



भारत सरकार
विद्युत मंत्रालय
केन्द्रीय विद्युत प्राधिकरण
इमर्जिंग टेक्नोलॉजी एंड इनोवेशन प्रभाग

सेवामें,

1. DG, IEEMA- (dg@ieema.org)
2. All the Stakeholders (Through Central Electricity Authority official Website-www.cea.nic.in).

विषय: पहचान की गई महत्वपूर्ण वस्तुओं, जो वर्तमान में आयात की जा रही हैं, तथा उनके स्थानीयकरण के लिए आवश्यक समर्थन के संबंध में जानकारी प्रस्तुत करने हेतु ।

Subject: Submission of information regarding identified critical items those are currently being imported and support required for their localisation- reg.

The Central Electricity Authority (CEA) has identified a list of 73 critical items through consultations with IEEMA and major industry stakeholders, including ABB, Aditya Birla, Hyosung, Polycab, Dong-Woo Quantum India, Sterlite, Schneider, Toshiba, KEC, Mehru, Destak, Jindal Aluminium, Yash High Voltage, and others. These items are currently imported due to technology gaps, limited domestic manufacturing capabilities, or economies-of-scale challenges.

2. Based on stakeholder inputs, 16 items from this list have been prioritised for immediate attention (attached at Annexure-I), primarily due to their high import dependency and criticality for the power sector.
3. The remaining 57 items (attached at Annexure-II), although recognised as critical, require further detailed and quantified inputs from domestic or international manufacturers interested in exploring manufacturing opportunities in India. Such information is essential to accurately assess the total financial implications and formulate a comprehensive item-wise localisation strategy based on criticality, feasibility, and industry readiness. In this regard, all stakeholders, including IEEMA, are requested to provide detailed comments, suggestions, and inputs as per the attached format in the Annexure-II, clearly specifying:
 - (i) estimated cost of the item,
 - (ii) annual domestic volume requirement for next 10 years,
 - (iii) percentage contribution of the item to the total cost of the final product,
 - (iv) current import levels (in numbers or value),
 - (v) Support required from the Government (clearly mentioning financial requirement in terms of ₹.

- (vi) in case of any technology transfer/machinery required (clearly specifying the part of the equipment/item for which technology transfer is needed / Machinery) to promote local manufacturing.
 - (vii) any other specific support required for localisation of the proposed items.
4. This initiative has become essential in the current scenario, as the power sector remains relies heavily on imported advanced components, making it vulnerable to global supply-chain risks and price volatility. Localising these items supports the Government's Atmanirbhar Bharat vision by boosting domestic manufacturing, reducing forex outflow, and strengthening grid resilience and energy security. A realistic, industry-backed assessment is essential for preparing a financially sound proposal for the Ministry of Power.
5. **The complete information may please be furnished to: ce-rndcea@nic.in by 29-12-2025.**

संलग्नक: यथोपरि।

(सुनित कुमार गुप्ता)
निदेशक

प्रतिलिपि:

1. विशेष सहायक, अध्यक्ष, के.वि.प्रा.
2. विशेष सहायक, सदस्य (योजना), के.वि.प्रा.

Annexure-I

Prioritised 16 critical items that are currently being imported:

Sr. No.	Name of the Critical items	Application of the item in the end product
1.	Subsea Cables (HVDC & HVAC)	subsea Cable
2.	Permanent Magnet (NdFeB) for actuators	MV Actuators
3.	Oxygen Free High Conductivity Copper Rods of very high precision, of flatness, ppm level < 5, Various diameters (Dia 25 to 45 mm)	Vacuum Interrupter
4.	Aluminum zinc coated steel sheets of non-skin passed, non-oiled, non-chromatid grade, 2mm thickness	M V panel cabinets and fabrication components
5.	HVDC: Valve assemblies including IGBT/ Thyristors, Capacitor banks and cooling system.	HVDC
6.	Porcelain Hollow Insulators - Complete range from 33 kV to 800 kV	Circuit Breaker, Bushings, Instrument Transformer
7.	Composite/ Polymer Hollow Core Insulators - Complete range from 33 kV to 420 kV	Bushings, Instrument Transformers, Circuit Breaker, Cable Termination, Surge Arrester etc.
8.	Modular type Ethernet Switches (automatic data processing / communication switches) suitable for IEC communication protocol ex IEC61850, PLC Controllers (FRTU) with digital inputs and digital outputs	M V Panels of digital solutions, Ring main units, customized assembled skids / panels for distributions
9.	Lightning Arrester	
10.	Solid insulated / screened touch proof bus bars, adaptors of high die electric strength and insulation properties	MV Switchgear
11.	Insulating Spacers / Gas Partitions Insulation Chamber/Insulation Rod	GIS
12.	Hollow Core Insulators for Gas-Air Bushings (For > 245 kV)	Bushings
13.	Voltage Transformers	GIS
14.	Pipes for Gas Insulated Bus Ducts and Bus bar (ID>400mm) (Spiral welded Aluminium pipe)	GIS
15.	Epoxy raw material (Resin, Hardener), Liquid Silicone rubber, Bus bar insulation shrink tubing of high die electric strength and insulation properties.	Encapsulation components (Bushings, Insulators) for M V panels Busbars of M V panels, Vacuum circuit breakers of different M V ratings
16.	Motors and VCB mechanisms assembly with miniature gear train.	Vacuum Circuit Breaker, MV Switchgear

Annexure-II**List of 57 Critical Items currently being imported and needs localisation**

S.no.	Name of the Critical items	Application of the item in the end product	Support required from the Government (clearly mentioning financial requirement in terms of ₹, and in case of any technology/machinery required, the name of the specific technology/machinery) to promote local manufacturing	Reference price of the items.	HSN Code	Percentage Contribution in the items (%)	Volume/ value of the items for the next 10 years.	Current import (in numbers or value)	Country/ countries from where these items are primarily imported.	Key reasons for importing these items	Probable manufacturers for the identified items (domestic/ foreign)	Remarks (if any)
1	Electronics / Printed Circuit Boards Assembly				85340000							
2	Electrolytic Capacitors				85322200							
3	Surge arrester for 36kv GIS suitable for size 3 or size 2 sockets				85354030							
4	Sulphur Hexafluoride gas SF6.				28129000							
5	Pipes for Gas Insulated Bus Ducts and Bus Bars (ID >300 mm)				7306, 7608							
6	Silicon tube for busbar insulation				39173990, 40091100							
7	Voltage test plug for 33 kV	Vacuum			⁴ 8501,							

	GIS for size 3 or size 2 sockets	Circuit Breaker, MV Switchgear			853521							
8	Current test plug for 33 kV for size 3 or size 2 socket				85366990							
9	Dummy test plug for 33kv GIS for size 3 or size 2 sockets				85366990							
10	Electronic components, Semiconductor devices such as IGBT, MOSFET, Thyristors, Magnetic cores, DC Capacitors etc.				8541							
11	Up to 36 SS tank for GIS.				7309							
12	Aluminium Zinc Sheet for fabrication. Up to 36 kV SF6 free Ring Main Unit and GIS.				72106100							
13	Oxygen Free Copper rods, bars, strips and sheets with a Vacuum interrupter minimum purity of 99.995% and a maximum oxygen content of 5 ppm.				7407							
14	Shielded solid insulated Switchgear core components such as tank and bus bars.				85359030							
15	Super Capacitor				8532							
16	Modules				854141							

17	Ring main unit motors with geared Mechanism with miniature gear train				85015120, 85015220							
18	Magnet, Silver Alloys Contacts, Shunt				8505, 7106							
19	Automation for bobbin winding, testing & inspection assembly Assembly, line automation for latching relay assly (for high volume). Ferrite magnet for rotary arm (part of latching relay) Electron Beam welded Cu + C151 Copper.				844540, 85051110							
20	Specialized magnetic core materials (e.g., H-class ferrite cores), High-precision injection molding tools, High-reliability contact materials (e.g., AgSnO2 sourced from Europe/Asia), Coil winding and automation machinery, Relay calibration and high-speed testing systems.				850511, 847710, 84798100, 90318000							
21	Triple-layer extruder lines for 550 kV Drum Twisters 91 X 630 standing machines Poly-al applicator Corrugation aluminum line Aluminum extrusion line TR-XLPE (above 66 kV) (Dow - US)				84772000							
22	XLPE from 66 kV to 220 kV SEMICON from 66 kV to 220 kV				85446090							

23	High Voltage High Current IGBT and WBG Devices: IGBT, SiC, GaN >1.2KV are critical component for HVDC/HVAC/MVDC/MVAC applications				854121, 854129, 854159							
24	High Voltage and High Current IGBT and SiC Power Modules [1MW] are critical components for Key Applications like HVDC, HVAC, MVDC, MVAC, Renewables, Energy Storage				854121, 854129							
25	GaN Devices [40V, 200V, 650V and 1200V] and GaN Based Designs are critical for Data Center Applications				854129							
26	PIR Disk for GIS application				85311090							
27	HVDC: Valve assemblies and Control & Protection System				8481							
28	Limb reactors				84198912							
29	Filters (Capacitors, resistors & reactors)				842121							
30	DC measuring devices and yard equipment (DC switchgear items)				903180							
31	System Design and Engineering for HVDC systems				8535, 8536, 8544							
32	SCADA System, Active Power management system, Reactive Power				8537							
					7							

	management											
33	Converter transformers				850440							
34	Lignite air lock feeder				84799090							
35	Master fuel trip valve				84814000							
36	Blowers of type GM150S, GM35S & GM90S				84145920							
37	PA & SA fan General bearing				84828000							
38	Online Continuous Emission Monitoring System (OCEMS)				90271000							
39	Effluent Quality Monitoring System (EQMS)				90318000							
40	Steam and Water Analysis System (SWAS)				90318000							
41	Zero Speed Sensors and its Controller				902920							
42	Flame Ignitors, Flame Scanners and its controller				84169000							
43	Zirconia Oxygen Analysers				90279090							
44	Programmable Logic Controller and its modules				8537							
45	Battery				85065000							
46	Relay				85364900							
47	o Relays for voltage $\leq$ 60V o C151 Copper Strip, Special alloy for relay manufacturing o Other relays (applicable for 230V load switching in meters) o Shunt for current measurement				85364100, 85364900, 74091100, 74099000							
					8							

48	Dana				39074000							
49	Module				85176990							
50	LCD Glass				85249190							
51	Micro IC				85423100							
52	Laminated insulation Press board with Polyester glue for UHV Transformers											
53	Laminated Insulation Press board with Casein Glue for UHV Transformers											
54	Pre compressed Press board for UHV Transformers											
55	Online Dissolved Gas Analyzer											
56	Fiber Optic Temperature indicators											
57	Vacuum Onload Tap changer											
