

**Tentative future requirements for next 5 years for equipment and material for which capacity is available in India but imported due to cost competitiveness or other reasons
(Domestically insufficient)**

Sl. No	Item Description	Rating (indicative)	HSN Code	Tentative future requirements for next 5 years
				Quantity #
1	Vacuum belt filter for FGD System	32-48 Ton per hour	84212900	17 Set (1 set is item required for 1 project/Package)
2	Slurry Recirculation Pump for FGD system	9000-13500 m3/Hr Head- 16 to 28 metre liquid column	84137099	20 Set (1 set is item required for 1 absorber)
3	Mist Eliminator for FGD system	made up of Polysulphone	84213920	15 Set (1 set is item required for 1 absorber)
4	Drive Turbine for Boiler Feed Pumps	18-25 MW power	84068200	16 nos
5	Tube side sentinel relief valve for HP heaters	1" size	84814000	48 nos
6	HP heater 3 way bypass valves	388 mm Nominal Bore Flow 2500 TPH Pressure- 300 kg/cm2	84818030	16 nos
7	HP/LP bypass valves	High pressure Bypass- 270 kg/cm2 Low Pressure Bypass- 65 kg/cm2, Flow 600-900 TPH	84811000	HP bypass-16 No LP bypass-16 No
8	HP Bypass oil supply system	Discharge Pressure of oil supply system- 140-200 kg/Cm2	84818030	16 No
9	Lube oil pump	Head- 15 - 20 Bar Flow- 3500-5000 Litre Per Minute	84139120	34 nos
10	Hydraulic Motor for wagon tippler	Specific Torque upto 250Nm/Bar, Specific displacement upto 30Litre per revolution, 350 Bar	84289010	2 nos
11	Hydraulic Motor for staker reclaimers	Specific Torque upto 850Nm/Bar, Specific displacement upto 75Litre per revolution, 350 Bar	84829900	10 nos
12	Flame scanners	0-100% intensity for protection of boiler	90278090	272 Nos.
13	Gear Box for Air Cooled Condenser (ACC)	200-250KW	84834000	224nos
14	Turbine Main Steam and Reheat steam Valves	Pressure-270 kg/cm2 Flow- 750-1250 TPH	84812000	32 nos
15	Cold Reheat Non Return Valve	Size-30 " Flow 800-950 Ton per Hour	84813000	16 nos
16	Flame TV Camera	High Definition flame camera	85258090	16 Nos.
17	Condenser Vacuum Pumps	20/30/40 standard cubic feet per minute	84141000	37 nos
18	Agitators for FGD	Side & top entry	84798200	15 set (1 set=item required for 1 absorber and common system)
19	Air Cooled Condenser	A frame, single row forced draft, pressure 106-196 mmHg	84042000	3 sets of few components
20	Gypsum Dewatering System (Vaccum Belt Filter + vacuum pump + Primary & Secondary Hydrocyclones and Accessories)	32-48 Ton per hour	84213990	17 Set (1 set is item required for 1 project/Package)
21	DDCMIS - Distributed Digital Control Monitoring and Information System	Latest state of the art microprocessor based DDCMIS	90318000	8 Set (1 set= requirement for 1 unit)

22	Public address system (PA system)	Internet Protocol (IP) Based	85185000	5 Sets (1 set= requirement for 1 project)
23	BFP Hydraulic coupling	power transmission 15 MW, speed upto 6000 rpm	84834000	8 nos
24	Non Intrusive electrical actuator	415V 3Phase	84819090	1600 Nos.
25	Infra Red Fire Detector	For Coal conveyers	90318000	70 Nos.

1. The projected requirement is based on NTPC's current plan to set up coal based units and associated spares requirement thereof. In case of non award of such coal units due to change in policy / plan by GOI/NTPC the projected requirement shall be adversely impacted.

2. # The total projected quantity indicated have two components i.e. likely requirement for 8 units of proposed new projects and O&M requirement for next 5 years.

3. Quantity/requirements indicated above are total requirements. Import of same may depend upon demand/supply situation, particular OEM and other conditions etc at that Particular time.

Tentative future requirements for next 5 years for equipemnts for which no capacity exists in India and are totally Imported (Mandatory Import)

Sl. No	Item Description	Rating (Indicative)	HSN Code	Tentative future requirements for next 5 years (Refer Note at the end)
				Quantity #
1	RIP bushings	420kV (1600A,1250A,2000A), 245kV(11250A),	85469090	75 No(420kV 1600A), 10nos(765kV)
2	Gas Insulated Voltage Transformer (VT)	400kV / 110V	85043100	12 nos
3	Boiler separator safety valves	Set pressure in the range of 336 to 341 kg/cm2 Capacity 436 to 442Ton per Hour(TPH)	84814000	64 nos
4	Boiler Reheater Safety valve	Set pressure in the range of 62 to 66 kg/cm2, Capacity 278 to 361 Ton per Hour	84814000	80 nos
5	Boiler safety valve SPARES	Set pressure in the range of 50 to 320 kg/cm2	84814000	64 nos
6	Boiler safety valve ERV	Set pressure 292 kg/cm2, Capacity 102 TPH, Set Pressure 60 kg/cm2 capacity- 163 Ton per Hour	84814000	48 nos
7	Boiler super heater safety valve	Set pressure in the range of 308 to 321 kg/cm2, Capacity 353TPH	84814000	32 nos
8	Nucleonic Density Meter	Range 0 to 1800 kg/m3	90278090	18 nos
9	Acoustic Pyrometer	High temperature measurement, (100-2000 Deg C)	90251920	1 no
10	Electro Hydraulic Scoop Actuator for Boiler Feed Pump	Pressure 8-10 bar	84834000	8 nos
11	Steam Generator Start up drain Recirculation Pump motor	Motor(450 KW, 3.3 KV)	84133030	13 nos
12	Steam Generator Start up drain Recirculation Pump	Pressure 315.6 kg/cm2 Flow 830 m3/hr	84133090	8 nos
13	High Concentration Ash slurry pump	Flow- 174 m3/hr, Pressure 38 Bar	84137010	9 nos
14	O ₂ analyzer	0-10% of Oxygen.	90271000	68 Nos.
15	Turbine Rotor Forgings	Alloy steel (10Chrome) forgings (50-150 Tons)	84069000	52 nos
16	Forging of Generator rotors and retaining rings	Alloy steel forgings (100-150 Tons)	85030010	13 No Rotor forgings 26 nos Retaining Ring forging
17	Resin insulated Bushings for GIS	400kV	85479090	70 Nos
18	Hollow Polymer Housing for Substation/ Switchyard equipment (CT,LA,CVT)	400KV	85469090	235 Nos
19	Borosilicate lining, Adhesive, Primer(FGD System)	Borosilicate liner, Adhesive & primer	70200029 35069190 32089090	15 sets (1 set=liner required for one Chimney 4000 SqM)
20	Resins for Condensate polishing units (CPUs)	Cation Rasin	34021200	265000 Litres
21	Resins for Condensate polishing units (CPUs)	Inert Resin	34021110	28000 Litres

22	Resins for Condensate polishing units (CPUs)	Anion Resin	34021300	176500 Litres
23	Cladded Plates of C276/ Cladded plate of Titanium	Carbon steel + C276/ Carbon steel + Titanium	72107000 81089010	15 sets, (1 set required for one absorber)
24	Carbon Brush	300 to 600 Volts	85452000	1140 No
25	Alloy Steel Pipes / Tubes	SA335P92/P91, T92/ T91, SS 304, Super 304H/TP347H	84029020	P91/92- 3000 T, T91/92-4700T, Super 304/TP347H-3800T
26	EHG (Electro Hydraulic Governor) Spares	High pressure (100 - 160 kg/cm2) Governing system	90318000	8 sets (1set requirement for 1 unit)
27	High Pressure/Low Pressure Bypass valve Spares	High pressure Bypass- 270 kg/cm2 Low Pressure Bypass- 65 kg/cm2	84811000	HP Bypass spares-8 sets LP Bypass spares-8 Sets (1set requirement for 1 unit)
28	Steam and water analysis system (SWAS) Analysers	Analysers for monitoring of steam and water quality.	98010013	425(360+65)
29	Turbine Supervisory (Sensors and Electronic Control Modules)	For measurement of Turbine axial shift/vibration/expansion etc	98010013	8 Set(1set requirement for 1 unit)
30	Programmable Logic Control with accessories	Microprocessor based Programmable Logic Controller for monitoring and operation of few plant auxiliary systems.	85389000	32 Nos.
31	Turbine Control Valve Servo Controller Modules	For interfacing between DDCMIS and the Control Valve	84819090	8 Set(1set requirement for 1 unit)
32	VMS (Vibration Monitoring System)	Vibration monitoring System including vibration sensors, phase marker sensors etc for diagnostics and analysis of equipments.	90318000	8 Set(1set requirement for 1 unit)
33	Slew ring for Stacker Cum Reclaimer	Up to 5m diameter	8482	7
34	Quick erect scaffolding	Alluminium scaffolding	73084000	5 set (1 set for 1 project)
35	Coalescer type oil purifier	Meeting NAS 7 Requirement	84211999	08 Nos for Main Turbine
36	Microprocessor based fire alarm and detection system.	Microprocessor based Programmable Logic Controller	85311020	5 Set(1set requirement for 1 project)
37	Mineral Insulated Copper Conductor Cable (MICC Cable)	2 core 1.5 / 2.5 Sqmm	85444999	70 Kms
38	Linear heat sensing cable	Digital cable for sensing 70/90 Deg C	85444999	250 Kms
39	Probe type heat detector	For Heavy Fuel Oil and Light Diesel Oil Tanks	85319000	33 Nos.
40	Rubber Lining (Absorber Tanks, Auxilliary Absorbent Tank & Slurry Tanks)	Bromo Butyl rubber based lining	40169990	15 sets (1 set requirement for 1 FGD System)
41	CCTV System	Internet Protocol (IP) Based system	90063000	5 set (1 set for 1 project)
42	Generator Terminal Bushing	In the range of 21-27 KV	85471030	63 nos
43	Ambient air quality Monitoring system -Analysers	For Air Quality Monitoring		1Set
44	Continious Emmission Monitoring System - Analysers	For Emmision monitoring		8 set

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