

<b>6695-CGM-G00-CA-0019</b>			
<b>TENDER FOR LSTK Package LSTK-13</b>			
<b>Package Description: Cooling Towers and Associated Equipment and Piping</b>			
<b>SYNOPSIS OF ITB (INSTRUCTIONS TO BIDS)</b>			

SR. NO.	VOLUME NO.	NO. OF SECTIONS	DESCRIPTION
1	1	6	COMMERCIAL
			Contains Instructions To Bids (ITB), General Condition of Contract (GCC), Letter Inviting Bid and Acknowledgement-Cum-Consent Letter, Proposal Forms, Schedule of Prices (SP) Form, Commercial Questionnaire
2	2	8	PROJECT MANAGEMENT, SCOPE OF SUPPLIES & SCOPE OF WORK
			Project Management & Planning, Scheduling & Monitoring System, Vendor List, Spare Philosophy, Battery Limit, Scope of Work & Scope of Supplies.
3	3	3	QA PLANS, CONSTRUCTION SPECIFICATIONS & COMMISSIONING
			QA Plan For Engineering & Shop Inspection, Construction Specifications, Construction QA & QC Requirements, Construction HSE Requirements, Construction Management Guideline, Commissioning & Performance Test Run
4	4	7	FEED DOCUMENTS
			Design Basis, Process Description , Equipment List , PFDs, P&IDs, Process Datasheets, Technical Specifications, General Engineering Specifications HSE, Overall Plot Plans (Conceptual), Piping Specification, Fire Fighting, Line List, Load List, Single Line Diagrams, etc.
5	5	1	REFERENCE DOCUMENTS
			Licensors BEP and Other Reference Documents

<b>VOLUME - 1</b>			
<b>COMMERCIAL</b>			

SECTION NO.	PART NO.	DOCUMENT NO.	DESCRIPTION	REV.
1		6695-CGM-G00-CA-0019	Acknowledgement-Cum- Consent Letter	00
2		6695-CGM-G00-CA-0019	Instructions To Bids - (I.T.B.)	01
3		6695-CGM-G00-CA-0019	Special Conditions of Contract (Part A)	00
4		6695-CGM-G00-CA-0019	Special Conditions of Contract (Part B)	00
5		6695-CGM-G00-CA-0019	Schedule of Prices (SP) Forms	01
6		6695-CGM-G00-CA-0019	Proposal Forms	00
7		6695-CGM-G00-CA-0019	Commercial Questionnaire	00
8		6695-CGM-G00-CA-0019	General Conditions of Contract- Indegeneous	00
9		6695-CGM-G00-CA-0019	Bank Guarantee Format	00
10		6695-PRC-538-CA-0007	Technical Questionnaire	01

SECTION NO.	PART NO.	DOCUMENT NO.	DESCRIPTION	REV.
<b>VOLUME - 2</b>				
<b>PROJECT MANAGEMENT, SCOPE OF SUPPLIES &amp; SCOPE OF WORK</b>				

<b>1</b>			<b>Project Management</b>	
	1	6695-PMG-G00-BD-0005	Project Execution Plan Requirement For Contractor	02
	2	6695-PRC-538-AB-0001	Document Matrix	01
	3	6695-PDM-G00-BD-0002	Vendor Documentation Procedure	00
	4	6695-PMG-G00-BD-0006	IT & Software Requirements	00
<b>2</b>			<b>Project Planning, Scheduling &amp; Monitoring System</b>	
	1	6695-PSC-G00-BE-0006	Project Planning, Scheduling & Monitoring System For Contractor	02
<b>3</b>			<b>Vendor List &amp; Spare Philosophy</b>	
	1	6695-PPM-508-BA-0001	Equipment Vendor List	01
	2	6695-PRC-538-CA-0009	Spare Philosophy	01
<b>4</b>			<b>Job Instruction</b>	
	1	6695-PRC-538-CA-0008	General Job Instructions to Contractor	00
<b>5</b>			<b>Battery Limit Documents</b>	
	1	6695-PRC-538-CA-0004	Battery Limit Documents - Process	01
	2	6695-ELT-538-CA-0002	Battery Limit & Interfaces - Electrical	00
	3	6695-INS-538-CA-0001	Battery Limit & Interfaces - Instrumentation	01
<b>6</b>			<b>Scope Of Work</b>	
	1	6695-PRC-538-CA-0005	Scope Of Work For Contractor- General	01
	2	6695-PRC-538-CA-0006	Scope Of Work For Contractor - Process	01
	3	6695-EQS-538-CA-0001	Scope Of Work For Contractor - Static Equipment	00
	4	6695-EQM-538-CA-0013	Scope Of Work For Contractor - Rotating Equipment	00
	5	6695-PIP-538-CA-0001	Scope of Work for Contractor - Piping & Material Handling	01
	6	6695-CVC-538-CA-0001	Scope Of Work For Contractor - Civil, Structural & Architectural	01
	7	6695-ELT-538-CA-0001	Scope Of Work For Contractor - Electrical	00
	8	6695-INS-538-CA-0002	Scope Of Work For Contractor - Instrumentation	00

SECTION NO.	PART NO.	DOCUMENT NO.	DESCRIPTION	REV.
<b>VOLUME - 3</b>				
<b>QA &amp; HSE PLANS</b>				

<b>1</b>			<b>Quality Assurance Plan Requirement</b>	
	1	6695-IEX-G00-EC-0001	Project Inspection & Test Plan For Shop Inspection - Static Equipment & Packages (For Electrical, refer respective ELTech Specs)	00
	2	6695-CMG-G00-CA-0005	Construction Quality Assurance & Control Requirements	01
	3	6695-EQM-G00-QA-0001	Inspection Test Plan Requirements For Rotating Equipment	01
	4	6695-INS-G00-QA-0001	Inspection Test Plan Instrumentation	01
	5	6695-INS-G00-QA-0002	Inspection Test Plan Instrumentation Erection	01
	6	6695-ELT-G00-QA-0001	QAP for Site Installation, testing & Commissioning - Electrical	00
	7	6695-PRC-538-CA-0010	Inspection Categorization Plan	00
<b>2</b>			<b>Health, Safety &amp; Environmental Requirements</b>	
	1	6695-PRC-G00-BG-0001	Health, Safety & Environmental Requirements For Engineering	02
	2	6695-CMG-G00-CA-0003	Construction Health, Safety & Environmental Requirements	02
<b>3</b>	1	6695-CMG-G00-CA-0004	Construction Management Requirements	01

<b>VOLUME - 4</b>				
<b>TECHNICAL DOCUMENTS</b>				

<b>1</b>			<b>PROCESS</b>	
	1	6695-PRC-G00-EC-0001	<b>Project Design Basis</b>	02
	2	6695-PRC-000-FB-0101 to 0105	<b>Legend sheet P&amp;ID's</b>	02
	3		<b>Process Flow Diagram</b>	
	3.1	6695-PRC-538-CA-0001	Cooling water system for Evaporation Unit	01
	3.2	6695-PRC-538-CA-0002	Cooling water system for Inter stage coolers	01
	3.3	6695-PRC-538-CA-0003	Cooling water system for Calcination Unit	01
	4	6695-PRC-538-PD-0001	<b>Equipment List (Major)</b>	01
	5		<b>Technical Specifications</b>	
	5.1	6695-PRC-538-EC-0001	Technical specification of Cooling Tower	01
	5.2	6695-PRC-538-EC-0002	Technical specification of Cooling Tower - Calcination	01
			Attachment 1- Calcination	
	5.3	6695-PRC-538-EC-0003	Technical specification of Cooling Tower Dosing Unit	01
	5.4	6695-PRC-538-EC-0004	Technical specification of Cooling Tower - Evaporation	01
			Attachment 1-Evaporation	
	5.5	6695-PRC-538-EC-0005	Technical specification of Cooling Tower - ISC	01
			Attachment 1-ISC	
	<b>6</b>	6695-PRC-000-BG-0002	<b>Commissioning &amp; Performance Test Run</b>	01

SECTION NO.	PART NO.	DOCUMENT NO.	DESCRIPTION	REV.
<b>2</b>			<b>ROTATING</b>	
	1		<b>General Engineering Specifications &amp; Other Technical Documents</b>	
	1.1	6695-EQM-G00-EC-0002	General Engineering Specification For Non API Pumps	01
	1.2	6695-EQM-G00-EC-0010	General Engineering Specification For Horizontal Split Case Pumps	00
	1.3	6695-EQM-G00-EC-0007	General Engineering Specification For Positive displacement pumps	01
	2		<b>Technical specifications</b>	
	2.1	6695-EQM-G00-EC-0012	Technical Specification For Non API Centrifugal Pumps	00
	3		<b>Datasheets</b>	
	3.1	6695-EQM-538-EC-0001	Cooling Water Pump for Condensate Tankfarm	01
	3.2	6695-EQM-538-EC-0002	Evaporation Cooling Water Supply Pump	01
	3.3	6695-EQM-538-EC-0003	ISC Cooling Water Supply Pump	01
	3.4	6695-EQM-538-EC-0004	Calciner Unit Cooling Water Supply Pump	01
	3.5	6695-EQM-538-EC-0005	Cooling Water Pump for Seed & Product Filtration	01
	3.6	6695-EQM-538-EC-0006	Cooling Water Pump for Utilities	01
<b>3</b>			<b>STATIC EQUIPMENT</b>	
	1		<b>General Engineering Specifications</b>	
	1.1	6695-EQS-000-EC-0001	GES for Pressure Vessel	01
	1.2	6695-EQS-000-EC-0004	GES for Storage Tanks	01
	1.3	6695-EQS-000-EC-0007	GES for Painting	01
	1.4	6695-EQS-000-EC-0008	GES for Insulation	01
	2		<b>Technical specifications</b>	
	2.1	6695-EQS-538-EC-0001	Technical Specification for Side Stream Filter for Calcination	01
<b>4</b>			<b>PIPING</b>	
	1	6695-LAY-G00-LD-0001	Overall Plot Plan	01
	2	6695-LAY-538-LD-0001	Conceptual Plot Plan Cooling Tower-1	00
	3	6695-LAY-538-LD-0002	Conceptual Plot Plan Cooling Tower-2	00
	4	6695-LAY-538-LD-0003	Conceptual Plot Plan Cooling Tower-3	00
	2		<b>Piping Specification</b>	
	2.1	6695-PIP-G00-EC-0003	Piping Specification	02
	2.2	6695-PIP-G00-EC-0008	Technical Requirement for Valves	02
	2.3	6695-PIP-G00-EC-0007	Technical Requirement for Pipes, Fittings, Flanges, Gaskets & Fasteners	01
	2.4	6695-PIP-G00-EC-0010	Technical Requirement for Special Parts	02
	2.5	6695-PIP-G00-EC-0006	Technical Specifications For 3-D Model	00
	3		<b>General Engineering Specification</b>	
	3.1	6695-PIP-G00-EC-0001	GES for Above ground steel piping	01
	3.2	6695-LAY-G00-EC-0001	GES for Plant Layout	01
	3.3	6695-PIP-G00-EC-0002	GES for Piping Flexibility Analysis	01
	3.4	6695-PIP-G00-EC-0004	GES for Material Handling Equipment	03
	3.5	6695-HES-G00-EC-0001	GES for Fire Fighting System (LSTK Packages)	02
<b>5</b>			<b>CIVIL</b>	
	1		<b>General Documents</b>	
	1.1	6695-CVC-G00-EC-0001	General Engineering Specification - Civil, Structural & Architectural	03
	1.2	6695-CVC-G00-EC-0002	Technical Specifications for Construction Works - Civil, Structural & Architectural	00
	1.3	6695-CVC-G00-EC-0003	Standard Instruction Design Calculation Documentation	01

SECTION NO.	PART NO.	DOCUMENT NO.	DESCRIPTION	REV.
	2		<b>Reference Document</b>	
	2.1	6695-CVC-G00-DD-0001_Volume 1	Geotechnological Investigation Report_April 2018	00
		6695-CVC-G00-DD-0001_Volume 2	Geotechnological Investigation Report_15th October 2019	00
	2.2	6695-CVC-G00-DD-0002_Part A	Traverse & Topographic Survey (Contour Plan) Report	00
		6695-CVC-G00-DD-0002_Part B	Contour and Topographical Survey Report_April 2018	00
<b>6</b>			<b>ELECTRICAL</b>	
	1		<b>General</b>	
	1.1	6695-ELT-G00-EC-0002	General Engineering Specification - Electrical	04
	1.2	6695-ELT-G00-FA-0001	Overall Key SLD	05
	1.3	6695-ELT-G00-FA-0003	Typical Detail Single Line diagram	02
	1.4	6695-ELT-526-LH-0004	Substation arrangement layout - Substation US-505 (EPCM)	00
	1.5	6695-ELT-526-LH-5001	Substation arrangement layout - Substation US-506 (LSTK)	01
	1.6	6695-ELT-526-LH-6001	Substation arrangement layout - Substation US-507 (LSTK)	01
	1.7	6695-ELT-G00-FA-0002	Block Diagram for earthing & lightning protection concept	00
	1.8	6695-ELT-G00-EC-0003	Guidelines For Electrical Equipment Numbering System	02
	1.9	6695-ELT-G00-FS-0001	Typical I/O list for SCADA	01
	1.10	6695-ELT-G00-EB-0001	Standard Formats for Lists (Consumer, cable, feeder, LCS, Operation mode list)	00
	1.11	6695-ELT-G00-EC-0004	Design Guidelines For Electrical Facilities	02
	1.12	6695-ELT-G00-FA-0004	Typical SCADA Block diagram for unit substation level networking	02
	2		<b>Technical Specifications of Electrical equipments</b>	
	2.1	6695-ELT-G00-EC-0009	Technical Specifications - Low Voltage Switchgear Panels	02
	2.2	6695-ELT-G00-EC-0011	Technical Specifications - High Voltage Induction Motors	00
	2.3	6695-ELT-G00-EC-0012	Technical Specifications - Low Voltage Induction Motors	00
	2.4	6695-ELT-G00-EC-0018	Technical Specifications - High Voltage Cables	00
	2.5	6695-ELT-G00-EC-0019	Technical Specifications - Low Voltage Cables	00
	2.6	6695-ELT-G00-EC-0020	Technical Specifications - Miscellaneous Low Voltage Switchgear	00
	2.7	6695-ELT-G00-EC-0021	Technical Specifications - Local Control Stations	00
	2.8	6695-ELT-G00-EC-0022	Technical Specifications - Industrial Light Fittings	00
	2.9	6695-ELT-G00-EC-0024	Technical Specifications - LV Variable Frequency Drive	01
	2.10	6695-ELT-G00-EC-0026	Technical Specifications - EOT Crane	01
	2.11	6695-ELT-G00-EC-0027	Technical Specifications - Electrical Installation	00
	2.12	6695-ELT-G00-EC-0029	Technical Specifications - Electric hoist	01
	2.13	6695-ELT-G00-EC-0030	Technical Specifications - GI Cable Trays	01
	2.14	6695-ELT-G00-EC-0031	Technical Specifications - High mast for lighting	00
	2.15	6695-ELT-G00-EC-0032	Technical Specifications - HV Variable Frequency Drives	02
	2.16	6695-ELT-G00-EC-0033	Technical Specifications - Bulk Material	00
	2.17	6695-ELT-G00-EC-0035	Technical Specifications - LV Power factor Capacitor	00
<b>7</b>			<b>INSTRUMENTATION</b>	
	1		<b>General</b>	
	1.1	6695-INS-G00-EC-0001	General Engineering Specification For Instrumentation & Control	02

SECTION NO.	PART NO.	DOCUMENT NO.	DESCRIPTION	REV.
<b>VOLUME - 5</b>				
<b>REFERENCE DOCUMENTS</b>				

			<b>Licensors BEP and Other Reference Documents (wherever applicable).</b>	
<b>1</b>		-	State pollution control board order dated 21.04.17	
<b>2</b>		-	Ministry of Environment, Forest and climate change order dated 12.04.17	