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**No. 11/05/2018-Coord
Government of India
Ministry of Power**

Annexure II

**Shram Shakti Bhawan, New Delhi
Dated: 27.12.2018**

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ORDER

Subject: Public Procurement (Preference to Make in India) to provide for Purchase Preference (linked with local content) in respect of Thermal Power Sector.

Reference: Department of Industrial Policy and Promotion (DIPP) Notification No. P-45021/2/2017-PP (BE-II) dated 28.05.2018

- 1.0** The Government of India has issued Public Procurement (Preference to Make in India) Order 2017 vide Department of Industrial Policy and Promotions (DIPP) Notification quoted above to encourage "Make in India" and to promote manufacturing and production of goods and services in India with a view to enhancing income and employment.
- 2.0** In furtherance of the Public Procurement (Preference to Make in India) Order 2017 notified vide reference cited above, and in supersession of any existing policy on the subject, Ministry of Power hereby notifies that preference shall be given by all public procuring entities to domestically manufactured products used in the Thermal Sector as per the aforesaid order of DIPP quoted above.
- 3.0** In pursuance of the aforesaid order of Department of Industrial Policy & Promotion (DIPP), the following products associated with the Thermal sector are hereby notified under the Public Procurement (Preference to Make in India) Order 2017 for procuring local:

A. Coal/lignite based thermal power projects:

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
1	Boiler System & its Auxiliaries		
i)	Boiler pressure parts (tubes/ pipes/ headers/ separator shell etc.), membrane wall, fittings/ forged tees etc.	40%	50%
ii)	Safety valves / critical valves	0%	0%
iii)	Boiler recirculation pumps	0%	0%
iv)	Air pre-heaters (RAPH & SCAPH)	95%	95%
	Air pre-heaters (RAPH & SCAPH) - having CE enamelled element	65%	75%
v)	Steam soot blowers (wall blowers & LRSB)	100%	100%

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Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
vi)	Auxiliary Steam PRDS	100%	100%
vii)	Burners (Coal/ Oil Burners)	100%	100%
viii)	Coal Mills & coal feeders	85%	90%
ix)	Mill reject system	100%	100%
x)	Fuel oil system	100%	100%
xi)	PA /FD/ ID/ Seal air Fan	40%	60%
xii)	Gas / air duct dampers	70%	75%
xiii)	Gas/ air duct expansion joints	100%	100%
Overall Boiler Package (on finished Product basis):		70%	75%
2	Electro- static precipitators (ESPs)		
i)	Casings	100%	100%
ii)	Electrodes	100%	100%
iii)	Rapping system	100%	100%
iv)	Hopper heaters	100%	100%
v)	Transformer rectifiers	100%	100%
vi)	Insulators	100%	100%
Overall ESP Package (on finished Product basis)		100%	100%
3	Turbine-Generator (TG) System & its Auxiliaries		
a.	Turbine and & its Auxiliaries		
i)	HP/ IP/ LP turbine casings, rotors, turbine blades, blade rings, diaphragms, sealing rings, bearings, thick plates etc.		
	– Forgings for turbine Shafts	0%	10%
	– Casting for IP Outer casing	0%	10%
	– LP guide/ moving blades	20%	30%
	– Seal ring	0%	0%
	– Stationary blade ring- HPT & IPT	0%	0%
	– Bearings/ Bearing pedestals	50%	60%
	– Plates	75%	85%
	– Bars	20%	30%
	– Anchor rod, Anchor nuts & Torque nut	20%	30%
ii)	Hydraulic turning motor/ Barring gear system	0%	0%
iii)	Turbine steam inlet valves	50%	70%
iv)	Governing system & protection system	0%	0%
v)	Gland sealing system	40%	50%
vi)	Lub oil system & purification system	25%	35%
vii)	Drain system & flash tanks	25%	40%

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
viii)	HP/ LP bypass valves	0%	10%
ix)	Condensate extraction pumps	100%	100%
x)	Condenser tubes	20%	30%
xi)	Condenser tubes (sea water application)	0%	10%
xii)	Condenser Support Arrangement/ springs	20%	30%
xiii)	Ti Cladded Plate for condenser (Applicable for sea water only)	0%	10%
xiv)	Vaccum Pumps	0%	10%
xv)	Condenser On line Tube Cleaning System (COLTC)	100%	100%
xvi)	Debris filters, CW butterfly valves & RE joints etc.	100%	100%
xvii)	Heaters (HP heaters, deaerator, LP heaters & drain coolers)	80%	90%
xviii)	Boiler Feed Pumps (BFPs) & accessories	40%	50%
xix)	BFP Drive turbines	40%	50%
xx)	BFP Hydraulic coupling	30%	50%
xxi)	Condensate polishing units (CPUs)	80%	90%
xxii)	ECW system (Primary & secondary cooling water pumps, PHEs, self-cleaning filters etc.)	30%	40%
xxiii)	Air cooled condenser	40%	60%
b.	Generator System & its Auxiliaries		
i)	Thick Plates for Stator Casing	80%	90%
ii)	Forgings for Generator Rotor	0%	10%
iii)	Copper Profiles for stator bars		
	– Solid & Hollow Copper Profile	40%	50%
	– Hollow SS Profile	20%	30%
iv)	Stampings for Stator Core		
	– CRNGO Grade 270/ 350	25%	30%
	– Magnetic steel sheet Grade 700	25%	30%
v)	Rotor Hollow Copper Conductor	0%	10%
vi)	Rotor Wedges	0%	10%
vii)	Retaining / Support Rings	0%	10%
viii)	Static excitation system	40%	50%
ix)	Insulating Tapes		
	– Mica Paper Glass Tape	0%	20%
	– Epoxy Glass Fabric Tape	20%	40%

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
	– Conductive Polyester Fleece	20%	40%
x)	Seal oil system		
	– Vacuum Pump	0%	10%
	– Temperature control valve	0%	10%
	– Differential pressure gauge	0%	10%
xi)	– Filters for Stator cooling system	0%	10%
xii)	Gas system	0%	20%
Overall TG system (on finished product basis)		60%	65%
4	Electrical Works		
i)	Power & Auxiliary service transformers	65%	75%
ii)	HT & LT bus ducts	100%	100%
iii)	HT & LT motors	100%	100%
iv)	HT & LT switchgears	100%	100%
v)	Power & control cables	100%	100%
vi)	Control and metering equipment	90%	95%
vii)	Protective relays	90%	95%
viii)	Switch yard equipment - Insulators, Circuit Breakers, Isolators, Conductors, CTs, PTs, Bushings, PLCC etc.	90%	95%
ix)	Earthing & lightning protection system	100%	100%
x)	DC batteries & battery charger system	70%	90%
xi)	Electrical laboratory & testing equipment	70%	80%
xii)	Emergency DG sets	100%	100%
xiii)	Plant illumination system	100%	100%
xiv)	Generator Circuit Breaker & fittings	0%	0%
Overall Electrical system		70%	80%
5	Control & Instrumentation System (C&I System)		
i)	Distributed digital control, Monitoring and Information System (DDCMIS)	50%	60%
ii)	Thermocouples (for sensing Temperature/ Pressure)	50%	60%
iii)	Measuring instruments	50%	60%
iv)	Burner management system	50%	60%
v)	Furnace TV Camera & Flame Monitoring System	20%	40%
vi)	Actuators	50%	60%
vii)	Automation and Control Cards	50%	60%
viii)	PLC System	50%	60%

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Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
ix)	SWAS system	30%	40%
x)	Inter plant communication system	50%	60%
xi)	Vibration monitoring system	10%	20%
Overall C&I system		40%	50%
6	Coal Handling Plant		
i)	Conveyors, Feeders, Shuttle feeders, conveyor gallery, etc.	100%	100%
ii)	Hydraulic drives, hydraulic motor and split bearing for pulleys	70%	80%
iii)	Wagon Tippler	90%	95%
iv)	Side Arm Charger	90%	95%
v)	Paddle feeder	85%	90%
vi)	Junction and transfer towers	100%	100%
vii)	Crushers & Screens	90%	95%
viii)	Boiler bunker feeding system	100%	100%
ix)	Dust suppression (dry fog & plain water) system	100%	100%
x)	Compressors for DSS	100%	100%
xi)	Magnetic separators & metal detectors	100%	100%
xii)	Coal sampling system	60%	70%
xiii)	Stacking and reclaiming facilities (Stacker cum Reclaimer)	70%	80%
xiv)	Belt weighing & monitoring system.	100%	100%
xv)	Coal Analyser	0%	20%
Overall Coal Handling Plant(CHP)		85%	90%
7	Ash Handling System		
i)	Wet Bottom Ash handling system	100%	100%
	Wet Bottom Ash handling system with scraper chain conveyor	70%	80%
	Dry Bottom Ash handling system	0%	20%
ii)	Ash disposal system for economiser, APH & duct hoppers	100%	100%
iii)	Dry fly ash vacuum extraction system and pressure pneumatic conveying system	80%	100%
iv)	Wet fly ash disposal system for ESP	100%	100%
v)	Ash slurry disposal system - Lean ash slurry system	100%	100%
	Ash slurry disposal system - High concentration slurry system	70%	80%

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
vi)	Ash water system	100%	100%
vii)	Ash pond water recovery system	100%	100%
viii)	Instrument air system comprising of compressors, air dryers & air receivers.	80%	85%
Overall Ash Handling Plant (AHP)		75%	85%
8	Raw water intake & supply system		
i)	Travelling water screens, stop log gates and coarse screens	100%	100%
ii)	Raw water supply pumps and AHS supply pumps	100%	100%
iii)	Piping, valves, RE joints etc.	100%	100%
Overall Raw water intake & supply system		100%	100%
9	Water Treatment System and Effluent Treatment System		
i)	Clarification plant	100%	100%
ii)	Filtration plant	100%	100%
iii)	Ultra-filtration plant	40%	60%
iv)	Reverse osmosis plant	55%	60%
v)	DM plant	80%	90%
vi)	Chlorination plant	100%	100%
vii)	Chemical dosing system	100%	100%
viii)	Effluent Treatment Plant	90%	95%
ix)	DM Water storage tanks & transfer pumps	100%	100%
Overall Water Treatment Plant & ETP etc.		80%	90%
10	CW & ACW System		
i)	CW & ACW Pumps	100%	100%
ii)	Piping, BF valves, NRVs, RE joints & air release valves	100%	100%
Overall CW and ACW system		100%	100%
11	Cooling towers (NDCT/ IDCT)		
i)	Water distribution system, spray nozzles, packing, drift eliminators	100%	100%
ii)	CT Fans (for IDCT)	100%	100%
iii)	Gear boxes & shafts (for IDCT)	100%	100%
Overall Cooling towers (NDCT/ IDCT)		100%	100%
12	Air Conditioning & ventilation system		
i)	Split & window air conditioners	100%	100%
ii)	Chilling/ condensing unit (500 TR & below)	100%	100%

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
	Chilling/ condensing unit (above 500 TR)	65%	80%
iii)	AHU and Fresh air unit	100%	100%
iv)	Cooling towers	100%	100%
v)	AWUs, axial fans, roof extractors	100%	100%
vi)	Ducts, louvers & dampers	100%	100%
Overall Air Conditioning & Ventilation system (upto 500TR capacity)		100%	100%
Overall Air Conditioning & Ventilation system (more than 500 TR capacity)		85%	90%
13	Cranes & Hoisting facilities		
i)	Cranes	100%	100%
ii)	EOT Cranes	100%	100%
iii)	Monorail & Hoists	100%	100%
Overall Cranes & hoisting facilities		100%	100%
14	Fire Protection and Detection System		
i)	Fire water pumps (motor driven & diesel engine driven) including hydrant, spray & jockey pumps.	100%	100%
ii)	Hydrant system for the power plant.	100%	100%
iii)	High velocity water spray system for transformers, oil tanks, boiler burner front etc.	100%	100%
iv)	Medium velocity water spray system for cable galleries, conveyor galleries, fuel oil tanks & pump house etc.	100%	100%
v)	Automatic fire detection, alarm & control system for control rooms, electrical premises & conveyor galleries etc.	100%	100%
vi)	Foam system for LDO/ LSHS tanks and foam/ water monitors for fuel oil storage, ESP & switch yard area.	100%	100%
vii)	Inert gas flooding system for control room, RC Equipment room & panels etc.	100%	100%
viii)	Fire tenders and Portable fire-extinguishers	100%	100%
ix)	Fire Alarm Panels, Detection components including detectors and Modules.	85%	90%
x)	Clean Agent gas Based Systems	90%	95%
xi)	Special Cables such as Mineral Insulated Cables	90%	95%
xii)	Linear Heat Sensing Cables	90%	95%
Overall Fire Protection, detection & Alarm system		90%	95%
15	Flue Gas Desulphurization (FGD)		

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
i)	Spray Nozzles, Spray header etc.	0%	75%
ii)	Limestone Wet Ball Mill	0%	75%
iii)	Vacuum Belt Filter	0%	50%
iv)	Oxidation Blowers	50%	70%
v)	Limestone slurry handling pumps	40%	50%
vi)	Agitator	0%	50%
vii)	Mist Eliminator	0%	50%
viii)	GGH	0%	20%
ix)	C276 Clad plate	0%	20%
x)	Titanium Clad plate	0%	20%
Overall FGD system		30%	45%

B. Gas based thermal power projects:

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
1	Gas turbine generating set and auxiliaries :		
i)	Gas turbine unit		
	< 44MW	80	90
	44 – 145 MW	50	70
	> 150 MW	10	20
ii)	Combustion unit (Standard)		
	< 44MW	90	95
	44 – 145 MW	50	65
	> 150 MW	0	0
iii)	Combustion unit (Dry low nox)		
	< 44MW	30	40
	44 – 145 MW	0	25
	> 150 MW	0	0
iv)	Compressor unit		
	< 44MW	90	90
	44 – 145 MW	30	50
	> 150 MW	0	0

Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
v)	Lubrication and control oil system		
	< 44MW	80	85
	44 – 145 MW	80	85
	> 150 MW	80	80
vi)	Oil purification and cooling system		
	< 44MW	80	80
	44 – 145 MW	80	80
	> 150 MW	80	85
vii)	Turbine governing and protection system		
	< 44MW	0	0
	44 – 145 MW	0	0
	> 150 MW	0	0
viii)	Turning gear system		
	< 44MW	0	0
	44 – 145 MW	0	0
	> 150 MW	0	0
ix)	Compressor cleaning system		
	< 44MW	100	100
	44 – 145 MW	100	100
	> 150 MW	100	100
x)	Inlet air system		
	< 44MW	75	80
	44 – 145 MW	75	80
	> 150 MW	50	60
2.	Exhaust gas system		
	Ducting, Silencers, Bypass stack, Guillotine gates, Diverter damper and Expansion joints		
	< 44MW	100	100
	44 – 145 MW	100	100
	> 150 MW	100	100
3.	Heat Recovery Steam Generator (HRSG)		
i)	Drums	30	35*
ii)	Evaporators & superheaters	85	90**
iii)	Condensate preheater	100	100
iv)	Feed regulating station	100	100
v)	Superheater temperature control system	100	100

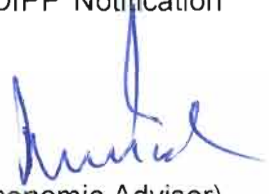
Sl. No.	Item	Minimum Local Content (%)	
		Year 2018-19	Over next five years in phased manner
vi)	Blow down tank	100	100
vii)	HP chemical dosing system	100	100
viii)	HRSG Stack	100	100
ix)	Supporting steelworks	100	100
x)	Nitrogen preservation system	100	100
xi)	Water washing system	100	100
* Indian vendors are not available for SA299 drum plates & SA516 Gr.70 plates above 120mm thickness.			
** Indian vendors are not available for T91 & T92 tubes.			
Overall Gas Turbine Package (on finished Product basis)			
	< 44MW	75	80
	44 – 145 MW	50	60
	> 150 MW	25	30
Overall CCGT Package (on finished Product basis)			
	< 44MW	80	85
	44 – 145MW	70	75
	> 150 MW	60	65
Notes :			
1. Raw material may be imported			
2. For high efficiency advance class Gas turbines, the first 3-5 Gas turbines shall be imported until technology is established locally.			
3. The minimum local content in %age for steam turbine, its auxiliaries and Balance of Plants (BoPs) pertaining to CCGT projects shall be same as applicable that for coal based plants as given under para (A) above.			

- 4.0** The minimum local content percentage shall be more than 70% in EPC / Turnkey projects and more than 90% in Works and Service contracts.
- 5.0** Purchase preference shall be given to local suppliers in procurements done by departments or attached or subordinate office of, or autonomous body controlled by, the Ministry of Power and includes Government companies as defined in the Companies Act, including procurements in the projects / schemes which are fully or partially funded by the Government of India and/or PFC / REC.
- 6.0** Decision on complaints relating to implementation of this Order shall be taken by a Committee constituted by Ministry of Power as under:

Chairperson	Member (Thermal), CEA
Member	Chief Engineer (Thermal), CEA

Other Members Director (Thermal), CEA.

- 7.0** The complaint fee of Rs. 2 Lakh or 1% of the value of the local item being procured (subject to maximum of Rs. 5 Lakh), whichever is higher, shall be paid in the form of Demand Draft, drawn in favour of DDO, CEA. In case the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.
- 8.0** All other conditions shall be as per those laid down in the DIPP Notification No. P-45021/2/2017-PP (BE-II) dated 28.05.2018.



(Economic Advisor)
Ministry of Power

To:

1. All Ministries/Departments of Government of India (As per list)
2. Cabinet Secretariat
3. Prime Minister's Office
4. NITI Aayog
5. Comptroller and Auditor General of India
6. Secretary, DIPP, Chairman of Standing Committee for implementation of Public Procurement Order, 2017
7. Joint Secretary, DIPP, Member-Convener of Standing Committee for implementation of Public Procurement Order, 2017
8. All JSs/EA/CE, MoP