

Volume-III

Annexure (4-10)

Annexure – 4

GOVERNMENT OF ODISHA
DEPARTMENT OF ENERGY

No. 3193 / En., Dated 17.4.2013
OPGC-4/2013

From
Sri Sangramjit Nayak,
Joint Secretary to Government

To
The Director (Finance), OPGC

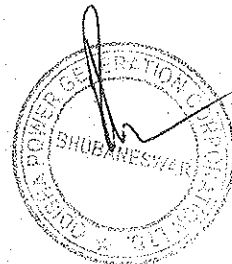
Sub: Project approval of Units 3 & 4 of OPGC Expansion Project.

Sir,

I am directed to invite a reference to your letter No.3322 dt.11.12.2012 on the subject noted above and to say that Government have been pleased to approve the Construction and installation of Units 3 & 4 of IB Thermal Power Plant of OPGC at a cost of Rs.11547.00 crore with a debt and equity ratio of 75:25. The equity participation between the Government of Odisha and AES will be in the ratio of 51:49 and a sum of Rs.903.00 crore and a sum of Rs.867.00 crore whichever is less is required to be infused by the State Government and AES respectively between the years 2014-15 and 2017-18.

Yours faithfully,

[Signature]
Joint Secretary to Govt.



Annexure – 5

CONTRACT FOR THE SUPPLY OF EQUIPMENT

BETWEEN

ODISHA POWER GENERATION CORPORATION LIMITED,
- as Buyer

AND

BHARAT HEAVY ELECTRICALS LIMITED
as Seller

dated as of
[27 April 2013]

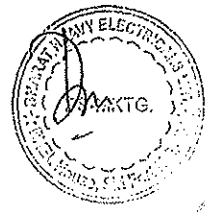
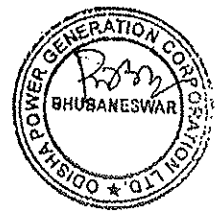
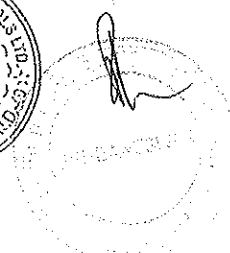
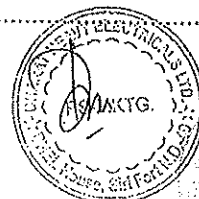
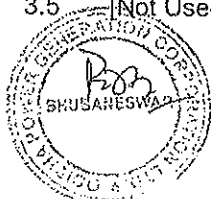
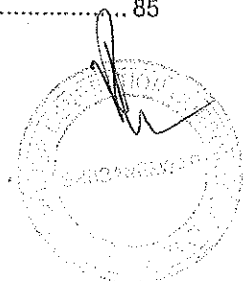
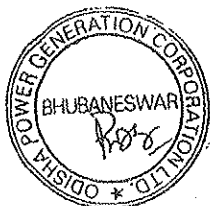


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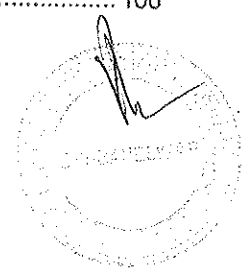
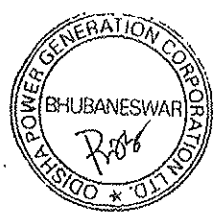
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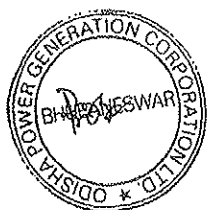
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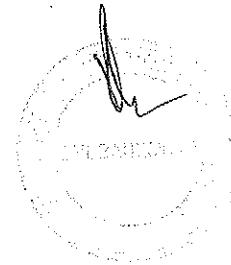


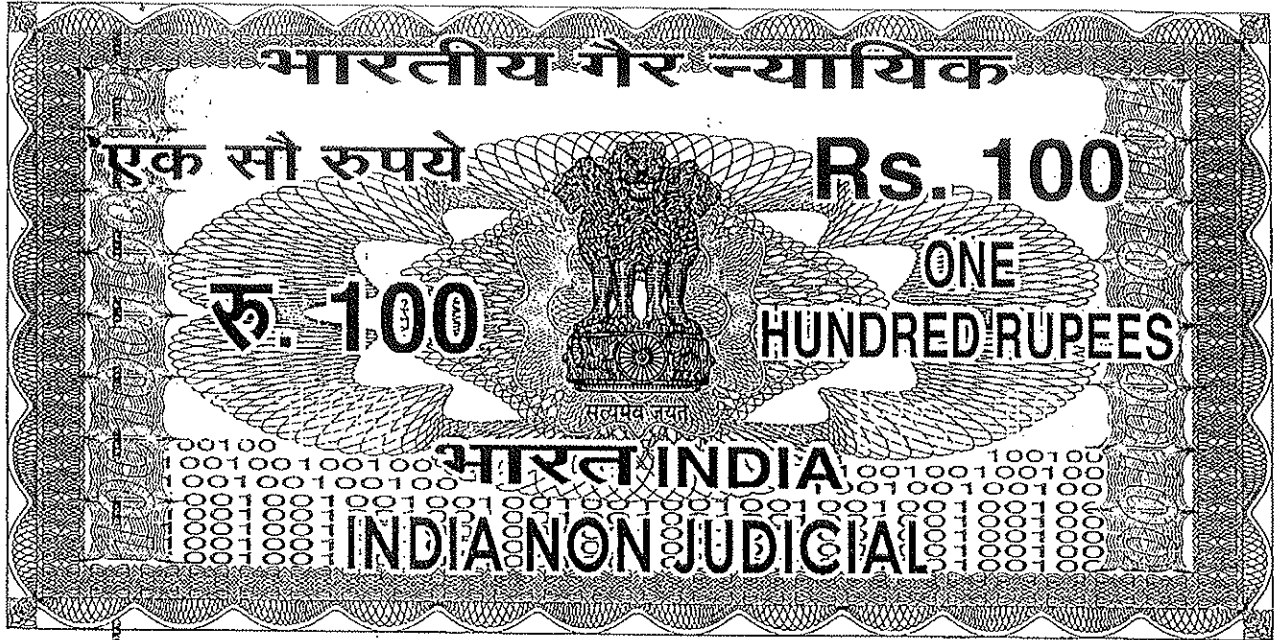
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ANNEXES

Annexure I	Technical Specification
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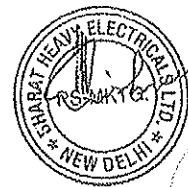
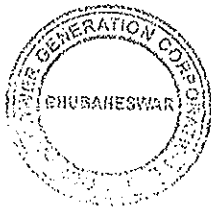


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CONTRACT FOR THE SUPPLY OF EQUIPMENT

This CONTRACT FOR THE SUPPLY OF EQUIPMENT is entered into on the 27th day of April, 2013 (the "Effective Date"), by and between ODISHA POWER GENERATION CORPORATION LIMITED, a company incorporated under the Indian Companies Act, 1956, with its registered office at Zone-A, 7th Floor, Fortune Towers, Chandrasekharapur, Bhubaneswar – 751 023, Odisha, India (hereinafter called "OPGC" or the "Buyer"), and BHARAT HEAVY ELECTRICALS LIMITED, a company incorporated under the Indian Companies Act, 1956, with its registered office at BHEL House, Siri Fort, New Delhi – 110 049, a Government of India Undertaking duly organized, registered, and existing under the laws of India with its office at BHEL House, Siri Fort, New Delhi – 110 049 (the "Seller").



WHEREAS, Buyer is developing the Facility (as hereinafter defined);

WHEREAS, Buyer conducted an international competitive bidding process for award of a contract for the Supply of Equipment and Seller was chosen as successful bidder. Buyer now wishes to appoint Seller to perform the Supply of Equipment (as hereinafter defined);

WHEREAS, Seller has represented and warranted to Buyer that it has the requisite experience, expertise, capability and know-how to and is willing to perform the Supply of Equipment in accordance with the terms and conditions of Articles 1 through 19 hereof and all the Appendices and Annexes attached hereto (this "Contract");

WHEREAS, on the basis of and relying upon the above representations and warranties and other representations and warranties in this Contract, Buyer has agreed to engage Seller to perform the Supply of Equipment on the terms and conditions set out in the Contract.

WHEREAS, the Parties therefore wish to enter into this Contract to set forth the terms and conditions governing the Supply of Equipment and their respective rights and obligations in relation thereto.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, and other good and valid consideration, the sufficiency of which is hereby acknowledged, the Parties covenant and agree as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 Defined Terms: As used in this Contract, the following terms shall have the following meanings (such meanings as necessary to be equally applicable to both the singular and plural forms of the terms defined unless the context otherwise requires):

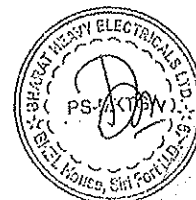
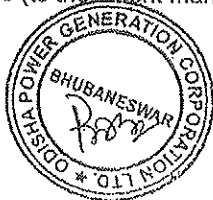
"Acceptable Credit Provider" means a bank or branch thereof with an office located in Mumbai, India that: (a) has a rating of at least A by CRISIL and a rating of at least A by ICRA, if the bank is rated by both CRISIL and ICRA, or has a rating of at least A by CRISIL or a rating of at least A by ICRA if the bank is rated by either CRISIL or ICRA but not both; and (b) is acceptable to Buyer.

"Acceptance Tests" has the meaning set forth in Section 8.1.1.

"Affiliate" of any Person (the "Relevant Person"), means (a) a Person that is a subsidiary of the Relevant Person, (b) a Person of which the Relevant Person is a subsidiary, (c) a Person that is the subsidiary of another Person of which the Relevant Person is a subsidiary or (d) any other Person that, directly or indirectly, controls or is controlled by or is under common control with such Person. For purposes of this definition, (i) a Person is a "subsidiary" of another Person if the latter owns, legally or beneficially, directly or indirectly, the shares of the former that are sufficient to cast over fifty percent (50%) of the votes in a general meeting of shareholders, members, partners or other owners of the former and (ii) "control" (including "controlled by" and "under common control with"), as used with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities or by contract or otherwise.

"Ambient Conditions" shall have the meaning set forth in Section III of Volume II-A of Annexure 1 of Technical Specification.

"Applicable Laws" means any and all acts, statutes, laws, codes, standards, regulations, permits, constitutions, licenses, ordinances, rules, judgments, orders, decrees, directives, guidelines or policies (to the extent mandatory) or any similar form of decision or determination by, or any



IN WITNESS WHEREOF, this Contract is executed as of the date first noted above.

ODISHA POWER GENERATION CORPORATION LIMITED

BHARAT HEAVY ELECTRICALS LIMITED

By: K. VENKATACHALAM

By: V. VENKATAKRISHNAN

Title: MANAGING DIRECTOR

Title: GENERAL MANAGER

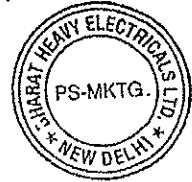
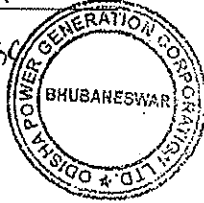
Managing Director
Odisha Power Generation Corporation Ltd.
Bhubaneswar

V. VENKATAKRISHNAN
General Manager / Marketing
BHEL / New Delhi - 110 049

In the presence of

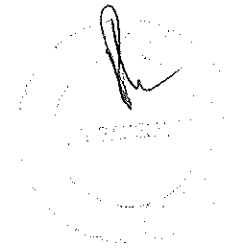
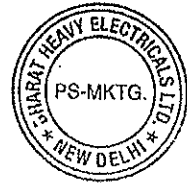
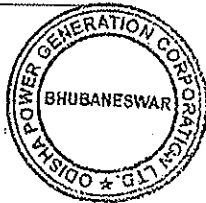
Name: Manojan Mishra
Company Secretary OPGC

Name:

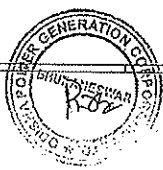



Name: Prakash K. Das
OPGC

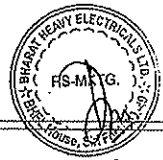
Name: (N.N. SARKAR)
Addl. General Manager



PRICE SCHEDULE – SUPPLY OF EQUIPMENT

S. No.	Equipment	Price for Supply of Equipment	Seller Taxes						Contract Price	
		EX Works	Import Duty, Cess and Levies on Equipment directly consigned to Buyer	Import Duty, Cess and Levies on Equipment directly consigned to Seller, Seller's Subcontractor(s)	Excise Duty	Sales Tax (States & Central) and VAT	Other Taxes, including Entry Taxes and Octroi	Total	Price for Supply of Equipment	Seller Taxes
		INR MILLION	INR MILLION	INR MILLION	INR MILLION	INR MILLION	INR MILLION	INR MILLION	INR MILLION	INR MILLION
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Boiler proper and accessories	<p style="text-align: center;">Price for Supply of Equipment and associated Seller Taxes included in row A</p>  								
2	Boiler Control & Instrumentation									
3	Electrostatic Precipitator									
4	Steam & Water Analysis system									
5	Mill reject Handling system									
6	Coal Bunker and Support Steel									
7	Fuel Oil and Firing Equipment									
8	Chemical Feed systems									
9	Turbine Building Structural / Enclosure / Metal Deck									
10	Turbine, Generator and accessories									

11	Steam Turbine Control & Instrumentation	<p>Price for Supply of Equipment and associated Seller Taxes included in row A</p>
12	HP / LP bypass system	
13	Condenser & Air Extraction system	
14	Turbine Oil Purification System	
15	Power Cycle Equipment	
16	Power Cycle Piping / Valves / Specialties	
17	CW piping and Low Pressure piping, valves and specialties	
18	Horizontal centrifugal Pumps	
19	Plate Heat exchangers	
20	Air Conditioning System	
21	Ventilation system	<p>Price for Supply of Equipment and associated Seller Taxes included in row A</p>
22	Compressed Air system	
23	Diesel Generator Set	
24	Elevators	
25	Miscellaneous Hoists	
26	Miscellaneous Cranes	
27	Sump Pumps	
28	Condensate Polishing system	
29	Thermal Insulation	
30	Generator Transformer	
31	Unit Transformer	
32	Reserve Auxiliary Transformer	
33	Unit Auxiliary Transformer	
34	Station Auxiliary Transformer	
35	LT Transformer	
36	Main Plant DC system	
37	Main Plant UPS system	
38	HT Switch Gear	



[Handwritten signature]

39	LT Switch Gear	<p>Price for Supply of Equipment and associated Seller Taxes included in row A</p>																																								
40	Cables																																									
41	Main Plant Illumination system																																									
42	Main Plant Earthing & Lightning system																																									
43	Isolated Phase Bus duct (IPBD)																																									
44	Segregated Phase Bus duct (SPBD)																																									
45	Generator Circuit Breaker(GCB)																																									
46	Central Control Room and Control Equipment Room (Unit Operator work stations, Unit Control Panels, Electrical control panels)																																									
47	Continuous Emission Monitoring system																																									
48	Station C&I as per Volume: IIE of Specification																																									
49	Paints																																									
50	Start Up and Commissioning Spares (Appendix B62)	<p>Price for Supply of Equipment and associated Seller Taxes included in row A</p>																																								
51	Special Tools and tackles for the complete plant (Appendix B76)																																									
52	Chemicals and consumables required till Substantial Completion (Annexure III/Volume IIA/Section V of the Annex 1 Technical Specification)																																									
53	Type Tests Price included--in--the--Price--of Equipment--with--break--up--in--Appendix--B4																																									
54	Training (Appendix B8)																																									
55	Any other supply item not covered above but required as per Technical Specification (mention the items)	<table border="1"> <tr> <td>A</td> <td>Sub Total - Supply of Equipment (excluding Price for Supply of Mandatory Spares)</td> <td>31,780.49</td> <td>Included in column (3)</td> <td>Included in column (3)</td> <td>2,119.92</td> <td>381.90</td> <td>Included in column (3)</td> <td>2,501.82</td> <td>31,780.49</td> <td>2,501.82</td> </tr> <tr> <td>56</td> <td>Mandatory Spares (Appendix B62)</td> <td>1,585.11</td> <td>Included in column (3)</td> <td>Included in column (3)</td> <td>188.89</td> <td>34.39</td> <td>Incl. in Cl. (3)</td> <td>223.28</td> <td>1,585.11</td> <td>223.28</td> </tr> <tr> <td>57</td> <td>Grand Total - Supply of Equipment</td> <td>33,365.60</td> <td>Included in column (3)</td> <td>Included in column (3)</td> <td>2,308.81</td> <td>416.29</td> <td>Included in column (3)</td> <td>2,725.10</td> <td>33,365.60</td> <td>2,725.10</td> </tr> </table>								A	Sub Total - Supply of Equipment (excluding Price for Supply of Mandatory Spares)	31,780.49	Included in column (3)	Included in column (3)	2,119.92	381.90	Included in column (3)	2,501.82	31,780.49	2,501.82	56	Mandatory Spares (Appendix B62)	1,585.11	Included in column (3)	Included in column (3)	188.89	34.39	Incl. in Cl. (3)	223.28	1,585.11	223.28	57	Grand Total - Supply of Equipment	33,365.60	Included in column (3)	Included in column (3)	2,308.81	416.29	Included in column (3)	2,725.10	33,365.60	2,725.10
A	Sub Total - Supply of Equipment (excluding Price for Supply of Mandatory Spares)									31,780.49	Included in column (3)	Included in column (3)	2,119.92	381.90	Included in column (3)	2,501.82	31,780.49	2,501.82																								
56	Mandatory Spares (Appendix B62)									1,585.11	Included in column (3)	Included in column (3)	188.89	34.39	Incl. in Cl. (3)	223.28	1,585.11	223.28																								
57	Grand Total - Supply of Equipment	33,365.60	Included in column (3)	Included in column (3)	2,308.81	416.29	Included in column (3)	2,725.10	33,365.60	2,725.10																																
A	Sub Total - Supply of Equipment (excluding Price for Supply of Mandatory Spares)	31,780.49	Included in column (3)	Included in column (3)	2,119.92	381.90	Included in column (3)	2,501.82	31,780.49	2,501.82																																
56	Mandatory Spares (Appendix B62)	1,585.11	Included in column (3)	Included in column (3)	188.89	34.39	Incl. in Cl. (3)	223.28	1,585.11	223.28																																
57	Grand Total - Supply of Equipment	33,365.60	Included in column (3)	Included in column (3)	2,308.81	416.29	Included in column (3)	2,725.10	33,365.60	2,725.10																																



Note:

- (1) The Price for Supply of Equipment and associated Seller Taxes, mentioned in row (A) of the table above, is the lump sum price for Supply of Equipment and associated Seller Taxes for items listed in rows (1) to row (55) in the table above.
- (2) The Price for Supply of Equipment, mentioned in row (57) and column (3) above, includes all costs towards the marine transit insurance policy taken by Seller for the transit of Equipment and its Delivery at the Site.
- (3) Seller Taxes in the nature of import duty, cess and levies on Supply of Equipment, in columns (4) and (5), is included in Price for Supply of Equipment, in column (3). Seller shall neither seek any reimbursement of nor any Change Order on such Seller Tax from Buyer as per the provisions of the Contract.
- (4) Seller Taxes in the nature of Excise Duty and Central Sales Tax on Supply of Equipment, in columns (6) and (7) has been computed based on the following:
 - a. Excise Duty @ 12.36%;
 - b. Central Sales Tax @ 2%;
- (5) Seller Taxes in the nature of VAT and Entry Tax on Supply of Equipment, in columns (7) and (8), are included in Price for Supply of Equipment, in column (3). Seller shall neither seek any reimbursement of nor any Change Order on such Seller Taxes from Buyer as per the provisions of the Contract.
- (6) The Ex Works Price of Mandatory Spares is as per the respective total Ex Works Price furnished for the Mandatory Spares forming part of the Appendix B6.
- (7) The Ex Works Price for Special Tools and Tackles conforms to the total Ex Works price furnished for Special Tools and Tackles forming part of the Appendix B7.



009

Supply

APPENDIX C1

CONTRACT SUPPLY SCHEDULE – SUPPLY OF EQUIPMENT

Seller assures the Guaranteed Supply Dates, as per Table 1 below, for the supply of Equipment of Unit 3 and Unit 4 of the Main Plant at the Supply Point. Seller also assures the Guaranteed Delivery Dates, as per the Table 1 below, for the supply of Equipment of Unit 3 and Unit 4 of the Main Plant at Site.

TABLE – 1: Guaranteed Supply Dates and Guaranteed Delivery Dates for the Supply of Equipment at the Supply Point and at the Site

S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
1.	BOILER PROPER AND ACCESSORIES						
1.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete.	66	150	180	66	270	300
1.2.	Structural Steel and Building						
1.2.1.	Tier-1 Structural Steel along with Walkways, Platforms and stairs	66	240	270	360	390	



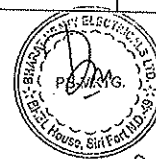
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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site			
1.2.2.	Tier-2 Structural Steel along with Walkways, Platforms and stairs	66	270	300	66	390	420
1.2.3.	Tier-3 Structural Steel along with Walkways, Platforms and stairs	66	300	330	66	420	450
1.2.4.	Tier-4 Structural Steel along with Walkways, Platforms and stairs	90	350	390	90	470	510
1.2.5.	Tier-5 Structural Steel along with Walkways, Platforms and stairs	90	350	390	90	470	510
1.3.	COMPLETION OF SUPPLY OF STRUCTURAL STEEL (1.2.1 to 1.2.5)			390			510
1.4.	Coal Bunker and Support Steel	300	480	510			870
1.5.	Gallery & duct support structural steel	127	630	660	127	680	720
1.6.	Misc. Structural steel	127	450	480			
1.7.	Building Enclosures - Roofing and siding	300	510	540			
1.8.	Casing	492	720	750	492	840	870
1.9.	Buck stay		480	510		600	630



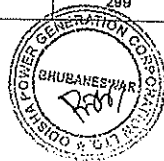
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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site	At Site		
1.10a	Ceiling Girders	270	330	360			
1.10b	Hanger of Boiler /	127	420	450	127	540	
1.11.	Headers						
1.11.1.	Eco inlet / outlet	278	450	480	400	570	
1.11.2.	Bottom ring header	278	660	690	400	810	
1.11.3.	Furnace inlet	278	450	480	400	570	
1.11.4.	Outlet and Intermediate header	278	450	480	400	570	
1.11.5.	S.H header	278	600	630	400	720	
1.11.6.	R.H header	278	450	480	400	570	
1.12.	Water wall tube						
1.12.1.	Back pass wall tube	219	630	660	219	780	
1.12.2.	Hopper wall tube	219	660	690	219	780	



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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site			
1.12.3.	Spiral and vertical wall tube	219	630	660	219	780	810
1.12.4.	Vertical & roof wall tube	219	630	660	219	780	810
1.13.	Super heater assembly						
1.13.1.	S.H division panels	219	620	660	219	740	780
1.13.2.	S.H finish assembly	219	620	660	219	740	780
1.13.3.	S.H platen assembly	219	620	660	219	740	780
1.13.4.	Loose tubes	219	620	660	219	740	780
1.14.	Reheater assembly						
1.14.1.	R.H finish assembly	278	620	660	278	690	780
1.14.2.	R.H L.T horizontal assembly	278	620	660	278	690	780
1.14.3.	R.H L.T pendant assembly	278	620	660		690	780
1.15.	Economizer assembly	299	620	660	299	690	780



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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site	At Site		
1.16.	Separator & storage tank	278	450	479	278	570	599
1.17.	Link & connections	278	450	479	278	570	599
1.17.1.	Link & connections Piping	299	450	479	299	570	599
1.17.2.	Attenuator system	339	450	479	339	570	599
1.17.3.	Safety valves / MOV's	540	630	660	540	570	840
1.17.4.	Silencers	250	450	329	250	420	449
1.18.	COMPLETION OF SUPPLY OF BOILER PRESSURE PARTS (1.11.1 to 1.17.4)			690			840
1.19.	Refractory, insulation & cladding	720	870	899	720	990	1019
1.20.	Boiler recirculation Pumps	600	690	720	600	810	840
1.21.	MOV's / CV's / Safety valves/ Silencers	523	659	689	523	779	809
1.22.	Blow down tanks / Flash tanks	523	689	719	523	809	839
1.23.	Soot blowing system	680	980	990	680	1080	1110



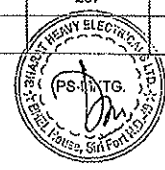
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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
1.24.	Coal firing system	400	900	929	400	1020	1049
1.24.1.	Coal shutoff gates / Valves / Chutes	643	900	929	643	1020	1049
1.24.2.	Raw Coal Feeders	704	900	929	704	1020	1049
1.24.3	Pulverised Coal pipes	523	900	929	523	1020	1049
1.24.4.	Coal Pulverisers	630	840	869	630	960	989
1.24.5.	Valves	630	840	869	630	960	989
1.24.6.	Seal air fans	630	840	869	630	960	989
1.24.7.	Seal air piping	704	840	869	704	960	989
1.24.8.	Coal burners	400	869	869	400	989	989
1.25.	Draft System						
1.25.1.	Air Preheater	480	510	540	600	690	660
1.25.2.	Steam Coil Air Heater	480	570	600	600	690	720



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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site	At Site		
1.25.3.	Primary Air Fans	480	780	810	600	900	930
1.25.4.	Forced Draft Fans	480	660	720	600	900	930
1.25.5.	Induced draft Fans	480	720	780	600	900	930
1.25.6.	Lube oil system	480	780	810	600	900	930
1.25.7.	Air Ducts	127	710	739	247	830	859
1.25.8.	Damper and Expansion Joints	643	710	739	763	830	859
1.25.9.	Flue Gas Ducts	127	710	739	247	830	859
1.25.10	Scanner Air cooling Fan	643	710	739	763	830	859
1.25.11	Air piping	643	710	739	763	830	859
1.26.	COMPLETION OF SUPPLY OF BOILER DRAFT SYSTEM INCLUDING DUCTS AND DUCT SUPPORTS			810			930
1.27.	Fly Ash Hoppers below Economizer and APH	127	870	920	267	990	1049
	BOILER CONTROL & INSTRUMENTATION						



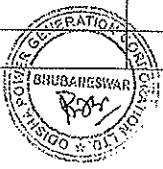
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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
2.							
2.1.	Distributed Digital Control Monitoring & Information System, (DDCMIS) based control system, hardware & software consisting of:	615	839	870	735	959	990
2.1.1.	FSSS system / Burner Management System including flame scanner	615	839	870	615	959	990
2.1.2.	Secondary air damper control (SADC)	735	839	870	855	959	990
2.1.3.	Soot blowing control system (SBC)	735	839	870	855	959	990
2.1.4.	Automatic steam leak Detection System,	735	839	870	735	959	990
2.1.5.	Furnace flame monitoring television,	735	839	870	735	959	990
2.1.6.	Coal feeder control	704	899	929	704	1019	1049
2.1.7.	Furnace Temperature probe	659	899	929	659	1019	1049
2.2.	COMPLETION OF SUPPLY OF BOILER CONTROL & INSTRUMENTATION (2.1.1 to 2.1.7)			929			1049



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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site			
2.3.	Complete hardware and software, pushbutton stations, Man-Machine interface (MMI) station, local panels etc. for boiler control system.	714	1000	1029	834	1120	1149
2.4.	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	674	900	989	794	1080	1109
2.5.	Junction and solenoid Boxes	714	1000	1029	834	1120	1149
2.6.	Pneumatic & Process hook up tubing / piping.	674	980	989	794	1080	1109
3.	ELECTROSTATIC PRECIPITATOR						
3.1.	Structural steel	120	330	359	240	450	479
3.2.	Platforms / walkways / stairs	120	480	510	240	600	630
3.3.	Guillotine dampers	180	710	739	300	830	859
3.4.	Gas distribution system	180	680	689		780	809



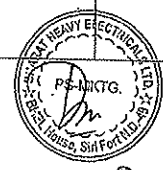
S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
3.5.	Dust Hoppers	210	660	689	330	780	809
3.6.	Thermal insulation and Cladding	600	860	900	720	900	1020
3.7.	Casing	150	510	540	270	630	660
3.8.	Insulators / Insulator compartment	180	750	789	300	870	909
3.9.	Discharge Electrode and Frame work	150	420	439	270	540	559
3.10.	Discharge / collecting Electrode Rappers	150	490	519	270	610	639
3.11.	Collecting Electrodes	150	410	439	270	530	559
3.12.	Transformer Rectifier Units	644	750	780	764	870	900
3.13.	Rectifier control cubicle	644	840	869	764	870	1020
3.14.	HT Switch Gear	644	810	869	764	930	989
3.15.	Indoor Dry transformer	644	810	869	764	930	989
3.16.	Non Segregated bus Duct	644	810	869	764	930	989



S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site			
3.17.	Power Control Centers / Motor Control Centers	644	810	869	764	930	989
3.18.	Control Panels / Auxiliary Control Panels	644	810	869	764	930	989
3.19.	Cables	644	810	869	764	930	989
3.20.	Earthing and shielding	644	810	869	764	930	989
3.21.	COMPLETION OF SUPPLY OF ESP (3.1 to 3.20)			900			1020
4.	STEAM & WATER ANALYSIS SYSTEM						
4.1.	Sample Conditioning system	629	914	929	749	1034	1049
4.2.	Monitoring instruments (for temperature, pressure, flow & sample), Analyzers, Converters / Transmitters,	659	944	959	779	1054	1079
4.3.	PLC	719	1004	1019	839	1124	1139
4.4.	SWAS Panels	719	1004	1019	839	1124	1139
5.	MILL REJECT HANDLING SYSTEM						
5.1.	Conveying Air compressors	625	899	929	625	1019	1049

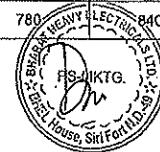


S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
5.2.	Air receivers	625	899	989	625	1019	1109
5.3.	Supply of complete C&I systems including PLC system, micro controller and field instruments.	625	899	1019	625	1019	1139
6.	FUEL OIL AND FIRING EQUIPMENT			869			989
6.1.	Fuel Oil Burners	553	869	869	553	989	989
6.2.	Piping / Valves / Strainers	553	869	869	553	989	989
6.3.	All Field Instruments	523	869	869	523	989	989
7.	CHEMICAL FEED SYSTEMS			809			929
7.1.	Oxygen Dosing System	419	779	809	419	899	929
7.2.	Hydrazine Dosing System	419	779	809	419	899	929
7.3.	Ammonia Dosing System	419	779	809	419	899	929
7.4.	Sodium Hydroxide Dosing system	419	779	809	419	899	929
	COMPLETION OF SUPPLY OF COMPLETE BOILER AND ITS AUXILIARIES [ITEMS 1.00 TO 7.4 except 2.3, 2.4, 2.5, 2.6, 4.2, 4.3, 4.4, 5.2, 5.3]			929			1049



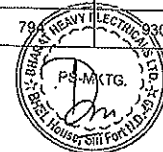
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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site	At Site		
	(For Item 1.2.1, to 1.2.5 and 1.11.1 to 1.17.4 LD will not be duplicated)						
	TURBINE BUILDING						
8.1.	Structural Steel and Building						
8.1.1.	Tier-1-Structural-Steel- A row Structural steel	210	300	359	330	479	
8.1.2.	Tier-2-Structural-Steel-B row Structural steel	210	360	399	330	519	
8.1.3.	Tier-3-Structural-Steel C row Structural steel	210	390	429	330	549	
8.1.4.	Tier-4-Structural-Steel-Supporting beams and bracings	210	480	519	330	639	
8.1.5.	Tier-5-Structural-Steel-Roof truss material	210	540	570	330	690	
8.2.	COMPLETION OF SUPPLY OF STRUCTURAL STEEL (8.1.1 to 8.1.5)			570		690	
8.3.	Misc. Structural steel	210	540	570	330	690	
8.4.	Crane Girder and Rails	330	450	480	450	600	
8.5.	False roofing for Control room	660	720	750	780	870	



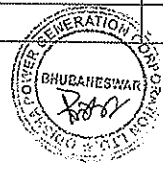
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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site			
8.6.	Metal decking for Floors / roofs	360	450	480	480	570	600
8.7.	Building Enclosures -Siding	360	630	660	480	750	780
8.8.	Doors and Windows	380	660	689	480	780	809
8.9.	COMPLETION OF SUPPLY OF TURBINE BUILDING COMPONENTS (8.1 to 8.8)			750			870
9.	STEAM TURBINE & GENERATOR						
9.1.	All sole plates, sub-sole plates, shims, jack-screws and wedges, as required, to set and align the turbine generator unit and foundation springs (VIS), if required.	359	389	449	479	509	569
9.2.	All foundation frames/base plates, anchor bolts, sleeves, nuts etc. for all equipment.	359	389	449	479	509	569
9.3.	TG Foundation Frames	479	509	569	599	629	689
9.4.	Bearing frames / bodies	599	629	689	719	749	809
9.5.	LP Cylinders	689	720	800	809	930	1020
9.6.	Turbine Rotors	674	810	900	799	930	1020

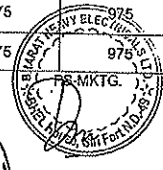


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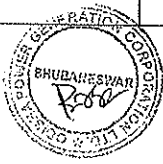
S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
9.7.	IP Cylinders	674	810	900	794	930	1020
9.8.	HP Cylinders & Rotors	634	780	840	754	930	1020
9.9.	Completion of supply of Steam Turbine (Casings / Cylinder, Rotor etc) (Items 9.1 to 9.9)			900			1020
9.10.	Turbine Integral piping	659	689	749	779	809	869
9.11.	Emergency stop valve / control valve / NRV's	659	689	749	779	809	869
9.12.	Lube oil system with tanks / pumps / filters / extractors etc	719	749	809	839	869	929
9.13.	Oil piping	719	749	809	839	869	929
9.14.	Gland sealing system	719	749	809	839	869	929
9.15.	Turbine Insulation	839	869	929	959	989	1049
9.16.	Generator Stator	719	780	840	839	960	1049
9.17.	Generator Rotor	749	840	900	869	960	1049
9.18.	Generator Excitation System	809	870	929	929	980	1049



S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Date of Completion of Supply	Guaranteed Delivery Date	Guaranteed Date - Start of supply	Guaranteed Date of Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site			
9.19.	Generator Gas supply system	809	870	959	929	990	1079
9.20.	Generator Seal Oil System	749	870	959	869	990	1079
9.21.	Water cooling system of generator winding	749	870	959	869	990	1079
9.22.	Completion of supply of Generator (Stator, Rotor etc)			959			1079
9.23.	Automatic Voltage Regulator	749	830	869	869	950	989
9.24.	Excitation Cubicles	749	830	869	869	950	989
10.	STEAM TURBINE CONTROL & INSTRUMENTATION						
10.1.	Distributed Digital Control Monitoring & Information System, (DDCMIS) based control system, hardware & software consisting of:				644	944	990
10.1.1.	Turbine Stress Evaluator (TSE)	555	930	960	675	975	990
10.1.2.	Electro Hydraulic Turbine Controls (EHTC)	555	930	960	675	975	990
10.1.3.	LP Bypass and Gland steam pressure Control (LPBP)	555	930	960	675	975	990
10.1.4.	Turbine Protection and Interlock System. (TP)		930	960	675	975	990

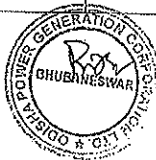


S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
10.1.5.	Automatic Turbine Tester (ATT)	555	930	960	675	975	990
10.1.6.	Automatic Turbine Rolling System (ATRS)	555	930	960	675	975	990
10.1.7.	Load Shedding Relay / Auto Synchronizer/ Islanding Operation	555	930	960	675	975	990
10.1.8.	Turbine Supervisory Instruments (TSI)	555	930	960	675	975	990
10.1.9.	Vibration Monitoring System with vibration analysis & decision support system	555	930	960	675	975	990
10.1.10.	HP-LP Bypass Control System.	524	930	960	644	944	959
10.2.	Completion of supply of Turbine Control & Instrumentation			990			1110
10.3.	Complete hardware and software, pushbutton stations, Man-Machine interface (MMI) station, local panels etc. for boiler control system.	704	1004	1019	824	1124	1139
10.4.	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	704	1004	1019	824	1124	1139



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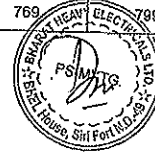
S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
10.5.	Junction and solenoid Boxes	704	1004	1019	824	1124	1139
10.6.	Pneumatic & Process hook up tubing / piping.	704	1004	1019	824	1124	1139
10.7.	Turbine local gauge board.	704	1004	1019	824	1124	1139
11.	LP BYPASS SYSTEM						
	LP Bypass Valves	779	809	929	899	929	1049
	Hydraulic Actuators / Hydraulic oil skid	779	809	929	899	929	1049
	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	779	809	929	899	929	1049
	Junction and solenoid Boxes	779	809	929	899	929	1049
	Pneumatic & Process hook up tubing / piping.	779	809	929	899	929	1049
	PLC.			959			1079



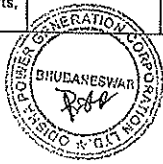
S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
	HP BYPASS SYSTEM						
11.1.	HP Bypass Valves	720	900	929	840	1020	1049
11.2.	Hydraulic Actuators / Hydraulic oil skid	720	900	929	840	1020	1049
11.3.	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	720	900	929	840	1020	1049
11.4.	Junction and solenoid Boxes	720	900	929	840	1020	1049
11.5.	Pneumatic & Process hook up tubing / piping.	720	900	929	840	1020	1049
11.6.	PLC.	720	900	929	840	1020	1049
12.	TURBINE OIL PURIFICATION SYSTEM						
12.1.	Turbine Lube Oil Purifier	839	869	929	959	989	1049
12.2.	Oil transfer pumps	839	869	929	959		1049



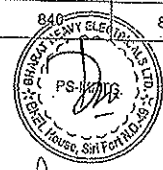
S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
12.3.	Central Oil Storage tank	839	869	929	959	989	1049
12.4.	Interconnecting Piping Valves, Fittings	839	869	929	959	989	1049
12.5.	Completion of Steam Turbine and Generator and Auxiliaries Supply [Items 8.00 to 12.5 except 10.3, 10.4, 10.5, 10.6, 10.7, 11.6]			990			1049
	(For items 8.1 to 8.8, 9.1 to 9.8 and 9.16 to 9.21 LD will not be duplicated)						
13.	CONDENSER & AIR EXTRACTION SYSTEM						
13.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete	284	314	359	404	434	479
13.2.	Base Plates	269	539	569	369	659	689
13.3.	Connection Pieces	449	539	569	569	659	689
13.4.	Hotwell	539	569	629	659	689	749
13.5.	LP Heater and Condenser Neck	669	750	810	779	870	930
13.6.	Tubes / Tube Sections	540	660	690	780	930	960
13.7.	Transition neck	649	679	739	769	799	859



S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
13.8.	Expansion Joints	649	679	739	769	799	859
13.9.	Internal Supports	649	679	739	769	799	859
13.10.	Water Boxes	539	569	629	659	689	749
13.11.	Air extraction Vacuum Pumps	719	869	900	839	989	1020
13.12.	Interconnecting Piping / Valves / fittings	719	749	809	839	869	929
13.13.	On-Load tube cleaning system	384	749	839	504	869	959
13.14.	Supply of complete C&I systems including PLC system, micro controller for On-Load tube cleaning system.	384	900	929	504	1020	1049
13.15.	Field instruments, process switches, transmitters, analysers, control valves, solenoid valves	384	900	929	504	1020	1049
13.16.	Completion of supply of complete Condenser & Air Extraction system			929			1049
14.	FEED CYCLE EQUIPMENT						
14.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete			660			780

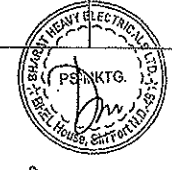
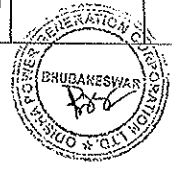


S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
14.2.	Boller Feed Pumps	720	810	839	840	930	959
14.3.	Steam Turbine for Boiler Feed Pumps including exhaust duct	720	810	839	840	930	959
14.4.	Steam turbine governing system	720	900	929	840	1020	1049
14.5.	BFP Turbine Electro hydraulic Governing System	720	810	839	840	930	959
14.6.	BFP Turbine Supervisory Instruments	720	810	839	840	930	959
14.7.	Motors for BFP	437	810	839	557	930	959
14.8.	Hydraulic Coupling	720	780	810	840	900	930
14.9.	Lubricating Oil system	720	780	810	840	900	930
14.10.	BFP Booster Pumps	720	700	739	840	820	859
	Condensate Extraction Pumps	720	810	840	840	930	960
14.11.	Condensate Extraction Pumps motors	437	710	810	557	830	930
14.12.	Deaerator	720	750	780	840	870	900



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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
14.13.	High Pressure feed water heaters	720	720	750	840	900	930
14.14.	Low Pressure feed water heaters	720	720	750	840	900	930
14.15.	Interconnecting Piping / Valves / fittings	720	780	810	840	900	930
14.16.	Field mounted Instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	720	840	899	840	960	1019
14.17.	Junction and solenoid Boxes	720	840	899	840	960	1019
14.18.	Pneumatic & Process hook up tubing / piping.	720	840	899	840	960	1019
14.19.	Local instruments, local gauge board and instruments to be mounted on the gauge board as required.	720	840	899	840	960	1019
14.20.	Strainers for CEP and BFP	720	840	899	840	960	1019
14.21.	Completion of supply of complete Condenser and Feed Cycle Equipment [Items 13.00 to 14.20]			929			1049



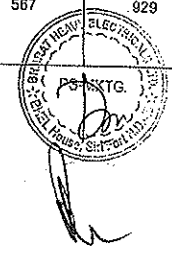
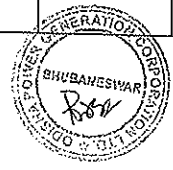
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		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
15.	POWER CYCLE PIPING						
15.1.	Carbon Steel, ASTM A-106, Gr. B or C Seamless						
15.1.1.	Pre Fabricated	517	729	900	637	849	1020
15.1.2.	Loose supply	447	659	719	567	779	839
15.2.	Alloy steel, ASTM A-335, P11/P12						
15.2.1.	Pre Fabricated	517	729	870	637	849	990
15.2.2.	Loose supply	447	659	719	567	779	839
15.3.	Alloy steel, ASTM A -335, P22/P91						
15.3.1.	Pre Fabricated	517	729	839	637	849	959
15.3.2.	Loose supply	447	659	719	567	779	839
15.4.	Complete insulation material for piping, valves, specialties & auxiliary equipment, Cladding sheet, Wire netting etc	517	729	789	637	849	909
15.5.	Carbon Steel Fittings (Elbows / Bends / Tees etc)	447	809	839		929	959

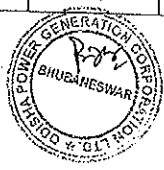


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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
15.6.	Carbon Steel Valves (Manual / Motorised / Control)	447	809	839	567	929	959
15.7.	Alloy Steel Fittings (Elbows / Bends / Tees etc)	447	809	839	567	929	959
15.8.	Alloy Steel Valves (Manual / Motorised / Control)	447	809	839	567	929	959
15.9.	Anchors / Hangers / Vibration Dampers / Restraints etc	447	809	839	567	929	959
15.10.	Structural steel members for pipe supports	447	809	839	567	929	959
15.11.	Funnels, tundishes for drips and drains	447	809	839	567	929	959
15.12.	Bolts, nuts, washers, temporary and permanent gaskets, fasteners	447	809	839	567	929	959
15.13.	Painting of all piping, valves & specialities at site	447	809	839	567	929	959
15.14.	All temporary pipes and accessories, supporting arrangement for cleaning, flushing and steam blowing	447	809	839	567	929	959
15.15.	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	447	809	839	567	929	959



S. No.	Description	Supply of Equipment					
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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
15.16.	Junction and solenoid Boxes	447	809	839	567	929	959
15.17.	Pneumatic & Process hook up tubing / piping.	447	809	839	567	929	959
15.18.	Completion of supply of complete Power Cycle piping (Items 15.1 to 15.17)			900			1020
16.	CW PIPING AND LOW PRESSURE PIPING, VALVES AND SPECIALITIES						
16.1.	Rubber expansion joints	378	840	869	498	960	989
16.2.	Butterfly valves	378	900	929	498	1020	1049
16.3.	Piping / supports / fittings / valves / specialities	657	869	929	777	989	1049
16.4.	Field instruments, process switches, analysers, control valves, solenoid valves	657	869	929	777	989	1049
16.5.	Junction and solenoid Boxes	597	809	869	717	929	989
16.6.	Pneumatic & Process hook up tubing / piping.	597	809	869	717	929	989
17.	HORIZONTAL CENTRIFUGAL PUMPS						
17.1.	DMCW Pump (Turbine Island)	419	759	789	419	879	909
17.2.	DMCW Pump (Boiler Island)	419	759	789	419	879	909

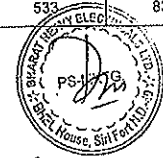
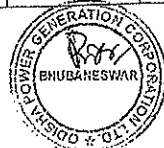


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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
17.3.	Cycle Makeup Pump	419	759	789	419	879	909
17.4.	Condensate Transfer Pump (Boiler fill pumps)	419	759	789	419	879	909
17.5.	ACW Booster Pump	419	759	789	419	879	909
18.	HEAT EXCHANGERS						
18.1.	Plate heat exchangers including isolation valves / Relief Valves	475	759	789	475	879	909
18.2.	Self cleaning system (pump, piping, valves etc)	475	759	789	475	879	909
19.1.	Central Control Room and Other areas in Turbine Building	449	719	749	449	839	869
19.1.1.	Water cooled screw chiller unit	449	719	749	449	839	869
19.1.2.	Condenser cooling water pumps	449	719	749	449	839	869
19.1.3.	Chilled Water circulating Pumps	449	719	749	449	839	869
19.1.4.	Cooling Towers	449	719	749	449	839	869
19.1.5.	Interconnecting piping	449	719	749	449	839	869

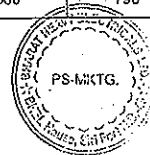
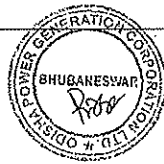


S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
19.1.6.	Insulation	449	719	749	449	839	869
19.1.7.	Expansion / Make-up Water Tanks	449	719	749	449	839	869
19.1.8.	Make-up water booster pump	449	719	749	449	839	869
19.1.9.	Air Handling Units	449	719	749	449	839	869
19.1.10.	Fresh Air units	449	719	749	449	839	869
19.1.11.	Filters	449	719	749	449	839	869
19.1.12.	Humidifiers / Heaters	449	719	749	449	839	869
19.1.13.	Ducting / Dampers / Hangers / Supports / Fire dampers	449	719	749	449	839	869
19.2.	Water cooled Precision Air conditioners - ESP Control-cum-Fly Ash Equipment Building	449	719	749	449	839	869
19.3.	Field instruments, process switches, analysers, control valves, solenoid valves	449	719	749	449	839	869
20.	VENTILATION SYSTEM						
20.1.	Centrifugal Fans	533	719	749	533	839	869

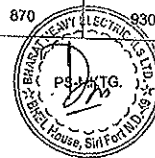


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		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
20.2.	Air washer units	533	719	749	533	839	869
20.3.	Air Filtration system	533	719	749	533	839	869
20.4.	Roof Exhausters	533	719	749	533	839	869
20.5.	Wall exhausters / supply fans and Tube axial fans	533	719	749	533	839	869
20.6.	Ducting / Dampers / Hangers / Supports / Fire dampers	533	719	749	533	839	869
20.7.	Field instruments, process switches, analysers, control valves, solenoid valves	533	719	749	533	839	869
21.	COMPRESSED AIR SYSTEM						
21.1.	Instrument air compressors	500	670	700	500	790	820
21.2.	Service air compressors	500	670	700	500	790	820
21.3.	Air receivers (IA / SA)	500	670	700	500	790	820
21.4.	Interconnection piping / valves / fittings	500	670	700	500	790	820
21.5.	Air driers	500	670	700	500	790	820



S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
21.6.	Supply of complete C&I systems including PLC system, micro controller and field instruments.	500	670	700	500	790	820
21.7.	Completion of supply of complete Compressed Air System (21.1 to 21.6)			700			820
22.	DIESEL GENERATOR SET						
22.1.	Diesel Generator set	750	810	870	870	930	990
22.2.	A C Generator	750	810	870	870	930	990
22.3.	Fuel Oil System	750	810	870	870	930	990
22.4.	Lube oil system	750	810	870	870	930	990
22.5.	Hand operated fuel oil filling pumps	750	810	870	870	930	990
22.6.	Cooling water system consisting of Pumps / Heaters / expansion tanks/ radiators etc	750	810	870	870	930	990
22.7.	Exhaust air ducting, silencer, expansion joints etc	750	810	870	870	930	990
22.8.	All interconnecting piping, valves, supports etc.	750	810	870	870	930	990
22.9.	Supply of complete C&I systems including PLC system, micro controller and field instruments.	750	810	870	870	930	990



S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
22.10.	DG Battery Bank along with DG Battery Charger	750	810	870	870	930	990
22.11.	DG Switchgear	750	810	870	870	930	990
23.	ELEVATORS						
23.1.	Steam Generator Area	704	720	750	704	840	870
23.2.	T-G Building	450	579	609	450	699	729
24.	MISCELLANEOUS HOISTS						
24.1.	Turbine Building	431	569	749	431	689	869
24.2.	Steam Generator Area	431	569	599	431	689	719
24.3.	ESP Area	431	569	599	431	689	719
24.4.	DG Building	431	569	599	431	689	719
24.5.	Machine Room of all Elevators	431	569	599	431	689	719
24.6.	Other areas	431	569	599	431	689	719



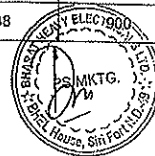
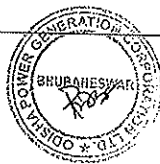
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		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
25.	Miscellaneous Cranes						
25.1.	Turbine Building (Station EOT crane)	380	450	480	380	570	600
25.2.	Compressor's Area	480	689	719	480	809	839
25.3.	Other areas	480	689	719	480	809	839
26.	SUMP PUMPS	491	779	809	491	899	929
27.	CONDENSATE POLISHING SYSTEM						
27.1.	Condensate Polisher Vessels	505	779	809	505	899	929
27.2.	Interconnecting Piping Valves, Fittings	505	779	809	505	899	929
27.3.	Blowers	505	779	809	505	899	929
27.4.	Rinse recirculation Pumps	505	779	809	505	899	929
27.5.	External Regeneration System	505	779	809	505	899	929
27.6.	Supply of complete C&I systems including PLC system, micro controller.	505	779	809	505	899	929



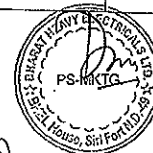
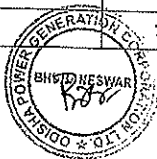
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		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site	At Site		
27.7.	Field Instruments, process switches, analysers, control valves, solenoid valves	505	779	809	505	899	929
27.8.	Junction and solenoid Boxes	505	779	809	505	899	929
27.9.	Pneumatic & Process hook up tubing / piping.	505	779	809	505	899	929
27.10.	First fill of resin	505	779	809	505	899	929
27.11.	All anchor bolts, foundation plate's sleeves, nuts, Inserts, etc. to be embedded in concrete for entire CP System.	505	779	809	505	899	929
28.	MISCELLANEOUS						
28.1.	Paints	800	990	1019	1020	1110	1139
28.2.	Consumables (Lub Oils, Grease, Chemicals)	900	990	1019	1020	1110	1139
29.	GENERATOR TRANSFORMER (GT), 400/21KV						
29.1.	All anchor bolts, foundation plate's sleeves, nuts, Inserts, rails etc. to be embedded in concrete	468	630	659	588	750	779
29.2.	Transformer	468	780	870	588	900	990
29.3.	HV & LV Bushings	468	780	870	588		990



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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
29.4.	Transformer oil	468	780	870	588	900	990
29.5.	Radiators	468	780	870	588	900	990
29.6.	Fans & pumps	468	780	870	588	900	990
29.7.	Conservator	468	780	870	588	900	990
29.8.	Electrical Panel	468	780	870	588	900	990
29.9.	Marshalling Box	468	780	870	588	900	990
29.10.	Protection System	468	780	870	588	900	990
29.11.	Completion of supply of Generator Transformer(GT) , 400/21KV (29.1 to 29.10)			870			990
30.	UNIT TRANSFORMER(UT),21/11KV						
30.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	468	630	659	588	760	779
30.2.	Transformer	704	810	870	824	930	1020
30.3.	HV & LV Bushings	704	840	870	824	960	1020



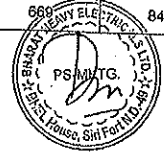
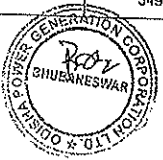
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		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
30.4.	Transformer oil	704	840	870	824	960	1020
30.5.	NGR & NGT	704	840	870	824	960	1020
30.6.	Radiators	704	840	870	824	960	1020
30.7.	Fans	704	840	870	824	960	1020
30.8.	Conservator	704	840	870	824	960	1020
30.9.	Electrical Panel	704	840	870	824	960	1020
30.10.	Marshalling Box	704	840	870	824	960	1020
30.11.	Protection System	704	840	870	824	960	1020
31.	RESERVE AUXILIARY TRANSFORMER (RAT), 400/11KV						
31.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	468	600	629	588	750	780
31.2.	Transformer	468	689	719	588	840	900
31.3.	HV & LV Bushings	468	689	719	588	840	900



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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
31.4.	Transformer oil	468	689	719	588	840	900
31.5.	NGR & NGT	468	689	719	588	840	900
31.6.	Radiators	468	689	719	588	840	900
31.7.	Fans	468	689	719	588	840	900
31.8.	Conservator	468	689	719	588	840	900
31.9.	Electrical Panel	468	689	719	588	840	900
31.10.	Marshalling Box	468	689	719	588	840	900
31.11.	Protection System	468	689	719	588	840	900
32.	UNIT AUXILIARY TRANSFORMER (UAT), 11/3.3KV						
32.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	549	570	629	669	690	749
32.2.	Transformer	549	720	780	669	840	900
32.3.	HV & LV Bushings	549	720	780	669	840	900



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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
32.4.	Transformer oil	549	720	780	669	840	900
32.5.	NGR &NGT	549	720	780	669	840	900
32.6.	Radiators	549	720	780	669	840	900
32.7.	Fans	549	720	780	669	840	900
32.8.	Conservator	549	720	780	669	840	900
32.9.	Electrical Panel	549	720	780	669	840	900
32.10.	Marshalling Box	549	720	780	669	840	900
32.11.	Protection System	549	720	780	669	840	900
33.	STATION AUXILIARY TRANSFORMER(SAT),11/3.3KV						
33.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	559	575	660	679	695	780
33.2.	Transformer	559	689	719	679	870	900
33.3.	HV & LV Bushings	559	689	719	679	870	900



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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
33.4.	Transformer oil	559	689	719	679	870	900
33.5.	NGR &NGT	559	689	719	679	870	900
33.6.	Radiators	559	689	719	679	870	900
33.7.	Fans	559	689	719	679	870	900
33.8.	Conservator	559	689	719	679	870	900
33.9.	Electrical Panel	559	689	719	679	870	900
33.10.	Marshalling Box	559	689	719	679	870	900
33.11.	Protection System	559	689	719	679	870	900
34.	LT TRANSFORMER,11/415 V						
34.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	350	599	629	470	719	749
34.2.	Transformer	350	750	719	470	870	900
34.3.	HT & LT Bushing		750	719	470	870	900



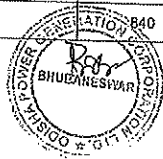
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		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
	At Supply Point	At Site	At Supply Point	At Site			
34.4.	Electrical Marshalling Box with all accessories	350	750	719	470	870	900
34.5.	Completion of supply of all Transformers [Items 29.00 to 34.4]			900			1020
	For item 29.11 LD will not be duplicated)						
35.	MAIN PLANT DC SYSTEM (220V DC AND 24VDC)						
35.1.	Battery Bank	445	779	809	565	899	929
35.2.	Battery charger	445	779	839	565	899	959
35.3.	DC switch Gear	445	779	839	565	899	959
36.	MAIN PLANT UPS SYSTEM						
36.1.	UPS Electrical Panel	539	824	839	659	944	959
36.2.	UPS Battery	539	824	839	659	944	959
36.3.	UPS Battery Charger	539	824	839	659	944	959
37.	HT Switch Gear(11KV)						
37.1.	Switch Gear Board	378	780	810	378	900	930



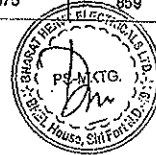
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At Supply Point		At Site	At Supply Point		At Site		
37.2.	Breakers	378	780	810	379	900	930
37.3.	Relays	378	780	810	380	900	930
38.	HT SWITCH GEAR(3.3KV)						
38.1.	Switch Gear Board	378	780	810	378	900	930
38.2.	Breakers	378	780	810	378	900	930
38.3.	Relays	378	780	810	378	900	930
39.	LT SWITCH GEAR(415V AC)						
39.1.	Boiler MCC	840	900	929	960	1020	1049
39.2.	Turbine MCC	840	900	929	960	1020	1049
39.3.	Valve MCC	840	900	929	960	1020	1049
39.4.	Soot Blower MCC	840	900	929	960	1020	1049
39.5.	Emergency MCC	840	900	929	960	1020	1049



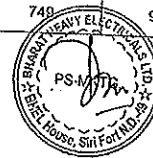
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		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
39.6.	Unit Switch Gear MCC	840	900	929	960	1020	1049
39.7.	Chemical Feeding system MCC	840	900	929	960	1020	1049
39.8.	Compressor MCC	650	670	700	770	790	820
39.9.	Relays	840	900	929	960	1020	1049
40.	LT SWITCH GEAR(220V AC)						
40.1.	Switch Gear Module	840	900	929			1049
	Completion of supply of all HT and LT Switch Gear[Items 37.1 to 40.1]			929			1049
41.	CABLES						
41.1.	HT Power Cable(11KV)	375	739	769	375	859	889
41.2.	HT Power Cable(3.3KV)	375	739	769	375	859	889
41.3.	LT Power cable(415V)	405	739	769	405	859	989
41.4.	LT Control Cable	375	739	769	375	859	989



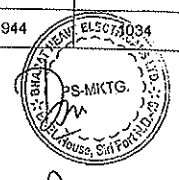
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		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
41.5.	Cable Trays, structure and other accessories for cabling	415	739	769	415	859	889
42.	MAIN PLANT ILLUMINATION SYSTEM						
42.1.	Lighting fixtures, Bulbs & fittings	389	839	869	389	959	989
42.2.	Lighting Panels	389	839	869	389	959	989
43.	MAIN PLANT EARTHING & LIGHTNING SYSTEM						
43.1.	Earthing mat	298	739	769	298	859	889
43.2.	Grounding Rod	298	739	769	298	859	889
43.3.	Earthing strip	298	739	769	298	859	889
43.4.	Lightning mast	298	739	769	298	859	889
44.	BUSDUCT						
44.1.	Isolated Phase Busduct(IPBD),Main & Tapoff,21KV	719	839	869	749	959	989
44.2.	Segregated Phase Busduct(SPBD),11KV,3.3KV	689	839	869	749	959	989



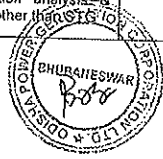
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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
44.3.	Non Segregated Phase Busduct(NSPBD),415V	689	839	869	749	959	989
44.4.	Bus Insulators and fitting accessories	809	839	869	929	959	989
44.5.	Pressurised Cubicle for IPBD	809	839	869	929	959	989
45.	GENERATOR CIRCUIT BREAKER(GCB)						
45.1.	Circuit Breaker(GCB) with all fitting accessories	809	839	869	929	959	989
45.2.	SF6 Gas for GCB	809	839	870	929	959	989
46.	CENTRAL CONTROL ROOM AND CONTROL EQUIPMENT ROOM						
46.1.	Unit Operator work stations	824	914	929	944	1034	1049
46.2.	Unit Control Panels	824	914	929	944	1034	1049
46.3.	Electrical control panels	824	914	929	944	1034	1049
46.4.	Large video screen display / Clock	824	914	929	944	1034	1049
46.5.	Control desks and furniture	824	914	929	944	1034	1049



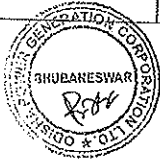
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		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
46.6.	Computer & Server Room equipment (Programming stations, servers, Historian, HART stations etc)	824	914	929	944	1034	1049
46.7.	Completion of supply of all equipment / panels in Central Control Room and Control Equipment Room			929			1049
47.	CONTINUOUS EMISSION MONITORING SYSTEM						
47.1.	Complete flue gas analyzers / Emission monitoring instruments (SOx, NOx, CO & CO2 analyzers).	614	914	929	734	1034	1049
47.2.	CEMS Panels	614	914	929	734	1034	1049
48.	STATION C&I						
48.1.	Vibration Monitoring System with vibration analysis & decision support system for all equipment other than SIS IO	554	854	869	674	974	989

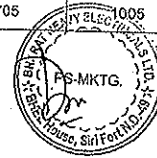


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		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
48.2.	All process connection and piping materials comprising of stub, root valves, impulse pipes of different grades & stainless steel tubes, Isolation & drain valves, valve manifolds, gauge valves, condensate pot, fittings, stands, brackets etc. as required for satisfactory installation of all field instruments like transmitters, local instruments etc.	554	854	869	674	974	989
48.3.	Local Control Panels, Gauge Boards, Transmitter racks, Transmitter enclosures, stanchions, brackets etc.	554	854	869	674	974	989
48.4.	Pneumatic hookup materials like stainless steel grade pneumatic tubes, fittings and isolating valves as required. Erection hardware including junction boxes, canopies, structural steel as required.	554	854	869	674	974	989
48.5.	All cables, cable accessories inclusive of all flexible conduits, perforated tray, pull boxes, inspection covers, bends, elbows, mounting brackets, clamps, nuts and bolts, glands, lugs, ferrules, connectors, markers, tray supports, rigid conduits, tie wraps etc.	554	854	869	674	974	989



S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
		Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
At Supply Point		At Site	At Supply Point		At Site		
48.6.	Optical fiber cable / special cables with accessories like LIU, patch cord / pigtail, converter, terminators, taps, heavy duty HDPE conduits etc. Optical Time Domain Reflectometer and splicing kit for optical fiber cable testing & maintenance	554	854	869	674	974	989
48.7.	Supply of Electronic earth pit and Earthing system materials for all I&C system grounding.	554	854	869	674	974	989
49.	Auxiliary Boiler & Accessories	585	885	900	705	1005	1020



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Annexure – 6

CONTRACT FOR THE SERVICES

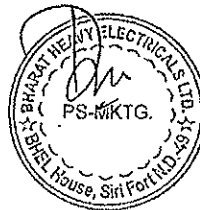
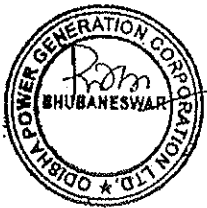
BETWEEN

ODISHA POWER GENERATION CORPORATION LIMITED
as Owner

AND

BHARAT HEAVY ELECTRICALS LIMITED
as Contractor

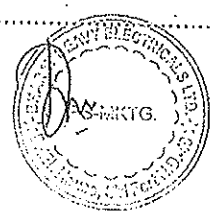
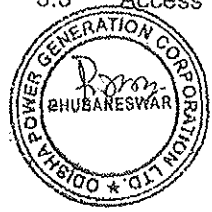
dated as of
[27 April 2013]



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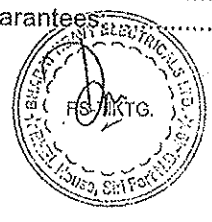
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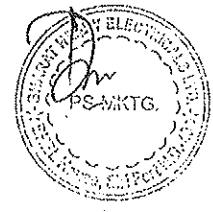
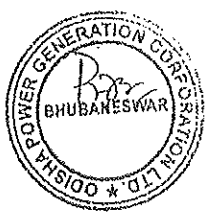
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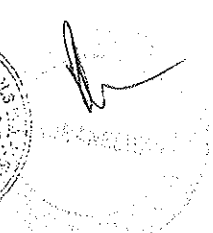
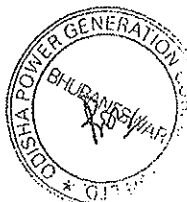
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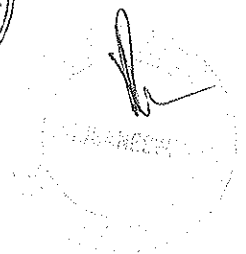
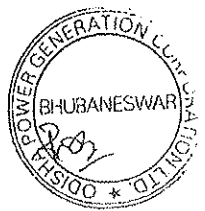


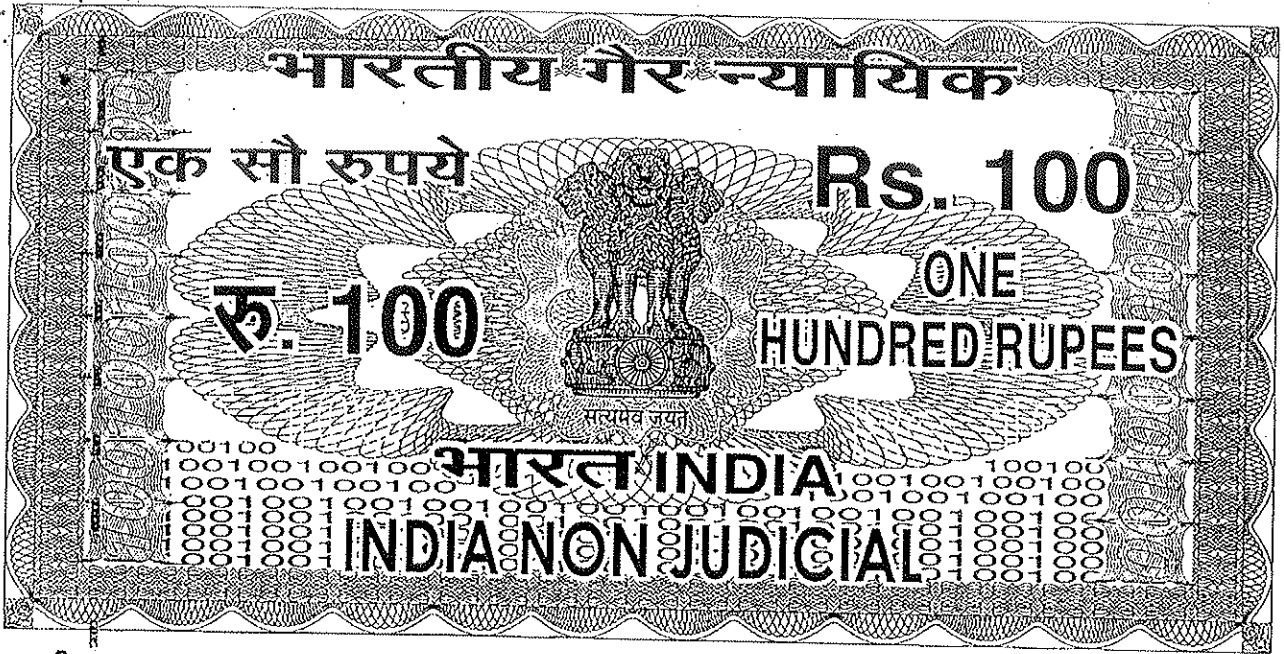
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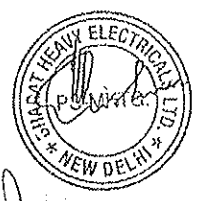
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CONTRACT FOR THE SERVICES

This CONTRACT FOR THE SERVICES is entered into on the 27th day of April, 2013 (the "Effective Date"), by and between ODISHA POWER GENERATION CORPORATION LIMITED, a company incorporated under the Indian Companies Act, 1956, with its registered office at Zone-A, 7th Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar – 751 023, Odisha, India (hereinafter called "OPGC" or the "Owner"), and BHARAT HEAVY ELECTRICALS LIMITED, a company incorporated under the Indian Companies Act, 1956, with its registered office at BHEL House, Siri Fort, New Delhi – 110 049, a Government of India Undertaking duly organized, registered, and existing under the laws of India with its office at BHEL House, Siri Fort, New Delhi – 110 049 (the "Contractor").

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WHEREAS, Owner is developing the Facility (as hereinafter defined);

WHEREAS, Owner conducted an international competitive bidding for award of a contract for the Services (as defined hereinafter), including the Taking Over (as defined hereinafter) of the Equipment from the Owner's Nominated Related Contractor at Supply Point (as defined hereinafter), transportation of Equipment and Delivery (as defined hereinafter) of Equipment at Site, unloading of Equipment at Site, handling and storage of Equipment at Site erection and installation of Equipment, commissioning, start-up, testing and related services for the completion of the Main Plant (as hereinafter defined) and Owner has chosen the Contractor as the successful Bidder. Owner now wishes to appoint Contractor for such Services;

WHEREAS, Contractor has represented and warranted to Owner that it has the requisite experience, expertise, capability and know-how to and is willing to perform the Services in accordance with the terms and conditions of Articles 1 through 19 hereof and all the Appendices and Annexes attached hereto (this "Contract");

WHEREAS, on the basis of and relying upon the above representations and warranties and other representations and warranties in this Contract, Owner has agreed to engage Contractor to perform the Services on the terms and conditions set out in the Contract.

WHEREAS, the Parties therefore wish to enter into this Contract to set forth the terms and conditions governing the Services and their respective rights and obligations in relation thereto.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, and other good and valid consideration, the sufficiency of which is hereby acknowledged, the Parties covenant and agree as follows:

1. DEFINITIONS AND INTERPRETATION

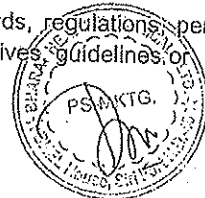
1.1 Defined Terms: As used in this Contract, the following terms shall have the following meanings (such meanings as necessary to be equally applicable to both the singular and plural forms of the terms defined unless the context otherwise requires):

"Acceptable Credit Provider" means a bank or branch thereof with an office located in Mumbai, India that: (a) has a rating of at least A by CRISIL and a rating of at least A by ICRA, if the bank is rated by both CRISIL and ICRA, or has a rating of at least A by CRISIL or a rating of at least A by ICRA if the bank is rated by either CRISIL or ICRA but not both; and (b) is acceptable to Owner.

"Acceptance Tests" has the meaning set forth in Section 8.1.1.

"Affiliate" of any Person (the "Relevant Person"), means (a) a Person that is a subsidiary of the Relevant Person, (b) a Person of which the Relevant Person is a subsidiary, (c) a Person that is the subsidiary of another Person of which the Relevant Person is a subsidiary or (d) any other Person that, directly or indirectly, controls or is controlled by or is under common control with such Person. For purposes of this definition, (i) a Person is a "subsidiary" of another Person if the latter owns, legally or beneficially, directly or indirectly, the shares of the former that are sufficient to cast over fifty percent (50%) of the votes in a general meeting of shareholders, members, partners or other owners of the former and (ii) "control" (including "controlled by" and "under common control with"), as used with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities or by contract or otherwise. "Ambient Conditions" shall have the meaning set forth in Section III of Volume II-A of Annexure 1 of Erection Specification.

"Applicable Laws" means any and all acts, statutes, laws, codes, standards, regulations, permits, orders, licenses, ordinances, rules, judgments, orders, decrees, directives, guidelines, or



IN WITNESS WHEREOF, this Contract is executed as of the date first noted above.

ODISHA POWER GENERATION CORPORATION LIMITED

BHARAT HEAVY ELECTRICALS LIMITED

[Handwritten signature of K. Venkatachalam]

[Handwritten signature of V. Venkatakrishnan]

By: K. VENKATACHALAM

By: V. VENKATAKRISHNAN

Title: MANAGING DIRECTOR
Managing Director
Odisha Power Generation Corporation Ltd.
Bhubaneswar

Title: GENERAL MANAGER

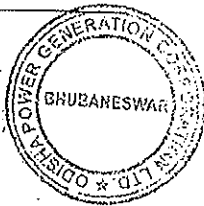
V. VENKATAKRISHNAN
General Manager / Marketing
BHEL / New Delhi - 110 049

In the presence of

Manarajan Mishra

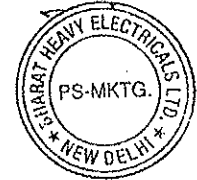
Name:

Campy Secretary OPGC



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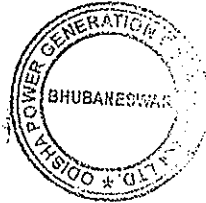
Name:



Balaram Upadhyay

Name:

OPGC

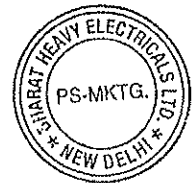


Yaravandi

Name:

(N.N. SARKAR)

Add. General Manager.



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PRICE SCHEDULE - SERVICES

APPENDIX B1

S. No.	Services	Price for Services	Contractor Taxes			Contract Price	
			Service Tax	Other Taxes, Cess, if any	Total	Price for Services	Contractor Taxes
			INR Million	INR Million	INR Million	INR Million	INR Million
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.00	Inland Transportation of Equipment from Supply Point to Delivery Point	855.40	25.63	0.77	26.40	855.40	26.40
2.00	Erection & Commissioning of the Main Plant	3,148.36	377.80	11.34	389.14	3,148.36	389.14
	TOTAL	4,003.76	403.43	12.11	415.54	4,003.76	415.54

Note:

1. Service Tax @ 12% applicable on the Price for Services. Cess @ 3% of the applicable Service Tax on the Price of Services. Rebate @ 75% of the applicable Service Tax on the Price for Inland Transportation of Equipment from Supply Point to Delivery Point.



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CONTRACT SCHEDULE - SERVICES

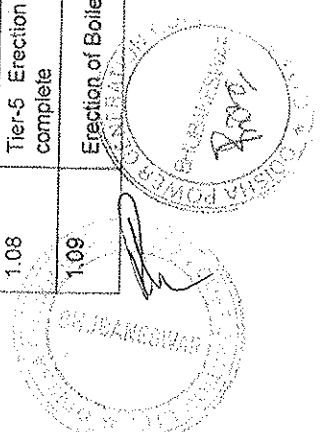
Contractor assures the Guaranteed Completion Dates, as per Table 1 below, for erection and commissioning of various Activities/Systems of Unit 3 and Unit 4 of the Main Plant at the Site.

TABLE - 1

Guaranteed Completion Dates for Erection and Commissioning

Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
1.0	BOILER PROPER AND ACCESSORIES				
1.01	Steam Generator structural erection started	240			
1.02	Tier-1 Erection - Structural Steel along with Walkways, Platforms and stairs complete	240	300	360	420
1.03	Tier-2 Erection - Structural Steel along with Walkways, Platforms and stairs complete	300	330	420	450
1.04	Tier-3 Erection - Structural Steel along with Walkways, Platforms and stairs complete	330	360	450	480
1.07	Tier-4 Erection - Structural Steel along with Walkways, Platforms and stairs complete	360	390	480	510
1.08	Tier-5 Erection - Structural Steel along with Walkways, Platforms and stairs complete	390	420	510	540
1.09	Erection of Boiler Enclosures - Roofing and siding complete				

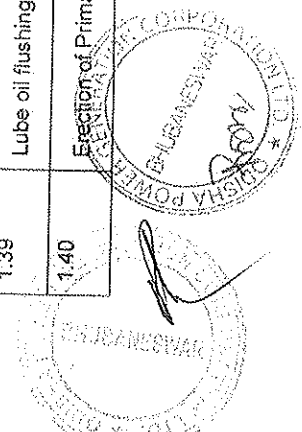
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Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
1.10	Erection of Casing complete	960	1170	1080	1290
1.11 (a)	Erection of Buckstay complete	600	780	720	900
1.11(b)	Erection of Ceiling Girders complete	420	450	540	570
1.12	Erection of Hanger of Boiler	450	510	570	630
1.13	Erection of Headers complete	510	600	630	720
1.14	Erection of Water walls complete	600	780	720	900
1.15	Erection of Super heater assembly complete	660	720	780	840
1.16	Erection of Reheater assembly complete	660	720	780	840
1.17	Erection of Economizer assembly complete	690	750	810	870
1.18	Erection of Separator & storage tank complete	750	810	870	930
1.19	Boiler Pressure Parts erection complete		810	120	930
1.20	Erection of Refractory, insulation & cladding complete	930	1080	1050	1200
1.21	Erection of Boiler recirculation Pumps complete	780	840	900	960
1.28	Steam Generator Hydro test complete and IBR approval received		900		1020

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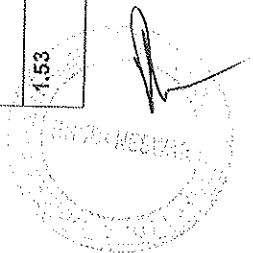
Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
	COAL BURNER SYSTEM				
1.29	Erection of Soot blowing system complete.	960	1170	1080	1290
1.30	Erection of Raw Coal Feeders complete	870	960	990	1080
1.31	Erection of Pulverised Coal pipes complete	900	1080	1020	1200
1.32	Erection of Coal Pulverisers complete	720	1080	840	1200
1.33	Erection of Seal air fans complete	840	1080	960	1200
1.34	Erection of Coal burners complete	600	780	720	900
	BOILER AUXILIARIES & DRAFT SYSTEM				
1.35	Erection of Air Preheater complete	750	930	870	1050
1.36	Erection of Steam Coil Air Heater complete	750	930	870	1050
1.37	ID / FD / PA fans erection	570	1020	690	1140
1.38	Erection of Lube oil system of ID/FD/PA fans complete	870	960	990	1080
1.39	Lube oil flushing of ID/FD/PA fans complete	960	1050	1080	1170
1.40	Erection of Primary Air Fans with drives complete	720	1020	840	1140



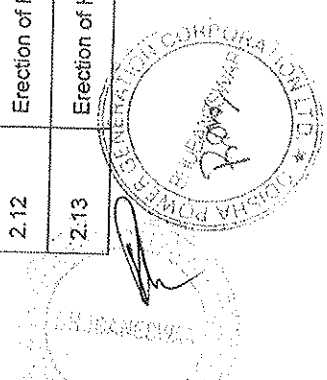
SI. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
1.41	Testing and Commissioning of PA Fans complete	1020	1110	1140	1230
1.42	Erection of Forced Draft Fans with drives complete	600	960	720	1080
1.43	Testing and Commissioning of FD Fans complete	1050	1050	1170	1170
1.44	Erection of Induced draft Fans with drives complete	660	960	780	1080
1.45	Testing and Commissioning of ID Fans complete	1050	1050	1170	1170
1.46	Erection of Duct support complete	680	750	800	870
1.47	Erection of Air Ducts complete	690	990	810	1110
1.48	Erection of Flue Gas Ducts complete	720	990	840	1110
1.49	No load run of ID, FD complete	1050	1080	1170	1200
1.50	Load test of ID / FD complete	1050	1080	1170	1200
1.51	Boiler FD/ID Draft Air / Pressure Balancing complete	1050	1080	1170	1200
1.52	Boiler Light up successfully complete		1110		1230
	Chemical cleaning of steam generator		1140		1260
1.53	Steam Blowing complete and pipes restored		1200		1320

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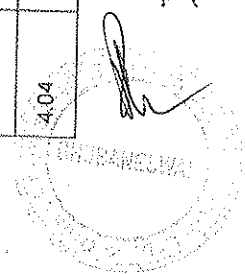


Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
2.0	ELECTROSTATIC PRECIPITATOR				
2.01	Erection of Guillotine dampers complete	960	1020	1080	1140
2.02	Erection of Gas distribution system complete	630	750	750	870
2.03	Erection of Dust Hoppers complete	780	900	900	
2.04	Erection of Structural steel / Platforms / walkways / stairs complete	270	540	390	660
2.05	Erection of Thermal insulation and Cladding complete	960	1050	1080	1170
2.06	Erection of Casing complete	480	630	600	750
2.07	Erection of Insulators / Insulator compartment complete	780	900	900	1020
2.08	Erection of Discharge Electrode and Frame work complete	600	720	720	840
2.09	Erection of Discharge / collecting Electrode Rappers complete	840	990	960	1110
2.10	Erection of Collecting Electrodes complete	720	840	840	960
2.11	Erection of Transformer Rectifier Units complete	780	900	900	1020
2.12	Erection of Rectifier control cubicle complete	810	930	930	1050
2.13	Erection of HT Switch Gear complete	900	960	1020	1080



SI. No		Description	Erection and Commissioning of the Main Plant			
			From NTP Date (Days)			
			Unit 3		Unit 4	
Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	
2.14	Erection of Indoor Dry transformer complete	825	1050	945	1170	
2.15	Erection of Non Segregated bus Duct complete	840	1050	960	1170	
2.16	Erection of Power Control Centers / Motor Control Centers complete	870	1050	990	1170	
2.17	Erection of Control Panels / Auxiliary Control Panels complete	840	960	960	1080	
2.18	Erection of Cables complete		1020		1140	
2.19	Testing and Commissioning of ESP complete	1020	1080	1140	1200	
2.20	ESP ready to receive flue gas		1080		1200	
2.21	Completion of Erection Of ESP		1110		1230	
3.0	ERECTION OF SWAS SYSTEM	1110	1170	1230	1290	
4.0	MILL REJECT HANDLING SYSTEM					
4.01	Erection of Conveying Air compressors complete	990	1020	1110	1140	
4.02	Erection of Pyrite Hoppers complete	990	1050	1110	1170	
4.03	Erection of Conveying piping complete	1050	1170	1170	1290	
4.04	Erection of Mill reject silo's complete	1050	1170	1170	1290	

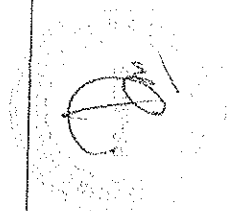
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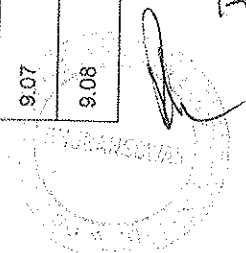
Erection and Commissioning of the Main Plant		From NTP Date (Days)			
		Unit 3		Unit 4	
Sl. No	Description	Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
5.0	COAL BUNKER				
5.01	Bunker Bay structural steel erection complete	270	510	390	630
5.02	Coal bunker shells Erection complete	510	720	630	840
	Coal bunkers Erection complete				
6.0	CHEMICAL FEED SYSTEMS				
7.01	Erection of Oxygen Dosing System complete	900	990	1020	1110
7.02	Erection of Hydrazine Dosing System complete	900	990	1020	1110
7.03	Erection of Ammonia Dosing System complete	900	990	1020	1110
7.04	Erection of Sodium Hydroxide Dosing system complete	900	990	1020	1110
7.0	TURBINE BUILDING				
8.01	Construction of TG Columns complete				
8.02	STG Building structural erection started				
8.03	Erection of A row Structural Steel complete.				
8.04	Erection of B row Structural Steel complete				

Refer Item 1 of the Table 1 for Guaranteed Completion Dates.



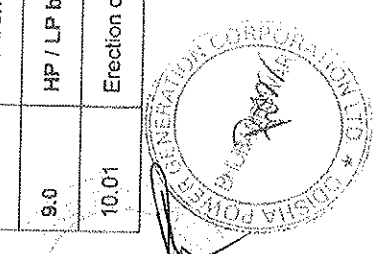
Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
8.05	Erection of C row Structural Steel complete	540	570	660	690
8.06	Erection of D row Structural Steel complete.				
8.07	Turbine Building - A, B, C, D row Structural Steel erection complete				
8.08	Erection of Crane Girder and Rails complete	540	570	660	690
8.09	Erection of Building Enclosures - Roofing / Siding / Metal Deck Complete	540	720	660	840
8.0	STEAM TURBINE & GENERATOR				
9.01	Erection of TG Foundation Frames complete	675	720	750	840
9.02	Erection of Bearing frames / bodies complete	750	810	870	930
9.03	Erection of LP Cylinders(s) Complete	900	1020	1020	1140
9.04	Erection of Turbine Rotors complete	930	1020	1050	1140
9.05	Erection of IP & HP Cylinders Complete	870	960	990	1080
9.06	Erection of Turbine Integral piping complete	960	1080	1080	1200
9.07	Erection of Emergency stop valve / control valve / NRV's complete	960	1020	1080	1140
9.08	Erection of Lube oil system with tanks / pumps / filters / extractors etc complete	960	1080	1080	1200

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Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
9.09	Erection of Oil piping complete	960	1080	1080	1200
9.10	Erection of Gland sealing system complete	960	1080	1080	1200
9.11	Erection of Turbine Insulation complete	1080	1110	1200	1230
9.12	Generator stator lifted and placed on its foundation				
9.13	Erection of Generator Rotor complete	900	930	1020	1050
9.14	Erection of Generator Excitation System complete	900	1050	1020	1170
9.15	Erection of Generator Gas supply system complete	900	1080	1020	1200
9.16	Erection of Generator Seal Oil System complete	900	1080	1020	1200
9.17	Erection of Water cooling system of generator winding complete	900	1080	1020	1200
9.18	Erection of Automatic Voltage Regulator complete	1020	1080	1140	1200
9.19	Erection of Excitation Cubicles complete	1020	1080	1140	1200
9.20	STG boxed up		1110		1230
9.0	HP / LP bypass system				
10.01	Erection of Bypass Valves complete	990	1020	1110	1140



SI. No		Description	Erection and Commissioning of the Main Plant			
			From NTP Date (Days)			
			Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	
10.02	Erection of HP / LP Bypass piping complete	990	1050	1110	1170	
10.03	Erection of Hydraulic Actuators / Hydraulic oil skid complete	990	1050	1110	1170	
10.0	CONDENSOR & AIR EXTRACTION SYSTEM					
11.01	Erection of Base Plates complete	600	720	720	840	
11.02	Erection of Connection Pieces complete	630	720	750	840	
11.03	Erection of Hotwell complete	630	720	760	840	
11.04	Erection of LP Heater and Condenser Neck complete	930	1020	1050	1140	
11.05	Erection of Lower Tube section complete	750	870	870	990	
11.06	Erection of Upper Tube section complete	750	870	870	990	
11.07	Erection of Transition neck complete	930	990	1050	1110	
11.08	Erection of Expansion joints complete	1050	1080	1170	1200	
11.09	Erection of Internal Supports complete	810	870	930	990	
11.10	Erection of Water Boxes complete	930	990	1050	1110	
11.11	Condenser tube installation commenced	870	930	990	1050	

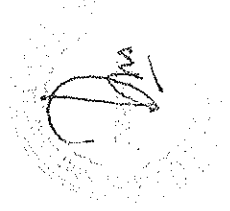
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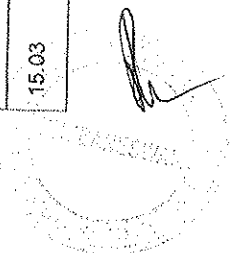
Sl. No	Description	Erection and Commissioning of the Main Plant							
		From NTP Date (Days)				Unit 4			
		Unit 3		Unit 4		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
11.12	Erection of Air extraction Vacuum Pumps complete	930	960	1050	1080				
11.13	Erection of Interconnecting Piping / Valves / fittings complete	960	1020	1080	1140				
11.14	Erection of On-Load tube cleaning system complete	1020	1080	1140	1200				
11.0	STG on Barring Gear operation		1170		1290				
12.0	TURBINE OIL PURIFICATION SYSTEM								
13.01	Erection of Centrifuge Oil Purifier complete	900	1110	1020	1230				
13.02	Erection of Oil transfer pumps complete	900	1110	1020	1230				
13.03	Erection of Central Oil Storage tank complete	900	1110	1020	1230				
13.04	Erection of Interconnecting Piping Valves, Fittings complete	990	1110	1110	1230				
13.0	FEED CYCLE EQUIPMENT								
14.01	Feed Cycle equipment erection strated		750		840				
14.02	Erection of Motor Driven Boiler Feed Pumps and drive complete and alignment complete	750	1050	870	1170				
14.03	Erection of and turbine driven pumps and Steam Turbine for Boiler Feed Pumps including exhaust duct complete	780	1020	900	1140				
14.04	Erection of Steam turbine governing system complete	990	1050	1110	1170				



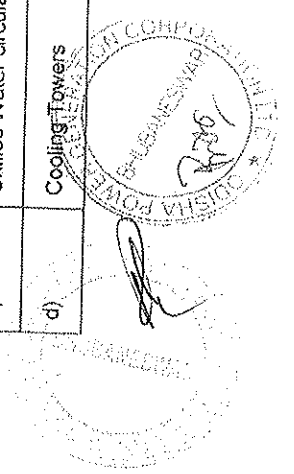
SI. No		Description	Erection and Commissioning of the Main Plant			
			From NTP Date (Days)			
			Unit 3		Unit 4	
Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	
14.05	Erection of Lubricating Oil system complete	990	1050	1110	1170	
14.06	Erection of Feed water Booster Pumps complete	840	900	960	1020	
14.07	Erection of Condensate Extraction Pumps complete	810	1080	930	1200	
14.08	Erection of Deaerator Complete	845	960	920	1080	
14.09	Erection of High Pressure feed water heaters Complete	795	900	900	1020	
14.10	Erection of Low Pressure feed water heaters Complete	795	960	940	1080	
14.11	Erection of Deaerator and Feed Water heaters complete		1020		1140	
14.12	Erection of Interconnecting Piping / Valves / fittings complete	845	1080	1110	1200	
14.13	Lube oil flushing of Feed water Pumps oil piping complete	1020	1080	1140	1200	
14.14	BFP ready for testing and commissioning		1080		1200	
14.0	POWER CYCLE PIPING					
15.01	Erection of Main steam piping with Insulation complete	720	1020	840	1140	
15.02	Erection of HRH Piping Insulation complete	750	1050	870	1170	
15.03	Erection of CRH piping Insulation complete	750	1050	870	1170	



Box



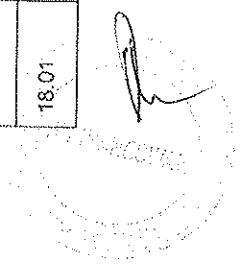
Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
15.04	Erection of Extraction Piping Insulation complete	750	1050	870	1170
15.05	Erection of Feed water piping Insulation complete	750	1050	870	1170
15.06	Erection of Heater Drain and vent piping Insulation complete	750	1050	870	1170
15.07	Erection of Condensate piping complete	750	1050	870	1170
15.08	Erection of HP / LP Bypass piping complete	750	1050	870	1170
15.09	Erection of auxiliary steam piping complete	750	1050	870	1170
15.10	Hydro test of Power cycle Piping complete	1050	1080	1170	1200
15.11	Flushing of Power cycle Piping complete	1140	1170	1260	1290
15.0	AIR CONDITIONING SYSTEM				
16.01	Erection of AC in Central Control Room and Other areas in Turbine Building complete	750	960	870	1080
a)	Water cooled screw chiller unit	750	960	870	1080
b)	Condenser cooling water pumps	750	960	870	1080
c)	Chilled Water circulating Pumps	750	960	870	1080
d)	Cooling Towers	750	960	870	1080



Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
e)	Interconnecting piping	750	960	870	1080
f)	Air Handling Units	750	960	870	1080
g)	Fresh Air units	750	960	870	1080
h)	Ducting / Dampers / Hangers / Supports / Fire dampers	750	960	870	1080
16.02	AC System ready for testing and commissioning complete				
16.0	VENTILATION SYSTEM				
17.01	Erection of Centrifugal Fans complete	840	960	960	1080
17.02	Erection of Air washer units complete	840	960	960	1080
17.03	Erection of Air Filtration system complete	840	960	960	1080
17.04	Erection of Roof Exhausters complete	840	960	960	1080
17.05	Erection of Ducting / Dampers / Hangers / Supports / Fire dampers complete	840	960	960	1080
17.06	Ventilation system ready for testing and commissioning complete				
17.0	COMPRESSED AIR SYSTEM				
18.01	Erection of Instrument air compressors Complete	750	900	870	1020

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Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
18.02	Erection of Service air compressors Complete	750	900	870	1020
18.03	Erection of piping / valves / fittings (breakup floor wise/ area wise) complete	750	900	870	1020
18.04	Erection of Air driers complete	750	900	870	1020
18.05	Compressors ready for testing and commissioning complete		900		1020
18.0	DIESEL GENERATOR SET				
19.01	Erection of Diesel Generator set complete	870	1020	990	1140
19.02	Erection of Fuel Oil System complete	870	1020	990	1140
19.03	Erection of Cooling water system consisting of Pumps / Heaters / expansion tanks/ radiators etc complete	870	1020	990	1140
19.04	Erection of DG Battery Bank along with DG Battery Charger complete	870	1020	990	1140
19.05	Erection of DG Switchgear complete				
19.0	ELEVATORS				
20.01	Erection of Steam Generator Area complete	930	1050	1050	1170
20.02	Erection of T-G Building complete	930	1050	1050	1170
20.0	MISCELLANEOUS CRANES				



SI. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
22.01	TG hall EOT Cranes (A - B bay crane) erected and cleared for commissioning	540	630	660	750
21.0	CONDENSATE POLISHING SYSTEM				
23.01	Erection of Condensate Polisher Mixed Beds complete	960	1080	1080	1200
23.02	Erection of Interconnecting Piping Valves, Fittings complete	960	1080	1080	1200
23.03	Erection of External Regeneration System complete	960	1080	1080	1200
23.04	CPU ready for testing and commissioning		1080		1200
22.0	GENERATOR TRANSFORMER (GT),400/21KV				
23.0	Generator Transformer erection mechanically complete and released for electrical tests	810	1140	930	1260
24.0	Testing and commissioning of Transformer complete	1140	1170	1260	1290
25.0	UNIT TRANSFORMER (UT),21/11KV				
36.01	Unit Transformer (24KV/11KV) Transformer erection mechanically complete and released for electrical tests	840	960	960	1080
36.02	Testing and commissioning of Transformer complete	1140	1170	1260	1290
26.0	RESERVE AUXILIARY TRANSFORMER (RAT),400/11KV				
37.01	Reserve Auxiliary Transformer (400 KV/11KV) erection mechanically complete and released electrical tests	680	780	800	900

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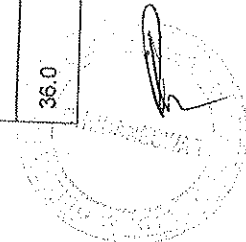
Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
37.02	Testing and commissioning of Transformer complete		780	120	900
27.0	UNIT AUXILIARY TRANSFORMER (UAT),11/3.3KV				
38.01	Unit Auxiliary Transformer (11KV/0.415 KV) erection mechanically complete and released for electrical tests	780	900	900	1020
38.02	Testing and commissioning of Transformer complete		960	120	1080
28.0	STATION AUXILIARY TRANSFORMER (SAT),11/3.3KV				
39.01	Station Auxiliary Transformer (11KV/0.415 KV) erection mechanically complete and released for electrical tests	720	780	840	900
39.02	Testing and commissioning of Transformer complete		780	120	900
29.0	LT TRANSFORMER,11/0.415KV				
40.01	All LT(11KV/0.415 KV) Transformers erection mechanically complete and released electrical tests	780	870		
40.02	Testing and commissioning of Transformer complete		960	120	1080
30.0	RAT and 11 kV unit switchgear released for commissioning		780		900
31.0	MAIN PLANT DC SYSTEM (220V DC and 24VDC)				
42.01	Erection of Main Plant DC system(220V DC and 24VDC) complete	840	900	960	1020
42.02	Main Plant DC system(220V DC and 24VDC) released for charging		930	120	1050

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SI. No		Description	Erection and Commissioning of the Main Plant			
			From NTP Date (Days)			
			Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	
32.0	UPS and Battery Room and LT SWGR Rooms and HT SWGR Room ready for receipt of equipment					
33.0	MAIN PLANT UPS SYSTEM		870		990	
44.01	Erection of Main Plant UPS system complete					
44.02	Testing and commissioning complete	870	900	990	1020	
44.03	Main Plant UPS released for charging		930	120	1050	
34.0	HT SWITCH GEAR (11KV)		930		1050	
45.01	Erection of HT Switch Gear (11KV)					
45.02	HT Switch Gears (11KV) installed and released for cabling.	720	780	840	900	
45.03	Testing and commissioning complete		930	120	1050	
35.0	HT SWITCH GEAR (3.3KV)		960		1080	
46.01	Erection of HT Switch Gear (3.3 KV)					
46.02	HT Switch Gears (3.3 KV) installed and released for cabling.	750	900	870	1020	
46.03	Testing and commissioning complete	900	930	1020	1050	
36.0	LT SWITCH GEAR (415V AC)		960		1080	

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SI. No		Description	Erection and Commissioning of the Main Plant			
			From NTP Date (Days)			
			Unit 3		Unit 4	
Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	Start	Guaranteed Completion Date	
47.01	Erection of Boiler MCC complete	900	960	1020	1080	
47.02	Erection of Turbine MCC complete	900	960	1020	1080	
47.03	Erection of Valve MCC complete	900	960	1020	1080	
47.04	Erection of Soot Blower MCC complete	900	960	1020	1080	
47.05	Erection of Emergency MCC complete	900	960	1020	1080	
47.06	Erection of Unit Switch Gear MCC complete	900	960	1020	1080	
47.07	Erection of Chemical Feeding system MCC complete	900	960	1020	1080	
47.08	Erection of Compressor MCC complete	750	900	870	1020	
47.09	LT Switch Gears installed and released for cabling.	900	960	1020	1080	
47.10	Testing and commissioning complete	960	990	1080	1110	
47.11	LT Switch Gear energized		990		1110	
37.0	CABLING AND EARTHING (BREAKUP BASED ON PLANT/SYSTEM)					
48.01	HT, LT and Control Cables delivered at site	870	1020	990	1140	
48.02	Erection of HT Power Cable(11KV) complete	870	1020	990	1140	



Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
48.03	Erection of HT Power Cable(3.3KV) complete	870	1020	990	1140
48.04	Erection of LT Power cable(415V) complete	870	1020	990	1140
48.05	Erection of LT Control Cable complete	870	1020	990	1140
48.06	Erection of Cable Trays, structure and other accessories for cabling complete	810	900	930	1020
38.0	ILLUMINATION SYSTEM				
49.01	Erection / testing commissioning illumination system (break up Building wise) complete				
39.0	BUS DUCT				
50.01	Erection of Isolated Phase Bus duct(IPBD),Main& Tapoff, 21KV complete and released for electrical tests	840	1110	960	1230
50.02	Erection of Segregated Phase Bus duct(SPBD), 11KV,3.3KV complete and released for electrical tests	690	1020	960	1140
50.03	Erection of Non Segregated Phase Bus duct (NSPBD) complete and released for electrical tests	840	1020	960	1140
50.04	Testing and commissioning complete	960	1020	1080	1140
40.0	GENERATOR CIRCUIT BREAKER (GCB)				
51.01	Erection of Circuit Breaker(GCB) with all fitting accessories complete	1050	1110	1170	1230
51.02	Testing and commissioning complete		1110		1230


 Date _____


Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
41.0	CENTRAL CONTROL ROOM AND CONTROL ROOM EQUIPMENT				
52.01	Control Room ready with ducting work and released for C&I/Electrical cubicle installation		900		1020
52.02	Installation of C&I cubicles complete and released for cabling	870	900	990	1020
52.03	Installation and testing of Boiler Control & Instrumentation complete				
a)	FSSS system / Burner Management System including flame scanner				
b)	Secondary air damper control (SADC)				
c)	HP Bypass controls with fast opening				
d)	APRDS				
e)	Soot blowing control system (SBC)	870	1050	990	1170
f)	Automatic steam leak Detection System,				
g)	Furnace flame monitoring television,				
h)	Electronic Water Level Indicators (EWLI)				
i)	Coal feeder control				
52.04	Installation and testing of Steam Turbine Control & Instrumentation complete				



Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
a)	Turbine Stress Evaluator (TSE)				
b)	Electro Hydraulic Turbine Controls (EHTC)				
c)	LP Bypass and Gland steam pressure Control (LPBP)				
d)	Turbine Protection and Interlock System. (TP)				
e)	Automatic Turbine Tester (ATT)				
f)	Automatic Turbine Rolling System (ATRS)	990	1110	1110	1230
g)	Load Shedding Relay / Auto Synchronizer/ Islanding Operation				
h)	FGMO/ RGMO				
i)	Turbine Supervisory Instruments (TSI)				
j)	Vibration Monitoring System with vibration analysis & decision support system				
k)	HP-LP Bypass Control System.				
52.05	Architectural / finishing works complete				
52.06	Installation of Unit Operator work stations complete				
52.07	Installation of Unit Control Panels complete and released for cabling	960	1170	1080	1290

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SI. No	Description	Erection and Commissioning of the Main Plant					
		From NTP Date (Days)					
		Unit 3		Unit 4			
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date		
22.01	TG hall EOT Cranes (A - B bay crane) erected and cleared for commissioning	540	630	660	750		
21.0	CONDENSATE POLISHING SYSTEM						
23.01	Erection of Condensate Polisher Mixed Beds complete	960	1080	1080	1200		
23.02	Erection of Interconnecting Piping Valves, Fittings complete	960	1080	1080	1200		
23.03	Erection of External Regeneration System complete	960	1080	1080	1200		
23.04	CPU ready for testing and commissioning		1080		1200		
22.0	GENERATOR TRANSFORMER (GT),400/21KV						
23.0	Generator Transformer erection mechanically complete and released for electrical tests	810	1140	930	1260		
24.0	Testing and commissioning of Transformer complete	1140	1170	1260	1290		
25.0	UNIT TRANSFORMER (UT),21/11KV						
36.01	Unit Transformer (24KV/11KV) Transformer erection mechanically complete and released for electrical tests	840	960	960	1080		
36.02	Testing and commissioning of Transformer complete	1140	1170	1260	1290		
26.0	RESERVE AUXILIARY TRANSFORMER (RAT),400/11KV						
37.01	Reserve Auxiliary Transformer (400 KV/11KV) erection mechanically complete and released electrical tests	680	780	800	900		

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Sl. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
32.0	UPS and Battery Room and LT SWGR Rooms and HT SWGR Room ready for receipt of equipment		870		990
33.0	MAIN PLANT UPS SYSTEM				
44.01	Erection of Main Plant UPS system complete	870	900	990	1020
44.02	Testing and commissioning complete		930	120	1050
44.03	Main Plant UPS released for charging		930		1050
34.0	HT SWITCH GEAR (11KV)				
45.01	Erection of HT Switch Gear (11KV)	720	780	840	900
45.02	HT Switch Gears (11KV) installed and released for cabling.		930	120	1050
45.03	Testing and commissioning complete		960		1080
35.0	HT SWITCH GEAR (3.3KV)				
46.01	Erection of HT Switch Gear (3.3 KV)	750	900	870	1020
46.02	HT Switch Gears (3.3 KV) installed and released for cabling.	900	930	1020	1050
46.03	Testing and commissioning complete		960		1080
36.0	LT SWITCH GEAR (415V AC)				

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Erection and Commissioning of the Main Plant		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
Sl. No	Description				
a)	Turbine Stress Evaluator (TSE)				
b)	Electro Hydraulic Turbine Controls (EHTC)				
c)	LP Bypass and Gland steam pressure Control (LPBP)				
d)	Turbine Protection and Interlock System. (TP)				
e)	Automatic Turbine Tester (ATT)				
f)	Automatic Turbine Rolling System (ATRS)	990	1110	1110	1230
g)	Load Shedding Relay / Auto Synchronizer/ Islanding Operation				
h)	FGMO/ RGMO				
i)	Turbine Supervisory Instruments (TSI)				
j)	Vibration Monitoring System with vibration analysis & decision support system				
k)	HP-LP Bypass Control System.				
52.05	Architectural / finishing works complete				
52.06	Installation of Unit Operator work stations complete				
52.07	Installation of Unit Control Panels complete and released for cabling	960	1170	1080	1290

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TABLE --2

Guaranteed Supply Dates and Guaranteed Delivery Dates for the supply of Equipment at the Supply Point and at the Site

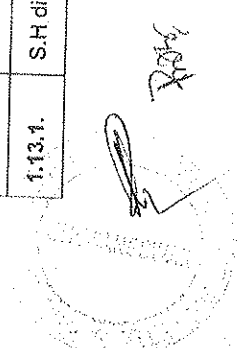
Owner or the Owner's Nominated Related Contractor will supply the Equipment on the following Guaranteed Supply Dates at the Supply Point.

S. No.	Description	Supply of Equipment							
		From NTP Date (Days)				At Site			
		Unit 3		Unit 4		Unit 3		Unit 4	
Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
1.	BOILER PROPER AND ACCESSORIES	At Supply Point		At Site		At Supply Point		At Site	
1.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete.	66	150	180	66	270	300	300	
1.2.	Structural Steel and Building	At Supply Point		At Site		At Supply Point		At Site	
1.2.1.	Tier-1 Structural Steel along with Walkways, Platforms and stairs	66	240	270	66	360	390	390	
1.2.2.	Tier-2 Structural Steel along with Walkways, Platforms and stairs	66	270	300	66	390	420	420	
1.2.3.	Tier-3 Structural Steel along with Walkways, Platforms and stairs	66	300	330	66	420	450	450	
1.2.4.	Tier-4 Structural Steel along with Walkways, Platforms and stairs	90	350	390	90	470	510	510	

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		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site
		At Supply Point		At Site		At Supply Point		At Site	
1.11.2.	Bottom ring header	278	660	690	At Supply Point	400	810	840	
1.11.3.	Furnace inlet	278	450	480	At Supply Point	400	570	600	
1.11.4.	Outlet and intermediate header	278	450	480	At Supply Point	400	570	600	
1.11.5.	S.H header	278	600	630	At Supply Point	400	720	750	
1.11.6.	R.H header	278	450	480	At Supply Point	400	570	600	
1.12.	Water wall tube								
1.12.1.	Back pass wall tube	219	630	660	At Supply Point	219	780	810	
1.12.2.	Hopper wall tube	219	660	690	At Supply Point	219	780	810	
1.12.3.	Spiral and vertical wall tube	219	630	660	At Supply Point	219	780	810	
1.12.4.	Vertical & roof wall tube	219	630	660	At Supply Point	219	780	810	
1.13.	Super heater assembly								
1.13.1.	S.H division panels	219	620	660	At Supply Point	219	740	780	

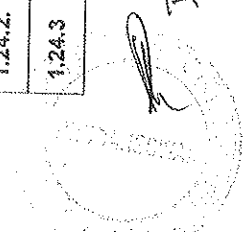
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		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site
		At Supply Point				At Site			
1.17.3.	Safety valves / MOV's	540	630	660	At Supply Point	540	570	660	At Site
1.17.4.	Silencers	250	450	329	At Supply Point	250	420	329	At Site
1.18.	COMPLETION OF SUPPLY OF BOILER PRESSURE PARTS (1.11.1 to 1.17.4)			690	At Supply Point			690	At Site
1.19.	Refractory, insulation & cladding	720	870	399	At Supply Point	720	990	399	At Site
1.20.	Boiler recirculation Pumps	600	690	720	At Supply Point	600	810	720	At Site
1.21.	MOV's / CV's / Safety valves/ Silencers	523	659	689	At Supply Point	523	779	689	At Site
1.22.	Blow down tanks / Flash tanks	523	689	719	At Supply Point	523	809	719	At Site
1.23.	Soot blowing system	660	960	990	At Supply Point	660	1080	990	At Site
1.24.	Coal firing system	400	900	929	At Supply Point	400	1020	929	At Site
1.24.1.	Coal shutoff gates / Valves / Chutes	643	900	929	At Supply Point	643	1020	929	At Site
1.24.2.	Raw Coal Feeders	704	900	929	At Supply Point	704	1020	929	At Site
1.24.3	Pulverised Coal pipes	523	900	929	At Supply Point	523	1020	929	At Site

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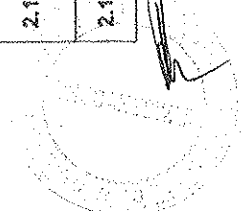
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		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site
		At Supply Point		At Site		At Supply Point		At Site	
1.25.7.	Air Ducts	127	710	739	At Supply Point	247	830	859	859
1.25.8.	Damper and Expansion joints	643	710	739	At Supply Point	763	830	859	859
1.25.9.	Flue Gas Ducts	127	710	739	At Supply Point	247	830	859	859
1.25.10	Scanner Air cooling Fan	643	710	739	At Supply Point	763	830	859	859
1.25.11	Air piping	643	710	739	At Supply Point	763	830	859	859
1.26.	COMPLETION OF SUPPLY OF BOILER DRAFT SYSTEM INCLUDING DUCTS AND DUCT SUPPORTS			810				930	
1.27.	Fly Ash Hoppers below Economizer and APH	127	870	929		257	990	1049	
	BOILER CONTROL & INSTRUMENTATION								
2.									
2.1.	Distributed Digital Control Monitoring & Information System, (DDCMIS) based control system, hardware & software consisting of.	615	839	870		735	959	990	
2.1.1.	FSSS system / Burner Management System including flame scanner	615	839	870		615	959	990	

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SI. No	Description	Erection and Commissioning of the Main Plant			
		From NTP Date (Days)			
		Unit 3		Unit 4	
		Start	Guaranteed Completion Date	Start	Guaranteed Completion Date
52.08	Installation of Electrical control panels complete and released for cabling				
52.09	Installation of Large video screen display / Clock complete				
52.10	Installation of Control desks and furniture complete				
52.11	Installation of Unit wise Computer & Server Room equipment (Programming stations, servers, Historian, HART stations etc) complete				
52.12	Installation of Uninterruptible Power Supply (UPS) Systems for Peripherals of DDC/MIS and Microprocessor based instruments complete				
52.13	DCS installation complete and ready for powering on.	1020	1170		1290
42.0	Generator Transformer back charged and 415 V SWGR energized		1170		1290
43.00	Synchronization with Grid				
44.00	Capability test (Trial run)		1230		1360
45.00	Substantial completion (Performance tests)		1260		1390
			1320		1440

Owner assures the Guaranteed Supply Dates, as per Table 2 below, for the supply of Equipment of Unit 3 and Unit 4 of the Main Plant at the Supply Point. Owner also assures the Guaranteed Delivery Dates, as per the Table 2 below, for the supply of Equipment of Unit 3 and Unit 4 of the Main Plant at Site.

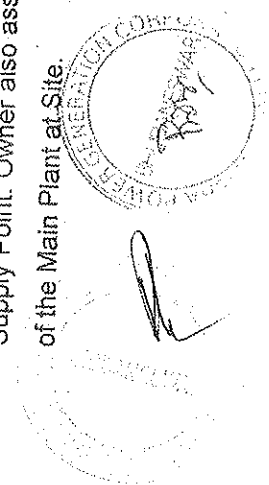


TABLE - 2

Guaranteed Supply Dates and Guaranteed Delivery Dates for the supply of Equipment at the Supply Point and at the Site

Owner or the Owner's Nominated Related Contractor will supply the Equipment on the following Guaranteed Supply Dates at the Supply Point.

S. No.	Description	Supply of Equipment									
		Unit 3				Unit 4					
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
		At Supply Point		At Site		At Supply Point		At Site		At Site	
1.	BOILER PROPER AND ACCESSORIES										
1.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete.	66	150	180	66	270	66	270	300		
1.2.	Structural Steel and Building										
1.2.1.	Tier-1 Structural Steel along with Walkways, Platforms and stairs	66	240	270	66	360	66	360	390		
1.2.2.	Tier-2 Structural Steel along with Walkways, Platforms and stairs	66	270	300	66	390	66	390	420		
1.2.3.	Tier-3 Structural Steel along with Walkways, Platforms and stairs	66	300	330	66	420	66	420	450		
1.2.4.	Tier-4 Structural Steel along with Walkways, Platforms and stairs	90	350	390	90	470	90	470	510		

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S. No.	Description	Supply of Equipment					
		From NTP Date (Days)					
		Unit 3			Unit 4		
	Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
	At Supply Point			At Site			
1.2.5.	Tier-5 Structural Steel along with Walkways, Platforms and stairs	90	350	390	90	470	510
1.3.	COMPLETION OF SUPPLY OF STRUCTURAL STEEL (1.2.1 to 1.2.5)			390			
1.4.	Coal Bunker and Support Steel.	300	480	510			870
1.5.	Gallery & duct support structural steel	127	630	660	127	680	720
1.6.	Misc. Structural steel	127	450	480			
1.7.	Building Enclosures - Roofing and siding	300	510	540			
1.8.	Casing	492	720	750	492	840	870
1.9.	Buck stay	360	480	510	360	600	630
1.10a	Ceiling Girders	270	330	360			
1.10b	Hanger of Boiler /	127	420	450	127	540	570
1.11.	Headers						
1.11.1.	Eco inlet /outlet	278	450	480	400	570	600

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S. No.		Description		Supply of Equipment							
				Unit 3				Unit 4			
				From NTP Date (Days)				At Site			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date				
		At Supply Point		At Site		At Supply Point		At Site			
1.11.2.		Bottom ring header	278	660	690	400	810	840			
1.11.3.		Furnace inlet	278	450	480	400	570	600			
1.11.4.		Outlet and intermediate header	278	450	480	400	570	600			
1.11.5.		S.H header	278	600	630	400	720	750			
1.11.6.		R.H header	278	450	480	400	570	600			
1.12.		Water wall tube									
1.12.1.		Back pass wall tube	219	630	660	219	780	810			
1.12.2.		Hopper wall tube	219	660	690	219	780	810			
1.12.3.		Spiral and vertical wall tube	219	630	660	219	780	810			
1.12.4.		Vertical & roof wall tube	219	630	660	219	780	810			
1.13.		Super heater assembly									
1.13.1.		S.H division panels	219	620	660	219	740	780			

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S. No.	Description	Supply of Equipment							
		Unit 3				Unit 4			
		From NTP Date (Days)							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site	At Site
		At Supply Point		At Site	At Supply Point		At Site		
1.13.2.	S.H finish assembly	219	620	660	219	740	780		
1.13.3.	S.H platen assembly	219	620	660	219	740	780		
1.13.4.	Loose tubes	219	620	660	219	740	780		
1.14.	Reheater assembly								
1.14.1.	R.H finish assembly	278	620	660	278	690	780		
1.14.2.	R.H L.T horizontal assembly	278	620	660	278	690	780		
1.14.3.	R.H L.T pendant assembly	278	620	660	278	690	780		
1.15.	Economizer assembly	299	620	660	299	690	780		
1.16.	Separator & storage tank	278	450	479	278	570	599		
1.17.	Link & connections	278	450	479	278	570	599		
1.17.1.	Link & connections Piping	299	450	479	299	570	599		
1.17.2.	Attemperator system	339	450	479	339	570	599		



S. No.		Description	Supply of Equipment										
			Unit 3				Unit 4						
			From NTP Date (Days)										
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site	At Supply Point	At Site	At Supply Point		
1.17.3.		Safety valves / MOV's	540	630	660	540	570	660	540	570	660	570	840
1.17.4.		Silencers	250	450	329	250	420	329	250	420	329	420	449
1.18.		COMPLETION OF SUPPLY OF BOILER PRESSURE PARTS (1.11.1 to 1.17.4)			690			690			690		840
1.19.		Refractory, insulation & cladding	720	870	899	720	990	899	720	990	899	990	1019
1.20.		Boiler recirculation Pumps	600	690	720	600	810	720	600	810	720	810	840
1.21.		MOV's / CV's / Safety valves/ Silencers	523	659	689	523	779	689	523	779	689	779	809
1.22.		Blow down tanks / Flash tanks	523	689	719	523	809	719	523	809	719	809	839
1.23.		Soot blowing system	660	960	990	660	1080	990	660	1080	990	1080	1110
1.24.		Coal firing system	400	900	929	400	1020	929	400	1020	929	1020	1049
1.24.1.		Coal shutoff gates / Valves / Chutes	643	900	929	643	1020	929	643	1020	929	1020	1049
1.24.2.		Raw Coal Feeders	704	900	929	704	1020	929	704	1020	929	1020	1049
1.24.3		Pulverised Coal pipes	523	900	929	523	1020	929	523	1020	929	1020	1049

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S. No.		Description		Supply of Equipment							
				Unit 3				Unit 4			
				From NTP Date (Days)							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
		At Supply Point		At Site	At Supply Point		At Site	At Supply Point		At Site	
1.24.4.		630	840	869	630	860	869	630	860	869	
1.24.5.		630	840	869	630	860	869	630	860	869	
1.24.6.		630	840	869	630	860	869	630	860	869	
1.24.7.		704	840	869	704	860	869	704	860	869	
1.24.8.		400	869	869	400	869	869	400	869	869	
1.25.											
1.25.1.		480	510	540	600	690	540	600	690	660	
1.25.2.		480	570	600	600	690	600	600	690	720	
1.25.3.		480	780	810	600	900	810	600	900	930	
1.25.4.		480	660	720	600	900	720	600	900	930	
1.25.5.		480	720	780	600	900	780	600	900	930	
1.25.6.		480	780	810	600	900	810	600	900	930	

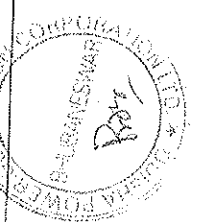


		Supply of Equipment					
		From NTP Date (Days)					
S. No.	Description	Unit 3		Unit 4		Guaranteed Delivery Date	At Site
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply		
		At Supply Point		At Supply Point		At Site	At Site
1.25.7.	Air Ducts	127	710	739	247	830	859
1.25.8.	Damper and Expansion joints	643	710	739	763	830	859
1.25.9.	Flue Gas Ducts	127	710	739	247	830	859
1.25.10	Scanner Air cooling Fan	643	710	739	763	830	859
1.25.11	Air piping	643	710	739	763	830	859
1.26.	COMPLETION OF SUPPLY OF BOILER DRAFT SYSTEM INCLUDING DUCTS AND DUCT SUPPORTS			810			930
1.27.	Fly Ash Hoppers below Economizer and APH	127	870	929	257	990	1049
	BOILER CONTROL & INSTRUMENTATION						
2.							
2.1.	Distributed Digital Control Monitoring & Information System. (DDCMIS) based control system, hardware & software consisting of:	615	839	870	735	959	990
2.1.1.	FSSS system / Burner Management System including flame scanner	615	839	870	615	959	990

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		Supply of Equipment							
		Unit 3				Unit 4			
		From NTP Date (Days)							
S. No.	Description	At Supply Point		At Site		At Supply Point		At Site	
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
2.1.2.	Secondary air damper control (SADC)	735	839	870	855	959	870	855	980
2.1.3.	Soot blowing control system (SBC)	735	839	870	855	959	870	855	990
2.1.4.	Automatic steam leak Detection System,	735	839	870	735	959	870	735	990
2.1.5.	Furnace flame monitoring television,	735	839	870	735	959	870	735	990
2.1.6.	Coal feeder control	704	899	929	704	1019	929	704	1049
2.1.7.	Furnace Temperature probe	659	899	929	659	1019	929	659	1049
2.2.	COMPLETION OF SUPPLY OF BOILER CONTROL & INSTRUMENTATION (2.1.1 to 2.1.7)								
2.3.	Complete hardware and software, pushbutton stations, Man-Machine interface (MMI) station, local panels etc. for boiler control system.	714	1000	1029	834	1120	1029	834	1149
2.4.	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer flow-elements etc. along with accessories.	674	960	989	794	1080	989	794	1109



		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	At Supply Point	At Site
		At Supply Point		At Site	At Supply Point		At Site	At Site	
2.5.	Junction and solenoid Boxes	714	1000	1029	834	1120	1149		
2.6.	Pneumatic & Process hook up tubing / piping.	674	960	989	794	1080	1109		
3.	ELECTROSTATIC PRECIPITATOR								
3.1.	Structural steel	120	330	359	240	450	479		
3.2.	Platforms / walkways / stairs	120	480	510	240	600	630		
3.3.	Guilfofine dampers	180	710	739	300	830	859		
3.4.	Gas distribution system	180	660	689	300	780	809		
3.5.	Dust Hoppers	210	660	689	330	780	809		
3.6.	Thermal insulation and Cladding	600	860	900	720	900	1020		
3.7.	Casing	150	510	540	270	630	660		
3.8.	Insulators / Insulator compartment	180	750	789	300	870	909		
3.9.	Discharge Electrode and Frame work	150	420	439	270	540	559		

S. No.		Description	Supply of Equipment							
			From NTP Date (Days)							
			Unit 3				Unit 4			
Guaranteed Supply Start of supply		Guaranteed Supply Date-Completion of Supply		Guaranteed Delivery Date		Guaranteed Supply Date-Start of supply		Guaranteed Supply Date-Completion of Supply		
		At Supply Point		At Site		At Supply Point		At Site		
3.10.		Discharge / collecting Electrode Rappers	150	490	519	270	610	639		
3.11.		Collecting Electrodes	150	410	439	270	530	559		
3.12.		Transformer Rectifier Units	644	750	780	764	870	900		
3.13.		Rectifier control cubicle	644	840	869	764	870	1020		
3.14.		HT Switch Gear	644	810	869	764	930	989		
3.15.		Indoor Dry transformer	644	810	869	764	930	989		
3.16.		Non Segregated bus Duct	644	810	869	764	930	989		
3.17.		Power Control Centers / Motor Control Centers	644	810	869	764	930	989		
3.18.		Control Panels / Auxiliary Control Panels	644	810	869	764	930	989		
3.19.		Cables	644	810	869	764	930	989		
3.20.		Earthing and shielding	644	810	869	764	930	989		
3.21.		COMPLETION OF SUPPLY OF ESP (3.1 to 3.20)			900			1020		

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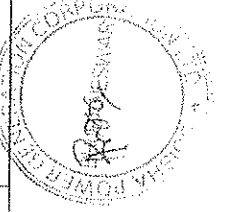
S. No.	Description	Supply of Equipment							
		Unit 3				Unit 4			
		From NTP Date (Days)		At Supply Point		From NTP Date (Days)		At Supply Point	
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site
4.	STEAM & WATER ANALYSIS SYSTEM								
4.1.	Sample Conditioning system	629	914	929		749	1034		1049
4.2.	Monitoring instruments (for temperature, pressure, flow & sample), Analyzers, Converters / Transmitters,	659	944	959		779	1064		1079
4.3.	PLC	719	1004	1019		839	1124		1139
4.4.	SWAS Panels	719	1004	1019		839	1124		1139
5.	MILL REJECT HANDLING SYSTEM								
5.1.	Conveying Air compressors	625	899	929		625	1019		1049
5.2.	Air receivers	625	899	989		625	1019		1109
5.3.	Supply of complete C&I systems including PLC system, micro controller and field instruments.	625	899	1019		625	1019		1139
6.	FUEL OIL AND FIRING EQUIPMENT								
6.1.	Fuel Oil Burners	553	869	869		553	989		989
6.2.	Piping / Valves / Strainers	553	869	869		553	989		989

JW

Boys

S. No.	Description	Supply of Equipment							
		From NTP Date (Days)							
		Unit 3				Unit 4			
	Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	At Site	At Site
6.3.	All Field instruments	523	869	869	523	989	At Supply Point	At Site	At Site
7.	CHEMICAL FEED SYSTEMS								
7.1.	Oxygen Dosing System	419	779	809	419	899	At Supply Point	At Site	At Site
7.2.	Hydrazine Dosing System	419	779	809	419	899	At Supply Point	At Site	At Site
7.3.	Ammonia Dosing System	419	779	809	419	899	At Supply Point	At Site	At Site
7.4.	Sodium Hydroxide Dosing system	419	779	809	419	899	At Supply Point	At Site	At Site
	COMPLETION OF SUPPLY OF COMPLETE BOILER AND ITS AUXILIARIES [ITEMS 1.00 TO 7.4 except 2.3, 2.4, 2.5, 2.6, 4.2, 4.3, 4.4, 5.2, 5.3]			929					1049
	(For item 1.2.1, to 1.2.5 and 1.11.1 to 1.17.4 LD will not be duplicated)]								
	TURBINE BUILDING								
8.1.	Structural Steel and Building								
8.1.1.	A row Structural steel	210	300	359	330	450			479
8.1.2.	B row Structural steel	210	360	399	330	480			519

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		Supply of Equipment					
		From NTP Date (Days)					
S. No.	Description	Unit 3			Unit 4		
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point		At Site	At Supply Point		At Site
8.1.3.	C row Structural steel	210	390	429	330	510	549
8.1.4.	Supporting beams and bracings	210	480	519	330	600	639
8.1.5.	Roof truss material	210	540	570	330	660	690
8.2.	COMPLETION OF SUPPLY OF STRUCTURAL STEEL (8.1.1 to 8.1.5)			570			690
8.3.	Misc. Structural steel	210	540	570	330	660	690
8.4.	Crane Girder and Rails	330	450	480	450	570	600
8.5.	False roofing for Control room	660	720	750	780	840	870
8.6.	Metal decking for Floors / roofs	360	450	480	480	570	600
8.7.	Building Enclosures --Siding	360	630	660	480	750	780
8.8.	Doors and Windows	360	660	689	480	780	809
8.9.	COMPLETION OF SUPPLY OF TURBINE BUILDING COMPONENTS (8.1 to 8.8)			750			870
9.	STEAM TURBINE & GENERATOR						

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S. No.		Description	Supply of Equipment												
			Unit 3				Unit 4								
		Guaranteed Supply Start of supply		Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site	At Supply Point	At Site	At Supply Point	At Site	At Supply Point	
				At Supply Point		At Supply Point		At Supply Point		At Supply Point		At Supply Point		At Site	
9.1.		All sole plates, sub-sole plates, shims, jack-screws and wedges, as required, to set and align the turbine generator unit and foundation springs (VIS), if required.		359	389	449	479	509	569	479	509	569			
9.2.		All foundation frames/base plates, anchor bolts, sleeves, nuts etc. for all equipment.		359	389	449	479	509	569	479	509	569			
9.3.		TG Foundation Frames		479	509	569	599	629	689	599	629	689			
9.4.		Bearing frames / bodies		599	629	689	719	749	809	719	749	809			
9.5.		LP Cylinders		689	720	800	809	930	1020	809	930	1020			
9.6.		Turbine Rotors		674	810	900	794	930	1020	794	930	1020			
9.7.		IP Cylinders		674	810	900	794	930	1020	794	930	1020			
9.8.		HP Cylinders & Rotors		634	780	840	754	930	1020	754	930	1020			
9.9.		Completion of supply of Steam Turbine (Casings / Cylinder, Rotor etc) (items 9.1 to 9.9)													
9.10.		Turbine integral piping		659	689	749	779	809	869	779	809	869			
9.11.		Emergency stop valve / control valve / NRV's		659	689	749	779	809	869	779	809	869			



S. No.		Description	Supply of Equipment					
			Unit 3		Unit 4			
		From NTP Date (Days)				At Site		
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
		At Supply Point		At Supply Point		At Site		
9.12.		Lube oil system with tanks / pumps / filters / extractors etc	719	749	809	839	869	929
9.13.		Oil piping	719	749	809	839	869	929
9.14.		Gland sealing system	719	749	809	839	869	929
9.15.		Turbine insulation	839	869	929	959	989	1049
9.16.		Generator Stator	719	780	840	839	960	1049
9.17.		Generator Rotor	749	840	900	869	960	1049
9.18.		Generator Excitation System	809	870	929	929	990	1049
9.19.		Generator Gas supply system	809	870	959	929	990	1079
9.20.		Generator Seal Oil System	749	870	959	869	990	1079
9.21.		Water cooling system of generator winding	749	870	959	869	990	1079
9.22.		Completion of supply of Generator (Stator, Rotor etc)			959	869	990	1079
9.23.		Automatic Voltage Regulator	749	830	869	869	950	989

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R.R.

S. No.		Description	Supply of Equipment							
			Unit 3				Unit 4			
			From NTP Date (Days)							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	At Site	At Supply Point	At Site	
		At Supply Point		At Site		At Supply Point		At Site		
9.24.		Excitation Cubicles	749	830	869	869	869	950	989	
10.		STEAM TURBINE CONTROL & INSTRUMENTATION								
10.1.		Distributed Digital Control Monitoring & Information System, (DDCMIS) based control system, hardware & software consisting of:					644	944	990	
10.1.1.		Turbine Stress Evaluator (TSE)	555	930	960	960	675	975	990	
10.1.2.		Electro Hydraulic Turbine Controls (EHTC)	555	930	960	960	675	975	990	
10.1.3.		LP Bypass and Gland steam pressure Control (LPBP)	555	930	960	960	675	975	990	
10.1.4.		Turbine Protection and Interlock System. (TP)	555	930	960	960	675	975	990	
10.1.5.		Automatic Turbine Tester (ATT)	555	930	960	960	675	975	990	
10.1.6.		Automatic Turbine Rolling System (ATRS)	555	930	960	960	675	975	990	
10.1.7.		Load Shedding Relay / Auto Synchronizer/ Islanding Operation	555	930	960	960	675	975	990	
10.1.8.		Turbine Supervisory Instruments (TSI)	555	930	960	960	675	975	990	

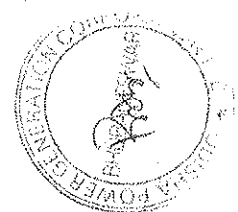


		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site
		At Supply Point		At Site		At Supply Point		At Site	
10.1.9.	Vibration Monitoring System with vibration analysis & decision support system	555	930	960	At Site	675	975	990	At Site
10.1.10.	HP-LP Bypass Control System.	524	930	960	At Site	644	944	959	At Site
10.2.	Completion of supply of Turbine Control & Instrumentation			990	At Site			1110	At Site
10.3.	Complete hardware and software, pushbutton stations, Man-Machine interface (MMI) station, local panels etc. for boiler control system.	704	1004	1019	At Site	824	1124	1139	At Site
10.4.	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	704	1004	1019	At Site	824	1124	1139	At Site
10.5.	Junction and solenoid Boxes	704	1004	1019	At Site	824	1124	1139	At Site
10.6.	Pneumatic & Process hook up tubing / piping.	704	1004	1019	At Site	824	1124	1139	At Site
10.7.	Turbine local gauge board.	704	1004	1019	At Site	824	1124	1139	At Site
11.	LP BYPASS SYSTEM				At Site				At Site

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		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply
		At Supply Point		At Site	At Supply Point		At Site	At Site	
	LP Bypass Valves	779	809	929	899	929	1049		
	Hydraulic Actuators / Hydraulic oil skid	779	809	929	899	929	1049		
	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	779	809	929	899	929	1049		
	Junction and solenoid Boxes	779	809	929	899	929	1049		
	Pneumatic & Process hook up tubing / piping.	779	809	929	899	929	1049		
	PLC.			959			1079		
	HP BYPASS SYSTEM								
11.1.	HP Bypass Valves	720	900	929	840	1020	1049		
11.2.	Hydraulic Actuators / Hydraulic oil skid	720	900	929	840	1020	1049		



		Supply of Equipment					
		From NTP Date (Days)					
S. No.	Description	Unit 3			Unit 4		
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point			At Site		
11.3.	Field mounted instruments & primary elements viz process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	720	900	929	840	1020	1049
11.4.	Junction and solenoid Boxes	720	900	929	840	1020	1049
11.5.	Pneumatic & Process hook up tubing / piping.	720	900	929	840	1020	1049
11.6.	PLC.	720	900	929	840	1020	1049
12.	TURBINE OIL PURIFICATION SYSTEM						
12.1.	Turbine Lube Oil Purifier	839	869	929	959	989	1049
12.2.	Oil transfer pumps	839	869	929	959	989	1049
12.3.	Central Oil Storage tank	839	869	929	959	989	1049
12.4.	Interconnecting Piping Valves, Fittings	839	869	929	959	989	1049
12.5.	Completion of Steam Turbine and Generator and Auxiliaries Supply items 8.00 to 12.5 except 10.3, 10.4, 10.5, 10.6, 10.7, 11.6]			990			1049

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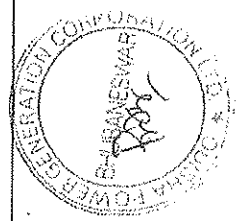
		Supply of Equipment					
		From NTP Date (Days)					
S. No.	Description	Unit 3			Unit 4		
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point			At Site		
	(For items 8.1 to 8.8, 9.1 to 9.8 and 9.16 to 9.21 LD will not be duplicated)						
13.	CONDENSER & AIR EXTRACTION SYSTEM						
13.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete	234	314	359	404	434	479
13.2.	Base Plates	269	539	569	389	659	689
13.3.	Connection Pieces	449	539	569	569	659	689
13.4.	Hotwell	539	569	629	659	689	749
13.5.	LP Heater and Condenser Neck	659	750	810	779	870	930
13.6.	Tubes / Tube Sections	540	660	680	780	930	960
13.7.	Transition neck	649	679	739	769	799	859
13.8.	Expansion joints	649	679	739	769	799	859
13.9.	Internal Supports	649	679	739	769	799	859
13.10.	Water Boxes	539	569	629	659	689	749

		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site
		At Supply Point		At Site		At Supply Point		At Site	
13.11.	Air extraction Vacuum Pumps	719	869	900	869	839	989	989	1020
13.12.	Interconnecting Piping / Valves / fittings	719	749	809	749	839	869	869	929
13.13.	On-Load tube cleaning system	384	749	839	749	504	869	869	959
13.14.	Supply of complete C&I systems including PLC system, micro controller for On-Load tube cleaning system.	384	900	929	900	504	1020	1020	1049
13.15.	Field instruments, process switches, transmitters, analysers, control valves, solenoid valves	384	900	929	900	504	1020	1020	1049
13.16.	Completion of supply of complete Condenser & Air Extraction system			929					1049
14.	FEED CYCLE EQUIPMENT								
14.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete			660					780
14.2.	Boiler Feed Pumps	720	810	839	810	840	930	930	959
14.3.	Steam Turbine for Boiler Feed Pumps including exhaust duct	720	810	839	810	840	930	930	959
14.4.	Steam turbine governing system	720	900	929	900	840	1020	1020	1049



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S. No.		Description		Supply of Equipment							
				Unit 3				Unit 4			
				From NTP Date (Days)							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site			
		At Supply Point		At Site	At Site	At Site	At Site	At Site	At Site		
14.5.	BFP Turbine Electro hydraulic Governing System	720	810	839	840	930	959				
14.6.	BFP Turbine Supervisory Instruments	720	810	839	840	930	959				
14.7.	Motors for BFP	437	810	839	557	930	959				
14.8.	Hydraulic Coupling	720	780	810	840	900	930				
14.9.	Lubricating Oil system	720	780	810	840	900	930				
14.10.	BFP Booster Pumps	720	700	739	840	820	859				
	Condensate Extraction Pumps	720	810	840	840	930	960				
14.11.	Condensate Extraction Pumps motors	437	710	810	557	830	930				
14.12.	Deaerator	720	750	780	840	870	900				
14.13.	High Pressure feed water heaters	720	720	750	840	900	930				
14.14.	Low Pressure feed water heaters	720	720	750	840	900	930				
14.15.	Interconnecting Piping / Valves / fittings	720	780	810	840	900	930				

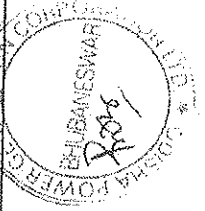
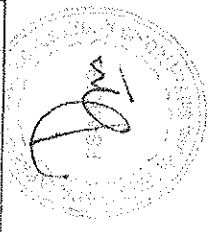


		Supply of Equipment				
		From NTP Date (Days)				
S. No.	Description	Unit 3		Unit 4		
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	
		At Supply Point		At Site		
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	At Site
14.16.	Field mounted instruments & primary elements viz process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	720	840	899	960	1019
14.17.	Junction and solenoid Boxes	720	840	899	960	1019
14.18.	Pneumatic & Process hook up tubing / piping.	720	840	899	960	1019
14.19.	Local instruments, local gauge board and instruments to be mounted on the gauge board as required.	720	840	899	960	1019
14.20.	Strainers for CEP and BFP	720	840	899	960	1019
14.21.	Completion of supply of complete Condenser and Feed Cycle Equipment [Items 13.00 to 14.20]			929		1049
15.	POWER CYCLE PIPING					
15.1.	Carbon Steel, ASTM A-106, Gr. B or C Seamless					
15.1.1.	Pre Fabricated	517	729	900	849	1020



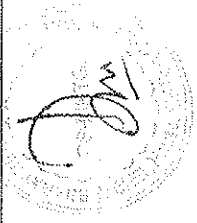
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S. No.		Description	Supply of Equipment				From NTP Date (Days)	
			Unit 3		Unit 4		At Site	At Site
			Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
			At Supply Point		At Site	At Supply Point		At Site
15.1.2.		Loose supply	447	659	719	567	779	839
15.2.		Alloy steel, ASTM A-335, P11/P12						
15.2.1.		Pre Fabricated	517	729	870	637	849	990
15.2.2.		Loose supply	447	659	719	567	779	839
15.3.		Alloy steel, ASTM A -335, P22/P91						
15.3.1.		Pre Fabricated	517	729	839	637	849	959
15.3.2.		Loose supply	447	659	719	567	779	839
15.4.		Complete insulation material for piping, valves, specialties & auxiliary equipment, Cladding sheet, Wire netting etc	517	729	789	637	849	909
15.5.		Carbon Steel Fittings (Elbows / Bends / Tees etc)	447	809	839	567	929	959
15.6.		Carbon Steel Valves (Manual / Motorised / Control)	447	809	839	567	929	959
15.7.		Alloy Steel Fittings (Elbows / Bends / Tees etc)	447	809	839	567	929	959
15.8.		Alloy Steel Valves (Manual / Motorised / Control)	447	809	839	567	929	959



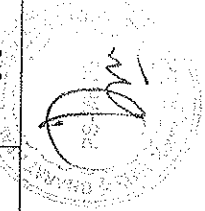
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		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply
		At Supply Point		At Site		At Supply Point		At Site	
15.9.	Anchors / Hangers / Vibration Dampers / Restraints etc	447	809	839	567	929	567	929	959
15.10.	Structural steel members for pipe supports	447	809	839	567	929	567	929	959
15.11.	Funnels, tundishes for drips and drains	447	809	839	567	929	567	929	959
15.12.	Bolts, nuts, washers, temporary and permanent gaskets, fasteners	447	809	839	567	929	567	929	959
15.13.	Painting of all piping, valves & specialties at site	447	809	839	567	929	567	929	959
15.14.	All temporary pipes and accessories, supporting arrangement for cleaning, flushing and steam blowing	447	809	839	567	929	567	929	959
15.15.	Field mounted instruments & primary elements viz. process transmitters, temperature elements (Thermocouple & RTD), local indicators & gauges, thermowell, process switches, sensors, converters, totalizer, flow elements etc. along with accessories.	447	809	839	567	929	567	929	959
15.16.	Junction and solenoid Boxes	447	809	839	567	929	567	929	959
15.17.	Pneumatic & Process hook up tubing / piping.	447	809	839	567	929	567	929	959
15.18.	Completion of supply of complete Power Cycle piping (items 15.1 to 15.17)			900					1020



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S. No.		Description	Supply of Equipment								
			Unit 3				Unit 4				
		From NTP Date (Days)									
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
		At Supply Point		At Site	At Supply Point		At Site	At Supply Point		At Site	
16.		CW PIPING AND LOW PRESSURE PIPING, VALVES AND SPECIALITIES									
16.1.		378	840	869	498	960	989			989	
16.2.		378	900	929	498	1020	1049			1049	
16.3.		657	869	929	777	989	1049			1049	
16.4.		657	869	929	777	989	1049			1049	
16.5.		597	809	869	717	929	989			989	
16.6.		597	809	869	717	929	989			989	
17.		HORIZONTAL CENTRIFUGAL PUMPS									
17.1.		419	759	789	419	879	909			909	
17.2.		419	759	789	419	879	909			909	
17.3.		419	759	789	419	879	909			909	
17.4.		419	759	789	419	879	909			909	
17.5.		419	759	789	419	879	909			909	



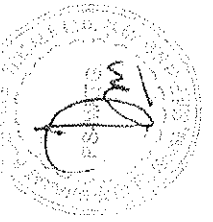
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		Supply of Equipment											
		From NTP Date (Days)											
S. No.	Description	Unit 3				Unit 4							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Delivery Date				
		At Supply Point				At Site							
18.	HEAT EXCHANGERS												
18.1.	Plate heat exchangers including isolation valves / Relief Valves	475	759	789	475	879	475	879	909				
18.2.	Self cleaning system (pump, piping, valves etc)	475	759	789	475	879	475	879	909				
19.1.	Central Control Room and Other areas in Turbine Building	449	719	749	449	839	449	839	869				
19.1.1.	Water cooled screw chiller unit	449	719	749	449	839	449	839	869				
19.1.2.	Condenser cooling water pumps	449	719	749	449	839	449	839	869				
19.1.3.	Chilled Water circulating Pumps	449	719	749	449	839	449	839	869				
19.1.4.	Cooling Towers	449	719	749	449	839	449	839	869				
19.1.5.	Interconnecting piping	449	719	749	449	839	449	839	869				
19.1.6.	Insulation	449	719	749	449	839	449	839	869				
19.1.7.	Expansion / Make-up Water Tanks	449	719	749	449	839	449	839	869				
19.1.8.	Make-up water booster pump	449	719	749	449	839	449	839	869				

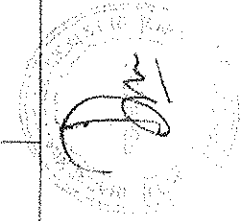


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		Supply of Equipment				
		From NTP Date (Days)				
S. No.	Description	Unit 3		Unit 4		
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point		At Site		
19.1.9.	Air Handling Units	449	719	749	839	869
19.1.10.	Fresh Air units	449	719	749	839	869
19.1.11.	Filters	449	719	749	839	869
19.1.12.	Humidifiers / Heaters	449	719	749	839	869
19.1.13.	Ducting / Dampers / Hangers / Supports / Fire dampers	449	719	749	839	869
19.2.	Water cooled Precision Air conditioners - ESP Control-cum-Fly Ash Equipment Building	449	719	749	839	869
19.3.	Field instruments, process switches, analysers, control valves, solenoid valves	449	719	749	839	869
20.	VENTILATION SYSTEM					
20.1.	Centrifugal Fans	533	719	749	839	869
20.2.	Air washer units	533	719	749	839	869
20.3.	Air Filtration system	533	719	749	839	869
20.4.	Roof Exhausters	533	719	749	839	869

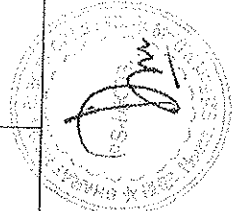


		Supply of Equipment								
		From NTP Date (Days)								
S. No.	Description	Unit 3				Unit 4				
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point		At Site	At Supply Point		At Site	At Site		
20.5.	Wall exhausters / supply fans and Tube axial fans	533	719	749	533	839	869			
20.6.	Ducting / Dampers / Hangers / Supports / Fire dampers	533	719	749	533	839	869			
20.7.	Field instruments, process switches, analysers, control valves, solenoid valves	533	719	749	533	839	869			
21.	COMPRESSED AIR SYSTEM									
21.1.	Instrument air compressors	500	670	700	500	790	820			
21.2.	Service air compressors	500	670	700	500	790	820			
21.3.	Air receivers (IA / SA)	500	670	700	500	790	820			
21.4.	Interconnection piping / valves / fittings	500	670	700	500	790	820			
21.5.	Air driers	500	670	700	500	790	820			
21.6.	Supply of complete C&I systems including PLC system, micro controller and field instruments.	500	670	700	500	790	820			
21.7.	Completion of supply of complete Compressed Air System (21.1 to 21.6)			700			820			
22.	DIESEL GENERATOR SET									

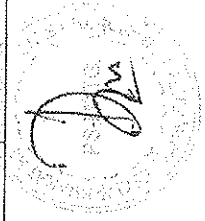


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S. No.		Description	Supply of Equipment				
			Unit 3		Unit 4		
		From NTP Date (Days)					
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point		At Site	At Supply Point		At Site
22.1.		Diesel Generator set	750	810	870	870	990
22.2.		A C Generator	750	810	870	870	990
22.3.		Fuel Oil System	750	810	870	870	990
22.4.		Lube oil system	750	810	870	870	990
22.5.		Hand operated fuel oil filling pumps	750	810	870	870	990
22.6.		Cooling water system consisting of Pumps / Heaters / expansion tanks/ radiators etc	750	810	870	870	990
22.7.		Exhaust air ducting, silencer, expansion joints etc	750	810	870	870	990
22.8.		All interconnecting piping, valves, supports etc.	750	810	870	870	990
22.9.		Supply of complete C&I systems including PLC system, micro controller and field instruments.	750	810	870	870	990
22.10.		DG Battery Bank along with DG Battery Charger	750	810	870	870	990
22.11.		DG Switchgear	750	810	870	870	990
23.		ELEVATORS					

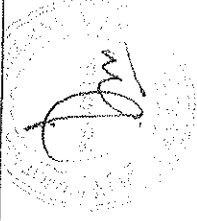


		Supply of Equipment					
		From NTP Date (Days)					
S. No.	Description	Unit 3			Unit 4		
		Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point			At Site		
23.1.	Steam Generator Area	704	720	750	704	840	870
23.2.	T-G Building	450	579	609	450	699	729
24.	MISCELLANEOUS HOISTS						
24.1.	Turbine Building	431	569	749	431	689	869
24.2.	Steam Generator Area	431	569	599	431	689	719
24.3.	ESP Area	431	569	599	431	689	719
24.4.	DG Building	431	569	599	431	689	719
24.5.	Machine Room of all Elevators	431	569	599	431	689	719
24.6.	Other areas	431	569	599	431	689	719
25.	Miscellaneous Cranes						
25.1.	Turbine Building (Station EOT crane)	380	450	480	380	570	600
25.2.	Compressors Area	480	689	719	480	809	839

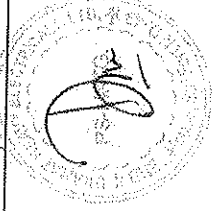


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S. No.	Description	Supply of Equipment									
		Unit 3				Unit 4					
		From NTP Date (Days)									
Guaranteed Supply Start of supply		Guaranteed Supply Date-Completion of Supply		Guaranteed Delivery Date		Guaranteed Supply Date-Start of supply		Guaranteed Supply Date-Completion of Supply		Guaranteed Delivery Date	
At Supply Point		At Supply Point		At Site		At Supply Point		At Supply Point		At Site	
25.3.	Other areas	480	689	719	480	809	839				
26.	SUMP PUMPS	491	779	809	491	899	929				
27.	CONDENSATE POLISHING SYSTEM										
27.1.	Condensate Polisher Vessels	505	779	809	505	899	929				
27.2.	Inferconnecting Piping Valves, Fittings	505	779	809	505	899	929				
27.3.	Blowers	505	779	809	505	899	929				
27.4.	Rinse recirculation Pumps	505	779	809	505	899	929				
27.5.	External Regeneration System	505	779	809	505	899	929				
27.6.	Supply of complete C&I systems including PLC system, micro controller.	505	779	809	505	899	929				
27.7.	Field instruments, process switches, analysers, control valves, solenoid valves	505	779	809	505	899	929				
27.8.	Junction and solenoid Boxes	505	779	809	505	899	929				
27.9.	Pneumatic & Process hook up tubing / piping.	505	779	809	505	899	929				



		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3				Unit 4			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Delivery Date
		At Supply Point		At Site	At Supply Point		At Site	At Site	
27.10.	First fill of resin	505	779	809	505	899	809	505	929
27.11.	All anchor bolts, foundation plate's sleeves, nuts, inserts, etc. to be embedded in concrete for entire CP System.	505	779	809	505	899	809	505	929
28.	MISCELLANEOUS								
28.1.	Paints	900	990	1019	1020	1110	1019	1020	1139
28.2.	Consumables (Lub Oils, Grease, Chemicals)	900	990	1019	1020	1110	1019	1020	1139
29.	GENERATOR TRANSFORMER (GT), 400/21KV								
29.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	468	630	659	588	750	659	588	779
29.2.	Transformer	468	780	870	588	900	870	588	990
29.3.	HV & LV Bushings	468	780	870	588	900	870	588	990
29.4.	Transformer oil	468	780	870	588	900	870	588	990
29.5.	Radiators	468	780	870	588	900	870	588	990
29.6.	Fans & pumps	468	780	870	588	900	870	588	990



R. Ravi

S. No.		Description		Supply of Equipment							
				Unit 3				Unit 4			
				From NTP Date (Days)		Guaranteed Supply Date-Start of supply	Guaranteed Delivery Date	Guaranteed Supply Date-Completion of Supply	Guaranteed Supply Date-Start of supply	Guaranteed Delivery Date	Guaranteed Supply Date-Completion of Supply
				At Supply Point		At Site		At Supply Point		At Site	
29.7.		Conservator		468	780	870	900	588	900	990	990
29.8.		Electrical Panel		468	780	870	900	588	900	990	990
29.9.		Marshalling Box		468	780	870	900	588	900	990	990
29.10.		Protection System		468	780	870	900	588	900	990	990
29.11.		Completion of supply of Generator Transformer(GT), 400/21KV (29.1 to 29.10)				870					990
30.		UNIT TRANSFORMER(UT),21/11KV									
30.1.		All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete		468	630	659	750	588	750	779	779
30.2.		Transformer		704	810	870	930	824	930	1020	1020
30.3.		HV & LV Bushings		704	840	870	960	824	960	1020	1020
30.4.		Transformer oil		704	840	870	960	824	960	1020	1020
30.5.		NGR & NGT		704	840	870	960	824	960	1020	1020
30.6.		Radiators		704	840	870	960	824	960	1020	1020



S. No.		Description	Supply of Equipment							
			Unit 3				Unit 4			
			From NTP Date (Days)							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
		At Supply Point		At Site	At Supply Point		At Site	At Site		
30.7.		Fans	704	840	870	824	960	870	1020	
30.8.		Conservator	704	840	870	824	960	870	1020	
30.9.		Electrical Panel	704	840	870	824	960	870	1020	
30.10.		Marshalling Box	704	840	870	824	960	870	1020	
30.11.		Protection System	704	840	870	824	960	870	1020	
31.		RESERVE AUXILIARY TRANSFORMER (RAT), 400/11KV								
31.1.		All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	468	600	629	588	750	629	780	
31.2.		Transformer	468	689	719	588	840	719	900	
31.3.		HV & LV Bushings	468	689	719	588	840	719	900	
31.4.		Transformer oil	468	689	719	588	840	719	900	
31.5.		NGR & NGT	468	689	719	588	840	719	900	
31.6.		Radiators	468	689	719	588	840	719	900	



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S. No.	Description	Supply of Equipment							
		From NTP Date (Days)							
		Unit 3				Unit 4			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site	
		At Supply Point		At Site	At Supply Point		At Site	At Site	
31.7.	Fans	468	689	719	588	840	900	900	
31.8.	Conservator	468	689	719	588	840	900	900	
31.9.	Electrical Panel	468	689	719	588	840	900	900	
31.10.	Marshalling Box	468	689	719	588	840	900	900	
31.11.	Protection System	468	689	719	588	840	900	900	
32.	UNIT AUXILIARY TRANSFORMER (UAT), 11/3.3KV								
32.1.	All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	549	570	629	669	690	749	749	
32.2.	Transformer	549	720	780	669	840	900	900	
32.3.	HV & LV Bushings	549	720	780	669	840	900	900	
32.4.	Transformer oil	549	720	780	669	840	900	900	
32.5.	NGR &NGT	549	720	780	669	840	900	900	
32.6.	Radiators	549	720	780	669	840	900	900	

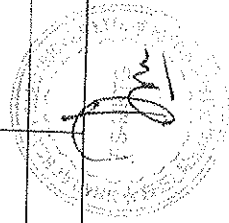


S. No.		Description	Supply of Equipment							
			Unit 3				Unit 4			
			From NTP Date (Days)							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site		
32.7.		Fans	549	720	780	669	840	900	At Site	
32.8.		Conservator	549	720	780	669	840	900	At Site	
32.9.		Electrical Panel	549	720	780	669	840	900	At Site	
32.10.		Marshalling Box	549	720	780	669	840	900	At Site	
32.11.		Protection System	549	720	780	669	840	900	At Site	
33.		STATION TRANSFORMER(SAT), 11/3.3KV							At Site	
33.1.		AUXILIARY All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	559	575	660	679	695	780	At Site	
33.2.		Transformer	559	689	719	679	870	900	At Site	
33.3.		HV & LV Bushings	559	689	719	679	870	900	At Site	
33.4.		Transformer oil	559	689	719	679	870	900	At Site	
33.5.		NGR &NGT	559	689	719	679	870	900	At Site	
33.6.		Radiators	559	689	719	679	870	900	At Site	



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S. No.		Description	Supply of Equipment										
			Unit 3				Unit 4						
		From NTP Date (Days)											
		Guaranteed Supply Date-Start of supply		Guaranteed Supply Date-Completion of Supply		Guaranteed Delivery Date		Guaranteed Supply Date-Start of supply		Guaranteed Supply Date-Completion of Supply		Guaranteed Delivery Date	
		At Supply Point		At Supply Point		At Site		At Supply Point		At Supply Point		At Site	
33.7.		Fans	559	689	719	679	870	900					
33.8.		Conservator	559	689	719	679	870	900					
33.9.		Electrical Panel	559	689	719	679	870	900					
33.10.		Marshalling Box	559	689	719	679	870	900					
33.11.		Protection System	559	689	719	679	870	900					
34.		LI TRANSFORMER, 11/415 V											
34.1.		All anchor bolts, foundation plate's sleeves, nuts, inserts, rails etc. to be embedded in concrete	350	599	629	470	719	749					
34.2.		Transformer	350	750	719	470	870	900					
34.3.		HT & LT Bushing	350	750	719	470	870	900					
34.4.		Electrical Marshalling Box with all accessories	350	750	719	470	870	900					
34.5.		Completion of supply of all Transformers [Items 29.00 to 34.4]											
		For item 29.11 LD will not be duplicated)			900								
35.		MAIN PLANT DC SYSTEM (220V DC AND 24VDC)											1020

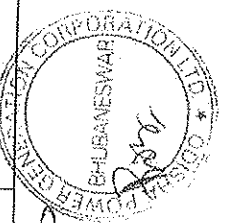
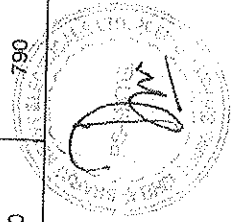


S. No.		Description		Supply of Equipment										
				Unit 3				Unit 4						
				From NTP Date (Days)										
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Supply Point	At Site	At Supply Point	At Site			
		At Supply Point				At Site				At Site				
35.1.		Battery Bank	445	779	809	565	899	809	565	899	809	565	899	929
35.2.		Battery charger	445	779	839	565	899	839	565	899	839	565	899	959
35.3.		DC switch Gear	445	779	839	565	899	839	565	899	839	565	899	959
36.		MAIN PLANT UPS SYSTEM												
36.1.		UPS Electrical Panel	539	824	839	659	944	839	659	944	839	659	944	959
36.2.		UPS Battery	539	824	839	659	944	839	659	944	839	659	944	959
36.3.		UPS Battery Charger	539	824	839	659	944	839	659	944	839	659	944	959
37.		HT Switch Gear(11KV)												
37.1.		Switch Gear Board	378	780	810	378	900	810	378	900	810	378	900	930
37.2.		Breakers	378	780	810	379	900	810	379	900	810	379	900	930
37.3.		Relays	378	780	810	380	900	810	380	900	810	380	900	930
38.		HT SWITCH GEAR(3.3KV)												

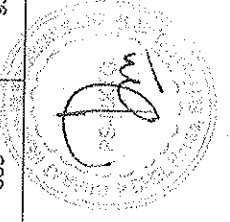


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		Supply of Equipment							
		From NTP Date (Days)							
S. No.	Description	Unit 3			Unit 4				
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point			At Site			At Supply Point	
38.1.	Switch Gear Board	378	780	810	378	900	930		
38.2.	Breakers	378	780	810	378	900	930		
38.3.	Relays	378	780	810	378	900	930		
39.	LT SWITCH GEAR(415V AC)								
39.1.	Boiler MCC	840	900	929	960	1020	1049		
39.2.	Turbine MCC	840	900	929	960	1020	1049		
39.3.	Valve MCC	840	900	929	960	1020	1049		
39.4.	Soot Blower MCC	840	900	929	960	1020	1049		
39.5.	Emergency MCC	840	900	929	960	1020	1049		
39.6.	Unit Switch Gear MCC	840	900	929	960	1020	1049		
39.7.	Chemical Feeding system MCC	840	900	929	960	1020	1049		
39.8.	Compressor MCC	650	670	700	770	790	820		



S. No.		Description	Supply of Equipment							
			Unit 3				Unit 4			
			Guaranteed Supply Date-Start of supply		Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	
			At Supply Point		At Site	At Site	At Supply Point		At Site	
39.9.		Relays	840		900	929	960	1020	1049	
40.		LT SWITCH GEAR(220V AC)								
40.1.		Switch Gear Module	840		900	929			1049	
		Completion of supply of all HT and LT Switch Gear[Items 37.1 to 40.1]				929			1049	
41.		CABLES								
41.1.		HT Power Cable(11KV)	375		739	769	375	859	989	
41.2.		HT Power Cable(3.3KV)	375		739	769	375	859	989	
41.3.		LT Power cable(415V)	405		739	769	405	859	989	
41.4.		LT Control Cable	375		739	769	375	859	989	
41.5.		Cable Trays, structure and other accessories for cabling	415		739	769	415	859	989	
42.		MAIN PLANT ILLUMINATION SYSTEM								
42.1.		Lighting fixtures, Bulbs & fittings	389		839	869	389	959	989	

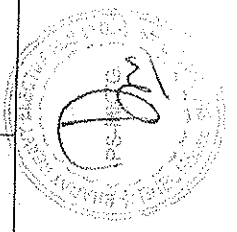


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S. No.	Description	Supply of Equipment							
		Unit 3				Unit 4			
		From NTP Date (Days)							
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date		
		At Supply Point		At Site	At Supply Point		At Site		
42.2.	Lighting Panels	389	839	869	389	959	989		
43.	MAIN PLANT EARTHING & LIGHTNING SYSTEM								
43.1.	Earthing mat	298	739	769	298	859	889		
43.2.	Grounding Rod	298	739	769	298	859	869		
43.3.	Earthing strip	298	739	769	298	859	889		
43.4.	Lightning mast	298	739	769	298	859	889		
44.	BUSDUCT								
44.1.	Isolated Phase Busduct(IPBD), Main & Tapoff, 21KV	719	839	869	749	959	989		
44.2.	Segregated Phase Busduct(SPBD), 11KV, 3.3KV	689	839	869	749	959	989		
44.3.	Non Segregated Phase Busduct(NSPBD), 415V	689	839	869	749	959	989		
44.4.	Bus insulators and fitting accessories	809	839	869	929	959	989		
44.5.	Pressurised Cubicle for IPBD	809	839	869	929	959	989		



S. No.		Description		Supply of Equipment							
				Unit 3				Unit 4			
				From NTP Date (Days)		At Site		At Supply Point		At Site	
		Guaranteed Supply Start of supply	Guaranteed Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Delivery Date	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Start of supply	Guaranteed Date-Completion of Supply	Guaranteed Delivery Date
		At Supply Point		At Site		At Supply Point		At Site		At Site	
45.		GENERATOR CIRCUIT BREAKER(GCB)									
45.1.		809	839	869	929	929	959	989			
45.2.		809	839	870	929	929	959	989			
46.		CENTRAL CONTROL ROOM AND CONTROL EQUIPMENT ROOM									
46.1.		824	914	929	944	929	1034	1049			
46.2.		824	914	929	944	929	1034	1049			
46.3.		824	914	929	944	929	1034	1049			
46.4.		824	914	929	944	929	1034	1049			
46.5.		824	914	929	944	929	1034	1049			
46.6.		824	914	929	944	929	1034	1049			
46.7.		Completion of supply of all equipment / panels in Central Control Room and Control Equipment Room		929		929	1034	1049			

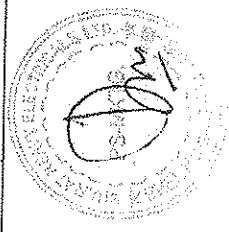


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S. No.		Description	Supply of Equipment							
			From NTP Date (Days)							
			Unit 3				Unit 4			
		Guaranteed Supply Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	At Site		
		At Supply Point		At Site	At Supply Point		At Site			
47.		CONTINUOUS EMISSION MONITORING SYSTEM								
47.1.		Complete flue gas analyzers / Emission monitoring instruments (SOx, NOx, CO & CO2 analyzers).	614	914	929	734	1034	1049		
47.2.		CEMS Panels	614	914	929	734	1034	1049		
48.		STATION C&I								
48.1.		Vibration Monitoring System with vibration analysis & decision support system for all equipment other than STG	554	854	869	674	974	989		
48.2.		All process connection and piping materials comprising of stub, root valves, impulse pipes of different grades & stainless steel tubes, isolation & drain valves, valve manifolds, gauge valves, condensate pot, fittings, stands, brackets etc. as required for satisfactory installation of all field instruments like transmitters, local instruments etc.	554	854	869	674	974	989		
48.3.		Local Control Panels, Gauge Boards, Transmitter racks, Transmitter enclosures, stanchions, brackets etc.	554	854	869	674	974	989		



S. No.		Description	Supply of Equipment					
			Unit 3			Unit 4		
			Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date-Start of supply	Guaranteed Supply Date-Completion of Supply	Guaranteed Delivery Date
			At Supply Point			At Supply Point		
			554	854	869	674	974	989
48.4.		Pneumatic hookup materials like stainless steel grade pneumatic tubes, fittings and isolating valves as required. Erection hardware including junction boxes, canopies, structural steel as required.						
48.5.		All cables, cable accessories inclusive of all flexible conduits, perforated tray, pull boxes, inspection covers, bends, elbows, mounting brackets, clamps, nuts and bolts, glands, lugs, ferrules, connectors, markers, tray supports, rigid conduits, tie wraps etc.	554	854	869	674	974	989
48.6.		Optical fiber cable / special cables with accessories like LIU, patch cord / pigtail, converter, terminators, taps, heavy duty HDPE conduits etc. Optical Time Domain Reflectometer and splicing kit for optical fiber cable testing & maintenance	554	854	869	674	974	989
48.7.		Supply of Electronic earth pit and Earthing system materials for all I&C system grounding.	554	854	869	674	974	989
49.		Auxiliary Boiler & Accessories	585	885	900	705	1005	1020



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TABLE - 3

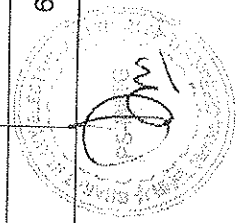
BOP CONTRACTOR'S COMPLETION DATES FOR CIVIL WORKS RELATED TO UNIT 3 AND UNIT 4 MAIN PLANT AREA

1. Owner will cause the BOP Contractor to complete the foundations and civil works in line with the requirements of erection of Unit 3 and Unit 4 progressively as envisaged in Table 3.
2. The Start date for release and progress dates of foundations till Completion will be finalized during LNTP.
3. Generally the foundations for Unit 4 will be released within 90 to 120 days of the corresponding foundations/civil works completion dates for Unit 3 except for STG deck which will be within 60 days. All foundations /civil work dates of unit 4 shall be finalized within ninety (90) days from LNTP Date.

Sr. No	Activity	Responsibility	* Civil completion for unit 3 requirement from NTP
1.00	Steam Generator		Start Complete
1.01	Steam Generator Columns foundations completed and released for structure erection	BOP	255
1.02	APH LHS Column foundations completed and released for structure erection	BOP	255
1.03	APH RHS Column foundations completed and released for structure erection	BOP	255
2.00	Bunker Building and Coal Mills		
2.01	LHS Coal Mill foundations completed and released for equipment erection	BOP	255

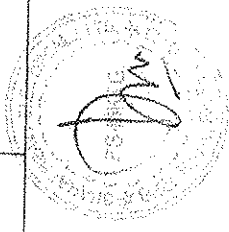


Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP	
			Start	Complete
2.02	LHS Bunker building foundations completed and released for structure erection	BOP		255
2.03	LHS Feeder floor structure completed and released for slab casting	BHEL		
2.04	LHS Feeder floor slab casting completed and released for equipment erection	BOP		855
2.05	RHS Coal Mill foundations completed and released for equipment erection	BOP		255
2.06	RHS Bunker building foundations completed and released for structure erection	BOP		255
2.07	RHS Feeder floor structure completed and released for slab casting	BHEL		
2.08	RHS Feeder floor slab casting completed and released for equipment erection	BOP		885
3.00	Boiler Auxiliaries			
3.01	ID Fans foundations completed and released for equipment erection	BOP		645
3.02	BHEL to release area for civil foundations (Both the sides)	BHEL		600

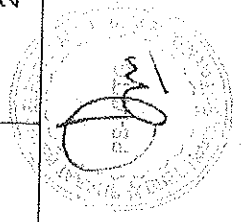


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Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP
3.03	Both the sides PA Fans foundations, FD fans, Two TPs, Duct Supports foundations, Tresiles completed and released for equipment erection	BOP	Start
4.00	Electrostatic Precipitator		Complete
4.01	Pass - A foundations completed and released for equipment erection	BOP	780
4.02	Pass - B foundations completed and released for equipment erection	BOP	300
4.03	Pass - C foundations completed and released for equipment erection	BOP	300
4.04	Pass - D foundations completed and released for equipment erection	BOP	300
5.00	ESP Control Room		300
5.01	BHEL to release area for civil foundations		Front is available to BOP Contractor
5.02	Ground Floor civil works completed and released for equipment erection	BOP	780
5.03	Roof ceiling floor released for ducting work	BOP	780
5.04	First Floor civil works completed and released for equipment erection	BOP	825
6.00	Duct Foundation		
6.01	Boiler to ESP (both Passes) foundations completed and released for equipment erection	BOP	780



Sr. No	Activity	Responsibility	* Civil completion for unit 3 requirement from NTP
			Start Complete
6.02	ESP to ID Fan A foundations completed and released for equipment erection	BOP	665-750
6.03	ID Fan A to Chimney foundations completed and released for equipment erection	BOP	665-750
6.04	ESP to ID Fan B foundations completed and released for equipment erection	BOP	665-750
6.05	ID Fan B to Chimney foundations completed and released for equipment erection	BOP	665-750
6.06	Chimney flange ready for interconnection	BOP	960
7.00	Mill Reject Building		
7.01	Construction of Mill Reject House Complete	BOP	1035
7.02	Equipment foundations in Mill Reject Building completed and released for equipment erection.	BOP	945
8.00	TG Building - AB Bay - Zero M Elevation	BOP	
8.01	STG Raft, CEP foundations,	BOP	300
8.02	STG Deck completed released for equipment erection	BOP	580
8.03	A Row Structure foundation completed and released for structural erection.	BOP	255

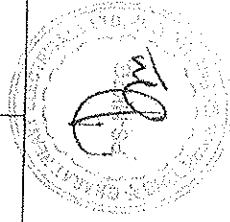


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Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
8.04	B Row structure foundations completed and released for structural erection.	BOP		255
8.05	Condenser foundations completed and released for equipment erection	BOP		580
8.06	LP Drain Flash Tank foundations completed and released for equipment erection.	BOP		745
8.07	HP Drain Flash Tank foundations completed and released for equipment erection	BOP		745
8.08	Unit Flash Tank foundations completed and released for equipment erection	BOP		745
8.09	COLTC foundations completed and released for equipment erection	BOP		1005
8.10	Waste Oil Tank foundations completed and released for equipment erection	BOP		930
8.11	Dirty Oil Tank foundations completed and released for equipment erection	BOP		930
8.12	WO/DO Pump foundations completed and released for equipment erection	BOP		930
8.13	DMCW Pumps foundations completed and released for equipment erection	BOP		750



Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP	
			Start	Complete
8.14	ACW Pumps foundations completed and released for equipment erection	BOP		750
8.15	SC Filters foundations completed and released for equipment erection	BOP		750
8.16	Condenser Vacuum Pumps foundations completed and released for equipment erection	BOP		915
8.17	Seal oil Unit foundations completed and released for equipment erection	BOP		800-850
8.18	Drain Cooler foundations completed and released for equipment erection	BOP		800-850
8.19	CEP foundations completed and released for equipment erection.	BOP		580
8.20	Duplex Lube Oil foundations completed and released for equipment erection.	BOP		800-850
8.21	GSC foundations completed and released for equipment erection.	BOP		900
8.22	MDBFP Lube Oil Console foundations completed and released for equipment erection.	BOP		750-800
8.23	TDBFP Lube Oil Console foundations completed and released for equipment erection.	BOP		750-800

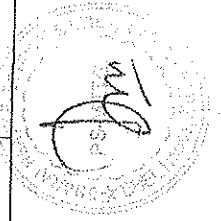


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Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP
			Start Complete
8.24	Gas Cylinder Room civil works completed and released for equipment erection.	BOP	960
8.25	TG Auxiliary column foundations completed and released for equipment erection (from axis 1 - 4, 8 - 13)	BOP	285
8.26	TG Auxiliary column foundations completed and released for equipment erection (from axis 4 - 8 from B to deck)		345
8.27	TG Auxiliary column foundations completed and released for equipment erection (from A to deck)		615
8.28	Zero Metre flooring completed	BOP	
8.29	Completion of CEP up to TG Raft	BOP	255
9.00	TG Building - AB Bay - 3.5 M Elevation		
9.01	Structural work and metal deck completed and released for 3.5 M floor slab casting.	BHEL	
9.02	Slab casting completed and released for equipment erection	BOP	720
9.03	Civil Works for SWGR room completed and released for equipment erection	BOP	825
9.04	Front released for AC Ducting/Ventilation	BOP	825
10.00	TG Building - AB Bay - 8.5 M Elevation	BOP	



Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP	
			Start	Complete
10.01	Structural Work and metal deck completed and released for slab casting.	BHEL		
10.02	Slab casting completed and released for equipment erection excluding all round TG Deck.	BOP		690
10.03	MDBFP foundation completed and released for equipment erection.	BOP		765
10.04	STG MOT foundations completed and released for equipment erection.	BOP		825
10.05	HP OSU for ESV/ISV foundations completed and released for equipment erection.	BOP		850-950
10.06	HPBP Hydraulic Unit foundations completed and released for equipment erection.	BOP		850-950
10.07	LPBP Hydraulic Unit foundations completed and released for equipment erection.	BOP		850-950
10.08	PHE foundations completed and released for equipment erection.	BOP		850-950
10.09	PW Pump and Filter foundations completed and released for equipment erection.	BOP		850-950
10.10	PW Cooler foundations completed and released for equipment erection.	BOP		850-950
11.00	TG Building - AB Bay - 17 M Elevation			

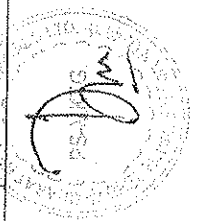


Roof

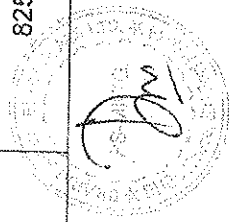
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Sr. No	Activity	Responsibility	Start	Complete
11.01	Completion of TG Raft Auxiliary columns and metal deck erected and released for TG Operating floor slab casting (from axis 2 - 4)	BOP		300
11.02	Auxiliary columns and metal deck erected and released for TG Operating floor slab casting	BHEL		
11.05	Entire 17 M operating floor slab completed and released for equipment erection	BOP		660
11.06	TDBFP foundations completed and released for equipment erection.	BOP		720
12.00	TG Building - BC Bay - Zero M Elevation			
12.01	Foundations of B Row structure completed and released for structural erection.	BOP		285
12.02	Foundations of C Row Structure completed and released for structural erection (from axis 11 to 6).	BOP		300
12.03	Foundations of C Row Structure completed and released for structural erection (from axis 5 to 1).	BOP		330
12.04	Condensate Polishing Unit foundations completed and released for equipment erection	BOP		900-930
12.05	Dosing System foundations completed and released for equipment erection	BOP		900-930

* Civil completion for unit 3 requirement from NTP



Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP	
			Start	Complete
12.06	Central Lube Oil Purification unit foundations completed and released for equipment erection	BOP		900-930
13.00	TG Building - BC Bay - 4.95 M Elevation			
13.01	Structural steel work completed and metal deck complete for slab casting	BHEL		630
13.02	Slab casting completed and released for equipment erection	BOP		780
13.03	Civil works of cable vault completed and released for equipment erection	BOP		855
13.04	Structural work completed and released for 8.5 M floor slab casting	BHEL		700
14.00	TG Building - BC Bay - 8.5 M Elevation			
14.01	Slab casting completed and released for equipment erection	BOP		750
14.02	HP Heaters 6A/6B foundations completed and released for equipment erection.	BOP		780
14.03	LPH - 2, 3, 4 foundations completed and released for equipment erection.	BOP		780
14.04	Civil works of Battery Room completed and released for equipment erection.	BOP		825

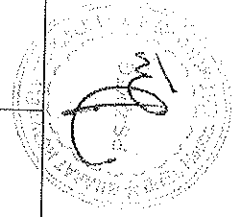


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Sr. No	Activity	Responsibility	* Civil completion for unit 3 requirement from NTP	
			Start	Complete
14.05	Front released for AC Ducting/Ventilation	BOP		800
14.06	Structural Work completed and released for 17 M floor slab casting.	BHEL		
15.00	TG Building - BC Bay - 17 M Elevation			
15.01	Structural Work up to 24 M floor slab and metal deck completed	BHEL		
15.02	Slab casting at 17 M completed and released for equipment erection	BOP		750
15.03	HPH 8A/8B & 7A/7B foundations completed and released for equipment erection.	BOP		765
15.04	CCR and Computer Room civil works completed and released for equipment installation	BOP		900
15.05	CCR fire detection and suppression lines installed	BOP		800
15.06	Front released for AC ducting, false ceiling, flooring etc.	BOP		800
16.00	TG Building - BC Bay- 24 M Elevation			
16.01	Structural Work up to for 28 M floor slab and metal deck completed.	BHEL		

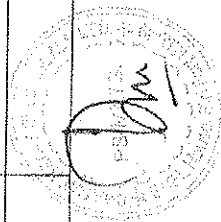


Sr. No	Activity	Responsibility	* Civil completion for unit 3 requirement from NTP	
			Start	Complete
16.02	24 M floor Slab casting completed and released for equipment erection	BOP		810
16.03	Cable vault room civil works completed and released for equipment erection	BOP		830
17.00	TG Building - BC Bay - 28 M Elevation			
17.01	Structural Work up to 32.8 M floor slab and metal deck completed	BHEL		
17.02	Slab casting at 28 M completed and released for equipment erection	BOP		840
17.03	SG MCC civil works completed and released for equipment erection.	BOP		840
17.04	Front released for AC ducting/Ventilation	BOP		815
18.00	TG Building - BC Bay - 32.8 M Elevation			
18.01	Structural Work up to 38 M floor slab and metal deck completed.	BHEL		
18.02	Slab casting of 32.8 M completed and released for equipment erection	BOP		840
18.03	PRDS foundation completed and released for equipment erection	BOP		860

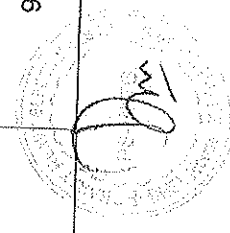


Roof

Sr. No	Activity	Responsibility	* Civil completion for unit 3 requirement from NTP
			Start Complete
18.04	Emergency Cooling Water Tank foundation completed and released for equipment erection	BOP	860
18.05	CBD Tank foundation completed and released for equipment erection	BOP	860
19.00	TG Building - BC Bay - 38 M Elevation		
19.01	Structural Work up to 38 M roof slab and metal deck completed.	BHEL	
19.02	Slab casting at 38 M completed and released for equipment erection	BOP	830
19.03	Deaerator foundation completed and released for equipment erection	BOP	830
20.00	TG Building - CD Bay - Zero M Elevation		
20.01	Foundation of C Row structure completed and released for structural erection.	BOP	300 - 330
20.02	Foundation of D Row structure completed and released for structural erection.	BOP	330
20.03	Structural work completed and released for 8.5 M slab casting.	BHEL	
21.00	TG Building - CD Bay - 8.5 M Elevation		



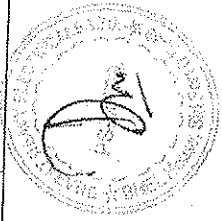
Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP	
			Start	Complete
21.01	Structural work up to 13.5 M floor slab and metal deck completed.	BHEL		
21.02	Floor Slab of 8.5 casting completed and released for equipment erection	BOP		780
21.03	Civil works of Battery Room completed and released for equipment erection.	BOP		825
22.00	Turbine Building - CD Bay - 13.5 M Elevation			
22.01	Structural work up to 17 m floor slab and metal deck completed.	BHEL		
22.02	Floor Slab of 13.5 M casting completed and released for equipment erection	BOP		840
22.03	Civil works of cable vault room completed and released for equipment erection.	BOP		840
23.00	TG Building - CD Bay - 17 M Elevation			
23.01	Structural work 28 m floor slab and metal deck completed.	BHEL		
23.02	17 M Floor Slab casting completed and released for equipment erection	BOP		780
23.03	Civil works of control room completed and released for equipment erection.	BOP		915



Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP
			Start Complete
23.04	Front Released for AC ducting/ventilation	BOP	840
24.00	TG Building DE and EF Bay - 0 M Elevation		
24.01	D, E, F Row structure foundations completed and released for structural erection.	BOP	300
24.02	Structural work up to 8.5M floor and metal deck completed.	BHEL	
24.03	Civil Works for Inert Gas Room completed and released for equipment erection	BOP	960
24.04	AC Plant foundations completed and released for equipment erection.	BOP	765
25.00	TG Building DE and EF Bay - 8.5 M Elevation		
25.01	Structural work up to 17 M floor and metal deck completed.	BHEL	
25.02	Civil works of UPS, Battery and Charger Room completed and released for equipment erection.	BOP	840
26.00	TG Building CD/DE/EF Bay - 17 M Elevation		
26.01	Structural work up to 25 M floor and metal deck completed.	BHEL	
26.02	Structural Work completed and released for slab casting.	BOP	



Sr. No	Activity	Responsibility	Start	Complete
*Civil completion for unit 3 requirement from NTP				
26.03	Equipment Control Room civil works compiled and released for equipment erection	BOP		840
27.00	TG Building - DE Bay - 25 M Elevation			
27.01	Structural Work and metal deck completed and released for roof slab casting.	BHEL		
27.02	Slab casting completed and released for equipment erection	BOP		840
27.03	AC Cooling Tower Tank foundations completed and released for equipment erection.	BOP		890
28.00	Plant Instrument and Service Air compressors			
28.01	Instrument air compressors foundations completed and released for equipment erection	BOP		735
28.02	Service air compressors foundations completed and released for equipment erection	BOP		735
28.03	Air Receivers (IA/SA) foundations completed and released for equipment erection	BOP		735
28.04	Air Driers foundations completed and released for equipment erection.	BOP		735

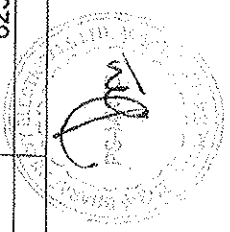


BOP

Sr. No	Activity	Responsibility	* Civil completion for unit 3 requirement from NTP
			Start Complete
28.05	Compressor house civil works completed and released for equipment erection	BOP	735
29.00	Diesel Generator Set		
29.01	Diesel Generator set foundations completed and released for equipment erection	BOP	825
29.02	DG building civil works completed and released for equipment erection	BOP	840
30.00	Elevators		
30.01	SG Area Area Elevator pit completed and released for equipment erection	BOP	900
30.02	T-G Building Elevators pit and Shaft completed and released for equipment erection	BOP	900
30.03	Machine Room of all Elevators completed and released for equipment erection	BOP	900
31.00	Generator Transformer (GT),400/21KV		
31.01	GT Foundations with trenches and fireproof walls	BOP	790
31.02	Fire Proof walls completed	BOP	830
31.03	Trench completed	BOP	830
32.00	Unit Transformer (UT),21/11KV		



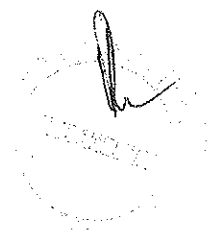
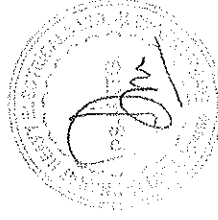
Sr. No	Activity	Responsibility	*Civil completion for unit 3 requirement from NTP
			Start Complete
32.01	UT Foundations completed and released for equipment erection.	BOP	825
32.02	Fire Proof walls completed	BOP	865
32.03	Trench completed	BOP	865
33.00	Reserve Auxiliary Transformer (RAT), 400/11KV		
33.01	RAT Foundations completed and released for equipment erection.	BOP	675
33.02	Fire Proof walls completed	BOP	705
33.03	Trench completed	BOP	705
34.00	Unit Auxiliary Transformer (UAT), 11/3.3KV		
34.01	UAT Foundations completed and released for equipment erection.	BOP	765
34.02	Fire Proof walls completed	BOP	795
34.03	Trench completed	BOP	825
35.00	Station Auxiliary Transformer (SAT), 11/3.3KV		
35.01	SAT Foundations completed and released for equipment erection.	BOP	765
35.02	Fire Proof walls completed	BOP	795
35.03	Trench completed	BOP	825
36.00	LT Transformer, 11/415KV		
36.01	LT Foundations completed and released for equipment erection.	BOP	765
36.02	Fire Proof walls completed	BOP	795
36.03	Trench completed	BOP	825
37.00	Bus Duct		



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Sr. No	Activity	Responsibility	Start	Complete
37.01	21 KV IPBD foundations (Main & Tap-off) foundations completed and released for equipment erection	BOP		660-810
37.02	11KV, 3.3 KV, SPBD foundations completed and released for equipment erection	BOP		660-810
37.03	NSPBD foundations completed and released for equipment erection	BOP		660-810

* The Guaranteed Completion Dates (in Days) will be converted into a date for completion of Activity at NTP



**TABLE 4
OWNER'S AND RELATED CONTRACTOR'S COMPLETION DATES FOR BALANCE OF PLANT SYSTEMS**

Subject to Section 3.0 of the Contract, Owner will or will clause the Related Contractor to complete the Balance of Plant related to Unit 3 and Unit 4 as per Table 4 below, and these completion dates will be agreed by the Owner, Contractor and Related Contractor within ninety (90) days of issue of LNTP.

S. No.	Particulars	Guaranteed Completion Date - Unit 3	Guaranteed Completion Date - Unit 4
1	Back feed power available for commissioning	780	
2	DM Water available for commissioning	900	
3	CW System available for commissioning	960	1020
4	LDO System and LDO available for commissioning	1020	
5	HFO System and HFO available for commissioning	1020	
6	Coal Handling System and Coal available for commissioning	1020	1140
7	220 Switchyard available for power evacuation	1020	1140
8	O&M Personnel made available	720	



Annexure – 7

CONTRACT FOR SUPPLY OF EQUIPMENT

BETWEEN

ODISHA POWER GENERATION CORPORATION LIMITED
as Buyer

AND

BGR ENERGY SYSTEMS LIMITED
as Seller

dated
[11th July 2013]

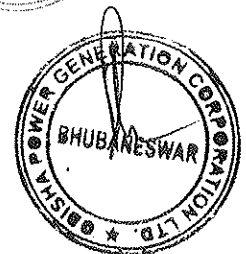
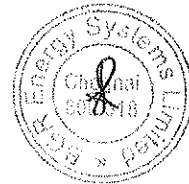
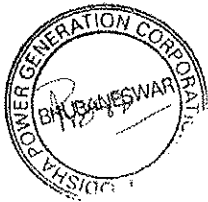
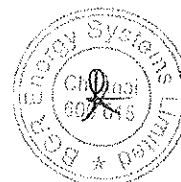
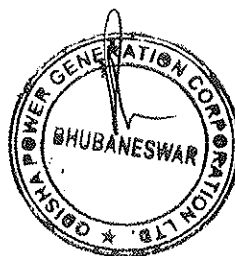


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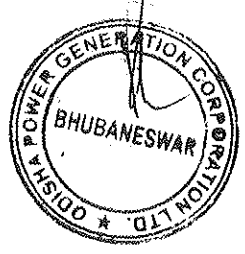
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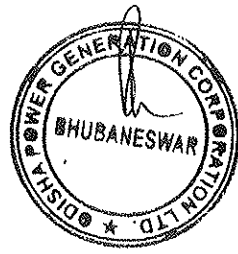
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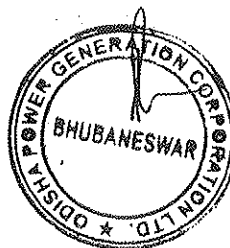
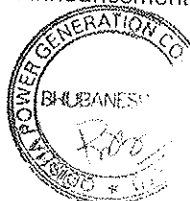
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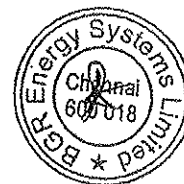
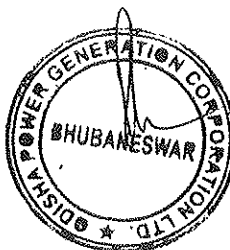
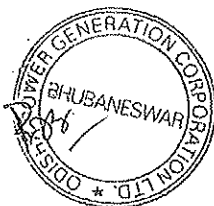


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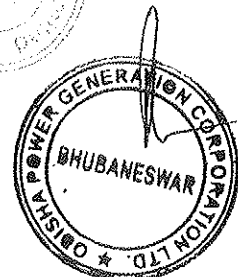
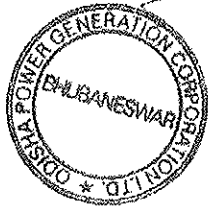


उड़ीसा ORISSA

E 532866

CONTRACT FOR SUPPLY OF EQUIPMENT

THIS CONTRACT FOR SUPPLY OF EQUIPMENT is entered into the 11th day of July 2013 (the "Effective Date") by and between ODISHA POWER GENERATION CORPORATION LIMITED, a company established under the Indian Companies Act, 1956, organized under the laws of India with its registered office at Zone-A, 7th Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar – 751 023, Odisha, India ("Buyer") and BGR ENERGY SYSTEMS LIMITED, a company established under Indian Companies Act, 1956, organized under the laws of India with its registered office at A-5, Pannamgadu Industrial Estate, Ramapuram Post, Sulerpet Taluk, Nellore District, Andhra Pradesh – 524 401, India ("Seller").

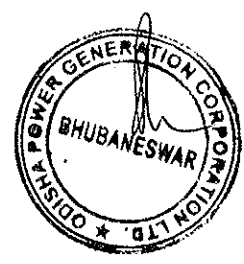


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CPD, Bhubaneswar

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Bhubaneswar
9 J APR 2013

Sudhir Kumar Patra
SIC

BALABHADRA PARIDA
STAMP VENDOR
BHUBANESWAR COURT



WITNESSETH:

WHEREAS, Buyer is setting up a 2X660 MW thermal power project at Banharpalli, in the Jharsuguda District of Odisha, India and is developing the Facility (as hereinafter defined); and

WHEREAS, Buyer conducted an international competitive bidding for award of contract for the Supply of Equipment and Seller was chosen as successful bidder. Buyer now wishes to appoint Seller to perform Supply of Equipment subject to the terms and conditions set forth herein; and

WHEREAS, Seller has represented and warranted to Buyer that it has the requisite experience, expertise, capability and know-how to and is willing to perform such Supply of Equipment as per the terms and conditions set forth in this Contract, including Articles 1 through 20 hereof and all Appendices and Annexes attached hereto (this "Contract");

WHEREAS, on the basis of and in reliance on the above representations and warranties and other representations and warranties in the Contract, Buyer has agreed to engage Seller to perform the Supply of Equipment on the terms and conditions set out in the Contract.

WHEREAS, the Parties therefore wish to enter into this Contract to set forth the terms and conditions governing the Supply of Equipment and their respective rights and obligations in relation thereto.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties covenant and agree as follows:

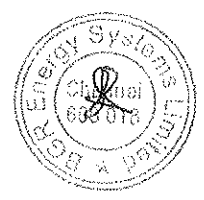
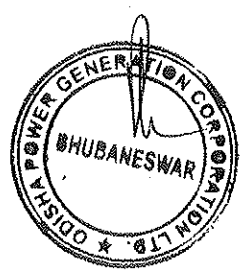
1. DEFINITIONS; INTERPRETATION

1.1. Defined Terms. As used in this Contract, the following terms shall have the following meanings (such meanings as necessary to be equally applicable to both the singular and plural forms of the terms defined unless the context otherwise requires):

"Acceptable Credit Provider" means a bank or branch thereof with an office located in Mumbai, India that: (a) has a rating of at least A by CRISIL and a rating of at least A by ICRA, if the bank is rated by both CRISIL and ICRA, or has a rating of at least A by CRISIL or a rating of at least A by ICRA if the bank is rated by either CRISIL or ICRA but not both; and (b) is acceptable to Buyer.

"Acceptance Tests" has the meaning set forth in Section 8.1.1.

"Affiliate" of any Person (the "Relevant Person"), means (a) a Person that is a subsidiary of the Relevant Person, (b) a Person of which the Relevant Person is a subsidiary, (c) a Person that is the subsidiary of another Person of which the Relevant Person is a subsidiary or (d) any other Person that, directly or indirectly, controls, is controlled by or is under common control with such Person. For



IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this Contract to be executed by their duly authorized officers on the date indicated below and to be effective on the date, day and year first above written.

ODISHA POWER CORPORATION LIMITED

GENERATION

BGR ENERGY SYSTEMS LIMITED

K. Venkatachalam

By: K. Venkatachalam

Title: Managing Director

Date: 11th July 2013

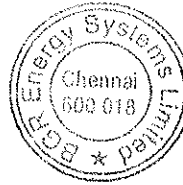
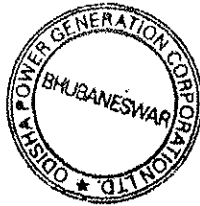
A. Swaminathan

By: A. Swaminathan

Title: Director (Sales & Marketing)

Date: 11th July 2013

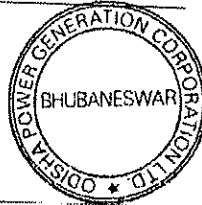
In the presence of



Manojan Mishra

Name:

Manojan Mishra
Company Secretary
OPGC Ltd.
FORTUNE TOWERS
BBSR - 751023



James Anand

Name: JAMES ANAND
BGR Energy Systems Ltd



Sudhakar

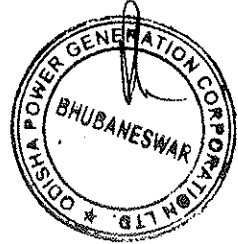
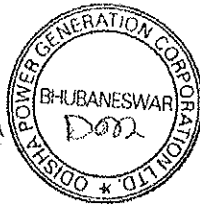
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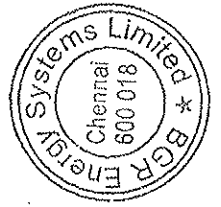
(SUDHAKAR)
RESIDENT (CON)
BGR ENERGY SYS LTD



Prakash Kumar

Prakash Kumar
OPGC

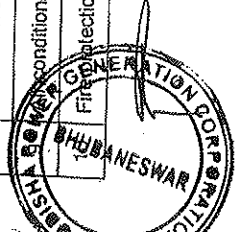




PRICE SCHEDULE - SUPPLY OF EQUIPMENT

S. No.	Equipment	Price for Supply of Equipment		Seller Taxes						Contract Price	
		INR MILLION	INR MILLION	Import Duty, Cess and Levies on Equipment directly consigned to Buyer	Import Duty, Cess and Levies on Equipment directly consigned to Seller/Seller's Subcontractor(s)	Excise Duty	Sales Tax (States & Central) and VAT	Other Taxes, including Entry Taxes and Octroi	Total	Price on Supply of Equipment	Seller Taxes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1	Water transportation system										
2	Raw water pre-treatment plant										
3	Demineralization plant										
4	Waste water management system (Effluent treatment plant)										
5	Ash handling system										
6	Coal handling system										
7	Main and Auxiliary cooling water system and accessories										
8	Ventilation system										
	Air conditioning system										
	Fire protection and detection system										
								(45687.8)			

Price for Supply of Equipment and associated Seller Taxes included in row A

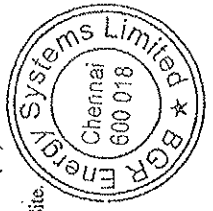
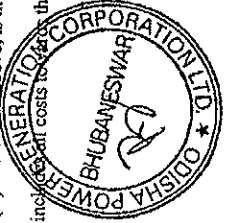
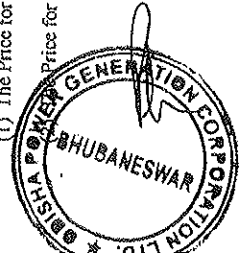


Price for Supply of Equipment and associated Seller Taxes included in row A

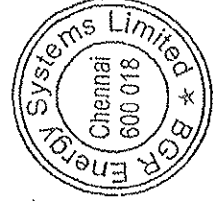
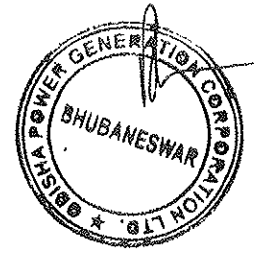
Sl. No.	Description	Included in column (3)	Included in column (3)	Included in column (3)	Included in column (3)	Included in column (3)	Included in column (3)
11	Hydrogen generation system						
12	Fuel oil unloading , Heating and Pressurization system						
13	Auxiliary transformers / LT transformers						
14	HT / LT switchgear						
15	HT / LT control cables						
16	Segregated phase bus duct						
17	AC and DC motors						
18	Electric motor actuators						
19	Switchyard equipment and accessories						
20	UPS Battery and Battery Charger						
21	Instrumentation and control Systems						
22	Start Up and Commissioning Spares						
23	First fill of lubricants and consumables (excluding fuel and commissioning & start-up power) required till Substantial Completion						
24	Prices for Supply of Special Tools and Tackles for the Balance of Plant as specified						
25	Training						
26	Any other supply item not covered above but required as per specification (mention the items)						
A	Sub Total - Supply of Equipment (excluding Price for Supply of Mandatory Spares)	9,170.70	70.30	70.30	70.30	9,170.70	70.30
27	Price for Supply of Mandatory Spares for Balance of Plant (Appendix B4)	199.00		Incl. in Cl. (3)	0.00	199.00	0.00
28	Grand Total - Supply of Equipment	9,369.70	70.30	70.30	70.30	9,369.70	70.30

Note:

(1) The Price for Supply of Equipment and associated Seller Taxes, mentioned in row (A) of the table above, is the lump sum price for Supply of Equipment and associated Seller Taxes for items listed in rows (1) to row (26) in the table above. The Price for Supply of Equipment, mentioned in row (28) and column (3) above, includes the marine transit insurance policy taken by Seller for the transit of Equipment and its Delivery at the Site.



- (3) Seller Taxes in the nature of import duty, cess and levies on Supply of Equipment, in columns (4) and (5), is included in Price for Supply of Equipment, in column (3). Seller shall neither seek any reimbursement of nor any Charger Order on such Seller Tax from Buyer as per the provisions of the Contract.
- (4) Seller Taxes in the nature of Excise Duty and VAT / Central Sales Tax on Supply of Equipment, in columns (6) and (7), is included in Price for Supply of Equipment, in column (3). Seller shall neither seek any reimbursement of nor any Charger Order on such Seller Tax from Buyer as per the provisions of the Contract.
- (5) Seller Taxes in the nature of Entry Tax on Supply of Equipment, in column (8) has been computed based on the following
 - a. Entry Tax @ 2%;
- (6) The Ex Works Price of Mandatory Spares is as per the respective total Ex Works Price furnished for the Mandatory Spares forming part of the Appendix B4.



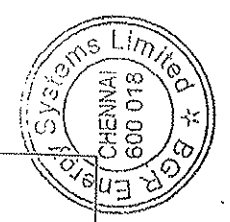
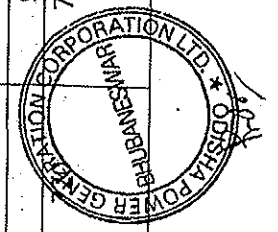
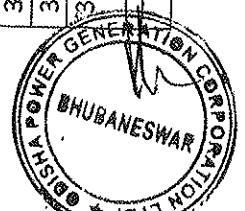
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APPENDIX C1

CONTRACT SUPPLY SCHEDULE – SUPPLY OF EQUIPMENT

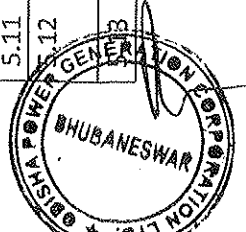
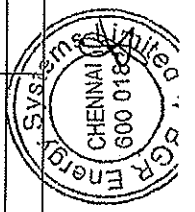
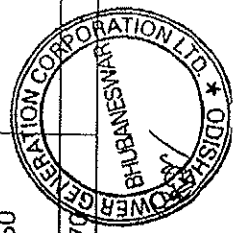
Seller assures the Guaranteed Supply Dates, as per Table 1 below, for the supply of Equipment of Balance of Plant Unit 3 and Balance of Plant Unit 4 at the Supply Point. Seller also assures the Guaranteed Delivery Dates, as per the Table 1 below, for the supply of Equipment of Balance of Plant Unit 3 and Balance of Plant Unit 4 at Site.

S/no	Description	Balance of Plant Unit 3		From NTP Date (in Days)		Balance of Plant Unit 4	
		Guaranteed Supply Date - Start of Supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of Supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
		At Supply Point	At Supply Point	At Site	At Supply Point	At Supply Point	At Site
1.0	WATER TRANSPORTATION SYSTEM (WTS)						
1.01	Pump Ordered						
1.02	WTS Pumps delivered		600				420 660
2.0	RAW WATER PRETREATMENT PLANT						
2.01	Raw Water Pretreatment Plant ordered						90
2.02	Chlorination System ordered						100
2.03	Clarifier Rotating System delivered		590				650
2.04	Raw Water Treatment Plant Chlorination system delivered		690				750
3.0	DIMINERALIZATION PLANT						
3.01	Demineralization Plant ordered						90
3.02	Delivery of OM Plant Equipment complete as per clause number 2.01 to 2.30,						780

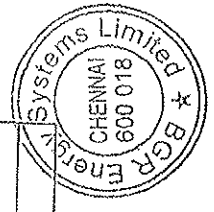


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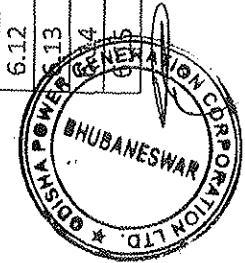
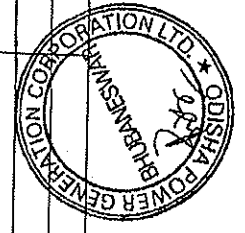
Sl.no.	Description	From NIP Date (in Days)			
		Balance of Plant Unit 3		Balance of Plant Unit 4	
		Guaranteed Supply Date - Start of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of Supply	Guaranteed Delivery Date
		At Supply Point	At Site	At Supply Point	At Site
	2.35 and 2.36 of Vol. 11-C/2/S-1 in BOP Tech spec*				
4.0	WASTE WATER MANAGEMENT				
4.01	Effluent treatment Plant ordered		120		
5.0	ASH HANDLING PLANT				
5.01	Ash Handling Plant ordered		180		
5.02	Vacuum Pumps for AHP ordered		360		
5.03	Vacuum Pumps for AHP delivered at Site	790	850	910	970
5.04	Compressors ordered		480		
5.05	Compressors delivered	790	850	910	970
5.06	Bottom Ash Slurry Disposal Pumps ordered		400		
5.07	Bottom Ash Slurry Disposal Pumps delivered at Site	840	900	960	1020
5.08	Slurry piping, fittings, specialties ordered		520		
5.09	Slurry piping, fittings, specialties delivered at Site	860	920	980	1040
5.10	HCSD Pumps ordered		400		
5.11	HCSD Pumps delivered at Site	940	1000	1000	1060
5.12	HSDC Slurry piping, fitting and specialties ordered		550		
5.13	HSDC Slurry piping, fitting and	810	870	930	990



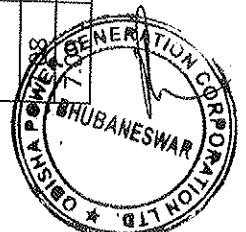
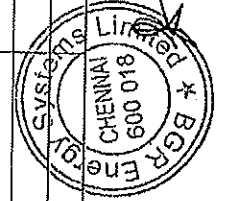
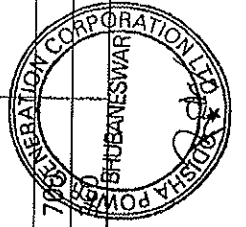
Sl.no.	Description	Balance of Plant Unit-3		Balance of Plant Unit-4		From NTP Date (in Days)	
		Guaranteed Supply Date - Start of Supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date	Guaranteed Start of Supply	Guaranteed Completion of Supply
		At Supply Point	At Supply Point	At Site	At Supply Point	At Site	At Site
	specialities delivered at Site						
5.14	Ash Water System Pumps ordered			480			
5.15	Ash Water System Pumps delivered			770			890
6.0	COAL HANDLING PLANT						
6.01	CHP ordered	180					
6.02	Paddle Feeders ordered	450					
6.03	Paddle Feeders delivered at site		790	850			
6.04	Staker Reclaimer ordered	300					
6.05	Staker Reclaimer delivered at site		740	800			
6.06	Crusher ordered	300					
6.07	Crushers delivered at site						
6.08	Vibrating Grizzly Feeders ordered	450		800			
6.09	Vibrating Grizzly Feeders delivered at site		790	850			
6.10	Dust Suppression system ordered	450					
6.11	Dust Extraction system ordered	450					
6.12	Coal sampling unit ordered	450					
6.13	Magnetic Separators ordered	450					
6.14	Metal detectors ordered	450					
6.15	Bell weigher ordered	450					



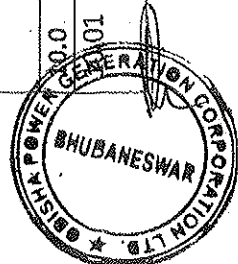
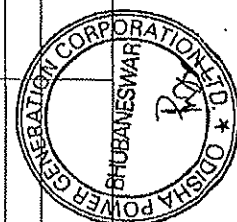
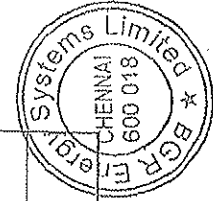
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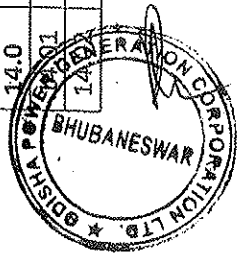
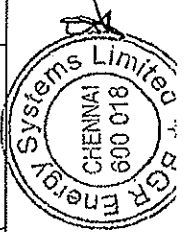
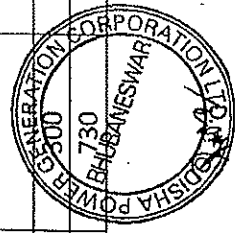
Sl.no.	Description	From NTP Date (in Days)			
		Balance of Plant Unit 3		Balance of Plant Unit 4	
		Guaranteed Supply Date - Start of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of Supply	Guaranteed Delivery Date
		At Supply Point	At Site	At Supply Point	At Site
6.16	CHP Motors ordered	450			
6.17	All CHP motors delivered at site		850		
6.18	Transformers ordered	450			
6.19	Transformers delivered at site		900		
6.20	Flag gates & RP Gates ordered	450			
6.21	Conveyor Belting ordered	400			
6.22	Full Conveyor Belting delivered at site		900		
6.23	Belt Feeders ordered	450			
7.0	CIRCULATING WATER SYSTEM				
7.01	Circulating Water Pumps ordered		180		
7.02	All Circulating Water Pump delivered at Site		720	780	840
7.03	Cooling Tower ordered		60		
7.04	Cooling Tower Fans including drives delivered at Site		780	840	900
7.05	Full quantity of Cooling Tower Fills delivered at Site		900	960	1020
7.06	Aux Cooling Water Pumps ordered		200		
7.07	Aux Cooling Water Pumps delivered at site		740	800	860
7.08	All CW Piping delivered at Site		700	760	820
	Butterfly Valves ordered		640		

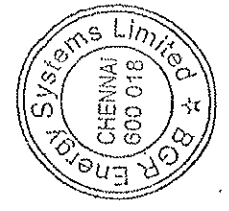
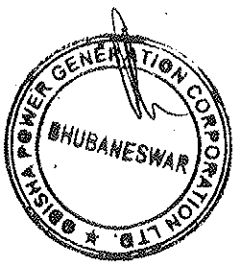


Sl no.	Description	From NTP Date (In Days)				
		Balance of Plant Unit 3	Balance of Plant Unit 4	At Site	At Supply Point	
		Guaranteed Supply Date - Start of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of Supply	Guaranteed Completion of Supply	
7.10	All Butterfly Valves delivered at Site		660	720	780	840
7.11	Expansion joints ordered					
7.12	CW Chlorination system delivery at Site complete		840	900		
8.0	FIRE PROTECTION AND DETECTION SYSTEM					
8.01	Fire Protection System ordered			210		
8.02	Fire Water Pumps ordered			270		
8.03	All Fire Water Pumps delivered at Site		540	600		
8.04	Piping for Fire Protection System ordered			330		
8.05	Piping for Fire Protection System delivered			660		
8.06	Supply of Portable fire extinguishers			600		
9.0	HYDROGEN GENERATION PLANT					
9.01	Hydrogen Generation Plant ordered			210		
9.02	Hydrogen Generation Plant delivered at Site		940	1000		
9.0.0	FUEL OIL SYSTEM					
9.0.01	Fuel Oil Unloading System ordered			300		



Sl.no.	Description	Balance of Plant Unit-3		Balance of Plant Unit-4		From NTP Date (in Days)	
		Guaranteed Supply Date - Start of Supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of Supply	Guaranteed Supply Date - Completion of Supply	Guaranteed Delivery Date
		At Supply Point	At Site	At Supply Point	At Site	At Supply Point	At Site
10.02	Fuel Oil Unloading Pumps ordered		300				
10.03	Fuel Oil Unloading Pumps delivered at site	640		700			
10.04	Fuel Oil Forwarding Pumps ordered		240				
10.05	Fuel Oil Forwarding Pumps delivered at site	640		700			
10.06	Fuel Oil piping delivered at site	790		850			
11.0	LT TRANSFORMER, 11/415 kV						
11.01	LT transformers (11 kV/0.415kV) ordered		420				
11.02	All LT transformers (11 kV/0.415 kV) delivered a Site	790		850			
12.0	HT SWITCH GEAR (11 kV)/3.3 kV as applicable						
12.01	HT Switchgears ordered		350				
12.02	HT Switchgears delivered at Site	740		800			
13.0	HT SWITCH GEAR (3.3 kV)						
13.01	Switch gear for AHP ordered		350				
13.02	Switch gear for CHP ordered		350				
13.03	HT Switch gear delivered at site	740		800			
14.0	LT SWITCH GEAR (415V AC)						
14.01	LT Switchgears ordered		670				
14.02	LT Switchgears delivered at Site						





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Sl.no.	Description	From NTP Date (in Days)			
		Balance of Plant Unit 3		Balance of Plant Unit 4	
		Guaranteed Supply Date - Start of Supply	Guaranteed Delivery Date	Guaranteed Supply Date - Start of Supply	Guaranteed Delivery Date
		At Supply Point	At Site	At Supply Point	At Site
15.0	CABLING AND EARTHING (BREAKUP BASED ON PLANT/SYSTEM)				
15.01	HT, LT and Control Cables delivered at site		790		
16.0	ILLUMINATION SYSTEM				
16.01	Illumination System Contractor for BOP Scope of Work delivered at site		750		
17.0	BUS DUCT				
17.01	Segregated Phase Bus Duct ordered		660		
17.02	Segregated Phase Bus Duct delivered at site		750	810	870
18.0	SWITCH YARD				
18.01	Complete Switch Yard Equipment ordered (all major equipment)		300		
18.02	All Switch Yard Equipment delivered at Site		650	710	770

Annexure - 8

CONTRACT FOR THE SERVICES

BETWEEN

ODISHA POWER GENERATION CORPORATION LIMITED
as Owner

AND

BGR ENERGY SYSTEMS LIMITED
as Contractor

dated
[11th July 2013]

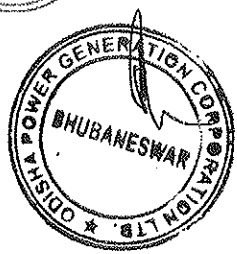
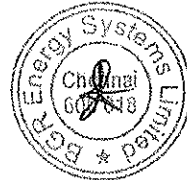
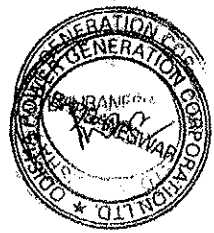
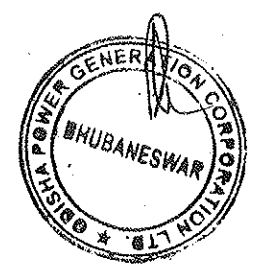
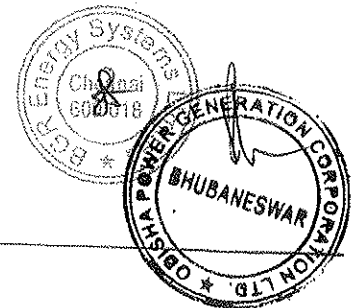


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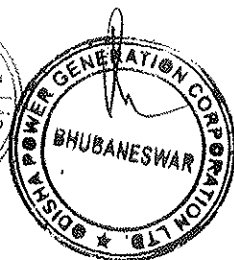
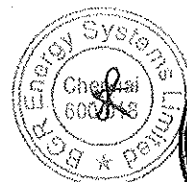
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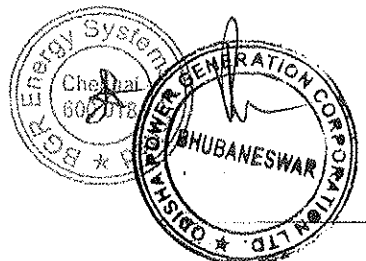
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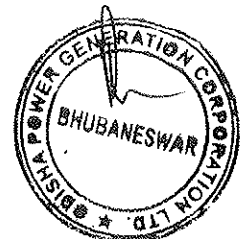
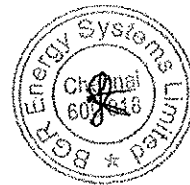
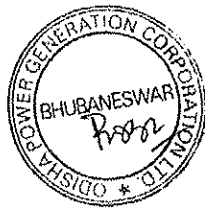
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APPENDICES

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Appendix H Quality Assurance Plan Scope

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Appendix J Approved Subcontractors

Appendix K Insurance

Appendix L Contractor's Key Personnel

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Appendix P Monthly Progress Reports and Meetings

Appendix Q Temporary Facilities

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Appendix AA Form of Limited Notice to Proceed (LNTP) and Notice to Proceed (NTP) Request

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Appendix DD Form of Limited Notice to Proceed (LNTP)

Appendix EE Form of Performance Security

Appendix FF Form of LNTP Payment / NTP Payment / Warranty / Punch List Security

Appendix GG Form of Consent to Assignment

Appendix HH Form of Warranty Claim Notification

Appendix II-1 Form of Partial Lien Release (Contractor)

Appendix II-2 Form of Partial Lien Release (Subcontractor)

Appendix JJ-1 Form of Full Lien Release (Contractor)

Appendix JJ-2 Form of Full Lien Release (Subcontractor)

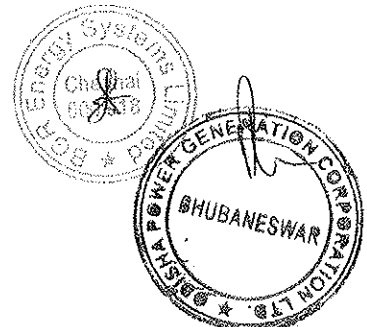
Appendix KK Form of Subcontractor Acknowledgment and Consent

Appendix LL Form of Deed of Conditional Assignment of Subcontracts

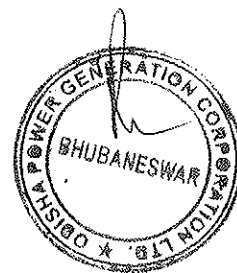
Appendix MM Form of Price Adjustment of the Contract Price

ANNEX

Annex 1 Erection Specification



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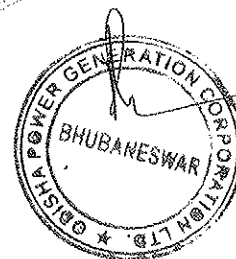
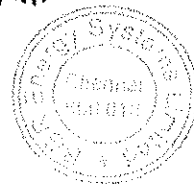


उड़ीसा ORISSA

E 534067

CONTRACT FOR THE SERVICES

THIS CONTRACT FOR THE SERVICES is entered into the 11th day of July 2013 (the "Effective Date") by and between ODISHA POWER GENERATION CORPORATION LIMITED, a company established under the Indian Companies Act, 1956, organized under the laws of India with its registered office at Zone-A, 7th Floor, Fortune Towers, Chandrasekharapur, Bhubaneswar – 751 023, Odisha, India ("Owner") and BGR ENERGY SYSTEMS LIMITED, a company established under the Indian Companies Act, 1956, organized under the laws of India with its registered office at A-5, Pannamgadu Industrial Estate, Ramapuram Post, Sulurpet Taluk, Nellore District, Andhra Pradesh – 524 401, India ("Contractor").



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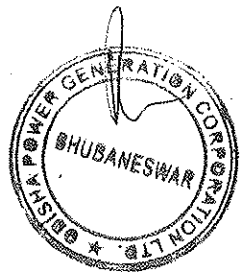
24 04 2013

M DOPAC
CPUR, DAGI

DISTRICT JUDGE
KHURDA, BHUBANESWAR
20 APR 2013

[Handwritten Signature]
BALABHADRA MOUDA
STAMP VENDOR
BHUBANESWAR COURT

[Handwritten Signature] Ramesh Kumar
SIGNATURE OF PURCHASER.....



WITNESSETH:

WHEREAS, Owner is setting up a 2X660 MW thermal power project at Banharpalli, in the Jharsuguda District of Odisha, India and is developing the Facility (as hereinafter defined); and

WHEREAS, Owner conducted an international competitive bidding for award of a contract for the Services (as hereinafter defined) consisting of design and construction of Civil Works at Site AND the Take Over (as hereinafter defined), transportation of Equipment and Delivery (as hereinafter defined) of Equipment at Site, handling and storage of Equipment at Site, design, permitting, fabrication, construction, Civil Works, installation, commissioning, start-up, testing, warranties and related services in relation to the Equipment for the Project and the Owner has chosen the Contractor as the successful Bidder. Owner now wishes to appoint Contractor for such Services, subject to the terms and conditions set forth herein; and

WHEREAS, Contractor has represented to Owner that it has the requisite experience, expertise, capability and know-how to and is willing to perform such Services upon the terms and conditions set forth in this Contract, including Articles 1 through 20 hereof and all Appendices and Annexes attached hereto (this "Contract");

WHEREAS, on the basis of and in reliance on the above representations and other representations and warranties in this Contract, Owner has agreed to engage Contractor to perform the Services on the terms and conditions set out in the Contract.

WHEREAS, the Parties therefore wish to enter into this Contract to set forth the terms and conditions governing the Services and their respective rights and obligations in relation thereto.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties covenant and agree as follows:

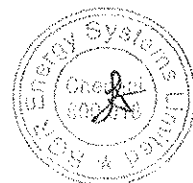
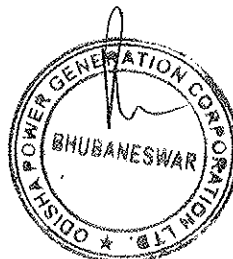
1. DEFINITIONS; INTERPRETATION

1.1. Defined Terms. As used in this Contract, the following terms shall have the following meanings (such meanings as necessary to be equally applicable to both the singular and plural forms of the terms defined unless the context otherwise requires):

"Acceptable Credit Provider" means a bank or branch thereof with an office located in Mumbai, India that: (a) has a rating of at least A by CRISIL and a rating of at least A by ICRA, if the bank is rated by both CRISIL and ICRA, or has a rating of at least A by CRISIL or a rating of at least A by ICRA if the bank is rated by either CRISIL or ICRA but not both; and (b) is acceptable to Owner.

"Acceptance Tests" has the meaning set forth in Section 8.1.1.

"Affiliate" of any Person (the "Relevant Person"), means (a) a Person that is a subsidiary of the Relevant Person, (b) a Person of which the Relevant Person is a



IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this Contract to be executed by their duly authorized officers on the date indicated below and to be effective on the date, day and year first above written.

ODISHA POWER CORPORATION LIMITED

GENERATION

BGR ENERGY SYSTEMS LIMITED

By: K. Venkatachalam

Title: Managing Director

Date: 11th July 2013



In the presence of

Name: Manoj Kumar
Company Secretary OPGCL
Bhubaneswar



By: A. Swaminathan

Title: Director (Sales & Marketing)

Date: 11th July 2013

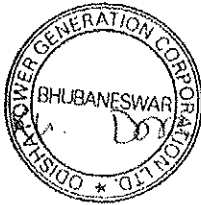


Name: JAMES AMALAN
BGR Energy Systems Ltd



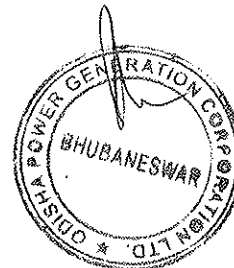
Name:

Prakash
OPGCL



Name:

(S.K. AGRAWAL)
VICE PRESIDENT (Comm)
BGR ENERGY SYS. LTD

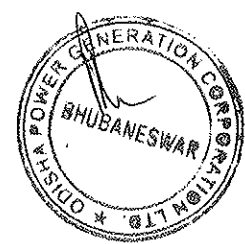


PRICE SCHEDULE - ERECTION AND COMMISSIONING

S. No.	Services	Price of Erection and Commissioning INR Million	Contractor Taxes			Contract Price	
			Service Tax INR Million	Other Taxes, Cess if any INR Million	Total INR Million	Price of Erection and Commissioning INR Million	Contractor Taxes INR Million
(1)	(2)	(3)	(4)	(5)	(4+5)	(3)	(6)
1.00	Delivery, unloading at site, handling, storage, transportation within Site, erection, installation, testing, pre-commissioning, commissioning, start up, Capability Tests, Performance Tests and Reliability Test of Balance of Plant	614.10	73.99	2.21	75.90	614.10	75.90
	PRICE OF ERECTION AND COMMISSIONING OF BALANCE OF PLANT	614.10	73.69	2.21	75.90	614.10	75.90

Note:

1. Service Tax @ 12.00% applicable on the Price of Erection and Commissioning
2. Other Taxes, Cess, if any, include Education Cess @ 3.00% applicable on the Service Tax on Price of Erection and Commissioning

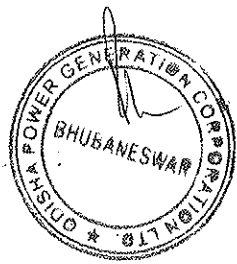


PRICE SCHEDULE - CIVIL WORKS

S. No.	Services	Price of Civil Works		Contractor Taxes			Contract Price	
		INR Million	INR Million	Service Tax	Other Taxes, Cess if any	Total	Price of Civil Works	Contractor Taxes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.00	Civil Works related to the Main Plant	848.70	27.84	11.25	89.09	848.70	35.25	
2.00	Civil Works related to Equipment of the Balance of plant	3,974.21	103.81	41.98	345.79	3,974.21	143.75	
3.00	Site grading	81.99	2.15	0.87	9.07	81.99	3.02	
	PRICE OF CIVIL WORKS	4,904.90	133.80	54.10	187.90	4,904.90	187.90	

Note:

Service Tax @ 12.36 % applicable on the Price of Civil Works (includes Education Cess @ 3.00% on the applicable Service Tax on the Price of Civil Works).
Other Taxes, Cess, if any, include Labour Cess @ 1 % applicable on the Price of Civil Works.

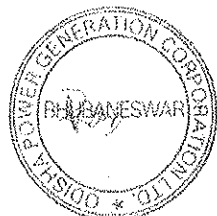


GUARANTEED COMPLETION SCHEDULE - FACILITY

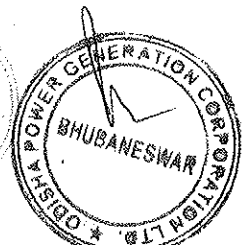
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Table - 1
(Civil Works, Erection & Commissioning of BOP Area)

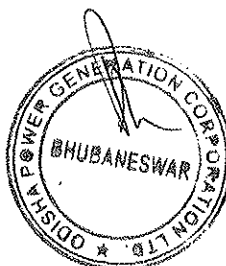
Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under ID
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
1.00	Water Transportation System					
1.01	Construction of Foundation for Horizontal pumps complete		*		*	
1.02	Construction of Clarified water Reservoir complete		800		*	
1.03	Construction of Clarified Water Pump house complete		800		*	
1.04	Erection of Raw Water Transportation system (Pumps, Piping, Instrumentation) complete		*		*	
1.05	Erection of Demineralised Water (DMW) Transportation System (Pumps, Piping, Instrumentation) complete		840		*	
1.06	Erection of Cooling tower Makeup system (Pumps, Piping, Instrumentation) complete		900		*	
1.07	Erection of Service water system (Pumps, Piping, Instrumentation) complete		*		*	
1.08	Erection of Ash handling plant sealing water system (Pumps, Piping, Instrumentation) complete		*		*	
1.09	Erection of CHP Makeup system (Pumps, Piping, Instrumentation) complete		*		*	
1.10	Erection of DMW Transportation System (Piping, Instrumentation) complete		*		*	
1.11	Erection of DMCW System (Pumps, Piping, Instrumentation) complete		*		*	
1.12	Erection of Cycle Makeup system (Pumps, Piping,		*		*	



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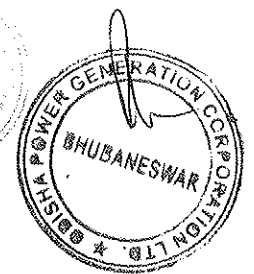
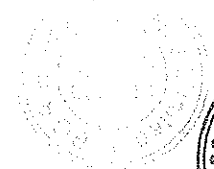
Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
	Instrumentation) complete		*		*	
1.13	Testing and commissioning of Individual system complete		*		*	
2.00	RAW WATER PRETREATMENT PLANT					
2.01	Construction of Clarifier complete		700		*	
2.02	Design Of Chemical House complete		*		*	
2.03	Construction of Chemical House complete		980		*	
2.04	Installation of Chlorination system complete		820		*	
2.05	Testing and Commissioning complete		*		*	
2.06	Clarified water available for CW System filling		*		*	
3.00	DIMINERALIZATION PLANT					
3.01	Construction of DM Plant foundation complete		600		*	
3.02	Installation of DM Plant complete		810		*	
3.03	Water Treatment Plant in operation with guaranteed water quality and effluent limits.		840		*	YES
3.04	DM water available		*		*	
4.00	WASTE WATER MANAGEMENT					
5.01	Construction of Central Monitoring Basin complete		1100		*	
5.02	Construction / Installation of ETP complete		1200		*	
5.03	Construction of ETP building complete		1200		*	
5.04	Construction of Coal Settling Pond complete		*		*	
5.05	Testing and commissioning of ETP complete		*		*	
5.00	ASH HANDLING PLANT					
5.06	Construction of Foundations for BA Hopper complete		*		*	
5.07	Installation of BA Hoppers complete		990		*	
5.08	Installation Slurry Piping		*		*	



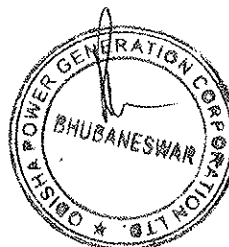
Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
	from BA Hopper to Slurry Sump complete					
5.09	Construction of foundations for Vacuum Pumps complete		*		*	
5.10	Vacuum Pumps installed and ready		950		*	
5.11	Installation of Vacuum conveying system complete		1020		*	
5.12	Testing and commissioning of Vacuum conveying system complete		*		*	
5.13	Construction of Intermediate surge hoppers complete		1020		*	
5.14	Construction of all Dry Ash Storage silos competed		1020		*	
5.15	Construction of Compressor		1100		*	
5.16	Installation of compressors complete		*		*	
5.17	Installation of Pressure conveying system complete		1020		*	
5.18	Testing and commissioning of Pressure conveying system complete		*		*	
5.19	Construction of Ash Slurry pump house complete		*		*	
5.20	Construction of Ash Water pump house complete		1020		*	
5.21	Slurry disposal pumps installed and trial operation complete		1020		*	
5.22	Ash handling system ready for trial operation		1020		*	
5.23	Installation of Ash water Pumps complete		*		*	YES
5.24	Installation of recovery water system complete		*		*	
5.25	Testing and commissioning of Ash water system complete		*		*	
5.26	Testing and commissioning of Recovery water system complete		*		*	
6.0	COAL HANDLING PLANT					



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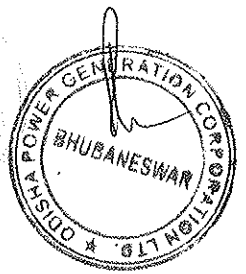
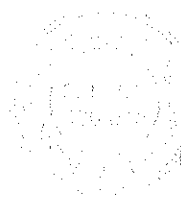
Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
6.01	Conveyor belt installation complete and ready for trial operation		960		*	
6.02	Track hopper construction complete and released for equipment erection		900		*	
6.03	Track Hopper Structural steel erection complete		*		*	
6.04	Paddle feeder erection complete		*		*	
6.05	No Load commissioning of Paddle feeder complete		*		*	
6.06	Conveyors civil foundation		800		*	
6.07	Conveyor Structural steel erection from Track Hopper to Crusher House complete		900		*	
6.08	Conveyor Structural steel erection from Crusher House to Transfer point 18 complete		950		*	
6.09	structures Erection complete		*		*	
6.10	Conveyor Galleries erection complete		990		*	
6.11	Conveyor Galleries Roof and		*		*	
6.12	Electrical erection complete		*		*	
6.13	No load commissioning of Conveyors complete		*		*	
6.14	Civil foundation work for Transfer House complete		800		*	
6.15	Transfer House Structures Erection Complete		*		*	
6.16	Transfer House Roof and side cladding work complete		*		*	
6.17	Civil Foundation work for Stacker Reclaimer complete		*		*	
6.18	Erection of Stacker Reclaimer complete		*		*	
6.19	No load commissioning of Stacker Reclaimer (trial Operation Complete)		1000		*	
6.20	Installation of Dust suppressions system complete		*		*	
6.21	Installation of Dust Extraction		1100		*	



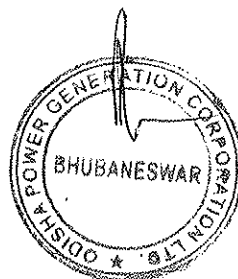
Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
	system complete					
6.22	Construction of CHP Control Building complete		1100		*	
6.23	Construction of Crusher		1100		*	
6.24	Crushers installed and ready for testing		1000		*	
6.25	No Load commissioning of Crushers complete		*		*	
6.26	Installation of Vibrating Grizzly Feeders complete		*		*	
6.27	No load commissioning of Vibrating Grizzly Feeders complete		*		*	
6.28	Installation of CHP PLC complete		*		*	
6.29	No load commissioning of complete CHP complete		*		*	
6.30	Coal handling system trial operation (without coal) complete		1020		*	
7.0	CIRCULATING WATER SYSTEM					YES
7.01	Raft foundation for Forebay complete		*		*	
7.02	Construction of CW Forebay and sump Complete		720		*	
7.03	Construction of CW channels complete		*		*	
7.04	Installation of CW Piping complete		*		*	
7.05	Fabrication of CW Piping complete		800		*	
7.06	Laying of CW Piping complete		850		*	
7.07	Installation of CW Pumps complete		870		*	
7.08	Flushing of CW Pumps complete		*		*	
7.09	CW System ready for trial operation.		900		*	YES
7.10	Raft foundation for Cooling Towers complete		*		*	
7.11	Cooling Tower Columns and beams up to deck level complete		750		*	
7.12	Partition walls		*		*	
7.13	Fan deck construction complete		*		*	



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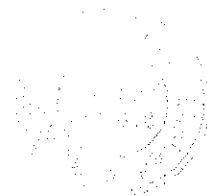
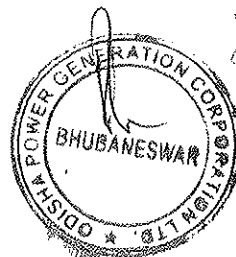
Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
7.14	Fan Flume Construction complete		*		*	
7.15	Erection of Equipment complete		*		*	
7.16	Erection of Fills complete for 50% of cells		380		*	
7.17	Complete civil works of Cooling Tower complete and 50% of cells in operation		900		*	YES
7.18	Installation of CW Chlorination system complete		1020		*	
8.00	FIRE PROTECTION AND DETECTION SYSTEM					
8.01	Construction of Fire water Pump House complete and released for equipment erection		650		*	
8.02	Construction of Fire Water Pumps foundation complete		*		*	
8.03	Construction of Fire water tank foundation complete		*		*	
8.04	Installation of Fire water		700		*	
8.05	Testing of Fire water Pumps complete		*		*	
8.06	Erection of fire water tank complete		650		*	
8.07	Installation of Fire water Hydrants complete		*		*	
8.08	Hydro test of Fire water piping complete		*		*	
8.09	Installation of Spray system complete		*		*	
8.10	Installation of Fire detection system complete		*		*	
8.11	Construction of Fire station building complete		*		*	
8.12	Hydrant and Spray lines for Switchyard, Transformers (GT, UT, RAT, UAT and SAT) and cable gallery complete and ready for taking into service.		720		*	
9.00	HYDROGEN GENERATION PLANT					
9.01	Construction of Hydrogen Generation building complete		*		*	



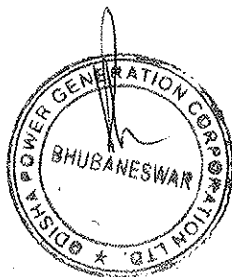
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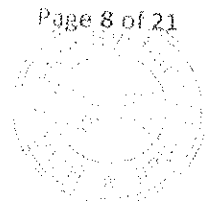
Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
9.02	Constructi9n of Hydrogen generation equipment foundation complete		*		*	
9.03	Installation of Hydrogen Generation Plant complete		1150		*	
9.04	Testing and Commissioning of Hydrogen Generation Plant complete		*		*	
10.00	FUEL OIL SYSTEM					
10.01	Construction of Fuel Oil Pump house complete		950		*	
10.02	Construction of Fuel Oil Pump Foundation complete		800		*	
10.03	Installation of Fuel Oil Tanks and ready for oil filling		950		*	
10.04	Fuel Oil piping delivered at site		*		*	
10.05	Installation of Fuel oil piping complete		*		*	
10.06	Fuel oil system (LDO and HFO) ready for operation		1020		*	YES
11.00	PIPE RACKS					
12.01	Construction of Pipe Rack foundation complete		*		*	
12.02	Erection of Pipe Rack Foundation complete		*		*	
12.03	Rerouting of existing Fuel Oil Pipe Rack complete		*		*	
12.00	LT TRANSFORMER, 11/415KV					
12.01	Construction of foundations complete		*		*	
12.02	All LT(11KV/0.415 KV) Transformers erection mechanically and complete and released ready for electrical tests		970		*	
12.03	Testing and commissioning of Transformer complete		*		*	
12.04	HT SWITCH GEAR (11KV)/3.3 kV as applicable					
12.05	Erection of HT Switch Gear (11KV)		920		*	
12.06	Testing and commissioning complete		990		*	



Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
13.00	HT SWITCH GEAR (3.3KV)					
13.01	Erection of HT Switch Gear (3.3 KV)		*		*	
13.02	Erection of Switch gear for AHP complete		*		*	
13.03	Erection of Switch gear for CHP complete		*		*	
13.04	HT Switch Gears (3.3 KV) installed and released for cabling		920		*	
13.05	Testing and commissioning complete		990		*	
14.00	LT SWITCH GEAR (415V AC)					
14.01	Erection of Compressor MCC complete		*		*	
14.02	Erection of DM Plant MCC complete		*		*	
14.03	Erection of AHP MCC complete		*		*	
14.04	Erection CHP MCC complete		*		*	
14.05	LT Switch Gears installed and released for cabling		850		*	
14.06	Testing and commissioning complete		*		*	
14.07	LT Switch Gear energized		990		*	
15.00	CABLING AND EARTHING (BREAKUP BASED ON PLANT/SYSTEM)					
16.01	Erection of HT Power Cable (11 KV) complete		*		*	
16.02	Erection of HT Power Cable(3.3KV) complete		*		*	
16.03	Erection of LT Power cable(415V) complete		*		*	
16.04	Erection of LT Control Cable complete		*		*	
16.05	Erection of Cable Trays, structure and other accessories for cabling complete		*		*	
16.06	Erection of Earthing & Lightning system complete		*		*	
16.00	ILLUMINATION SYSTEM					
16.01	Erection / testing commissioning Illumination system (break up		*		*	



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Sl no.	Description (Activity/ System)	From BOP NTP Date (in Days)				Under LD
		BOP Unit 3		BOP Unit 4		
		Start	Finish	Start	Finish	
17.00	Building work complete GENERAL CIVIL WORKS					
17.01	Roads		*		*	
17.02	Concrete Paving in Main Plant area		*		*	
17.03	Concrete Paving in BOP area		*		*	
17.04	Weight Bridge Control room construction		*		*	
17.05	Main Control room construction		*		*	
17.06	Construction of Rain Water Harvesting pond complete		*		*	
18.00	CHIMNEY					
18.01	Raft Casting					
18.02	Construction of Chimney Shell complete		300		*	
			600		*	
18.03	Fabrication and erection of flue complete		810		*	
18.04	Installation of Elevator complete				*	
18.05	Completion of Electrical works		*		*	
18.06	External piping complete		*		*	
18.07	Chimney ready for receiving flue gas		1020		*	YES
19.00	SWITCH YARD					
19.01	Construction of Switch		*		*	
19.02	Construction of Switch Yard Building complete		*		*	
19.03	Erection of Switch yard structures complete released for equipment erection		700		*	
19.04	Installation of Switch Yard Equipment complete		850		*	
19.05	400 KV Switchyard back-charged from Grid		720		*	YES

* The Contractor shall finalize the completion dates on or before 60 days of LNTP and agreed dates will be incorporated.



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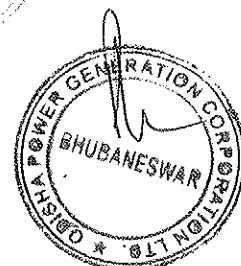
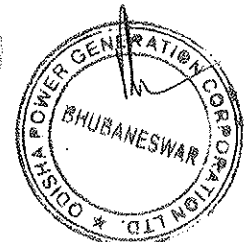
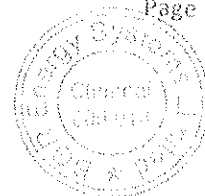


Table - 2
(Civil Works of Main Plant Area)

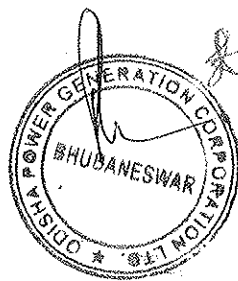
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
1.00	Steam Generator			
1.01	Steam Generator Columns foundations completed and released for structure erection	BOP		255
1.02	APH Column LHS foundations completed and released for structure erection	BOP		255
1.03	APH Column RHS foundations completed and released for structure erection	BOP		255
2.00	Bunker Building and Coal Mills			
2.01	LHS Coal Mill foundations completed and released for equipment erection	BOP		255
2.02	LHS Bunker building foundations completed and released for structure erection	BOP		255
2.03	LHS Feeder floor structure completed and released for slab casting	BHEL		
2.04	LHS Feeder floor slab casting completed and released for equipment erection	BOP		855
2.05	RHS Coal Mill foundations completed and released for equipment erection	BOP		255
2.06	RHS Bunker building foundations completed and released for structure erection	BOP		255
2.07	RHS Feeder floor structure completed and released for slab casting	BHEL		
2.08	RHS Feeder floor slab casting completed and released for equipment erection	BOP		885
3.00	Boiler Auxiliaries			
3.01	ID Fans foundations completed and released for equipment erection	BOP		645
3.02	BHEL to release area for civil foundations (Both the sides)	BHEL		600



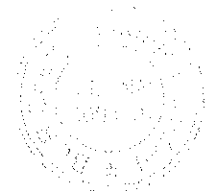
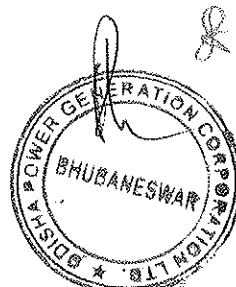
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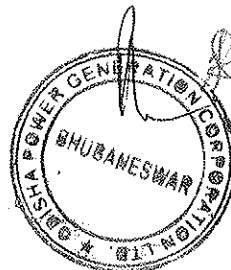
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
3.03	Both the sides PA Fans foundations, FD fans, Two TPs, Duct Supports foundations, Trestles completed and released for equipment erection	BOP		780
4.00	Electrostatic Precipitator			
4.01	Pass - A foundations completed and released for equipment erection	BOP		300
4.02	Pass - B foundations completed and released for equipment erection	BOP		300
4.03	Pass - C foundations completed and released for equipment erection	BOP		300
4.04	Pass - D foundations completed and released for equipment erection	BOP		300
5.00	ESP Control Room			
5.01	BHEL to release area for civil foundations			Front is available to BOP Contractor
5.02	Ground Floor civil works completed and released for equipment erection	BOP		780
5.03	Roof ceiling floor released for ducting work	BOP		780
5.04	First Floor civil works completed and released for equipment erection	BOP		825
6.00	Duct Foundation			
6.01	Boiler to ESP (both Passes) foundations completed and released for equipment erection	BOP		780
6.02	ESP to ID Fan A foundations completed and released for equipment erection	BOP		665-750
6.03	ID Fan A to Chimney foundations completed and released for equipment erection	BOP		665-750
6.04	ESP to ID Fan B foundations completed and released for equipment erection	BOP		665-750
6.05	ID Fan B to Chimney foundations completed and released for equipment erection	BOP		665-750
6.06	Chimney flange ready for interconnection	BOP		960
7.00	Mill Reject Building			
7.01	Construction of Mill Reject House Complete	BOP		1035



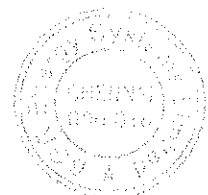
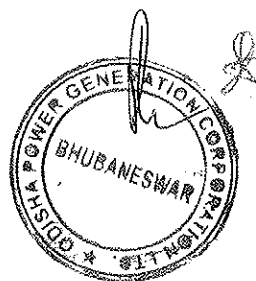
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
7.02	Equipment foundations in Mill Reject Building completed and released for equipment erection.	BOP		945
8.00	TG Building - AB Bay - Zero M Elevation	BOP		
8.01	STG Raft, CEP foundations,	BOP		300
8.02	STG Deck completed released for equipment erection	BOP		580
8.03	A Row Structure foundation completed and released for structural erection.	BOP		255 - 300 Grid wise hand over
8.04	B Row structure foundations completed and released for structural erection.	BOP		255 - 300 Grid wise hand over
8.05	Condenser foundations completed and released for equipment erection	BOP		580
8.06	LP Drain Flash Tank foundations completed and released for equipment erection	BOP		745
8.07	HP Drain Flash Tank foundations completed and released for equipment erection	BOP		745
8.08	Unit Flash Tank foundations completed and released for equipment erection	BOP		745
8.09	COLTC foundations completed and released for equipment erection	BOP		1005
8.10	Waste Oil Tank foundations completed and released for equipment erection	BOP		930
8.11	Dirty Oil Tank foundations completed and released for equipment erection	BOP		930
8.12	WO/DO Pump foundations completed and released for equipment erection	BOP		930
8.13	DMCW Pumps foundations completed and released for equipment erection	BOP		750
8.14	ACW Pumps foundations completed and released for equipment erection	BOP		750
8.15	SC Filters foundations completed and released for equipment erection	BOP		750



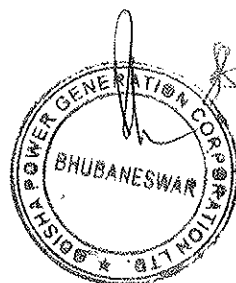
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
8.16	Condenser Vacuum Pumps foundations completed and released for equipment erection	BOP		915
8.17	Seal of Unit foundations completed and released for equipment erection	BOP		800-850
8.18	Drain Cooler foundations completed and released for equipment erection	BOP		800-850
8.19	CEP foundations completed and released for equipment erection.	BOP		580
8.20	Duplex Lube Oil foundations completed and released for equipment erection	BOP		800-850
8.21	GSC foundations completed and released for equipment erection.	BOP		900
8.22	MDBFP Lube Oil Console foundations completed and released for equipment erection.	BOP		750-800
8.23	TDBFP Lube Oil Console foundations completed and released for equipment erection.	BOP		750-800
8.24	Gas Cylinder Room civil works completed and released for equipment erection.	BOP		960
8.25	TG Auxiliary column foundations completed and released for equipment erection (from axis 1 - 4, 8 - 13)	BOP		285
8.26	TG Auxiliary column foundations completed and released for equipment erection (from axis 4 - 8 from B to deck)			345
8.27	TG Auxiliary column foundations completed and released for equipment erection (from A to deck)			615
8.28	Zero Metre flooring completed	BOP		
8.29	Completion of CEP up to TG Raft	BOP		
9.00	TG Building - AB Bay - 3.5 M Elevation			255 - 300
9.01	Structural work and metal deck completed and released for 3.5 M floor slab casting.	BHEL		
9.02	Slab casting completed and released for equipment erection	BOP		720



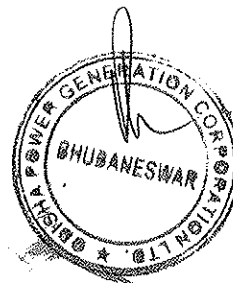
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
9.03	Civil Works for SWGR room completed and released for equipment erection	BOP		825
9.04	Front released for AC Ducting/Ventilation	BOP		825
10.00	TG Building - AB Bay - 8.5 M Elevation	BOP		
10.01	Structural Work and metal deck completed and released for slab casting.	BHEL		
10.02	Slab casting completed and released for equipment erection excluding all round TG Deck.	BOP		690
10.03	MDBFP foundation completed and released for equipment erection.	BOP		765
10.04	STG MOT foundations completed and released for equipment erection.	BOP		825
10.05	HP OSU for ESV/ISV foundations completed and released for equipment erection.	BOP		850-950
10.06	HPBP Hydraulic Unit foundations completed and released for equipment erection.	BOP		850-950
10.07	LPBP Hydraulic Unit foundations completed and released for equipment erection.	BOP		850-950
10.08	PHF foundations completed and released for equipment erection.	BOP		850-950
10.09	PW Pump and Filter foundations completed and released for equipment erection.	BOP		850-950
10.10	PW Cooler foundations completed and released for equipment erection.	BOP		850-950
11.00	TG Building - AB Bay - 17 M Elevation			
11.01	Completion of TG Raft	BOP		300
	Auxiliary columns and metal deck erected and released for TG Operating floor slab casting (from axis 2 - 4)	BHEL		
11.02	Auxiliary columns and metal deck erected and released for TG Operating floor slab casting	BHEL		
11.05	Entire 17 M operating floor slab completed and released for equipment erection	BOP		660



Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
11.06	TDBFP foundations completed and released for equipment erection	BOP		720
12.00	TG Building - BC Bay - Zero M Elevation			
12.01	Foundations of B Row structure completed and released for structural erection.	BOP		285
12.02	Foundations of C Row Structure completed and released for structural erection (from axis 11 to 6)	BOP		300
12.03	Foundations of C Row Structure completed and released for structural erection (from axis 5 to 1).	BOP		330
12.04	Condensate Polishing Unit foundations completed and released for equipment erection	BOP		900-930
12.05	Dosing System foundations completed and released for equipment erection	BOP		900-930
12.06	Central Lube Oil Purification unit foundations completed and released for equipment erection	BOP		900-930
13.00	TG Building - BC Bay - 4.95 M Elevation			
13.01	Structural steel work completed and metal deck complete for slab casting	BHEL		630
13.02	Slab casting completed and released for equipment erection	BOP		780
13.03	Civil works of cable vault completed and released for equipment erection	BOP		855
13.04	Structural work completed and released for 8.5 M floor slab casting.	BHEL		700
14.00	TG Building - BC Bay - 8.5 M Elevation	BOP		
14.01	Slab casting completed and released for equipment erection	BOP		750
14.02	HP Heaters 6A/6B foundations completed and released for equipment erection.	BOP		780
14.03	LPH - 2, 3, 4 foundations completed and released for equipment erection.	BOP		780
14.04	Civil works of Battery Room completed and released for equipment erection.	BOP		825

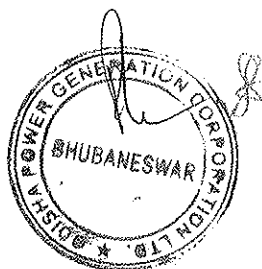


Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
14.05	Front released for AC Ducting/Ventilation	BOP		800
14.06	Structural Work completed and released for 17 M floor slab casting.	BHEL		
15.00	TG Building - BC Bay - 17 M Elevation			
15.01	Structural Work up to 24 M floor slab and metal deck completed	BHEL		
15.02	Slab casting at 17 M completed and released for equipment erection	BOP		750
15.03	HPH 8A/8B & 7A/7B foundations completed and released for equipment erection.	BOP		765
15.04	CCR and Computer Room civil works completed and released for equipment installation	BOP		900
15.05	CCR fire detection and suppression lines installed	BOP		800
15.06	Front released for AC ducting, false ceiling, flooring etc.	BOP		800
16.00	TG Building - BC Bay - 24 M Elevation	BOP		
16.01	Structural Work up to 24 M floor slab and metal deck completed.	BHEL		
16.02	24 M floor Slab casting completed and released for equipment erection	BOP		810
16.03	Cable vault room civil works completed and released for equipment erection	BOP		830
17.00	TG Building - BC Bay - 28 M Elevation			
17.01	Structural Work up to 32.8 M floor slab and metal deck completed	BHEL		
17.02	Slab casting at 28 M completed and released for equipment erection	BOP		840
17.03	SG MCC civil works completed and released for equipment erection.	BOP		840
17.04	Front released for AC ducting/Ventilation	BOP		815

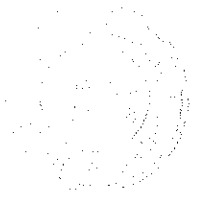
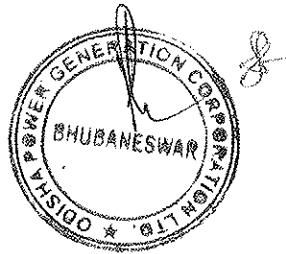


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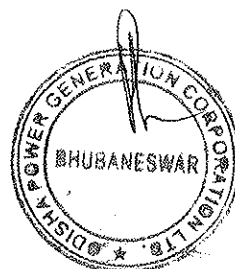
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
18.00	TG Building - BC Bay - 32.8 M Elevation			
18.01	Structural Work up to 38 M floor slab and metal deck completed.	BHEL		
18.02	Slab casting of 32.8 M completed and released for equipment erection	BOP		840
18.03	PRDS foundation completed and released for equipment erection	BOP		860
18.04	Emergency Cooling Water Tank foundation completed and released for equipment erection	BOP		860
18.05	CBD Tank foundation completed and released for equipment erection	BOP		860
19.00	TG Building - BC Bay - 38 M Elevation			
19.01	Structural Work up to 38 M roof slab and metal deck completed.	BHEL		
19.02	Slab casting at 38 M completed and released for equipment erection	BOP		830
19.03	Deaerator foundation completed and released for equipment erection	BOP		830
20.00	TG Building - CD Bay - Zero M Elevation			
20.01	Foundation of C Row structure completed and released for structural erection.	BOP		300 - 330
20.02	Foundation of D Row structure completed and released for structural erection.	BOP		330
20.03	Structural work completed and released for 8.5 M slab casting.	BHEL		
21.00	TG Building - CD Bay - 8.5 M Elevation			
21.01	Structural work up to 13.5 M floor slab and metal deck completed.	BHEL		
21.02	Floor Slab of 8.5 casting completed and released for equipment erection	BOP		780
21.03	Civil works of Battery Room completed and released for equipment erection.	BOP		825



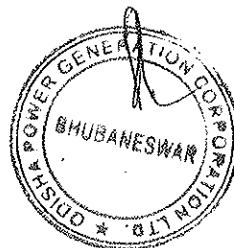
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
22.00	Turbine Building - CD Bay - 13.5 M Elevation			
22.01	Structural work up to 17 m floor slab and metal deck completed	BHEL		
22.02	Floor Slab of 13.5 M casting completed and released for equipment erection	BOP		840
22.03	Civil works of cable vault room completed and released for equipment erection	BOP		840
23.00	TG Building - CD Bay - 17 M Elevation			
23.01	Structural work 28 m floor slab and metal deck completed.	BHEL		
23.02	17 M Floor Slab casting completed and released for equipment erection	BOP		780
23.03	Civil works of control room completed and released for equipment erection.	BOP		915
23.04	Front Released for AC ducting/ventilation	BOP		840
24.00	TG Building DE and EF Bay - 0 M Elevation			
24.01	D, F, F Row structure foundations completed and released for structural erection.	BOP		300 - 330
24.02	Structural work up to 8.5M floor and metal deck completed.	BHEL		
24.03	Civil Works for Inert Gas Room completed and released for equipment erection	BOP		960
24.04	AC Plant foundations completed and released for equipment erection.	BOP		765
25.00	TG Building DE and EF Bay - 8.5 M Elevation			
25.01	Structural work up to 17 M floor and metal deck completed.	BHEL		
25.02	Civil works of UPS, Battery and Charger Room completed and released for equipment erection.	BOP		840
26.00	TG Building CD/DE/EF Bay - 17 M Elevation			
26.01	Structural work up to 25 M floor and metal deck completed.	BHEL		



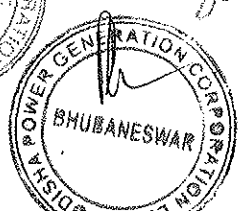
Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
26.02	Structural Work completed and released for slab casting	BOP		
26.03	Equipment Control Room civil works completed and released for equipment erection	BOP		840
27.00	TG Building - DE Bay - 25 M Elevation			
27.01	Structural Work and metal deck completed and released for roof slab casting.	BHEL		
27.02	Slab casting completed and released for equipment erection	BOP		840
27.03	AC Cooling Tower Tank foundations completed and released for equipment erection.	BOP		890
28.00	Plant Instrument and Service Air compressors			
28.01	Instrument air compressors foundations completed and released for equipment erection	BOP		735
28.02	Service air compressors foundations completed and released for equipment erection	BOP		735
28.03	Air Receivers (IA/SA) foundations completed and released for equipment erection	BOP		735
28.04	Air Driers foundations completed and released for equipment erection	BOP		735
28.05	Compressor house civil works completed and released for equipment erection	BOP		735
29.00	Diesel Generator Set			
29.01	Diesel Generator set foundations completed and released for equipment erection	BOP		825
29.02	DG building civil works completed and released for equipment erection	BOP		840
30.00	Elevators			
30.01	SG Area Area Elevator pit completed and released for equipment erection	BOP		900
30.02	T-G Building Elevators pit and Shaft completed and released for equipment erection	BOP		900



Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
30.03	Machine Room of all Elevators completed and released for equipment erection	BOP		900
31.00	Generator Transformer (GT),400/21KV			
31.01	GT Foundations with trenches and fireproof walls	BOP		790
31.02	Fire Proof walls completed	BOP		830
31.03	Trench completed	BOP		830
32.00	Unit Transformer (UT),21/11KV			
32.01	UT Foundations completed and released for equipment erection.	BOP		825
32.02	Fire Proof walls completed	BOP		865
32.03	Trench completed	BOP		865
33.00	Reserve Auxiliary Transformer (RAT),400/11KV			
33.01	RAT Foundations completed and released for equipment erection.	BOP		675
33.02	Fire Proof walls completed	BOP		705
33.03	Trench completed	BOP		705
34.00	Unit Auxiliary Transformer (UAT), 11/3.3KV			
34.01	UAT Foundations completed and released for equipment erection.	BOP		765
34.02	Fire Proof walls completed	BOP		795
34.03	Trench completed	BOP		825
35.00	Station Auxiliary Transformer (SAT),11/3.3KV			
35.01	SAT Foundations completed and released for equipment erection.	BOP		765
35.02	Fire Proof walls completed	BOP		795
35.03	Trench completed	BOP		825
36.00	LT Transformer, 11/415KV			
36.01	LT Foundations completed and released for equipment erection.	BOP		765
36.02	Fire Proof walls completed	BOP		795
36.03	Trench completed	BOP		825
37.00	Bus Duct			
37.01	21 KV IPBD foundations (Main& Tap-off) foundations completed and released for equipment erection	BOP		660-810
37.02	11KV, 3.3 KV, SPBD foundations completed and released for equipment erection	BOP		660-810



Sr. No	Activity	Responsibility	Civil completion for unit 3 requirement from NTP	
			Start	Complete
37 03	NSPBD foundations completed and released for equipment erection	BOP		660-810



Annexure – 9

LUMP SUM, TURNKEY, ENGINEERING, PROCUREMENT
AND CONSTRUCTION CONTRACT

BETWEEN

ODISHA POWER GENERATION CORPORATION LIMITED

AND

LARSEN & TOUBRO LIMITED

DATED
MAY 08, 2015

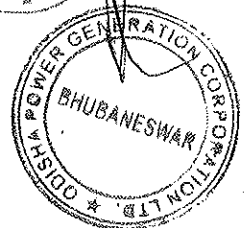
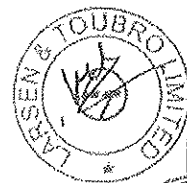
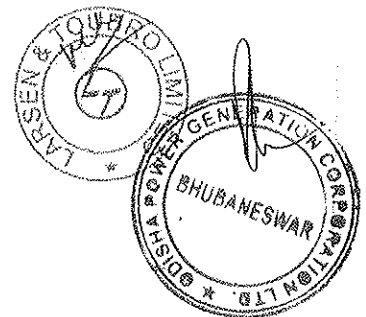
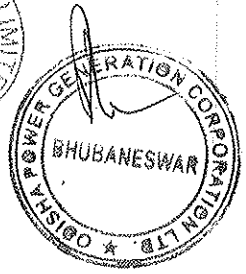
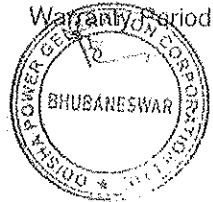


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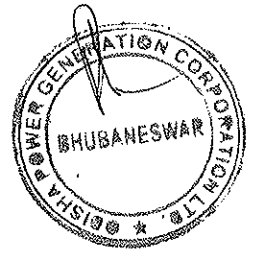
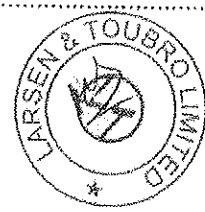
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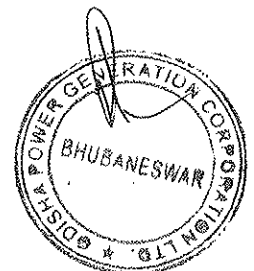
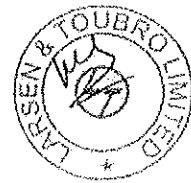
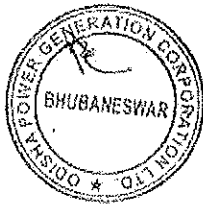
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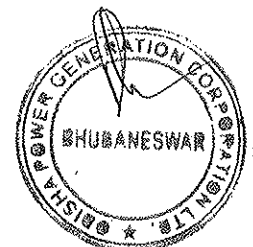
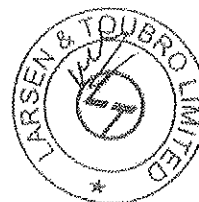


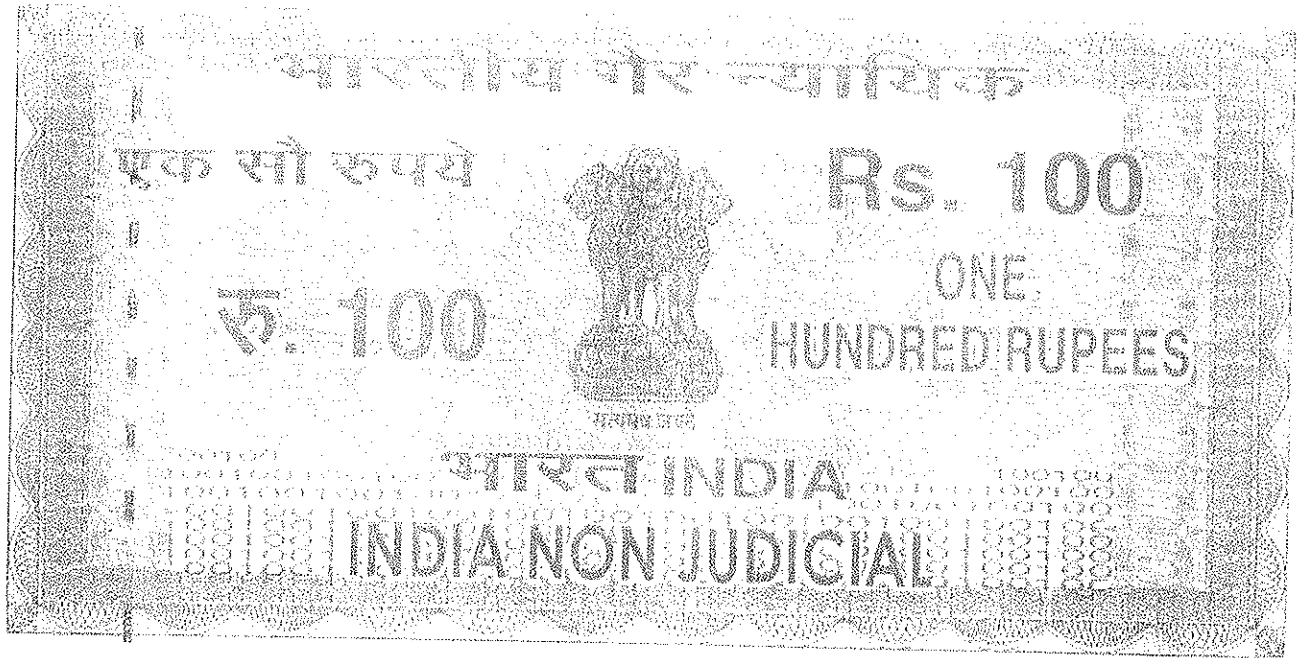
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ANNEX

Annex 1 Technical Specification
Annex 2 Change Order Conditions for Earthwork and Bridges





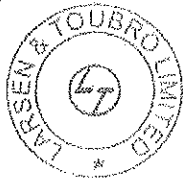
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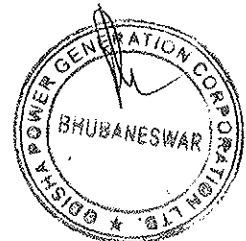
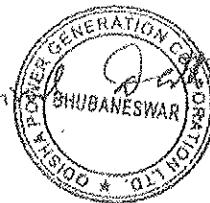
LUMP SUM, TURNKEY, ENGINEERING, PROCUREMENT
AND CONSTRUCTION CONTRACT

THIS LUMP SUM, TURNKEY, ENGINEERING, PROCUREMENT AND CONSTRUCTION CONTRACT is entered into the Eighth day of May 2015 (the "Effective Date") by and between ODISHA POWER GENERATION CORPORATION LIMITED, a company established under the Indian Companies Act, 1956, organized under the laws of India with its registered office at Zone-A, 7th Floor, Fortune Towers, Chandrasekharapur, Bhubaneswar – 751 023, Odisha, India ("Owner") and LARSEN & TOUBRO LIMITED, a company established under the Indian Companies Act, 1956, organized under the laws of India with its registered office at L&T House, Narottam Morarji Marg, Ballard Estate, Mumbai – 400 001 ("Contractor").

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O & C LTD

Fortune Tower

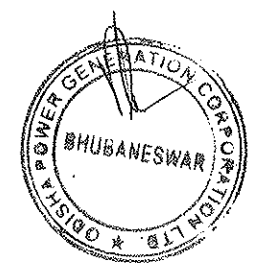
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DISTRICT TREASURER
CUTTACK, BHUBANESWAR
7.8.80

02/11

RECEIVED
11/11/80

Rajendra Narayan Ojha



WITNESSETH:

WHEREAS, Owner is developing the New Plant (as hereinafter defined); and

WHEREAS, Owner desires to appoint the Contractor for turnkey design, engineering, procurement, permitting, fabrication, construction, installation, commissioning, start-up testing, warranties and related services for the Facility, subject to the terms and conditions set forth herein; and

WHEREAS, Contractor has represented to the Owner that it has the requisite experience, expertise, capability and know-how and is willing to provide such turnkey design, engineering, procurement, permitting, fabrication, construction, installation, commissioning, start-up, testing and warranties and related services for the Facility upon the terms and conditions set forth in this Lump Sum, Turnkey, Engineering, Procurement and Construction Contract, including Articles 1 through 19 hereof and all Appendices and Annexes attached hereto (this "Contract");

WHEREAS, on the basis of and in reliance on the above representations, the Owner has agreed to engage the Contractor to perform the Work on the terms and conditions set out in the Contract.

WHEREAS, the Parties therefore wish to enter into this Contract to set forth the terms and conditions governing the Work and their respective rights and obligations in relation thereto.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties covenant and agree as follows:

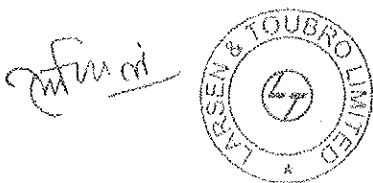
1. DEFINITIONS; INTERPRETATION

- 1.1. Defined Terms. As used in this Contract, the following terms shall have the following meanings (such meanings as necessary to be equally applicable to both the singular and plural forms of the terms defined unless the context otherwise requires):

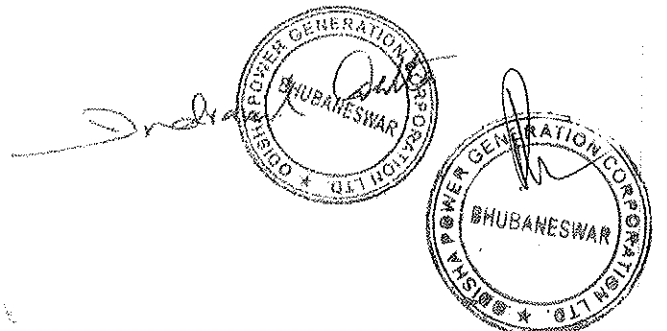
"Acceptable Credit Provider" means a bank or branch thereof with an office located in Mumbai, India that (a) has a rating of at least A by CRISIL and a rating of at least A by ICRA, if the bank is rated by both CRISIL and ICRA, or has a rating of at least A by CRISIL or a rating of at least A by ICRA if the bank is rated by either CRISIL or ICRA but not both and (b) is acceptable to Owner.

"Acceptance Tests" has the meaning set forth in Section 8.1.1.

"Affiliate" of any Person (the "Relevant Person"), means (a) a Person that is a subsidiary of the Relevant Person, (b) a Person of which the Relevant Person is a subsidiary, (c) a Person that is the subsidiary of another Person of which the Relevant Person is a subsidiary or (d) any other Person that, directly or indirectly, controls or is controlled by or is under common control with such Person. For purposes of this definition, (i) a Person is a "subsidiary" of another Person if the latter owns, legally or beneficially,



- 2 -




IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this Contract to be executed by their duly authorized officers on the date indicated below and to be effective on the day and year first above written.

FOR ODISHA POWER GENERATION CORPORATION LIMITED

FOR LARSEN & TOUBRO LIMITED


By: Indranil Dutta


By: Sanjay Singhal


Title: Managing Director

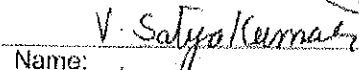
Title: Vice President & Head – Railway Construction Business Unit


Date: 8th May 2015

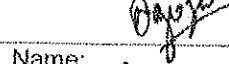
Date: 8th May 2015

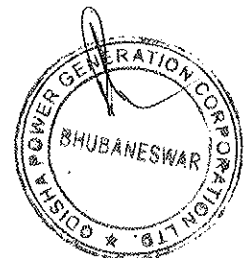
In the presence of


Name: Manoj Kumar
Company Secretary


Name: V. Satya Kumar
(V. SATYA KUMAR)
Head Contracts - Rail S&C
L&T


Name: Kameshwar
(KAMESHWAR)


Name: Chiknil Goyal
[Asst. Manager Contracts
Railway S&C, L&T]



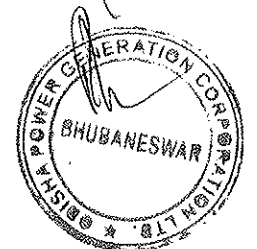


PRICE SCHEDULE – WORK

S. No.	Work	Price (INR Million)
(1)	(2)	(3)
1.00	Merry Go Round (MGR)	10,260
2.00	Water Pipeline	640
	PRICE OF WORK	10,900

Note:

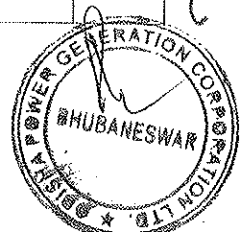
1. The Price of Merry Go Round shall include: (a) Price of Start-up and Commissioning Spares; (b) Price of Mandatory Spares below; (c) Price of Special Tools and Tackles; and (d) all Contractor's Taxes and any levy or cess or royalty, applicable to the Merry Go Round.
2. The Price of Water Pipeline shall include: (a) Price of Start-up and Commissioning Spares; (b) Price of Mandatory Spares below; (c) Price of Special Tools and Tackles; and (d) all Contractor's Taxes and any levy or cess or royalty, applicable to the Water Pipeline.
3. The Contract Price is inclusive of all Contractor's Taxes and the Contractor shall not be entitled to any adjustment in the Contract Price on account of any change in the applicable rate of any Contractor's Tax during the term of the Contract.
4. No Taxes, levies or cess shall be separately payable or reimbursed to the Contractor, in addition to the Contract Price specified in this Appendix B1.



Shubaneswar

MANDATORY SPARES
1. Mandatory Spares for Merry Go Round

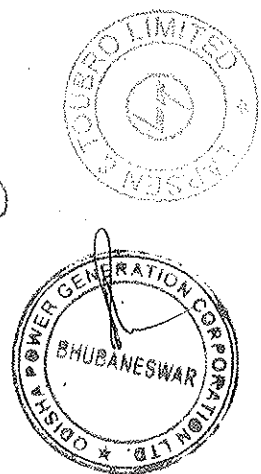
Sl. No	Equipment/Material	Qty	Price of Spares (INR)
(1)	(2)	(3)	(4)
1.	PERMANENT WAY MATERIALS		
1.1.	Supply of P-way materials		
1.1.1.	Rail 60kg IRS 90 UTS Rail 1st Quality	85 MT	7,710,914
1.1.2.	Rail 52kg IRS 90 UTS Rail 1st Quality	10 MT	907,166
1.2.	PSC Sleeper for 60KG rail for Straight portion Drg. No.-T-2496	600 Nos.	2,098,591
1.3.	PSC Sleeper for 60KG rail for Curve portion Drg. No.-T-4173	300 Nos.	1,166,309
1.4.	PSC Sleeper for Curve with 60kg with 52kg Check rail portion Drg.no-T 4186	100 Nos.	388,770
2.	Supply of small Permanent Way fittings		
2.1.	Supplying of Elastic Rail clips with flat toe (MK.III) to RDSO Drg. No.T-3701 (Alt.3) conforming to specifications IRS-T-31/92.	3800 Each	440,910
2.2.	Supplying of Elastic rail clips type 'J' as per RDSO Drg. No. T-4158 conforming to IRS Specification.	400 Each	39,294
2.3.	Supplying of Grooved Rubber Sole Plate to RDSO Drg. No.T-3711 (upto date Alteration) conforming to IRS Specification for 6 mm thick grooved rubber sole plates (Provisional) 1997.	2100 Each	194,704
2.4.	Supply of GFN liners for use with 60 Kg rail & 60 Kg PSC sleepers to RDSO Drg No T-3706 conforming to IRS specification.	4200 Nos.	126,578
2.5.	Supply of Fish Plates for 60 Kg rails to RDSO Drg. No.T- 1898 Alt .5 conforming to IRS Specification No.T-1/66.	100 Pairs	511,490



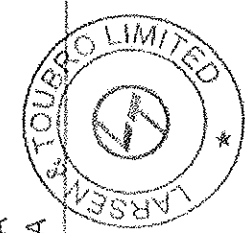
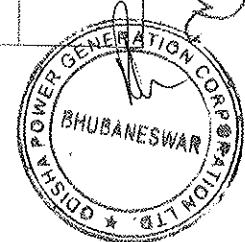
Sudhanshu Datta

Sl. No	Equipment/Material	Qty	Price of Spares (INR)
2.6.	Supplying sets of combination fish plates for 60 kg + 52 kg sections conforming to IRS specification No.T-6-1965, drg No T-696 to 699 with bolts and nuts, plain washers and spring washers complete to IRS specification T-23. (1 Set = 2 pairs =4 Nos. Fish plates along with required number of bolts & nuts, plain washer, spring washers etc.)	50 Pairs	380,869
2.7.	Supplying of Fish Bolts and nuts as per RDSO Drg. No.T-1899 Alt-2 of size 25 mm dia and 140 mm long conforming to IRS Specification No.T-23/67.	400 Each	40,688
3.	Fittings of check rail for curve track Sleepers for 60kg rails.		
3.1.	Double coil spring washer as per RDSO Drg No. EDO/T-1214, conforming to IRS specification for spring washer - 1980	200 Each	3,712
3.2.	22 mm dia bolts & Nuts with MS packing plates including single coil Spring washer as per RDSO Drg including coil spring washer conforming to IRS specification	100 Each	8,943
3.3.	Plate screw as per RDSO Drg. No. T- 3913 conforming to IRS T-16/81	200 Each	14,174
3.4.	C I Bracket as per RDSO Drg No T-4784 conforming to IRS -210-1962(grade-20), and IRS-T-10.	100 Each	88,586
3.5.	C I distance bracket as per RDSO Drg No T-4785 conforming to IRS -210-1962(grade-20),and IRS--T-10	100 Each	9,787

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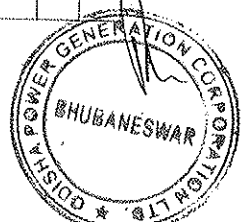
Sl. No	Equipment/Material	Qty	Price of Spares (INR)
3.6.	Supply & delivery of machine crushed stone ballast of 50 mm size clean angular, hard and durable track ballast as per specification and stacking the same on cess of the formation or toe of the bank or at suitable place as directed by Engineer-in-Charge at site. The rate includes all lead, lift, royalty, sales tax & other tax and duties and all incidental charges complete as applicable Tools, plants and screens of approved mesh & dimensions required for inspection and passing at the time of measurement are to be arranged by the contractor. The rate also includes levelling of ground, if necessary, where the ballast are to be stacked. If there will be required private land for stacking, contractor has to arrange for the same.	1500 Cum	1,967,121
4.	ELECTRICAL MATERIALS		
4.1.	LT x LPE Cable		
4.1.1.	3.5 x 25mm ²	500 Nos.	264,578
4.1.2.	3.5 x 70mm ²	500 Nos.	264,578
4.1.3.	3.5 x 120mm ²	500 Nos.	414,040
4.2.	Luminaries		
4.2.1.	40W HPSV – SON – T	5 Nos.	5,144
4.2.2.	70/150W HPSV	10 Nos.	15,431
4.2.3.	CFL/TS Fluorescent Lamp	10 Nos.	15,431
4.3.	Fan		
4.3.1.	240 V, 1400/1200 mm ceiling fans	05 nos	25,718
4.4.	Switch Gears		
	MCCBS/RCCBS		
4.4.1.	10A	5Nos.	15,431
	32A	5 Nos.	20,575



Shankar Datta

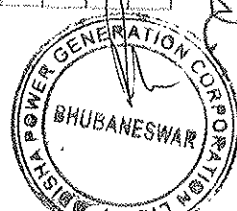
Sl. No	Equipment/Material	Qty	Price of Spares (INR)
4.4.2.	MCBs 63/100A	5 Nos.	25,718
4.4.3.	ACBs 400A	1 Nos.	30,862
4.5.	Submersible/Jet Pump 10/12 HP	1 Nos.	30,862
5.	SIGNALLING & TELECOMMUNICATION		
5.1.	SIGNALLING		
5.1.1.	Double line SGE type Block Instrument including all Accessories	1 LS	88,292
5.1.2.	Relays of sorts	5 Nos.	20,033
5.1.3.	Relay of special type	2 Nos.	56,603
5.1.4.	Switch Board Cable 50 Pairs	200 Mtrs.	46,720
5.1.5.	ND fuse 1.6A/6A/16A/63A along with its fuse holds	100 Nos.	4,492
5.1.6.	Track Relay 9 ohms/Q series plug in type	1 Nos.	3,941
5.1.7.	Flexible Wire 7 SWG	20 Kgs.	179,692
5.1.8.	Track Lead Junction Box Fibre Glass Type	1 Nos.	938
5.1.9.	Track Charger	2 Nos.	8,633
5.1.10.	B' Type Choke	2 Nos.	6,475
5.1.11.	Feed end Resistance	5 Nos.	1,949
5.1.12.	Secondary Cells 2V/ 80AH (Low Maintenance)	6 Nos.	18,836
5.1.13.	DG Set 10 KVA Auto Start Panel with Battery System	1 Nos.	441,460
5.1.14.	Signalling Cable PVC U/S 30 core	0.5 Kms.	238,225
5.1.15.	Signalling Cable PVC U/S 24 core	0.5 Kms.	197,851
5.1.16.	Signalling Cable PVC U/S 18 core	0.5 Kms.	160,323
5.1.17.	Signalling Cable PVC U/S 12 core	0.5 Kms.	110,242
5.1.18.	Signalling Cable PVC U/S 6 core	0.5 Kms.	71,183

Submanil Datta



Submanil Datta

Sl. No	Equipment/Material	Qty	Price of Spares (INR)
5.1.19.	Power Cable 2x25 sq.mm. Al Conductor	0.5 Kms.	61,667
5.1.20.	Power Cable 2x50 sq.mm. Al Conductor	0.5 Kms.	106,220
5.1.21.	Apparatus case with E type lock and anti-theft arrangement (half size)	1 Nos.	20,411
5.1.22.	Electrical Point Machine complete with all accessories including ground connections	1 Nos.	96,694
5.1.23.	Point Group Relay	2 Nos.	56,603
5.1.24.	Emergency Crank Handle	1 Nos.	59,356
5.1.25.	LED Lamp Red & Yellow with current regulator & health monitoring unit	25 Nos.	484,232
5.1.26.	LED Lamp Green with current regulator & health monitoring unit	5 Nos.	53,192
5.1.27.	LED Lamp for Routes with in-built current regulator	5 Nos.	68,236
5.1.28.	LED Lamp for Shunt Signal with in-built current regulator	5 Nos.	68,236
5.1.29.	HKT/ RKT Complete	1 Nos.	5,930
5.1.30.	Surge protection device class B & CAC power line complete	1 Nos.	44,146
5.2.	TELECOMMUNICATION		
5.2.1.	2/4 W E & M/VF interface card	2 Nos.	74,165
5.2.2.	Exchange interface card	1 Nos.	35,513
5.2.3.	Subscriber interface cards with ringer	2 Nos.	70,241
5.2.4.	Synchronous Data interface card	1 Nos.	37,083
5.2.5.	Electrical Line interface card	1 Nos.	33,595
5.2.6.	Optical electrical card	1 Nos.	52,060
5.2.7.	Hot line interphase card	1 Nos.	35,121
5.2.8.	Cable jointing kit for OFC	2 Nos.	11,602
5.2.9.	DC-DC converter 48 VDC/12V DC	1 Nos.	12,578
5.2.10.	SMPS based power supply system	1 Nos.	137,343

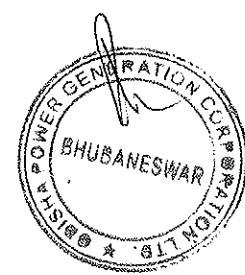
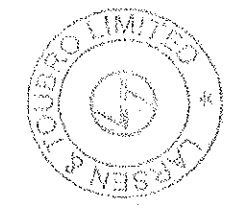


Sudhanshu Datta

Sl. No	Equipment/Material	Qty	Price of Spares (INR)
5.2.11.	U Link panel complete	5 Nos.	16,143
5.2.12.	DDF Module	1 Nos.	3,277
5.2.13.	Optical fibre cable monomode (24 fibre) armoured	1 Km.	101,468
5.2.14.	J filled telecom cable 20 pair	200 Mtrs.	53,896
5.2.15.	Switch Board cable 20 pair	200 Mtrs.	47,089
5.2.16.	Switch Board cable 10 pair	200 Mtrs.	39,241
5.2.17.	6 quad jelly filled telecom cable	0.5 Kms.	174,622
5.2.18.	Optical fibre jumper patch chord with connector	2 Nos.	1,305
5.2.19.	Portable emergency telephones	1 No.	3,500
5.2.20.	Lightening surge protection	1 No.	44,146
5.2.21.	Control Telephones at way stations	1 No.	4,946
5.2.22.	Auto telephone	1 No.	2,354
5.2.23.	Magneto telephone	1 No.	3,532
5.2.24.	Cable PVC 7 strand	100 Mtrs.	222,692
	Price of Mandatory Spares of Merry Go Round		21,225,296

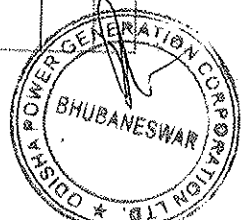
Pratima

Sudhansu Datta



2. Mandatory Spares for Water Pipeline

Sl. No	Equipment/Material	Qty	Price of Spares (INR)
(1)	(2)	(3)	(4)
A	Mechanical Packages		
1.	Booster Pump		
1.1.	Complete Booster Pump Assembly without base Plate	1 Set	353,311
1.1.	Bearings Various types as applicable	Complete 1 Set (one set means total requirements for one Pump)	63,596
1.2.	Coupling set (between BP & Motor with accessories)	1 Set	80,555
1.3.	Oil Seals / Guards / Thrower	1 Set	18,372
1.4.	Complete Assembly of Mechanical Seals Various types with Sleeves	Complete 1(One) Set (one set means total requirements for one Pump)	265,690
1.5.	O-rings, Oil-seals, Filters	Complete 1(One) Set (one set means total requirements for one Pump)	18,372
1.6.	Suction strainers insert complete	2 Sets	113,060
2.	Electrical Packages		



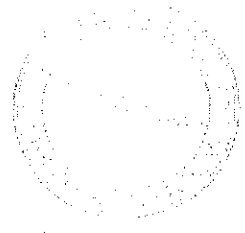
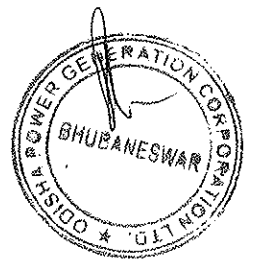
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Hydraulic Spares

Sl. No.	Equipment/Material	Qty	Price of Spares (INR)
2.1.	End Shield Cover Driving & Non-Driving End	1Set for each type and rating of Motor	70,662
2.2.	Driving End & Non-Driving End Bearing	1Set for each type and rating of Motor	265,690
2.3.	Cooling Fan	1No. for each type and rating of Motor	26,852
2.4.	Motor Space Heater	1No. for each type and rating of Motor	45,224
2.5.	Motor Terminal Block	1No. for each type and rating of Motor	176,656
2.6.	Complete Set of Coupling	1Set for each Application	35,331
Price of Mandatory Spares of Water Pipeline			1,533,372

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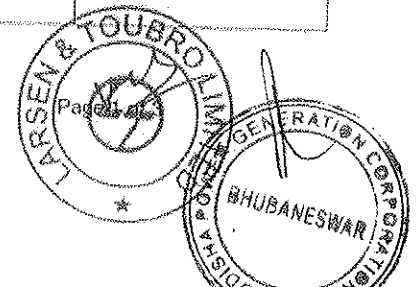
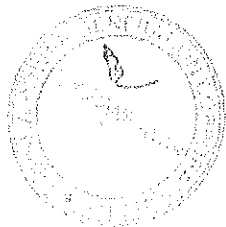
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CONTRACT SCHEDULE – MERRY GO ROUND

Contractor assures the completion schedule for Merry Go Round as below.

S. No.	Milestones	Guaranteed Completion Date from NTP (Days)	Under Liquidated Damages (LD)
(1)	(2)	(3)	(4)
1.	Design approval for Rail over Road Bridge on National Highway received	270	Yes
2.	Design approval for Rail over Rail Bridge on Howrah-Mumbai Trunk Route received	270	Yes
3.	Modification/ Realignment, up lifting and receipt of final approval for charging of 0.415 KV, 11 KV and 33 KV line completed	360	
4.	Completion of all extension bridges	360	
5.	Completion of permanent way work up to Twenty two (22)Km	540	
6.	Completion of all three (3) intermediate stations with platforms	540	
7.	Completion of loading platform at mines end.	540	
8.	Modification/ Realignment, up lifting and receipt of final approval for charging of 132KV line completed	540	
9.	Completion of permanent way work up to next twenty two (22) Km	600	
10.	Electrification and illumination station yard , construction of substation	630	
11.	Completion of permanent way work up to Balance 22.45 Km	660	
12.	Completion of Signaling and Tele-communication	690	
13.	Completion of all major bridges	720	
14.	Completion of all minor bridges	720	
15.	Rail over Road Bridge on National Highway construction completed	720	
16.	Rail over Rail Bridge on Howrah-Mumbai Trunk Route construction completed.	720	
17.	Rail over Road Bridge on National Highway approval received from Government Authority for operation	730	
18.	Rail over Rail Bridge on Howrah-Mumbai Trunk Route approval received from Government Authority for operation	730	
19.	Mechanical Completion		
20.	No Load Turn-around operation with One Rack	740	

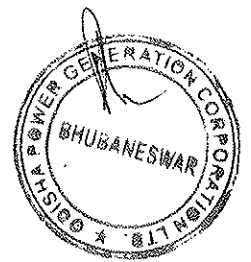
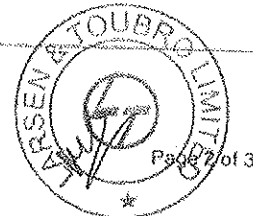
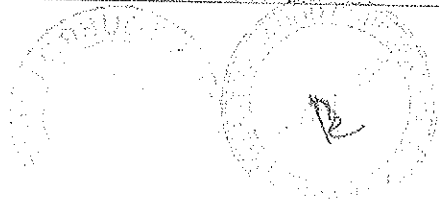


21.	Full Load Turn-around operation with One Rack	750	Yes
22.	Substantial Completion	800	
23.	Reliability Run Complete		
24.	Final Completion	1440	

Owner's Deliverables

Owner assures the delivery of Owner-Provided Work Areas for Merry Go Round as below.

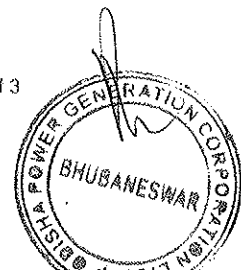
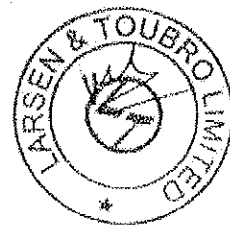
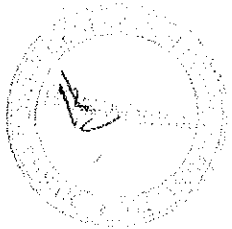
Sr. No.	Name of The Village	Chainage in KM	On or before
1	Inside Plant	00 to 3.335	July-2015
2	Tellenpali	3.335 to 6.669	July-2015
3	Kusraloi	6.669 to 7.350	Dec-2015
4	Kusraloi	7.350 to 7.600	Dec-2015
5	Kusraloi	7.600 to 7.950	Dec-2015
6	Chharia	7.950 to 11.000	Oct-2015
7	Chharia	11.000 to 11.150	Oct-2015
8	Darlipali & Kirarama	11.150 to 11.250	Oct-2015
9	Darlipali & Kirarama	11.250 to 13.700	Oct-2015
10	Belpahar (Jurabaga)	13.700 to 15.550	Dec-15
11	Belpahar	15.550 to 16.625	Dec-15
12	Belpahar	16.625 to 16.950	Dec-15
13	Belpahar	16.950 to 18.300	July-2016
14a	Belpahar	18.300 to 18.380	March -2016
14b	Belpahar	18.380 to 18.500	In Principle clearance from Railway authority is obtained to cross the Mumbai -Howrah rail line. Contractor shall obtain permits related to work.
14c	Belpahar	18.500 to 18.550	March 2016
15	Belpahar	18.550 to 19.350	July -2016
16	Chualiberna	19.350 to 21.678	Dec-2015
17	Chualiberna	21.678 to 21.690	National Highway Authority of India (NHAI) owns the land. Contractor shall obtain permits related to work.
18	Chualiberna	21.690 to 23.200	Dec-2015
19	Aamdhara, Junanimunda & Brajrajnagar	23.200 to 26.210	July-2016
20	Junanimunda, Bagrachaka	26.210 to 27.600	Dec-2015



21	Rajpur	27.600 to 27.750	Dec-2015
22	Belaituda	27.750 to 28.300	Dec-2015
23	Belaituda	28.300 to 28.920	July-2016
24	Gourmal / Chhelkothi	28.920 to 29.950	Dec-2015
25	Gourmal	29.950 to 30.400	Dec-2015
26	Chandnimal	30.400 to 31.900	Dec-2015
27	Kechhobahal	31.900 to 33.250	Dec-2015
28	Kechhobahal	33.250 to 35.930	Dec-2015
29	Kanatoora, Kalamegha	35.900 to 42.400	Dec-2015
30	Sarbahal	42.400 to 44.000	Dec-2015
31	Ghumdasan	44.000 to 46.000	Mar-2016
32	Sarbahal	46.000 to 47.350	Dec-2015

Note:

- The delivery schedule of Owner-Provided Work Areas for Merry Go Round, as shown above in Table 3, shall be mutually updated on or before the NTP Date or any other date mutually agreeable to Owner and the Contractor.
- Contractor shall obtain permits related to work. ROW related to occupancy of land for life of the Bridges shall be the responsibility of Owner.





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AMENDMENT AGREEMENT


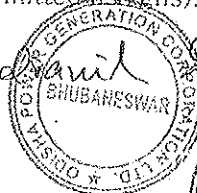
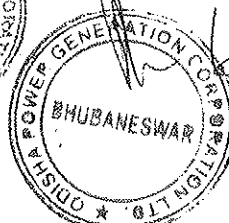


This Amendment Agreement ("Amendment Agreement") is made at Bhubaneswar, Odisha on Eighth Day of February 2016 between

ODISHA POWER GENERATION CORPORATION LIMITED, a company within the meaning of Section 2(20) of the Companies Act, 2013, organized under the laws of India with its registered office at Zone-A, 7th Floor, Fortune Towers, Chandrashekharpur, Bhubaneswar - 751 023, Odisha, India (hereinafter referred to as "OPGC" or "Owner", which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors-in-business and permitted assigns);

LARSEN & TOUBRO LIMITED, an company within the meaning of Section 2(20) of the Companies Act, 2013, having its registered office at L&T House, Narottam Morarji Marg, Ballard Estate, Mumbai - 400 001 (hereinafter referred to the "Contractor", which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors-in-interests and permitted assigns); and

AND

ODISHA COAL AND POWER LIMITED, a company incorporated under the provisions of the Companies Act, 2013, with its registered office at Plot Ground Floor, Zone- A, Fortune Towers, Chandrasekharpur, Bhubaneswar - 751 023, Odisha, India (hereinafter referred to as "OCPL", which expression shall unless repugnant to the context or meaning thereof, be deemed to mean and include its successors and permitted assigns).

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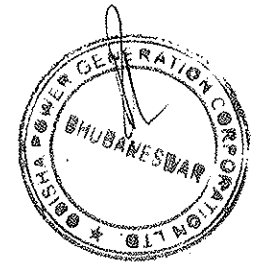
DIRECTOR GENERAL
JALPA, Bhubaneswar
28 JAN 2016

OPG4 Wd

DATE: 6/2/2016

Rajendra Narayan Oth

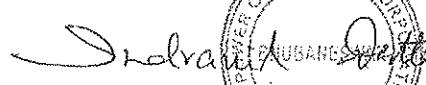


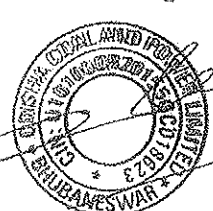

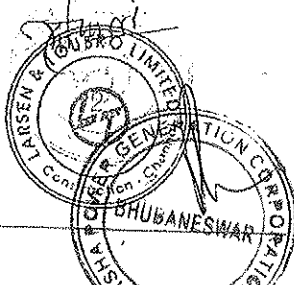
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RAJENDRA NARAYAN
STAMP VERIFICATION
CHIEF ENGINEER
REGD. L. NO. 1901-6-2/16
ID. No. 6



OPGC, the Contractor and OCPL are hereinafter individually referred to as a "Party" and collectively as the "Parties".

WHEREAS

- A. OPGC is in the process of setting up the New Plant, comprising 2 units, each with a gross capacity of 660 MW in the Jharsuguda District of Odisha (the **Expansion Project**).
- B. As a part of the Expansion Project, OPGC and the Contractor have executed a contract dated 8 May 2015 for the design, engineering, procurement, permitting, fabrication, construction, installation, commissioning, start-up testing, warranties and related services to be carried out and provided by the Contractor in respect of the Merry Go Round and the Water Pipe line on a lump-sum, turnkey basis (the **EPC Contract**).
- C. Pursuant to the EPC Contract, OPGC has issued the LNTF and made the LNTF Payment to the Contractor to commence the Work.
- D. The Merry Go Round and the Water Pipeline will connect the New Plant with the Manoharpur and Dip-side Manoharpur coal blocks, which are the blocks allotted for the specific purpose of mining coal for the generation of power from the New Plant (the **Coal Blocks**) and also from a further planned 1320 MW (Units 5 & 6) expansion project by OPGC. The Coal Blocks were initially allotted to OPGC for the New Plant and its further expansion projects, which allotment was cancelled pursuant to orders of the Supreme Court of India in W.P. (Cr.) No. 120 of 2012 on 25 August 2014 and 24 September 2014. Thereafter, the Coal Blocks were allotted to OCPL, a government company and a subsidiary of OPGC, pursuant to the allotment process provided under Section 5(1) of the Coal Mines (Special Provisions) Act, 2015.
- E. As the Water Pipeline is being constructed for sourcing water from the intake channel of OPGC's thermal power project at Jharsuguda District of Odisha, of which the New Plant is a part, for utilization of such water in mining and allied activities of OCPL, and the Water Pipeline will form a part of the Coal Blocks' assets. OPGC and OCPL have decided pursuant to board meetings dated 26th September 2015 of OPGC and 26th September 2015 of OCPL, respectively that the title to the Water Pipeline shall vest with OCPL and the cost of setting up the Water Pipeline shall be borne solely by OCPL.
- F. The Parties wish to reassign the scope of Work of the Parties such that the rights, title, interest, obligations and liabilities to or in connection with, the Water Pipeline, as specified under this Amendment Agreement, shall vest solely with OCPL. However, as OPGC has the necessary expertise and team to supervise the construction of the Merry Go Round and the Water Pipeline together, and the Water Pipeline shall be laid along the Merry Go Round corridor, it will supervise, and manage the work related to the Water Pipeline, which is not specifically performed by OCPL or as authorized by OCPL, under the EPC Contract, as amended by this Amendment Agreement. The Parties wish to amend certain terms and conditions of the EPC Contract to reflect the above agreed commercial understanding amongst the Parties with respect to the transfer of ownership and related rights and obligations in relation to the Water Pipeline.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. DEFINITIONS & INTERPRETATION

1.1 Definitions

"Coal Blocks" has the meaning ascribed to it in Recital D.

"EPC Contract" has the meaning ascribed to it in Recital B.

"Expansion Project" has the meaning ascribed to it in Recital A.

"Section" means a section of the EPC Contract.

Unless otherwise defined in this Amendment Agreement, all capitalized words and expressions used but not defined in this Amendment Agreement shall have the meanings ascribed to them in the EPC Contract.

1.2 Interpretation

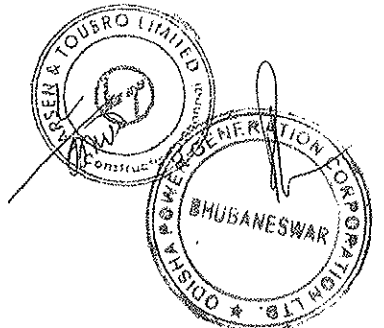
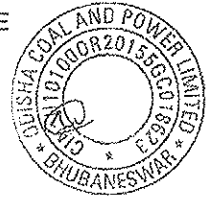
Section 1.2 of the EPC Contract shall apply mutatis mutandis to this Amendment Agreement.

2. DIVISION OF RESPONSIBILITIES

The Parties agree that, unless specifically provided otherwise in the Amendment Agreement:

- (i) all rights, title, interest, obligations and liabilities connected with the or in the Merry Go Round shall vest solely with the Owner and all rights, title, interest, obligations and liabilities connected with or in the Water Pipeline shall vest solely with OCPL;
- (ii) all payments due to the Contractor under the EPC Contract which relate to the Merry Go Round shall be made by the Owner and all payments due to the Contractor under the EPC Contract which relate to the Water Pipeline shall be made by OCPL; and
- (iii) all payments to be made by the Contractor under the EPC Contract, whether by way of liquidated damages, indemnities or otherwise, shall be made by the Contractor to the Owner if such payments relate to the Merry Go Round, and to OCPL, if such payments relate to the Water Pipeline.
- (iv) all liabilities pertaining to or arising out of or in connection with the Contractors failure to perform its obligations in relation to the MGR shall vest solely with Owner. Similarly all liabilities pertaining to or arising out of or in connection with the Contractors failure to perform its obligations of the WP shall vest solely with OPCL.

3. CONSIDERATION & PRICE



FOR ODISHA POWER GENERATION CORPORATION LIMITED

FOR LARSEN & TOUBRO LIMITED

Indranil Dutta

By: Indranil Dutta

Title: Managing Director

Date: 8th February 2016

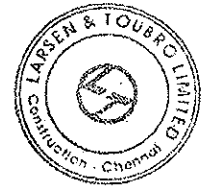


Sanjay Singhal

By: Sanjay Singhal

Title: Vice President & Head
Railway Construction
Business Unit

Date: 8th February 2016



In the presence of

Suraj Pratap Singh
Name: Suraj Pratap Singh
(Sr. Ex. Contract)

Rajendra Narayan Sahoo
Name: Rajendra Narayan Sahoo
A.M. (Law)
OPGC Ltd.

Dillip K. Nanda
Name: DILLIP KUMAR NANDA

Amrit Anand Chandra
Name: AMRIT ANAND CHANDRA
Sr. Executive - Contract
OPGC Ltd.

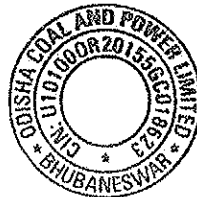
FOR ODISHA COAL AND POWER LIMITED

Kshirod Brahma

By: Kshirod Brahma

Title: General Manager - Mines

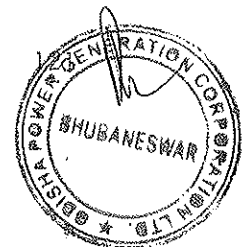
Date: 8th February 2016



In the presence of

Mani H. K. Tiwari
Name: MANI H KR TIWARI
COMPANY SECRETARY
OPL

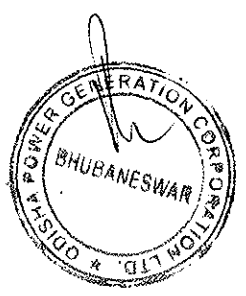
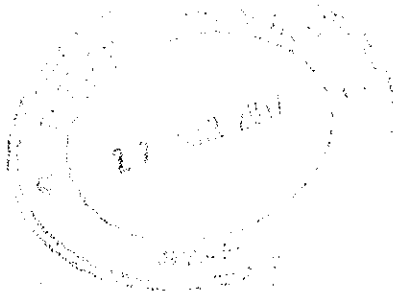
A. Kanungo
Name: A. Kanungo
(DGM - Commercial & Contracts)
OPL



Sl.No. 9289 Date 12/04/2014 Rs. 1.00
Name: P. S. Phandrakumar
S/O: Ramchandra Rao
At: Chhatibeera P.O. Bargarh
Rs. Bargarh Dist. Jharkhand

13

[Signature]
SANJIVAN PANIGRAHI
STAMP VENDOR
JALANPUR



WHEREAS

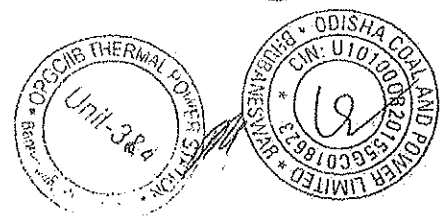
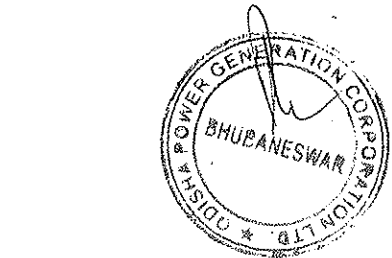
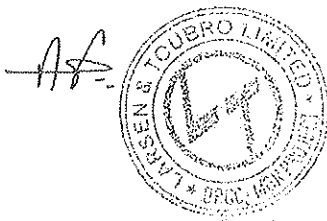
- A. OPGC is in the process of setting up the New Plant, comprising 2 units, each with a gross capacity of 660 MW in the Jharsuguda District of Odisha (the Expansion Project).
- B. As a part of the Expansion Project, OPGC and the Contractor have executed a contract dated 8 May 2015 for the design, engineering, procurement, permitting, fabrication, construction, installation, commissioning, start-up testing, warranties and related services to be carried out and provided by the Contractor in respect of the Merry Go Round and the Water Pipeline on a lump-sum, turnkey basis to connect the New Plant with the Manoharpur and Dip-side Manoharpur coal blocks, which are the blocks allotted to OCPL for the specific purpose of mining coal for the generation of power from the New Plant and also from a further planned 1320 MW (Units 5 & 6) expansion project by OPGC (the EPC Contract).
- C. The Parties entered into an amendment agreement dated 8 February 2016 (the First Amendment) to amend certain terms and conditions of the EPC Contract such that the rights, title, interest, obligations and liabilities to or in connection with, the Water Pipeline, vest solely with OCPL.
- D. Thereafter, the Parties entered into an amendment agreement dated 9 December 2016 (the Second Amendment) to amend certain terms and conditions of the EPC Contract relating to Performance Security under Section 15.2.2.2(a) to capture the agreed commercial understanding amongst the Parties with respect to reduction in the value of the existing Performance Security for the MGR portion.
- E. OPGC wishes to modify the Payment Milestones relating to the MGR for the purpose of achieving phased commissioning and handover of the MGR for the: (i) complete works from (-) 3.2 KM chainage (inside New Plant) to 6.69 KM chainage with Mechanical Completion (Plan C); (ii) complete works from (-) 3.2 KM chainage (inside New Plant) to 9.5 KM chainage with Substantial Completion (Plan B); and (iii) balance portion of the MGR from the Coal Block to 9.5 KM chainage from within the New Plant with Substantial Completion. In this regard, the Contractor by its letters LT-3808 dated 26 October 2016 (Ref. No.: L&T/OPGC/MGR/ 292A) and LT-3828 dated 27 October 2016 submitted its Change Order proposal for phased commissioning and handover of the MGR. Pursuant to a meeting held between OPGC and the Contractor on 18 November 2016, the Contractor submitted its revised Change order proposal by its letter LT-4602 dated 25 November 2016 and this proposal was accepted by OPGC on 14 January 2017.
- F. The Parties have now agreed to amend the terms and conditions of the EPC Contract (as amended by the First Amendment and Second Amendment) to reflect the above agreed commercial understanding.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the Parties hereby agree as follows:

1. DEFINITIONS & INTERPRETATION

1.1 Definitions

"EPC Contract" has the meaning ascribed to it in Recital B.



Annexure — 10

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CONTRACT
FOR
CONSTRUCTION OF ASH POND AT TILIA VILLAGE FOR OPGC II PROJECT
BETWEEN
ODISHA POWER GENERATION CORPORATION LIMITED
AND
SHREE BALAJI ENGICONS PRIVATE LIMITED

Dated 21-December-2016

Reference No.
OPGCII/ASH POND/SBEPL/1004

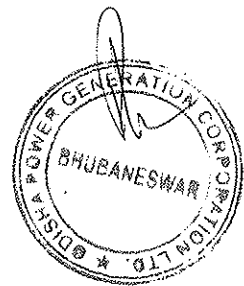
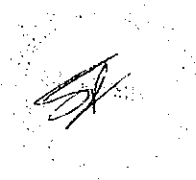
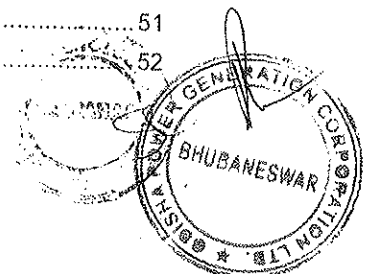
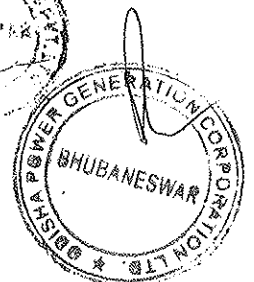


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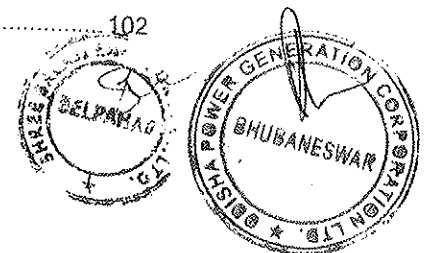
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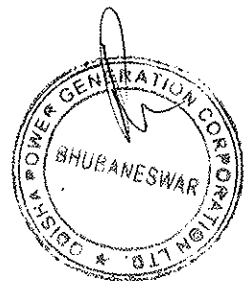
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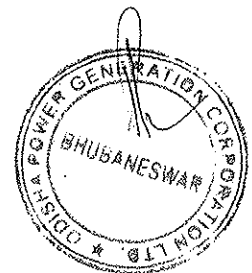


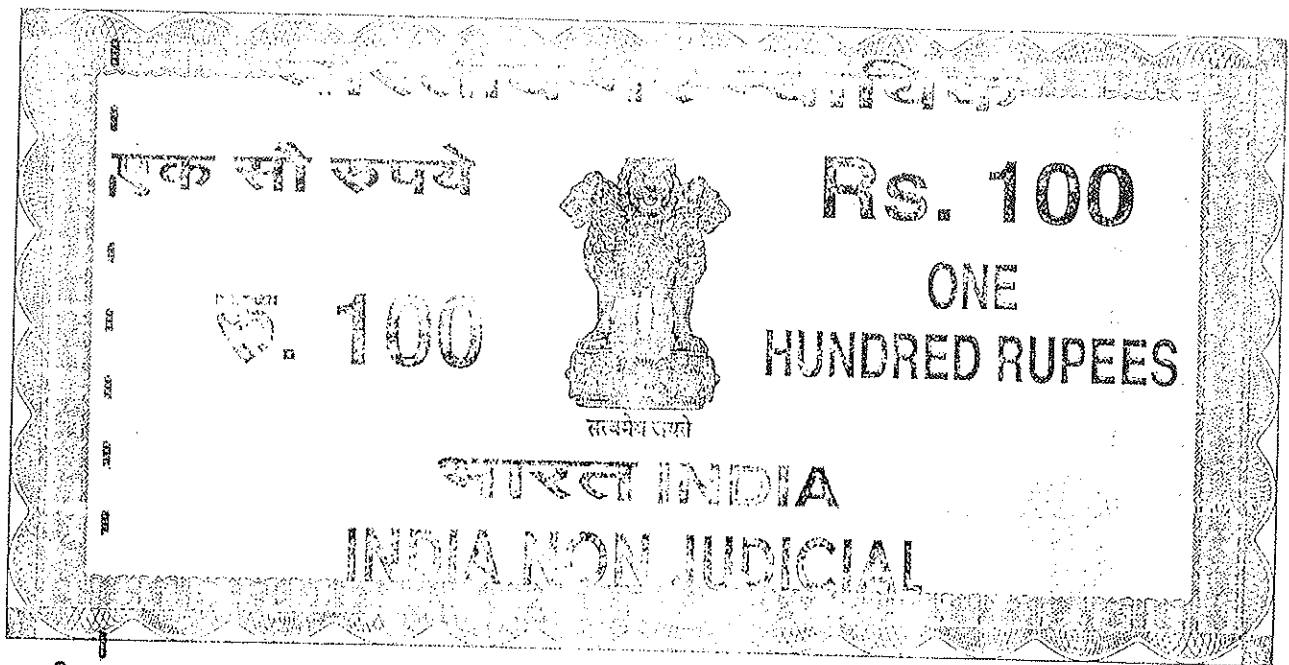
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Annexure 1	Technical Specification
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उड़ीसा ORISSA

F 226254

CONTRACT FOR CONSTRUCTION OF ASH POND
AT TILIA VILLAGE

THIS CONTRACT is entered into the 21st day of December 2016 by and between

ODISHA POWER GENERATION CORPORATION LIMITED, a company within the meaning of Section 2(20) of the Companies Act, 2013, organized under the laws of India with its registered office at Zone-A, 7th Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar – 751 023, Odisha, India (hereinafter referred to as "Owner", which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors-in-business and permitted assigns) of one part.

AND

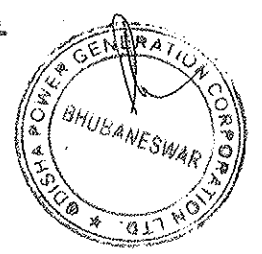
SHREE BALAJI ENGICONS PRIVATE LIMITED, a company within the meaning of Section 2(20) of the Companies Act, 2013, organized under the laws of India with its registered office at Belpahar (R.S), Jharsuguda-768217, Odisha, India (hereinafter referred to the "Contractor", which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors-in-interests and permitted assigns) of the other part.



A. Nayak
 21.12.16-7-

Shree Balaji Engicons Pvt.Ltd.

Managing Director
 Managing Director



~~for~~
37945

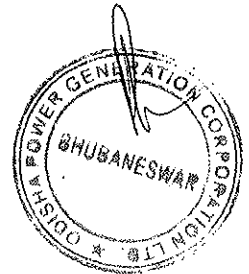
Uthappa

DISTRICT TREASURY
KHURDA, BHUBANESWAR
06 DEC 2018
EX

of the up

A. K. M.
Uthappa

AKSHAYA CHANDR LENKA
STAFF: JUNIOR
REGISTRATION COUNT
LICENSE NO. 33192
0-18



WITNESSETH:

WHEREAS, Owner is developing the New Plant (as hereinafter defined) and Facility; and

WHEREAS, Owner desires to appoint the Contractor for execution of the Work (as hereinafter defined) for construction of the Facility, subject to the terms and conditions set forth herein; and

WHEREAS, the Contractor had participate in the tendering process conducted by Owner and was selected as successful bidder for execution of the Work for construction of the Facility, subject to the terms and conditions set forth herein; and

WHEREAS, Contractor has represented to the Owner that it has the requisite experience, expertise, capability and know-how and is willing to execute the Works for the Facility upon the terms and conditions set forth in this Contract, including Articles 1.0 through 17.0 hereof and all Appendices and Annexes attached hereto (this "Contract"); and

WHEREAS, on the basis of and in reliance on the above representations, the Owner has agreed to engage the Contractor to perform the Work on the terms and conditions set out in the Contract.

WHEREAS, the Parties therefore wish to enter into this Contract to set forth the terms and conditions governing the Work and their respective rights and obligations in relation thereto.

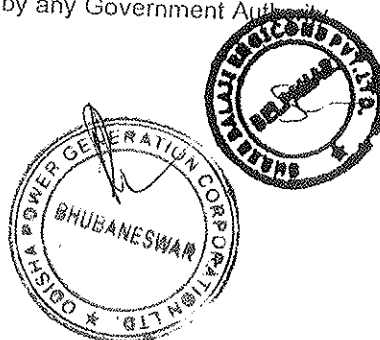
NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties covenant and agree as follows:

1.0 DEFINITIONS; INTERPRETATION.

1.1 Defined Terms.

As used in this Contract, the following terms shall have the following meanings (such meanings as necessary to be equally applicable to both the singular and plural forms of the terms defined unless the context otherwise requires):

"Applicable Laws" means any and all acts, statutes, laws, codes, standards, regulations, Permits, constitutions, licenses, ordinances, rules, judgments, orders, decrees, directives, consents including but not limited to conditions laid down in Consent to Establish issued by Odisha Pollution Control Board vide Order no. 14266/Ind-II-NOC-5037 dated 28.08.2010 and extensions and modifications thereof, clearances including but not limited to the conditions laid down in environmental clearance granted by MoEF vide Letter no.J-13011/5912008-IA.ii(T) dated 04.02.2010 and extension and modifications thereof, guidelines or policies (to the extent mandatory), or any similar form of decision or determination by, or any interpretation or administration of any of the foregoing, by any Government Authority.



Tax pursuant to Section 5.2 and shall promptly pass such refunds on to Owner. Contractor shall maintain copies of all Tax exemption certificates in its records.

5.4 Exemptions and Concessions.

The benefit of any concession, rebate or exemption or any other incentive which becomes available when the Contractor or its Subcontractors are performing their obligations under the Contract shall be passed on to the Owner. Where the Owner is entitled to an exemption or concession concerning any Tax in respect of the execution of the Work under the Contract, the Contractor shall use reasonable endeavors to enable the Owner to avail such exemption or concession.

5.5 Minimization of Tax Liability.

Without prejudice to the provision in Section 5.1, the parties shall co-operate in good faith to minimize each other's tax liability to the extent legally permissible. Contractor agrees to indemnify and hold Owner harmless from any and all claims or liability arising:

- a. on account of payment of any Contractor Taxes assessed or levied by any competent Government Authority on Contractor or its Subcontractors or on Owner for or on account of any act or omission on the part of Contractor or its Subcontractors; or
- b. due to deficiency (including penalties, interest and legal expenses) relating to Taxes which are the responsibility of the Contractor under this agreement and to reimburse the Owner for all accounting and attorneys fees and expenses incurred (on an indemnity basis) in connection with such a deficiency; or
- c. on account of the Contractor's or any Subcontractor's failure to file returns or any other documents required by Applicable Laws or comply with reporting requirements under Applicable Laws relating to Taxes; or
- d. directly or indirectly from or incurred by reason of any misrepresentation by or on behalf of the Contractor or any Subcontractor to any competent authority in respect of Taxes.

6.0 CONTRACT PRICE AND PAYMENT.

6.1 Contract Price.

Contractor shall perform the Work for the amount INR 199,75,45,890/- (INR One Hundred Ninety Nine Crores Seventy Five Lacs Forty Five Thousand Eight Hundred Ninety Only) (the "Contract Price") as per the breakdown of prices set out in Appendix B. The Contract Price shall be full consideration to Contractor for the complete performance of the Work in accordance with this Contract. The Contract Price is a fixed price and may be adjusted only pursuant to this Section 6.0 or a Change Order issued in accordance with the provisions of Section 9.0. Subject to the provisions of this Contract, Owner will pay, in accordance with Section 6.0, the Contract Price. The Parties agree that the Contract Price is inclusive of all Contractor's Taxes.

