



CLAUSE NO.	INTENT OF SPECIFICATION	<div>एनटीपीसी NTPC</div>														
	<div>SECTION-B</div> <div>PROVENNESS</div> <p>The Bidder / Bidder's sub-vendor(s) is required to meet the provenness criteria and/or qualification requirement for the items/ services listed below as per the stipulated criteria indicated in the respective clauses. For the purpose of qualification of Bidders / Sub-vendor(s), experience shall be reckoned as on the date of consideration for approval but not later than six months to award date of contract to the Main bidder unless otherwise specified in the respective clauses.</p> <div>1.0<div>Provenness Criteria/Qualifying Requirements for Equipments/Systems</div></div> <div>1.1<p>The Bidder / Bidder's sub-vendor(s) is required to meet the provenness criteria and/or qualification requirement for critical equipments, auxiliaries, systems and bought out items as per criteria stipulated below:</p></div> <div>1.2<p>Booster Fans, Slurry Recirculation Pumps, Oxidation Blowers, Wet Limestone Grinding Mills, Slurry Pumps, Agitators & Vacuum Belt Filters for the Wet Limestone based Flue Gas Desulphurisation (FGD) System offered by the Bidder shall be only from such manufacturer(s) who has previously designed (either by itself or under collaboration / licensing agreement), manufactured / got manufactured the respective equipment(s) of the type, application and minimum equipment rating as stipulated below such that the respective equipment(s) should have been in successful operation in at least one (1) plant for a period not less than one(1) year.</p><div>Type and Rating for Qualification</div><table><tr><th>Sl. No.</th><th>Name of Equipment</th><th>Type of Equipment</th><th>Application</th><th>Equipment Rating</th></tr><tr><td>(a)</td><td>Booster Fans</td><td>Axial type with variable pitch control</td><td>Coal fired power plant</td><td>Unit size of 500 MW – Flow 490 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.) Unit size of 210 MW & Below – Flow 225 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.)</td></tr><tr><td>(b)</td><td>Slurry Recirculation Pumps</td><td>Centrifugal type</td><td>Wet Limestone based FGD application in Coal fired</td><td>Unit size of 500 MW & Above - Flow 10200 m3/hr (min.) with Head 16</td></tr></table></div>	Sl. No.	Name of Equipment	Type of Equipment	Application	Equipment Rating	(a)	Booster Fans	Axial type with variable pitch control	Coal fired power plant	Unit size of 500 MW – Flow 490 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.) Unit size of 210 MW & Below – Flow 225 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.)	(b)	Slurry Recirculation Pumps	Centrifugal type	Wet Limestone based FGD application in Coal fired	Unit size of 500 MW & Above - Flow 10200 m3/hr (min.) with Head 16
Sl. No.	Name of Equipment	Type of Equipment	Application	Equipment Rating												
(a)	Booster Fans	Axial type with variable pitch control	Coal fired power plant	Unit size of 500 MW – Flow 490 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.) Unit size of 210 MW & Below – Flow 225 m3/s (min.) with Head 400 mmwc (min.) & Fan Speed 900 rpm (max.)												
(b)	Slurry Recirculation Pumps	Centrifugal type	Wet Limestone based FGD application in Coal fired	Unit size of 500 MW & Above - Flow 10200 m3/hr (min.) with Head 16												
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE	TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 7 OF 19													

CLAUSE NO.	<div style="text-align: center;"> INTENT OF SPECIFICATION  </div>				
	Sl. No.	Name of Equipment	Type of Equipment	Application	Equipment Rating
				power plant	Meters of Liquid Column (min.) Unit size of 210 MW & Below – Flow 5680 m3/hr (min.) with Head 16 Meters of Liquid Column (min.)
	(c)	Oxidation Blowers	Centrifugal/ positive displacement type blower	Wet Limestone based FGD application in Coal fired power plant or any other process application	Unit size of 500 MW & Above - Flow 7300 Nm3/hr Dry Basis (min.) with Head 8500 mmwc (min.) for spray tower process Or Head 3500 mmwc (min.) for bubbling type process Unit size of 210 MW & Below - Flow 5000 Nm3/hr Dry Basis (min.) with Head 6500 mmwc (min.) for spray tower process Or Head 3500 mmwc (min.) for bubbling type process
	(d)	Wet limestone Grinding mills	Horizontal Wet Ball mill	Wet Limestone based application in Coal fired power plant or any other process application .	Station size of 2001 MW – 2600 MW Capacity 40 T/hr (min.) with pulverizing fineness not less than 90% thru 325 mesh Station size of 1501 MW – 2000 MW - Capacity 30 T/hr (min.) with pulverizing fineness not less than 90% thru 325 mesh
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9		SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 8 OF 19


CLAUSE NO.	INTENT OF SPECIFICATION					
	Sl. No.	Name of Equipment	Type of Equipment	Application	Equipment Rating	
					Station Size of 1000 MW -1500 MW Capacity 20 T/hr (min.) with pulverizing fineness not less than 90% thru 325 mesh	
	(e)	Slurry Pumps	Centrifugal type	Wet Limestone based FGD application or ash slurry application in Coal fired power plant	Unit size of 500 MW & Above - Flow 50 m3/hr (min.) with head 30 Meters of Liquid Column (min.)	
					Unit size of 210 MW & Below - Flow 25 m3/hr (min.) with head 30 Meters of Liquid Column (min.)	
	(f)	Agitators	Vertical/Horizontal	Wet Limestone based FGD application in Coal fired power plant	Agitator rating not less than that supplied for 500 MW or higher size unit for similar application	
	(g)	Vacuum Belt filters	Belt type	Wet Limestone based FGD application in Coal fired power plant or in any other process application	Station size of 2001 MW- 2600 MW-Capacity 65 T/hr (min.)	
					Station size of 1501 MW-2000 MW-Capacity 50 T/hr (min.)	
					Station Size of 1000 MW – 1500 MW-Capacity 35 T/hr (min.)	
	The provenness criteria for equipment (Booster Fans) stipulated at Sl. No. 1.2 (a) above shall also be considered acceptable provided the rating parameters (i.e., flow, head and rated rpm) is covered within the operating regime of the respective fan performance curve of the reference plant equipment.					
	LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9		SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 9 OF 19


CLAUSE NO.	INTENT OF SPECIFICATION			<div>एनटीपीसी NTPC</div>						
1.3	<p>The provenness criteria for equipment (Booster Fans) stipulated at Sl. No. 1.2 (a) above shall also be considered acceptable provided the rating parameters (i.e., flow,head and rated rpm) is covered within the operating regime of the respective fan (Booster fan/ID fan.) performance curve of the reference plant equipment.</p> <p>In case the Bidder or the proposed sub-vendor is not manufacturer of proven Booster Fans as per clause 1.2 (a) above but is a manufacturer of such equipment for units of at least * MW rating, the Bidder or the proposed sub vendor shall be considered qualified for manufacturing such equipment for ** MW units also, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such equipment in India with such manufacturer who meets the requirements stipulated at clause 1.2 (a) above for the Booster Fans.</p> <p>For value of * and ** refer table below.</p> <table><tr><td>*</td><td>**</td></tr><tr><td>195 MW</td><td>195 MW – 500 MW</td></tr><tr><td>500 MW</td><td>660 MW</td></tr></table>				*	**	195 MW	195 MW – 500 MW	500 MW	660 MW
*	**									
195 MW	195 MW – 500 MW									
500 MW	660 MW									
1.4	<p>A JV / Subsidiary Company formed for manufacturing and supply of equipment(s) as listed at clause no. 1.2 above in India, shall also be considered qualified for manufacturing such equipment(s), provided that it has a valid collaboration or licensing agreement for design, engineering, manufacturing of such equipment(s) in India with a qualified equipment manufacturer who meets the requirements stipulated at clause 1.2 above (or the technology provider of the qualified equipment manufacturer) for the respective equipment(s). Before taking up the manufacturing of such equipment(s), the bidder/ his sub-vendor(s) must create /have created manufacturing facilities at his works as per collaborator's/licenser's design, manufacturing and quality control system for such equipment(s).</p> <p>Further, in such a case, such qualified equipment manufacturers should have, directly or indirectly through its holding company/ subsidiary company, at least 26% equity participation in the Indian Joint Venture Company/ Subsidiary Company, which shall be maintained for a lock-in period of seven (7) years from the date of incorporation of such Joint Venture/ Subsidiary or upto the end of defect liability period of the contract, whichever is later.</p>									
1.5	<p>In case the Bidder or the proposed sub-vendor is not manufacturer of proven Oxidation Blowers as per clause 1.2 (c) above but is a manufacturer of Blowers/compressors for minimum 50 NM³/min capacity, the Bidder or the proposed sub-vendor shall also be considered qualified for manufactur-ing Oxidation Blowers, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such Oxidation Blowers in India with such manufacturer who meets the requirements stipulated at clause 1.2 (c) above for the Oxidation Blowers. Before taking up the manufacturing of such equipment, the bidder/ his sub-vendor must create /have created manufacturing facilities at his works as per collaborator's /licenser's design, manufacturing and quality control system for such equipments.</p>									
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 10 OF 19						

CLAUSE NO.	INTENT OF SPECIFICATION	<div>एनटीपीसी NTPC</div>		
1.6	<p>(i) In case the Bidder or the proposed sub-vendor is not manufacturer of proven Wet limestone Grinding mills as per clause 1.2 (d) above but is a manufacturer of dry Grinding mills for power or cement industry of minimum 20 T/h capacity, the Bidder or the proposed sub-vendor shall also be considered qualified for manufacturing Wet limestone Grinding mills, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such Wet limestone Grinding mills in India with such manufacturer who meets the requirements stipulated at clause 1.2 (d) above for the Wet limestone Grinding mills. Before taking up the manufacturing of such equipment, the bidder/ his sub-vendor must create /have created manufacturing facilities at his works as per collaborator's /licenser's design, manufacturing and quality control system for such equipments.</p> <p>In addition, the Bidder shall be required to furnish a letter of support from Collaborator(s) / Licensor / Technology provider for successful performance of the equipment valid up to the end of defect liability period of the contract as per the format enclosed in the bidding documents, at the time of placement of order on the approved sub-vendor.</p> <p>OR</p>			
1.6	<p>(ii) In case, the bidder or proposed sub vendor is not a manufacturer of proven Wet Limestone Grinding Mills as per clause 1.2 (d) above, but have designed, manufactured & supplied dry Grinding Ball Tube mills for at least 500 MW pulverized coal fired power plant, the Bidder or the proposed sub-vendor shall also be considered qualified for manufacturing Wet limestone Grinding Mills provided it has a licensing agreement with a Wet limestone Grinding mills manufacturer who meets the requirements stipulated at clause 1.2 (d) above for the Wet limestone Grinding mills and provides extended warranty of three (3) years for the Wet Limestone Grinding Mills.</p>			
1.7	<p>In case the Bidder or the proposed sub-vendor is not manufacturer of proven Agitators as per clause 1.2 (f) above but is a manufacturer of Agitators for similar process/duty application in petrochemical or metals and mining industry, the Bidder or the proposed sub-vendor shall also be considered qualified for manufacturing Agitators, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such Agitators in India with such manufacturer who meets the requirements stipulated at clause 1.2 (f) above for the Agitators. Before taking up the manufacturing of such equipment, the bidder/ his sub-vendor must create /have created manufacturing facilities at his works as per collaborator's /licenser's design, manufacturing and quality control system for such equipments.</p>			
1.8	<p>In case the Bidder or the proposed subvendor is a manufacturer of Pumps, the Bidder or the proposed sub-vendor can also manufacture Slurry Recirculation Pumps and slurry pumps, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such equipment in India with such manufacturer who meet the requirements stipulated above at clause 1.2 (b) & 1.2 (e) of Section B Intent of Specification for the Slurry Recirculation Pumps and slurry pump respectively. Before taking up the manufacturing of such equipment, the bidder/ his sub-vendor must create /have created manufacturing facilities at his works as per collaborator's /licenser's design, manufacturing and quality control system for such equipment.</p>			
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 11 OF 19

CLAUSE NO.	INTENT OF SPECIFICATION	<div>एन टी पी सी NTPC</div>	
1.9	Before taking up the manufacturing of such equipment(s) as per clause 1.3, 1.4, 1.5, 1.6(i), 1.7 & 1.8 above, the Bidder / its sub vendor(s) must create (or should have created) manufacturing and testing facilities at its works as per Collaborator / licensor's design, manufacturing and quality control system for such equipments duly certified by the Collaborator / licensor. Further, the Collaborator / Licensor shall provide (or should have provided) all design, design calculation, manufacturing drawings and must provide (or should have provided) technical and quality surveillance assistance and supervision during manufacturing, erection, testing, commissioning of equipments.		
1.10	Bidder shall offer and supply only the type of the above equipment(s) for which it, itself or the manufacturer / Collaborator(s) / Licensor(s) proposed by the Bidder for the above equipment(s) is qualified.		
1.11	The Employer reserves the right to fully satisfy himself regarding capability and capacity of Bidder / its sub-vendor(s) and the proposed arrangement and may prescribe additional requirement before allowing manufacture of the equipment listed above for this contract.		
	<p>Note to clause 1.2</p> <p>(1) Whenever the term 'coal fired' is appearing above, "Coal" shall be deemed to also include bituminous coal/brown coal/Anthracite Coal/lignite.</p>		
2.0	Sub QR for Civil Works:		
2.1	Bidder or its agency should have in past executed civil and structural works for * or higher capacity (applicable for project having ** MW unit rating) coal based/Lignite based power plant including earthwork in filling involving mechanical compaction and cutting in hard rock, piling, foundations, Bulk material handling plant involving underground storage hopper and underground tunnels.		
2.2	Bidder can engage more than one agency, in case the Bidder itself is not able to meet the requirement at 2.1. The agency being engaged for a particular work should have in the past executed such works of * or higher capacity plant (applicable for project having ** MW unit rating).		
2.3	For Chimney, Bidder or its agency should have in the past built at least one (1) reinforced concrete chimney of minimum 100m height.		
2.4	In case Bidder or its agency do not meet the requirements at 2.1 and the Bidder proposes to engage agency (ies) for civil & structural works on work volume basis (except for Chimney), Bidder or its agency (ies) should have executed such works in		
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION
			PAGE 12 OF 19

CLAUSE NO.	INTENT OF SPECIFICATION	<div>एनटीपीसी NTPC</div>					
2.5	<p>the past and the annual rate of execution in the reference works should not be less than eighty percent (80%) of the asking rate of such works, (structural steel fabrication, erection, RCC, earthwork in filling involving mechanical compaction and cutting in hard rock, piling, RCC in underground storage hopper and underground tunnels) for which it is being engaged.</p> <p>Successful Bidder shall finalize the agency (ies) for each work in consultation with Engineer-in-charge at site before engaging them.</p> <p>Design agency for Civil & Steel Structural Works:</p> <p>Bidder or its agency (ies) should have carried out the design and detailed engineering of following works:</p> <div><div>(i)</div><div>Civil & Structural works associated with at least one bulk material handling plant for * or higher capacity coal based/Lignite based power plant (applicable for project having ** MW unit rating).</div></div> <div><div>(ii)</div><div>For Chimney, Bidder or its design agency (ies) should have carried out design & detailed engineering of at least one reinforced concrete chimney with steel flues, of minimum 100m height.</div></div> <div><div>(iii)</div><div>Machine foundations such as Mill foundations/ Block foundations.</div></div>						
	2.6	<p>Bidder can engage more than one agency (of repute), in case the Bidder itself is not able to meet the requirement at 2.5.</p> <p>The design agency (ies) proposed by the Bidder shall be subject to Employer’s approval.</p> <p>NOTE:- For value of “*”and “**” refer table below:-</p> <table><tr><td>*</td><td>**</td></tr><tr><td>195 MW</td><td>195 MW – 500 MW</td></tr><tr><td>500 MW</td><td>660 MW</td></tr></table>	*	**	195 MW	195 MW – 500 MW	500 MW
*	**						
195 MW	195 MW – 500 MW						
500 MW	660 MW						
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 13 OF 19			


CLAUSE NO.	INTENT OF SPECIFICATION			
3.0	PROVENNESS CRITERIA FOR ELECTRICAL EQUIPMENTS			
3.1	HT MOTORS			
3.1.1	BOOSTER FAN MOTOR			
	Bidder/Sub Vendor should have manufactured and supplied motor of 4MW or above rating, which should have been in successful operation in at least one (1) plant for at least two (2) years.			
3.2	LT SWITCHGEAR			
3.2.1	ROUTE 1			
3.2.1(i)	Bidder/ Sub Vendor should have manufactured and supplied at least a total of four hundred & fifty (450) numbers of draw out type Air Circuit Breaker Panels and / or draw out type Motor Control Centre Panels with fault rating of at least 45kA for one (1) second and 105kA peak under a single order and these panels should have been in successful operation for at least two (2) years.			
	And			
3.2.1(ii)	Bidder/ Sub Vendor should have manufactured and supplied at least one hundred & fifty (150) numbers of Air Circuit Breakers having fault rating of at least 45kA rms BREAKING, 105kA peak MAKING and 45kA withstand for one (1) second, and their associated draw out type Air circuit breaker panels having fault rating of at least 45kA for one (1) second and 105kA peak, which should have been in successful operation for at least two (2) years.			
3.2.2	ROUTE 2			
3.2.2(i)	Bidder/ Sub Vendor should have manufactured and supplied at least a total of two hundred & twenty five (225) numbers of draw out type Air Circuit Breaker Panels and / or draw out type Motor Control Centre Panels with fault rating of at least 45kA for one (1) second and 105kA peak under a single order and these panels should have been in successful operation for at least two (2) years.			
	And			
3.2.2 (ii)	Bidder/ Sub Vendor should have manufactured and supplied at least seventy five (75) numbers of draw out type Air Circuit Breaker panels having fault rating of at least 45kA for one (1) second and 105kA peak, which should have been in successful operation for at least two (2) years.			
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 14 OF 19

CLAUSE NO.	INTENT OF SPECIFICATION			
3.2.2(iii)	<p>And</p> <p>Bidder/ Sub Vendor shall be considered qualified provided its Associate or Collaborator or Technology Provider or Licensor meets the requirement stipulated in Route-1 for sourcing of Air Circuit Breakers. The Associate or Collaborator or Technology Provider or Licensor shall provide a letter of technical support for successful performance of the Air Circuit Breakers, as per the format, given in the bidding document. This letter of technical support should be submitted at the time of placement of order on the Sub Vendor.</p>			
3.2.2(iv)	<p>And</p> <p>Bidder/ Sub Vendor should have established manufacturing facility for draw out type Air Circuit Breaker Panels and draw out type Motor Control Centre Panels in India. Further, all the panels for this project shall be manufactured and supplied from the Indian manufacturing facility.</p> <p>NOTE: 1. Each Single Front Panel shall be counted as one (1) Panel, Double Front Panel as one (1) Panel and Air Circuit Breaker Panel as one (1) Panel. 2. The provenness criteria shall be applicable for all draw out type and fixed type switchboards except Lighting DBs and Welding DBs.</p>			
3.3	33 kV / 11 kV / 6.6 kV / 3.3 kV SWITCHGEARS			
3.3.1	Bidder/ Sub Vendor should have manufactured and supplied at least one hundred (100) numbers of 6.6kV or above Switchgear panels with fault rating of at least 40kA for one (1) second and 100kA peak, which should have been in successful operation for at least two (2) years.			
3.3.2	Bidder/ Sub Vendor should have manufactured and supplied at least one hundred (100) numbers of Vacuum Circuit breakers for 6.6kV or above panels with a rating of 40kA rms BREAKING, 100kA peak MAKING and 40kA withstand for one (1) second, which should have been in successful operation in 6.6kV or higher voltage application for at least two (2) years.			
3.4	NUMERICAL RELAYS			
3.4.1	Bidder/ Sub Vendor should have manufactured and supplied and successfully configured at least one hundred (100) numbers of Numerical Relays with IEC 61850			
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 15 OF 19

CLAUSE NO.	INTENT OF SPECIFICATION			<div>एनटीपीसी NTPC</div>
	used for application in Feeder Protections/Transformer Protections/Motor protections. These relays should have been in successful operation for at least two (2) years.			
3.5	TRANSFORMERS			
3.5.1	FGD Tie Transformer (50 MVA 220KV CLASS TRANSFORMER)			
	(a) Bidder/Sub-Vendor should have designed, manufactured and supplied at least two (2) nos. (one each at two different installations) of 220 kV or above class transformers of atleast 50 MVA capacity which should be in successful operation for atleast two (2) years.			
	And			
	(b) 90 MVA, 132 KV or higher rated oil filled transformer manufactured by Bidder/Sub-Vendor should have been successfully short circuit tested.			
3.5.2	FGD TIE TRANSFORMERS (132 KV CLASS TRANSFORMERS)			
	(a.) Bidder/Sub-vendor should have designed, manufactured and supplied at least two (2) numbers (one each at two different installations) of 132 kV or above class transformers of at least 110MVA capacity which should have been in successful operation for at least two years.			
	And			
	(b.) Bidder/Sub-Vendor should have its own facilities for conducting all routine and type tests as per IS: 2026 (except short circuit test).			
	And			
	(c.) 90 MVA, 132 KV or higher rated oil filled transformer manufactured by Bidder/Sub-Vendor should have been successfully short circuit tested.			
3.5.3	AUXILIARY OIL FILLED TRANSFORMERS			
	(Transformers not covered under Clause 3.5.1 & 3.5.2)			
	(a) The Bidder/ Sub-Vendor should have manufactured & supplied at least two numbers (one each at two different installations) of 16 MVA, 11kV or higher rating oil filled transformers which should have been in successful operation for at least two (2) years.			
	And			
	(b) Bidder/ Sub-Vendor should have his own facilities for conducting all routine and type tests as per IS: 2026 (except short circuit test).			
	And			
	(C) 16 MVA, 11KV Class or higher rated oil filled transformer manufactured by Bidder/ Sub-Vendor should have been successfully short circuit tested.			
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION	PAGE 16 OF 19

CLAUSE NO.	INTENT OF SPECIFICATION	<div>एनटीपीसी NTPC</div>	
	<p>Note (applicable for Cl. No. 3.5.1, 3.5.2, 3.5.3):</p> <p>(i) Two different installations means two different project sites or two different contracts.</p> <p>(ii) Equipment designed by the Bidder/Sub-vendor by itself or through its Collaborator/Associate for reference plant, shall also be considered meeting the requirement of design.</p>		
3.6	<p>Switchyard 132KV/220kV Equipment</p> <p>I. 132KV/220kV CIRCUIT BREAKERS 132KV/220KV Circuit Breakers being offered should be from Manufacturer who has manufactured and supplied atleast five(5) nos. of three phase circuit breakers suitable for Air Insulated Substation/ Switchyard of 132KV/220KV or above class which should have been in successful operation for at least two(2) years.</p> <p>II. 132KV/220 kV INSTRUMENT TRANSFORMERS (Current Transformers / Voltage Transformers as Applicable 132KV/220 kV Instrument Transformers being offered should be from Manufacturer who has manufactured and supplied atleast fifteen (15) nos. of single phase Instrument Transformers suitable for Air Insulated Substation/ Switchyard of 132KV/220 kV or above class which should have been in successful operation for atleast two (2) years</p> <p>III. 132KV/220 kV DISCONNECTORS 132KV/220kV Disconnectors being offered should be from Manufacturer who have manufactured and supplied atleast five (5) nos. of three phase Disconnectors suitable for Air Insulated Substation/ Switchyard of 132KV/220kV or above class which should have been in successful operation for atleast two (2) years.</p> <p>IV. 132KV/220 kV SURGE ARRESTORS 132KV/220kV Surge Arrestors being offered should be from Manufacturer who has manufactured and supplied atleast fifteen (15) nos. of single phase Surge Arrestors suitable for Air Insulated Substation/ Switchyard of 220kV or above class which should have been in successful operation for atleast two (2) years</p>		
3.7	<p>CONTROL AND PROTECTION</p> <p>The Bay Protection and control Units offered should be from Manufacturer(s) who have manufactured and supplied the offered type of devices for respective equipment, which should have been in successful operation in a 220kV class or above Substation/switchyard for at least two (2) years.</p>		
4.0	<p>PROVENNESS CRITERIA FOR CONTROL AND INSTRUMENTATION (C&I) EQUIPMENTS / SYSTEMS</p>		
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION
			PAGE 17 OF 19

CLAUSE NO.	INTENT OF SPECIFICATION	<div>एनटीपीसी NTPC</div>	
	<p>The Bidder or its proposed sub vendor(s) should meet the provenness requirements as stipulated under clause 4.1, 4.2 and 4.3. For the purpose of qualification of Bidders / Sub-vendor(s), experience shall be reckoned as on the date of consideration for approval but not later than six months after award date of LOT-4 FGD package unless otherwise specified in the respective clauses.</p>		
4.1	The Distributed Digital Control, Monitoring and Information System (DDCMIS) supplier of this package should be Indian Company registered in India as per Companies Act and should have engineered, supplied, and commissioned/ got commissioned BOP DDCMIS/DCS system in at least one (1) unit of rating 200MW or above in a power station.		
4.2	The Control system offered for this package shall be same or of same series which is operating successfully for a period of not less than one (1) year in at least one (1) unit of rating 200MW or above in a power station for BOP application.		
4.3	<p>The other C&I systems offered for this package shall meet the following:</p> <p>a) UPS system offered for this package shall be same or of same series and type as that of 105 KVA or above capacity UPS which should have been in successful operation for a period of not less than one (1) year in a power station.</p> <p>b) 24 V DC modular charger offered for this package shall be same or of same series and type as that of 500A or above capacity 24 V DC modular charger which should have been in successful operation for a period of not less than one(1) year in any industry or telecommunication application.</p> <p>c) CEMS and Vibration Monitoring system offered for this package shall be same or of same series which should have been in successful operation for a period of not less than one(1) year in at least one(1) unit of rating 200MW or above in a power station.</p> <p>Notes:-</p> <p>(A) Control system for BOP application referred in Para 4.1 and 4.2 means following:</p> <p>(i) Control system for BOP shall include Modulating control for Steam Generator (SG), Modulating control for feed water / Condensate Cycle, Binary Control of the auxiliaries for Steam Generator (SG) and Binary Control of the auxiliaries for Turbine generator (TG) for coal fired units.</p>		
5.0	DELETED		
6.0	DELETED		
LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9	SUB-SECTION-I INTENT OF SPECIFICATION
			PAGE 18 OF 19

CLAUSE NO.	INTENT OF SPECIFICATION			
<p>7.0</p> <p>8.0</p> <p>9.0</p> <p>10.0</p> <p>11.0</p>	<p>DELETED</p> <p>Agency for Wet Stack Flow Model Study</p> <p>Wet Stack Flow Model Study shall be carried out by an agency which has successfully performed at least two (2) flow model studies, in separate coal fired power plants, of wet stack installed after wet limestone based FGD Absorber (without reheating of cleaned flue gas), and based on the studies developed at least two (2) wet stack liquid collection systems which are in successful operation for a period of at least two (2) years reckoned as on the date of consideration for approval but not later than six months after award date of contract to the Main bidder.</p> <p>Balance equipments/ systems</p> <p>The Bidder at his option can source the balance of plant equipment/systems not covered in clause 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0 & 8.0 above. However for such balance of plant equipment/systems, the Employer reserves the rights to satisfy himself on the provenness of the equipment and capability and capacity of the manufacturers.</p> <p>Notwithstanding anything stated above, the Employer reserves the right to assess the capabilities and capacity of the Bidder/his collaborators/ licensor/ his sub-contractors to perform the contract, should the circumstances warrant such assessment in the overall interest of the Employer.</p> <p>To enable the approval of sub-vendors, the Bidder shall provide all necessary data such as type, design, make, capacity, duty conditions, date of commissioning/ operation etc.</p>			
<p>LOT-4 PROJECTS FLUE GAS DESULPHURISATION (FGD) SYSTEM PACKAGE</p>	<p>TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-0011-109(4)-9</p>	<p>SUB-SECTION-I INTENT OF SPECIFICATION</p>	<p>PAGE 19 OF 19</p>	