

The Chugoku Electric Power Co., Inc.

Main Material/Equipment Procurement Plan

(FY 2019)

Related to Power Sources and Retails Sales Business

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The Chugoku Electric Power Co., Inc. Main Material/Equipment Procurement Plan(FY 2019)Related to Power Sources and Retails Sales Business

[Article purchasing] 205 item(s)

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General material/equipment (21 item(s))

No	Facilities Classification	Item Name	Article Name/Construction Name/Work Task Name	Qty.	Unit	Delivery/Construction/ Implementation Locations	Scheduled Procurement Date	Delivery Deadline	Contract Group (Scheduled)
1	Industrial chemicals and oils/greases	Turbine oil	Unit 2 turbine oil (FBKSH32: 35 kL, FBKSH68: 8 kL; For precision inspection of pump-turbine generator-motor; Replacement)	43	kL	Matanogawa Power Station	201904	201908	Corporate Finance and Procurement Div. (Materials and equipment procurement)
2	Industrial chemicals and oils/greases	Turbine oil	Unit 1 turbine oil (Shell Turbo J32)	42	kL	Shin-Onoda Power Station	202002	202004	
3	Industrial chemicals and oils/greases	Other oils/greases	Unit 3 special heavy oil A (JIS K2205 Type 1, No. 1; For auxiliary boiler fuel)	200	kL	Shimane Nuclear Power Station	201904	201906	
4	Industrial chemicals and oils/greases	Other oils/greases	Special heavy oil A (JIS K2205 Type 1, No. 1)	600	kL	Shimane Nuclear Power Station	201904	201906	
5	Industrial chemicals and oils/greases	Other oils/greases	Light oil for gas turbine generator	500	about kL	Shimane Nuclear Power Station	201909	201910	
6	Industrial chemicals and oils/greases	Other oils/greases	Unit 3 special heavy oil A (JIS K2205 Type 1, No. 1; For auxiliary boiler fuel)	200	kL	Shimane Nuclear Power Station	201910	201912	
7	Industrial chemicals and oils/greases	Other oils/greases	Special heavy oil A (JIS K2205 Type 1, No. 1)	600	kL	Shimane Nuclear Power Station	201910	201912	
8	Industrial chemicals and oils/greases	Other oils/greases	Special heavy oil A (JIS K2205 Type 1, No. 1)	700	kL	Shimane Nuclear Power Station	201912	202002	
9	Industrial chemicals and oils/greases	Other oils/greases	Special heavy oil A (JIS K2205 Type 1, No. 1)	600	kL	Shimane Nuclear Power Station	202002	202004	
10	Industrial chemicals and oils/greases	Industrial chemicals (ammonia)	Liquefied ammonia (Purity: 99.8% or more; Sea transport)	1	Set	Misumi Power Station	201904	202003	
11	Industrial chemicals and oils/greases	Industrial chemicals (ammonia)	Liquefied ammonia (Purity: 99.8% or more; Overland transport)	1	Set	Misumi Power Station	201904	202003	
12	Industrial chemicals and oils/greases	Industrial chemicals (ammonia)	Liquid ammonia (Direct shipment)	1	Set	Mizushima Power Station	201904	202003	
13	Industrial chemicals and oils/greases	Industrial chemicals (ammonia)	Liquid ammonia (Overland transport)	1	Set	Mizushima Power Station	201904	202003	
14	Industrial chemicals and oils/greases	Industrial chemicals (concentrated sulfuric acid)	Concentrated sulfuric acid	1	Set	Mizushima Power Station	201904	202003	
15	Industrial chemicals and oils/greases	Other industrial chemicals	Sodium hydroxide (45%)	1	Set	Mizushima Power Station	201904	202003	
16	Wires/Cables	6-kV power cable	Power cable (CVT 600 sq, CVT60 sq., CVT 38 sq; For switchgear replacement)	450	m	Shin-Kawahira Power Station	201909	202101	
17	Wires/Cables	6-kV power cable		450	m	Shin-Kawahira Power Station	201909	202101	
18	Wires/Cables	Power cable (Included with works)	220 kV, CAZV 2,000 sq (1C, 3-phase, 2 sections/phase; For tunnel laying of Unit 2 extra-high voltage CV cable; Between outdoor switching station and main transformer)	4,350	m	Misumi Power Station Construction Site	201905	202211	
19	consumables and misc. items	OA equipment/Software	Expansion of NSC multi-personal computers (Windows 7 desktop personal computer with display) (Information System & Telecommunications Div.)	59	Unit	Location specified by Chugoku Electric (Hiroshima Pref., etc.)	201912	202002	
20	consumables and misc. items	OA equipment/Software	Microsoft Enterprise Agreement (OS licenses for use with general office OA personal computers and similar, and licenses for using desktop virtual environment VDA: Planning an agreement based on volume license program applied to Microsoft products (Enterprise Agreement)) (Information System & Telecommunications Div.)	about 13,520	license	Location specified by Chugoku Electric (Hiroshima Pref.)	201912	FY2019	
21	consumables and misc. items	Furnitures/Tools	Relocation and equipment upgrade (furnitures) of Emergency Disaster Prevention Office due to legal separation (33 desks, 66 chairs, 6 storage sheds, etc. for each team) (Regional Relations Div.)	1	Set	Headquarters	201910	202001	

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Thermal power/nuclear power equipment(123item(s))

No.	Facilities Classification	Item Name	Article Name/Construction Name/Work Task Name	Qty.	Unit	Delivery/Construction/ Implementation Locations	Scheduled Procurement Date	Delivery Deadline	Contract Group (Scheduled)
1	Thermal power equipment	Coal and petroleum-related equipment	Unit 1 F coal pulverizer mill roller journal bearing (top and bottom tapered roller bearings; For wear inspection and repair works of rollers (FY 2020))	1	Set	Misumi Power Station	201904	202006	Corporate Finance and Procurement Div. (Power source equipment procurement)
2	Thermal power equipment	Thermal power stations: Operations including assistance for routine civil-engineering-related inspection (FY 2019: Measurement of electric potential, etc. at 9 power stations)	A-System vacuum transport piping (For replacement and ash treatment)	1	Set	Misumi Power Station	201906	201912	
3	Thermal power equipment	Coal and petroleum-related equipment	A storage silo pressure feed blower (Replacement for ash treatment of part with same performance as LIF-345: Air flow rate: 135 m ³ /min; Discharge pressure: 90.22 kPa)	1	Unit	Matanogawa Power Station	201906	201912	
4	Thermal power equipment	Coal and petroleum-related equipment	Unit 1 turbine oil (Shell Turbo J32)	1	Set	Misumi Power Station	201911	202011	
5	Thermal power equipment	Coal and petroleum-related equipment	Disassembled parts of Unit 1 B coal pulverizer mill roller journal bearing (Bolts and other fixing hardware, shims, protectors; For wear inspection and repair works of rollers (FY 2020))	1	Set	Shimane Nuclear Power Station	201911	202011	
6	Thermal power equipment	Coal and petroleum-related equipment	Inspection/Repair of Unit 1 B coal pulverizer mill roller wear (FY 2020)	1	Set	Shimane Nuclear Power Station	201911	202103	
7	Thermal power equipment	Coal and petroleum-related equipment	Clinker crusher parts (For heavy-load period pre-inspection of Unit 1 boiler facilities of ash handling equipment)	1	Set	Shimane Nuclear Power Station	201912	202004	
8	Thermal power equipment	Coal and petroleum-related equipment	Ash treatment pump factory repair (Disassembled inspection, maintenance, parts replacement)	1	Set	Shimane Nuclear Power Station	201904	202006	
9	Thermal power equipment	Coal and petroleum-related equipment	Hopper for coal yard C pile emergency (Installed to east side of C pile)	1	Set	Shimane Nuclear Power Station	201907	201912	
10	Thermal power equipment	Coal and petroleum-related equipment	Corridor for 1 DS gypsum separator inspection (Installed in between Unit 1 and 2 gypsum separators)	1	Set	Shin-Onoda Power Station	201908	201912	
11	Thermal power equipment	Coal and petroleum-related equipment	Unit 1 journal roller factory repair (For periodic repair works of pulverized coal combustor (1st half of FY 2020))	1	Set	Shimonoseki Power Station	201909	202004	
12	Thermal power equipment	Coal and petroleum-related equipment	Unit 1 bull rings, etc. (Periodic repair works of pulverized coal combustor (1st half of FY 2020))	1	Set	Shimonoseki Power Station	201909	202004	
13	Thermal power equipment	Coal and petroleum-related equipment	Unit 1 ash handling equipment parts (For intermediate inspection and construction work of clinker crusher cam segments, collection cyclone damper sheet, damper sheets for automatic switching valves, etc. (3rd inspection))	1	Set	Shin-Onoda Power Station	201909	202005	
14	Thermal power equipment	Coal and petroleum-related equipment	Unit 1 journal roller factory repair (For periodic repair works of pulverized coal combustor (2nd half of FY 2020))	1	Set	Shimonoseki Power Station	201909	202011	
15	Thermal power equipment	Coal and petroleum-related equipment	Unit 1 bull rings, etc. (Periodic repair works of pulverized coal combustor (2nd half of FY 2020))	1	Set	Shimonoseki Power Station	201909	202011	
16	Thermal power equipment	Coal and petroleum-related equipment	Ash gate sheet (Sheet MH1-037, gate seat sheet, and gate liner for clinker hopper ash gate)	1	Set	Shin-Onoda Power Station	201911	202006	
17	Thermal power equipment	Coal and petroleum-related equipment	Reducer factory repairs (For inspection works (mechanical) of coal unloading equipment)	1	Set	Shin-Onoda Power Station	201912	202006	
18	Thermal power equipment	Smoke exhaust treatment equipment	Parts for common desulfurization dehydrator (For first inspection works (FY 2020))	1	Set	Misumi Power Station	201908	202006	
19	Thermal power equipment	Smoke exhaust treatment equipment	Soot blower for Unit 1 desulfurization GGH reheater	1	Set	Misumi Power Station	202001	202107	
20	Thermal power equipment	Smoke exhaust treatment equipment	Top casing for 1DS A absorption tower inlet damper	1	Set	Shin-Onoda Power Station	201908	202004	

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21	Thermal power equipment	Smoke exhaust treatment equipment	Rapping device parts for Unit 1 electrostatic precipitator (Rapping hammer and hinge bolts for repair works)	1	Set	Shin-Onoda Power Station	201909	202004	Corporate Finance and Procurement Div. (Power source equipment procurement)
22	Thermal power equipment	Gas turbines	Shaft 1-2 GT tensioner bolts (For repair works)	1	Set	Yanai Power Station	201904	201911	
23	Thermal power equipment	Gas turbines	Tensioner equipment for disassembly/assembly of Unit 1 system gas turbine casing	1	Set	Yanai Power Station	201904	201911	
24	Thermal power equipment	Gas turbines	Unit 1 system GT 1st stage moving blade repair (G1, TBC re-coating)	1	Set	Yanai Power Station	201904	202009	
25	Thermal power equipment	Gas turbines	Unit 1 system GT 3rd stage moving blade (Due to discontinuance of Groups B2 and B1)	1	Set	Yanai Power Station	201904	202009	Corporate Finance and Procurement Div. (Power source equipment procurement)
26	Thermal power equipment	Gas turbines	Unit 1 system GT F1 cone repair (G1, TBC re-coating)	1	Set	Yanai Power Station	201904	202104	
27	Thermal power equipment	Gas turbines	Shaft 1-1 GT combustor parts repair	1	Set	Yanai Power Station	201905	201908	
28	Thermal power equipment	Gas turbines	Unit 2 system combustor repair (Transition piece and antechamber repair)	1	Set	Yanai Power Station	201905	201908	
29	Thermal power equipment	Gas turbines	Unit 2 system combustor repair (Transition piece and antechamber repair)	1	Set	Yanai Power Station	201905	201908	
30	Thermal power equipment	Gas turbines	Unit 1 system GT 1st stage stationary blade inspection (A1; Deterioration inspection)	1	Set	Yanai Power Station	201905	201909	
31	Thermal power equipment	Gas turbines	Unit 1 system GT primary air filter (For replacement and repair works)	1	Set	Yanai Power Station	201905	201910	
32	Thermal power equipment	Gas turbines	Unit 2 system GT primary air filter (For repair works)	1	Set	Yanai Power Station	201905	201912	
33	Thermal power equipment	Gas turbines	Unit 2 system 1st stage stationary blade repair (F2; 1st time)	1	Set	Yanai Power Station	201905	202003	
34	Thermal power equipment	Gas turbines	Unit 1 system GT 1st stage stationary blade (Due to discontinuance of Groups D2 and D1)	1	Set	Yanai Power Station	201905	202009	
35	Thermal power equipment	Gas turbines	Unit 2 system GT swirl vane (Due to discontinuance of Groups N2 and N1)	1	Set	Yanai Power Station	201905	202011	
36	Thermal power equipment	Gas turbines	Unit 2 system inner cylinder cone (Due to discontinuance of Groups N2 and N1)	1	Set	Yanai Power Station	201905	202011	
37	Thermal power equipment	Gas turbines	Unit 1 system transition piece repair (J1; Reinforcement of inner circumference on flow sleeve outlet; Machining and repair of flow sleeve integrated type, etc.)	1	Set	Yanai Power Station	201905	202101	
38	Thermal power equipment	Gas turbines	Unit 2 system GT transition piece (Due to discontinuance of Groups D4 and D3)	1	Set	Yanai Power Station	201905	202105	
39	Thermal power equipment	Gas turbines	Unit 1 system GT F1 cone repair (E1, TBC re-coating)	1	Set	Yanai Power Station	201905	202106	
40	Thermal power equipment	Gas turbines	Shaft 1-5 GT tensioner bolts (For repair works)	1	Set	Yanai Power Station	201906	202002	
41	Thermal power equipment	Gas turbines	Unit 1 system GT swirl vane (Due to discontinuance of Groups I2 and I1)	1	Set	Yanai Power Station	201907	202101	
42	Thermal power equipment	Gas turbines	Unit 1 system GT liner (Due to discontinuance of Groups G2 and G1)	1	Set	Yanai Power Station	201907	202101	
43	Thermal power equipment	Gas turbines	Unit 1 system GT 1st stage stationary blade (Due to discontinuance of Groups C2 and C1)	1	Set	Yanai Power Station	201907	202101	
44	Thermal power equipment	Gas turbines	Unit 1 system GT 1st stage internal/external shrouds (Due to discontinuance of Groups F2 and F1)	1	Set	Yanai Power Station	201907	202101	

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45	Thermal power equipment	Gas turbines	Unit 1 system GT 2nd stage moving blade (Due to discontinuance of Groups F2 and F1)	1	Set	Yanai Power Station	201907	202101	Corporate Finance and Procurement Div. (Power source equipment procurement)
46	Thermal power equipment	Gas turbines	Unit 1 system GT 3rd stage stationary blade (Due to discontinuance of Groups B2 and B1)	1	Set	Yanai Power Station	201907	202101	
47	Thermal power equipment	Gas turbines	Unit 1 system GT 3rd stage moving blade (Due to discontinuance of Groups F2 and F1)	1	Set	Yanai Power Station	201907	202101	
48	Thermal power equipment	Gas turbines	Unit 2 system GT swirl vane (Due to discontinuance of Groups M2 and M1)	1	Set	Yanai Power Station	201909	202003	
49	Thermal power equipment	Gas turbines	Shaft 1-4 GT tensioner bolts (For repair works)	1	Set	Yanai Power Station	201909	202005	
50	Thermal power equipment	Gas turbines	Shaft 2-2 secondary and tertiary GT air filters (For 14th routine inspection works)	1	Set	Yanai Power Station	201909	202005	Corporate Finance and Procurement Div. (Power source equipment procurement)
51	Thermal power equipment	Gas turbines	Parts for Shaft 2-2 GT combustor inspection (For 14th routine inspection works)	1	Set	Yanai Power Station	201909	202005	
52	Thermal power equipment	Gas turbines	Unit 2 system 3rd stage stationary blade (Due to discontinuance of Groups C2 and C1)	1	Set	Yanai Power Station	201909	202103	
53	Thermal power equipment	Gas turbines	Unit 2 system antechamber (Due to discontinuance of Groups R2 and R1)	1	Set	Yanai Power Station	201909	202103	
54	Thermal power equipment	Gas turbines	Unit 2 system combustor repair (Transition piece and antechamber repair)	1	Set	Yanai Power Station	201910	202006	
55	Thermal power equipment	Gas turbines	Unit 1 system GT liner (Due to discontinuance of Groups I2 and I1)	1	Set	Yanai Power Station	201910	202104	
56	Thermal power equipment	Gas turbines	Unit 1 system GT 1st stage moving blade (Due to discontinuance of Groups F2 and F1)	1	Set	Yanai Power Station	201910	202104	
57	Thermal power equipment	Gas turbines	Unit 2 system antechamber (Due to discontinuance of Groups S2 and S1)	1	Set	Yanai Power Station	201910	202105	
58	Thermal power equipment	Gas turbines	Unit 2 system combustor repair (Transition piece and antechamber repair)	1	Set	Yanai Power Station	201911	202003	
59	Thermal power equipment	Gas turbines	Unit 2 system GT swirl vane (Due to discontinuance of Groups R2 and R1)	1	Set	Yanai Power Station	201911	202105	
60	Thermal power equipment	Gas turbines	Unit 2 system inner cylinder cone (Due to discontinuance of Groups R2 and R1)	1	Set	Yanai Power Station	201911	202105	
61	Thermal power equipment	Gas turbines	Shaft 1-2 GT combustor parts repair	1	Set	Yanai Power Station	201912	202003	
62	Thermal power equipment	Gas turbines	Unit 1 system GT 2nd stage moving blade inspection (D1; Deterioration inspection)	1	Set	Yanai Power Station	201912	202004	
63	Thermal power equipment	Gas turbines	Parts for Shaft 2-3 GT combustor inspection (For inspection works (FY 2020))	1	Set	Yanai Power Station	201912	202007	
64	Thermal power equipment	Gas turbines	Unit 1 system GT balance plate (Due to discontinuance of Groups B2 and B1)	1	Set	Yanai Power Station	201912	202106	
65	Thermal power equipment	Gas turbines	Unit 1 system GT 1st stage moving blade (Due to discontinuance of Groups A2 and A1)	1	Set	Yanai Power Station	201912	202106	
66	Thermal power equipment	Gas turbines	Unit 2 system GT and combustor accessory parts (Accessory parts of transition piece and stationary blade)	1	Set	Yanai Power Station	202001	202006	
67	Thermal power equipment	Gas turbines	Shaft 1-6 GT tensioner bolts (For repair works)	1	Set	Yanai Power Station	202001	202009	
68	Thermal power equipment	Gas turbines	Shaft 2-1 secondary and tertiary GT air filters (For 14th routine inspection works)	1	Set	Yanai Power Station	202001	202009	

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69	Thermal power equipment	Gas turbines	Parts for Shaft 2-1 GT combustor inspection (For 14th routine inspection works)	1	Set	Yanai Power Station	202001	202009	Corporate Finance and Procurement Div. (Power source equipment procurement)
70	Thermal power equipment	Gas turbines	Unit 1 system GT F1 cone repair (F1; TBC re-coating)	1	Set	Yanai Power Station	202001	202112	
71	Thermal power equipment	Gas turbines	Unit 1 system transition piece (K1)	1	Set	Yanai Power Station	202002	202002	
72	Thermal power equipment	Gas turbines	Unit 2 system GT swirl vane (Due to discontinuance of Groups S2 and S1)	1	Set	Yanai Power Station	202002	202108	
73	Thermal power equipment	Gas turbines	Unit 2 system inner cylinder cone (Due to discontinuance of Groups S2 and S1)	1	Set	Yanai Power Station	202002	202108	
74	Thermal power equipment	Gas turbines	Unit 2 system GT transition piece (Due to discontinuance of Groups E4 and E3)	1	Set	Yanai Power Station	202002	202202	
75	Thermal power equipment	Gas turbines	Shaft 1-5 GT combustor parts repair	1	Set	Yanai Power Station	202003	202006	
76	Thermal power equipment	Gas turbines	Shaft 1-6 secondary and tertiary GT air filters (For 14th routine inspection works (BTG))	1	Set	Yanai Power Station	202003	202012	Corporate Finance and Procurement Div. (Power source equipment procurement)
77	Thermal power equipment	Gas turbines	Unit 2 system 2nd stage external shroud (Due to discontinuance of Groups C4 and C3)	1	Set	Yanai Power Station	202003	202103	
78	Thermal power equipment	Gas turbines	Unit 2 system GT 3rd stage shroud (Due to discontinuance of Groups C3 and C2)	1	Set	Yanai Power Station	202003	202103	
79	Thermal power equipment	Gas turbines	Unit 2 system GT 1st stage moving blade (Due to discontinuance of Groups E3 and E2)	1	Set	Yanai Power Station	202003	202109	
80	Thermal power equipment	Gas turbines	Unit 2 system antechamber (Due to discontinuance of Groups N3 and N2)	1	Set	Yanai Power Station	202003	202109	
81	Thermal power equipment	Gas turbines	Unit 2 system antechamber (Due to discontinuance of Groups P2 and P1)	1	Set	Yanai Power Station	202003	202109	
82	Thermal power equipment	Element purchase	Unit 1 boiler air pre-heater intermediate temperature element (Intermediate temperature element basket and basket lifting lugs for repair works)	1	Set	Shin-Onoda Power Station	201906	202006	
83	Thermal power equipment	Generators (Motors): Insulation aging repair	Insulation aging repair of Unit 1 high-voltage motor (Stator coil, 2 C-condensate pumps, Shaft C cooling water pump)	1	Set	Shin-Onoda Power Station	201908	202006	
84	Thermal power equipment	Pumps	Unit 3 A and B - stator cooling water pump (For repair works)	1	Set	Mizushima Power Station	201908	202009	
85	Thermal power equipment	Pumps	Unit 1 chemical injection pump (Hydrazine injection pump (Discharge rate: 0.2 L/min; Discharge pressure: 0.98 MPa); Shaft cooling water hydrazine injection pump (Discharge rate: 1.33 L/min; Discharge pressure: 1.47 MPa); Ammonia injection pump (0.55 L/min; Discharge pressure: 0.98 MPa); Common injection pump (0.55 L/min; Discharge pressure: 0.98 MPa))	4	Unit	Yanai Power Station	201911	202007	
86	Thermal power equipment	Measurement control system	Coal silo gas detection equipment (129 gas concentration detectors (CO: 51 units; CH4: 39 units; O2 gas: 39 units); Gas concentration meter sequencer: 1 unit)	1	Set	Misumi Power Station	201904	201909	
87	Thermal power equipment	Measurement control system	Outlet residual chlorine meter and inlet/outlet thermometer (For Unit 2 construction works)	1	Set	Misumi Power Station Construction Site	201909	202109	
88	Thermal power equipment	Measurement control system	Unit 3 stack inlet gas analyzer (For replacement works)	1	Set	Mizushima Power Station	201906	202009	
89	Thermal power equipment	Measurement control system	Drainage treatment nitrogen, phosphorous, and COD measuring equipment (For replacement works)	1	Set	Mizushima Power Station	201912	202009	
90	Thermal power equipment	Measurement control system	LNG equipment transmitter (For repair works (FY 2019))	1	Set	Yanai Power Station	201907	202001	

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91	Thermal power equipment	Measurement control system	Unit 1 bunker level indicator (For repair works)	1	Set	Shin-Onoda Power Station	201909	202005	Corporate Finance and Procurement Div. (Power source equipment procurement)
92	Thermal power equipment	Measurement control system	Unit 1 sampling rack dissolved oxygen meter (For repair works)	1	Set	Shin-Onoda Power Station	201909	202005	Corporate Finance and Procurement Div. (Power source equipment procurement)
93	Thermal power equipment	Measurement control system	Unit 1 sampling rack pneumatic control valve (For repair works)	1	Set	Shin-Onoda Power Station	201910	202005	
94	Thermal power equipment	Measurement control system	Unit 1 coal conveyor temperature monitor sensor (For installation works)	1	Set	Shimonoseki Power Station	201911	202008	
95	Thermal power equipment	Measurement control system	Unit 1 turbine bearing hydraulic pressure transmitter (For repair works)	48	Unit	Shin-Onoda Power Station	201912	202004	
96	Thermal power equipment	Measurement control system	Transmitters, etc. for Unit 1 desulfurization control (For repair works)	26	Unit	Shin-Onoda Power Station	201912	202004	
97	Thermal power equipment	Water-treatment equipment, and equipment for condensate, seawater, and feed-water systems	Unit 1 condensate demineralizer resin (For repair works)	1	Set	Misumi Power Station	201905	201911	
98	Thermal power equipment	Water-treatment equipment, and equipment for condensate, seawater, and feed-water systems	Unit 1 seawater strainer (For modification works)	1	Set	Mizushima Power Station	201912	202011	
99	Thermal power equipment	Water-treatment equipment, and equipment for condensate, seawater, and feed-water systems	Shaft 1-2 condenser cooling tube (Material: C6870T-0 to C6872T-0 (aluminum brass pipes, JIS standards-compatible part), 28.58-mm bore x 1.24 t x 6,220 L x 1,100 pipes; For replacement and repair works)	1	Set	Yanai Power Station	201905	201911	Corporate Finance and Procurement Div. (Power source equipment procurement)
100	Thermal power equipment	Water-treatment equipment, and equipment for condensate, seawater, and feed-water systems	Shaft 1-5 condenser cooling tube (Material: C6870T-0 to C6872T-0 (aluminum brass pipes, JIS standards-compatible part), 28.58-mm bore x 1.24 t x 6,220 L x 1,100 pipes; For replacement and repair works)	1	Set	Yanai Power Station	201909	202002	
101	Thermal power equipment	Water-treatment equipment, and equipment for condensate, seawater, and feed-water systems	Electrodes for Unit 1 intake port seawater electrolytic equipment (Positive electrodes are Ti (precious metal coating); Negative electrodes are SUS 316L; Consumables sufficient for 12 tanks)	1	Set	Shin-Onoda Power Station	201910	202005	
102	Thermal power equipment	Water-treatment equipment, and equipment for condensate, seawater, and feed-water systems	Shaft 1-4 condenser cooling tube (Material: C6870T-0 to C6872T-0 (aluminum brass pipes, JIS standards-compatible part), 28.58-mm bore x 1.24 t x 6,220 L x 1,100 pipes; For replacement and repair works)	1	Set	Yanai Power Station	201912	202005	Corporate Finance and Procurement Div. (Power source equipment procurement)
103	Thermal power equipment	Sluice gate/Dust remover	Unit 1 dust remover carrying chain	176	L	Tamashima Power Station	201910	202007	
104	Thermal power equipment	Other equipment	Ash-disposal site thermal camera (Countermeasure to prevent scattering at ash-disposal site, for installation works)	1	Set	Misumi Power Station	201905	201910	
105	Thermal power equipment	Other equipment	Unit 1 metal-clad/load center factory repairs	1	Set	Misumi Power Station	201905	202002	
106	Thermal power equipment	Other equipment	Unit 2 outdoor equipment DC power source equipment (1 set of storage batteries, 1 charger, and 1 silicone dropper; Installed to Unit 2 desulfurization electrical room)	1	Set	Misumi Power Station Construction Site	201907	202107	
107	Thermal power equipment	Other equipment	Equipment for expansion of Unit 2 machinery internal telephone equipment (BTG, common, and outdoor equipment; For installation works)	1	Set	Misumi Power Station Construction Site	201907	202211	

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3. Contact the corresponding contract group for inquiries and comments regarding this plan.

Thermal power/nuclear power equipment(123item(s))

No.	Facilities Classification	Item Name	Article Name/Construction Name/Work Task Name	Qty.	Unit	Delivery/Construction/ Implementation Locations	Scheduled Procurement Date	Delivery Deadline	Contract Group (Scheduled)
108	Thermal power equipment	Other equipment	Coal conveyor optical fiber temperature monitoring equipment (For improvement works for Unit 2 construction)	1	Set	Misumi Power Station	201912	202211	Corporate Finance and Procurement Div. (Power source equipment procurement)
109	Thermal power equipment	Other equipment	Unit 2 lighting control equipment (For installation works of lighting fixtures for Unit 2 main station building outdoor equipment)	1	Set	Misumi Power Station Construction Site	202001	202211	
110	Thermal power equipment	Other equipment	Large screen panels for outdoor control room (For modification works for Unit 2 construction)	1	Set	Misumi Power Station	202002	202112	
111	Thermal power equipment	Other equipment	Weight for load test of overhead traveling cranes, etc. (60-t weight)	1	Set	Shin-Onoda Power Station	201904	202003	Corporate Finance and Procurement Div. (Power source equipment procurement)
112	Thermal power equipment	Other equipment	Turbine room lighting (For repair works)	1	Set	Yanai Power Station	201905	201910	(Power source equipment procurement)
113	Thermal power equipment	Other equipment	LNG equipment pipe supports (For repair works (FY 2019))	1	Set	Yanai Power Station	201905	202001	Corporate Finance and Procurement Div. (Power source equipment procurement)
114	Thermal power equipment	Other equipment	1DS oil unit (For repair works of GGH casing etc.)	1	Set	Shin-Onoda Power Station	201905	202007	
115	Nuclear power equipment	Radioactive material control equipment	Leaked fuel rod identification equipment and fuel assembly internal inspection equipment (Common)	1	Set	Shimane Nuclear Power Station	201905	202007	
116	Nuclear power equipment	Other equipment	Bottom plate of top cover of Unit 2 cable tray (For installation works)	1	Set	Shimane Nuclear Power Station	201904	202003	
117	Nuclear power equipment	Other equipment	Infrared thermograph equipment (Temperature accuracy of readings: $\pm 2^{\circ}\text{C}$ or $\pm 2\%$ (25°C or more); Heat resolution: 307,200 (640 x 480); Temperature resolution: $< 0.03^{\circ}\text{C}$ (30°C); Temperature range: -40°C to $+2000^{\circ}\text{C}$)	2	Unit	Shimane Nuclear Power Station	201904	201907	Shimane Nuclear Power Station General Affairs Sect.
118	Nuclear power equipment	Other equipment	Ultrasonic diagnostic apparatus	2	Unit	Shimane Nuclear Power Station	201904	201907	Shimane Nuclear Power Station General Affairs Sect.
119	Nuclear power equipment	Other equipment	Unit 2 simulator video and sound equipment (Cameras (1 fixed, 6 movable, mounting hardware, etc.), microphones (necessary number of directional and omnidirectional), storage memory and playback equipment (equipment main units, recorders, storage memory, control monitors, monitoring displays, etc.), audio equipment (amps, distributors, mixers, etc.), camera control equipment, etc.; For upgrading)	1	Set	Shimane Nuclear Power Station	201904	202001	Shimane Nuclear Power Station General Affairs Sect.
120	Nuclear power equipment	Other equipment	Unit 3 simulator equipment touch display (17-inch LC display with touch function for replacement)	1	Set	Shimane Nuclear Power Station	201904	202003	Shimane Nuclear Power Station General Affairs Sect.
121	Nuclear power equipment	Other equipment	Monitoring car and radioactivity measurement equipment equipped to car	1	Set	Shimane Nuclear Power Station	201904	202003	Shimane Nuclear Power Station General Affairs Sect.
122	Nuclear power equipment	Other equipment	Containers for emergency equipment/materials storage	1	Set	Shimane Nuclear Power Station	201904	202003	Shimane Nuclear Power Station General Affairs Sect.
123	Nuclear power equipment	Other equipment	Slings, wires, shackles, fixed jigs, anchor bolts, concrete rocks, etc. (For countermeasures works to protect portable equipment against tornadoes)	1	Set	Shimane Nuclear Power Station	201908	201910	Shimane Nuclear Power Station General Affairs Sect.

Hydro-power/civil engineering/internal combustion equipment (26item(s))

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No	Facilities Classification	Item Name	Article Name/Construction Name/Work Task Name	Qty.	Unit	Delivery/Construction/ Implementation Locations	Scheduled Procurement Date	Delivery Deadline	Contract Group (Scheduled)
1	Hydro-power/civil engineering	Hydro generator	Unit 1 hydraulic pump (For hydro generator; Replacement)	1	Set	Shin-Nariwagawa Power Station	201911	202102	Corporate Finance and Procurement Div. (Materials and equipment procurement)
2	Hydro-power/civil engineering equipment	Thermal power stations: Operations including assistance for routine civil-engineering-related inspection (FY 2019: Measurement of electric potential, etc. at 9 power stations)	Hydro generator (Precision inspection)	1	Unit	Takimoto Power Station	201908	202008	
3	Hydro-power/civil engineering	Steel penstock	Steel penstock (Modification of steel penstock terminal piping; 3 sections => 2 sections)	1	Set	Matanogawa Power Station	202001	202403	
4	Hydro-power/civil engineering	Other hydro-power equipment	Unit 1 turbine oil (Shell Turbo J32)	1	Set	Ushio Power Station	201904	202010	
5	Hydro-power/civil engineering	Other hydro-power equipment	Unit 2 generator protective relay panel (Short circuit, ground, overcurrent, ground overcurrent, overvoltage, loss of excitation, step out detection, speed; Replacement)	1	Set	Shimane Nuclear Power Station	201904	202010	
6	Hydro-power/civil engineering	Other hydro-power equipment	1 and 2 ground relays, individual detectors, etc. (Relay panels: 2; Individual detector: 1; Station temperature panel: 1; Automatic synchronization panel: 1; Replacement)	5	Panel	Shimane Nuclear Power Station	201905	202005	
7	Hydro-power/civil engineering	Other hydro-power equipment	Units 2 and 3 drainage pumps (Replacement of 2 pumps)	1	Set	Shimane Nuclear Power Station	201904	202001	
8	Hydro-power/civil engineering equipment	Other hydro-power equipment	Water level detectors (Water channel-side water level detector box (including submerged water level indicator), steel pipe side, float-type water level indicator; Replacement)	3	Unit	Shimane Nuclear Power Station	202003	202010	
9	Hydro-power/civil engineering	Other hydro-power equipment	Unit 1 feed-water strainer (Replacement of motorized strainer)	1	Unit	Shimane Nuclear Power Station	201905	201910	
10	Hydro-power/civil engineering	Other hydro-power equipment	Unit 3 GV servo driver (Replacement of motorized servo driver)	1	Set	Uchinashi Power Station	202004	202110	
11	Hydro-power/civil engineering	Other hydro-power equipment	Unit 3 sequencer (Replacement of 2 control panels)	2	Unit	Uchinashi Power Station	202008	202112	
12	Hydro-power/civil engineering	Other hydro-power equipment	Automatic voltage regulator panel (AVR) (Replacement)	1	Set	Choumonkyo Power Station	201908	202103	
13	Hydro-power/civil engineering	Other hydro-power equipment	Governor (Replacement of governor panel and governor control panel)	1	Set	Choumonkyo Power Station	201908	202103	
14	Hydro-power/civil engineering equipment	Other civil engineering equipment	Intake port dust remover (Motorized rake switching and wire rope; Replacement)	1	Unit	Shin-Kawahira Power Station	201912	202103	
15	Hydro-power/civil engineering equipment	Other civil engineering equipment	Disposal work due to intake port dust remover replacement (motorized rake switching and wire rope)	1	Set	Shin-Kawahira Power Station	201912	202103	
16	Hydro-power/civil engineering equipment	Other civil engineering equipment	Turbidity water temperature equipment (Replacement)	1	Set	Shin-Nariwagawa Power Station	201905	201912	
17	Hydro-power/civil engineering equipment	Other civil engineering equipment	Intake port log boom	260	m	Yubara-Daiichi Power Station	201906	202002	
18	Hydro-power/civil engineering equipment	Other civil engineering equipment	Transceiver for Tateiwa Dam spillway gate opening angle indicator (Replacement)	1	Set	Uchinashi Power Station	201908	202003	
19	Hydro-power/civil engineering equipment	Other civil engineering equipment	Turbidity meter for Shoji intake weir dam (Replacement)	1	Set	Yoshigase Power Station	201908	202003	
20	Switchgear	Gas circuit breakers	Gas circuit breaker (Replacement for 66-kV generator; 72 kV, 800 A, 20 kVA)	1	Unit	Takeichi Power Station	201906	202103	
21	Switchgear	Gas circuit breakers	Gas circuit breaker (Replacement of #221 GCB; 220 kV, 1,200 A, 31.5 kA)	1	Set	Shin-Nariwagawa Power Station	201905	202203	

Hydro-power/civil engineering/internal combustion equipment (26item(s))

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No	Facilities Classification	Item Name	Article Name/Construction Name/Work Task Name	Qty.	Unit	Delivery/Construction/Implementation Locations	Scheduled Procurement Date	Delivery Deadline	Contract Group (Scheduled)
22	Switchgear	Gas circuit breakers	Gas circuit breaker (Replacement of #622 CB; 120 kV, 1,200 A, 25 kA)	1	Unit	Yubara-Daini Power Station	201908	202011	Corporate Finance and Procurement Div. (Materials and equipment procurement)
23	Switchgear	Gas circuit breakers	Gas circuit breaker (Replacement of 110-kV main transformer primary CB; 120 kV, 800 A, 20 kA)	1	Unit	Yasaka Power Station	201909	202011	
24	Control system	Hydro power control system	IoT system (Sensors for status monitoring)	1	Set	Takiyamagawa Power Station	201909	202103	
25	Control system	Hydro power control system	Replacement of Unit 1 automatic control panel (Generator control panel)	1	Panel	Hiro Power Station	201910	202012	Corporate Finance and Procurement Div. (Materials and equipment procurement)
26	Control system	Hydro power control system	Replacement of Unit 2 automatic control panel (Generator control panel)	1	Panel	Hiro Power Station	201910	202012	

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Other equipment (35 item(s))

No	Facilities Classification	Item Name	Article Name/Construction Name/Work Task Name	Qty.	Unit	Delivery/Construction/ Implementation Locations	Scheduled Procurement Date	Delivery Deadline	Contract Group (Scheduled)
1	Other equipment	Unit-enclosed switchboard	Switchgear (Replacement)	3	Box	Shin-Kawahira Power Station	201905	202101	Corporate Finance and Procurement Div. (Materials and equipment procurement)
2	Other equipment	Thermal power stations: Operations including assistance for routine civil-engineering-related inspection (FY 2019: Measurement of electric potential, etc. at 9 power stations)	11-kV switchgear (Installed parts: 1 vacuum circuit breaker, 1 DS, 1 set of bus, 1 set of external box; Replacement)	1	Set	Ushio Power Station	201905	202009	
3	Other equipment	Unit-enclosed switchboard	6-kV switchgear (CB box and excitation transformer box; Replacement)	2	Box	Matanogawa Power Station	201907	202008	
4	Other equipment	Unit-enclosed switchboard	Unit 1 turbine oil (Shell Turbo J32)	1	Panel	Uchinashi Power Station	202005	202110	
5	Other equipment	Unit-enclosed switchboard	Generator switchgear (Dual-stack boxes: 3 boxes; ExTr/PT box: 1 box; Parallel CB/VCT box: 1 box; GPT/LA/SA box: 1 box; Replacement)	1	Set	Shimane Nuclear Power Station	201909	202103	
6	Other equipment	Unit-enclosed switchboard(Repair/Inspection)	11-kV parallel CB, etc. (1 vacuum circuit breaker: 12 kV, 600 A, 25 kA; 1 surge absorber: 11 kV, 0.5 μF; 1 lightning arrester: 14 kV, 10 kA; 2 full-scale inspection boxes; Housing, insulated bus, etc.; SWG modification materials; Replacement)	1	Set	Shimane Nuclear Power Station	201907	202011	
7	Other equipment	Other switchboards	Kijima Dam station switchboard (Replacement)	1	Set	Shimane Nuclear Power Station	201905	202002	
8	Other equipment	Other switchboards	Disposal work due to replacement of Kijima Dam station switchboard	1	Set	Shimane Nuclear Power Station	201905	202002	
9	Other equipment	Other switchboards	Onbara Dam station control station switchboard (Replacement of station panel and relay terminal box due to reconstruction work of control station)	1	Unit	Shimane Nuclear Power Station	201907	202001	
10	Other equipment	Other switchboards	Disposal work due to replacement of Onbara Dam control station switchboard	1	Set	Heisakubara Power Station	201907	202001	
11	Other equipment	Other switchboards	Relay panel	1	Panel	Takimoto Power Station	201909	202008	
12	Other equipment	Other switchboards	Hydraulic pump panel (Control panel replacement)	1	Panel	Takimoto Power Station	201909	202010	
13	Other equipment	Other switchboards	Individual operation prevention panel (Replacement)	1	Set	Hiro Power Station	201910	202012	
14	Other equipment	Other switchboards	Generator protective relay panel (Replacement)	1	Panel	Kake Power Station	202003	202109	
15	Other equipment	Other switchboards	Intake port power receiving equipment (Replacement)	1	Set	Nishikigawa-Daini Power Station	201906	202001	
16	Other equipment	Other switchboards	Disposal work due to replacement of intake port power receiving equipment	1	Set	Nishikigawa-Daini Power Station	201906	202001	
17	Other equipment	Other switchboards	Generator relay panel, etc. (Main transformer control panel: 1; Generator relay panel: 1; Automatic synchronization/auxiliary relay panel: 1; Station panel: 1; Replacement)	1	Set	Yasaka Power Station	201909	202011	
18	Other equipment	Power transformers (Less than 220-kV)	Replacement works of transformers, etc. for 66-kV generator (Transformer: 66 kV/6.9 kV, 6.5 MVA)	1	Set	Takeichi Power Station	201906	202103	
19	Other equipment	Power transformers (Less than 220-kV)	Main transformer protective relay panel (For Nos. 1 and 2 MTr; Related to replacement of 11-kV switchgear)	2	Panel	Ushio Power Station	201906	202008	
20	Other equipment	Emergency generator	Engine generator for Unit 1 hydraulic pump (Compliant with Fire Service Act)	1	Set	Shin-Nariwagawa Power Station	202003	202102	

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Other equipment (35 item(s))

No	Facilities Classification	Item Name	Article Name/Construction Name/Work Task Name	Qty.	Unit	Delivery/Construction/ Implementation Locations	Scheduled Procurement Date	Delivery Deadline	Contract Group (Scheduled)
21	Other equipment	Emergency generator	Emergency EG (Light oil, 80 kVA)	1	Unit	Akioota office	201905	201912	Corporate Finance and Procurement Div. (Materials and equipment procurement)
22	Other equipment	Rectifiers	Kijima Dam 24-V rectifier panel (Replacement)	1	Set	Ushio Power Station	201904	201912	
23	Other equipment	Rectifiers	Disposal works due to replacement of Kijima Dam 24-V rectifier panel	1	Set	Ushio Power Station	201904	201912	
24	Other equipment	Storage battery	Unit 3 A storage battery (Stationary-type lead storage battery MSE, 1,000 Ah, 52 cells; Replacement)	1	Set	Mizushima Power Station	201905	202009	Corporate Finance and Procurement Div. (Materials and equipment procurement)
25	Other equipment	DC power source	DC power source equipment for communications of Telecommunications System Office (DC power source equipment for 48-V/100-A communications: 1 unit; 48-V/500-Ah storage batteries (long-life type): 1 family; Commissioning of DC power source equipment: 1 set; Replacement)	1	Set	Shimane Nuclear Power Station	201906	202003	
26	Other equipment	DC power source	Unit 1 A and B 115-V system charger and storage battery (Replacement)	1	Set	Shimane Nuclear Power Station	201907	202003	
27	Other equipment	ITV (Industrial-use TV, monitoring camera)	Replacement of Onbara Dam ITV equipment	1	Unit	Heisakubara Power Station	201908	202002	
28	Other equipment	ITV (Industrial-use TV, monitoring camera)	Disposal work due to replacement of Onbara Dam ITV	1	Set	Heisakubara Power Station	201908	202002	
29	Other equipment	ITV (Industrial-use TV, monitoring camera)	Nikyū Dam ITV (Installation)	1	Set	Hiro Power Station	201909	202001	
30	Other equipment	Chemical measurement equipment	Wind direction/Speed meter (Regional Relations Div..)	5	Set	Misumi Power Station	201904	201912	
31	Other equipment	Chemical measurement equipment	Data recorder (Regional Relations Div.)	5	Set	Misumi Power Station	201904	202003	
32	Other equipment	Chemical measurement equipment	Environmental air quality measuring equipment (Regional Relations Div.)	5	Set	Misumi Power Station	201904	202003	
33	Other equipment	Chemical measurement equipment	Bead sampler (AmenaTech Tabletop Bead And Fuse Sampler TK-4100 or equivalent product) (Energia Economic and Technical Research Institute)	1	Set	Location specified by Chugoku Electric (Hiroshima Pref.)	201906	201909	
34	Other equipment	Chemical measurement equipment	Laser particle size meter (Shimadzu Laser Diffraction Particle Size Analyzer SALD-2300 or equivalent product) (Energia Economic and Technical Research Institute)	1	Set	Location specified by Chugoku Electric (Hiroshima Pref.)	201906	201909	
35	Other equipment	Chemical measurement equipment	Total organic carbon (TOC) content analyzer (Shimadzu TOC Analyzer TOC-L or equivalent product) (Energia Economic and Technical Research Institute)	1	Set	Location specified by Chugoku Electric (Hiroshima Pref.)	201906	201909	