine)	Overhaul and repair components for Unit 1 pump hydraulic turbine generator motors	Pump-turbine, generator-motor, auxiliaries and other overhaul components, etc.	1	set	Ohira Pumped Storage Power Station	Jun-2024	Jan-2025	Adjustment
27	Equipment and materials for hydro power plants (water turbine)	Overhaul and repair components for Unit 2 pump hydraulic turbine generator motors	Pump-turbine, generator-motor, auxiliaries and other overhaul components, etc.	1	set	Ohira Pumped Storage Power Station	Apr-2025	Nov-2025	Adjustment
28	Equipment and materials for hydro power plants (water turbine)	Parts for overhaul and repair of hydraulic turbine generator	Parts for overhaul and repair of hydraulic turbine generator	1	set	Itsukigawa Hydro Power Station	Sep-2024	Jan-2026	Delivery
29	Equipment and materials for hydro power plants (water turbine)	Electric servo control panel	Electric servo control panel (1 side)	1	set	Itsukigawa Hydro Power Station	Sep-2024	Mar-2026	Free on Truck
30	Equipment and materials for hydro power plants (other equipment)	Flash board material, suspension device	Flash board material: 9 m high x 10.6 m wide, hanging devices x 2 units	1	set	Shinohara Hydro Power Station Takeda Hydro Power Station	Jun-2023	Mar-2024	Installation, adjustment and field test
31	Equipment and materials for hydro power plants (other equipment)	Steel shutter gate, 1 gate	3.0 m high x 22 m wide, 1 gate	1	set	Migita Hydro Power Station	Apr-2024	Sep-2027	Installation and adjustment
32	Equipment and materials for hydro power plants (other equipment)	Scour outlet and lifting machine, 1 gate	2.0 m high x 2.0 m wide, 1 gate	1	set	Migita Hydro Power Station	Apr-2024	Sep-2027	Installation and adjustment
33	Equipment and materials for hydro power plants (other equipment)	Scour outlet and lifting machine, 1 gate	3.9 m high x 2.37 m wide, 1 gate	1	set	Migita Hydro Power Station	Jul-2023	Nov-2024	Installation and adjustment
34	Equipment and materials for hydro power plants (other equipment)	Oil cooler	Cooling capacity: 3760 kW (470 kW x 8 units)	1	set	Ohira Pumped Storage Power Station	Dec-2023	Feb-2025	Completion of test
35	Equipment and materials for hydro power plants (other equipment)	Feed water pump	Feed water pump (total pump head: 46 m, discharge amount: 24 m <sup>3</sup> /min, output: 230 kW, voltage: 440 V)	1	set	Ohira Pumped Storage Power Station	Dec-2023	Feb-2025	Free on Truck
36	Equipment and materials for hydro power plants (other equipment)	Feed water pump	Feed water pump (total pump head: 27 m, discharge amount: 26 m <sup>3</sup> /min, output: 150 kW, voltage: 440 V)	1	set	Ohira Pumped Storage Power Station	Sep-2024	Feb-2026	Free on Truck
37	remote monitoring and control system	Electric power station server	Input/output rack x 1 side, tandem system: Myouken PS slave station	1	set	Koshikano Hydro Power Station	Oct-2023	Dec-2024	Completion of test
38	remote monitoring and control system	Electric power station server	Input/output rack x 1 side, tandem system: Honjogawa PS slave station	1	set	Koyamagawa Hydro Power Station	Sep-2024	Sep-2025	Completion of test
39	remote monitoring and control system	Electric power station server	IP, server rack: 1 side, Input/output rack: 1 side, control: 30 POS, display: 180 POS, tandem type: master station	1	set	Jikumaru Hydro Power Station	Dec-2023	Aug-2024	Completion of test
40	remote monitoring and control system	Electric power station server	IP, server rack: 1 side, Input/output rack: 1 side, control: 30 POS, display: 180 POS, tandem type: master station	1	set	Kurokawa No.1 Hydro Power Station	Oct-2024	Oct-2025	Completion of test

## Procurement Plan for Electric Power Facilities

(Category: Equipment and materials for hydro power stations)

(All of information of this plan are subject to change without notice. There may be cases that procurement procedure are in progress at time of release of this plan.)

NO.	Description and Specifications			Quantity	Unit	Requesting Office/Station	Month of quotation	Month of delivery	Conditions of Delivery
41	remote monitoring and control system	Electric power station server	IP, I/O rack: 1 side, control: 30 POS, display: 180 POS, tandem connection system (slave station)	1	set	Chinda Hydro Power Station	Feb-2024	Nov-2024	Completion of test
42	remote monitoring and control system	Electric power station server	Tandem master station, server rack x 1 side	1	set	Tamukae Hydro Power Station	Jun-2023	Jun-2024	Installation, adjustment and field test
43	Miscellaneous power cables	Power cable	11 kV, CV 400 mm2, 3C, flame-retardant, ant-proof, including terminal processing material	200	m	Jikumaru Hydro Power Station	Feb-2024	Aug-2024	Delivery
44	Miscellaneous power cables	Power cable	11 kV, CV 38 mm2, 1C, flame-retardant, ant-proof, including terminal processing material	30	m	Jikumaru Hydro Power Station	Feb-2024	Aug-2024	Delivery
45	Miscellaneous power cables	Power cable	11 kV, CV 800 mm2, 6C, flame-retardant, ant-proof, including terminal processing material	300	m	Kurokawa No.1 Hydro Power Station	Mar-2025	Mar-2026	Delivery
46	Miscellaneous power cables	Power cable	11 kV, CV 38 mm2, 1C, flame-retardant, ant-proof, including terminal processing material	30	m	Kurokawa No.1 Hydro Power Station	Mar-2025	Mar-2026	Delivery
47	Miscellaneous power cables	Power cable	6.6 kV, CV 600 mm2, 3C, flame-retardant, ant-proof, including terminal processing material	200	m	Chinda Hydro Power Station	May-2024	Nov-2024	Delivery
48	Miscellaneous power cables	Power cable	6.6 kV, CV 38 mm2, 1C, flame-retardant, ant-proof, including terminal processing material	30	m	Chinda Hydro Power Station	May-2024	Nov-2024	Delivery
49	Miscellaneous power cables	Power cable	6.6 kV, CV 100 mm2 x 1C, flame-retardant, ant-proof, including terminal treatment materials	450	m	Yokono Hydro Power Station	Jun-2023	Jan-2024	Delivery
50	Miscellaneous power cables	Power cable	6.6 kV, CV 325 mm2 x 1C, flame-retardant, ant-proof, including terminal treatment materials	350	m	Shiramizutaki Hydro Power Station	Dec-2023	Sep-2024	Delivery
51	Miscellaneous power cables	Power cable	6.6 kV, CV 14 mm2 x 1C, flame-retardant, ant-proof, including terminal treatment materials	150	m	Otsuka Hydro Power Station	Jun-2023	Jan-2024	Delivery
52	Miscellaneous power cables	6 kV power cable and accessories	6 kV, CVT, 100 sq, flame-retardant, ant-proof, with water shielding layers, including 1 set of terminal treatment materials	100	m	Ozeki Hydro Power Station	Aug-2023	Jan-2024	Delivery
53	Miscellaneous power cables	6.6 kV power cable	6 kV, CVT 38 mm2, flame-retardant, ant-proof x 1C	150	m	Suzaki Hydro Power Station	Aug-2023	Jan-2025	Delivery
54	Miscellaneous power cables	6.6 kV power cable	6 kV, CVT 38 mm2, flame-retardant, ant-proof x 1C	50	m	Suzaki Hydro Power Station	Aug-2023	Jan-2025	Delivery
55	Miscellaneous power cables	11 kV power cable	11 kV, CV 250 mm2, flame-retardant, ant-proof x 1C	200	m	Machida No.2 Hydro Power Station	Oct-2023	Jul-2024	Delivery
56	steel structure	Overall renewal work of Kurokawa Daiichi Power Station	66 kV, standard angle 6t	1	set	Kurokawa No.1 Hydro Power Station	Jan-2025	Sep-2025	Delivery
57	physical and chemical appliance	Turbidimeter (barge type automatic turbidimeter or cableway type automatic turbidimeter)	Turbidimeter, equivalent to the model MAS-011-3	1	set	Hitotsuse Hydro Power Station	May-2024	Mar-2025	Installation, adjustment and field test
58	physical and chemical appliance	Turbidimeter (fixed automatic turbidimeter)	Turbidimeter, equivalent to the model MA-955D	1	set	Hitotsuse Hydro Power Station	May-2024	Mar-2025	Installation, adjustment and field test
59	physical and chemical appliance	Turbidimeter (cableway type automatic turbidimeter)	Relocation of turbidimeter (the trestle and sensor section are used as much as possible.), construction of foundation of cableway type turbidimeter (5 m x 5 m x 5 m scale)	1	set	Hitotsuse Hydro Power Station	May-2024	Mar-2025	Installation, adjustment and field test
60	bridges	Bridge	Form: truss bridge, extension: 34 m, width: 1.2 m	1	set	Nanukigawa Hydro Power Station	Sep-2023	2024/03	Installation and adjustment