



**EPCM Consultancy Services for setting up of HPG-2, Butene-1 and
PSA units at BCPL, Lepetkata**

TENDER DOCUMENT

(Document No : B348-TENDER_DOC-B348-115-79-41-LA-T-8501)



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ब्रह्मपुत्र क्रेकर और पालीमेर लिमिटेड
(भारत सरकार का उपक्रम)
Brahmaputra Cracker and Polymer Ltd.
(A Government of India Enterprise)



ब्रह्मपुत्र क्रेकर और पालीमेर लिमिटेड
BRAHMAPUTRA CRACKER AND POLYMER LIMITED

(भारत सरकार का उपक्रम)/ (A Government of India Enterprise)

प्रशासनिक भवन, पो.ओ. लेपेटकटा / ADMINISTRATIVE BUILDING, PO: LEPETKATA

जिला: डिब्रूगढ़, असम/ DISTT.: DIBRUGARH, ASSAM

पिनकोड – 786006 / PIN CODE: 786006

दूरभाष: 0373 2914636 / PHONE NO. 0373 2914636

e -TENDER NO: 2021_EIL_622330_1

(Tender to be submitted in e-mode only)

**निविदा दस्तावेज़ /TENDER DOCUMENT
FOR**

**[SUPPLY OF KNOW-HOW / LICENSE, BASIC
ENGINEERING DESIGN PACKAGE (BEDP),
CATALYSTS AND OTHER RELATED SERVICES
FOR HPG 2nd STAGE UNIT]**

(BIDDING DOCUMENT No. SG/B348-115-LA-TN-8501/1003)



MASTER INDEX

(BIDDING DOCUMENT NO.: SG/B348-115-LA-TN-8501/1003)

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2.	MASTER INDEX
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4.	SECTION-II: BID EVALUATION CRITERIA [BEC] & EVALUATION METHODOLOGY, FORM AND APPENDIX (ES).
5.	SECTION-III: INSTRUCTIONS TO BIDDERS [ITB], ANNEXURES AND FORMS & FORMATS
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SECTION-I

INVITATION FOR BID (IFB)



SECTION-I
"INVITATION FOR BID (IFB)"

Ref No: B348/8501/1003

Date: 15.03.2021

To,

PROSPECTIVE BIDDERS

SUB: TENDER DOCUMENT FOR SUPPLY OF KNOW-HOW / LICENSE, BASIC ENGINEERING DESIGN PACKAGE (BEDP), CATALYSTS AND OTHER RELATED SERVICES FOR HPG 2nd STAGE UNIT ON OPEN INTERNATIONAL COMPETITIVE BIDDING BASIS (BIDDING DOCUMENT No. SG/B348-115-LA-TN-8501/1003).

Dear Sir/ Madam,

1.0 **Brahmaputra Cracker and Polymer Ltd. (BCPL), Lepetkata (A Government of India Enterprise)** having registered office at 1st Floor, House No 6, Bhuban Road, Uzanbazar, Guwahati, Assam, Pin-781001 & Project Office at Administrative Building, BCPL, Lepetkata, Dibrugarh, Assam, PIN - 786006, is in the process of setting up HPG-2, Butene-1 & PSA Units at Lepetkata, Assam (India). BCPL has appointed Engineers India Limited (EIL) as consultant for this project.

EIL on behalf of **Brahmaputra Cracker and Polymer Ltd (BCPL)** invites bids from bidders for the subject job / works, in complete accordance with the following details and enclosed Tender Documents.

2.0 The brief details of the tender are as under:

(A)	NAME OF WORK / BRIEF SCOPE OF WORK/ JOB	Brahmaputra Cracker & Polymer Ltd (BCPL) invites firm techno-commercial proposals from the LICENSORS of both technologies :-(a) “Hydrogenation of PyGas” and (b) “Benzene saturation to cyclohexane” for supply of Know-how / License, Basic Engineering Design Package (BEDP), catalysts and other related services for evaluation and selection of their technologies for the proposed HPG-2nd Stage unit at BCPL LEPETKATA.						
		The table below lists out the capacity and objective for the proposed HPG-2 nd Stage Unit:						
		<table><tr><th>Process Unit</th><th>Capacity</th><th>Objective of process Unit</th></tr><tr><td>HPG 2nd Stage</td><td>52 KTPA</td><td>Hydrotreated pygas stream should meet a benzene specification of 1Vol % (max) and sulphur less than 10 ppm wt.</td></tr></table>			Process Unit	Capacity	Objective of process Unit	HPG 2 nd Stage
Process Unit	Capacity	Objective of process Unit						
HPG 2 nd Stage	52 KTPA	Hydrotreated pygas stream should meet a benzene specification of 1Vol % (max) and sulphur less than 10 ppm wt.						



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(B)	TENDER NO. & DATE	SG/B348-115-LA-TN-8501/1003, Dated-15.03.2021				
(C)	TYPE OF BIDDING SYSTEM	<table border="1"> <tr> <td>SINGLE BID SYSTEM</td> <td></td> </tr> <tr> <td>TWO BID SYSTEM</td> <td>✓</td> </tr> </table>	SINGLE BID SYSTEM		TWO BID SYSTEM	✓
SINGLE BID SYSTEM						
TWO BID SYSTEM	✓					
(D)	TYPE OF TENDER	<table border="1"> <tr> <td>E-TENDER</td> <td>✓</td> </tr> <tr> <td>MANUAL</td> <td></td> </tr> </table>	E-TENDER	✓	MANUAL	
E-TENDER	✓					
MANUAL						
(E)	COMPLETION/CONTRACT PERIOD	Refer Technical Section of the Bidding Documents.				
(F)	BID SECURITY / EARNEST MONEY DEPOSIT (EMD)	<table border="1"> <tr> <td>APPLICABLE</td> <td></td> </tr> <tr> <td>NOT APPLICABLE</td> <td>✓</td> </tr> </table>	APPLICABLE		NOT APPLICABLE	✓
APPLICABLE						
NOT APPLICABLE	✓					
		<u>Amount:</u> Not Applicable, Bidder is required to submit Declaration for EMD in Bid as per proforma at Annexure-1 to Section-I. (Refer clause no.16 of ITB & BDS for details).				
(G)	AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S)	From 15.03.2021 to 29.04.2021 (1200.Hrs, IST) on following websites: (i) https://gaitenders.in/ (ii) http://www.bcplonline.co.in (iii) Govt. Website: https://www.eprocure.gov.in (iv) https://tenders.eil.co.in				
(H)	DATE, TIME & VENUE OF PRE-BID MEETING (#)	Date: 31.03.2021 Time: At 1030 HRS (IST) Venue : Engineers India Limited, Tower-1, 2nd Floor, Sector-16, Gurugram, Haryana-122001 (India)				
(I)	DUE DATE & TIME OF BID-SUBMISSION	Date : 29.04.2021 Time : Upto 1200 HRS (IST)				



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(J)	DATE AND TIME OF UN-PRICED BID OPENING (#)	Date : 30.04.2021 Time : At 1400 HRS (IST)
(K)	CONTACT DETAILS OF TENDER DEALING OFFICER	Name : Sangitta Ghuliani Designation:GM (SCM) Phone No. & Extn : +91(0)-124-289-1391 / 1418 / 1436 e-mail: sangitta.ghuliani@eil.co.in ; anil.biswas@eil.co.in ; naveen.baswal@eil.co.in

(#) In case of the days specified above happens to be a holiday in EIL, Gurugram, the next working day shall be implied.

- 3.0 Bids must be submitted strictly in accordance with Clause No. 11 of ITB (Section-III) depending upon Type of Tender as mentioned at Clause no. 2.0 (D) of IFB. The IFB is an integral and inseparable part of the bidding document.
- 4.0 The following documents in addition to uploading in the bid on e-tendering website <https://www.eprocure.gov.in> shall also be submitted in Original (in physical form) within 7 (seven) days from the bid due date provided the scanned copies of the same have been uploaded in e-tender by the bidder along with e-bid within the due date and time to the address mentioned in Bidding Data Sheet (BDS) [Annexure-IV to Section-III]:-
- i) Power of Attorney
- 5.0 Bidder(s) are advised to quote strictly as per terms and conditions of the tender documents and not to stipulate any deviations/exceptions.
- 6.0 Any bidder, who meets the Bid Evaluation Criteria (BEC) and wishes to quote against this Tender Document, may download the complete Tender Document alongwith its amendment(s) if any from websites as mentioned at 2.0 (G) of IFB and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the Bid Due Date & Time of Bid Submission.
- 7.0 Bid must be submitted only on <https://www.eprocure.gov.in>. Bid(s) received from bidders to whom tender/ information regarding this Tender Document has been issued as well as offers received from the bidder(s) by downloading Tender Document from above mentioned website(s) shall be taken into consideration for evaluation & award provided that the Bidder is found responsive and subject to provisions contained in Clause No. 2 of Instructions to Bidders [ITB; (Section-III)] .
- The Tender Document calls for offers on single point “Sole Bidder” responsibility basis (except where JV/Consortium bid is allowed pursuant to clause no. 3.0 of ITB) and in total compliance of Scope of Works as specified in Tender Document.
- 8.0 Clarification(s)/ Corrigendum(s) if any shall also be available on above referred websites. Any revision, clarification, addendum, corrigendum, time extension, etc. to this Tender Document will be hosted on the above mentioned website(s) only. Bidders are requested to visit the website regularly to keep themselves updated.



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9.0 All the bidders including those who are not willing to submit their bid are required to submit F-6 (Acknowledgement cum Consent letter) duly filled within 7 days from receipt of tender information.

10.0 Procurement through GeM in future by BCPL

Government of India has introduced an online procurement portal – ‘Government e-Market place (GeM)’ with the aim to transform the way in which public procurement of goods and services is done by the Government Ministries/ Departments, PSUs, autonomous bodies etc. GeM aims to enhance transparency, efficiency and speed in public procurement.

BCPL is already registered on GeM and have started procurement through GeM.

You are, therefore, requested to kindly register your organization and your products on GeM at the earliest.

The detailed process of registration is available on GeM Portal (i.e. <https://gem.gov.in/>).

11.0 BCPL reserves the right to reject any or all the bids received at its discretion without assigning any reason whatsoever.

This is not an Order.

For & on behalf of

Brahmaputra Cracker and Polymer Ltd.

(Authorized Signatory)

Name : Sangitta Ghuliani

Designation : GM(SCM)

E-mail ID : sangitta.ghuliani@eil.co.in

Contact No. : +91(0)-124-289-1391 / 1418 / 1436



Annexure-1 to Section-I

DECLARATION FOR BID SECURITY

To,
M/s Brahmaputra Cracker and Polymer Ltd.

SUB:

TENDER NO:

Dear Sir

After examining / reviewing provisions of above referred tender documents (including all corrigendum/ Addenda), we M/s_____ (***Name of Bidder***) have submitted our offer/ bid no.

We, M/s_____ (***Name of Bidder***) hereby understand that, according to your conditions, we are submitting this Declaration for Bid Security.

We understand that we will be put on watch list/ holiday/ banning list (as per policies of BCPL in this regard), if we are in breach of our obligation(s) as per following:

- a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- (b) having been notified of the acceptance of our Bid by the BCPL during the period of bid validity:
 - (i) fail or refuse to execute the Contract, if required, or
 - (ii) fail or refuse to furnish the Contract Performance Security, in accordance provisions of tender document.
 - (iii) fail or refuse to accept 'arithmetical corrections' as per provision of tender document.
- (c) having indulged in corrupt/fraudulent /collusive/coercive practice as per procedure.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:



DO NOT OPEN - THIS IS A QUOTATION

Bid Document No. : SG/B348-115-LA-TN-8501/1003

Description : **SUPPLY OF KNOW-HOW/ LICENSE, BASIC ENGINEERING DESIGN PACKAGE (BEDP), CATALYST AND OTHER RELATED SERVICES FOR HPG 2nd STAGE UNIT**

Due Date& Time : 29.04.2021; 1200 HRS (IST)

From: ***To:***

.....	Ms. Sangitta Ghuliani (GM-SCM)
.....	2nd Floor, Tower-1, Engineers India Ltd,
	Sector-16 (On NH-48), Gurugram
	Haryana-122001 (India)

(To be pasted on the envelope containing Physical documents i.e. POA etc)

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SECTION-II

BID EVALUATION

CRITERIA & EVALUATION

METHODOLOGY



SECTION-II

BID EVALUATION CRITERIA & EVALUATION METHODOLOGY

1. BID EVALUATION CRITERIA (BEC)

A. Technical Criteria of BEC

1.1. The HPG 2nd Stage unit comprises of the following two facilities

- Hydrogenation of Pygas
- Benzene Saturation of Hydrogenated Pygas Stream to convert Benzene to cyclohexane.

Bidder is required to meet the following qualification criteria so as to enable further evaluation of his bid for technology selection for BCPL's HPG 2nd Stage Unit.

1.1.1. The Bidder must be a licensor himself and must have licensed and supplied technology for both a). hydrogenation of Pygas from Ethylene Steam Cracker and b). Benzene Saturation of Naphtha Range Material/Hydrogenated Pygas. Bidder should have licensed both the units and shall furnish a reference of these units.

The reference of Hydrogenation of Pygas unit (hereinafter called reference unit #1A), Benzene Saturation Unit of Naphtha Range Material/Hydrogenated Pygas (hereinafter called reference unit #1B) shall meet the Minimum Qualifying criteria as defined below.

1.1.2. Minimum capacity:

- a. **Hydrogenation of Pygas Unit:** 26 KTPA (Reference Unit # 1A)
- b. **Benzene Saturation Unit of Naphtha Range Material/ Hydrogenated Pygas:** 15KTPA (Reference Unit #1B)

1.1.3. The reference unit #1A, 1B,:

- i. Should have been licensed within the last fifteen (15) years (Note-1).
- ii. Must be a commercial unit (Reference of pilot plant, laboratory scale plant, demonstration plant not accepted).
- iii. Should have been for a client other than licensor himself (i.e. unit should be non-captive).
- iv. Should be a grass-root unit and not be a revamp or debottlenecked unit.
- v. Feed to Unit #1A shall be Pyrolysis gasoline from Ethylene Steam Cracker Unit.
- vi. For reference unit #1A, product sulphur of hydrogenated Pygas from this unit should be 10 ppmw max.
- vii. For reference unit #1B, benzene content of Hydrogenated Pygas/gasoline from this unit should be 1 vol% max.
- viii. Should have completed at least one year of operation. (Note-1).

1.1.4. A) In case bidder meets all the requirements of section 1.1.3 above, however the Hydrogenation of Pygas unit (Reference unit #1A) has been licensed prior to last ten (10) years, bidder is required to provide an additional reference of same /unit of any capacity (Reference Unit #1AA) meeting the following requirements:

- i. Must have been licensed and designed within the last ten (10) years (Note-1).



- ii. Must be a commercial unit (Reference of pilot plant, laboratory scale plant, demonstration plant not accepted).
- iii. Should have been for a client other than licensor himself (i.e. unit should be non-captive).
- iv. Should be a grass-root unit and not be a revamp or debottlenecked unit.

B) In case bidder meets all the requirements of section 1.1.3 above, however the Benzene Saturation Unit of Naphtha Range Material/Hydrogenated Pygas (Reference unit #1B) has been licensed prior to last ten (10) years, bidder is required to provide an additional reference of this unit of any capacity (Reference Unit #1BA) meeting the following requirements:

- i. Must have been licensed and designed within the last ten (10) years (Note-1).
- ii. Must be a commercial unit (Reference of pilot plant, laboratory scale plant, demonstration plant not accepted).
- iii. Should have been for a client other than licensor himself (i.e. unit should be non-captive).
- iv. Should be a grass-root unit and not be a revamp or debottlenecked unit.

1.1.5. In case the Bidder offers the same catalyst(s) as employed in reference unit #1A, 1B, then the reference unit # 1A, 1B, should meet the following criteria:

- i. The offered catalysts must have completed minimum one year of operation (Note-1).

1.1.6. In case the Bidder offers alternative catalyst(s) other than the ones employed in reference unit #1A, then the Bidder should offer other Hydrogenation of Pygas reference unit (hereinafter called reference Unit # 2A)

The reference unit # 2A,

- i. Can be a Grass-root, brown field or de-bottlenecked unit.
- ii. Should have been for a client other than licensor himself (i.e. unit should be non-captive).
- iii. Must be a commercial unit (Reference of pilot plant, laboratory scale plant, demonstration plant not accepted).
- iv. The offered catalysts must have completed minimum one year of operation within last fifteen (15) years (Note-1).
- v. The Reference Unit feed shall be Pyrolysis gasoline from Ethylene Steam Cracker Unit.
- vi. Sulphur specification of 10 ppmw max in hydrogenated Pygas from hydrogenation of Pygas Unit .

1.1.7. In case the Bidder offers alternative catalyst(s) other than the ones employed in reference unit # 1B, then the Bidder should offer other Benzene Saturation Unit of Naphtha Range Material /Hydrogenated Pygas reference unit (hereinafter called reference Unit # 2B). The reference unit # 2B,

- i. Can be a Grass-root, brown field or de-bottlenecked unit.
- ii. Should have been for a client other than licensor himself (i.e. unit should be non-captive).
- iii. Must be a commercial unit (Reference of pilot plant, laboratory scale plant, demonstration plant not accepted).



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- iv. The offered catalysts must have completed minimum one year of operation within last fifteen (15) years (Note-1).
- v. Benzene content of Hydrogenated Pygas/Gasoline is 1 Vol% max .

Note:

- 1. Cut-off date for meeting the criteria will be reckoned as the Bid Due Date.

B. Financial Criteria of BEC :

a. Turnover

The minimum annual turnover of the bidder as per the audited financial results during any one of the immediate three preceding financial years shall be as under:-

Minimum Annual Turnover	
Indian Bidder	Foreign Bidder
INR 1132.77 Lakhs	USD 1.55 Million

b. Net worth

Net worth of the bidder should be positive as per the immediate last audited annual financial statement.

Notes:

- (i) **Annual Turnover:** In case the tenders having the **Due Date for submission of bid** up to **31st December** of the relevant financial year, and audited financial results of the immediate 3 preceding financial years are not available, the bidder has an option to submit the audited financial results of the 3 years immediately prior to that. Wherever the closing date of the bid is after **31st Dec.** of the relevant financial year, bidder has to **compulsorily** submit the audited financial results for the immediate 3 preceding financial years. However, in case bidder is meeting the Annual Turnover criteria of BEC based on Audited Financial Statement of any one of the preceding 3 financial years, the same shall suffice **and bidders may submit format F-16 accordingly.**
- (ii) **Net Worth:** In case the tenders having the **Due Date for submission of bid** up to **31st December** of the relevant financial year, and audited financial results of the immediate preceding financial year is not available, in such case the audited financial results of the year immediately prior to that year will be considered as last financial year for Net worth calculation. Wherever the closing date of the bid is after **31st Dec.** of the relevant financial year, Bidder has to compulsorily submit the audited financial results for the immediate preceding financial years.

For the bidders whose financial year is calendar year, for such bidders the audited financial results shall be considered as calendar year, in lieu of financial year.

C. Exchange rate for Conversion of Currency :

Exchange rate for Conversion of Currency for evaluation of documents submitted by Bidders for BEC which are in other currency than USD shall be as follows:



- (a) **BEC (Technical Criteria):** Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the date of ward of Contract submitted by Bidder.
- (b) **BEC (Financial Criteria):**

- (i) **For Annual Turnover:**

- The average of Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the First date and Last date of the respective Financial Year.

- (ii) **For Networth :**

- The Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the Last date of the respective Financial Year.

- (c) In case, The SBI Selling rate is not available as on the date of conversion as specified above for respective cases, the exchange rate for conversion of currency shall be taken from the internet.

- D.** Only documents (License Agreement, Purchase Order / Work Order, Completion certificate, Execution Certificate etc.) which have been referred/ specified in the bid shall be considered in reply to queries, if any, during evaluation of Bids.

- E. DOCUMENTS TO BE SUBMITTED FOR COMPLIANCE TO BEC**

- (i) Technical Criteria of BEC:**

- Bidder shall submit the following documents as a minimum as documentary evidence to support the references provided to meet the criteria of Technical BQC

- Reference for Hydrogenation of Pygas Unit & Benzene Saturation Unit of Naphtha Range Material/Hydrogenated Pygas

- a) Details of Reference Unit(s) including names, address, telephone numbers and email of contact person(s) for each reference unit.
 - b) Relevant documents such as extracts of License Agreement and / or relevant work orders and/ or contract agreement with the Licensee(s) as a proof of holding Licensing rights. The extracts should include the following:
 - i.) Cover sheet depicting name of project
 - ii.) Licensor-Licensee definition
 - iii.) Technology Definition
 - iv.) Date of signing
 - v.) Signature of Licensor-Licensee
 - c) Relevant documents such as extracts of Engineering Agreement and/ or Design Basis and/ or guarantee document etc. as a proof of Unit design Capacity of Hydrogenation of Pygas Unit, Feed source/ definition of unit and product quality i.e. sulphur of 10 ppmwt (max) of Hydrogenated Pygas from Hydrogenation of Pygas Unit and benzene specification of 1 Vol % (max) of Hydrogenated Pygas/Gasoline in Benzene Saturation Unit of Naphtha Range Material/ Hydrogenated Pygas.
 - d) Communication from the Licensee(s)/ Owner(s) of reference unit #1A & reference unit #1B to support claim for :



- i.) Date of commissioning
 - ii.) Unit has completed operation of one year meeting desired operation.
- e) Additional communication from Licensee(s)/ Owner(s) to support claim for Basic Engineering Design package has been delivered to client for reference unit #1AA and #1BA.

Reference units for Catalysts offered by bidder:

- a) Details of the catalysts reference unit(s) including name, address, telephone number and e-mail of contact person(s) for each reference unit.
- b) Communication from Licensee/ Owner to support claim that the specified catalyst in reference units has completed at least one year of operation within the last fifteen (15) years (Note-1) meeting desired operation.

Note: 1: Cut-off date for meeting the criteria will be reckoned as the bid due date.

General Requirements:

The bidder shall ensure submission of complete authentic information / documents along with the bid.

Wherever specific compliance to the relevant documentation from licensee in support of the criterion mentioned in qualification criteria clauses above is required post bid submission, BCPL/ EIL reserves the right to directly interact with the bidder's clients to verify the relevant documentation and the Bidder will render assistance in facilitating that.

Visit to reference unit(s):

BCPL/EIL at its own discretion may visit any of the reference unit(s) which is/are submitted by bidder in the offer. Bidder shall render assistance in facilitating such visits. BCPL/EIL shall verify all the submitted information by the bidder during the visit to that/those reference unit(s). Any discrepancy, if found in the information collected by BCPL/EIL during site visit of any reference unit(s) w.r.t. the information submitted by bidder, bidder's offer shall be liable for rejection.

(ii) Financial Criteria of BEC:

a. Annual Turn-over

Bidder(s) shall submit copy of complete Audited Annual Financial Statement including auditor's report, Balance Sheet, Profit & Loss Account Statement and all other schedules & Notes of immediate three (3) preceding Financial Year(s) along with un-priced bid.

b. Net Worth

Bidder(s) shall submit copy of complete Audited Annual Financial Statement including auditor's report, Balance Sheet, Profit & Loss Account Statement and all other schedules & Notes of immediate last Financial Year along with un-priced bid.



- c. The details of Financial Capability of Bidder filled by Chartered Accountant / Certified Public Accountant (CPA) for Financial Capability of the Bidder on their Letter Head in prescribed Format (F-16) enclosed with Bidding Document.

Notes:

- i. In case of a bidder being subsidiary of a company or incorporated Joint Venture (JV) of two or more companies, where a separate annual report is not published but only consolidated annual report of the Parent Company or Parent companies respectively is available, such consolidated annual report of the parent company or any one of the parent companies respectively, shall be considered for Financial Criteria.
- ii. Bidder shall submit “Details of Financial Capability of Bidder” in prescribed Format (F-16) and shall include a declaration that as per the laws of the Bidder’s Country, there is no mandatory requirement for separate Audit of standalone Financial Statements of bidder and Audited Financial Statements are available only on consolidated basis of Parent company and subsidiary companies.

Bidder shall furnish the duly filled and signed Check list for submission of documents for qualification for Bid Evaluation Criteria (BEC) as per format F-8 (B).

F. AUTHENTICATION OF DOCUMENTS TO BE SUBMITTED IN SUPPORT OF BEC:

(a) Technical Criteria of BEC:

i. For Domestic Bidders:

All documents in support of Technical Criteria of BEC to be furnished by the Bidder shall necessarily be duly certified/ attested by Chartered Engineer and Notary Public with legible stamp.

ii. For Foreign Bidders:

All documents in support of Technical Criteria of BEC to be furnished by the Bidder shall necessarily be duly certified / attested by Chartered Engineer / Licensed Professional Engineer / EurEta Registered Engineer / Eur Ing or Equivalent Registered Engineer of Bidder’s country with legible stamp.

Further, supporting documents pertaining to technical BEC should also be either duly certified true copies, duly signed, dated and stamped by an official, authorized for this purpose in Indian Embassy / High Commission in Bidder’s country.

However, member countries of Hague Convention 1961, supporting documents pertaining to technical BEC certified “Apostille affixed by competent authorities designated by the government of Bidder’s Country” shall also be acceptable.

(b) Financial Criteria of BEC:

i. For Domestic Bidders:

Bidder shall submit “Details of Financial Capability of Bidder” in prescribed Format (F-16) duly signed and stamped by a Chartered Accountant (CA) / Certified Public Accountant (CPA).

Further, copy of audited annual financial statements submitted in bid shall be duly certified/ attested by Notary Public with legible stamp.



ii. For Foreign Bidders:

Bidder shall submit "Details of Financial Capability of Bidder" in prescribed format F-16 in the Bidding Documents, duly signed & stamped by a Practicing Chartered accountant (CA) / Certified Public Accountant (CPA).

Further, copy of Audited Annual Financial Statements submitted in Bid shall be certified true copies, duly signed, dated and stamped by an official, authorized for this purpose in Indian Embassy/ High Commission in Bidder's Country.

However, member countries of Hague Convention 1961, supporting document pertaining to financial BEC certified "Apostille affixed by Competent authorities designated by the government of bidder's country" shall also be acceptable.

Note:

1. In case of Foreign bidder, if the required documents for establishing the Bid Evaluation Criteria, such as duly audited Balance Sheet, Annual Reports, Purchase Order, Inspection Release Note etc., are not in English language, then the English translation copy of the same shall be furnished duly certified, stamped and signed by Local Chamber of Commerce or Indian Embassy in their Country or their Embassy in India or any translator in India recognised /authorised by their Embassy along with the original Balance Sheet, Annual report, Purchase Orders, Inspection release Note etc. with the unpriced bid. For the purpose of interpretation of the Bid, the English translation shall govern. This requirement of certification of English translation by Local Chamber of Commerce is additional to the requirement of authentication stipulated above as applicable.

G. Apart from above, Bidder must submit all other relevant documents/ information as specified in the Scope of Work/SCC for Technical Evaluation of bid or specified elsewhere in the Tender Document, towards proof of its responsiveness.

H. PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA

- 1.** Order (Public Procurement No. 1) dated 23.07.2020, Order (Public Procurement No. 2) dated 23.07.2020 and Order (Public Procurement No. 3) dated 24.07.2020, Department of Expenditure, Ministry of Finance, Govt. of India refers. The same are available at website <https://doe.gov.in/procurement-policy-divisions>.
2. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement No. 1) dated 23.07.2020.

Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs, Govt. of India

3. **"Bidder"** (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) **for purpose of this provision** means any person or firm or



company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.

4. **"Bidder from a country which shares a land border with India"** for the purpose of this:
- An entity incorporated, established or registered in such a country; or
 - A subsidiary of an entity incorporated, established or registered in such a country; or
 - An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - An entity whose beneficial owner is situated in such a country; or
 - An Indian (or other) agent of such an entity; or
 - A natural person who is a citizen of such a country; or
 - A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

5. **"Beneficial owner"** for the purpose of above (4) will be as under:

- In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

- "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
 - "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
- In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
 - Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;



- v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
6. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons
7. **SUBMISSION OF CERTIFICATE IN BIDS:**
- Bidder shall submit a certificate in this regard as Form-I to Section-II.
If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate rejection of the bid/termination and further action as per "Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices" of tender document.
8. The registration, wherever applicable, should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.
9. **DELETED**

I. EVALUATION METHODOLOGY:

- a. Economic evaluation of the bids will be carried out by calculating Net Present Value (NPV) as described in the Technical Specifications for Techno-Commercial acceptable bidder. The licensor/ agency/ bidder with the highest NPV will be recommended for selection.
- b. SBI bill selling exchange rate of one day prior to price bid opening shall be considered for Conversion to single currency for comparison of bids.



Form-I to Section II

**CERTIFICATE FOR TENDERS FOR WORKS INVOLVING POSSIBILITY OF
SUB-CONTRACTING**

To,
M/s Brahma Putra Cracker and Polymer Ltd.

SUB:

TENDER NO:

Dear Sir

We have read the clause regarding Provisions for Procurement from a Bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; we certify that, bidder M/s_____ (**Name of Bidder**) is:

- (i) not from such a country []
- (ii) if from such a country, has been registered []
with the Competent Authority.
(Evidence of valid registration by the
Competent Authority shall be attached)

(Bidder is to tick appropriate option (✓ or X) above).

We further certify that bidder M/s_____ (**Name of Bidder**) will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

We hereby certify that bidder M/s_____ (**Name of Bidder**) fulfills all requirements in this regard and is eligible to be considered.

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:



SECTION-III

INSTRUCTIONS TO **BIDDER**

(TO BE READ IN CONJUNCTION WITH
BIDDING DATA SHEET (BDS)



SECTION-III

INSTRUCTIOS TO BIDDER

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INSTRUCTIONS TO BIDDER [ITB]

(TO BE READ IN CONJUNCTION WITH BIDDING DATA SHEET (BDS))

[A] – GENERAL

1. SCOPE OF BID

- 1.1. The Owner as defined in the "Commercial Terms & Conditions (CTC)", wishes to receive Bids as described in the Bidding Document/Tender document issued by Owner. Employer/Owner/BCPL/ Brahmaputra Cracker and Polymer Ltd. occurring herein under shall be considered synonymous.
- 1.2. It shall be Bidder's responsibility to have thorough understanding of the reference documents and specifications included in the Bidding Document.
- 1.3. SCOPE OF BID: The scope of work/ Services shall be as defined in the Bidding documents.
- 1.4. The successful bidder will be expected to complete the scope of Bid within the period stated elsewhere in the Bidding document.
- 1.5. Throughout the Bidding Document, the terms 'Bid', 'Tender' & 'Offer' & Proposal and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

2. ELIGIBLE BIDDERS

- 2.1. The Bidder shall not be under a declaration of ineligibility by Employer for Corrupt/ Fraudulent/ Collusive/ Coercive practices, as defined in "Instructions to Bidders [ITB], Clause No. 39" (Action in case Corrupt/ Fraudulent/ Collusive/ Coercive Practices).
- 2.2. The Bidder is not put on 'Holiday' by GAIL/ BCPL or Public Sector Project Management Consultant (like EIL due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on Due Date of Submission of Bid. Further, neither bidder nor their allied agency/(ies) (as defined in the Annexure-I, Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of GAIL/ BCPL or the Ministry of Petroleum and Natural Gas.

If the Bidding document is/was issued inadvertently/ downloaded from website, offers submitted by such bidders shall not be considered for opening/ evaluation/Award.

In case there is any change in status of the declaration prior to Award of Contract, the same has to be promptly informed to BCPL by the Bidder.

It shall be the sole responsibility of the bidder to inform BCPL/ EIL in case the bidder is put on 'Holiday' by GAIL/ BCPL or Public Sector Project Management Consultant (like EIL due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on Bid Due Date and during the course of finalization of the tender. Concealment of the facts shall tantamount



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to misrepresentation of facts and shall lead to action against such Bidders as per Clause No. 39 of ITB.

- 2.3. The Bidder should not be under any liquidation, court receivership or similar proceedings on Bid Due Date of submission of bid. In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to BCPL/ EIL by the bidder.

It shall be the sole responsibility of the bidder to inform BCPL/ EIL in case the bidder is under any liquidation court receivership or similar proceedings on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause no.39 of ITB.

- 2.4. Bidder shall not be affiliated with a firm or entity:

- (i) that has provided consulting services related to the work to the Employer during the preparatory stages of the work or of the project of which the works/services forms a part of or
- (ii) that has been hired (proposed to be hired) by the Employer as an Engineer/ Consultant for the contract.

- 2.5. Neither the firm/ entity appointed as the Project Management Consultant (PMC) for a ~~Project (except feasibility report)~~ contract nor its affiliates/ JV'S/ Subsidiaries shall be allowed to participate in the tendering process ~~unless it is the sole Licensor/Licensor nominated agent/ vendor.~~

- 2.6. Pursuant to qualification criteria set forth in the bidding document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.

- 2.7. **Power of Attorney:**

Power of Attorney (POA) to be issued by the bidder in favour of the authorised employee(s), in respect of the particular tender, for purpose of signing the documents including bid, all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decision on behalf of the bidder. Any consequence resulting due to such signing shall be binding on the Bidder.

The Power of Attorney shall be issued as per the constitution of the bidder as below:

- a) **In case of Proprietorship:** by Proprietor
- b) **In case of Partnership:** by all Partners or Managing Partner
- c) **In case of Limited Liability Partnership:** by any bidder's employee authorized in terms of Deed of LLP
- d) **In case of Public / Limited Company:** PoA in favour of authorized employee(s) by Board of Directors through Board Resolution or by the designated officer



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authorized by Board to do so. Such Board Resolution should be duly countersigned by Company Secretary / MD / CMD / CEO.
The Power of Attorney should be valid till award of contract to successful bidder.

3. BIDS FROM "UNINCORPORATED JOINT VENTURE"/"CONSORTIUM" : NOT APPLICABLE

4. ONE BID PER BIDDER

- 4.1 A Bidder shall submit only 'one [01] Bid' against this Tender Document. A Bidder who submits or participates in more than 'one [01] Bid', will cause all the Bids in which the Bidder has participated to be disqualified.
- 4.2 More than one bid means bid(s) by bidder(s) having same Proprietor / Partners / Limited Liability Partner in any other Bidder (s). Further more than one bids shall also include two or more bidders having common power of attorney holder.
Failure to comply this clause during tendering process will disqualify all such bidders from process of evaluation of bids.
- 4.3 Alternative Bids shall not be considered.
- 4.4 The provisions mentioned at sl. no. 4.1 and 4.2 shall not be applicable wherein bidders are quoting for different Items / Sections / Parts / Groups/ SOR items of the same tender which specifies evaluation on Items / Sections / Parts / Groups/ SOR items basis.

5. COST OF BIDDING

- 5.1. The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Documentation Charges, Bank charges, all courier charges, translation charges, document authentication charges, site visit charges and any associated charges including taxes & duties thereon. Further, BCPL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

6. SITE VISIT – NOT APPLICABLE

and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.

The Bidder shall not be entitled to hold any claim against -compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.



[B] – BIDDING DOCUMENT

7. CONTENTS OF BIDDING DOCUMENTS

7.1. The contents of Bidding Document / Tender Document are those stated below, and should be read in conjunction with any 'Addendum / Corrigendum' issued in accordance with "ITB: Clause-9":

- Section-I : Invitation for Bid [IFB], Annexure & Cut-out slip
- Section-II : Bid Evaluation Criteria [BEC] & Evaluation Methodology, Form and Appendix(es).
- Section-III : Instructions to Bidders [ITB], Annexures and Forms & Formats
- Section-IV : Commercial Terms & Conditions (CTC)
- Section-V : Schedule of Prices (SOP)
- Section-VI : Technical Section

Note:

1. The subject tender is based on standard formats and applicability of some specific clauses may be seen in Annexure –IV i.e. Bidding Data Sheet (BDS).
2. For participation in e-tender, instructions are mentioned at Annexure-III to Section-III.

7.2. The Bidder is expected to examine all instructions, forms, terms & conditions in the Bidding Document. The Bidding Document together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will be at Bidder's risk and may result in the rejection of his Bid.

8. CLARIFICATION OF BIDDING DOCUMENTS

8.1. A prospective Bidder requiring any clarification(s) of the Bidding Documents may notify BCPL in writing or by fax or email in the format "F-11" at BCPL's mailing address indicated in the BDS not later than 02 (two) days prior to pre-bid meeting (in cases where pre-bid meeting is scheduled) or 05 (five) days prior to the due date of submission of bid in cases where pre-bid meeting is not held. BCPL/EIL reserves the right to ignore the bidders request for clarification if received after the aforesaid period. BCPL/EIL may respond in writing to the request for clarification. BCPL's/EIL's response including an explanation to the query, but without identifying the source of the query will be uploaded on BCPL's website(s) as mentioned at Clause No. 2.0 (G) of IFB/ communicated to prospective bidders by e-mail/ fax.



- 8.2. Any clarification or information required by the Bidder but same not received by the Employer at clause 8.1 (refer BDS for address) above is liable to be considered as "no clarification / information required".

9. AMENDMENT OF BIDDING DOCUMENTS

- 9.1. At any time prior to the 'Bid Due Date', BCPL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Document by addenda/ corrigendum.
- 9.2. Any addendum/ corrigendum thus issued shall be integral part of the Tender Document and shall be hosted on the websites as provided at clause no. 2.0 (G) of IFB /communicated to prospective bidders by e-mail/ fax. Bidders have to take into account all such addenda/ corrigendum before submitting their Bid.
- 9.3. The Employer, if consider necessary, may extend the Bid Due Date in order to allow the Bidders a reasonable time to furnish their most competitive bid taking into account the addenda/ corrigendum issued thereof.



[C] – PREPARATION OF BIDS

10. LANGUAGE OF BID:

- 10.1. The bid prepared by the Bidder and all correspondence, drawing(s), document(s), certificate(s) etc. relating to the Bid exchanged by Bidder and BCPL shall be written in English language only. In case a document, certificate, printed literature etc. furnished by the Bidder in a language other than English, the same should be accompanied by an English translation duly authenticated by the Chamber of Commerce of Bidders Country, in which case, for the purpose of interpretation of the Bid, the English translation shall govern.
- 10.2. In the event of submission of any document/certificate by the Bidder in a language other than English, the English translation of the same duly authenticated by Chamber of Commerce of Bidder's country shall be submitted by the Bidder.

11. DOCUMENTS COMPRISING THE BID

In case the bids are invited under Two Bid System, The Bid prepared by the Bidder shall comprise of the following documents :-

11.1.1. PART-I: "TECHNO-COMMERCIAL / UN-PRICED BID"

Part-I of the Bid shall contain the following:

- a) 'Covering Letter' on Bidder's 'Letterhead' clearly specifying the enclosed contents.
- b) 'Bidder's General Information', as per 'Form F-1'.
- c) Copy of Schedule of Price (SOP) with prices blanked out but mentioning "Quoted" / "Not Quoted" (as applicable) written against each item, in support of having submitted prices in the Priced Bid /SOP strictly in the format provided in the Tender Document.
- d) 'Letter of Authority' on the Letter Head, as per 'Form F-3'
- e) 'Agreed Terms and Conditions', as per 'Form F-5A or 'Form-5B (as the case may be).
- f) Duly certified / attested documents in accordance with the "Bid Evaluation Criteria [BEC]", Section II of Tender Document.
- g) Copy of Power of Attorney / copy of Board Resolution, in favour of the authorized signatory of the Bid, as per clause no.2.7 of ITB.
- h) Copy of EMD, as per Clause 16 of ITB (if Applicable)___EMD is Not Applicable; However, Bidder is required to submit Declaration for EMD in Bid as per proforma at Annexure-1 to Section-I.
- i) Proforma for details of Indian Agents as per Form F-15 if Agent/Consultant/Retainer/ Associate is involved.
- j) 'Indemnity Bond' as per 'Form F-18'.
- k) All forms and Formats including Annexures.



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- l) Undertaking as per *Form-I to Section II* regarding Provisions for Procurement from a Bidder which shares a land border with India.
- m) Master Index of the Bidding Document.
- n) Corrigendum/ Amendment/ Clarification(s) of the Tender/ Bidding Document digitally signed by the Authorized Signatory holding POA.
- o) Additional documents specified in BDS or mentioned elsewhere in the Tender Document and its Corrigendum/ Amendment/ Clarification(s).
- p) All forms and format/ data sheet if required in Technical/ SOW of Tender Document
- q) Any other information/details required as per Bidding Document.

11.1.2 PART-II: Price Bid

Part-II of the Bid shall contain Price Bid only. The Prices are to be submitted strictly in the Schedule of Prices (SOP) format of the Tender Document. BCPL shall not be responsible for any failure on the part of the bidder to follow the instructions given in the Note below.

Note: In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from Bidders, while evaluating the un-priced part of the Bid, any of the Bidders submits a sealed envelope stating that it contains revised prices; such Bidder(s) will be requested to withdraw the revised prices failing which the bid will not be considered for further evaluation.

- 11.2. Bidders are requested to refer instructions for participating in e-Tendering enclosed herewith as Annexure-III, Ready Reckoner for Bidders and FAQs available in e-Portal and Bids submitted manually shall be rejected. The Bid must be submitted on e-portal (<https://www.eprocure.gov.in>) as mentioned below:-

- 11.2.1. **PART-I: “TECHNO-COMMERCIAL/ UN-PRICED BID”** comprising of all the above documents mentioned at 11.1.1 along with copies of ~~Integrity Pact, EMD/ Bid Bond and Power of Attorney, (wherever applicable)~~, should be uploaded in Govt. e-tendering Website. ~~All pages of the Bid must be digitally signed by the "authorized signatory" of the Bidder holding Power of Attorney.~~

Further, Bidders must submit the original ~~Bid Security / EMD~~, Power of Attorney, ~~Integrity Pact (wherever applicable)~~ and any other documents specified in the Bidding Document to the address mentioned in IFB, in a sealed envelope, superscribing the details of Document (i.e. tender number& tender for) within 7 days from the Bid Due Date.

~~Bidders are required to submit the EMD in original by Bid Due Date & Time or upload a scanned copy of the same in the Part-I of the Bid. If the Bidder is unable to submit EMD in original by Bid Due Date and Time, the Bidder is required to upload a scanned~~



copy of the EMD in Part I of Bid, provided the original EMD, copy of which has been uploaded, is received within 7 days from the Bid Due Date, failing which the Bid will be rejected irrespective of their status/ ranking in tendering process and notwithstanding the fact that a copy of EMD was earlier uploaded by the Bidder.

11.2.2. **PART-II: PRICE BID**

Part-II of the Bid shall contain Price Bid only. The Prices are to be submitted strictly in the Schedule of Prices (SOP) format of the Tender Document as per provisions mentioned at para 11.1.2 hereinabove and to be uploaded in SOR attachment as per instructions provided in Annexure-III (Instructions for participating in E-Tender) of Tender Document and Ready Reckoner available on BCPL's e-Portal.

BCPL shall not be responsible for any failure on the part of the Bidder to follow the instructions given in the Note below.

Note:

- i) Bidders are advised NOT to mention Rebate/ Discount separately, either in the SOP format or anywhere else in the offer. In case Bidder(s) intend to offer any Rebate/ Discount, they should include the same in the item rate(s) itself under the "Schedule of Prices (SOP)" and indicate the discounted unit rate(s) only.
- ii) If any unconditional rebate has been offered in the quoted rate the same shall be considered in arriving at evaluated price. However no cognizance shall be taken for any conditional discount for the purpose of evaluation of the bids.
- iv) In case, it is observed that any of the bidder(s) has/have offered suo-moto Discount/ Rebate after opening of unpriced bid but before opening of price bids such discount /rebate(s) shall not be considered for evaluation. However, in the event of the bidder emerging as the lowest evaluated bidder Licensor/ Agency/ Bidder with the Highest NPV without considering the discount/ rebate(s), then such discount/ rebate(s) offered by the bidder shall be considered for Award of Work and the same will be conclusive and binding on the Bidder.
- v) In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from bidders, while evaluating the un-priced part of the bid, any of the bidders submits a sealed envelope stating that it contains revised prices; such bidder(s) will be requested to withdraw the revised prices; failing which, the bid will not be considered for further evaluation.
- vi) ~~In case any bidder does not quote for any item(s) of "Schedule of Rates" and the estimated price impact is more than 10% of the quoted price, then the bid will be rejected. If such price impact of unquoted items is 10% or less of his quoted price, then the unquoted item(s) shall be loaded highest of the price quoted by the other bidders . If such bidder happens to be lowest evaluated bidder, price of unquoted items shall be considered as included in the quoted bid price.~~

12. **BID PRICES**



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- 12.1. Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole works as described in Bidding Documents, based on the rates and prices submitted by the Bidder and accepted by the Employer.

The Schedule of Prices shall be read in conjunction with all other sections of the Bidding Document.

- 12.2. The Prices quoted by the Bidder shall be firm and fixed as per tender provisions.
- 12.3. Rates/amount must be filled in format for 'Schedule of Prices (SOP)' enclosed as part of Bidding Document. If quoted in separate typed sheets and any variation in item description, unit, quantity and conditions of 'SOP' etc. is noticed, the bid is liable to be rejected.
- 12.4. Bidder shall quote all the items of Schedule of Prices after careful analysis of cost involved for the performance of the completed item considering all parts of the Bidding Document. In case any activity is specifically not covered in description of item under 'Schedule of Prices' but is required to complete the work as specified elsewhere in the Bidding Document, then the quoted prices for the item shall be deemed to be inclusive of cost incurred for such activity and no claims whatsoever on this account shall be entertained by Employer.

13. TAXES & DUTIES: Refer Annexure –I to Commercial Terms and Conditions (CTC).

- 13.1. GST, as quoted by the Bidder, shall be deemed as final and binding for the purpose of bid evaluation (applicable for Tenders where bidder quotes the GST rates). In case a bidder enters “zero/ blank” GST or an erroneous GST, the bid evaluation for finalizing the L1 bidder will be done considering the quoted GST rate. No request for change in GST will be entertained after submission of bids.

In cases where the successful bidder quotes a wrong GST rate, for releasing the order, the following methodology will be followed:

- In case the actual GST rate applicable is lower than the quoted GST rate, the actual GST rate will be added to the quoted basic prices. The final cash outflow will be based on actual GST rate.
- In case the actual GST rate applicable is more than the quoted GST rate, the basic prices quoted will be reduced proportionately, keeping the final cash outflow the same as the overall quoted amount.

Based on the Total Cash Outflow calculated as above, BCPL shall place orders.

- 13.2. Bidder to note the following :

“Prices quoted by the Indian Bidder shall be on Ex-works Basis (including packing and forwarding).”

This supersedes any other Clause/s relevant to Price quoted by the Indian Bidders mentioned elsewhere in the Tender Document(s).



14. BID CURRENCIES:

- 14.1. Bidders shall quote the price for materials and services to be procured from India in Indian Rupees (INR) only.
- 14.2. Bidder shall quote the prices for materials and services to be imported in India in US Dollars (USD) or Euro or GBP or INR, or any combination of USD and INR, or Euro and INR, or GBP and INR.
- 14.3. No other currencies shall be allowed other than Indian Rupees or US Dollar or Euro or GBP as above.
- 14.4. Currency once quoted will not be allowed to be changed. BCPL shall not be compensating for any exchange rate fluctuation.

15. BID VALIDITY

- 15.1. Bids shall be kept valid for period specified in BDS from the final Due date of submission of Bid. A Bid valid for a shorter period may be rejected by BCPL as 'non-responsive'.
- 15.2. In exceptional circumstances, prior to expiry of the original 'Bid Validity Period', the Purchaser-Employer may request the Bidder(s) to extend the 'Period of Bid Validity' for a specified additional period. The request and the responses thereto shall be made in writing or by fax/ email. ~~A Bidder may refuse the request without forfeiture of his 'Bid Security'.~~ A Bidder agreeing to the request will not be required or permitted to modify his Bid, ~~but will be required to extend the validity of its 'Bid Security' for the period of the extension and in accordance with "ITB: Clause 16" in all respects.~~

16. EARNEST MONEY DEPOSIT (EMD) NOT APPLICABLE

- 16.1 ~~Bid must be accompanied with earnest money (i.e. Earnest Money Deposit (EMD) also known as Bid Security) in the form of 'Demand Draft'/'Banker's Cheque' [in favour of Brahmaputra Cracker & Polymer Ltd. payable at place mentioned in BDS] or 'Bank Guarantee' strictly as per the format given in form F-2 of the Bidding Document. Bidder shall ensure that EMD submitted in the form of 'Bank Guarantee' or 'Letter of Credit' should have a validity of at least 'two [02] months' beyond the validity of the Bid. EMD submitted in the form of 'Demand Draft' or 'Banker's Cheque' should be valid for three months.~~
~~Bid not accompanied with EMD, or EMD not in requisite format shall be liable for rejection. The EMD shall be submitted in Indian Rupees for Indian bidders and US Dollars/ Indian Rupees for foreign bidders.~~
- 16.2 ~~BCPL shall not be liable to pay any documentation charges, Bank charges, commission, interest etc. on the amount of EMD. In case EMD is in the form of a 'Bank Guarantee', the same shall be from any Indian scheduled Bank or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank~~



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- in case of Indian bidder and from any reputed International Bank or Indian Scheduled Bank in case of Foreign bidder. However, in case of 'Bank Guarantee' from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores]/ or its equivalent in U.S. Dollars and a declaration to this effect should be made by such commercial Bank either in the 'Bank Guarantee' itself or separately on its letterhead.
- ~~16.3 Any Bid not secured in accordance with "ITB: Clause 16.1 & Clause 16.2" may be rejected by BCPL as non-responsive.~~
- ~~16.4 Unsuccessful Bidder's EMD will be discharged/ returned as promptly as possible, but not later than 'thirty [30] days' after finalization of tendering process.~~
- ~~16.5 The successful Bidder's EMD will be discharged upon the Bidder's acknowledging the 'Award' and signing the 'Agreement' (if applicable) and furnishing the 'Contract Performance Security (CPS)/ Security Deposit' pursuant to clause no. 38 of ITB.~~
- ~~16.6 Notwithstanding anything contained herein, the EMD may also be forfeited in any of the following cases:~~
- ~~(a) If a Bidder withdraws his Bid during the 'Period of Bid Validity'~~
 - ~~(b) If a Bidder has indulged in corrupt/fraudulent/collusive/coercive practice~~
 - ~~(c) If the Bidder modifies Bid during the period of bid validity (after Due Date and Time for Bid Submission).~~
 - ~~(d) Violates any other condition, mentioned elsewhere in the Tender Document, which may lead to forfeiture of EMD.~~
 - ~~(e) In the case of a successful Bidder, if the Bidder fails to:~~
 - ~~(i) to acknowledge receipt of the "Notification of Award" / Fax of Acceptance[FOA];~~
 - ~~(ii) to furnish "Contract Performance Security / Security Deposit", in accordance with "ITB: Clause 38"~~
 - ~~(i) to accept 'arithmetical corrections' as per provision of the clause 30 of ITB.~~
- ~~16.7 In case EMD is in the form of 'Bank Guarantee', the same must indicate the Tender Document No. and the name of Tender Document for which the Bidder is quoting. This is essential to have proper correlation at a later date.~~
- ~~16.8 MSEs (Micro & Small Enterprises) are exempted from submission of EMD in accordance with the provisions of PPP 2012. The Government Departments/PSUs are also exempted from the payment of EMD. Further, Startups are also exempted from the payment of EMD.~~
- ~~16.9 In case Bidder is a Micro or Small Enterprise under the Micro, Small and Medium Enterprises Development Act, 2006, the Bidder shall submit the following:~~
- ~~a) Ministry of MSME vide Gazette notification no. CG-DL-E-26062020-220191 dated 26.06.2020 had notified certain criteria for classifying the enterprises as Micro, Small and Medium Enterprises and specified form and procedure for filing the memorandum~~



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(Udyam Registration) w.e.f. 01.07.2020 (for complete details of policy refer website of Ministry of MSME i.e; <https://msme.gov.in/>)

Accordingly, Micro and Small Enterprises (MSEs) shall be required to submit Udyam Registration Certificate for availing benefit under Public Procurement Policy for MSEs-2012

- b) ~~An enterprises registered prior to 30.06.2020 and who are not re-registered with Udyam Registration, shall continue to be valid for a period upto 31.03.2021. Such enterprise shall submit EM Part II or Udyog Aadhaar Memorandum (UAM) for availing benefits of PPP-2012.~~

~~Further, Startup is required to submit requisite certificate towards Startup enterprise registration issued by Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce& Industry.~~

~~The above documents submitted by the bidder shall be duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp.~~

~~If the bidder does not provide the above confirmation or appropriate document or any evidence, then it will be presumed that they do not qualify for EMD exemption admissible in the Public Procurement Policy (PPP) 2012.~~

~~16.10 In case of forfeiture of EMD/ Bid Security, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by BCPL. The forfeiture amount will be subject to final decision of BCPL based on other terms and conditions of order/ contract.~~

~~16.11 EMD/Bid Security will not be accepted in case the same has reference of 'remitter'/'financer' other than bidder on the aforementioned financial instrument of EMD/ Bid Security submitted by the bidder and bid of such bidder will be summarily rejected.~~

17. PRE-BID MEETING

17.1. The Bidder(s) or his designated representative are invited to attend a "Pre-Bid Meeting" which will be held at address specified in IFB. It is expected that a bidder shall not depute more than 02 representatives for the meeting.

17.2. Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage and give hands-on demonstration of e-tendering process. The Bidder must submit their queries / clarifications to BCPL in the format "F-11", as mentioned at clause no. 8.0 of ITB.

17.3. Replies to Pre-Bid Queries will be uploaded on e-tendering website(s) against the Tender. Any modification of the Contents of Bidding Documents listed in "ITB: Clause-7.1", that may become necessary as a result of the Pre-Bid Meeting shall be made by the



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Employer/Consultant exclusively through the issue of an Addendum / Corrigendum pursuant to "ITB: Clause-9", and not through the minutes of the Pre-Bid Meeting.

17.4. Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.

18. FORMAT AND SIGNING OF BID

18.1. The original and all copies of the Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by each person signing, must be typed or printed below the signature. All pages of the Bid except for unamendable printed literature where entry(s) or amendment(s) have been made shall be initialed by the person or persons signing the Bid.

18.2. The Bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the Bid.

18.3. In case of e-tendering, digitally signed documents to be uploaded as detailed in addendum to ITB.

19. ZERO DEVIATION AND REJECTION CRITERIA

19.1. ZERO DEVIATION: Deviation to terms and conditions of "Bidding Document" may lead to rejection of bid. BCPL will accept bids based on terms & conditions of "Bidding Document" only. Bidder may note that BCPL will determine the substantial responsiveness of each bid to the Bidding Documents pursuant to provision contained in clause 29 of ITB. For purpose of this, a substantially responsive Bid is one which conforms to all terms and conditions of the Bidding Documents without deviation(s) or reservations. BCPL's determination of a Bid's responsiveness is based on the content of the bid itself without recourse to extrinsic evidence. BCPL reserves the right to raise technical and/or commercial query(ies) to the Bidder(s), if required. The response(s) to the same shall be in writing, and no change in the price(s) or substance of the bids shall be sought, offered or permitted. The substance of the Bid includes but not limited to prices, completion/ delivery Period, scope, technical specifications etc. Bidders are requested not to take any deviation(s)/exception(s) to the terms and conditions of "Bidding Document", and submit all requisite documents as mentioned in this "Bidding Document", failing which their Bid will be liable for rejection. If a bidder does not reply to the queries in the permitted time frame, then its bid shall be evaluated based on the documents available in the Bid.

19.2. **REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Bidding document shall lead to summarily rejection of Bid:

(a) Firm Price

(b) Declaration for Bid Security ~~Earnest Money Deposit / Bid Security~~ Not Applicable for this Tender.



- (c) Scope of Work
- (d) Specifications
- (d) Price Schedule
- (e) Delivery / Completion Schedule
- (f) Period of Validity of Bid
- (g) Price Reduction Schedule
- (h) Contract Performance Bank Guarantee / Security Deposit
- (i) Warranty/ Guarantee
- (j) Arbitration / Resolution of Dispute/Jurisdiction of Court
- (k) Force Majeure & Applicable Laws
- (l) Integrity Pact, if applicable
- (m) Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid

Note: Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document.

20. E-PAYMENT

Brahmaputra Cracker and Polymer Ltd. has initiated payments electronically to Suppliers / Contractors through '**e-banking**'. The successful bidder should give the details of his bank account as per the bank mandate form.



[D] – SUBMISSION OF BIDS

21. SUBMISSION, SEALING AND MARKING OF BIDS

21.1. Bids shall be submitted through e-tender mode in the manner specified elsewhere in Bidding Document. No Manual/ Hard Copy (Original) / through email offer shall be acceptable. ~~EMD~~ Physical documents shall be addressed to the BCPL/ EIL at address specified in IFB.

21.2. The Bid shall be addressed to the Owner/ Consultant at address specified in IFB.

21.3. Bids submitted under the name of AGENT/ CONSULTANT/ REPRESENTATIVE /RETAINER/ ASSOCIATE etc. on behalf of a bidder/affiliate shall not be accepted.

21.4. **AGENTS/ CONSULTANTS/ REPRESENTATIVES/ RETAINERS/ ASSOCIATES:**

21.4.1. BCPL would prefer to deal directly with the manufacturers/ principals abroad without involving any Indian Agent. But in case they decide to have their Agent/ Consultant/ Representative/ Retainer/Associate in India and pay commission for their services against a particular tender it should be bare minimum and the principal would have to certify that such a commission is commensurate with the services rendered to them by such an Agent/Consultant/ Representative/ Retainer/ Associate in India. The principal will also have to broadly list out services to be rendered by the Agent/Consultant/ Representative/ Retainer/Associate in India.

21.4.2. In the event Bidder is having Agent/Consultant/Representative/Retainer/ Associate/servicing facilities in India (who is not an employee of the bidder) the bidder should indicate in their offer the name of such an Agent/Consultant/Representative /Retainer /Associate, they have for services in India. The bidder must also indicate clearly the commission payable to the Agent/Consultant/Representative/Retainer/Associate in rupees in terms of Agreement (enclosing copy of the same). The Bidder, in his bid will indicate the nature and extent of service to be provided by such an Agent/Consultant/ Representative/Retainer/Associate on behalf of the bidder and also remuneration therefore provided in the price, as a separate item, quoted by the bidder to BCPL. Such remuneration/commission will be paid by BCPL in non-convertible Indian currency in India. Should it be established at any subsequent point of time that the above statement of the Bidder is not correct or that any other amount of remuneration/commission either in India or abroad is being paid to any one (who is not an employee of the bidder), the Bidder would be liable to be debarred from participating in the future tenders of BCPL. Failure to give such information will lead to rejection of the offer.

The following particulars will also be furnished by the bidder:

- (i) Name, address and precise relationship between the foreign manufacturer/ principal and their Agent/Consultant/Representative/Retainer/ Associate in India.



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- (ii) The mutual interest which the manufacturer/principal and the Agent/ Consultant/Representative/ Retainer/Associate in India have in the business of each other.
- (iii) Any payment which the Agent/ Consultant/ Representative/ Retainer/ Associate receives in India or abroad from the manufacturer/principal whether as a commission for the contract or as a general fee. Bidder's quoted price shall be treated as inclusive of such commission/fee.
- (iv) Permanent Income Tax number of Agent/ Consultant/ Representative/ Retainer/ associate in India.
- (v) Permanent income tax account number of foreign supplier.
- (vi) All services to be rendered by the Agent/Consultant/Representative /Retainer/Associate.

Note: Tenders which do not comply with the above stipulations are liable to be ignored.

21.4.3. Overseas bidder should submit bid directly. Bid sent through Agent/Consultant /Representative/Retainer/Associate will not be recognized. Agent/ Consultant/Representative/Retainer/Associate of the overseas manufacturers/suppliers are, however, permitted to download Bidding documents and attend bid opening provided such as Agent/Consultant/ Representative/Retainer/Associate has a power of attorney/letter of authority setting out very clearly his role, which will be limited to such areas of activity as downloading of Bid documents, attending of Bid opening and claiming of payment for their services, provided further that such a power of attorney/ letter of authority is submitted to BCPL in advanced for scrutiny and acceptance or otherwise.

22. DEADLINE FOR SUBMISSION OF BIDS

- 22.1. The Bids must be submitted through e-tender mode not later than the date and time specified in the Bidding Document/BDS.
- 22.2. BCPL may, in exceptional circumstances and at its discretion, extend the Due Date & Time for Bid submission (Clause Nos.-8 and 9 ITB refers) of through a Corrigendum as per clause no. 9.0 of ITB. In that case all rights and obligations of BCPL and the Bidders, previously subject to the original Due Date & Time will thereafter be subject to the Due Date & Time as extended. Such Corrigendum for extension of Due Date & Time of Bid submission will be uploaded on BCPL and Govt. website(s) and will be communicated to the prospective bidders.

23. LATE BIDS

- 23.1. Any bids received after the notified date and time of closing of tenders (i.e. Bid Due Date) will be treated as late bids.



- 23.2. E-tendering system for submission of bids shall close immediately after the due date for submission of Bid and no Bids can be submitted thereafter.

In case, ~~EMD/ Bid bond~~/physical document has been received but the Bid is not submitted by the Bidder in the e-tendering portal, such ~~EMD/ Bid bond~~/ physical documents shall be returned immediately.

- 23.3. Unsolicited Bids or Bids received to address other than one specifically stipulated in the Bidding Document will not be considered for evaluation/opening/award, if not received to the specified destination within stipulated date & time.

24. MODIFICATION AND WITHDRAWAL OF BIDS

- 24.1. The bidder may withdraw or modify its Bid after Bid submission but before the Due Date and Time for submission as per Bidding Document.
- 24.2. The modification shall also be prepared, sealed, marked and dispatched in accordance with the provisions of the clause 11 & 22 of ITB with relevant 'Cut-Out Slip' duly pasted and mentioning on top of the envelope as "MODIFICATION". In case of withdrawal of Bid, the Envelope containing withdrawal letter duly superscribing the envelope as "WITHDRAWAL" and "Tender Document number :...."/ communication regarding withdrawal of bid with "Tender Document number :...."/ must reach concerned dealing official of BCPL/EIL within Due date & Time of submission of Bid. No Bid shall be modified/ withdrawn after the Due Date & Time for Bid submission.
- 24.3. Any withdrawal/ modification/substitution of Bid in the interval between the Due Date & Time for Bid submission and the expiration of the period of bid validity specified by the Bidder in their Bid shall result in the ~~Bidder's forfeiture of EMD pursuant to clause 16 of ITB and~~ rejection of Bid.
- 24.4. The latest Bid submitted by the Bidder before Bid Due Date & Time shall be considered for evaluation and all other Bid(s) shall be considered to be unconditionally withdrawn.

[E] – BID OPENING AND EVALUATION

25. EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

BCPL reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for BCPL's action. However, Bidder if so desire may seek the reason (in writing) for rejection of their Bid to which BCPL shall respond quickly.



26. BID OPENING

26.1. Unpriced Bid Opening :

26.1.1. BCPL/EIL will open Bids, in the presence of bidders' designated representatives who choose to attend, at date, time and location stipulated in the BDS. The Bidders' representatives, who are present shall sign a bid opening register evidencing their attendance.

26.1.2. However, Bidders can witness bid opening by logging on to the e-Tendering Portal through their system using their valid digital signature certificate.

26.2. Priced Bid Opening:

26.2.1. BCPL/EIL will open the price Bids of those Bidders who meet the qualification requirement and whose Bids is determined to be technically and commercially responsive. Bidders selected for opening of their price bids shall be informed about the Date and Time of Price Bid Opening. Bidders may depute their authorized representative to witness attend the Price Bid Opening. The Bidders' representatives, who are present shall sign a Price Bid Opening Register evidencing their attendance and may be required to be present on a short notice.

26.2.2. The Price Bids of those Bidders who were not found to be techno-commercially responsive shall not be opened.

27. CONFIDENTIALITY

Information relating to the examination, clarification, evaluation and comparison of Bids, and recommendations for the award of a Contract, shall not be disclosed to Bidder(s) or any other persons not officially concerned with such process.

28. CONTACTING THE EMPLOYER

28.1. From the time of Bid opening to the time of award of Contract, if any Bidder wishes to contact the Employer on any matter related to the Bid, it should do so in writing. Information relating to the examination, clarification, evaluation & recommendation for award shall not be disclosed.

Any effort by the Bidder to influence the Employer in the Employer's 'Bid Evaluation', 'Bid Comparison', or 'Contract Award' decisions may result in the rejection of the Bidder's Bid and action shall be initiated as per procedure for action in case Corrupt / Fraudulent / Collusive / Coercive practices in this regard.

29. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

29.1. The employer's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:-

- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents;



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- (b) Has been properly signed;
 - (c) Is accompanied by the required Declaration for EMD in Bid as per proforma at Annexure-1 to Section-I. ~~'Earnest Money / Bid Security'~~; __Not Applicable.
 - (d) Is substantially responsive to the requirements of the Bidding Document; and
 - (e) Provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to "ITB: Clause-29.2"
- 29.2. A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Document without any material deviations or reservations or omissions for this purpose Employer defines the foregoing terms below:-
- a) "Deviation" is departure from the requirement specified in the tender documents.
 - b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
 - c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document for evaluation of Bid.
- 29.3. A material deviation, reservation or omission is one that,
- a) If accepted would,
 - i) Affect in any substantial way the scope, quality, or performance of the job as specified in Bidding Documents.
 - ii) Limit, in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract.
 - b) If rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.
- 29.4. The employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.
- 29.5. If a Bid is not substantially responsive, it may be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the material deviation, reservation or omission.

30. CORRECTION OF ERRORS

- 30.1. Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors.

Errors in Price Schedule/ SOP will be corrected by the Employer as follows:

- (i) When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the Bidder (i.e. by multiplying the quantity and rate) shall be taken as correct.



- (ii) When the rate quoted by the Bidder in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount. The amount shall be re-calculated/ corrected accordingly.
 - (iii) When it is not possible to ascertain the correct rate, in the manner prescribed above, the rate as quoted in words shall be adopted and the amount worked out, for comparison purposes.
- 30.2. The amount stated in the bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors. If the bidder does not accept the corrected amount of bid, its bid will be rejected, ~~and the EMD shall be forfeited.~~

31. CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS

To facilitate evaluation and comparison, the Employer / Consultant will convert all bid prices expressed in the amounts in various currencies in which the bid price is payable to single currency and that will be Indian Rupees only at the Bills selling exchange rate published by the State Bank of India on one day prior to the Price Bid Opening Date.

32. EVALUATION AND COMPARISON OF BIDS

Bid shall be evaluated as per Evaluation Methodology mentioned in Section-II of Tender Document (refer clause 7.0 of ITB).

In case of a tie at the Highest Net Present Value (NPV) between two or more Licensor/ Agency/ Bidders, the order/ LOA will be placed on the Bidder who has higher/ highest turnover in last audited financial year.

32.1. Bidder Qualification

The Bidder qualification shall be as mentioned in the Bidder Evaluation Criteria stated in Section-II of Tender Document. The Bidders who are considered qualified, on the basis of details furnished in respect of Bidder Evaluation Criteria, shall be considered for further evaluation.

32.2. Technical and Commercial Evaluation

- 32.2.1. Technical acceptability shall be ascertained in accordance with requirements mentioned in Technical Specifications / Technical Part of Bidding Document.
 - 32.2.2. Commercial/ Financial acceptability shall be ascertained in accordance with Bid's responsiveness to commercial/ financial part of bidding document.
 - 32.2.3. BCPL/EIL reserves the right to use in-house information for assessment of capability of bidder during evaluation.
- 32.3. Economic evaluation of the bids will then be carried out by calculating Net Present Value (NPV) as described in the Technical Specifications for Techno-Commercial acceptable bidder. The licensor/ bidder with the highest NPV will be recommended for selection.



33. COMPENSATION FOR EXTENDED STAY :- NOT APPLICABLE

- 33.1. In the event of the time of completions of work getting delayed beyond the time schedule indicated in the bidding document plus a grace period equivalent to 1/5th of the time schedule or 2 months whichever is more, due to reasons solely attributable to Employer, the Contractor shall be paid compensation for extended stay (ESC) to maintain necessary organizational set up, manpower and construction tools, tackles, equipment etc. at site of work.
- 33.2. Unless otherwise specified, the bidder is required to specify the rate for ESC on per month basis in the "PRICE PART" of his bid, which shall be considered for loading on total quoted price during price bid evaluation. The loading shall be done of a period of 1/5th of the time schedule or 1 month whichever is less. In case bidder does not indicate the rate for ESC in price part of his bid, it will be presumed that no ESC is required by the bidder and evaluation shall be carried out accordingly.

34. PURCHASE PREFERENCE :- NOT APPLICABLE.

Purchase Preference to Local Content (PP-LC) bidders or Domestically Manufactured Telecom Products (DMTP) shall be allowed as per Government instructions in vogue, as applicable from time to time.

The policy for providing Purchase Preference (linked with Local content) is enclosed as Annexure V to ITB herewith

[F] – AWARD OF CONTRACT

35. AWARD

Subject to "ITB: Clause-29", BCPL will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the highest NPV provided that bidder, is determined to be qualified to satisfactorily perform the Contract.

In case Indian bidder emerged as successful bidder, BCPL intent to place the order/contract directly on the address from ~~where Goods are produced/ dispatched and Services~~ where Works are to be rendered ~~are rendered~~. In case, bidder wants order/contract at some other address ~~or supply of Goods/ Services~~ Works to be rendered from multiple locations, bidder is required to provide in their bid address on which order is to be placed.



36. NOTIFICATION OF AWARD / FAX OF ACCEPTANCE

- 36.1. Prior to the expiry of 'Period of Bid Validity', Notification of Award for acceptance of the Bid will be intimated to the successful Bidder by BCPL either by Fax / E - mail /Letter or like means defined as the "Fax of Acceptance (FOA)". The Contract shall enter into force on the date of FOA and the same shall be binding on BCPL and successful Bidder (i.e. Contractor/~~Service Provider~~). The Notification of Award/ FOA will constitute the formation of a Contract. The detailed Letter of Acceptance shall be issued thereafter incorporating terms & conditions of Tender Document, Corrigendum, Clarification(s), Bid and agreed variation(s)/ acceptable deviation(s), if any. BCPL may choose to issue Notification of Award in form of detailed Letter of Acceptance without issuing FOA and in such case the Contract shall enter into force on the date of detailed Letter of Acceptance only.
- 36.2. Contract period shall commence from the date of "Notification of Award" or as mentioned in the Notification of Award. The "Notification of Award" will constitute the formation of a Contract, until the Contract has been effected pursuant to signing of Contract as per "ITB: Clause-37.1".
- 36.3. Upon the successful Bidder's/ Contractor's furnishing of 'Contract Performance Security / Security Deposit', pursuant to "ITB: Clause-38", BCPL will promptly discharge his EMD (if EMD is applicable to submit by the Bidder as per Tender requirement), pursuant to "ITB: Clause-16".
- 36.4. The Order/ contract value mentioned in the FOA/LOA is subject to Price Reduction Schedule clause.

37. SIGNING OF AGREEMENT

- 37.1. BCPL will award the Contract to the successful Bidder, who, within 'fifteen [15] days' of receipt of the same, shall sign and return the acknowledged copy to BCPL.
- 37.2. The successful Bidder/Contractor shall be required to execute an 'Agreement' in the proforma given in this Bidding Document on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Contractor] and of ' State of India' specified in Bidding Data Sheet (BDS)only, within 'fifteen [15] days' of receipt of the "Fax of Acceptance [FOA]" of the Tender by the successful Bidder/Contractor failure on the part of the successful Bidder/Contractor to sign the 'Agreement' within the above stipulated period, shall constitute sufficient grounds for forfeiture of ~~EMD~~/ Contract Performance Security (CPS).
- 37.3. Domestic Bidders can request Bilingual (Hindi & English) Contract Agreement. The format for signing Contract Agreement in English is attached in this Bidding Document.



38. CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT

- 38.1. Within thirty (30) days of the ~~date of the Agreement coming into force~~ receipt of the issuance of the notification of award/ Fax of Acceptance from BCPL, the successful bidder shall furnish the Contract Performance Security (CPS)/ Security Deposit in accordance with Commercial Terms & Conditions. The CPS shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee or Letter of Credit and shall be in the currency of the Contract.
- 38.2. The Contract Performance Security shall be for an amount equal to specified in Commercial Terms & Conditions (CTC) and as per Clause No-13 of ITB (Section-III) towards faithful performance of the contractual obligations and performance of equipment/material. For the purpose of CPS, Contract/order value shall be exclusive of **GST (CGST & SGST/UTGST or IGST).** ~~to be reimbursed by the Owner.~~
- 38.3. Bank Guarantee towards CPS shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank in case of Indian bidder as well as foreign bidder. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores/or its equivalent in U.S. Dollars) and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.
- 38.4. Failure of the successful Bidder to comply with the requirements of this article shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD.
- 38.5. The CPS has to cover the entire contract value including extra works/services also. As long as the CPS submitted at the time of award take cares the extra works/ services executed and total executed value are within the awarded contract price, there is no need for additional CPS. As soon as the total executed value is likely to burst the ceiling of awarded contract price, the contractor should furnish additional CPS.
- 38.6. Further, Ministry of Finance (MOF) Department of financial service has issued direction for submission of Bank Guarantee through online vide letter ref number F.No.7/112/2011-BOA dated 17th July 2012. The successful bidder can submit CPS online through issuing bank to BCPL directly as per the above direction including its revisions, if any. In such cases confirmation will not be sought from issuing banker by BCPL.
- 38.7. The successful bidder can also submit the Security Deposit/ Contract Performance Guarantee through online banking transaction i.e. IMPS/NEFT/RTGS/SWIFT etc. For this purpose, the details of BCPL's Bank Account is mentioned in BDS. Further, in case a successful Bidder is willing to furnish CPS through SWIFT, the details may be obtained from Purchase Officer immediately after receipt of FOA.

While remitting, the bidder must indicate "Security Deposit/ Contract Performance Guarantee against FOA/DLOA/~~PO no.~~ _____ (contractor/ vendor to specify the



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FOA/DLOA/PO—No.)” under remarks column of respective bank portal. The contractor/vendor shall be required to submit the successful transaction details to the dealing officer immediately through email/letter and necessarily within 30 days from the date of Fax of Acceptance.

- 38.8. In case of forfeiture of Contract Performance Security/ Security Deposit ~~in terms of GGC~~, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by BCPL. The forfeiture amount will be subject to final decision of BCPL based on other terms and conditions of Order/ Contract.
- 38.9. The successful bidder will also submit covering letter along with CPS as per format at F-4.
- 38.10. CPBG/Security Deposit will not be accepted in case the same has reference of ‘remitter’/‘financer’ other than bidder on the aforementioned financial instrument of CPBG/ Security Deposit submitted by the successful bidder/ Contractor.
- 38.11. “Contract Performance Security (CPS)” / “Security Deposit (SD)”/ “Contract Performance Bank Guarantee (CPBG)” mentioned in the Bidding Document shall mean the same.

39. PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES

- 39.1. Procedure for action in case Corrupt/ Fraudulent/Collusive/Coercive Practices is enclosed at Annexure-I to Section-III.
- 39.2. The Fraud Prevision Policy document is available on BCPL’s website (www.bcplonline.co.in).
- 39.3. Name and contact details of nodal officer are as under:
- 39.4. HOD (C&P), BCPL shall be the nodal officer.

39.4 NON-APPLICABILITY OF ARBITRATION CLAUSE IN CASE OF BANNING OF VENDORS/ SUPPLIERS / CONTRACTORS/BIDDERS/ CONSULTANTS INDULGED IN FRAUDULENT/ COERCIVE PRACTICES

Notwithstanding anything contained contrary in "CONTRACT DOCUMENTS", in case it is found that the ~~Vendors/ Suppliers / Contractors/ Bidders/ Consultants~~ indulged in fraudulent/ coercive practices at the time of bidding, during execution of the contract etc., and/or on other grounds as mentioned in BCPL’s “Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices” (Annexure-I to Section-III), the contractor/bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by BCPL, to such ~~Vendors/ Suppliers / Contractors/Bidders/ Consultants~~.



The ~~Vendor/ Supplier/ Contractor/ Bidder/Consultant~~ understands and agrees that in such cases where ~~Vendor/ Supplier/ Contractor/ Bidder/Consultant~~ has been banned (in terms of aforesaid procedure) from the date of issuance of such order by BCPL, such decision of BCPL shall be final and binding on such ~~Vendor/ Supplier/ Contractor/ Bidder/Consultant~~ and the 'Arbitration clause' in the CTC and other "CONTRACT DOCUMENTS" shall not be applicable for any consequential issue /dispute arising in the matter.

40. PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES (MSEs) 2012-NOT APPLICABLE. PROCUREMENT (MSEs) bidder)ITEMS (R BDS FOR APPLICABILITY)

41. VENDOR PERFORMANCE EVALUATION

The procedure for evaluation of performance of the successful bidder is enclosed as Annexure II to ITB (Section-III) herewith.

42. PROVISION IN TENDER REGARDING PERMANENT ESTABLISHMENT (PE) W.R.T. FOREIGN BIDDERS

Foreign bidders must submit (along with their bid) the following particulars which are required to be furnished by BCPL to Income Tax Department for complying with the requirements for making remittances to non-residents as per Income Tax Act, 1961 (as amended from time to time):

- (i) Certificate of having No Permanent Establishment / No Business Connection in India (Format F-10A).
- (ii) In case the non-resident has a Fixed Place Permanent Establishment (PE) or a Dependent Agency PE in India, in terms of the Double Taxation Avoidance Agreement (DTAA) between India and his country of tax residence through which the non-resident carries on business activities in relation to its engagement by BCPL, the address of the Fixed Place PE or name & address of the Dependent Agent is to be provided.
- (iii) Deemed Permanent Establishment: Whether by carrying on activities in relation to its engagement by BCPL, the non-resident constitutes an Installation / Construction PE or a Service PE in India in terms of the DTAA between India and his country of tax residence
- (iv) If the non-resident has PE in India, whether the remittances to be made to him under his engagement by BCPL are attributable to such PE or not with reasons thereof
- (v) Non-resident's complete address in the country of residence along with Local Contact No. with ISD Code and E-Mail ID of concerned person.
- (vi) If the non-resident has an Indian Income Tax Permanent Account Number (PAN), details of the same
- (vii) Country of tax residence of the non-resident supported by a Tax Residency certificate (TRC) issued by the Government of country or specified territory to the effect that the person named therein is a resident of that country or specified



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territory along-with Form 10F, if non-resident desire to avail benefits available under Double Tax Avoidance Agreement (DTAA).

- (viii) If it is not possible for the non-resident to obtain & submit Tax Residency Certificate to BCPL within a reasonable time, the bidder should furnish Form No. 10F along with an undertaking to the effect that the bidder is a tax resident of (the specified country) and that they shall obtain and provide the TRC to BCPL before 30 days of submission of first Invoice by them or within 3 months from the date of entering into the contract whichever is earlier.
- (ix) Whether the non-resident is constituted as a company, a partnership firm, or any other form of business organization.

In addition to above particulars, the bidder should also provide any other information as may be required later for determining the taxability of the amount to be remitted to the non-resident. Further, the bidder shall be liable to intimate the subsequent changes (if any) to the information submitted against any of the above particulars, along with full details.

Bidders should note that if there is any delay in submission / non-submission of information / documents required as above within the specified time, BCPL will be constrained to deduct tax as per Income Tax Act, 1961. In case, tax liability is to be borne by BCPL as per purchase / work order terms & conditions, any additional tax liability due to delay in submission / non submission of information / documents required as above shall be recovered from the supplier / contractor / consultant.

TAX INCIDENCE:

- a) If bidder insists at the time of bidding that Tax Liability is to be borne by BCPL, then the bidder's total quoted prices shall be suitably loaded by equivalent amount for evaluation purpose (depending upon the status of Foreign Vendor based on the documents submitted by them at the time of bidding) and WHT Certificate will be issued.
- b) In case bidder agrees to bear the WHT as per the provision of Income Tax Act 1961, no loading on quoted prices towards WHT will be done. The WHT will be deducted from their payments due to them and WHT certificate will be issued as per IT Act. . If the bidder wants to avail the benefit of DTAA, then they have to submit the Tax Residency Certificate (TRC) issued by Government or Specified Authority of that country and Form 10F as per the proforma at Format F-10B.
- c) Bidders should note that any delay in submission of TRC, Form 10F or PE information within specified time OR any subsequent change in TRC, Form 10F or PE status after submission of bid, may lead to deduction of tax at higher rate than at which it would otherwise have been deducted. Such additional tax liability shall be recovered from the supplier/contractor/ consultant.

Note: Form 10F as per requirement of Indian Income Tax Act is attached at Format F-10B.

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43. PROMOTION OF PAYMENT THROUGH CARDS AND DIGITAL MEANS (APPLICABLE FOR INDIAN BIDDERS)

To promote cashless transactions, the onward payments by Contractors to their employees, service providers, sub-contractors and suppliers may be made through Cards and Digital means to the extent possible.

44. QUARTERLY CLOSURE OF THE CONTRACT(FOR APPLICABILITY OF THIS CLAUSE REFER BDS):-

a) During execution of contracts/orders, various issues may arise. In order to timely detect and to address the contractual issue (s) during the execution of contracts, BCPL has introduced a mechanism of quarterly closure of the contract, under which all the issues related to the contract execution will be monitored on quarterly basis for resolution.

Vendors/Contractors are required to co-operate with EIC for proper implementation of this mechanism for smooth execution of the contract.”

b) Sh. Pranjal Phukan, CM (C&P) [email: pranjalk.phukan@bcplindia.co.in] shall be the coordinator to the Samadhaan Committee to whom all complaints shall be lodged by the Vendor/Supplier/ Contractor/Consultant/EIC/dealing officer of C&P.

45. EMPLOYMENT VISA FOR FOREIGN NATIONALS

All foreign nationals coming to India for execution of Projects/Contracts will have to apply for Employment Visa only and that grant of Employment Visa would be subject to strict adherence of following norms:

(i) Employment Visa is granted only for the skilled and qualified professionals or to a person who is being engaged or appointed by a Company, Organization, Industry or Undertaking etc., in India or contract or employment basis at a senior level, skilled position such as technical expert, senior executive or in managerial position etc.,

(ii) Request for Employment Visa for jobs for which large number of qualified Indians are available, is not considered.

(iii) Under no circumstances an Employment Visa is granted for routine, ordinary secretarial/clerical jobs.

Bidders are advised in their own interest to check latest Visa rules from Indian Embassy / High Commission in their country in case foreign nationals are required to be deputed to India during execution of the Contract.

46. NON DISCLOSURE AGREEMENT (NDA)

Bidders are hereby informed that the execution of the Non-Disclosure Agreement (NDA) with individual bidders shall be carried out outside the tender portal.

In case any prospective bidder indicates to execute NDA with BCPL& EIL, such bidder must get the same executed with BCPL& EIL by the last date of bid submission. In case



any bidder has submitted their bid but has not got the NDA executed with BCPL& EIL within the cut-off date stipulated above, it shall be construed that such bidder is not interested for executing any NDA with BCPL& EIL. In such case no NDA will be signed by BCPL& EIL after the cut-off date mentioned above.

47. UNIQUE DOCUMENT IDENTIFICATION NUMBER BY PRACTICING CHARTERED ACCOUNTANTS

Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them as per provisions of Tender Document.

However, UDIN may not be required for documents being attested by Chartered Accountants in terms of provisions of Tender Document.

48. TRANSPARENCY

Bidders if so desires, may seek in writing the reason for rejection of their bid, to which BCPL shall respond quickly.

49. PROVISION W.R.T. E- INVOICING REQUIREMENT AS PER GST LAWS

Refer Amendment-1 to Finance Input on Taxes and Duties for Licensor Selection of Commercial Terms and Condition (CTC) [i.e. Amendment-1 to Annexure –I to Commercial Terms and Conditions (CTC).]



Annexure-I to Section-III

**PROCEDURE FOR ACTION IN CASE
CORRUPT/FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES**

A Definitions:

- A.1 “Corrupt Practice” means the offering, giving, receiving or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.
- “Corrupt Practice” also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
- A.2 “Fraudulent Practice” means and include any act or omission committed by-a agency or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive in order to influence a selection process or during execution of Contract/ order.
- A.3 “Collusive Practice amongst bidders (prior to or after bid submission)” means a scheme or arrangement designed to establish Bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- A.4 “Coercive practice” means impairing or harming or threatening to impair or harm directly or indirectly, any agency or its property to influence the improperly actions of an agency, obstruction of any investigation or auditing of a procurement process.
- A.5 “Vendor/Supplier/Contractor/Consultant/Bidder” is herein after referred as “Agency”.
- A.6 “Appellate Authority” shall mean Committee of Managing Director, BCPL & Director (Finance), BCPL.
- A.7 “Competent Authority” shall mean the authority, who is competent to take final decision for Suspension of business dealing with an Agency/ (ies) and Banning of business dealings with Agency/ (ies) and shall be the COO, BCPL.
- A.8 “Allied Agency” shall mean all the concerns within the sphere of effective influence of banned/ suspended agencies. In determining this, the following factors may be taken into consideration:
- (a) Whether the management is common;
 - (b) Majority interest in the management is held by the partners or directors of banned/ suspended firm.
 - (c) substantial or majority shares are owned by banned/ suspended agency and by virtue of this it has a controlling voice.
- A.9 “Investigating Agency” shall mean any department or unit of BCPL investigating into the conduct of Agency/ party and shall include the Vigilance Department of the BCPL, Central



Bureau of Investigation, State Police or any other agency set up by the Central or State Government having power to investigate.

B Actions against Bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice

B.1 Irregularities noticed during the evaluation of the bids:

If it is observed during bidding process/ bids evaluation stage that a bidder has indulged in corrupt/fraudulent /collusive/coercive practice, the bid of such bidder (s) shall be rejected and its Earnest Money Deposit (EMD) shall be forfeited.

Further, such agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2 Irregularities noticed after award of Contract

(i) During execution of Contract:

If an agency, is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, during execution of Contract, the agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.

The concerned Order (s)/ Contract(s) where corrupt/fraudulent/collusive practices is observed, shall be suspended with immediate effect by Engineer-in-Charge (EIC)/ Employer whereby the supply/ work/ service and payment etc. will be suspended. The action shall be initiated for putting the agency on banning.

After conclusion of process, the Order(s)/ Contract(s) where it is concluded that such irregularities have been committed, shall be terminated and Contract cum Performance Bank Guarantee (CPBG)/ Contract Performance Security (CPS) submitted by agency against such Order(s)/ Contract(s) shall also be forfeited. The amount that may have become due to the Contractor/Supplier on account of work/supplies already executed by him shall be payable to the Contractor/Supplier and this amount shall be subject to adjustment against any amounts due from the Contractor/Supplier under the terms of the contract.

No risk and cost provision will be enforced in such cases.

(ii) After execution of contract and during Defect Liability Period (DLP)/ Warranty/Guarantee Period:

If an Agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of Contract and during DLP/ Warranty/Guarantee Period, the Agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.

Further, the ~~CPBG/CPS~~ Contract cum Performance Bank Guarantee (CPBG)/Contract Performance Security (CPS) submitted by Agency against such Order(s)/Contract(s) shall be forfeited.

(iii) After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period

If an Agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after expiry of Defect liability period (DLP)/ Warranty/Guarantee Period,



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the Agency shall be banned for future business with BCPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2.2 Period of Banning

The period of banning of agencies indulged in Corrupt/Fraudulent/Collusive/Coercive Practices shall be as under and to be reckoned from the date of banning order:

Sl. No.	Description	Period of banning from the date of issuance of Banning order
1	Misrepresentation/False information other than pertaining to BEC of tender but having impact on the selection process. For example, if an agency confirms not being in holiday/ banning list of PSUs/ Govt. Dept., liquidation, bankruptcy & etc. and subsequently it is found otherwise, such acts shall be considered in this category.	02 years
2	Corrupt/Fraudulent (pertaining to BEC of tender) /Collusive/Coercive Practices	03 years
2.1	If an agency again commits Corrupt/Fraudulent (pertaining to BEC of tender) /Collusive/ Coercive Practices in subsequent cases after their banning, such situation of repeated offense to be dealt with more severity and following shall be the period of banning: (i) Repeated once (ii) Repeated twice or more	7 years (in addition to the period already served) 15 years (in addition to the period already served)
3	Indulged in unauthorized disposal of materials provided by BCPL	7 years
4	If act of vendor/ contractor is a threat to the National Security	15 years

C Effect of banning on other ongoing contracts/ tenders

- C.1 If an Agency is put on Banning, such agency should not be considered in ongoing tender(s)/future tender(s).
- C.2 However, if such an Agency is already executing other order(s)/contract (s) where no corrupt/fraudulent/ collusive/coercive practice is found, the Agency should be allowed to



continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract.

- C.3 If an Agency is put on the Banning List during tendering and no irregularity is found in the case under process:
- C.3.1 after issue of the Tender Document but before opening of Part-I/Technical Bid, the bid submitted by the Agency shall be ignored.
- C.3.2 after opening Part-I/Technical bid but before opening the Price bid, the Price bid of the Agency shall not be opened and EMD submitted by the Agency shall be returned to the Agency.
- C.3.3 after opening of price (Part-II), EMD submitted by the Agency shall be returned; the offer of the Agency shall be ignored & will not be further evaluated. If the agency is put on banning list for fraud/ mis-appropriation of facts committed in the same Tender Document/other tender where errant Agency emerges as the highest NPV bidder, then such tender shall also be cancelled and re-invited.

D. Procedure for Suspension of Bidder

D.1 Initiation of Suspension

Action for suspension business dealing with any Agency(ies) shall be initiated by Corporate C&P Department, BCPL when :-

- (i) Corporate Vigilance Department, BCPL based on the fact of the case gathered during investigation by them recommend for specific immediate action against the Agency.
- (ii) Corporate Vigilance Department, BCPL based on the input from Investigating agency, forward for specific immediate action against the Agency.
- (iii) Non performance of Vendor/Supplier/Contractor/Consultant leading to termination of Contract/Order.

D.2 Suspension Procedure:

- D.2.1 The order of suspension would operate initially for a period not more than 6 (six) months and is to be communicated to the Agency and also to Corporate Vigilance Department, BCPL. Period of suspension can be extended with the approval of the Competent Authority by 1 (one) month at a time with a ceiling of 6(six) months pending a conclusive decision to put the Agency on banning list.
- D.2.2 During the period of suspension, no new business dealing may be held with the Agency.
- D.2.3 Period of suspension shall be accounted for in the final order passed for banning of business with the Agency.
- D.2.4 The decision regarding suspension of business dealings should also be communicated to the Agency.
- D.2.5 If a prima-facie, case is made out that the agency is guilty on the grounds which can result in banning of business dealings, proposal for issuance of suspension order and show cause notice shall be put up to the Competent Authority. The suspension order and show cause



notice must include that (i) the Agency is put on suspension list and (ii) why action should not be taken for banning the Agency for future business from BCPL.

The Competent Authority to approve the suspension will be same as that for according approval for banning.

D 3 Effect of Suspension of business:

Effect of suspension on other on-going/future tenders will be as under:

- D.3.1 No enquiry/bid/tender shall be entertained from an Agency as long as the name of Agency appears in the Suspension List.
- D.3.2 If an Agency is put on the Suspension List during tendering process:
 - D.3.2.1 after issue of the Tender Document but before opening of Part-I/Technical Bid, the Bid submitted by the Agency shall be ignored.
 - D.3.2.2 after opening Part-I/ Technical Bid but before opening of Part-II/ Price bid, the Price bid of the Agency shall not be opened and EMD submitted by the Agency shall be returned to the Agency.
 - D.3.2.3 after opening of price, EMD submitted by the Agency shall be returned; the Offer/Bid of the Agency shall be ignored & will not be further evaluated. If the Agency is put on Suspension list for fraud/ mis-appropriation of facts conducted in the same tender/other tender where errant Agency emerges as the highest NPV bidder, then such tendering process shall also be cancelled and re-invited.
- D.3.3 The existing contract (s)/ order (s) under execution shall continue.
- D.3.4 The Bidder confirms/undertake that (i) neither the Bidder themselves nor their allied Agency(ies) are on banning list of BCPL or the Ministry of Petroleum and Natural Gas and (ii) Bidder is not banned by any Government department/ Public Sector.

F. Appeal against the Decision of the Competent Authority:

- F.1 The Agency may file an appeal against the order of the Competent Authority for putting the Agency on banning list. The appeal shall be filed to Appellate Authority of BCPL. Such an appeal shall be preferred within one month from the date of receipt of banning order.
- F.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- F.3 Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- G. Wherever there is contradiction with respect to terms of 'Integrity pact', GCC and 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice', the provisions of 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice' shall prevail.



Annexure-II to Section-III

**PROCEDURE FOR EVALUATION OF PERFORMANCE OF VENDORS/
SUPPLIERS/ CONTRACTORS/ CONSULTANTS**

1.0 GENERAL

A system for evaluation of Vendors/ Suppliers/Contractors/ Consultants and their performance is a key process and important to support an effective purchasing & contracting function of an organization.

Performance of all participating Vendors/ Suppliers/Contractors/ Consultants need to be closely monitored to ensure timely receipt of supplies from a Vendor, completion of an assignment by a Consultant or complete execution of order by a contractor within scheduled completion period. For timely execution of projects and meeting the operation & maintenance requirement of operating plants, it is necessary to monitor the execution of order or contracts right from the award stage to completion stage and take corrective measures in time.

2.0 OBJECTIVE

The objective of Evaluation of Performance aims to recognize and develop reliable Vendors/ Suppliers/Contractors/ Consultants so that they consistently meet or exceed expectations and requirements.

The purpose of this procedure is to put in place a system to monitor performance of Vendors/ Suppliers/Contractors/ Consultants associated with BCPL in Projects and in O&M so as to ensure timely completion of various projects, timely receipt of supplies including completion of works & services for operation and maintenance of operating plants and quality standards in all respects.

3.0 METHODOLOGY

i) Preparation of Performance Rating Data Sheet (PRDS)

Performance rating data Sheet for each and every Vendor/ Supplier/Contractor/Consultant for all orders/Contracts with a value of Rs. 50 Lakhs and above is recommended to be drawn up. Further, Performance rating data Sheet for orders/contracts of Vendor/Supplier/Contractor/ Consultant who are on watch list/holiday list/ banning list shall be prepared irrespective of order/ contract value. These data sheets are to be separately prepared for orders/ contracts related to Projects and O&M. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

ii) Measurement of Performance

Based on the parameters defined in Data Sheet, Performance of concerned Vendor/ Supplier/Contractor/ Consultant would be computed and graded



accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.

iii) Initiation of Measures:

Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/ Supplier/Contractor/ Consultant. Response of Vendor/ Supplier/Contractor/ Consultant would be considered before deciding further course of action.

iv) Implementation of Corrective Measures:

Based on the response of Vendor/ Supplier/Contractor/ Consultant, concerned Engineer-in-Charge for the Projects and/or OIC in case of O&M would recommend for continuation or discontinuation of such party from the business of BCPL.

- v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.

4.0 EXCLUSIONS:

The following would be excluded from the scope of evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants:

- i) Orders/Contracts below the value of Rs. 50 Lakhs if Vendor/ Supplier/Contractor/ Consultant is not on watch list/ holiday list/ banning list.
- ii) Orders for Misc./Administrative items/ Non stock Non valued items (PO with material code ending with 9).

However, concerned Engineer-in-Charge /OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to non performance of Vendors/ Suppliers/Contractors/ Consultants in all such cases.

5.0 **PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS**

5.1 **FOR PROJECTS**

- i) Evaluation of performance of Vendors/Suppliers/Contractors/ Consultants in case of Projects shall be done immediately with commissioning of any Project.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in-charge shall prepare a Performance Rating Data Sheet (Format at Annexure-A) for all Orders and Contracts.
- iii) Depending upon the Performance Rating, following action need to be initiated by Engineer-in-charge/Project-in-charge:



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Sl.No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future
4	VERY GOOD	No further action

iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating Data Sheet to be closed with a letter to the concerned for improving performance in future.

v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is “POOR” (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor/Supplier/Contractor/ Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):

(a) **First Instance: Holiday for Two Years**

(b) **Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday for Three Years**

2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):

(a) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Three (3) Years.

(b) **Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday for a period of One Year**

(c) **Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday for a period of Three Years.**

B) Where Poor/Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to



Vendor/Supplier/ Contractor/Consultant (under Appendix-A to Annexure-II to Section-III).

- (a) **First instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Three (3) Years.
Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.
However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).
The Yellow card will be automatically revoked after a period of three years unless the same is converted into Red Card due to subsequent instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.
- (b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.
- (c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Three Years and they shall also to be considered for Suspension.**
- (C) Where Performance rating is “FAIR”:
Issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

5.2 FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 5.1 for Projects.

5.3 FOR OPERATION & MAINTENANCE

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of Operation and Maintenance, shall be done immediately after execution of Order/Contract.
- ii) After execution of Orders, a Performance Rating Data Sheet (Format at Annexure-B) shall be prepared for Orders by Site C&P and for Contracts/Services by respective Engineer-In-Charge.
- iii) Depending upon Performance Rating, following action need to be initiated by Site C&P:



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Sl. No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2.	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future.
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

- A) Where performance rating is “POOR” (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor / Supplier / Contractor / Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):

- (a) **First Instance: Holiday for Two Years**
(b) **Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday for Three Years**

1. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):

- (a) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Three (3) Years.
(b) **Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday for a period of One Year**
(c) **Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday for a period of Three Years.**

- B) Where Poor/ Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to Vendor/ Supplier/ Contractor/Consultant (under clause no. 32 (C) of GCC-Works)



- (a) **First instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Three (3) Years.
Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.
However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).
The Yellow card will be automatically revoked after a period of three years unless the same is converted into Red Card due to subsequent instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.
- (b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.
- (c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Three Years and they shall also to be considered for Suspension.**
- (C) Where Performance rating is “FAIR”
Issuance of warning to such defaulting Vendors/Contractors/Consultants to improve their performance.

6.0 REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY

- 6.1 An order for Holiday passed for a certain specified period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/ Supplier/Contractor/ Consultant is put on holiday due to quality, and new order is placed on bidder after restoration of Vendor/ Supplier/Contractor/ Consultant, such order will be properly monitored during execution stage by the concerned site.

7.0 EFFECT OF HOLIDAY

- 7.1 If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant should not be considered in ongoing tenders/future tenders.
- 7.2 However, if such Vendor/ Supplier/Contractor/ Consultant is already executing any other order/ contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this would be without prejudice to other terms and conditions of the contract.
- 7.3. Effect on other ongoing tendering:
- 7.3.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.
- 7.3.2 after opening Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and EMD submitted by the party shall be returned to the party.



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7.3.3 after opening of price bid, EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. If errant party emerges as highest NPV bidder, then such tender shall also be cancelled and re-invited.

8.0 While putting the Vendor/ Supplier/ Contractor/ Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/ Supplier/Contractor/ Consultant shall not be considered for putting on holiday list.

Any bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.

9.0 If an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to BCPL or any other bidder, such bidder will be put on holiday for a period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

10.0 APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY:

- (a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the receipt of Holiday order.
- (b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- (c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- (d) “Appellate Authority” shall mean Committee of Managing Director, BCPL & Director (Finance), BCPL.

11. ERRANT BIDDER

In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, BCPL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in retendering of the same job(s)/item(s).

Further, such bidder will be put on Watch List (Yellow Card) for a period of three years after following the due procedure. However, during the period in watch list such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).

In case of subsequent instances of default in other tender(s) during aforesaid watch list period, the action shall be initiated as per provision of sl. no. 2 of para A of Clause no. 5.1 (v) and 5.3 (v).

The Yellow card will be automatically revoked after specified period unless the same is converted into Red Card.

12. In case CBIC (Central Board of Indirect Taxes and Customs)/ any tax authority / any equivalent government agency brings to the notice of BCPL that the Supplier has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from BCPL to the government exchequer, then, that Supplier shall be put under Holiday list of BCPL for period of six months after following the due procedure. This action will be in addition to the right of recovery of financial implication arising on BCPL.



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Annexure-A of Annexure-II to Section-III

Brahmaputra Cracker & Polymer Ltd.
PERFORMANCE RATING DATA SHEET
(FOR PROJECTS/ CONSULTANCY JOBS)

- i) Project/Work Centre :
- ii) Order/ Contract No. & date :
- iii) Brief description of Items :
Works/Assignment
- iv) Order/Contract value (Rs.) :
- v) Name of Vendor/Supplier/ :
Contractor/ Consultant
- vi) Contracted delivery/ :
Completion Schedule
- vii) Actual delivery/ :
Completion date

Performance Parameter	Delivery/ Completion Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated				

Note:

Remarks (if any)

PERFORMANCE RATING (**)

Note :

(#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.

(*) Allocation of marks should be as per enclosed instructions

(**) Performance rating shall be classified as under :

Sl. No.	Range (Marks)	Rating
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VERY GOOD

Signature of
Authorised Signatory:

Name:

Designation:

Instructions for allocation of marks

1. Marks are to be allocated as under :

1.1 DELIVERY/ COMPLETION PERFORMANCE

40 Marks

**Delivery Period/
Completion Schedule**

Delay in Weeks

Marks

a) Upto 3 months

Before CDD

40

Delay upto 4 weeks

35

" 8 weeks

30

" 10 weeks

25

" 12 weeks

20

" 16 weeks

15



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	More than 16 weeks	0
b) Above 3 months	Before CDD	40
	Delay upto 4 weeks	35
	” 8 weeks	30
	” 10 weeks	25
	” 16 weeks	20
	” 20 weeks	15
	” 24 weeks	10
	More than 24 weeks	0
1.2	QUALITY PERFORMANCE	40 Marks
	For Normal Cases : No Defects/ No Deviation/ No failure:	40 marks
i) Rejection/Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
ii) When quality failure endanger system integration and safety of the system	Failure of severe nature - Moderate nature - low severe nature	0 marks 5 marks 10-25 marks
iii) Number of deviations	1. No deviation 2. No. of deviations ≤ 2 3. No. of deviations > 2	5 marks 2 marks 0 marks

1.3 RELIABILITY PERFORMANCE 20 Marks

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



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Annexure-B of Annexure-II to Section-III

Brahmaputra Cracker & Polymer Ltd.
PERFORMANCE RATING DATA SHEET
(FOR O&M)

- i) Location :
- ii) Order/ Contract No. & date :
- iii) Brief description of Items Works/Assignment :
- iv) Order/Contract value (Rs.) :
- v) Name of Vendor/Supplier/ Contractor/ Consultant :
- vi) Contracted delivery/ Completion Schedule :
- vii) Actual delivery/ Completion date :

Performance Parameter	Delivery Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated (*)				

Remarks (if any)

PERFORMANCE RATING (**)

Note :

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance
- (*) Allocation of marks should be as per enclosed instructions
- (**) Performance rating shall be classified as under :

Sl. No.	Range (Marks)	Rating	Signature of Authorised Signatory:
1	60 & below	POOR	
2	61-75	FAIR	Name:
3	76-90	GOOD	
4	More than 90	VERY GOOD	Designation:

Instructions for allocation of marks (For O&M)

1. Marks are to be allocated as under:

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks
a) Upto 3 months	Before CDD	40
	Delay upto 4 weeks	35
	" 8 weeks	30
	" 10 weeks	25
	" 12 weeks	20



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” 16 weeks	15
More than 16 weeks	0

b) Above 3 months	Before CDD	40
	Delay upto 4 weeks	35
	” 8 weeks	30
	” 10 weeks	25
	” 16 weeks	20
	” 20 weeks	15
	” 24 weeks	10
	More than 24 weeks	0

1.2 QUALITY PERFORMANCE 40 Marks

For Normal Cases : No Defects/ No Deviation/ No failure: 40 marks

i) Rejection/Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
ii) When quality failure endanger system integration and safety of the system	Failure of severe nature - Moderate nature - low severe nature	0 marks 5 marks 10-25 marks
iii) Number of deviations	1. No deviation 2. No. of deviations ≤ 2 3. No. of deviations > 2	5 marks 2 marks 0 marks

1.3 RELIABILITY PERFORMANCE 20 Marks

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



1.0 Failure by the contractor to comply with the provisions of the contract:

- i. If the CONTRACTOR refuses or fails to execute the WORK or any separate part thereof with such diligence as will ensure its completion within the time specified in the CONTRACT or extension thereof or fails to perform any of his obligation under the CONTRACT or in any manner commits a breach of any of the provisions of the CONTRACT it shall be open to the EMPLOYER at its option by written notice to the CONTRACTOR:
 - a) TO DETERMINE THE CONTRACT in which event the CONTRACT shall stand terminated and shall cease to be in force and effect on and from the date appointed by the EMPLOYER on that behalf, whereupon the CONTRACTOR shall stop forthwith any of the CONTRACTOR's work then in progress, except such WORK as the EMPLOYER may, in writing, require to be done to safeguard any property or WORK, or installations from damage, and the EMPLOYER, for its part, may take over the work remaining unfinished by the CONTRACTOR and complete the same through a fresh contractor or by other means, at the risk and cost of the CONTRACTOR, and any of his sureties if any, shall be liable to the EMPLOYER for any excess cost occasioned by such work having to be so taken over and completed by the EMPLOYER over and above the cost at the rates specified in the schedule of quantities and rate/prices.
 - b) WITHOUT DETERMINING THE CONTRACT to take over the work of the CONTRACTOR or any part thereof and complete the same through a fresh contractor or by other means at the risk and cost of the CONTRACTOR. The CONTRACTOR and any of his sureties are liable to the EMPLOYER for any excess cost over and above the cost at the rates specified in the Schedule of Quantities/ rates, occasioned by such works having been taken over and completed by the EMPLOYER.
- ii. In such events of Clause 1-i (a) or 1-i (b) above.
 - a) The whole or part of the Contract Performance Security furnished by the CONTRACTOR is liable to be forfeited without prejudice to the right of the EMPLOYER to recover from the CONTRACTOR the excess cost referred to in the sub-clause aforesaid, the EMPLOYER shall also have the right of taking possession and utilising in completing the works or any part thereof, such as materials equipment and plants available at work site belonging to the CONTRACTOR as may be necessary and the CONTRACTOR shall not be entitled for any compensation for use or damage to such materials, equipment and plant.
 - b) The amount that may have become due to the CONTRACTOR on account of work already executed by him shall not be payable to him until after the expiry of Six (6) calendar months reckoned from the date of termination of CONTRACT or from the taking over of the WORK or part thereof by the EMPLOYER as the case may be, during which period the responsibility for faulty materials or workmanship in respect of such work shall, under the CONTRACT, rest exclusively with the CONTRACTOR. This amount shall be subject to deduction of any amounts due from the CONTRACT to the EMPLOYER under the terms of the CONTRACT authorised or required to be reserved or retained by the EMPLOYER.
- iii. Before determining the CONTRACT as per Clause 1-i (a) or 1-i (b) above provided in the judgement of the EMPLOYER, the default or defaults committed by the CONTRACTOR is/are curable and can be cured by the CONTRACTOR if an opportunity given to him, then the



EMPLOYER may issue Notice in writing calling the CONTRACTOR to cure the default within such time specified in the Notice.

- iv. The EMPLOYER shall also have the right to proceed or take action as per Clause 1-i (a) or 1-i (b) above, in the event that the CONTRACTOR becomes bankrupt, insolvent, compounds with his creditors, assigns the CONTRACT in favour of his creditors or any other person or persons, or being a company or a corporation goes into voluntary liquidation, provided that in the said events it shall not be necessary for the EMPLOYER to give any prior notice to the CONTRACTOR.
- v. Termination of the CONTRACT as provided for in sub- clause 1-i (a) above shall not prejudice or affect their rights of the EMPLOYER which may have accrued upto the date of such termination.

2.0 TERMINATION OF CONTRACT FOR NON-PERFORMANCE AND SUBSEQUENTLY PUTTING THE CONTRACTOR ON HOLIDAY:

In case of termination of CONTRACT herein set forth (under above clause 1.0) except under conditions of Force Majeure and termination after expiry of contract, the CONTRACTOR shall be put under holiday [i.e. neither any enquiry will be issued to the party by BCPL against any type of tender nor their offer will be considered by BCPL against any ongoing tender (s) where contract between BCPL and that particular CONTRACTOR (as a bidder) has not been finalized] for three years from the date of termination by BCPL to such CONTRACTOR.



Annexure-III to Section-III

**ADDENDUM TO INSTRUCTIONS TO BIDDERS
(INSTRUCTIONS FOR PARTICIPATION IN E-TENDER)**

(Ready Reckoner to Participate in BCPL e-tender through CPP Portal of NIC)

1. General:

This section contains detailed instructions regarding bid submission procedure under BCPL's e-tender under NIC CPP Portal system. Bidders are required to read the following instructions in addition to various instructions mentioned elsewhere in the bid document for e-tendering, Ready Reckoner and FAQs etc. The instructions mentioned herein related to bid submission procedure shall supersede and shall prevail over the conditions enumerated elsewhere in the bid/tender document.

Bidders who wish to participate in e-tenders must go through the following in BCPL website in tender section:-

- 1) **“Guideline for Bidder enrolment process to Participate in BCPL e-tender through CPP Portal of NIC”.**
- 2) **“Ready Reckoner to Participate in BCPL e-tender through CPP Portal of NIC.**
- 3) **“Bidder Manual Kit”**

which contains instructions in respect of e-Tendering essentially covering security settings required for bidder's PC / Laptop, uploading and checking the status of digital signature in the bidder's PC / Laptop, obtaining unique login ID and password, re-setting the password, downloading of Tender document and uploading of Offer/Bid etc. Further, the troubleshooting issues are also available in the form of FAQs (link given in website) which can be downloaded from E-Tender Portal (<https://eprocure.gov.in/eprocure/app>).

2. About E-Tender Portal (Web):

BCPL's e-tender under NIC CPP Portal system enabling bidders to Search, View, Download tender document(s) directly from the portal <https://eprocure.gov.in/cppp/> (referred hereunder as “E-Tender Portal”) and also enables the bidders to participate and submit online prices directly in the e-tender portal or uploading of SOR/Price Schedule (Price Bid) in note and attachment folder, as applicable and technical bids in secured and transparent manner maintaining absolute confidentiality and security throughout the tender evaluation process and award.

3. Pre-requisite for participation in bidding process:



The following are the pre-requisite for participation in e-Tendering Process:

3.1 PC/Laptop with Windows OS, Internet Explorer:

Bidder must possess a PC / Laptop with Windows 7 professional operating system and Internet Explorer 9 or above for hassle free bidding. Bidder must go through the system setting as mentioned in Resources required (go to <https://eprocure.gov.in/eprocure/app> → click downloads → click resources) and also refer Trouble Shooting (go to <https://eprocure.gov.in/eprocure/app> → click bidder Manual kit → click Trouble shooting).

3.2 Internet Broadband Connectivity:

The Bidder must have a high speed internet connectivity (preferably Broadband) to access NIC Portal for downloading the Tender document and uploading/submitting the Bids.

3.3 A valid e-mail Id of the Organization/Firm:

Bidder must possess an e-mail ID, preferably of the Organisation (in case of a company)/Individual (in case of proprietorship concern)/Partner having Power of Attorney (in case of a partnership firm) to create login ID. The e-mail ID should not be changed frequently. All communication related to e-tendering including system generated mails shall be sent on this e-mail Id only. The communication to bidder is fully automated through the system and hence email-ID of bidder is very important for online communication with bidder during various stages of tendering process and should be preferably common e-mail Id of the Organisation.

3.4 User ID and Password for new Bidder(s):

To participate in the bidding process, it is mandatory on the part of bidder(s) to have user ID and password. Without user ID (Login ID) and password, bidders cannot participate in e-tender. There will be single login ID for a bidder/vendor code. To obtain User ID and Password Vendor/Bidder must visit <https://eprocure.gov.in/eprocure/app> site and perform the following steps:

- i) Click on Online bidder enrolment (For new Bidders)
- ii) Fill the on line self-registration form and submit. Ensure that the e-mail address given in the form is valid and active.
- iii) Ensure that all the mandatory fields (identified with a * mark) are filled in the self-registration form for User Id creation.

Steps for creating user id & Password is available in file name “steps by steps guide for online Bidder enrolment process” in BCPL website.

3.5 Procedure for change of E-mail ID of the Bidder:

Login E-Mail ID cannot be changed.

3.6 About Digital Signature:

(I) What is a Digital Signature?



This is a unique digital code which can be transmitted electronically and primarily identifies a unique sender. The objective of digital signature is to guarantee that the individual sending the message is who he or she really claims to be just like the written signature. The Controller of Certifying Authorities of India (CCA) has authorized certain Certifying Authorities (CA) to issue Digital Certificates. Digitally signed documents are legally valid as per the Indian IT Act 2000. One Digital Certificate is valid for a specified period and can be used for digitally signing any number of documents. For details go to <https://eprocure.gov.in/eprocure/app> → click Information about DSC.

Only Class 3b Digital Signature is acceptable where individual are using their digital signature on behalf of the organization and digital signature should be in the name of authorized signatory who has signed the bid on behalf of bidder.

(II) Why Digital Signature is required?

In order to bid for NIC e-tenders, bidders are required to obtain a legally valid Digital Certificate as per Indian IT Act 2000 from the licensed Certifying Authorities (CA) operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.

(III) How to obtain Digital Signatures from Certifying Authority (CA)?

Valid Digital Certificate (class 3b) can be obtained from Certifying Agency (C.A).

Information about CA's can be obtained through CCA India website

(<http://www.cca.gov.in>).

Digital Signatures can be obtained using following steps:

- a) Visit the site of the licensed CA* using internet browser.
- b) Follow the instructions on the CA's website for submission of requisite documents for issue of the Digital Certificate and making payment.

***Links to some of the licensed CA's are provided below:**

1. <http://www.ncodesolutions.com>
2. <http://www.sifycorp.com>
3. <http://www.tcs-ca.tcs.co.in>
4. <http://www.e-mudhra.com>
5. <http://www.nicca.nic.in>
6. www.idrbtca.org.in

For foreign bidder please refer:-<https://eprocure.gov.in/eprocure/app> then click on download – where procedure for obtaining DSC for Foreign Bidders is given.



4. How to submit On-line Bids/Offeres electronically against E-tenders?

Bidders who wish to participate against e-tenders uploaded on BCPL's e-tender under NIC CPP Portal website (<https://eprocure.gov.in/cppp/>) (e-tender portal) should follow the steps Mentioned in the “**Bidders Manual Kit**” available on BCPL website / (go to <https://eprocure.gov.in/eprocure/app> → click Bidder manual kit) which shall guide them to Search, Display/View, Download and Submit electronic Bids/Offeres online in a secured manner ensuring confidentiality. Bidder can also download the tender documents from BCPL websites, but they must have to quote through e-mode only (CPP Portal).

5. How to search, view and download e-tender?

Explained in **Bidders Manual Kit** which is available in BCPL website.

8.0 Content of Bid:

8.1 Un-Priced Bid:

The Un-priced Bid - “SOR” (i.e. Part I – Technical Bid, refer ITB of tender for details) to be uploaded using Link “TECHNICAL DOCUMENT”. Bidders are advised to not upload duly filled Schedule of Rates/Price Schedule (Price Bid) at this link. For detailed instructions, **Bidders Manual Kit** which is available in BCPL website for bidders may be referred.

Before the bid is uploaded, the bid comprising of all relevant documents mentioned in the tender document should be digitally signed in accordance with the Indian IT Act 2000. If any modifications are required to be made to a document thereafter the modified documents shall be again digitally signed before uploading.

Bidders are required to upload all Tender forms and supporting documents which form part of the bid/tender under tender document of e-tender portal.

Uploading the documents relevant to bid before the bid submission date and time is the sole responsibility of the bidder. **No Manual/Hard copy** of bid is acceptable. **Bids submitted manually shall be rejected.**

Bidders are required to submit the Earnest Money Deposit (EMD)/Bid Bond in original in the prescribed formats and in the manner prescribed in the tender document at the time of bid submission in sealed envelope.

However, if the bidder is unable to submit EMD/Bid Bond in original on the due date, he may upload scanned copy of the EMD/Bid Bond while submitting the bid electronically, provided the original EMD/Bid Bond, copy of which has been uploaded, is received within **7 (seven) days from the date of unpriced bid opening**, failing which the bid will be rejected irrespective of their status / ranking in tender and notwithstanding the fact that a copy.



The complete bid (each page) shall be continuously numbered in sequence, from start till end i.e. 1, 2, 3... n. The bid shall be uploaded along with proper index and indicating page numbers against each category of documents.

Note:

- i) Bidder may save/store the bid documents in the PC/Laptop before submitting the bid into in e-tender portal.
- ii) Bidder is required to fill up the price(s)/rate(s) strictly in the Schedule of Rate (SOR)/Price Schedule attached with the tender.

Inadvertently, if a document is uploaded in by the bidders, such document can be deleted by the bidder and can be replaced by a digitally signed new/modified document prior to due date & time.

Un-priced techno-commercial bid document should be placed in the private area earmarked in the C-folder of Tender Document in e-tender portal.

8.2 Priced Bid:

The Priced Bid (i.e. Part II – Price Bid, refer ITB for details) to be uploaded using “FINANCE ATTACHMENTS” and NOT using link “TECHNICAL DOCUMENT”. Bidders are advised not to upload any other documents and same shall be ignored. For detailed instructions, refer tender document and Ready Reckoner.

BCPL shall not be responsible for any failure on the part of the bidder in submission of Priced Bid and the manner prescribed elsewhere in this instruction sheet in tender documents.

9. E-Tender demo during pre-bid conference:

During the Pre-Bid Conference, BCPL shall also arrange demonstration for submission of bids in e-tender portal for interested bidders.

10. Submission of documents:

Bidders are requested to upload small sized documents preferably (up to 25 MB) at a time to facilitate easy uploading into e-tender portal. BCPL shall not be responsible in case of failure of the bidder to upload documents/bids within specified time of tender submission.

11. Last date for submission of bids:

System does not allow for submission or modification of bids beyond the deadline for bid submission. However, if the bidder for some reason intends to change the bid already entered, he may change/revise the same on or before the last date and time of submission. The system time displayed on NIC's e-tender webpage shall be final and binding on the bidders for all



purposes pertaining to various events of the subject tender and no other time shall be taken into cognizance.

Bidders are advised in their own interest to ensure that bids are uploaded in e-tender system well before the closing date and time of bid.

12. Internet connectivity:

If bidders are unable to access BCPL's e-tender under NIC CPP Portal system or Bid Documents, the bidders may please check whether they are using proxy to connect to internet or their PC is behind any firewall and may contact their system administrator to enable connectivity. Please note that Port SSL/443 should be enabled on proxy/firewall for HTTPS connectivity. Dial-up/Broad band internet connectivity without Proxy settings is another option.

13. Help to Contractors:

For special instructions to bidders / contractors Please visit <https://eprocure.gov.in/eprocure/app> → click Help to contractors.

14. FAQ:

For various frequently asked question Please visit <https://eprocure.gov.in/eprocure/app> → click FAQ.

15. e-Brochure:

For e-brochure please visit <https://eprocure.gov.in/eprocure/app> → click Downloads → click e brochure (details & general).

16. DSC for Foreign Bidders:

For DSC for foreign bidders Please visit - <https://eprocure.gov.in/eprocure/app> → click Downloads → click DSC for foreign bidders.

17. System Malfunction Procedure:

For system malfunction procedure Please visit - <https://eprocure.gov.in/eprocure/app> → click Downloads → system malfunction procedure.

18. IT Resources:

For various IT resources please visit → <https://eprocure.gov.in/eprocure/app> → click Downloads --- Resources required. (Download Java for system compatibility).

19. Form for DSC Deactivation for bidders:



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For DSC deactivation Please visit - <https://eprocure.gov.in/eprocure/app> → click Downloads
→ Form for DSC deactivation for bidders.

20. **Search Tender for Guest Users:**

For tender search please visit - <https://eprocure.gov.in/eprocure/app> → click on Tenders by
Location / Tenders by Organization / Tenders by classifications / Tenders by Archive.





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21. Check list / Quick View Summary:

one time activity	1	GET THE DIGITAL SIGNATURE CERTIFICATE	plz. Refer	Please refer clause 3.6 of Ready reckoner to participate in e-tender available in BCPL website	also refe	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click Information about DSC.	
	2	GET THE HARDWARE / IT RESOURCES:- Computer/laptop, Internet etc	plz. Refer	Refer clause 3.1, 3.2, 12 of Ready reckoner to participate in e-tender available in BCPL website	also refe	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click downloads --- click resources required	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- click trouble shooting
	3	GET ENROLLED WITH BCPL e- tender THROUGH CPP PORTAL OF NIC AND TO GET USERID & PASSWORD FOR NEW VENDORS	plz. Refer	Refer Guideline for Bidder enrolment process available in BCPL website	also refe	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- click Registration of Bidders	
	4	UPLOADING OF MY DOCUMENTS	plz. Refer	Bidder can upload their regular documents like PAN, BALANCE SHEET, VATICAT and other certificate	also refe	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- click Uploading of my documents	
	5	SEARCH BIDS	plz. Refer	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click tender by location / by organization / by classification	also refe	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- click Clarifications (Tender Status, My Archive...)	
	6	ON LINE e-BID SUBMISSION involved EMD/FEE, technical bid (part I) & finance bid (part II)	plz. Refer	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- go through online e-bid submission	also refe	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- Online e-Bid Submission	
	7	FINANCE BID/PRICE BID/PART II Preparation guidelines	plz. Refer	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- go BoQ Preparation Guidelines			
	8	ON LINE e-BID WITHDRAWL	plz. Refer	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- go Online Bid Withdrawal			
	9	ON LINE e-BID Re- SUBMISSION	plz. Refer	ROUTE:- https://eprocure.gov.in/cpp pl --- click e-procure --- click bidder manual kit --- go Online Bid Re- submission			

For various queries, manual, FAQs and information may please refer the link
<https://eprocure.gov.in/eprocure/app>



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In Help to contractor's users will get: **Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this eProcurement Portal.**

In Information about DSC user will get: **Frequently Asked Questions on Digital Signature Certificate.**

In FAQ user will get various FAQ related to:

- a) GENERAL Q&A about e-procurement.
- b) On line enrolment Q&A
- c) Password related Q&A
- d) DSC related Q&A
- e) Tender related Q&A
- f) Security related Q&A
- g) Foreign bidder related Q&A
- h) User account related Q&A

Feedback: **Users to give their feedback to NIC.**

Bidder manual kit: **Bidder will get various manuals for the following:**

1	Notice to Bidders	notice_to_bidders.pdf
2	Registration of Bidders	bidder_registration.pdf
3	Uploading of My Documents	my_documents.pdf
4	Online e-Bid Submission	two_cover_bid_submission.pdf



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		three_cover_bid_submission.pdf
		four_cover_bid_submission.pdf
		single_cover_bid_submission.pdf
5	Online Bid Withdrawal	bid_withdrawal.pdf
6	Online Bid Re-submission	bid_resubmission.pdf
7	Clarifications (Tender Status, My Archive...)	enquiry.pdf
8	Trouble Shooting	troubleshoot_document.pdf
9	BoQ Preparation Guidelines	BoQ_Help_Bidder_ItemRate.pdf
		BoQ_Help_Bidder_ItemWise_Tax.pdf
		BoQ_Help_Bidder_Percentage.pdf

HELP DESK (BCPL)

Phone: 0373-2914582 (only for e-tender queries)

Mobile: 8811017320

Email: etender@bcplindia.co.in

HELP DESK (NIC)

Phone: 1800-233-7315, 0120-4200462, 0120-4001002 (only for e-tender queries)

Mobile: 8826246593

Email: cphp-nic@nic.in

-----X-----



ANNEXURE-IV TO SECTION-III

BIDDING DATA SHEET (BDS)

ITB TO BE READ IN CONJUNCTION WITH THE FOLLOWING:

A. GENERAL					
ITB clause	Description				
1.1	The Invitation for Bids/ Tender no is : SG/B348-115-LA-TN-8501/1003, Dated-15.03.2021				
1.1	The Employer/Owner is: M/s Brahmaputra Cracker & Polymer Limited (BCPL)				
1.2	The name of the Works/ ~~Services~~ to be performed is: SUPPLY OF KNOW-HOW / LICENSE, BASIC ENGINEERING DESIGN PACKAGE (BEDP), CATALYSTS AND OTHER RELATED SERVICES FOR HPG 2nd STAGE UNIT at BCPL, LEPETKATA.				
3	BIDS FROM CONSORTIUM/ JOINT VENTURE <table border="1"><tr><td>APPLICABLE</td><td>☐</td></tr><tr><td>NOT APPLICABLE</td><td>☒</td></tr></table>	APPLICABLE	☐	NOT APPLICABLE	☒
APPLICABLE	☐				
NOT APPLICABLE	☒				
B. BIDDING DOCUMENT					
ITB clause	Description				
8.1	For <u>clarification purposes</u> only, the communication address is: Refer sl. no. 2.0 (K) of Section I “Invitation for Bid (IFB)”				
C. PREPARATION OF BIDS					
ITB clause	Description				
11.1.1	The Bidder shall submit with its Techno-commercial/ Unpriced bid the following additional documents: Documents as per requirement of clause no. 4 of Section I “Invitation for Bid (IFB)” and clause no. 1 D of Section II “Bid Evaluation Criteria (BEC) & Evaluation Methodology”				
12	Additional Provision for Schedule of Rate/ Bid Price are as under: Not Applicable				



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13	Whether BCPL will be able to avail input tax credit in the instant tender <table border="1" style="margin: 10px auto; width: 60%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 5px;">YES</td><td style="text-align: center; padding: 5px;"> √ </td></tr> <tr> <td style="text-align: center; padding: 5px;">NO</td><td style="text-align: center; padding: 5px;"> </td></tr> </table>	YES	√	NO	
YES	√				
NO					
13.1.10	Details of Employer: Employer M/s Brahma Putra Cracker & Polymer Limited (BCPL) Registered office at 1st Floor, House No 6, Bhuban Road, Uzanbazar, Guwahati, Assam, Pin-781001 & Project Office at Administrative Building, BCPL, Lepetkata, Dibrugarh, Assam, PIN – 786006. GST No. 18AADCB2356E1ZY PAN No. AADCB2356E				
15	Bid shall be valid upto 04 months.				
16.1, 16.9 & 38.6	In case 'Earnest Money / Bid Security' or “Contract Performance Security” is in the form of 'Demand Draft' or 'Banker's Cheque', the same should be in favor of Brahmaputra Cracker and Polymer Ltd. , payable at Assam. Details of BCPL’s Bank is STATE BANK OF INDIA, CAG II, New Delhi, IFSC: SBIN0017313 Bidder to mention reference no. “EMD/.....” in narration while remitting the EMD / Bid Security amount and to mention reference no. “CPS/.....” in narration while remitting the CPS amount in BCPL ’s Bank Account.				
D. SUBMISSION AND OPENING OF BIDS					
ITB clause	Description				
11.2.1 and 4.0 of IFB	For <u>bid submission purposes</u> -only submission of physical document as per clause no. 4.0 of IFB, the Owner’s address is : Refer sl. no. 2.0 (K) of Section I “Invitation for Bid (IFB)”				
26	The bid opening shall take place at Engineers India Limited, Sector-16, Gurugram, Haryana-122001 (India).				



E. EVALUATION, AND COMPARISON OF BIDS

ITB clause	Description
32	Evaluation Methodology is mentioned in Section II “Bid Evaluation Criteria (BEC) & Evaluation Methodology”.

F. AWARD OF CONTRACT

ITB clause	Description				
37	State of which stamp paper is required for Contract Agreement: Assam (India).				
38	Contract Performance Security/ Security Deposit : <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>APPLICABLE</td><td style="text-align: center;">☒</td></tr> <tr> <td>NOT APPLICABLE</td><td style="text-align: center;">☐</td></tr> </table> The value/ amount of Contract Performance Security/ Security Deposit: Refer Article 7 – Contract Performance Bank Guarantee (CPBG) of Section III “Commercial Terms & Conditions”.	APPLICABLE	☒	NOT APPLICABLE	☐
APPLICABLE	☒				
NOT APPLICABLE	☐				
38.5	For submission of Contract Performance Security through online banking transaction i.e. IMPS/NEFT/RTGS, the details of BCPL’s Bank Account is as below: <i>While remitting, the bidder must indicate CPS and tender/E-tender no. under remarks.</i> BCPL’s PAN No.- AADCB2356E BCPL GST No.- 18AADCB2356E1ZY.				
General	Wherever BCPL is appearing in the Bidding Document and their annexures, shall be read as BCPL / EIL. EIL shall act on behalf of BCPL for further communication (if any).				
50	Quarterly Closure of Contract: <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>APPLICABLE</td><td style="text-align: center;">☒</td></tr> <tr> <td>NOT APPLICABLE</td><td style="text-align: center;">☐</td></tr> </table>	APPLICABLE	☒	NOT APPLICABLE	☐
APPLICABLE	☒				
NOT APPLICABLE	☐				



**UNDERTAKING REGARDING SUBMISSION OF ELECTRONIC INVOICE (E-
INVOICE AS PER GST LAWS)**

(to be submitted on letter head along with documents for release of payment)

To,

M/s Brahmaputra Cracker and Polymer Ltd

SUB:

LOA NO:

Dear Sir,

We _____ (Name of the Supplier/Contractor/Service Provider/ Consultant)
hereby confirm that E-Invoice provision as per the GST Law is

- (i) Applicable to us []
- (ii) Not Applicable to us []

(Supplier/Contractor/Service Provider/ Consultant is to tick appropriate option (✓ or X) above).

In case, same is applicable to us, we confirm that we will submit E-Invoice after complying with all the requirements of GST Laws. If the invoice issued without following this process, such invoice can-not be processed for payment by **BCPL** as no ITC is allowed on such invoices. We also confirm that If input tax credit is not available to **BCPL** for any reason attributable to Supplier/Contractor/Service Provider/ Consultant (both for E-invoicing cases and non-E-invoicing cases), then **BCPL** shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the Supplier/Contractor/Service Provider/ Consultant under this contract or under any other contract.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Bidder Name:

Seal:



FORMS & FORMAT



LIST OF FORMS & FORMAT

Form No.	Description
F-1	BIDDER'S GENERAL INFORMATION
F-2	PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY / BID SECURITY"
F-3	LETTER OF AUTHORITY
F-4	PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"
F-5A	AGREED TERMS & CONDITIONS FOR INDIAN BIDDER
F-5B	AGREED TERMS & CONDITIONS FOR FOREIGN BIDDER
F-6	ACKNOWLEDGEMENT CUM CONSENT LETTER
F-7	BIDDER'S EXPERIENCE
F-8A	CHECK LIST
F-8B	CHECK LIST FOR BID EVALUATION CRITERIA (BEC) QUALIFYING DOCUMENTS
F-9	DELETED
F-10A	CERTIFICATE OF HAVING NO PERMANENT ESTABLISHMENT / NO BUSINESS CONNECTION IN INDIA
F-10B	PROFORMA FORM 10F
F-11	BIDDER'S QUERIES FOR PRE BID MEETING
F-12	E-BANKING FORMAT
F-13	DELETED
F-14	FREQUENTLY ASKED QUESTION
F-15	PROFORMA FOR DETAILS OF INDIAN AGENT
F-16	FORMAT FOR CHARTERED ACCOUNTANT / CPA CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER
F-17	COMMERCIAL QUESTIONNAIRE
F-18	INDEMNITY BOND



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F-1

BIDDER'S GENERAL INFORMATION

To,
M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

TENDER NO:

1	Bidder Name:	M/s.....
2	Status of Firm (Indian Bidder only)	Proprietorship Firm/Partnership firm/ Public Limited/ Pvt. Limited/ Govt. Dept. / PSU/ Others If Others Specify:_____ [Enclose relevant certificates / partnership deed/certificate of Registration, as applicable]
3	Name of Proprietor/ Partners/ Directors of the firm/company	1. 2. 3.
4	Number of Years in Operation	
5	Address of Registered Office In case of Partnership firm, enclose letter mentioning current address of the firm and the full names and current addresses of all the partners of the firm.	_____ City: _____ District: _____ State: _____ PIN/ZIP : _____
6	Bidder's address where order/contract is to be placed *	_____ City: _____ District: _____ State: _____ PIN/ZIP : _____



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7	Address from where Goods/ Services are to be dispatched/ provided along with GST no. <i>(For Indian Bidder: In case supply of Goods/ Services are from multiple locations, addresses and GST no. of all such locations are to be provided).</i>	City: District: State: PIN/ZIP: GST No.:
8	Telephone Number & Contact Information of address where order is to be placed	_____ (Country Code) (Area Code) (Telephone Number) FAX No. : e-mail ID:
9	Website	
10	ISO Certification, if any {If yes, please furnish details}	
11	Banker's Name	
12	Branch	
13	Branch Code	
14	Bank Account Number	
15	PAN No	
16	GST No. (Indian Bidder only) (refer sl. no. 4B above)	[Enclose copy of GST Certificate]
17	Whether Micro or Small Enterprise(Indian Bidder only)	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB)
	Whether MSE is owned by SC/ST Entrepreneur(s)	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB)
	Whether MSE is owned by Women	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB)
	Whether payment is required through TReDS	Yes / No If Yes, please provide the name of portal



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18	Type of Entity (Indian Bidder only)	Corporate/ Non-Corporate (As per CGST/SGST/UTGST Act). (In case of Non-Corporate Entity, bidder will submit documentary evidence for same).
19	Whether Bidder is Startups or not (Indian Bidder only)	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB)
	In case of Start-up confirm the following: (i) Date of its incorporation/ registration (ii) Whether turnover for any financial years since incorporation/ registration has exceeded Rs.25 Crores.	

*** For Indian Bidder:** BCPL intent to place the order/contract directly on the address from where Goods are produced/dispatched are Services are rendered. In case, bidder wants order/ contract at some other address or supply of Goods/ Services from multiple locations, bidder is required to provide in their bid address on which order is to be placed.

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:



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(A Government of India Enterprise)

F-2

PROFORMA OF "BANK GUARANTEE"
FOR "EARNEST MONEY / BID SECURITY"
(To be stamped in accordance with the Stamp Act)

To, M/s Brahmaputra Cracker and Polymer Ltd. _____	Bank Guarantee No.	
	Date of BG	
	BG Valid up to	
	Claim period up to (There should be three months gap between expiry date of BG & Claim period)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

In accordance with Letter Inviting Tender under your reference No _____ M/s.
_____ having their Registered / Head Office at _____ (hereinafter called
the Tenderer), wish to participate in the said tender for

As an irrevocable Bank Guarantee against Earnest Money for the amount of _____ is
required to be submitted by the Tenderer as a condition precedent for participation in the said tender
which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender
Document.

We, the _____ Bank at
_____ having our Head Office
_____ (Local Address) guarantee
and undertake to pay immediately on demand without any recourse to the tenderers by Brahmaputra
Cracker and Polymer Ltd., the amount _____ without any
reservation, protest, demur and recourse. Any such demand made by Brahmaputra Cracker and
Polymer Ltd., shall be conclusive and binding on us irrespective of any dispute or difference raised
by the Tenderer.

This guarantee shall be irrevocable and shall remain valid up to _____ [this date should be
two (02) months beyond the validity of the bid]. If any further extension of this guarantee is required,
the same shall be extended to such required period on receiving instructions from M/s.
_____ whose behalf this guarantee is issued.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this
_____ day of _____ 20__ at _____.

Notwithstanding anything contained herein:

a) The Bank's liability under this Guarantee shall not exceed (currency in figures)
.... (currency in words only)



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- b) This Guarantee shall remain in force upto _____ (this expiry date of BG should be two months beyond the validity of bid) and any extension(s) thereof; and
- c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of BCPL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

WITNESS:

(SIGNATURE)
(NAME)

(SIGNATURE)
(NAME)
Designation with Bank Stamp

(OFFICIAL ADDRESS)

Attorney as per
Power of Attorney No. _____
Date: _____

**INSTRUCTIONS FOR FURNISHING "BID SECURITY / EARNEST MONEY" BY
"BANK GUARANTEE"**

1. The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per "Stamp Duty" applicable. The non-judicial stamp paper should be in the name of the issuing Bank. In case of foreign Bank, the said Bank's Guarantee to be issued by its correspondent Bank in India on requisite non-judicial stamp paper
2. The expiry date should be arrived at in accordance with "ITB: Clause-15.1".
3. The Bank Guarantee by bidders will be given from Bank as specified in "ITB".
4. A letter from the issuing Bank of the requisite Bank Guarantee confirming that said Bank Guarantee / all future communication relating to the Bank Guarantee shall be forwarded to the Employer at its address as mentioned at "ITB".
5. Bidders must indicate the full postal address of the Bank along with the Bank's E-mail / Phone from where the Earnest Money Bond has been issued.
6. If a Bank Guarantee is issued by a commercial Bank, then a letter to Employer confirming its net worth is more than Rs.1,000,000,000.00 [Rupees One Hundred Crores] or equivalent along with documentary evidence.



F-3
LETTER OF AUTHORITY

[Pro forma for Letter of Authority for Attending 'Pre-Bid Meetings' / 'Un-priced Bid Opening' / 'Price Bid Opening']

Ref:

Date:

To,

M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

SUB:

TENDER NO:

Dear Sir,

I/We, _____ hereby authorize the following representative(s) for attending Pre-Bid Meeting', 'Un-priced Bid Opening', 'Price Bid Opening' against the above Tender Document:

[1] Name & Designation _____ Signature _____

Phone/Cell:

Fax:

E-mail: @

[2] Name & Designation _____ Signature _____

Phone/Cell:

Fax:

E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

Note: This "Letter of Authority" should be on the "**letterhead**" of the Firm / Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Techno-commercial / Un-priced" & "Price Bid" Openings. Bidders authorized representative is required to carry a copy of this authority letter while attending the un-priced and priced bid opening, the same shall be submitted to BCPL/EIL.



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(A Government of India Enterprise)

F-4

**PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE
SECURITY / SECURITY DEPOSIT"**
(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

To, M/s Brahma Putra Cracker and Polymer Ltd. _____	Bank Guarantee No.	
	Date of BG	
	BG Valid up to	
	Claim period up to (There should be three months gap between expiry date of BG & Claim period)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

M/s. _____ having registered office at _____ (herein after called the “contractor/supplier” which expression shall wherever the context so require include its successors and assignees) have been placed/ awarded the job/work of _____ vide PO/LOA/FOA No. _____ dated _____ for Brahma Putra Cracker and Polymer Ltd. having registered office at 1st Floor, House No 6, Bhuban Road, Uzanbazar, Guwahati Assam, Pin-781001 (herein after called the “BCPL” which expression shall wherever the context so require include its successors and assignees).

The Contract conditions provide that the SUPPLIER/CONTRACTOR shall pay a sum of Rs. _____ (Rupees _____) as full Contract Performance Guarantee in the form therein mentioned. The form of payment of Contract Performance Guarantee includes guarantee executed by Nationalized Bank/Scheduled Commercial Bank, undertaking full responsibility to indemnify BRAHMAPUTRA CRACKER AND POLYMER LTD., in case of default.

The said M/s. _____ has approached us and at their request and in consideration of the premises we having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ hereby undertake to give the irrevocable & unconditional guarantee to you that if default shall be made by M/s. _____ in performing any of the terms and conditions of the tender/order/contract or in payment of any money payable to BRAHMAPUTRA CRACKER AND POLYMER LTD. we shall on first demand pay without demur, contest, protest and/ or without any recourse to the contractor to BCPL in such manner as BCPL may direct the said amount of Rupees



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- _____ only or such portion thereof not exceeding the said sum as you may require from time to time.
2. You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the order/contract with the said M/s. _____ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said M/s. _____ and such postponement forbearance would not have the effect of releasing the bank from its obligation under this debt.
 3. Your right to recover the said sum of Rs. _____ (Rupees _____) from us in manner aforesaid is absolute & unequivocal and will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court or arbitrator or any other authority/forum and any demand made by you in the bank shall be conclusive and binding. The bank shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the bank.
 4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said supplier/contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
 5. The bank undertakes not to revoke this guarantee during its currency without your previous consent and further agrees that the guarantee shall continue to be enforceable until it is discharged by BCPL in writing. However, if for any reason, the supplier/contractor is unable to complete the supply/work within the period stipulated in the order/contract and in case of extension of the date of delivery/completion resulting extension of defect liability period/guarantee period of the supplier/contractor fails to perform the supply/work fully, the bank hereby agrees to further extend this guarantee at the instance of the supplier/contractor till such time as may be determined by BCPL. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s. _____ (contractor) on whose behalf this guarantee is issued.
 6. Bank also agrees that BCPL at its option shall be entitled to enforce this Guarantee against the bank (as principal debtor) in the first instant, without proceeding against the supplier/contractor and notwithstanding any security or other guarantee that BCPL may have in relation to the supplier's/contractor's liabilities.
 7. The amount under the Bank Guarantee is payable forthwith without any delay by Bank upon the written demand raised by BCPL. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the exclusive jurisdiction of courts at Assam.
 8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Supplier/Contractor up to a total amount of _____ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring



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the Supplier/Contractor to be in default under the order/contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.

9. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney, dated _____ granted to him by the Bank.
10. Notwithstanding anything contained herein:
- a) The Bank's liability under this Guarantee shall not exceed (currency in figures)
. (currency in words only)
- b) This Guarantee shall remain in force upto _____ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and
- c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of BCPL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

Yours faithfully,

Bank by its Constituted Attorney

Signature of a person duly
Authorized to sign on behalf of the
Bank



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INSTRUCTIONS FOR FURNISHING
"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "BANK
GUARANTEE"

1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank. In case of foreign bank, the said Bank Guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper.
2. The Bank Guarantee by Bidders will be given from bank as specified in Tender.
3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Employer.
4. If a Bank Guarantee is issued by a commercial bank, then a letter to Employer and copy to Consultant (if applicable) confirming its net worth is more than Rs.100,00,00,000.00 [Rupees One Hundred Crores] or its equivalent in foreign currency alongwith documentary evidence.

Annexure

MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY
VENDOR ALONG WITH BANK GUARANTEE

1	BANK GUARANTEE NO	:										
2	VENDOR NAME / VENDOR CODE	:	<table><tr><td>NAME</td><td></td></tr><tr><td>VENDOR CODE</td><td></td></tr></table>	NAME		VENDOR CODE						
NAME												
VENDOR CODE												
3	BANK GUARANTEE AMOUNT	:										
4	PURCHASE ORDER/ LOA NO	:										
5	NATURE OF BANK GUARANTEE (Please Tick (✓) Whichever is Applicable	:	<table><tr><td>PERFORMANCE BANK GUARANTEE</td><td>SECURITY DEPOSIT</td><td>EMD</td><td>ADVANCE</td></tr></table>	PERFORMANCE BANK GUARANTEE	SECURITY DEPOSIT	EMD	ADVANCE					
PERFORMANCE BANK GUARANTEE	SECURITY DEPOSIT	EMD	ADVANCE									
6	BG ISSUED BANK DETAILS	:	<table><tr><td>(A) EMAIL ID</td><td>:</td><td></td></tr><tr><td>(B) ADDRESS</td><td>:</td><td></td></tr><tr><td>(C) PHONE NO/ MOBILE NO.</td><td>:</td><td></td></tr></table>	(A) EMAIL ID	:		(B) ADDRESS	:		(C) PHONE NO/ MOBILE NO.	:	
(A) EMAIL ID	:											
(B) ADDRESS	:											
(C) PHONE NO/ MOBILE NO.	:											



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F-5A

AGREED TERMS & CONDITIONS FOR INDIAN BIDDER

To,

M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

SUB:

TENDER NO:

This Questionnaire duly filled in, signed & stamped must form part of Bidder's Bid and must be submitted in Part –I (Un-priced Bid). Clauses confirmed hereunder need not be repeated in the Bid.

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1	Bidder's name and address	As per Cl. No. 1 & 7 of F-1
2.	Bidder confirms currency of quoted prices as:--	
3.	Bidder confirms quoted prices will remain firm and fixed till complete execution of the order, unless allowed as per tender provisions.	
4	Rate of applicable GST (CGST & SGST/ UTGST or IGST)	CGST: % Plus SGST/UTGST..... % Total:% Or IGST:..... %
4.1	Whether in the instant tender services/works are covered in reverse charge rule of GST (CGST & SGST/UTGST or IGST)	Yes/ No In case of Yes, please specify GST (CGST & SGST/UTGST or IGST) payable by: BCPL:.....% Bidder:.....%
4.2	Service Accounting Codes (SAC)/ Harmonized System of Nomenclature (HSN)	
4.3	Bidder confirms that the quoted prices is in compliance with taxes and duties provisions stipulated in Annexure-1 to CTC	
4.4	- Whether bidder is liable to raise E-Invoice as per GST Act - If yes, bidder will raise E-Invoice and confirm compliance to provision of tender in this regard.	



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5.	Bidder confirms acceptance of relevant Terms of Payment specified in the Bid Document.					
6.	Bidder confirms that Contract Performance Security will be furnished as per Bid Document.					
7.	Bidder confirms that Contract Performance Security shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalised Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores or equivalent US Dollars and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.					
8.	Bidder confirms compliance to Completion Schedule as specified in Bid document.					
9.	(i) Bidder confirms acceptance of Price Reduction Schedule for delay in completion schedule specified in Bid document. (ii) In case of delay, the bills shall be submitted after deducting the price reduction due to delay (refer PRS Clause).					
10.	a) Bidder confirms acceptance of all terms and conditions of Bid Document (all sections). b) Bidder confirms that printed terms and conditions of bidder are not applicable.					
11.	Bidder confirms that their offer is valid for period specified in BDS from Final/ Extended Due date of submission of Bid.					
12.	Bidder furnishes EMD/Bid Security details : a) EMD/ Bid Security No. & date b) Value c) Validity					
13.	Confirm acceptance to all provisions of ITB read in conjunction with Bid Data Sheet (BDS).					
14.	Bidder confirms that (i) none of Directors (in Board of Director) of bidder is a relative of any Director (in Board of Director) of Owner or (ii) the bidder is a firm in which any Director (in Board of Director) of Owner/ BCPL or their relative is not a partner.	<table><tr><td>Confirmed</td><td></td></tr><tr><td>Not confirmed</td><td></td></tr></table>	Confirmed		Not confirmed	
Confirmed						
Not confirmed						
15.	Bidder confirms that all correspondence must be in ENGLISH language only.					
16.	Bidder confirms that Owner reserves the right to make any change in the terms & conditions of the Tender/Bidding Document and to reject any or all bids.					
17.	Confirm that all Bank charges associated with Bidder's Bank shall be borne by Bidder.					



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18.	No Deviation Confirmation: It may be note that any 'deviation / exception' in any form may result in rejection of Bid. Therefore, Bidder confirms that they have not taken any 'exception / deviation' anywhere in the Bid. In case any 'deviation / exception' is mentioned or noticed, Bidder's Bid may be rejected.	
19.	If Bidder becomes a successful Bidder and pursuant to the provisions of the Tender Document, award is given to them against subject Tender Document, the following Confirmation shall be automatically enforceable: "We agree and acknowledge that the Employer is entering into the Contract/Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Contract/Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Purchaser is authorized to enter into Contract/Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Purchaser is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."	
20.	Bidder to ensure all documents as per tender including clause 11 of Section III and all Formats are included in their bid	



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21.	Bidder hereby confirms that they are not on 'Holiday' by BCPL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid. Further, Bidder confirms that neither they nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of BCPL or the Ministry of Petroleum and Natural Gas. Bidder also confirms that they are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'. In case it comes to the notice of BCPL that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices. Further, Bidder also confirms that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to BCPL by them.	
22.	As per requirement of tender, bidder (having status as Pvt. Ltd. or Limited company) must upload bid duly digitally signed on e-portal through class-3B digital signature (DS). In case, class of DS or name of employee or name of employer is not visible in the digitally signed documents, the bid digitally signed as submitted by the person shall be binding on the bidder.	
23.	Bidder confirms the contents of this Tender Document have not been modified or altered by them. In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by them shall be liable for rejection.	
24.	Bidder confirms that, in case of contradiction between the confirmations provided in this format and terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	



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25.	Bidder certifies that they would adhere to the Fraud Prevention Policy of BCPL [available on BCPL's website [www.bcplonline.co.in] and shall not indulge themselves or allow others (working in BCPL) to indulge in fraudulent activities and that they would immediately apprise BCPL of the fraud/suspected fraud as soon as it comes to their notice. Concealment of facts regarding their involvement in fraudulent activities in connection with the business transaction(s) of BCPL is liable to be treated as crime and dealt with by the procedures of BCPL as applicable from time to time.	
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Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation:
Seal:



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F-5B
AGREED TERMS & CONDITIONS FOR FOREIGN BIDDER

To,

M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

SUB:

TENDER NO:

This Questionnaire duly filled in, signed & stamped must form part of Bidder's Bid and must be submitted in Part –I (Un-priced Bid). Clauses confirmed hereunder need not be repeated in the Bid.

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1a	Bidder's name and address	As per Cl. No. 1 & 7 of F-1
1b	The address of the Fixed Place Permanent Establishment (PE) or name & address of the Dependent Agency PE of Foreign Bidder as per clause no.40 of ITB of Tender Document.	
2.	Bidder confirms currency of quoted prices as:-	
3.	Bidder confirms that quoted prices will remain firm and fixed till complete execution of the order, unless allowed as per tender provisions.	
4.	Bidder confirms that the quoted prices is in compliance with taxes and duties provisions stipulated in Annexure-1 to CTC	
4.1	- Whether bidder is liable to raise E-Invoice as per GST Act - If yes, bidder will raise E-Invoice and confirm compliance to provision of tender in this regard.	
5.	Bidder confirms acceptance of relevant Terms of Payment specified in the Bid Document.	
6.	Bidder confirms that Contract Performance Security will be furnished as per Bid Document.	
7.	Bidder confirms that Contract Performance Security shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalised Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores or equivalent US Dollars and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.	



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8.	Bidder confirms compliance to Completion Schedule as specified in Bid document.		
9.	(i) Bidder confirms acceptance of Price Reduction Schedule for delay in completion schedule specified in Bid document. (ii) In case of delay, the bills shall be submitted after deducting the price reduction due to delay (refer PRS Clause).		
10.	a) Bidder confirms acceptance of all terms and conditions of Bid Document (all sections). b) Bidder confirms that printed terms and conditions of bidder are not applicable.		
11.	Bidder confirms their offer is valid for period specified in BDS from Final/Extended due Due date of submission of Bid.		
12.	Bidder furnishes EMD/Bid Security details : a) EMD/ Bid Security No. & date b) Value c) Validity		
13.	Bidder confirms acceptance to all provisions of ITB read in conjunction with Bid Data Sheet (BDS).		
14.	Bidder confirms that (i) none of Directors (in Board of Director) of bidder is a relative of any Director (in Board of Director) of Owner or (ii) the bidder is a firm in which any Director (in Board of Director) of Owner/ BCPL or their relative is not a partner.	Confirmed	
		Not confirmed	
15.	Bidder confirms that all correspondence must be in ENGLISH language only.		
16.	Bidder confirms that Owner reserves the right to make any change in the terms & conditions of the Tender/Bidding Document and to reject any or all bids.		
17.	Bidder confirms that all Bank charges associated with Bidder's Bank shall be borne by Bidder.		
18.	No Deviation Confirmation: It may be note that any 'deviation / exception' in any form may result in rejection of Bid. Therefore, Bidder confirms that they have not taken any 'exception / deviation' anywhere in the Bid. In case any 'deviation / exception' is mentioned or noticed, Bidder's Bid may be rejected.		
19.	If Bidder becomes a successful Bidder and pursuant to the provisions of the Tender Document, award is given to them against subject Tender Document, the following Confirmation shall be automatically enforceable: "We agree and acknowledge that the Employer is entering into the Contract/Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Contract/Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Purchaser is authorized to enter into		



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	Contract/Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Purchaser is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."	
20.	Bidder to ensure all documents as per tender including clause 11 of Section III and all Formats are included in their bid.	
21.	Bidder hereby confirms that they are not on 'Holiday' by BCPL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid. Further, Bidder confirms that neither they nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of BCPL or the Ministry of Petroleum and Natural Gas. Bidder also confirms that they are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'. In case it comes to the notice of BCPL that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices. Further, Bidder also confirms that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to BCPL by them.	
22.	As per requirement of tender, bidder (having status as Pvt. Ltd. or Limited company) must upload bid duly digitally signed on e-portal through class-3B digital signature (DS). In case, class of DS or name of employee or name of employer is not visible in the digitally signed documents, the bid digitally signed as submitted by the person shall be binding on the bidder.	



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23.	Bidder confirms the contents of this Tender Document have not been modified or altered by them. In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by them shall be liable for rejection.	
24.	Bidder confirms that, in case of contradiction between the confirmations provided in this format and terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	
25.	Bidder certifies that they would adhere to the Fraud Prevention Policy of BCPL [available on BCPL's website [www.bcplonline.co.in] and shall not indulge themselves or allow others (working in BCPL) to indulge in fraudulent activities and that they would immediately apprise BCPL of the fraud/suspected fraud as soon as it comes to their notice. Concealment of facts regarding their involvement in fraudulent activities in connection with the business transaction(s) of BCPL is liable to be treated as crime and dealt with by the procedures of BCPL as applicable from time to time.	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



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ACKNOWLEDGEMENT CUM CONSENT LETTER

(On receipt of Tender Document/information regarding the tender, Bidder shall acknowledge the receipt and confirm his intention to bid or reason for non-participation against the enquiry /tender through e-mail/fax to Purchase Officer in BCPL who issued the Tender Document, by filling up the Format)

To,
M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

SUB:
TENDER NO:

Dear Sir,

We hereby acknowledge receipt of a complete set of Tender Document along with enclosures for subject item/job and/or the information regarding the subject tender.

- We intend to bid as requested for the subject item/job and furnish following details with respect to our quoting office:

Postal Address with Pin Code:
Telephone Number :
Fax Number :
Contact Person :
E-mail Address :
Mobile No. :
Date :
Seal/Stamp :

- We are unable to bid for the reason given below:

Reasons for non-submission of bid:

Agency's Name :
Signature :
Name :
Designation :
Date :
Seal/Stamp :



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BIDDER'S EXPERIENCE

To,

M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

SUB:

TENDER NO:

Sl. No	Description of the Supply/ Services	PO/ Contr-act No. and date	Full Address & phone nos. of Client.	Postal & nos. of Client.	Value of Contract /Order (Specify Currency Amount)	Date of Commencement	Scheduled Completion/Delivery Period (Months)	Date of Actual Completion	Reasons for delay in execution, if any
(1)	(2)	(3)	(5)		(6)	(7)	(8)	(9)	(10)

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



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CHECK LIST

Bidders are requested to duly fill in the checklist. This checklist gives only certain important items to facilitate the Bidder to make sure that the necessary data/information as called for in the Tender Document has been submitted by them along with their offer/Bid. This, however, does not relieve the Bidder of his responsibilities to make sure that his Bid is otherwise complete in all respects.

Please ensure compliance and tick (√) against following points:

S. No.	DESCRIPTION	CHECK BOX	REFERENCE PAGE NO. OF THE BID SUBMITTED
1.0	Confirm that the following details have been submitted in the Un-priced part of the Bid		
I	Covering Letter, Letter of Submission		
Ii	Bid Security as per provisions of Tender		
Iii	Signed and stamped original copy of Tender Document along with drawings and addendum (if any)		
Iv	Power of Attorney in the name of person signing the bid.		
V	Details and documentary proof required against BEC Criteria of Tender Document.		
vi	Confirm submission of documents alongwith unpriced bid as per tender requirement.		
2.0	Confirm that all forms duly filled in are enclosed with the bid duly signed by authorised person(s)		
3.0	Confirm that the price part as per Price Schedule format submitted with Tender Document/ uploaded in case of e-bid.		
4.0	Confirm that annual reports for last three financial years & duly filled in Form -16 are enclosed in the offer for financial assessment (where financial criteria of BEC is applicable).		
6.0	“FILE NAME, REFERENCE OF PAGE NO. OF THE BID UPLOADED ETC.” Above listing shall be done for the compliance/document requirement w.r.t. BEC, Evaluation Criteria, Technical and CTC etc.		

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:&Designation:

Seal:



F-8(B)
CHECKLIST FOR BID EVALUATION CRITERIA (BEC) QUALIFYING DOCUMENTS
(refer Section II of Tender document)

BEC Clause No.	Description	Documents required for qualification	Documents Submitted by Bidder	Reference Page No. of the Bid submitted
Technical BEC				
1.	Experience	(a) (b) (c)		
2.	Job executed for Subsidiary / Fellow subsidiary/ Holding company.	Tax paid invoice(s) duly certified by statutory auditor of the bidder towards payment of statutory tax in support of the job executed for Subsidiary / Fellow subsidiary/ Holding company.		
3.	Any other technical criteria in BEC	(a) (b) (c)		
Financial BEC				
1.	Annual Turn Over	Audited Financial Statements [including Auditor's Report, Balance sheet, Profit & Loss Accounts statements, Notes & schedules etc.] for last Audited Financial Year. [In case the Annual Turnover criteria is not met in last Audited Financial Year, then the Audited Financial Statements for previous two years of last Audited Financial Year is to be submitted]	Submitted (Mention specific year.....)	



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2.	Net Worth	Audited Financial Statements [including Auditor's Report, Balance sheet, Profit & Loss Accounts statements, Notes & schedules etc.] for last Audited Financial Year.	Submitted (Mention specific year)	
3.	Working Capital	Audited Financial Statements [including Auditor's Report, Balance sheet, Profit & Loss Accounts statements, Notes & schedules etc.] for last Audited Financial Year. If the bidder's working capital is negative or inadequate, the bidder shall submit a letter (in prescribed format) from their bank having net worth not less than Rs.100 Crores, confirming the availability of line of credit for at least working capital requirement as stated above.	Submitted (Mention specific year.....) Submitted/ Not Applicable (Bidder to tick appropriate option)	
4.	Format for Details of financial capability of Bidder	Bidder shall submit "Details of financial capability of Bidder" in prescribed format duly signed and stamped by a chartered accountant / Certified Public Accountant (CPA).	Submitted	

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
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F-10A

FORMAT OF DECLARATION BY SELLERS WHO DO NOT HAVE A PE IN INDIA

We, the beneficiary, hereby confirm as follows:

1. We are resident of a _____ (Contracting State) in accordance with the provisions of Article 4 of the Convention between the Government of the _____ (Contracting State) and the Government of the Republic of the _____ (Other Contracting State/ India) for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income ("Treaty") and are eligible to claim relief under the provisions of the Treaty including Article 5.
2. Till 31 March _____, we did not have a permanent establishment in India as contemplated under Article 5 of the Treaty respectively. Further, up to 31 March _____, we have no intention to have a fixed base or permanent establishment in the _____ (Other Contracting State/ India) within the meaning of Article 5 of the Treaty respectively.

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

(Note: Above declaration is not applicable for countries with companies located in countries or specified territories with which India does not have DTAA)



**FORMAT OF DECLARATION BY THE SELLER REGARDING NO BUSINESS
CONNECTION IN INDIA**

**This is to certify that.....(Name of the entity) a company in
.....(Country) having its registered office at (Address
of company)**

1. Is a tax resident of; and
2. Till 31 March, we did not have a business connection or fixed base in India as per the provisions of Indian Income Tax Act, 1961. Further, up to 31 March, we have no intention to have a business connection or fixed base in India.

We further undertake to notify your good office immediately if there is a change in the facts or status of our company in relation to being or operating a business connection of fixed base as stated herein above.

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation:
Seal:



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[For entities Located in Country or specified territories with which India has DTAA]
(This Form contains Form 10F as per Indian Income Tax Act, 1961)
FORM10F

Information to be provided under sub-section (5) of section 90 or sub-section (5) of section 90A of the Income-tax Act, 1961

I _____ *son/daughter of Mr. _____ in the capacity of _____ (designation) do provide the following information, relevant to the previous year _____ *in my case/in the case of _____ for the purposes of sub-section (5) of * section 90/section 90A:—

Sl.No.	Nature of information	:	Details#
(i)	Status (individual, company, firm etc.) of the assessee	:	
(ii)	Permanent Account Number (PAN) of the assessee if allotted	:	
(iii)	Nationality (in the case of an individual) or Country or specified territory of incorporation or registration (in the case of others)	:	
(iv)	Assessee's tax identification number in the country or specified territory of residence and if there is no such number, then, a unique number on the basis of which the person is identified by the Government of the country or the specified territory of which the assessee claims to be a resident	:	
(v)	Period for which the residential status as mentioned in the certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A is applicable	:	
(vi)	Address of the assessee in the country or territory outside India during the period for which the certificate, mentioned in (v) above, is applicable	:	



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2. I have obtained a certificate to in sub-section (4) of section 90 of sub-section (4) of section 90A from the Government of _____ (name of country or specified territory outside India)

Signature: _____

Name: _____

Address: _____

Permanent Account Number (If allotted): _____

Verification

I _____ do hereby declare that to the best of my knowledge and belief what is stated above is correct complete and is truly stated.

Verified today the _____ day of _____

Signature of the person providing the information

Place: _____

Notes:

1. Copy of supporting documents to be provided for the details mentioned.

2. *Delete whichever is not applicable.

3. #Write N.A. if the relevant information forms part of the certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A.



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[For entities Located in Country or specified territories with which India does not have DTAA]

Declaration Form

I _____ *son/daughter of Mr. _____ in the capacity of _____ (designation) do provide the following information, relevant to the previous year _____ *in my case/in the case of _____:—

Sl.No.	Nature of information	:	Details#
(i)	Status (individual, company, firm etc.) of the assessee	:	
(ii)	Permanent Account Number (PAN) of the assessee if allotted	:	
(iii)	Nationality (in the case of an individual) or Country or specified territory of incorporation or registration (in the case of others)	:	
(iv)	Assessee's tax identification number in the country or specified territory of residence and if there is no such number, then, a unique number on the basis of which the person is identified by the Government of the country or the specified territory of which the assessee claims to be a resident	:	
(v)	Address of the assessee in the country or territory outside India during the period for which the certificate, mentioned in (iv) above, is applicable	:	

Signature: _____

Name: _____

Address: _____

Permanent Account Number (If allotted): _____

Verification

I _____ do hereby declare that to the best of my knowledge and belief what is stated above is correct complete and is truly stated.

Verified today the _____ day of _____

Signature of the person providing the information

Place: _____

Notes:

1. Copy of supporting documents to be provided for the details mentioned.



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2. *Delete whichever is not applicable.



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BIDDER'S QUERIES FOR PRE BID MEETING

To,
M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

Sub :

Tender No :

SL. NO.	REFERENCE OF TENDER DOCUMENT				BIDDER'S QUERY	BCPL'S REPLY
	SEC. NO.	Page No.	Clause No.	Subject		

NOTE: The Pre-Bid Queries may be sent by fax / e-mail before due date for receipt of Bidder's queries in terms of Clause No. 8.1 of ITB.

SIGNATURE OF AUTHORISED REPRESENTATIVE OF BIDDER: _____

NAME OF BIDDER : _____



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E-Banking Mandate Form

(To be issued on vendors letter head)

(Applicable for Indian Bidder only)

1. Vendor/customer Name :
2. Vendor/customer Code:
3. Vendor /customer Address:
4. Vendor/customer e-mail id:
5. Particulars of bank account
 - a) Name of Bank
 - b) Name of branch
 - c) Branch code:
 - d) Address:
 - e) Telephone number:
 - f) Type of account (current/saving etc.)
 - g) Account Number:
 - h) RTGS IFSC code of the bank branch
 - i) NEFT IFSC code of the bank branch
 - j) 9 digit MICR code

I/We hereby authorize BCPL(India) Limited to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the Brahmaputra Cracker & Polymer Ltd. responsible.

(Signature of vendor/customer)

BANK CERTIFICATE

We certify that ----- has an Account no. ----- with us and we confirm that the details given above are correct as per our records.

Bank stamp

Date

(Signature of authorized officer of bank)



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FREQUENTLY ASKED QUESTIONS (FAQs)

SL.NO.	QUESTION	ANSWER
1.0	Can any Bidder quote for subject Tender?	Yes. A Bidder has to meet Bid Evaluation Criteria given under Section II of Tender Document in addition to other requirements.
2.0	Should the Bid Evaluation Criteria documents be attested?	Yes. Please refer Section II of Tender Document
3.0	Is attending Pre Bid Meeting mandatory.	No. Refer Clause No. 17 of Instruction to Bidders of Tender Document. However attending Pre Bid Meeting is recommended to sort out any issue before submission of bid by a Bidder.
4.0	Can a bidder submit more than 1 offer?	No. Please refer Clause No. 4 of Instruction to Bidders of Tender Document.
5.0	Is there any Help document available for e-Tender?	Yes. Refer Annexure-III to Instructions to Bidders of Tender Document and FAQs as available on BCPL E-Tender portal.
6.0	Are there any MSE (Micro & Small Enterprises) benefits available?	Yes. Refer Clause No. 16 of Instructions to Bidders of Tender Document.
7.0	Are there any benefits available to Start-Ups?	Refer Clause No. 16 of Instructions to Bidders of Tender Document.

All the terms and conditions of Tender remain unaltered.



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PROFORMA FOR DETAILS OF INDIAN AGENT

To,
M/s BRAHMAPUTRA CRACKER & POLYMER LTD.

TENDER NO:

Dear Sir,

Following are the details of Indian agent/ consultant/representative:

S. No	Description	Bidder's response
1.	Name & address of agent / consultant / representative in India.	
2.	The precise relationship between the bidder and their agent/consultant/representative in India.	
3.	The mutual interest which the bidder and Agent / Consultant / Representative in India have in the Business of each other.	
4.	Any payment which the Agent / Consultant / Representative in India or abroad receives from the bidder whether as a commission for the contract or as a general retainer fee.	
5.	Permanent Income Tax Account number of Agent / Consultant / Representative in India.	
6.	Permanent Income Tax account of bidder in his country and also in India, if applicable	
7.	All services to be rendered by the Agent / Consultant / Representative.	
8.	Bidder to confirm copy of agreement with their Indian Agent is enclosed in unpriced bid.	

SEAL AND SIGNATURE OF BIDDER

Note: Aforementioned information's need to be supported with necessary documents.



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Page 1 of 2

FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE/ CERTIFIED PUBLIC ACCOUNTANT (CPA) FOR FINANCIAL CAPABILITY OF THE BIDDER

We have verified the Audited Financial Statements and other relevant records of M/s..... (Name of the bidder) and certify the following:

A. AUDITED ANNUAL TURNOVER* OF LAST 3 YEARS:

Year	Amount (Currency)
Year 1:	
Year 2:	
Year 3:	

B. NETWORTH* AS PER LAST AUDITED FINANCIAL STATEMENT:

Description	Year _____
	Amount (Currency)
1. Net Worth	

****Refer Instructions***

- (i) It is further certified that the above mentioned applicable figures are matching with the returns filed with Registrar of Companies (ROC) [Applicable only in case of Indian Companies]
- (ii) We confirm that above figures are after referring instructions at page 2 of 2 of Format F-16.

Name of Audit Firm:
Chartered Accountant/CPA
Date:

Membership No.:

[Signature of Authorized Signatory]
Name:
Designation:
Seal:



Instructions for Format F-16:

1. The Separate Pro-forma shall be used for each member in case of JV/ Consortium.
2. The financial year would be the same as one normally followed by the bidder for its Annual Report.
3. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non-responsive.
4. For the purpose of this Tender document:
 - (i) **Annual Turnover** shall be “Sale Value/ Operating Income”
 - (ii) **Net Worth** shall be Paid up share capital plus Free Reserves & Surplus less accumulated losses, deferred expenditure and miscellaneous expenditure not written off, if any.
5. **Above figures shall be calculated after considering the qualification, if any, made by the statutory auditor on the audited financial statements of the bidder including quantified financial implication.**
6. This certificate is to be submitted on the letter head of Chartered Accountant/CPA.



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COMMERCIAL QUESTIONNAIRE

BIDDING DCOUMENT NO. : _____

NAME OF WORKS : _____

SL. NO.	BCPL's/EIL'S QUERIES	BIDDER'S REPLY
1.	Confirm that you have sent physical documents as per clause 4.0 of IFB, to EIL as per following Address:- Kind Attention: Ms. Sangitta Ghuliani, GM (SCM), 2nd Floor, Tower-I, Engineers India Limited, Sector-16 (On NH-8), Gurugram Haryana-122001 (India)	
2.	Confirm that your Bid is valid for period as mentioned in BDS from the bid due date	
3.	Please indicate the Delivery Schedule of first charge of Catalyst	_____ Months from the placement of Purchase order (Indicate here)
4.	Please indicate the Delivery Schedule of Proprietary items	_____ Months from the placement of Purchase order (Indicate here)
5.	Bidder to confirm whether or not India has a Double Taxation Avoidance Agreement (DTAA) with the Licensor's country.	
6.	In case, DTAA exist, the bidder shall submit (i) Permanent Account Number (PAN) as per Indian Income Tax requirement, (ii) Tax Residency Certificate (TRC) from govt. of foreign country and (iii) additional information as per Form No.10F. The above documents shall be furnished as per the details provided in the CTC.	



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SL. NO.	BCPL's/EIL'S QUERIES	BIDDER'S REPLY
7.	Please confirm that while submitting your 'Price', you have taken into consideration the following:-	
i.	'Price' has been submitted exactly as per the format included in the Bidding Document under section 'Schedule of Prices'.	
ii.	Blank copy of Schedule of Prices duly signed (i.e. without prices mentioning "Quoted") has been submitted in un-priced part.	
iii.	a) Confirm that only the name of the Catalyst and Name of Metal has been mentioned in the Unpriced Part. b) Confirm that Quantity of Catalyst, Chemicals, adsorbents, Absorbents, Additive (as applicable) with Unit rate has been mentioned in the Price Part. c) Confirm that contingencies towards losses & spillage have been included by you.	
iv.	Confirm that Mandatory Services has been quoted for the services indicated in the Technical part of the Bidding Document.	
v.	Confirm that charges for training to OWNER's Personnel have been quoted as per the Technical part of the Bidding Document.	
vi.	a) Confirm that prices for supply of Proprietary Equipments have been quoted as per the Technical part of the Bidding Document. b) Also confirm that Proprietary Equipments have been indicated in Price Bid and in un-priced Bid also along with delivery period, International Seaport of exit.	



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SL. NO.	BCPL's/EIL'S QUERIES	BIDDER'S REPLY
vii.	Confirm that "Escalation Rates" have been specified as in Price Part. Please note that in case "Escalation Rates" are not specified, then the prices quoted shall be considered valid and firm and no escalation shall be payable.	
viii.	Confirm that prices for License and Basic Engineering Fees are firm till execution of work and no escalation shall be payable.	
ix.	Confirm that you have complied with all the commercial terms and conditions and have not taken any exceptions and deviations.	
x.	Please note that 'Net Present Value' shall be calculated on the basis of philosophy mentioned in the Bidding Document supplemented by other details as decided by BCPL/ EIL.	

SIGN AND STAMP OF THE BIDDER



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INDEMNITY BOND

WHEREAS **Brahmaputra Cracker and Polymer Ltd. (BCPL)**, (hereinafter referred to as “**BCPL**”) which expression shall, unless repugnant to the context include its successors and assigns, having its registered office at 1st Floor, House No 6, Bhuban Road, Uzanbazar, Guwahati, Assam, Pin-781001 & Project Office at Administrative Building, BCPL, Lepetkata, Dibrugarh, Assam, PIN - 786006, is in the process of setting up HPG-2, Butene-1 & PSA Units at Lepetkatta, Assam (India) has entered into a contract with M/s* (hereinafter referred to as the “**Contractor**”) which expression shall unless repugnant to the context include its representatives, successors and assigns, having its registered office at * and on the terms and conditions as set out, inter-alia in the [*mention the work order/LOA/Tender No.*]and various documents forming part thereof, hereinafter collectively referred to as the ‘**CONTRACT**’ which expression shall include all amendments, modifications and / or variations thereto.

BCPL has also advised the Contractor to execute an Indemnity Bond in general in favour of **BCPL** indemnifying **BCPL** and its employees and Directors including Independent Directors from all consequences which may arise out of any prospective litigation or proceedings filed or may be initiated by any third party, including any Banker / financial institution / worker(s) / vendor(s) / subcontractor(s) etc. who may have been associated or engaged by the Contractor directly or indirectly with or without consent of **BCPL** for above works.

NOW, THEREFORE, in consideration of the promises aforesaid, the Contractor hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified **BCPL** and all its employees, Directors, including Independent Directors, from and against all/any claim(s), damages, loss, which may arise out of any litigations/ liabilities that may be raised by the Contractor or any third party against **BCPL** under or in relation to this contract. The Contractor undertakes to compensate and pay to **BCPL** and/or any of its employees, Directors including Independent Directors, forth with on demand without any protest the amount claimed by **BCPL** for itself and for and on behalf of its employees, Directors including Independent Directors together with direct/indirect expenses including all legal expenses incurred by them or any of them on account of such litigation or proceedings.

AND THE CONTRACTOR hereby further agrees with **BCPL** that:

- (i) This Indemnity shall remain valid and irrevocable for all claims of **BCPL** and/or any of its employees and Directors including Independent Directors arising out of said contract with respect to any such litigation / court case for which **BCPL** and/or its employees and Directors including Independent Directors has been made party until now or here-in-after.
- (ii) This Indemnity shall not be discharged/revoked by any change/modification/amendment/assignment of the contract or any merger of the Contractor with other entity or any change in the constitution/structure of the Contractor’s firm/Company



ब्रह्मपुत्रक्रेकरऔरपालीमेरलिमिटेड
(भारत सरकार का उपक्रम)
Brahmaputra Cracker and Polymer Ltd.
(A Government of India Enterprise)

or any conditions thereof including insolvency etc. of the Contractor, but shall be in all respects and for all purposes binding and operative until any/all claims for payment of **BCPL** are settled by the Contractor and/or **BCPL** discharges the Contractor in writing from this Indemnity.

The undersigned has full power to execute this Indemnity Bond for and on behalf of the Contractor and the same stands valid.

SIGNED BY :

For [Contractor]

Authorised Representative

Place:

Dated:

Witnesses:

- 1.
- 2

**COMMERCIAL TERMS AND CONDITIONS (CTC)
FOR LICENSOR SELECTION FOR
HPG-2nd STAGE UNIT OF BCPL**

(BIDDING DOCUMENT NO.: SG/B348-115-LA-TN-8501/1003)

**(SECTION-IV)
(Rev.2)**

Abbreviations:

ABBREVIATION	DESCRIPTION
BEDP/BDEP	: Basic Engineering and Design Package
BQC	: Bidder Qualification Criteria
LF	: License Fee
CPBG /BG	: Contract Performance Bank Guarantee/ Bank Guarantee
DTAA	: Double Taxation Avoidance Agreement
FOB	: Free on Board
GST	: Goods and Services Tax
KOM	: Kick Off Meeting
L/C	: Letter of Credit
MC	: Mechanical Completion
NPV	: Net Present Value
PGTR	: Performance Guarantee Test Run
PMC	: Project Management Consultant
PRS	: Price Reduction Schedule
PFD	: Process Flow Diagram
P&ID	: Piping and Instrumentation Diagram
PSU	: Indian Public Sector Undertaking

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ARTICLE 1 – DEFINITION

Unless repugnant to the subject in context thereof, for the purpose of this document, the following expressions (in alphabetical order) herein used shall have the following meaning:

- 1.1. **"Basic Engineering Design Package (BEDP)"** or Basic Design Engineering Package (BDEP)" mean such design and engineering document as set forth in more detail in Technical Specification.
- 1.2. **"Bidder"** mean Licensor who has submitted a Bid to the Owner/EIL against this Bidding Document.
- 1.3. **"Bidding Document / Tender Document"** means the complete technical and commercial documents including it's subsequent Amendment(s) [excluding replies to Pre-Bid Queries], if any, as issued/ web-hosted by Owner/PMC for preparation and submission of Bidder's Bid.
- 1.4. **"Bid/Offer/Tender"** means the Proposal submitted by the Bidder in respect of the specific requirement of the Bidding Document.
- 1.5. **"Catalyst"** as more specifically defined in the Technical Specification, shall include catalysts, absorbents, additives, adsorbents, Chemicals etc. required in the Process.
- 1.6. **"Commissioning"** shall mean when the products of desired Technical specifications and qualities etc. are obtained from the Unit/ Plant (as applicable) and shall be as more specifically defined in the Technical Specification, which shall take precedence in order, in the context of conflict with the CTC.
- 1.7. **"Contract / Agreement or License Agreement"** means an Agreement, executed by and between the Owner (Licensee) and the Licensor, **for granting a non-exclusive, irrevocable and non-transferable License by the Licensor to the Licensee under the Licensor's Patent Rights to grant the rights to (i) use the Process (ii) export / sell or use in any Country the Products of the Process produced, free from infringement of Licensor's Patent Rights etc.,** made in accordance with the various provisions of the Bidding Document and its Amendment(s) (if any) and the terms and conditions finally accepted for faithful execution of Agreement with respect to Process Guarantee(s), Engineering Services, Warrantees, Liabilities etc. for the Unit/Plant (as applicable)
- 1.8. **"Kick-off Meeting (KOM)"** mean the meeting between Licensor and Owner after award of work, with or without Owner's Consultant(s) as Owner may determine, to establish and agree on Final Design Basis on which the Process Package to be finalized, Project methodology, Deliverables etc.of Owner's Plant/ Unit (as applicable),in addition to or modification of the Design Basis set forth in Technical Specification hereof,
- 1.9. **"Licensor"** shall mean the "Owner of the Process (including any Patent Rights)" selected by the Licensee for this Project and shall, where the context so required, include the Owner/Supplier of a Process who has submitted a Proposal/Bid pursuant to the Bidding Document and a person authorized by Licensor of any part of the Process to grant a License for the part of the Process.

- 1.10. **"Licensed Territory"** shall mean **BRAHMAPUTRA CRACKER AND POLYMER LIMITED (BCPL), LEPETKATA-786006, DIBRUGARH, ASSAM, INDIA.**
- 1.11. **"License Fee (LF)"** shall include the royalty, know-how fee howsoever named for the use of the Patent and Intellectual Property rights of the Licensor in the Process
- 1.12. **"Manday"** shall mean any calendar day or part thereof, during which a Licensor's representative shall be engaged in performance of work for Owner.
- 1.13. **"Mechanical Completion (MC)" or "Mechanical Completion of the Unit"** shall mean the date when all plant, equipment, machinery, vessels, piping, insulation, systems and sub-systems pertaining thereto (as per scope of work) have been successfully supplied, erected, installed, joined, tested (like hydrostatic testing, wiring tests, calibration of instruments and electrical motor rotation tests etc.), and pre-commissioned in readiness for test runs, and shall be as more specifically defined in the Technical Specification, which shall take precedence in order, in the context of conflict with the CTC.
- 1.14. **Operating Instructions / Manual:** "Operating Instructions/ Manual" means the documents (written in English language) prepared by the Licensor with metric measures containing the procedures for pre-commissioning, commissioning, start-up, shut-down, and emergency handling.
- 1.15. **"Owner / Licensee/ Company / Client"** means **"BRAHMAPUTRA CRACKER AND POLYMER LIMITED (BCPL)"**, a company incorporated in India under the Companies Act, 1956, having its registered office at 1st Floor, House No.-06, Bhuban Road, Uzanbazar, Guwahati-781001 (Assam), Tel: (+91361) 2733554, Fax: 2733556 including its successors or permitted assignees.
- 1.16. **"Owner's Contractor(s)"** shall mean such engineering firm or firms, companies, individuals etc. to be selected by Owner for work(s) on Owner's Plant or Unit (as applicable).
- 1.17. **"Owner's Plant" or "Plant"** shall mean the first plant constructed by or for Owner in the Licensed Territory by means of the Process Technology which plant shall have a Rated Design Capacity.
- 1.18. **Patents:** "Patents" means the rights with respect to or transferable interests in patents and pending patent applications of all countries to the extent that they or the claims thereof cover the process, any equipment, apparatus, catalyst, absorbents, adsorbents, additives etc., for carrying out the process and the products of the process acquired by the Licensor including the inventions conceived by the Licensor.
- 1.19. **Performance Guarantee(s):** Performance Guarantee(s) means the Performance Guarantee(s) for the **Unit(s)/Plant (as applicable)** as set out in the Technical section included in the Bidding Document.
- 1.20. **"Process Technology /Process"** shall mean the Proprietary Process, Know-How, data, experience and Licensor's Information related to the Plant/ Unit (as applicable), required to design, set up, establish, and operate the Unit(s), which Licensor owns, controls or has access to, on the date of submission of

final BEDP, as more specifically defined in the Technical Specifications, which shall take precedence in order, in the context of conflict with the CTC.

- 1.21. **“Project Management Consultant (PMC)/Engineering, Procurement, Construction Management (EPCM) Consultant”** shall mean person or persons or a Company appointed by OWNER for assistance during the Project implementation. M/s Engineers India Limited (EIL), shall be the Project Management Consultant/ Engineering, Procurement, Construction Management Consultant for Licensor selection and related activities of the Plant/ Process Unit(s).
- 1.22. **“Proprietary Item”** shall mean the item (including catalyst/additive/chemical etc.), for which specification, engineering, manufacturing and supply are exclusively by the Licensor or Licensor specified Single Source / Single recommended Vendor (wherein addition of Bidder is not allowed by Licensor), as more specifically defined in the Technical Specifications, which shall take precedence in order, in the context of conflict with the CTC.
- 1.23. The **“Party”** shall mean Licensor or Licensee/Owner individually, and the **“Parties”** shall mean Licensor and Licensee/Owner collectively.
- 1.24. **“Rated Capacity”/ “Name Plate Capacity”/ “Designed Capacity”** means the capacity of the Plant/ Unit (as applicable) desired by Owner, and to be achieved using the Process Technology/ Process on a continuous basis during normal operation of the Plant/Unit, as more specifically described in Technical specifications, which shall take precedence in order, in the context of conflict with the CTC.
- 1.25. **“Scope of Work”** means the total obligations to be performed by the Licensor, as more particularly described in the Technical section of the Bidding Document and shall include Catalyst, and/or equipment and/or other item to be supplied and/ or Supervision Services by the Licensor.
- 1.26. **“Start-up”** shall mean the initial operation of the Plant/ Unit (as applicable) upon the introduction of feed stock into the Plant / Unit (as applicable) after Mechanical Completion, as more specifically defined in the Technical Specifications.
- 1.27. **“Site” or “Project Site” or “Project Location”** means **BRAHMAPUTRA CRACKER AND POLYMER LIMITED (BCPL), LEPETKATA-789006, DIBRUGARH, ASSAM, INDIA.**
- 1.28. **“Parent Company” / “Holding Company”**, in relation to one or more other companies, means a company of which such companies are Subsidiary companies; [as per the Companies Act, 2013, India (For Indian Subsidiary of Foreign Bidder or Indian Company), or as per Act of the respective Country (For Foreign Bidder)] .
“Subsidiary Company” or “Subsidiary”, in relation to any other company (that is to say the Holding Company), means a Company in which the Holding Company—
 - a. controls the composition of the Board of Directors; or
 - b. exercises or controls more than one-half of the **total voting power** either at its own or together with one or more of its Subsidiary

Companies:

Provided that such class or classes of Holding Companies as may be prescribed shall not have layers of subsidiaries beyond such numbers as may be prescribed as per respective Company Act of Bidders Country.

“Affiliate” means, in relation with any one of the parties, any company which, directly or indirectly, controls, is controlled by, or is under common control with such party. A company is controlled by the ownership of more than fifty percent (50%) of its voting rights.

“Sister Company” is a Company with close Affiliations to another Company with a separate name and personnel. Both Companies are owned by the same Parent and are considered Subsidiaries of the larger Company.

- 1.29. **“Technical Information” or “Licensor’s Information”:** “Technical Information” or “Licensor’s Information” means all operating techniques, apparatus data, technical data, information embodied in Patents, pending Patent applications, unpatented, improvements, developments and know-how, to the extent the same is applicable to or relates to the subject technology, which is owned or controlled by the Licensor or its affiliates, without any restrictions on further disclosure at any time.
- 1.30. **“Performance Guarantee Test Run (PGTR)”** shall be as defined in the Technical Specifications/Section.
- 1.31. **“Unit/ Process Unit”** means the total facilities of the Unit/Process Unit under consideration **“HPG-2, BUTENE-1 AND PSA UNITS”** to be installed within the Licensee’s refinery(ies)/Plant(s) to be operated by use of Process Technology based on the Scope of Work / Scope of Supply.
- 1.32. The masculine shall include the feminine and neuter genders, and vice versa
- 1.33. The expression written in CAPITAL or small font or Capitalized (i.e. first letter Capital of particular word) in the document has the same meaning of the expression as defined above, until specifically mentioned.

ARTICLE 2 - SCOPE OF WORK

The Licensor's scope of work is as set forth herein below:

- 2.1. **Granting Owner a non-exclusive, irrevocable, non-transferable right to use** the Technical Information and a non-exclusive, irrevocable **License** under Licensor's Patent rights, for the operation of the Process & Process Technology in the Owner's Plant/Unit, for making or having made for its own use, in so carrying out the Process any apparatus necessary thereof and for the use and sale of the products so produced from the Unit.
- 2.2. **Engineering** comprising of preparation and handing over of BEDP for the Unit/Plant and Detailed Engineering as per the agreed Scope of Work.
- 2.3. **Mandatory services** and any other **Additional services** such as training to Owner's personnel, assistance during Detailed Engineering, construction, Pre-Commissioning, Start-Up and Performance Guarantee Test Run (PGTR) etc. under the terms and conditions/provisions of the Agreement.
- 2.4. **Supply** comprising of:
 - (a) **Supply of Catalysts, Chemicals, Absorbents, Adsorbents, Additives etc. as applicable.**
 - (b) **Supply of Proprietary Catalysts, Co-Catalyst & Additives comprising of supply of first charge of Catalysts** for a minimum period as specified in the Technical part included in the Bidding document, for operation of the Plant, on FOB /FOT Despatch Point basis.
 - (c) **Supply of Proprietary Equipment:** The detailed scope of work shall be as per the Technical Specifications included in the Bidding Document.
 - (d) The Licensor shall provide and transfer the **Know-How and process package** in accordance with the Time Schedule specified in the Bidding Document.
- 2.5. The detailed scope of work shall be as per the Technical Specifications enclosed in the Bidding Document.
- 2.6. **Notes:**
 - (a) **Agreement:** The above requirements **either in the form of single Agreement or in any combination thereof** shall be prepared strictly on the basis of terms and conditions mentioned in the Bidding Document, modified only to the extent as agreed by Owner before award of work. Any Amendment shall be in writing and shall form part of the Bidding Document. In case Licensor proposes sub-supplier for any or all Catalysts and/or Proprietary Equipment in their offer, then Agreement for such Catalyst or Equipment shall be signed with Licensor indicating the details of the Supplier subject to the provision that single point responsibility shall lie with the Licensor only. However, payment of these Catalysts or Equipment can be made directly to the sub-supplier upon certification of invoices by the Licensor, if proposed in the Bid.
 - (b) **Catalyst Supply Agreement(CSA):** Post award, Owner may, at their discretion, enter into a long term **Catalyst Supply Agreement(CSA)** with the Licensor based on terms & conditions to be mutually agreed, so as to

take care of future operational needs of Owner.

- (c) **Guarantee and Liability Agreement:** As suitably incorporated in the above Agreements.
- (d) No clauses having financial / legal implication shall be incorporated in the Agreement (License, Process Package, Engineering, Proprietary items, Catalyst supply etc.), which will be executed at a later date, after award of the job. Also, if at all there are any financial implications on above grounds, the same shall be borne by the Licensor.

ARTICLE 3 - CONTRACT PRICE

- 3.1. As full and complete consideration, payment to Licensor for performance of all Services and Licensor's obligations under this Contract, Owner shall pay Licensor the Contract Price stated in Schedule of Prices.

The total compensation provided may be adjusted by Variation Order(s) issued pursuant to the provisions of [Article 25 \(Variations in the Services\)](#).

- 3.2. OWNER will endeavor to maximize the Unit input, once the operations stabilizes, by improving the run length and /or by fully exploiting the available design allowances and flexibilities in feed qualities compared to design quality. This could result in annual throughput exceeding the Name Plate/Rated Capacity indicated in the License Agreement. OWNER shall not be liable to pay any additional fee to Licensors, on account of processing additional feed as explained above and by using a self-developed improvement by the OWNER.
- 3.3. Notwithstanding what is stated in clause no. 3.2 above, **Owner shall not pay any Royalty up to 110% of the Designed/Rated Capacity.** However, if the Designed/Rated Capacity exceeds 110% **due to the reasons solely attributable to the Licensor, the payment of one-time additional Royalty beyond 110% of the Designed/Rated Capacity shall be on pro-rata License Fee basis. Royalty against any further Capacity enhancement shall be paid accordingly only for the enhanced Capacity from the last paid Capacity.**

ARTICLE 4 – TAXES AND DUTIES

Refer Annexure- I to this CTC.

ARTICLE 5 – PAYMENT SCHEDULE

5.1 LICENSE FEE / BASIC ENGINEERING DESIGN PACKAGE FEE AND DETAILED ENGINEERING FEES

Owner shall pay progressive payments against the lump sum price of respective item in accordance with the following terms:

A) LICENSE FEE (LF)

S. No.	MILESTONE	WEIGHTAGE
i)	Upon signing of License Agreement and successful completion of Kick-Off meeting and submission of Contract Performance Bank Guarantee (CPBG)	10%
ii)	Upon submission of Final Heat & Material Balances and final Process Flow Diagram (PFD).	20%
iii)	Upon submission of Final BEDP including incorporation of Owner's/ Consultant's comments by the Licensor, and its acceptance by the Licensee.	20%
iv)	Upon Mechanical Completion of the Unit or 32 months from BEDP acceptance date, whichever is earlier.	20%
v)	Upon successful Commissioning of the Unit or 35 months from BEDP acceptance date whichever is earlier.	15%
vi)	Upon successful completion of Performance Guarantee Test Run (PGTR) of the Unit or 38 months from acceptance of BEDP whichever is earlier.	15%

B) BASIC ENGINEERING DESIGN PACKAGE (BEDP) FEE

S. No.	MILESTONE	WEIGHTAGE
i)	Upon signing of BEDP & Engineering Agreement and successful completion of Kick-off meeting and submission of Contract Performance Bank Guarantee.	10%
ii)	Upon submission of Final heat & material balance and final process flow diagram (PFD's), utility summary & long lead items datasheets.	15%
iii)	Upon submission of all Data Sheets of Critical equipment for long delivery items to be identified during kick-off meeting.	15%
iv)	Upon submission of Final P&IDs and its acceptance by Licensee (Acceptance shall be accorded when the work/ services have been performed by the Licensor as per the scope and provisions of the Contract and Owner's/ Consultant's comments have been incorporated by the Licensor)	20%

S. No.	MILESTONE	WEIGHTAGE
v)	Upon acceptance of Final BEDP by Licensee (Acceptance shall be accorded when the work/ services have been performed by the Licensor as per the scope and provisions of the Contract and Owner's/ Consultant's comments have been incorporated by the Licensor).	15%
vi)	Upon acceptance of Operating Manual by Owner	5%
vii)	Upon Commissioning of the Unit or 35 months from submission of final BEDP (with Owner / EIL's all comments incorporated), whichever is earlier.	10%
viii)	Upon completion of successful Performance Guarantee Test Run (PGTR) of the Unit or 38 Months from BEDP acceptance date, whichever is earlier.	10%

C) DETAILED ENGINEERING FEES (if applicable):

S. No.	MILESTONE	WEIGHTAGE (Percentage (%) of Detail Engineering Fees)
(i)	Upon submission of the complete Detailed Engineering Package for review by Licensee, on Milestone/pro-rata basis as will be decided in the Kick-Off Meeting.	50%
(ii)	Upon acceptance of Detailed Engineering Package by Licensee / PMC (Acceptance shall be accorded when the work / services have been performed by the Licensor as per the scope and provisions of the Contract and Owner's / PMC's comments have been incorporated by the Licensor and resubmitted). Payment shall be on Milestone/pro-rata basis as will be decided in the Kick-Off Meeting.	30%
(iii)	Upon successful Commissioning of the Unit or 35 months from BEDP acceptance date whichever is earlier.	10%
(iv)	Upon completion of successful Performance Guarantee Test Run (PGTR) of the Plant/Unit or 38 months from acceptance of BEDP whichever is earlier.	10%

5.2 PAYMENT FOR TRAINING OF OWNER'S PERSONNEL

S. No.	MILESTONE	WEIGHTAGE	REMARKS
(i)	Any Type of Training to Owner's Personnel as per Technical Specifications, at Owner's office/ plant	100%	Full payment against completion of (respective) training

5.3 PAYMENT FOR MANDATORY AND OTHER SERVICES

S. No.	MILESTONE	WEIGHTAGE	REMARKS
(a)	Mandatory Services , by Licensor's Personnel at Owner's Project Site (Deputed from Licensor's Office outside India, or from Licensor's Indian Office/ it's Subsidiary's Office in India), in accordance with the provisions of Bidding Document		
i)	Mandatory Service On Lumpsum Basis (for Total specified Man days)	100%	On Pro-Rata basis after completion of respective services, duly certified by Owner/PMC (Single Invoice per Month)
ii)	Mandatory Service on Per Diem Basis	100%	At actual on Monthly Basis against the Time Sheet, duly certified by Owner / PMC
(b)	Additional Services by Licensor's Personnel at Licensor's Office outside India, or at Licensor's Indian Office/ it's Subsidiary's Office in India, in accordance with the provisions of Bidding Document, on Per Diem/Man Hour basis (as applicable)	100%	On Monthly Basis against certification by Owner/PMC

S. No.	MILESTONE	WEIGHTAGE	REMARKS

5.4 PAYMENT FOR PROPRIETARY EQUIPMENT

S. No.	MILESTONE	WEIGHTAGE
i)	Against placement of sub-orders for major raw materials (to be defined for each piece of equipment) and against submission of Bank Guarantee of equivalent amount, valid upto FOB delivery period plus 2 months claim period, through Wire Transfer.	10%
ii)	Against receipt of major raw materials at Manufacturer's works place (to be defined for each piece of equipment) and against submission of Bank Guarantee of equivalent amount, valid upto FOB delivery period plus 2 months claim period, through Wire Transfer.	15%
iii)	On despatch of Proprietary Equipment on FOB International Sea Port of Exit basis/ FCA International Airport of Exit basis, and upon submission of shipping documents through Irrevocable unconfirmed Letter of Credit .	65%
iv)	Upon completion of PGTR or 38 months from acceptance of BEDP whichever is earlier.	10%

5.5 PAYMENT FOR SUPPLY OF CATALYST, CHEMICALS, ABSORBENTS, ADSORBENTS, ADDITIVES (AS APPLICABLE) AND OTHER MATERIALS, IF ANY.

S. No.	MILESTONE	WEIGHTAGE
i)	Upon FOB shipment through Irrevocable unconfirmed Letter of Credit (L/C) .	95%
ii)	Upon completion of PGTR or 38 months from acceptance of BEDP whichever is earlier.	5%

Notes:

a) Payment against Letter of Credit (L/C):

The milestone payment through Letter of Credit, wherever applicable, shall be as follows:

- (i) L/C shall be opened by the Owner after placement of Purchase Order, within **One Month** after receipt of **Contract Performance Bank Guarantee (CPBG)** having a value of **3%** of the respective Contract Price for which L/C Payment is to be made [like Contract Price for Proprietary Equipment, Contract Price for Catalyst, Chemicals, Absorbents, Adsorbents, Additives etc.]
- (ii) **The L/C shall be Irrevocable and unconfirmed. In case, Licensor insists for Confirmed L/C, the L/C confirmation charges shall be borne by the Licensor.**
- (iii) On presentation of invoice and usual shipping documents.

b) Direct Payment to Sub-Supplier for Supply:

In case, Licensor proposes sub-supplier for supply of any or all Catalyst and/or Proprietary Equipment in their offer, then payment of these Catalyst or Equipment may be made **directly to the sub-supplier through wire transfer upon certification of invoices by the Licensor.**

c) Direct Payment to Licensor's Subsidiary for Onsite Services (assistance during Pre-commissioning and Commissioning):

Licensor may assign **onsite services (assistance during Pre-commissioning and Commissioning)** in India, as applicable, to their **Subsidiary as defined earlier**. However, the **Agreement shall be signed only with the Licensor having Single Point Responsibility** and all the payments may be made **directly to their subsidiary** upon certification of invoices by the Licensor.

5.6 TIME PERIOD AND MODE OF PAYMENT

5.6.1 The payment for **License Fee, BEDP, Detail Engineering, Mandatory Services, Training** etc. (i.e. for milestones other than payment specified through L/C) shall be paid **through wire transfer (NEFT/RTGS Bank Transfer), within Thirty (30) days** after receipt of each invoice, complete in all respects (after incorporating Owner/PMC comments, if any), with the relevant documents as required. Owner shall pay the Licensor the invoiced amount properly due.

No Payment shall be released until the submission of CPBG for respective Services/Supplies.

5.6.2 Owner shall endeavor to make undisputed payment within a period **not later than Sixty (60) days** of receiving correct invoice from Licensor. In the event, OWNER fails to make any undisputed payment **within Sixty (60) days**, LICENSOR may give written notice to OWNER of such default and should OWNER fail to correct such default within **thirty (30) days** of receipt of notice by Licensor, **LICENSOR may suspend Services**. In such event, should OWNER and LICENSOR fail to reach a written agreement regarding an established date for conclusion of such suspension **within sixty (60)**

days of notice of suspension, LICENSOR may terminate this CONTRACT by written notice to OWNER.

However, in case of disputed payments, the dispute, if any, shall be raised by Owner, **within 30 days** of receipt of Invoice and the payment shall be released within 30 days after settlement of dispute.

ARTICLE 6 – PERFORMANCE OF SERVICES

- 6.1. The Licensor shall exercise all reasonable skill, care and diligence in the faithful performance of the Services and such performance shall be in accordance with, in all respects, all the terms and conditions of the Agreement, with sound engineering principles and practices and to a standard compatible with the internationally recognized engineering standard. If there is deficiency in Licensor's Services, Licensor will re-perform the deficient work, provided Owner identifies the specific problem within 2 (two) months of successful Performance Guarantee Test Run or 45 (Forty Five) Months from acceptance of BEDP, whichever is earlier. Warranty of merchantability is excluded. Warranty of fitness for purpose shall be limited to the technical obligations stipulated in the Bidding document. Except as may be expressly provided elsewhere in the Agreement, **the acceptance or approval by Owner of any recommendation made by the Licensor shall not in any way relieve the Licensor of his full responsibility for his obligations under the Agreement.**
- 6.2. The Licensor shall provide all necessary personnel, equipment (if applicable), and facilities for the satisfactory performance of the Services in accordance with the provisions of Agreement.

ARTICLE 7 – CONTRACT PERFORMANCE BANK GUARANTEE (CPBG)

- 7.1. **CPBG for License Fee and BEDP Fee & Detail Engineering: Within thirty (30) days of the date of the Agreement coming into force, Licensor shall provide an irrevocable interest free Contract Performance Bank Guarantee in favour of Owner for an amount equivalent to 3% of the Sum of License Fee, BEDP Fee and Detail Engineering Fee.**
- 7.2. Licensor shall submit CPBG through a Scheduled Indian Bank (other than Co-Operative Banks) or an Indian Branch of Foreign Bank on a stamp paper of appropriate value and in a format given by Owner. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores or equivalent in US Dollars and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead. In no event, Owner shall be obliged to make payments to Licensor under this Contract prior to receipt of the bank guarantee, duly signed and accepted thereof. The bank guarantee shall be valid till two months beyond successful Performance Guarantee Test Run of the Plant/Unit or 45 (Forty Five) months from acceptance of BEDP,

whichever is earlier. In case PGTR could not be conducted due to reasons not attributable to the Owner, then the Bank Guarantee shall be extended by the Licensor for further period, till the PGTR is conducted. Upon written request of Owner, Licensor shall promptly effect such changes in the amount of, and/or the validity period of, the bank guarantee as may be required due to changes covered by Variation Orders and/or Amendments and/or repetition of PGTR due to failure to meet the Performance Guarantee.

- 7.3. **CPBG for Proprietary Equipment:** Bank Guarantee pertaining to proprietary equipment shall be separately submitted for **3% of the supply cost** and shall be **valid up to 12 months from commissioning of the Unit or 24 months from the last dispatch of Equipment whichever is earlier, plus 03 months of claim period.** CPBG shall be submitted within 30 days from the date of placement of order

- 7.4. **CPBG for Catalyst, Chemicals, Absorbents, Adsorbents, Additives (as applicable) and Other Materials:**

CPBG for Catalyst, Chemicals, Absorbents, Adsorbents, Additives and other materials shall be separately submitted for **3% of the supply cost** and shall be **valid up to the period of 24 months from date of shipment plus additional 03 months of claim period or 02 months beyond guaranteed life of catalyst, whichever is later.** CPBG shall be submitted within 30 days from the date of placement of order.

ARTICLE 8 – GUARANTEES

- 8.1. Licensor to guarantee the work as specified and described in the Contract. The Technical documents to be developed shall be in accordance with sound and established engineering practices as detailed in Technical Specification, for the purpose specified, free from defects and suitable for respective uses intended.

LICENSOR shall be required to fulfill the following guarantees:

- a) **Process Performance Guarantee and Minimum Performance Guarantee** shall be as detailed in the Technical Specifications enclosed in the Bidding Document.
- b) In case of **(i) Proprietary Items/Equipment and (ii) Catalyst, Chemicals, Absorbents, Adsorbents, Additives** (as applicable) supplied by Licensor, the guarantees shall be as detailed in Technical Specifications included in the Bidding Document.

ARTICLE 9 – RESPONSIBILITIES & LIABILITIES

- 9.1 **Patent Infringement:** Licensor shall, at all times, indemnify and hold harmless Owner from all liabilities, costs, damages and expenses arising out of any claims, actions or suits brought against Owner by third parties, or any related claims thereof, in respect of any actual or alleged infringement of any Patent Rights or registered design or any similar rights resulting from

the use of the Technology or Technical Information or any improvements thereof provided by Licensor to Owner. Upon Owner's prompt notification to Licensor in writing of any such claims, actions or suits upon such notice, or upon Licensor otherwise coming to know of such claims, actions or suits, **Licensor shall, at its own expense, conduct, defend or dispose of, including settling of such claims, actions or suits on its own behalf and on behalf of Owner and Owner's Associate Company and are obliged to follow all instructions from Owner in this regard.**

The Licensor shall ensure that the Technology, Designs and Engineering provided by them is free from any dispute etc.

Further, Licensor:

- a) Will undertake at its own expense the defense of any suit filed for infringement of Intellectual Property rights including attorney fees, court fees, incidental expenses etc.
- b) May at its option recommend changes to the Unit against which a suit has been brought to permit the Unit to avoid such infringement claim and bear the cost of plant/Unit rectification/modification

AND/OR

Obtain a right from the third party in question for Licensee to operate the Unit free from such infringement claim.

AND/OR

Hold Licensee free and harmless from any damages or other sums that may be assessed in or become under any decree or judgment by any Court, which results from such suit(s).

However, the **liability under provisions 9.1 b)** (the three lines, i.e., "May at its option Plant/Unit rectification/modification") on account of **plant/Unit rectification/modification is limited to sum of 50% of License fee, 50% of BEDP fee and 50% of Detailed Engineering Fees (as applicable)** and shall be included in Overall Aggregate Liability.

9.2 PRICE REDUCTION SCHEDULE (PRS)

- a) The **Basic Engineering and Design package (BEDP)** shall be submitted as per schedule given in Technical Specifications included in the Bidding Document. Licensor shall be liable for Price Discount for delay in delivery **attributable to the Licensor** as under:
 - (i) **Delay in submission of Final Basic Engineering and Design Package:** For the purpose of Price Reduction Schedule of BEDP, the date of submission of Final BEDP shall be reckoned from the date of finalization of Design Basis. The LICENSOR shall furnish to LICENSEE Revision 0 of Basic Engineering

Design Package. In the event that the LICENSOR delays to deliver to the LICENSEE, the said Basic Engineering Design Package in the manner and within the time described in the Bidding document, the LICENSOR shall give a price discount in the following manner :

0.5% of the Basic Engineering and Design Package Fee (BEDP Fee) per week of delay or part thereof with a maximum of five percent (5%) of said BEDP Fee.

(ii) **Delay in delivery of Detail Engineering:**

0.5% of the Detail Engineering Fee per week of delay or part thereof with a maximum of five percent (5%) of the Detail Engineering Fee.

b) **Delay in delivery of Proprietary Items/Equipment:**

0.5% of the total order value of Proprietary Items/ Equipment per week of delay or part thereof with a Maximum of five percent (5%) of the order value of Proprietary Items/Equipment.

c) **Delay in delivery of Catalysts, Chemicals, Absorbents, Adsorbents, Additives (as applicable):**

0.5% of the total order value of Catalyst, Chemicals, Absorbents, Adsorbents, Additives (as applicable) per week of delay or part thereof with a Maximum of five percent (5%) of its order value.

The Licensor/sub-supplier (as the case may be) shall be required to raise their invoices for reduced amount in case of delay, which is attributable to Licensor/sub-supplier.

9.3 **RECTIFICATION COSTS OF SERVICES**

In the event of **faulty design/engineering** i.e. error or omission in the job performed by Licensor (Licensor Services), the Licensor shall furnish corrective technical studies and engineering as may be required without any additional cost to Owner **within a mutually agreed time frame**, which shall be arrived at within 15 days from the date of request from Owner. However, Licensor shall rectify the defects in services, provided Owner identifies the specific problem with the work **up to two months beyond PGTR or 45 months from the date of acceptance of BEDP**, whichever occurs earlier.

The liabilities of the Licensor towards rectification costs of services shall be unlimited, without qualifications and not subject to any restrictions.

9.4 REIMBURSEMENT OF COST

In case of **faulty design, information and services furnished and rendered by Licensor** (for Licensor's Services), Licensor shall reimburse Owner the total costs of **making modifications, additions, alterations or replacements to correct Owner's Plant**. Licensor's responsibility and liability in this respect is described in detail in Technical Specifications. Licensor's liability under this Article shall be **limited to sum of 50% of the License Fee, 50% of BEDP Fee and 50% of Detail Engineering fee (as applicable)** and shall be included in the limit of the Overall Aggregate Liabilities.

9.5 LIABILITIES FOR NOT MEETING THE GUARANTEES

- a) The provisions of **Process Performance Guarantee, Minimum Performance Guarantee** and the associated liabilities thereof shall be, as described in the **Technical Specifications** included in the Bidding Document.
- b) In case of **(i) Proprietary Items/ Equipment, and (ii) Catalyst, Chemicals, Absorbents, Adsorbents, Additives** (as applicable) **supplied by Licensor**, the liabilities shall be as detailed in **Technical Specifications**.

9.6 Licensor **shall not be responsible for defects arising from defective materials or Equipment not supplied** by Licensor/Licensor mandated sub-supplier, deficient engineering and design work carried out by others, improper Operation and Maintenance by LICENSEE.

9.7 **Either Party shall not be liable for any loss of profit, loss of use, loss of production, business interruption or any other indirect or consequential damages that may be caused or suffered by the other Party.**

9.8 OVERALL AGGREGATE LIABILITIES

Licensor's Overall Aggregate Liability on all accounts under the Contract shall be limited to the sum of 50% of the License Fee, 50% of BEDP Fee and 50% of Detail Engineering Fee and sum of Proprietary Items/Equipment, Catalyst, Chemicals, Absorbents, Adsorbents, Additives (as applicable) as per Sub-Article 9.5b) above and PRS as per Sub-Article 9.2b) & c) for delay in delivery of Proprietary Items/ Equipment, Catalyst, Chemicals, Absorbents, Adsorbents, Additives (as applicable) and shall exclude the liabilities for the following:

- a) Rectification of defects in Licensor's services as per Sub-Article 9.3 above,
- b) Patent Infringement as per Sub-Article 9.1 above, except the Liability on account of Plant Modification/rectification due to Patent infringement.
- c) Deploying Licensor's Personnel for carrying out subsequent Performance Guarantee Test Runs (PGTR), if the PGTR had failed in the earlier attempt(s) due to reasons attributable to the Licensor. For details, refer Technical Specifications.

9.9 All liability(ies) of Licensor and its Affiliates as to ascertain or **all Performance Guarantees shall terminate upon occurrence of any of the events** set forth below:

a) Such Performance Guarantees as have been satisfied as determined by the results of a successful Performance Guarantee Test Run as herein provided ;

OR

b) Owner's notification to Licensor in writing of its decision not to conduct a Performance Guarantee Test Run;

OR

c) Licensor has paid Owner for remedial measures as set out in the Contract;

OR

d) The Performance Guarantee Test Run not conducted within 6 (six) months after successful commissioning or 45 (Forty Five) months beyond submission of BEDP and its acceptance by Owner, whichever occurs first. The above period shall exclude delays attributable to Licensor.

9.10 **Deviation in Overall Aggregate Liability: No deviation** to the Overall Aggregate Liability is acceptable. Offer of the Bidder taking deviation on Overall liability shall be liable for rejection.

9.11 **Provision Regarding Invoice for Reduced Value or Credit Note towards PRS**

PRS is the reduction in the consideration / contract value for the goods / services covered under this contract. In case of delay in supply/ execution of contract, supplier/ contractor/ service provider should raise invoice for reduced value as per Price Reduction Schedule Clause (PRS clause). If supplier/ contractor/ service provider has raised the invoice for full value, then supplier/ contractor/ service provider should issue Credit Note towards the applicable PRS amount with applicable taxes.

In such cases if supplier/ contractor/ service provider fails to submit the invoice with reduced value or does not issue credit note as mentioned above, BCPL will release the payment to supplier/ contractor/ service provider after giving effect of the PRS clause with corresponding reduction of taxes charged on vendor's invoice, to avoid delay in delivery/collection of material."

In case any financial implication arises on BCPL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of supplier/ contractor/ service provider. BCPL shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, against any amounts paid or becomes payable by BCPL in future to the Supplier/Contractor under this contract or under any other contract.

ARTICLE 10 – SUSPENSION

- 10.1. Owner may at any time, should Owner deem it necessary to do so for any valid reason, suspend all or part of work giving **not less than fourteen days** written notice to Licensor. Such notice of suspension shall specify the scope of the work to be suspended, and the effective date of suspension. Licensor shall suspend work on the date or dates specified by Owner in any of notice(s) issued under this clause and shall resume the work within a reasonable time upon receipt of Owner's notice to resume. The Licensor shall not be entitled for any claims/loss on account of such suspension of work.
- 10.2. However, in case of suspension when Licensor's Personnel is mobilized in India, reimbursement of airfare of Licensor's Personnel on account of demobilization and remobilization shall be borne by Owner.
- 10.3. Licensor shall be paid for all the amounts due against certified services provided and accrued up to the date of suspension as per payment terms.
- 10.4. In case, during the date of suspension, any payment milestone is partially completed by the Licensor and accepted by the Owner, the payment for the same shall be made as will be mutually agreed by the Licensee & the Licensor.

ARTICLE 11 – TERMINATION

- 11.1. Owner shall have the right to terminate the Agreement with **at least seven (7) days' notice**. Licensor's documents shall be returned to Licensor and Owner's documents shall be returned to the Owner. Licensor shall be paid for all the amounts due against certified services provided and accrued up to the date of termination as per payment terms.
- 11.2. However, in case of termination, Owner shall not be liable for any loss of profit, loss of use, business operation or any other indirect or special or punitive or incidental or exemplary or consequential losses / damages that may be suffered by the Licensor on account of such termination.
- 11.3. In case, during the date of Termination, any payment milestone is partially completed by the Licensor, the payment for the same shall be made as will be mutually agreed by the Licensee & the Licensor.

ARTICLE 12 – INSURANCE

- 12.1. **Owner shall take out and maintain** at its own expense an appropriate and adequate **All Risk Marine cum Erection Insurance Policy as available in India covering the Construction, Commissioning, Start-up, initial operations, Performance Guarantee Test Run, including third party liabilities** to cover any loss or damage to the Owner's facilities and other properties of the Owner or of third parties in India during the Construction, Commissioning, Start-up, initial operation and Performance Guarantee Test Runs of the Owner's Plant facilities. It should also cover **Transit Insurance**.
- 12.2. **The Licensor, at its own expense shall take out appropriate and adequate insurance** to cover any claim that may be made by

Licensor's employees/ representatives and/or their heirs and dependent alleging bodily injuries sustained or death suffered by employees/dependents as a result of **or in connection with the performance of any of Licensor's obligations under the Agreement** and will hold Owner and its employees and representatives (including PMC) harmless from any and all such claims. **The Licensor's insurance policy shall include a waiver clause as to any insurer's action against the Owner and PMC, its employees and representatives.**

- 12.3.** With respect to the insurance taken by the Parties as per their respective scope of insurance(s) as stated above, the Parties shall at all times indemnify and keep indemnified each other and its officers, servants, agents from and against all third party claims whatsoever (including but not limited to property loss and damage, personal accident, injury or death of/or to property and/or the servants/agents arising out of any act or omission) and shall at his own cost and initiative at all times keep each other indemnified upto the successful completion of the Performance Guarantee Test Runs or the period as mentioned in **Sub-Article 9.9** **Error! Reference source not found.** in case PGTR could not be carried out due to reasons solely attributable to the Licensee.

ARTICLE 13 - FORCE MAJEURE

13.1 Events of Force Majeure

Event of Force Majeure shall mean any circumstance not within reasonable control of the Party affected and which, despite the exercise of reasonable diligence, such Party is unable to prevent, avoid, or overcome.

13.2 Effect of Force Majeure

Should any Event of Force Majeure prevent or delay the performance by a Party of any of its obligations under this Agreement then, provided that notice is given to the other Party in accordance with the provisions of **Sub-Article 13.5**, the Party which is prevented or delayed in the performance of its obligations shall be excused from performance or performance in accordance with the time specified in this Agreement for so long as the relevant Event of Force Majeure continues and to the extent that such Party's performance is prevented, hindered or delayed thereby.

13.3 Instances of Force Majeure

Events of Force Majeure shall include, without limitation, but subject to the provisions of **Sub-Article 13.1**, the following:

- a) Act of terrorism
- b) Riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection of military or usurped power
- c) Explosions, fires, earthquakes, floods, hurricanes, typhoons, epidemics or other physical natural disaster, but excluding weather conditions regardless of severity;

- d) Ionising radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component, and
- e) Freight embargoes, Strikes applicable to the entire industry or region and not confined to the works or establishment of the Licensor.

13.4 Event excluded from Force Majeure:

Commercial hardship, third party breach, strike and shutdown or lockout of the Licensor shall not constitute an event of Force Majeure.

13.5 Notice of Force Majeure: Procedure

If either Party desires to invoke an Event of Force Majeure as a cause for delay in the performance of any obligation hereunder, that Party shall, not later than 07 (Seven) days after the commencement of such Event of Force Majeure or at such time as a notice can be practically given if the Event of Force Majeure prevents from giving of notice, give written notice to the other Party as detailed in **Article 20 titled “NOTICES”** of this Agreement of:

- a) the date of commencement and nature of the Event of Force Majeure; and
- b) the date on which the Event of Force Majeure terminated (if before the date of notice) or alternatively, if the Event is continuing, its expected duration, the extent known by the notifying Party.

13.6 Mitigation of delay

The Party affected by the Event of Force Majeure shall use all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by any Event of Force Majeure, including recourse to alternate acceptable sources of services, materials and supplies and reasonable adjustment of work activities. However, Owner's obligation to pay for work already performed by Licensor shall not be affected by an event of Force Majeure

13.7 Costs during Force Majeure

In the event of Force Majeure conditions occurring, each Party shall bear their respective costs, if any, incurred resulting therefrom.

- 13.8** If either Party is prevented from fulfilling its contractual obligations for a continuous period of **three (3) months** because of Force Majeure, then the Parties shall consult each other with a view to agreeing to the action to be taken under the circumstances, and failing such Agreement either Party is entitled to terminate the Agreement(s) the performance of which is affected by Force Majeure and any other Agreements dependent thereon.

ARTICLE 14 - DISPUTE RESOLUTION

As per Appendix-I to CTC.

ARTICLE 15 - GOVERNING LAWS & JURISDICTION

As per Appendix-I to CTC.

Foreign companies, operating in India shall have to obey the laws of the Land (India).

ARTICLE 16 - NO WAIVER OF RIGHTS

- 16.1. A waiver on the part of either Party of any terms, provisions or conditions of this Contract / Agreement shall not constitute a precedent, nor bind either Party to a waiver of any succeeding breach of the same, of any other terms, provisions for conditions of this Contract/Agreement.

ARTICLE 17 - DAMAGE TO PROPERTY

- 17.1. Licensor shall be responsible for any loss or damage to properties belonging to Owner or other agencies within the site due to willful fault and /or the gross negligence or willful acts, or omission of Licensor's employees, agents or representatives. In the same way, Owner shall be responsible for any loss or damage to properties belonging to Licensor or other agencies within the site due to willful fault and /or the negligence or willful acts or omission of Owner's employees, agents or representatives.
- 17.2. Licensor and the Owner shall at all times indemnify and keep indemnified each other in this regard.

ARTICLE 18-SAFETY

- 18.1. The Licensor shall observe and abide by all safety regulations of Owner during the course of performance of the work at Owner's Project site.

ARTICLE 19 - EXCLUSION OF GOVERNMENT OF INDIA'S LIABILITY

- 19.1. It is expressly understood and agreed that Owner is entering into this Contract/Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, **it is expressly understood and agreed that the Government of India is not a party to this Contract/Agreement, and has no liability, obligations or right whatsoever hereunder.** It is expressly understood and agreed that Owner is an independent level entity with power and authority to enter into Contracts/Agreements solely on its own behalf under the applicable **laws of India** and the general principles of Contract laws. The Licensor expressly agrees, acknowledge and undertakes that Owner is not an agent, representative or delegate of the Government of India and that the Government of India is not and shall not be liable for any act, omission, commission breach or other wrong arising out of this contract/Agreement. The Licensor hereby expressly waives, releases and forgoes any and all actions or claims, including cross claims, impleader claims or counter claims, against the Government of India arising out of this Contract and covenants not to sue the Government of India for any manner or claim, cause of action or thing whatsoever arising out of or under this contract.

ARTICLE 20 – NOTICES

- 20.1. The official address and contact details (Name and Designation, Mobile and Telephone with STD/ISD Codes, Email etc.) of the Parties for the purpose of issuing notice shall be as specified in the Agreement. However, either Party may change the same during the execution of the Contract/Agreement by giving notice in writing to the other Party.
- 20.2. All notices hereunder shall be in writing and shall be sufficient if delivered or sent by registered mail/Post, e-mail, facsimile, airmail or cable addressed to the Party entitled thereto at the above address.
- 20.3. Communications related to transmittal of technical documentation shall be forwarded to such individual as the concerned Party [Licensor or Licensee] may designate from time to time.

ARTICLE 21 –AMENDMENT

- 21.1. The Agreement may not be amended, modified or terminated orally, and no amendment, modification, or attempted waiver of any of the provisions hereof shall be binding unless the same is reduced in writing and signed by authorized representatives of both the Parties. Authorized representative shall mean a person holding Power of Attorney for signing and faithful execution of Agreement.

ARTICLE 22 – IMPROVEMENTS

- 22.1. If **Licensor** develop any Improvement(s) or should acquire Improvement(s) from a third party (for which Licensor has free right of disclosure) relating to the Unit designed and constructed in accordance with the process package **within 5 years of completion of PGTR**, then Licensor shall promptly free of charge inform to Owner the details of such Improvement(s) and shall at Owner's request communicate to Owner free of any additional cost the details necessary for incorporation of such Improvement(s) in the Unit, not involving any engineering services by Licensor. If Owner requires Licensor to perform engineering services for incorporating such Improvement in the Unit, Licensor shall be obliged to perform such services at Licensor's usual charge. If **Owner** develops any improvement(s) **within 5 years of completion of PGTR**, then Owner shall promptly and free of charge share such improvements with the Licensor.

ARTICLE 23 – ASSIGNMENT

- 23.1. The Agreement shall not be assignable by either Party without the prior written consent of the other Party, except that it may be assigned to the successor of either Party or, firm, or corporation acquiring all or substantially all of the business and assets of such Party. No assignment of this Agreement shall be valid unless and until this Agreement shall have been assumed by the assignee. When duly assigned in accordance with the foregoing, this

Agreement shall be binding upon and shall be to the benefit of the assignee. In such event, necessary Agreement to this effect shall be signed by the Parties.

- 23.2. Notwithstanding any other provision of this Article, Owner may, without the consent of Licensor, collaterally assign the benefit of this Agreement or any part thereof and any interest therein or thereunder to lenders to Licensee with respect to the Project (hereinafter referred to as the "Lenders") as security for the financing extended by the Lenders for such project, provided however that Licensor's obligations and responsibilities shall not be increased in any way by such assignment.
- 23.3. **All assignments shall be in terms so as not to prejudice the confidentiality obligations of the Licensor and the Licensee**

ARTICLE 24 - ORDER OF PRECEDENCE AND INTERPRETATION OF CONTRACT

- 24.1. Notwithstanding the sub-division of the documents into separate sections and parts, every section / part of each shall be deemed to be supplementary to and complementary of every other section / part.
- 24.2. Where any section / portion of the section is repugnant to or at variance with any provisions of the other section / portion of the section then, the most stringent provision shall prevail.
- 24.3. Wherever it is mentioned in the terms/ conditions /specifications that the Licensor shall perform certain work or provide certain facilities, the Licensor shall do so at his own cost.

ARTICLE 25 - VARIATION IN THE SERVICES

- 25.1. Owner may vary the Services to be performed by the Licensor. Such variation shall in no way vitiate or invalidate the Contract. The charges for all such variation shall be computed and submitted along with the basis/ justifications to the PMC/Owner for its review and acceptance.
- 25.2. All changes desired by Owner which may involve additions, deletions or revisions to the Scope of Services shall be covered by a written document issued by Owner to the Licensor hereinafter referred to as "**Change Order**".
- 25.3. Each Change Order shall set forth the changes in the Services to be performed by the Licensor and for the corresponding adjustment to the Completion Date, the Contract Price.
- 25.4. **Pursuant to this Agreement, no adjustment to the Completion Date or Contract price shall be applicable except by issuance of a Change Order.**
- 25.5. If Licensee requires Licensor to carry out variations in services which in Licensor's opinion may affect Licensor's ability to meet its guarantees under this Agreement, Licensor may accordingly inform Licensee along with appropriate reasoning. However, in case Licensee still insists for the variations to be carried out, Licensor shall be relieved of its guarantees to the extent affected by the aforesaid variation

ARTICLE 26 – SEVERABILITY

- 26.1. The invalidity, or un-enforceability of any provisions of this Agreement, shall not impair, invalidate or affect the other provisions of this Agreement. In case, any provision of this Agreement is found to be invalid or unenforceable, Parties will meet and agree on an amendment of the relevant provision, with a view that the Parties' mutual interests remain served as best as possible.

ARTICLE 27 - CONFIDENTIAL HANDLING OF INFORMATION

27.1. Title to Technical Data:

- a) Title to all Technical Data including drawings, bills of material, flow diagrams, layout details, and specifications etc. furnished to Licensor by Owner shall remain with Owner.
- b) Title to all Technical Data including designs, drawings, bills of material, flow diagrams, layout details, specifications and any other data prepared by Licensor, shall remain with Licensor.

27.2. Both Licensor as well as the Owner shall, **during a period beginning at the date of finalization of Design Basis (herein “Zero Date”) and continuing until fifteen (15) years after the date of disclosure of the Information in question**

- a) not disclose any information to any Third Party;
- b) use all appropriate means to preserve the secrecy of information.

27.3. These undertakings shall not apply to any information which, at the time it is received or obtained by Licensor or the Owner

- a) is lawfully known without binder of secrecy; or
- b) is publicly available and shall cease to apply to any such Information which, after it is received or obtained, becomes publicly available through no fault of Party receiving such information; or
- c) is received or obtained without restriction on disclosure from a source free to disclose it other than Owner or Licensor; or
- d) which Licensor or the Owner is required to disclose to any government agency, court, quasi-judicial or regulatory body or Parliament or other legal or constitutional authority that under any legal process requires Licensor or the Owner to disclose such information provided that prior to such disclosure where it is practicable to do so, or if it is not practicable, then at the time of disclosure, written notice of the potential disclosure or actual disclosure as the case may be, shall be given to the other Party.

27.4. Licensee may disclose Licensor's Technical Information to third parties necessary as per law and to build, maintain or operate the Unit, provided that:

- a) the information disclosed will be limited to the extent necessary for the third party to accomplish its part of building, maintaining or operating the Unit; and
- b) such third party except Statutory Bodies enters into a Non-Disclosure

Agreement (NDA) with Licensor concerning Licensor's Technical Information.

Documents which are subject to the restrictions stated in **a)** and **b)** above are to be listed by the Licensor in their offer.

- 27.5. Licensee may disclose Licensor's Technical Information which are not subject to the restrictions as per para above, to third parties for the purpose of procurement, construction, operation and maintenance of the Unit.

ARTICLE 28 - GENERAL CONDITIONS

- 28.1 All documents from one Party to another of whatever nature shall be submitted in English by e-mail, or letter.
- 28.2 Onsite Services (assistance during Pre-commissioning and Commissioning):
Notwithstanding above, Licensor may perform onsite services (assistance during Pre-commissioning and Commissioning) in India, as applicable, through their Subsidiary as defined earlier. However, the agreement shall be signed with Licensor only with Single Point Responsibility and the payment shall be made to Indian Subsidiary directly upon certification of invoices by Licensor.

ARTICLE 29- EXPORT OF TECHNICAL INFORMATION

- 29.1 Licensee shall not resell or re-export directly or indirectly the technical information or the work received from Licensor without the prior written consent of Licensor. The technology will not be used, directly or indirectly, in any nuclear related uses, missile technology, or chemical or biological weapons applications unless specifically authorized by Licensor and, if required, by the applicable governmental authority. Licensee shall use the technical information for civil use only.

ARTICLE 30-RETURN OF INCOME TAX

- 30.1 As per provisions of Indian Income Tax Act, 1961, any person deriving any income (within the meaning of the Act) which is taxable under the Act, has to file a Return of Income which accrues or arises or is deemed to accrue or arise in India in prescribed form within prescribed time with the Income Tax Department of India. The selected Licensor shall undertake the responsibility to file the said Return of Income, and to pay all income and other taxes payable in India.
- 30.2 The Licensor shall undertake to file all Returns, Statements and other documents, which it might be required to file under the Laws of India.

ARTICLE 31- TRANSFER OF PROPERTY

- 31.1 The right to use the documentation of whatever nature (including computer software) related to the process, Licensor's Information and IMPROVEMENTS shall pass to the Licensee when delivered to the Licensee or at the post office

or courier office of the country of the Licensor) who will be considered as an agent of the Licensee.

- 31.2 All drawings, flow sheets, specifications, data, and tracing and other documentation of whatever nature described in [Sub-Article 31.1](#) thereof forming part of the Basic Engineering Design Package (BEDP) or otherwise developed specifically for the Licensee pursuant to any Agreement(s) shall be and become the property of the Licensee in whom the right of use therein vests in the Licensee pursuant to [Sub-Article 31.1](#) thereof.

**ANNEXURE-I
TO
COMMERCIAL TERMS AND CONDITIONS [CTC]
[Licensor Selection]**

TAXES & DUTIES

FINANCE INPUT ON TAXES & DUTIES FOR LICENSOR SELECTION

DATE-
04.05.2020

Prepared by

Reviewed By

Approved By

A. FOR INDIAN BIDDERS: In the case of Indian bidders, the quoted rate shall be inclusive of all applicable taxes and duties except GST. Prices quoted by the bidder shall be on FOT dispatch point basis, unless otherwise stated in the bidding document. Prices shall be furnished strictly in the appropriate price schedule format(s) enclosed with the bidding document.

A.1. Invoicing & other provisions under Goods and Services Tax (GST) act/rules

- i. Licensor shall be required to issue tax invoice in accordance with GST act and/or rules so that input tax credit can be availed by Owner. In the event that the licensor fail to provide the invoice in the form and manner prescribed under the GST act read with GST invoicing rules there under, Owner shall not be liable to make any payment on account of GST against such invoice.
- ii. GST shall be paid against receipt of tax invoice and proof of payment of GST to Government (or auto-population of input tax credit on GSTIN portal). In case of non-receipt of tax invoice and/or non-payment of GST by the licensor (or non-auto-population of input tax credit on GSTIN portal), Owner shall with hold the payment of GST.
- iii. GST payable under reverse charge for specified services or goods under GST act or rules, if any, shall not be paid to the Licensor but will be directly deposited to the government by Owner. If the same has already been reimbursed / paid to the Licensor for any reason whatsoever, the said amount shall be deducted / recovered / adjusted from the payment due to the Licensor.
- iv. Where Owner has the obligation to discharge GST liability under reverse charge mechanism and Owner has paid or is liable to pay GST to the Government on which interest/penalty becomes payable as per GST law for any reason which is not attributable to Owner or Input Tax Credit w.r.t. such payment is not available to Owner for any reason which is not attributable to owner, then owner shall be entitled to deduct/set off /recover such amount against any amounts paid/payable by owner to licensor.
- v. The licensor will be liable to ensure to have registered with the respective tax authorities and to submit self-attested copy of such registration certificates and the licensor will be responsible for procurement of material in its own registration (GSTIN).The Licensor shall mention their registration status (Registered / Composition / Unregistered) on the bill / invoice. In case, there is change in the Registration status of the Licensor during the execution of the contract, the same should be advised immediately. Due to change in the Registration status, Owner will not be liable for any additional payments, whatsoever, including tax payments.
- vi. Licensors will be required to quote applicable tax rate (along with applicable SAC/ HSN Code) as per provisions of GST law for all the line items forming part of the enquiry. Any higher rate of tax actually invoiced in excess of quoted rate of tax (except in compliance with provisions of Statutory Variation clause) shall

be adjusted in price.

- vii. The classification of goods/services as per GST Tariff should be correctly done by the Licensor to ensure that input tax benefit is not lost to the Owner on account of any error on the part of the Licensor.
- viii. The licensor shall always comply with the requirements of applicable laws and provide necessary documents as prescribed under the rules and regulations, as applicable from time to time. In particular, if any tax credit, refund or any other benefit is denied/delayed to Owner due to any non-compliance/ delayed compliance by the licensor under the GST act (including but not limited to failure to upload the details of the sale on GSTN portal, failure to pay GST to the government or due to non-furnishing or furnishing of incorrect or incomplete documents, non-filing of GST return by the licensor), the licensor shall be liable to reimburse Owner for all such losses and other consequences including but not limited to the tax loss, interest and penalty. Owner shall be entitled to recover such amount from the licensor by way of adjustment from the next invoice, encashment of PBG or by way of any other means.
- ix. E-way bill shall be issued by Supplier for all domestic supplies (*¹). However, for imported supplies against BCPL PO, e-way bill shall be arranged by BCPL or BCPL Nominated CHA or their transporter (*¹).
- x. Notwithstanding anything contained anywhere, any cost, liability, dues, penalty, fees, interest as the case may be, to which Owner becomes liable, at any point of time on account of non-compliance of applicable tax laws or rules or regulations thereof or otherwise due to default on the part of Licensor shall be borne by the Licensor. Such cost, liability, dues, penalty, fees, and interest as the case may be shall be paid forthwith by the Licensor and /or Owner shall be entitled to recover such amount from the Licensor by way of adjustment from the invoice or from any other Securities like Bank Guarantees available to Owner. Any GST as may be applicable on such recovery of amount shall also be borne by Licensor.
- xi. TDS under GST, if applicable, shall be deducted from Licensor's bill at applicable rates. A certificate for tax deducted at source by Owner shall be provided to Licensor.

A.2. Imported supplies by licensor as built in import content

- i. The licensor shall pay the Customs Duties and all other duties/taxes/cess/surcharge applicable on the material imported. The licensor shall be fully responsible for Port and Customs clearance including stevedoring, handling, unloading, loading and storage and for satisfying all Port and Customs formalities for the clearance of the goods, including preparation of the Bill(s) of

Entry and other documents required for import and/or clearance of the goods.

- ii. The licensor shall also be fully responsible for any delays, penalties, demurrages, shortages and other charges and losses, if any, in this regard. The customs duties, Social Welfare Surcharge and other import duties payable on the CIF value of materials imported and IGST & Compensation Cess, if any, payable calculated on the CIF value shall be paid directly by the licensor and are included in price of supplies. However, for arriving at CIF value for the payment of Customs Duties, valuation shall be as per prevailing Custom rules. All harbor dues/ pilotage fees, port fees, wharf fees, unloading costs incurred in India in respect of any imported goods shall be to licensor's/supplier's account.
- iii. The licensor/supplier shall appoint a Customs House Clearing Agent of good standing and ensure speedy customs clearance.
- iv. The licensor/supplier shall be responsible to register the Import License with Customs Authorities at the Port of Import, and to answer and sort out technical queries(if any) raised by Customs Authorities in regard to any import(s).
- v. In case of wrong assessment of Customs Duties by licensor, any additional liability towards taxes and duties shall be to licensor's/supplier's account.
- vi. If for any reason, other than a Change Order, the total CIF Price of imported materials are exceeded or any penalty or other charges or higher rate of duty than applicable to relative imports is levied on the licensor/supplier with respect thereto, the Customs Duties/penalties and other charges or levies, if any, to the extent of the excess levied, shall be to the licensor's/supplier's account and shall be borne and paid wholly by the licensor/supplier.
- vii. Licensor/supplier to indicate CIF value of the import content and concessional rate^(*) of basic custom duty rate, applicable cess on custom duty, social welfare surcharge and IGST included in quoted price, if applicable in the price schedule. The licensor shall be responsible for, and shall exercise due diligence in properly classifying the goods and materials, undertaking the payment of custom duties, and/or otherwise complying with all applicable laws w.r.t. any import of the goods and materials.
In case owner is exposed to any penal action, interest /penalties by the custom authorities for incorrect declaration and /or valuation of the goods or material by the licensor/supplier, or otherwise on account of any breach of applicable laws in the course of the import of the goods and material by licensor/supplier, the licensor/supplier shall indemnify and hold harmless, Owner for any and all costs, expenses or losses suffered or incurred by Owner in this regard.

If licensor/supplier does not furnish built in CIF value and confirm that quoted

prices are firm and fixed, in that case licensor/supplier shall not be entitled to claim any variation in the custom duties even if licensor/supplier has quoted their prices considering custom duties.

A.3. Income Tax: - Quoted prices of Indian licensors shall be inclusive of income taxes as per Indian Income Tax Act/Rules.

Tax shall be deducted at source by owner on all sums due in accordance with the provisions of Indian Income Tax Act/Rules as in force at the relevant point of time.

Owner shall issue a tax deduction certificate to the licensor/bidder evidencing the tax deducted or withheld and deposited by owner on payments made to the licensor/bidder to enable the licensor/bidder to claim the credit of Tax deducted by owner.

A.4. Statutory Variation: - No variation on account of taxes and duties, statutory or otherwise, shall be payable to licensor except for the following:

- i. If after the due date of submission of last price bid and upto the contractual completion period (including extended contractual completion period for the reasons attributable to Owner or due to Force Majeure condition), any increase/decrease occurs in the applicable rate of GST or introduction of any new taxes/ levies pursuant to this contract, the variation in such GST or such new levy shall be to owner's account and shall be adjusted (increase / decrease) to / from the licensor's/supplier's invoices based on the documentary evidence.

Any increase in GST or introduction of any new taxes/ levies pursuant to this contract after the contractual completion period (including extended contractual completion period for the reasons attributable to Owner or due to Force Majeure condition) shall be to licensor's/supplier's account. However, any decrease in the rate of GST shall be passed on to owner.

For calculating statutory variations ceiling amount as declared by the bidder in price schedule shall only be considered.

- ii. **Basic Custom Duty & Social Welfare Surcharge:** If after the due date of submission of last price bid and upto 90%^(*) of contractual completion period (including extended contractual completion period for the reasons attributable to Owner or due to Force Majeure condition), any increase/decrease occurs in the applicable rate of Basic Customs duty & Social Welfare Surcharge on materials imported, the variation in such Basic Customs Duty & Social Welfare Surcharge shall be to owner's account and shall be adjusted (increase/decrease) to/from the licensor's/supplier's invoices based on the documentary evidence.

Any increase in Basic Customs Duty & Social Welfare Surcharge on materials imported after the 90 %^(*) of the contractual time for completion / extended Time

for Completion (due to reasons attributable to Owner or due to Force Majeure) shall be to Licensor's account. However, any decrease in the rate of Basic Customs Duty & Social welfare surcharge on materials imported shall be passed on to owner.

For calculating Statutory Variations ceiling amount as declared by the licensor/supplier in price schedule shall only be considered.

Note: Statutory variations on IGST (included in quoted prices) in case of imported materials from outside India in licensor's/supplier's name shall be to licensor/supplier account.

Any new taxes, duties, cess, levies notified or imposed after the due date of submission of last/final price bid but before the contractual date of completion of work (including extended contractual completion period for the reasons attributable to owner or due to Force majeure condition) shall be to Owner's account. These shall be reimbursed against documentary evidence. However, in case of delay attributable to the Licensor/Supplier, any new or additional taxes and duties imposed after Time of Completion, as above, shall be to Licensor's/Supplier's account.

B. FOR FOREIGN BIDDERS:

- B.1.** In the case of Foreign Bidders, **the fees/prices quoted shall be inclusive of all non-Indian taxes.** Prices quoted shall be on FOB International Port of exit basis, unless otherwise stated in the bidding document. Prices shall be furnished strictly in the appropriate price schedule format(s) enclosed with the bidding document.

Wherever the supplies by the foreign bidder falls under reverse charge mechanism, GST in India with respect to the contract or any goods or services provided by the Licensor under the contract shall be borne by the Owner. Hence, Clause A.1. (iii) & A.1. (iv) shall suitably be applicable for foreign bidders also.

However, where the supplies by the foreign bidder falls under normal charge mechanism, then all provisions w.r.t GST shall be as per the provisions applicable to Indian bidders mentioned herein above.

- B.2. Income Tax:** - Quoted prices of foreign licensor shall be gross of Income Tax i.e., inclusive of Indian Income Tax as per Indian Income Tax Act/Rules.

Owner shall deduct tax at source under Income Tax Act while making payments against each invoice for the services in India. Certificate for TDS shall be provided to the licensor.

Lower of rate of Withholding Tax as available in the relevant Double Taxation Avoidance Convention or Agreements (DTAA) as notified or amended from time to time as compared to the rate applicable as per relevant Finance Act will be

applicable subject to certain specified documentary compliances. Therefore, it is incumbent upon the licensor to decide and declare whether it intends to take benefits of lower rate of Withholding Tax and commit to provide necessary documents.

Foreign supplier/licensor shall furnish the information required in line with the prevalent provisions of Income Tax including but not limited to following documents:-

- PE/ No PE Declaration
- Tax residency certificate
- Form 10F
- PAN

Failing to provide above, the payment to licensor/supplier shall be subject to additional TDS as per the provisions of Indian Income Tax Act/Rules.

NOTES:

1. Where a non-resident has a PE in India then tax will be deducted at applicable rates and no cognizance will be given to the statement/declaration of bidder that no income derived from transaction is attributable to PE in India.
2. In cases where the foreign bidder is not availing the benefits of DTAA and does not furnish the PAN No., TDS will be deducted at applicable rate or @ 20% (in accordance with section 206AA) whichever is higher under Income Tax Act, 1961.

B.3. In respect of supplies (equipment etc.), sold and consigned directly by foreign supplier to Owner, Bill of entry (*4) shall be filed in favor of Owner. Import duties i.e. Basic Custom duty, Social welfare surcharge, IGST etc. as applicable in India shall be directly paid by Owner(if liable) , to Tax Authorities.

B.4. For imported supplies against BCPL PO, e-way bill shall be arranged by BCPL or BCPL Nominated CHA or their transporter (*1).

B.5. TAXATION TERMS FOR INDIAN SOURCED SUPPLIES: - Shall be the same as applicable for Indian bidders.

C. INCOME TAX (General Points):-

- i. The licensor/supplier shall also be responsible for ensuring compliance with all provisions of the direct tax laws of India including, but not limited to, the filing of appropriate Returns and shall promptly provide all information required by the owner for discharging any of its responsibilities under such laws in relation to or

arising out of the Contract. For the lapses, if any, on the part of the licensor and consequential penal action taken by the Income Tax department, the Owner shall not take any responsibility whether financial or otherwise.

- ii. The Indian Income Tax Act and rules made there under contains provisions permitting deduction of tax at a lesser rate if the licensor/supplier is able to justify to the Income Tax Authorities such lesser rate of deduction. However, a deduction once made has to be deposited by the Owner with the Income Tax Authorities in India and will not be adjustable by the Owner. It is therefore in the interest of the licensor that prior to release of any payment due to the licensor under the Contract that the licensor obtains, from the relevant Income Tax Authorities in India, a certificate specifying the rate of deduction/withholding of Income tax at source, failing which, payment to the licensor shall be made by the Owner after withholding/deduction at the rates applicable to the non-resident/foreign licensors/suppliers as per provisions of Income Tax Act, 1961.

D. CUSTOM DUTY (General Points):

- The licensor must ascertain and confirm along with supporting documents in the bid, if any custom duty exemption/waiver is applicable to the products being supplied under any CEPA/FTA/multi-lateral/bi-lateral trade agreements between India and licensor's country.
- The licensor shall be liable to provide all documentation to ensure availment of the exemption/waiver.

In case the licensor defaults on this due to any reason, whatsoever, licensor shall be liable to bear the incremental custom duty applicable if any.

- Any custom duty applicability on account of any change in the CEPA/FTA/multi-lateral/bi-lateral trade agreement shall be to licensor's account.
- Documentation to be furnished for availing the exemption/waiver of custom duty shall be specifically listed in the letter of credit also as a prerequisite for release of payment against shipping documents and this documentation shall necessarily form a part of shipping documents.

- E. APPLICABILITY OF TAX CREDIT:** - The input tax credit @ 100% (*5) of GST is available to owner.

F. EVALUATION METHODOLOGY W.R.T TAXES:- Following shall be loaded for evaluation:

1. CUSTOM DUTY (applicable for foreign bidders) :- Applicable Custom Duty (including BCD, Surcharge, Anti-Dumping Duty etc. but excluding IGST, which shall be dealt as per bid evaluation methodology given in Sr. No. 2 below) shall be loaded for the price bid evaluation in respect of supplies.
2. GST Loading (applicable for both Indian & foreign bidders):
 - a. Output GST shall be loaded for Price Bid Evaluation wherever Input Tax Credit is not available to Owner for goods and/ or services not eligible for Input Tax Credit as per Section 17(5) of CGST Act.
 - b. **No** (*5) Output GST shall be loaded for Price Bid Evaluation in all other cases.
 - c. Accordingly, Cess under GST, if applicable, shall also be loaded for Price Bid Evaluation.
3. **Quoted price must be gross of Withholding tax/Indian Income Taxes.** Moreover, if any foreign bidder insists on the '**Net of Taxes**' Agreement instead of gross of Withholding tax/Indian Income Taxes, the foreign bidder shall furnish the information stipulated in clause no. B.2 above, since, **in case of the 'Net of taxes' Agreement, Withholding tax/Indian taxes (as applicable) are borne by Owner** and if above information is not provided, it will result into higher tax liability on Owner. Accordingly, in such a case, a confirmation shall be provided by the foreign bidder that failing submission of the above information, any additional tax liability on purchase, will be deducted from the payment due to the Licensor. **In case, Quoted prices are net-off Withholding tax, then loading of Withholding/Income Tax (as applicable) shall be done for evaluation purpose.**

G. TAX INDEMNITY:

Any errors of interpretation of applicability of taxes and duties by the licensor/supplier shall be on licensor's/supplier's account.

Any fine, penalty or levies, required to be met by the Owner, arising out of non-compliance with respect to Indian taxation provisions by Licensor, Licensor's personnel or such third party, shall be recovered from the amounts payable to the Licensor.

NOTES:-

1. Concessional rate of custom duty will be applicable.
2. Applicable GST law wherever mentioned above, is to be interpreted as Indian GST Law.

Amendment-1 to Finance Input on Taxes & Duties for Licensor Selection

Following clauses are to be added:-

A.1 (xii):- Provision w.r.t. E- Invoicing requirement as per GST laws - Supplier / Service Provider / Contractor (s) who is required to comply with the requirements of E-invoice for B2B transactions as per the requirement of GST Law will ensure the compliance of requirement of E Invoicing under GST law. If the invoice issued without following this process, such invoice can-not be processed for payment by BCPL as no ITC is allowed on such invoices. Therefore, all the payments to such supplier / service provider / contractor who is liable to comply with e-invoice as per GST Laws shall be made against the proper e-invoice(s) only. Further, returns and details required to be filled under GST laws & rules against such e-invoices should be timely filed by Supplier of Goods / Services with requisite details. If input tax credit is not available to BCPL for any reason attributable to supplier / service provider / contractor (both for E-invoicing cases and non-E-invoicing cases), then BCPL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the supplier / service provider / contractor under the contract.

C (iii):- Provision w.r.t. TCS on Sale of Goods under section 206C(1H) of Income Tax Act (Applicable only in case of procurement of Goods) - As per section 206C(1H) of the Income Tax Act, 1961 inserted by Finance Act 2020, a seller (as defined under the said section), who receives any amount as consideration for sale of any goods to a buyer (as defined under the provision) of the value or aggregate of such value exceeding fifty lakh rupees in any previous year, shall levy at the time of sale, TCS for a sum equal to % as defined (Presently 0.1 per cent) of the sale consideration exceeding fifty lakh rupees (or limit as specified in the Act) and deposit the same with Government on receipt/collection of consideration from BCPL. BCPL will avail TCS credit and adjust such TCS credit against its income tax liability on the basis of TCS certificate to be issued by seller to BCPL.

DISPUTE RESOLUTION****1. PRE-LITIGATION GRIEVANCE/DISPUTE REDRESSAL MECHANISM:**

- i) Any issue should be first referred to EIC (for LOA/contracts)/Dealing C&P Executive (for Purchase Orders).
- (ii) In case issue is not resolved by above, Vendor/Supplier/Contractor/Consultant may submit their issue to “Samadhan Committee”. The same will be addressed by Samadhan Committee within 15days from the date of issue raised.
- (iii) In case, Vendor/Supplier/ Contractor/Consultant is not satisfied with the decision of the Samadhan Committee, there is a provision of escalation of issue to higher authority in BCPL. This option is available two times only, one is at Chief General Manager (O&M) and the other one is Chief Operating Officer.
- (iv) However, in case no mutual settlement is arrived at after exercising all pre-litigation grievance/dispute redressal mechanism as above, the matter shall be settled by arbitration in accordance with the provision of arbitration of the Indian Arbitration & Conciliation Act, 1996 and any statutory modification or re-enactment thereof and the Rules made there under and for the time being in force as stated below:

2. ARBITRATION

All issue(s)/dispute(s) excluding the matters that have been specified as excepted matters and listed at clause no. 2.6 and which cannot be resolved through pre-litigation grievance/dispute redressal mechanism, such issue(s)/dispute(s) shall be referred to arbitration for adjudication by Sole Arbitrator.

The party invoking the Arbitration shall have the option to either opt for Ad-hoc Arbitration as provided at Clause 2.1 below or Institutionalized Arbitration as provided at Clause 2.2 below, the remaining clauses from 2.3 to 2.7 shall apply to both Ad-hoc and Institutional Arbitration:-

- 2.1 On invocation of the Arbitration clause by either party, BCPL shall suggest a panel of three independent and distinguished persons (Retd. Supreme Court & High Court Judges only) to the other party from the Panel of Arbitrators maintained by ‘Delhi International Arbitration Centre (DIAC) to select any one among them to act as the Sole Arbitrator. In the event of failure of the other party to select the Sole Arbitrator within 30 days from the receipt of the communication from BCPL suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall

stand forfeited and BCPL shall appoint the Sole Arbitrator from the suggested panel of three Arbitrators for adjudication of dispute(s).

The decision of BCPL on the appointment of the sole arbitrator shall be final and binding on the other party. The fees payable to Sole Arbitrator shall be governed by the fee Schedule of ‘‘Delhi International Arbitration Centre’’.

OR

- 2.2 If a dispute arises out of or in connection with this contract, the party invoking the Arbitration shall submit that dispute to any one of the Arbitral Institutions i.e ICADR/ICA/DIAC/SFCA and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd. Supreme Court/High Court Judge to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.
- 2.3 The cost of arbitration proceedings shall be shared equally by the parties.
- 2.4 The Arbitration proceedings shall be in English language and the seat, venue and place of Arbitration shall be New Delhi, India only.
- 2.5 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matter relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at New Delhi.
- 2.6 List of Excepted matters:
 - a) Dispute(s)/issue(s) involving claims below Rs.25 lakhs and above Rs.25 crores.
 - b) Dispute(s)/issue(s) relating to indulgence of Contractor/Vendor/Bidder in corrupt/fraudulent/ collusive/coercive practices and/or the same is under investigation by CBI or Vigilance or any other investigating agency or Government.
 - c) Dispute(s)/issue(s) wherein the decision of Engineer-In-Charge/owner/BCPL has been made final and binding in terms of the Contract.

- 2.7. Disputes involving claims below Rs 25 Lakhs and above Rs. 25 crores:- Parties mutually agree that dispute(s)/issue(s) involving claims below Rs 25 Lakhs and above Rs 25 crores shall not be subject matter of Arbitration and are subject to the exclusive jurisdiction of the Court(s) situated at Dibrugarh.

3. GOVERNING LAW AND JURISDICTION:

The Contract shall be governed by and construed in accordance with the laws in force in India. The Parties hereby submit to the exclusive jurisdiction of the Competent Courts of Dibrugarh having territorial & pecuniary jurisdiction for adjudication of disputes, injunctive reliefs, actions and proceedings, if any, arising out of this Contract other than those covered under the arbitration clause as stated herein above.

4. DISPUTES BETWEEN CPSE'S/ GOVERNMENT DEPARTMENT'S/ ORGANIZATIONS:

Subject to pre litigation grievance/dispute redressal mechanism as provided above, in the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments /Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in OPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018.

Any party aggrieved with the decision of the Committee at the First level (tier) may prefer an appeal before the Cabinet Secretary at the Second level (tier) within 15 days from the date of receipt of decision of the Committee at First level, through its administrative Ministry/Department, whose decision will be final and binding on all concerned.

The above provisions shall supersede provisions relating to Conciliation, Arbitration, Governing Law & Jurisdiction and Disputes between CPSE's/ Government Department's/ Organizations mentioned in General Conditions of Contract (GCC) and elsewhere in tender document.

****Note-1 to Article-1 :** Sh. Pranjal Phukan, CM (C&P) [email: pranjalk.phukan@bcplindia.co.in] shall be the coordinator to the Samadhaan Committee to whom all complaints shall be lodged by the Vendor/Supplier/ Contractor/Consultant/EIC/dealing officer of C&P.



Section VI

SCHEDULE OF PRICE [SOP], REV. 0

NAME OF WORK : SUPPLY OF KNOW-HOW/ LICENSE, BASIC ENGINEERING DESIGN PACKAGE (BEDP), CATALYST AND OTHER RELATED SERVICES FOR **HPG-2ND STAGE UNIT**, FOR PROJECT OF SETTING UP OF BUTENE-1, HPG (2ND STAGE) AND PSA UNIT OF BRAHMAPUTRA CRACKER AND POLYMER LIMITED (BCPL)

BIDDING DOCUMENT NO. : SG/B348-115-LA-TN-8501/1003

NAME OF BIDDER :



SCHEDULE OF PRICES

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FORM – B7	ESCALATION RATE
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FORM – B9	DEPUTATION OF LICENSOR'S PERSONNEL [FOR MANDATORY SERVICES AND ADDITIONAL SERVICES]



Preamble to Schedule of Prices

1. Currency of Quote & Payment:
 - a) Bidders shall quote the price for materials and services to be procured from India in Indian Rupees (INR) only.
 - b) Bidder shall quote the prices for materials and services to be imported in India in US Dollars (USD) or Euro or GBP or INR, or any combination of USD and INR, or Euro and INR, or GBP and INR.
 - c) No other currencies shall be allowed other than Indian Rupees or US Dollar or Euro or GBP as above.
 - d) Payment shall be made in currency of quote.
2. Bidder to submit firm price based on complete scope of work for supply of License, Basic Design Engineering Package, Proprietary Items, Catalyst, Mandatory and Additional Services, Training etc. as per format included in the Bidding document. The Licensor's offer shall be complete in all respects, free from ambiguity and shall be submitted together with requisite information and FORMs as per Bidding Document.
3. Bidder shall specify "QUOTED IN PRICE PART" or "NOT QUOTED", as the case may be in unpriced bid in all FORMs of SOP.
4. Bidder must clearly specify the Currency of Quote as applicable in the various FORMs in respective column(s). In case, currency is not specifically mentioned, the single currency shall be considered in USD for evaluation and payment purpose (in case of foreign bidder) and in INR (in case of Indian bidder)
5. In case of any difference in the prices quoted in figures and words, the prices quoted in words shall be considered as correct.
6. All Prices quoted in all FORMs shall be gross of all non-Indian taxes. For detail of taxes and duties refer Article 4 of Commercial Terms and Conditions (CTC).
7. The Prices quoted should be inclusive of Indian Income Taxes (withholding tax). For detail of taxes and duties refer Article 4 of Commercial Terms and Conditions (CTC).
8. The shaded column in respective Form(s) of SOP shall not be filled up with Price.



FORM - B1

FEES TOWARDS LICENSING, BASIC ENGINEERING DESIGN PACKAGE (BEDP)

Sl. No.	ITEM DESCRIPTION	UNIT	AMOUNT OF FOREIGN COMPONENT (IN US\$/ EURO/ GBP) (Bidder to indicate the Currency.....)		AMOUNT OF INDIAN COMPONENT (IN INDIAN RUPEES)	
			IN FIGURES	IN WORDS	IN FIGURES	IN WORDS
1	License fee for grant of license for HPG 2 nd Stage Unit complete in all respects in accordance with provisions of Bidding Document and its amendments on Lump-sum basis.	LUMPSUM				
2	Fee for supply of Basic Engineering Design Package for HPG 2 nd Stage Unit complete in all respects in accordance with provisions of Bidding Document and its amendments on Lump-sum basis.	LUMPSUM				
TOTAL AMOUNT [i.e. 1 + 2 above]						

NOTES FOR LICENSING, BASIC ENGINEERING DESIGN PACKAGE (BEDP):

1. The above prices shall remain firm till execution of work and no escalation shall be payable.
2. Basic Engineering Design Package Fee should include all works as per the scope of BEDP as per Technical Specifications, amendments issued and provisions of the Bidding Document. LICENSOR shall confirm the schedule for the supply of the Complete Basic Engineering Design Package as indicated in the Technical Specifications.
3. The LICENSOR shall permit the participation of the representative(s) of the LICENSEE/ LICENSEE'S Consultant(s) during the preparation of Basic Design Engineering Package in LICENSOR's office for review of drawings / documents as per Technical specifications without any additional charges / fees. All expenses towards LICENSEE's and LICENSEE's CONSULTANT's personnel / representatives deputed to LICENSOR's Office and / or Plant for consultation / design conference or for training, in respect of traveling, boarding and lodging, travel and living expenses in the place of work will be borne by the LICENSEE. The LICENSOR shall, however, provide reasonable office accommodation, furniture, clerical assistance and e-mail and telephone facilities required by such personnel / representatives for the performance of their duties free of cost to the LICENSEE.
4. The License, BEDP fees should include License ,BEDP fees for the following sections of the HPG 2ND STAGE UNIT: a. Hydrogenation of Pygas Section. b. Benzene Saturation of Hydrogenated Pygas Stream to convert Benzene to Cyclohexane.



FORM - B2

PRICES FOR MANDATORY SERVICES

Sl. No.	ITEM DESCRIPTION	UNIT	AMOUNT OF FOREIGN COMPONENT (IN US\$/ EURO / GBP) (Bidder to indicate the Currency.....)		AMOUNT OF INDIAN COMPONENT (IN INDIAN RUPEES)	
			IN FIGURES	IN WORDS	IN FIGURES	IN WORDS
1	Mandatory Services in accordance with provisions of Bidding Document and its amendments: a) HAZOP and SIL studies during detail engineering stage at Owner/ Consultant's office b) Assistance during detailed engineering including 3D Model review at Owner/ Consultant's office c) Assistance during pre-commissioning/ commissioning and startup activities at Project site. d) Conducting performance guarantee test runs at Project site. e) Assistance during catalyst loading at Project site f) Any additional mandatory services that Bidder deems necessary for fulfilling the guarantees offered and other responsibilities. g) Review and Approval of detail engineering documents including fabrication drawing and vendor data for critical equipment that Bidder seems necessary.					
1.1	By Licensor Personnel (deputed from Licensor's office outside India)/Indian Bidder for providing above mandatory services	LUMPSUM				
1.2	By Licensor's Personnel deputed from Licensor's Indian office (Subsidiary of Licensor company) for providing specific Onsite Services at Project Site as per provisions of Bidding Document.	LUMPSUM				
TOTAL AMOUNT [i.e. 1.1 + 1.2 above]						



NOTES FOR MANDATORY SERVICES:

1. The above prices shall remain firm till 31.12.2021. However, beyond this date, the prices are subject to escalation for each calendar year as per FORM-B7.
2. The above prices shall be inclusive of all costs, overhead and profit, living allowance, communication, taxes (except GST in India) etc. but exclusive of airfare (with shortest route), local transportation and accommodation charge, which shall be paid at actual. The prices shall be exclusive of the provisions provided in the Form-B9.
3. Bidder to specify the break-up of 500 Man-days (including travel time) of Licensor Personnel to be deputed from Licensor's office outside India and Licensor's Indian Office respectively in the Un-priced Part in Form-B2A for providing mandatory services.
4. In case the actual number of Man-days utilized for the above Mandatory Services is lower or higher than 500 Man-days (including travel time), the lump sum amount quoted shall be pro-rated based on the actual number of Man-days deputed to arrive at the amount payable and payment shall be made accordingly.
5. Lump sum amount quoted by bidder for 500 Man-days (inclusive of travel time and Sunday as holiday) shall be considered for evaluation. However, to derive the per diem rate, lump sum amount quoted shall be pro-rated based on the estimated 500 Man-days.
6. Personnel of Licensor shall be required to work eight (8) hours per day in line with Licensee's office working hours. However, in case of exigencies of work, Licensor's personnel will be required to put in extra man hours without any additional payment.
7. For each personnel, additional up to three (3) days (US based Licensors)/ two (2) days (non-US Licensors)/ one day (India based Licensors) for travel shall be considered.



FORM – B2A

MANDATORY SERVICES (BREAK-UP OF MAN-DAYS)

Sr. No	Item Description	Number {Break up of 500 Man-days (inclusive of travel time and Sunday as holiday), respectively for Licensor's personnel from Licensor's office outside India and from Licensor's Indian office}
1	Mandatory Services in accordance with provisions of Bidding Document and its amendments: a) HAZOP and SIL studies during detail engineering stage at Owner/ Consultant's office b) Assistance during detailed engineering including 3D Model review at Owner/ Consultant's office c) Assistance during pre-commissioning/ commissioning and startup activities at Project site. d) Conducting performance guarantee test runs at Project site. e) Assistance during catalyst loading at Project site f) Any additional mandatory services that Bidder deems necessary for fulfilling the guarantees offered and other responsibilities. g) Review and Approval of detail engineering documents including fabrication drawing and vendor data for critical equipment that Bidder seems necessary.	
1.1	Man-days of Licensor Personnel to be deputed from Licensor's office outside India for providing above mandatory services.	_____ Man-days
1.2	Man-days of Licensor's Personnel to be deputed from Licensor's Indian office (Subsidiary of Licensor company) for providing specific Onsite Services at Project Site as per provisions of Bidding Document.	_____ Man-days

NOTES FOR MANDATORY SERVICES (BREAK-UP OF MAN-DAYS)

1. Bidder shall submit the break-up of 500 man-days for Mandatory Services in this Form.



FORM – B3

PRICES FOR TRAINING

Sl. No.	ITEM DESCRIPTION	UNIT	AMOUNT OF FOREIGN COMPONENT (IN US\$/ EURO / GBP) (Bidder to indicate the currency.....)		AMOUNT OF INDIAN COMPONENT (IN INDIAN RUPEES)	
			IN FIGURES	IN WORDS	IN FIGURES	IN WORDS
1.	Licensor shall provide Training to Owner's personnel on process design, operation, maintenance, analytical procedures and product & applications training etc. as indicated below as per the provisions of the Bidding Document and its amendments (Lump sum amount).	—				
1.1	One week classroom training for up to thirty (30) persons at Owner's office/ plant in two batches in single span.	LUMPSUM				

NOTES FOR TRAINING:

1. The above prices shall remain firm till 31.12.2021. However, beyond this date, the prices are subject to escalation for each calendar year as per FORM-B7.
2. Above amount shall be inclusive of all costs, overhead, profits, transportation (airfare & local), accommodation, living allowance, communication, taxes (except GST), etc. for Licensor's personnel and also inclusive of fees to be paid to plant Owner towards practical training at Industrial plant preferably in India.
3. Expenses for travel, boarding, lodging, and sustenance of the trainees / LICENSEE's personnel at the place of training will be borne by the LICENSEE.



FORM – B4

SCHEDULE OF PERSONNEL RATES- ADDITIONAL SERVICES

Sr. No	Item Description	AMOUNT (PER MAN-DAYS)		Currency
		IN FIGURES	IN WORDS	
1	Additional Services (PERSONNEL RATES FOR SERVICES RENDERED)			
1.1	At Licensor's Office Outside India (Per Manday) By Licensor Personnel (Deputed from Licensor's office outside India)			
1.1.1	Engineering a) Development of APC Strategies b) Development of specification for process simulators c) Any other activity/ service related to project implementation			IN USD / EURO/GBP/INR (Bidder to indicate any one currency)
1.1.2	Inspection a) Procurement/ Inspection/ expediting of critical equipment b) Supervision during construction c) Inspection at vendor's shop floor/ prequalification of vendors d) Any other activity/ service related to project implementation			IN USD / EURO/ GBP/INR (Bidder to indicate any one currency)
1.2	In India (Per Manday)			
1.2.1	Engineering By Licensor Personnel (Deputed from Licensor's Office Outside India) a) Development of APC Strategies b) Development of specification for process simulators c) Any other activity/ service related to project implementation			IN USD / EURO/ GBP/INR (Bidder to indicate any one currency)
1.2.2	Inspection By Licensor Personnel (Deputed from Licensor's Office Outside India) a) Procurement/ Inspection/ expediting of critical equipment b) Supervision during construction c) Inspection at vendor's shop floor/ prequalification of vendors d) Any other activity/ service related to project implementation			IN USD / EURO/ GBP/INR (Bidder to indicate any one currency)



NOTES FOR PERSONNEL RATES- ADDITIONAL SERVICES:

1. The personnel rates shall be firm till 31.12.2021. However, beyond 31.12.2021, the rates are subject to escalation for each calendar year as per FORM – B7.
2. Per Diem rates shall be furnished for Licensor's personnel involved in rendering Additional Services in accordance with the provisions of Bidding Document (Refer to sections on Additional Services of Technical Specifications and subsequent Amendments, if any, for details).
3. Single per diem rate shall be quoted separately for all the above additional services at Licensor's office outside India and in India in the above Form.
4. For the purpose of evaluation, total 150 man-days including travel time shall be considered and the break-up shall be as under:
 - a. Engineering: 50 man-days at Licensor's office and 50 man-days at Owners/Consultant's office in India.
 - b. Inspection: 20 man-days at Licensor's office and 30 man-days at Owners/Consultant's office in India.(Bidder to Specify the Breakup for 80 Man-days in India (Engineering: 50 man-days and Inspection: 30 man-days) in the Un-priced Part for Services rendered in Indian Currency and Foreign Currency in Form-B4A).
5. The quoted price per man-day shall be inclusive of all costs, overhead and profit, living allowance, communication, taxes (except GST in India) etc. but exclusive of airfare (local and international via shortest route), local transportation and accommodation charge which shall be paid at actual. The prices shall be exclusive of the provisions provided in the Form-B9.
6. The following shall be considered for payment of Licensor personnel deployment:
 - i. Personnel of Licensor shall be required to work for 48 Hours per week at site (Monday to Saturday, 8 hours per day) in line with Licensee's office working hours. However, in case of exigencies of work, Licensor's personnel will be required to put in extra man hours without any additional payment.
 - ii. If the situation of work so requires, Licensor shall also be required to work on Sunday, with the additional payment based on prorated hourly basis to be derived from Per Diem Rate.
 - iii. For each personnel, additional up to three (3) days (US based Licensors)/ two (2) days (non-US Licensors)/ one day (India based Licensors) for travel shall be considered.



FORM – B4A

ADDITIONAL SERVICES (BREAK-UP OF MAN-DAYS)

Sr. No	CATEGORY	AT LICENSOR'S OFFICE OUTSIDE INDIA (Man-Days)	IN INDIA (Man-Days)	
			For Man-Days Quoted in USD/EURO/GBP	For Man-Days Quoted in INR
1.	No of man-days			

NOTES FOR ADDITIONAL SERVICES (BREAK-UP OF MAN-DAYS) :

1. Bidder shall submit the break up of 70 man-days at Licensor's office and 80 man-days in India in this Form



FORM – B5

PRICES FOR SUPPLY OF PROPRIETARY EQUIPMENTS / ITEMS

Sl. No.	ITEM DESCRIPTION		UNIT	AMOUNT OF FOREIGN COMPONENT (IN US\$/ EURO/GBP) (Bidder to indicate the Currency.....)		OCEAN FREIGHT UPTO KOLKATA SEAPORT IN PERCENTAGE (%) (As per Note 3 below)	AMOUNT OF INDIAN COMPONENT (IN INDIAN RUPEES)		ROAD/ INLAND FREIGHT UPTO PROJECT SITE IN PERCENTAGE (%) (As per Note 3 below)
				IN FIGURES	IN WORDS		IN FIGURES	IN WORDS	
1	Supply of following proprietary items/Equipment if any (bidder to specify), on FOB Port of shipment for Foreign component (Inco terms 2010) and Ex-works Basis (including packing and forwarding) for Indian component , in accordance with provisions of Bidding Document – On Lump Sum basis.								
	Description of Item/ equipment	Quantity (Nos.)							
(i)			LUMPSUM						
(ii)			LUMPSUM						
(iii)			LUMPSUM						
..			LUMPSUM						
..			LUMPSUM						
TOTAL AMOUNT EXCLUDING FREIGHT (i + ii + iii + ...)									



NOTES FOR SUPPLY OF PROPRIETARY EQUIPMENTS / ITEMS:

1. The Prices as per this FORM are firm till 31.12.2021. However, beyond 31.12.2021, the Prices are subject to escalation for each calendar year as per FORM-B7.
2. Bidder to list proprietary equipment/ items, furnishing item description, quantity, lumpsum price in the Price Part. Bidder may add additional rows if required. Bidder shall submit the Un-Priced copy of the above Proprietary equipment/Items blanking out the prices in the Un-Priced part of their offer.
3. Bidder shall quote Lumpsum price for supply of proprietary equipment/ items in the above Form on FOB Port of Shipment (i.e. excluding cost of ocean freight from FOB Port to CFR Port in India & insurance) for foreign component (as per Inco-terms 2010) and Ex-works Basis (including packing and forwarding) for Indian component. Bidder shall also quote ocean freight in % of FOB port of Exit basis for foreign supplied items from FOB port of exit to CFR port of Entry in India (i.e., Kolkata Seaport) and Road freight up to project site in % of Ex-works Basis (including packing and forwarding) price for Indian supplied items. Quoting of ocean freight/ inland charges by bidders is mandatory.
4. Prices of mandatory, if required/ commissioning spares shall be included in the price of proprietary equipment/Items.
5. Prices for Spares for 2 years of operation shall not be included in the Prices for Supply of Proprietary equipment/ items.
6. For all imported equipment/items, nearest airport is Kolkata airport. Nearest Sea Port is Kolkata sea port.
7. Itemwise price list of spares for 2 years of operation (not included in the proprietary equipment/items' pricing), if applicable, shall also be furnished along with the Priced Bid and shall be valid for 12 months after placement of order of proprietary equipment/ items. These price list of spares shall not be considered for price bid evaluation. However, Licensee reserves the right to place the order to the Licensor on a later date within the validity period of Proprietary equipment/Items' Prices plus 12 Months, in which case the price as submitted shall be valid.
8. Delivery schedule of Proprietary items/ equipment from placement of order shall be firm and valid till commissioning of the Unit and firm delivery schedule shall be indicated in the unpriced part.
9. The order for proprietary equipment/items shall be placed separately on the above price and delivery period within validity period as mentioned in NOTE-1 above. The other commercial terms shall be finalised with the supplier of proprietary equipment/Items at the time of placement of order, except the terms and conditions already agreed against this bidding document.



FORM – B6

SUPPLY OF FIRST CHARGE OF CATALYSTS, CHEMICALS, ADSORBENTS, ABSORBENTS, ADDITIVES (As applicable)

Sr.No	Name of Catalyst (Proprietary & Non-Proprietary) and Proprietary Chemical/ Adsorbent/ Absorbent / Additive	Qty of Catalyst/ Chemical/ Adsorbent/ Absorbent / Additive [in KG]									Unit Rate of Base Catalyst/ Adsorbent/ Absorbent (per Kg) (Currency to be indicated...)	Cost of Base Catalyst (Col 9 x Col 11)	Ocean Freight upto Kolkata Seaport / Inland Freight up to site (As Applicable) (in Percentage applicable on Column 12) * (This % quoted shall be considered for Metal price also)
		Base (In kg)	Metals		Sub Total (col 3+ col 4B)	5% handling/ contingency losses [(col 3+col 4B) x 0.05]	Total including handling loss (Col 5 +Col 6)	Total Qty rounded off to the next higher Barrel/ Drum/ Bag Size Including handling/ contingency losses (In Kg)	Total base in the quantity indicated in column 8 (In Kg)	Total metal in the quantity indicated in column 8 (in Kg)			
1	2	3	4A Name	4B Quantity (In Kg)	5	6	7	8	9	10	11	12	
i.													
ii.													
iii.													
iv.													
v.													
vi.													
vii.													
viii.													
....													
....													
Total Cost of Catalyst/ Chemical/ Adsorbent/ Absorbent / Additive excluding freight (i+ii+iii+...+.....) In Figures In words													



NOTES FOR SUPPLY OF CATALYSTS, CHEMICALS, ADSORBENTS, ABSORBENTS, ADDITIVES (As applicable)

1. Licensor may add/delete the rows for nos. of Catalyst (Proprietary & Non-Proprietary)/ Adsorbents/ Absorbents/ Chemicals as per applicability in their technology.
2. Quantity quoted in column 3, 4 and 5 shall be inclusive of all manufacturing losses.
3. Quantity under column 9) + (quantity under column 10) shall be equal to quantity under column 8.
4. Cost of total base Catalyst (column 12) = Qty. of supply of first charge of total base Catalyst (Kg) (column 9) X Unit Rate of Base Catalyst (column 11) quoted by Licensor in USD/EURO/GBP/INR. Cost of total base Catalysts/ Adsorbents/ Absorbents shall exclude the cost of metals against which the Price variation is required, as applicable, but shall be inclusive of all elements associated with Catalysts/ Adsorbents/ Absorbents processing, all conversion charges, processing cost, service charges for procurement of metals, as applicable, etc. Metals against which the Price variation is required, as applicable, and their quantity shall be mentioned separately in respective columns of Form-B6.
5. Price for Catalyst shall be as follows:
Catalyst Price = Cost of total base Catalyst + Cost of metals, as applicable.
6. The cost of metals against which the Price variation is required, as applicable, is the cost of metals listed in the Catalysts/ Adsorbents/ Absorbents and is equal to metal content (in Kg) X cost of metals, as applicable, in USD / EURO/GBP/INR (per Kg)
7. Bidder to indicate "Unit Rate of base Catalyst in USD/EURO/GBP/INR" only.
8. Bidder shall quote Lump-sum prices for supply of all Catalyst (proprietary & non-proprietary) and Proprietary Chemical / Adsorbent/ Absorbent / Additive on FOB Port of Shipment (i.e. excluding cost of freight & insurance) for foreign component (Incoterms 2010) and Ex-works Basis (including packing and forwarding) for Indian component. Bidder shall also quote ocean freight in % of FOB port of Exit basis for foreign supplied items from FOB port of exit to CFR port of Entry in India (i.e., Kolkata Seaport) and Road freight up to project site in % of Ex-works Basis (including packing and forwarding) price for Indian supplied items. Quoting of ocean freight/ inland charges by bidders is mandatory
9. Quantity quoted shall be inclusive of minimum 5% for Handling/ contingency towards loss/ spillage. This 5% is besides losses mentioned in note-3 above. However, bidder should provide rounded-off quantity nearest to barrel / drum/ bag size in the priced bid and the same shall be considered for evaluation.
10. Bidder to specify metals in SOP against which they want prices as per LME index (OR CRU Ryan Notes, if specific metal is not available in LME) and exclude prices of such metals from the price of the base Catalyst/ Chemical/ Adsorbent/ Absorbent / Additive etc. Bidder shall include cost of all other metals (if any) in their cost of base Catalyst/ Chemical/ Adsorbent/ Absorbent/Additive. LME index reference is to be considered for NPV calculation and ordering. In case, specific metal price is not available in LME website, the metal price in CRU RYAN Notes shall be considered.
11. For Molybdenum (wherever applicable), bidder shall submit the floor price in their Unpriced bid to facilitate Owner to fix the uniform floor rate for all the Licensors, which shall be used for evaluation of Price/NPV calculation. The floor price for Molybdenum fixed by the Owner and informed to the bidders prior to the price bid opening shall be final and binding upon the bidders for price evaluation. However, for Ordering, either floor price or published Index Price whichever is "Higher" shall be considered. Published Index Price shall be 3 Months' average price, ending the month prior to the shipment.



DESCRIPTION	CURRENCY	FLOOR RATE PER KG
Floor price of Molybdenum per Kg [To be Quoted by Bidder in UNPRICED BID alongwith support Letter from their Supplier]	USD	

12. The other metal prices [i.e. Other than Molybdenum] shall be based upon three months' average price ending the month prior to shipment [for Ordering]. However, for evaluation/ NPV calculation, the latest price one day prior to the date of price bid opening of respective metal (For Catalyst, Chemicals, Adsorbents, Absorbents, Additives, as applicable) available as per LME index/ index as considered for NPV evaluation shall be considered. In case, specific metal price is not available in LME website, the metal price in CRU RYAN Notes shall be considered.
13. The rates/ prices quoted for all Catalyst/ Chemical/ Adsorbent/ Absorbent / Additive shall remain firm till 31.12.2021. However, beyond this date, the Prices of all Catalyst/ Chemical/ Adsorbent/ Absorbent / Additive are subject to escalation for each calendar year as per FORM-B7.
14. Delivery schedule shall be firm and valid till completion of the project. The firm delivery schedule shall be submitted in Unpriced Bid.
15. The cost of all Catalyst, Proprietary Chemicals, Adsorbents, Absorbents, Additives (as applicable) shall include supply of all Catalyst (Proprietary & Non-Proprietary) and Proprietary Chemicals/ Adsorbents/ Absorbents/ Additives (as applicable) in nonreturnable suitable sealed packing that will prevent loss, damage, deterioration or corruption of these items during ocean, air, rail and truck travel, handling and storage. The Licensor shall describe the type of packing and containers in their bid. The Licensor shall also confirm that the packing is suitable for transit and handling and for long term storage at Project site. The Catalyst, Proprietary Chemicals, Adsorbents, Absorbents, Additives (as applicable) supplied in drums/bags should be palletized for dispatch.
16. Quantities of Catalysts/ Adsorbents/ Absorbents/ Chemicals specified by Licensor in SOP shall be considered as guarantee numbers.
17. Bidder to note that only the name of the Catalyst (as per column 2 above) and Name of Metal (as per column 4A) shall be submitted in the Unpriced Bid.
18. Procurement methodology of Precious metal such as Platinum is attached in Bidding Document.
19. Bidder to note that the quantity of base Catalyst or metal are required to be quoted in Priced Bid only .



FORM - B7

ESCALATION RATE

Sl. No.	Year	Rate of Escalation in Percentage for Prices specified in				
		FORM - B2 (Mandatory services)	FORM - B3 (Training)	FORM - B4 (Personnel rates- Additional services)	FORM – B5 (Proprietary equipment's / items)	FORM – B6 (Catalysts, chemicals, adsorbents, absorbents, additives)
1.	2022					
2.	2023					
3.	2024					
4.	2025					
5.	2026					
6.	2027					

NOTE FOR ESCALATION RATE:

1. Rate of Escalation shall be indicated in terms of percentage in figures. In case any percentage is not mentioned, then it will be construed that the prices in FORM-B2 to FORM-B6 are valid and firm up to 31.12.2027
2. The above escalation rate shall be considered for computation of NPV based on the expected date of award.
3. The above escalation rate shall be considered for computation of NPV. It is explained that if any escalation percentage is mentioned in 2022, then it automatically applies to 2023. It means, the percentage mentioned in 2023 shall be in addition to the price already increased during 2022 as a result of percentage mentioned for 2022. Similar provisions shall be applicable for subsequent years also.

Example:

Base Price: 1000 valid upto 31.12.2021

Escalation for 2022 : 2%



Escalation for 2023 : 1%

Escalation for 2024 : 1%

Escalation for 2025 : 1%

Escalation for 2026 : 1%

Escalation for 2027 : 1%

Base Price: 1000 valid upto 31.12.2021

Price in 2021 : 1000

Escalation for 2022 : 2%

Price in 2022 : 1000 X 1.02

Escalation for 2023 : 1%

Price in 2023 : 1000 X 1.02 X 1.01

Escalation for 2024 : 1%

Price in 2024 : 1000 X 1.02 X 1.01 X 1.01

Escalation for 2025 : 1%

Price in 2025 : 1000 X 1.02 X 1.01 X 1.01 X 1.01

Escalation for 2026 : 1%

Price in 2026 : 1000 X 1.02 X 1.01 X 1.01 X 1.01 X 1.01

Escalation for 2027 : 1%

Price in 2027 : 1000 X 1.02 X 1.01 X 1.01 X 1.01 X 1.01 X 1.01



FORM – B8

DECLARATION FOR WITHHOLDING TAX

Sr. No	WITHHOLDING TAX	BIDDER'S CONFIRMATION
1	BIDDER TO CATEGORICALLY CONFIRM THAT THE PRICES QUOTED ABOVE IS GROSS/ NET OF WITHHOLDING TAX.	GROSS / NET
2	IN CASE QUOTED PRICES ARE NET OF WITHHOLDING TAX. BIDDER HAS TO INDICATE RATE OF WITHHOLDING TAX AS PER DTAA AGREEMENT	_____ %

Notes :

1. Bidder to submit the declaration for Withholding Tax as per above format in Unpriced copy of Price Bid.
2. The above details shall not be submitted by Bidder in their Price Bid folder. In case, Bidder had submitted these details in Unpriced as well as Price Bid, the Declaration as submitted in Unpriced Bid shall be considered for evaluation and award of work.

(SIGNATURE OF BIDDER)



FORM – B9

DEPUTATION OF LICENSOR'S PERSONNEL [FOR MANDATORY, ADDITIONAL SERVICES]

1.1 DEPUTATION OF LICENSOR'S PERSONNEL FROM ITS OFFICE OUTSIDE INDIA

- i. For each person deputed in India by LICENSOR from its office outside India, for services in connection with the LICENSED Unit for which LICENSEE is liable to pay as per terms and conditions, the LICENSEE shall reimburse/arrange the following:
 - a) Round Trip Business class Air Ticket from LICENSOR's designated Office to Indian airport nearest to LICENSEE's Petrochemical Complex site (Licensee shall pay for actual tickets cost).
 - b) Travel by Air (Business class) from the Airport of entry to the airport nearest to Petrochemical Complex with shortest route (licensee shall pay for actual tickets) or AIR-CONDITIONED First Class Train or Car from Mumbai / Kolkata / New Delhi/ Chennai to Petrochemical Complex location and back.
 - c) Single furnished Air-conditioned Hotel Room or equivalent Accommodation at the Petrochemical Complex.
 - d) Transportation from place of accommodation to work place and back.
 - e) Office facilities, clerical and secretarial assistance and expenses on Telegrams / telexes / Telephones / fax and e-mail facilities required for the work.
 - f) No additional Living allowance over & above the per diem rate would be admissible.
- ii. Although the LICENSEE may, as a courtesy, permit LICENSOR's personnel to be treated at any medical facility provided by the LICENSEE, the LICENSEE undertakes no obligation to provide any medical assistance or treatment to LICENSOR's personnel or to bear any medical, hospitalization, treatment or any other expenses incurred by the LICENSOR's personnel during deputation, and any courtesy medical facilities provided at any LICENSEE facility shall be without any attendant obligation on the LICENSEE and its personnel relative thereto, including for negligence or incompetence, and these terms shall constitute a complete and absolute waiver and discharge by the LICENSEE and any personnel deputed by it of any rights and causes of action of the LICENSEE / personnel against the OWNER or its personnel relative thereto, and an indemnity against all contrary claims and actions.
- iii. LICENSOR shall not, unless otherwise specifically permitted by the LICENSEE, permit any of LICENSOR's personnel to stay in India for more than 6 (six) months and shall replace any or all of its engineers who remain continuously in India prior to their completing a 6 (six) months stay in India. LICENSOR will give LICENSEE not less than 15 (Fifteen) days prior written notice of its intention to replace any of its engineers. Replacement shall be arranged in such a manner as not to prejudice the LICENSOR's responsibility of testing and commissioning the UNIT and proving the LICENSOR's guarantees.
- iv. Deputation of any LICENSOR's personnel (including replacements) shall be subject to the LICENSEE approving the qualifications and bio-data of the person(s) proposed. Notwithstanding such approval, the LICENSEE may for reason(s) which the LICENSEE shall not be bound to disclose, require the replacement of any LICENSOR's personnel.



- v. LICENSOR shall be exclusively responsible to pay and bear the cost including all kind of Transportation of repatriating and replacing any LICENSOR's personnel who is unable to continue because of death, injury or sickness .In case of replacement of person due to death, injury or sickness, the actual arrival of replacement at site shall be considered for the purpose of calculating mandays.

2.1 For each person deputed by the LICENSOR from its office in India for services in connection with the LICENSED Unit for which LICENSEE is liable to pay as per terms and conditions, the LICENSEE shall reimburse/arrange the following:

- a) Travel by Air (Business class) from the Airport of entry to the airport nearest to Petrochemical Complex with shortest route (licensee shall pay for actual tickets cost) or AIR-CONDITIONED First Class Train or Car from LICENSOR'S office to Petrochemical Complex location and back.
- b) Single furnished Air-conditioned Hotel Room or equivalent Accommodation at the Petrochemical Complex.
- c) Transportation from place of accommodation to work place and back.
- d) Office facilities, clerical and secretarial assistance and expenses on Telephones / fax and e-mail facilities required for the work.
- e) No additional Living allowance over & above the per diem rate would be admissible.

3.1 LICENSOR shall be exclusively responsible to pay and bear the cost of repatriating and replacing any LICENSOR's personnel who is unable to continue because of death, injury or sickness.

4.1 PER DIEM charges payable for LICENSOR's personnel shall commence with the commencement of the journey from the airport located nearest to the LICENSOR's office by shortest route to the location of deployment, and shall terminate with the termination of the return international journey.

5.1 For each personnel, additional up to three (3) days (US based Licensors)/ two (2) days (non-US Licensors)/ one day (India based Licensors) for travel shall be considered in each direction.

TECHNICAL SPECIFICATIONS

FOR

SUPPLY OF KNOW-HOW/ LICENSE,

BASIC ENGINEERING DESIGN PACKAGE (BEDP), CATALYST

AND

OTHER RELATED SERVICES

FOR
HPG 2nd STAGE UNIT

FOR
EPCM SERVICES FOR SETTING UP OF BUTENE-1, HPG (2ND STAGE) AND PSA UNIT
OF

BRAHMAPUTRA CRACKER AND POLYMER LIMITED



0	01.06.2020	ISSUED FOR TENDER	SK/PP	SA	RA
Rev. No.	Date	Purpose	Prepared by	Reviewed by	Approved by

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Annexure-IV A	Scope of Basic Engineering Design Package
Annexure-IV B	Time schedule
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1.0 INTRODUCTION

M/s Brahmaputra Cracker and Polymer Limited (BCPL/Owner/ Client), having Petrochemical Complex at Lepetkata, distt. Dibrugarh, Assam, comprising of a Gas Sweetening unit, C2+ Liquid recovery unit, Gas+Naphtha based Ethylene Cracker Unit, C4 Hydrogenation unit, Pyrolysis Gasoline unit, LLDPE/ HDPE unit and PP unit. Apart from the process units, the complex have an integrated Utility Generation and Offsite Storage Facilities along with various infrastructure facilities. The capacity of the Ethylene Cracker unit is 220,000 TPA of ethylene and about 60,000 TPA of propylene.

The Feedstock for the project is Natural Gas and Naphtha. The end products of the Complex are High Density Polyethylene (HDPE) and Linear Low Density Polyethylene (LLDPE) totalling 2,20,000 Tons per Annum (TPA) and Polypropylene (PP) amounting to 60,000 TPA. The other products include 43,024 TPA of Pyrolysis Gasoline and 9,728 TPA of Fuel OIL

Further, Hydrogenated Pyrolysis Gasoline (HPG), a by-product at BCPL, cannot be directly used as MS blend component due to high Benzene content. At present BCPL has made interim arrangements for sale/evacuation of HPG to ensure smooth running of the cracker. Looking into the inherent characteristics of HPG being carcinogenic and prone to adulteration in MS, a long term solution for safe and convenient evacuation of HPG is required. Second stage of hydrogenation of PyGasoline followed by benzene saturation of C6 streams to convert benzene to cyclohexane. This resultant 2nd stage Hydrogenated Pygasoline stream should meet a benzene specification of 1 Vol % (max) and Sulphur less than 10 ppm wt, so as to blend in gasoline pool.

- 1.1 As part of the above Project, BCPL (hereafter also referred as 'Licensee' / 'Owner'), will be setting up a HPG 2nd Stage Unit which has two facilities: a) Hydrogenation of Pygas b) Benzene Saturation of Hydrogenated Pygas Stream to convert Benzene to cyclohexane.
M/s BCPL has entrusted Engineers India Limited (EIL) the activity of performing the Licenser Selection for the HPG-2nd Stage.
- 1.2 This document constitutes Technical Specifications of bidding document for inviting firm techno-commercial proposals from the Licensors of HPG-2nd Stage Unit (which includes both Hydrogenation of Pygas and Benzene saturation of Hydrogenated Pygas to convert benzene to cyclohexane) technologies for supply of Know-how/ License, Basic Engineering Design Package (BEDP), Catalysts, Proprietary items, if any and other related services for evaluation of the technologies and selection of Licenser for the proposed HPG 2nd Unit.

2.0 BASIS FOR TECHNICAL PROPOSAL

The technical proposal from the bidder/ licenser shall be based on the basis as outlined in this section.

2.1 PROCESSING OBJECTIVE

Currently, Hydrogenated Pyrolysis Gasoline (HPG), a by-product at BCPL, cannot be directly used as MS blend component due to high Benzene content. At present BCPL has made interim arrangements for sale/evacuation of HPG to ensure smooth running of the cracker. Looking into the inherent characteristics of HPG being carcinogenic and prone to adulteration in MS, a long term solution for safe and convenient evacuation of HPG is required.

Thus, the processing objective of HPG 2nd Stage is hydrogenation of PyGas followed by benzene saturation to convert benzene to cyclohexane. This 2nd Stage

Hydrogenated Pygasoline stream should conform to specification indicated in section 2.7, so as to blend in gasoline pool.

The feed to the unit shall be HPG stream hydrogenated in 1st stage pyrolysis gasoline hydrogenation unit hereby to be referred as SC Pygasoline.

- 2.1.1 The HPG 2nd Stage unit shall be designed for a nameplate capacity of 52 KTPA of SC Pygasoline feed and Client overdesign margin of 10% shall be considered over the name plate capacity.
- 2.1.2 The design objective of the unit is to maximize production of main product, i.e., 2nd stage Hydrogenated Pygasoline, while minimizing production of by-products like off gas from HPG 2nd stage stripper, off gas from Benzene Saturation stabilizer column, etc. All products from HPG 2nd Stage shall meet the required qualities specified in this document under product specifications, section 2.7 and Annexure IV C. The normal routing of the various products is envisaged as follows:
- 1) 2nd Stage Hydrogenated Pygasoline to the Gasoline Pool.
 - 2) Off Gas from HPG 2nd stage stripper & Offgas from Benzene Saturation stabilizer to Charge gas compressor in ethylene cracker unit.

2.2 DEFINITION OF BATTERY LIMITS

- 2.2.1 For the purpose of this technical specification, battery limits of the HPG- 2nd Stage Unit shall mean all sections of the unit required to process the feed and produce products of desired specifications mentioned elsewhere in this document.

The facilities under HPG-2nd Stage battery limits shall consist of, as a minimum, the following sections all of which (except if it is found that any particular section/facility listed below is not required or is not relevant for the offered technology), shall be within the scope of Licensor's design without any exceptions:

1. All processing facilities as needed to meet the process objectives and guarantees, conforming to the design basis and other considerations specified in this document.
2. Feed Surge Drum/ pumping.
3. Feed Filtration and Coalescing (if required) facilities.
4. Feed preheating section (Electrical Gas Heater/Steam Heater)
5. Start-up heater if required
6. Hydrogen Make up Gas compression section and Recycle gas compression section.
7. Hydrodesulphurization reactor section and reactor effluent separation section.
8. Facilities for heat integration for improving energy optimization.
9. Stripper section, as applicable.
10. Splitter section, as applicable.
11. Benzene Saturation Reactor section and its effluent separation section.
12. Benzene Stabilizer section, as applicable.
13. Facilities for catalyst /additives loading and unloading.
14. Catalyst handling and storing facilities as per section-2.12. Facilities required for facilitating catalyst skimming, if any.
15. Catalyst sulfiding facilities using DMDS injection facility will be provided.
16. Facilities for receipt, preparation, dilution, storage and injection of chemicals and similar items required if any, within the battery limit. Detailed design including storage vessel and dosing pump datasheet shall be provided.
17. Facilities for in-plant steam generation and superheating, if any.
18. All instrumentation required for normal operation, handling emergencies and shutdown along with advance control strategies.
19. Neutralization/passivation facilities if required.
20. Facilities for carrying out on-stream and shut down maintenance.

21. Special firefighting and safety systems as necessary.
22. Necessary facilities required for environment protection and occupational safety related to Process of unit.
23. Any special facilities required for smooth and safe startup/operation/ Shutdown of the unit, if required.
24. Facilities for safeguarding process system/ catalyst.
25. Facilities for corrosion monitoring and control.
26. Steam pressure reduction and conditioning Facilities, as required.
27. In case of generation of liquid waste which cannot be disposed off in ETP, incineration, if required, will be included within battery limit.

Equipment List, PFDs, P&IDs, Process datasheets and all other BEDP documents shall cover the above facilities.

2.2.2 The following facilities are specifically excluded from the scope of Licensor design.

1. OSBL Fuel Gas treating facilities
2. Flare System including Flare knock-out drum
3. Offsite Feed and product storage tanks
4. ISBL closed Blowdown system.

2.2.3 Utilities including Power, Steam, BFW, Cooling Water, DM water, Nitrogen, Service Water, Treated Fuel Gas, Plant air and Instrument Air required for the HPG- 2nd Stage Unit shall be made available from the Petrochemical Complex power and utility systems/ network at the battery limit conditions indicated in this document. Any boosting of their pressure or conditioning, as required for the Licensor's process shall be in the scope of the bidder.

2.3 UNIT CAPACITY

2.3.1 The HPG-2nd Stage Unit is to be designed for a name plate capacity of 52 KTPA of feed i.e. SC Pygasoline of specification (as given in this document section 2.6). There shall be one design case for the HPG-2nd Stage Unit.

Licensor shall submit technical and commercial proposal for the design case. Evaluation of the proposal shall be carried out on Design feed case.

In addition to the above design case, there will be one check case for the BEDP which will be defined during the Kick Off Meeting. Licensor to provide the following information as a minimum for the check case along with the design case.

- Heat and Material Balance with detailed stream summary.
- All product properties as per section 2.7 and Annexure IV-C.
- PFDs indicating operating conditions.
- Maximum throughput achievable and Identification of limiting equipment's to achieve 100% throughput while meeting product specifications.

2.3.2 The HPG-2nd Stage unit shall be designed as a single train meeting the identified design feed case.

2.3.3 The equipment specifications, utility consumption and catalyst/ adsorbent volumes shall be provided for the identified design case. All technical information requested in the tender (estimated product yields, product qualities, utility consumption, etc.) must

be furnished for the identified design case. Licensor shall furnish PFD, Heat & Material Balances and product qualities for the identified design case in the BDEP.

2.3.4 Client's Overdesign margin of 10% shall be considered over the name plate capacity.

2.4 ONSTREAM HOURS

HPG-2nd Stage Unit shall be designed for an on-stream factor (operating hours) of 8000 hours per annum towards arriving at the hourly processing rate but the unit design and engineering practices (equipment design, catalyst/ adsorbent/ absorbent loaded quantities, unit operation practices, equipment construction, erection practices etc.) advised shall allow a minimum operating cycle of 4 years between turnarounds with units operating continuously at 100% capacity without catalyst regeneration/replacement i.e., $4 \times 365 = 1460$ operating days at design feed rate. (Also Refer to Clause 2.13.1).

Strategies deployed by the Licensor for meeting the above turnaround time requirement shall be specifically listed in the proposal.

In case of limitation in life of some catalyst for supporting the above turnaround time, two reactors with 100% of such catalyst will be provided in series in a lead/trail arrangement to allow replacement of catalyst in one reactor while plant operation continues with the other reactor.

2.5 PLANT TURNDOWN

The Unit shall be designed to operate in a stable manner, producing on-specification products when operating between 100% and 40 % of feed rate commensurate with the identified design case.

However, LICENSOR shall indicate the lowest achievable turn down ratio for each main equipment/section and overall for the unit, without any adverse impact on product quality, yields & investment, as part of the proposal.

Licensor to ensure in the design that the control system shall automatically adjust the operation of the plant during load changes within the range between design feed flow and turndown scenario, with no need for intervention by operators.

2.6 FEED CHARACTERISTICS

2.6.1 Feed Specifications

The offer shall primarily be based on Design Capacity & Design Feed case mentioned earlier. However, BCPL reserves the right to make reasonable changes ($\pm 10\%$) in plant capacity, composition of feedstock (including adding another alternate design feed/ composition), properties of feed components etc. for design case, utility specifications and battery limit conditions of process streams. These changes, if made, will be accepted by Licensor without any cost or schedule implications

The feed compositions corresponding to the design feed case shall be as per table 2.6.1 (a).

Table 2.6.1(a): HPG-2nd Stage Feed Composition

Feed Stream	Rate, KTPA	Source
	Design Case	
SC Pygasoline	52	HPG-1 st stage in Cracker Unit
Total	52	

The specifications of the above components of the feed to the HPG-2nd Stage unit are given in the following table: 2.6.1 (b).

Licensors to estimate any other feed properties not indicated in the table below and indicate the same in their offer.

Table 2.6.1(b): Feed specifications for HPG-2nd Stage unit

Estimated Properties (Note 1)	Design Case
Density @15 °C, kg/m ³	867
Total Sulfur, wt ppm	222
RVP @37.8 °C, psi	2.5
RON, Clear	106
MON, Clear	98
Existent Gum, mg/100 ml	2-5
Antioxidant, ppmw	65
ASTM D86 Distillation, °C	
IBP	62
5 LV%	81
10 LV%	82
30 LV%	85
50 LV%	86
70 LV%	108
90 LV%	148
95 LV%	168
FBP	185
Composition, liquid vol%	
Olefins	2.05
Cyclo-olefins	8.52
Paraffins	1.58
Naphthenes	1.45
Aromatics	86.40
Composition, mol%	
Butylenes	0.00
Butanes	0.00
C5 Olefins	0.24
C5 Saturates	0.30
C6 olefins	5.46
C6 Saturates	1.23
C7 olefins	1.34
C7 Saturates	0.27
C8 olefins	0.39
C8 Saturates	0.08
Benzene	53.78

Estimated Properties (Note 1)	Design Case
Toluene	19.33
Ethyl Benzene	5.29
Xylenes	3.39
Styrene	0.13-0.5
C9 Hydrocarbons	5.29
C10-204 deg C	3.46
204-288 deg C	0.00
Moisture PPMW	500

Notes:-

1. Definition of the check case will be given at the time of kick-off meeting.
2. Property values are estimated values. LICENSOR to indicate impact of each parameter on unit design including catalyst requirements in proposal.
3. For the missing property values, LICENSOR to exercise judgement based on their past experience and indicate the same in the offer.
4. Test methods/ Alternatives to be followed shall be discussed during Kick Off Meeting.
5. Licensor shall specify the max. permissible limits of Nitrogen, metals and moistures in the feedstock upto which the catalyst performance will not alter. Licensor shall specify the limits on all catalyst poison(s).

2.6.2 Make up hydrogen

Make-up Hydrogen shall be supplied from the Hydrogen PSA in cracker unit. Quality of make-up Hydrogen shall be as per table given below.

LICENSOR shall provide pre-treatment, required if any, for any of the impurities that may be necessary for his specific technology, as per his experience with hydrogen produced from the above mentioned sources.

Table 2.6.2: Make-up Hydrogen quality

S.No	Gas Composition	Units	Value	Test Method
1	Hydrogen	vol. %(min)	99.99	
2	CO ₂	ppmv(max.)	0.5	
3	CO	ppmv(max.)	0.5	
4	O ₂	ppmv(max.)	1	
5	C1-C3	ppmw(max)	10	

LICENSOR shall indicate the following in his proposal, if applicable:

1. Rate at which hydrogen is required for start-up,
2. Quantity of hydrogen required for each start-up.

2.7 PRODUCT SPECIFICATION

- 2.7.1 The product properties with corresponding yields shall be reported for both SOR and EOR conditions for the design case.
- 2.7.2 SOR means the conditions at the start of guaranteed cycle life of catalyst as specified. EOR means the conditions at the end of guaranteed run length (without regeneration) of catalyst as specified.

2.7.3 The HPG-2nd Stage unit is to be designed to produce following products as per specifications given below. The generation of off gas shall be minimized.

Table-2.7.3(a): Product specification- Off Gas from HPG 2nd stage stripper

Property	Unit	Specification	Remarks
H ₂ S, max.	ppmv	Report	
Mercaptan Sulfur	ppmw	Report	
NH ₃	ppmw	Report	
Chloride	ppmw	Report	
Hydrogen	ppmw	Report	
Molecular weight	Kg/Kgmoles	Report	
Composition	Vol%,wt%	Report	
Net calorific value	Kcal/kg	Report	

Table-2.7.3(b): Product specification- Off Gas from Benzene Saturation stabilizer

Property	Unit	Specification	Remarks
H ₂ S, max.	ppmv	Report	
NH ₃	ppmw	Report	
Chloride	ppmw	Report	
Hydrogen	ppmw	Report	
Molecular weight	Kg/Kgmoles	Report	
Composition	Vol%	Report	
Net calorific value	Kcal/kg	Report	

Table-2.7.3(c): Product specification- 2nd stage Hydrogenated PyGasoline

2 nd stage Hydrogenated PyGasoline				
Property	Unit	Specification	Test Method (ASTM/IP/IS 1448) (Note-1)	Remarks
Density @15deg C	kg/m ³		D 1298	
Min.	kg/m ³	Report		
Max.	kg/m ³	Report		
ASTM D-86 Distillation:(vol%) (IBP,5,10,30,50,70,90, 95,FBP)	Deg C	Report	D86	

2 nd stage Hydrogenated Pygasoline				
Property	Unit	Specification	Test Method (ASTM/IP/IS 1448) (Note-1)	Remarks
Total Sulphur, max.	Ppmw max	<10 ppmw	D 1266	Guarantee
Paraffins, max.	Vol%	Report		
Olefins, max.	Vol%	Report		
Naphthenes	Vol%	Report		
Aromatics, max	Vol%	Report and not more than feed		Guarantee
RVP at 38 Deg C, max	kPa	Report & Guarantee	D323	Guarantee
Cu Strip Corrosion, 3 hrs @ 50 deg C, max	Rating	Not worse than class 1		Guarantee
Total Nitrogen, max	ppmw	Report		
Basic Nitrogen	ppmw	Report		
Chlorine + Chlorides, max	ppmw	Report		
Mercaptan Sulphur, max	ppmw	Report		
RON (Clear), min		Report & Guarantee	D 2699	Guarantee
MON (Clear), min		Report & Guarantee	D 2700	Guarantee
Benzene, max	Vol%	1	D3606.	Guarantee
Potential gum	gm/m ³	Report		
Existent gum	gm/m ³	Report		
Gum content (solvent washed), max	mg/100 ml	Report		
Carbon number wise composition	Vol%, wt%	Report		
Metals (Fe, Si, As, Pb, Cu, Ni, Na, V, Heavy metals)	ppbw	Report		
C4 content	Wt %Max	Report		
Moisture content	ppmw	Report		
Bromine no./Bromine index		Report		
Diene value		Report		
Maleic Anhydride		Report		
Flash point	°C	Report		

2 nd stage Hydrogenated Pygasoline				
Property	Unit	Specification	Test Method (ASTM/IP/IS 1448) (Note-1)	Remarks
Component wise breakdown of PONA	Vol%	Report		

Notes:-

1. Test Method/ Alternatives to be followed shall be discussed during Kick Off Meeting.

2.8 UNIT OPTIMIZATION CRITERIA

- 2.8.1 For the purpose of unit optimisation/ energy optimisation and evaluation of Licensor's proposal, the prices for feed, products and utilities shall be considered as per table given below:

Table 2.8.2(a): Prices for Feeds and Products

S No	Feed/Products	Prices (Rs/MT)
Feeds		
1.	SC Pygasoline	25000
2.	Make Up Hydrogen	19960
Products		
3.	Off Gas from HPG 2 nd Stage Stripper & Off Gas from Benzene Saturation Stabilizer	8793
4.	2nd Stage Hydrogenated Pygasoline	41086

Table 2.8.2(b): Prices for Utilities

Sr. No	Utility	Unit	Price (Rs.)
1.	Raw Water	Rs/m3	16.43
2.	Cooling Water(Recirculating)	Rs/m3	1.20
3.	DM Water	Rs/m3	103.84
4.	Nitrogen	Rs/Nm3	2.90
5.	Plant air	Rs/Nm3	2.21
6.	Instrument air	Rs/Nm3	0.77
7.	Fuel gas	Rs/MT	7163.70
8.	Power	Rs/KW	4.39
9.	MP Steam	Rs/MT	1306.22
10.	LP Steam	Rs/MT	1206.4
11.	Boiler feed water	Rs/MT	145
12.	Condensate	Rs/m3	76

2.9 PLANT LIFE

Plant equipment design life shall be considered as follows:

- 30 years for Reactors, High pressure equipment's like separators, towers, exchangers etc. and associated internals.
- 20 years for columns, vessels, heat exchanger shells and similar services
- 10 years of removable internals for Columns and vessels.
- 10 years for piping, furnace tubes, high alloy exchanger tube bundles.
- 10 years for carbon steel / low alloy heat exchanger tube bundles
- 20 years for all rotating equipment

2.10 BATTERY LIMIT CONDITIONS FOR PROCESS STREAMS

Conditions for all incoming and outgoing streams at the HPG-2nd Stage unit battery limit shall be as per the table given below:

Table 2.10 Battery limit conditions for process streams at grade

S No	Stream	Pressure kg/cm2g	Temperature Deg. C	Source/ Destination
Incoming Streams				
1.	SC Pygasoline	4	40	HPG-1 st Stage
2.	Make Up Hydrogen	30.44	35	Header
Outgoing Streams				
1.	Off Gas from HPG 2 nd Stage Stripper & Off Gas from Benzene Saturation Stabilizer	5	40	Charge gas compressor in Ethylene cracker unit
2.	2 nd stage Hydrogenated Pygasoline	4	40	Gasoline Pool

Notes:

1. Mechanical design conditions of incoming streams shall be finalized at the time of design basis finalization.
2. Licensor shall accept revisions to the above Battery Limit conditions, if any, during design basis meeting post award without any cost or schedule implications to Owner.
3. Feed and products could have cold/hot conditions, depending on the source/destination.
4. In case there is some additional incoming and outgoing stream based on licensor's requirement, same shall be considered during design basis finalization.
5. Operating conditions specified shall be finalized at the time of design with selected licensor.

2.11 BATTERY LIMIT CONDITIONS FOR UTILITIES

Conditions of utilities at battery limits of unit shall be as per following table.

Table 2.11: Conditions of utilities at unit battery limits at grade

Sr. No	Parameter	Minimum	Normal	Maximum	Mech Design
1	VERY HIGH PRESSURE (VHP) STEAM				
	Pressure, kg/cm ² g	102	104	106	116/FV
	Temperature, °C	480	500	510	513
2	HIGH PRESSURE (HP) STEAM				
	Pressure, kg/cm ² g	38	40	42	46/ FV
	Temperature, °C	350	360	370	390
3	MEDIUM PRESSURE (MP) STEAM				
	Pressure, kg/cm ² g	15.0	16.0	17.0	21.0 / FV
	Temperature, °C	230	250	270	290
4	LOW PRESSURE (LP) STEAM				
	Pressure, kg/cm ² g	3.5	4.0	4.5	6.5 / FV
	Temperature, °C	170	180	190	220
5	CONDENSATE RETURN				
	Pressure, kg/cm ² g	4.0	4.5	5.0	6.5
	Temperature, °C	-	90	100	150
6	SERVICE WATER				
	Pressure, kg/cm ² g	3	5	6	10.0
	Temperature, °C		Amb.		65
7	BEARING COOLING WATER				
	Pressure, kg/cm ² g		4	6	7.5
	Temperature, °C		Amb.		65
8	COOLING WATER				
	Supply Pressure, kg/cm ² g		4.5		7.5
	Return Pressure, kg/cm ² g		2.5		7.5
	Supply Temperature, °C		33	-	65
	Return Temperature, °C	-		45	65
9	DEMINERALISED WATER				
	Pressure, kg/cm ² g		7.5	8.0	15.0
	Temperature, °C		40		65
10	BOILER FEED WATER (SHP/MP)				
	Pressure, kg/cm ² g	-/25	125/28	128/35	185/40
	Temperature, °C	130	130	130	150
11	PLANT AIR				
	Pressure, kg/cm ² g	4.0	6.5	-	10.5
	Temperature, °C		40		65

12	INSTRUMENT AIR (Dew Point (-) 40C @ Atm Pr.)				
	Pressure, kg/cm ² g	6.0	6.5	-	10.5
	Temperature, °C		40		65
13	FUEL GAS				
	Pressure, kg/cm ² g	3.0	3.5	-	7.0
	Temperature, °C	-	amb	-	65
14	NITROGEN (Dew point -100 deg C at atmospheric pressure)				
	Pressure, kg/cm ² g	4	6	7	10.5
	Temperature, °C		40	-	65

Notes:

1. All B/L pressure values reported are at GRADE.
2. LICENSOR to note that export steam from unit should meet MAXIMUM steam conditions given in Table – 2.11 at unit battery limits.
3. Licensors to accept the above battery limit conditions, with revisions, if any, during kick off meeting post award. There may be variance from the Battery Limit conditions specified by Licensor and Owner requirement.
4. Steam generators shall be floating on steam headers, i.e., no pressure control shall be provided on steam generators, unless warranted from process reasons. Accordingly, Licensor shall consider the normal Battery Limit steam pressure and temperature as indicated in table above for estimation and guarantee of the steam generation quantity. However, Steam generation facilities shall be capable of operating at minimum as well as maximum Battery Limit pressure conditions also.
5. Licensor shall superheat the steam generated in the unit (in case steam generation is envisaged) operating continuously to match the Battery Limit temperature conditions indicated in table above unless warranted otherwise for process reasons.
6. Wherever Minimum value of pressure is not specified; Normal value is to be considered as Minimum.
7. In case any utility is required at higher/ lower condition than indicated above, Licensor to include the facility to meet the requirement within their scope and also indicate in the proposal.
8. Any utility generated within the unit shall be exported to OSBL at MAXIMUM battery limit conditions as indicated in the above table.
9. Licensor to indicate any specific pressure/temperature requirements for steam / unit operation / regeneration along with the offer.

2.12 CATALYSTS, CHEMICALS, ADSORBENTS & ABSORBENTS

- 2.12.1 Unit design shall include specifications for all facilities for receiving, loading, unloading of catalysts/ adsorbents/ absorbents/ chemicals, dispatch to OSBL of spent catalyst/ adsorbent/ absorbent and keeping space for all such operations.
- 2.12.2 Licensor's scope of supply includes first charge of all catalysts (proprietary & non proprietary) and proprietary chemicals/ adsorbents/ absorbents/ additives (as applicable) for both the units.
- 2.12.3 Licensor to specify detailed procedure for spent catalyst & spent adsorbent/ absorbent safe disposal method. Licensor shall advise on details of treatment/ neutralization

before unloading of spent catalyst/ spent adsorbent/ absorbent and the disposal methods for neutralized spent catalysts/ spent adsorbents/ absorbents. Bidder to provide information on the safety & environmental hazard associated with the catalyst loading/unloading and the mitigation measures to be followed.

- 2.12.4 The catalyst first life shall be guaranteed as 4 years minimum with uninterrupted operation cycle at design capacity. Life of any consumable material used along with catalyst shall match with catalyst ultimate life.
- 2.12.5 Licensor to note that no changes in quantity of catalysts, adsorbents/ absorbents shall be permitted at post bid stage for the feed indicated in the design case of their bid.
- 2.12.6 Unit design shall include all facilities for preparing, storing and injection of required catalysts, adsorbents, additives and chemicals. Working storage volumes shall ensure smooth start-up, normal operation and shutdown of unit
- 2.12.7 Chemicals required shall be specified by the licensor. Unit design shall include all facilities for receiving, handling, preparing, storing and injecting the required chemicals. For each chemical to be consumed continuously during normal operation (such as BFW treatment chemicals, corrosion inhibitor, anti-fouling agent etc.), the chemical storage vessels within unit ISBL shall be designed for 14 days equivalent consumption. The chemicals requiring solution preparation within ISBL will have two vessels each of 7 days storage. Chemicals for which no solution preparation is required, one vessel of 14 days storage will be provided.

For chemicals required during start-up and shutdown, storage facility adequate for smooth start-up and shutdown of the unit shall be provided. However, as a minimum, storage volumes for one startup shall be provided.
- 2.12.8 Unit design details of chemicals, catalysts and absorbents/ adsorbents as envisaged by the licensor are to be indicated in terms of name, quality, annual consumption, consumption rate, storage and handling requirements & purpose etc. in the proposal. Licensor shall indicate the quantities of initial charge & ultimate life of catalysts, chemicals and absorbents/ adsorbents.
- 2.12.9 List of vendors for specialty chemicals, if any, is also to be provided.
- 2.12.10 Chemical passivation requirements shall be identified and suggestions provided for safe disposal of passivation effluent based on earlier experience of Licensor.
- 2.12.11 All chemical dosing system must be clearly defined including those for BFW/ Steam system.
- 2.12.12 No in-situ regeneration of catalysts shall be considered. However, licensor shall provide details of ex-situ regeneration agencies. Licensor to specify detailed procedure for spent catalyst safe disposal method and facility required
- 2.12.13 LICENSOR shall clearly indicate the name and suppliers of Catalyst/Adsorbents/Additives/Special chemicals to be used in the unit. Licensor to furnish necessary specification adequate for procurement of the same.
- 2.12.14 LICENSOR shall indicate the details of catalyst/Adsorbents/additives/Chemicals to be used in the process with the definition of life, quality, type and yield as applicable.
- 2.12.15 LICENSOR shall provide complete process specifications for catalyst/additive system, adsorbents/absorbents, chemical injection requirements including normal and

maximum dosing rates, delivery pressure and temperature, properties which have to be necessarily specified, etc., with which a detailed engineering contractor can develop the full system design without reverting to Licensor.

2.13 SPECIFIC PROCESS DESIGN GUIDELINES

- 2.13.1 All the hardware including reactor system and catalyst quantity shall be designed for a minimum of 4 years of continuous operation to process design feedstock at unit design capacity. Licensor to include any additional facility to achieve minimum 4 years of uninterrupted operation as part of the proposed scheme.
- 2.13.2 Licensor to note the following:
- Catalyst quantity reported by Licensor shall include 5% quantity towards Handling/Contingency losses.
 - Catalyst Quantity quoted in technical proposal shall be rounded off to nearest barrel/ drum size.
 - Catalyst quantity shall be offered for the design feed case (including design margin as specified in the NIT).
- 2.13.3 Licensor to report the maximum feed sulphur that can be processed while keeping the product sulphur level to < 10 ppmw with offered configuration.
- 2.13.4 Licensor shall propose conventional metallurgy in their offer.
- 2.13.5 The hydrogen consumption for the unit shall be estimated considering purity of makeup hydrogen as indicated in Makeup hydrogen specification clause: 2.6.2.
- 2.13.6 Air-cooling shall be maximized. The process side outlet temperature for air cooled heat exchanger shall be as per follows:
- Air cooled exchanger not followed by water cooling: 55 °C
 - Air cooled exchanger followed by water cooling: 65 °C
- 2.13.7 Licensor shall indicate overdesign philosophy followed for broad equipment specifications in the bid specifically for each type of equipment to meet the design requirements for design and check case. Owner's overdesign margin will be as per clause 2.1.1 above.
- 2.13.8 Licensor shall use following suggested fouling factors towards preliminary sizing of heat exchangers in the plant, for the proposal:

Table 2.13.1: Fouling factors (hr-m²-°C/kcal)

Stream	Fouling Factor	Stream	Fouling Factor
PyGasoline	0.0004	Cooling water	0.0004
DM Water	0.0001	Air	0.0001
Tempered Water	0.0002	Steam	0.0001
Condensate	0.0001		
Nitrogen	0.0001		

- 2.13.9 During BEDP stage, fouling factors for process streams shall be decided by designer based on past experience and good design practices. However, Owner's overriding considerations towards fouling factors for specific units or process streams shall be the basis of specifications to be spelt out in the unit design basis at BEDP stage.

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- 2.13.10 Emission norms to be considered for heater flue gas shall be specified during Kick off meeting. Licensor's design shall comply with the same.
- 2.13.11 Single-piece heavy equipment such as Reactors/ Vessels considered to be shop-fabricated and transported to site shall have to be within the following shipping envelope (dimensions including projections):
- | | |
|-------------------------|---|
| Maximum Length (TL/TL) | : 25 meters |
| Maximum Diameter/ Width | : 4.5 meters (including all nozzle projections) |
| Maximum Height | : 4.5 meters (including all nozzle projections) |
| Maximum Weight | : 100 Metric Tons |
- LICENSOR to identify such equipment specifically in the proposal while proposing an optimal design.
- Dimensions and weight limits specified above are applicable for equipment envisaged to be transported to site in a single piece and which do not require site welding. The equipment with dimension/ weight more than those specified above shall be site fabricated.
- 2.13.12 Process scheme shall include in-built facilities for safe guarding the process system/ catalysts/ adsorbents/ absorbents in any type of emergency/ failure. Details of online analyzers required during operation, for best plant performance, etc., shall also be furnished.
- 2.13.13 Licensor to recommend the type of drive preferred for pumps based on the criticality of the process streams and safety considerations in the proposal. Continuously operating pumps shall be generally motor driven with 100% spare.
- 2.13.14 Compressor anti surge circuit shall be sized for handling compressor rated capacity.
- 2.13.15 Minimum Metallurgy For Water Cooled Exchangers:
- For cooling mediums for heat exchangers, metallurgy can be selected for either long tube life at a higher initial cost or for shorter tube life at a lower initial cost with up gradations being decided in the course of operating the plant. The minimum metallurgy is KCS. Tube side metallurgy shall be based on more stringent service among shell side and tube side service fluids.
- 2.13.16 During BEDP, Licensor to provide scheme for reactor cooling circuit process using a normally conceived exchanger without any additional hardware requirement to ensure fast cooling reactor circuit close to ambient temperature to facilitate reactor entry.
- 2.13.17 Recycle gas compressor: Licensor to provide justification for type of compressor in the proposal. Drive for the compressor shall be electric motor. Licensor to consider suction KOD for recycle gas compressor. In case a positive displacement type recycle gas compressor is provided, the configuration shall be one operating + one standby.
- 2.13.18 Make up gas compressors: (in case required)
- Make-up compressors shall be reciprocating motor driven machines. These shall be specified as 1 operating + 1 spare train in parallel of 100% capacity each.
 - Interstage cooling (if required) at each stage of compressor discharge shall have only cooling water exchanger. Independent interstage coolers (if required) for each train shall be provided.
 - In case of multi-stage compressors, Independent Knock out drum (KOD) shall be provided for each stage of compressor discharge for each parallel train of MUG compressor. Each compressor to be provided with its own suction KOD.
 - Make up gas compressor shall be able to operate in nitrogen and air modes during start up and shutdown. Licensor to appropriately indicate this requirement in equipment specifications specifically mentioning that the spill back circuit needs to

be capable of this operation. Spill back circuit shall be designed for 100% of compressor rated capacity

- For reciprocating compressors, the spill back lines and coolers will be separate for each stage and no clubbing of spillback lines will be practised. Spillback circuits including lines, control valves and coolers shall be specified for 100% of relevant compressor stage rated flow through spillback.

2.13.19 For centrifugal compressors, the anti-surge circuit including line, control valve and anti-surge cooler, if applicable, shall be sized for minimum 100% of relevant compressor stage rated flow. In case anti surge cooler is specified, the same shall be specified as a cooling water cooled exchanger. These specifications will be further reviewed and updated by the compressor vendor during detailed engineering.

2.13.20 Licensor shall indicate the Safety Integrity Level (SIL) for each Safety Instrumented System (SIS) in the design of the unit. Systems shall be designed for appropriate SIL rating required as per accepted international practices/ standards. Minimum SIL requirement for each Safety Instrumented System (SIS) shall be identified by Licensor.

2.13.21 Plant hydraulics will be based on dense loading catalyst. However, the reactor volume shall be based on sock loading.

2.13.22 Licensor to design all the columns as trayed columns.

2.13.23 Single LP flare header is envisaged in HPG-2nd Stage Unit.

2.13.24 Licensor shall provide preliminary dimensioned (indicating relative location with inter distances) equipment layout of the unit along with their proposal showing major equipment as per OISD codes (OISD-118 Latest version).

2.13.25 Unit design has to meet effluent discharge standards as specified in Annexure-IV G of technical specification.

2.13.26 Facilities for handling & disposal of solid effluent, if any shall form a part of ISBL facilities. LICENSOR shall indicate quantity, composition and disposal methods for solid effluent.

In case some of the effluents produced in the Licensor's process need any special disposal methodology requirement e.g. incineration etc., the same shall be included in the Licensor's scope. Licensor shall provide necessary details as part of proposal and shall furnish complete specifications for the procurement of such incinerator during BEDP stage.

In case the solid waste cannot be avoided, Licensor shall design/specify suitable storage facility (15 days basis) for safe handling and evacuation of such waste. Licensor shall note cost of such facility shall be considered as part of plant capital cost.

2.13.27 Design shall incorporate latest features of environment protection & Occupational safety.

2.13.28 The BEDP provided by the LICENSOR shall comply with the statutory Indian Boiler Regulations (IBR). IBR requirements shall be informed to the LICENSOR during design basis finalization stage.

2.13.29 Adsorbent Beds: In case Adsorbent beds are considered for treatment of process streams, which has to be regenerated, the beds shall be sized considering a minimum run length of 6 months period. The facilities/ consideration required for uninterrupted continuous operation shall be provided for such adsorbent bed, if any.

Adsorbent beds requiring replacement shall be sized considering a minimum run length of 4 years before replacement. However, LICENSOR to include any additional facility to achieve minimum 4 years of uninterrupted operation as part of the proposed scheme.

- 2.13.30 LICENSOR to comply all technical specification as minimum specified in NIT and further consider/include any applicable specification based on their experience.
- 2.13.31 LICENSOR shall provide/share any Technological Development/New Generation Catalyst/Chemicals even after BEDP issued if any during implementation phase for Company review and implementation.
- 2.13.32 LICENSOR shall indicate the flare load under different emergency situations. LICENSOR to calculate the maximum flare load during various emergency situations involving reliefs from multiple safety valves, like cooling water and power failure.
- 2.13.33 Licensor shall indicate the requirement of emergency power for the unit and also the single largest load on emergency. Licensor to also indicate the re-acceleration requirement and auto start requirement, if any, for the electric motor drives.
- 2.13.34 For dense loading catalyst in the reactor, if applicable, Licensor shall furnish list of recommended vendors for Dense loading Machine at site and related Technical advisor at mutually agreed date. The technical advisor will be responsible for regulating operation of loading machine.
- 2.13.35 Licensor to specify any antioxidant addition requirement for processing storage feed from nitrogen blanketed tanks and limits on processing the storage feed capacity on pure basis without dilution with fresh feed.
- 2.13.36 Advance process control system/ strategies shall be followed and provided by LICENSOR as part of BEDP scope highlighting tangible benefits. LICENSOR to include / indicate the primary elements required for advanced process control so that same can be installed at later date, if required.
- 2.13.37 Licensor shall provide corrosion mapping of the entire unit indicating corrosion prone areas and remedial/ preventive measures thereof.
- 2.13.38 Variable frequency Drives (VFDs) to be provided for Air fin coolers for 50% fans.
- 2.13.39 Flare mitigation measures will be adopted to bring down the relief loads from the unit, with the instrumented reduction of flare load, studies like HIPPS (High Integrity Pressure Protection System) and SIL (Safety Integrity Level) shall have to be carried out in BEDP in order to ensure safety of the plant under various eventualities.
To reduce the resulting flare load, highly reliable safety Instrumented systems (SIS) will be adopted that take action during a global overpressure event to reduce the number of pressure relief devices discharging concurrently.
- 2.13.40 Licensor to indicate corrosion probes location and corrosion control methodology. Continuous corrosion monitoring is preferred
- 2.13.41 Process pump services in continuous service will, in general, be provided with installed spare. Intermittent pump services such as chemical unloading, batch make-up, etc., shall not be provided with installed spare. These shall be decided on a case-to-case basis.
Where more than one operating pump is found necessary for a service, or when defined by owner, pump capacity and spare shall be as follows:

Table 2.13.2: Sparing philosophy

# Operating pumps	Rated capacity per pump	Spare pumps
2	50% of total rated flow	1
3	33% of total rated flow	1
4	25% of total rated flow	2

Owner may exercise the option of specifying at least 2 operating pumps for specific services as an operational strategy.

2.13.42 Compressor Sparing Philosophy:

1. Centrifugal Compressor:
 - a. No spare compressor to be considered
 - b. Spare rotor requirement – YES
2. Screw Compressor:
 - a. Normally no spare compressor to be considered
 - b. Spare rotor requirement – YES
 - c. Specific service for which spare screw compressor to be provided (e.g. screw conveyers for pneumatic conveying system) (owner to indicate)
3. Reciprocating Compressor:
 - a. 100% stand-by to be provided for continuous operating reciprocating compressor.
 - b. Specific intermittent service for which spare compressor to be provided – No spare required for intermittent service

2.13.43 Licensor to provide the utility requirements for the unit during normal and design operation, start up, turndown, shut down, emergency condition and upset condition. Continuous as well as intermittent utility requirements to be provided. For utility conditions at unit battery limit, refer clause 2.11. Any utilities generated within the unit as surplus shall conform to these specifications.

2.13.44 All primary instrument elements linked to unit shutdown shall follow a “2 out of 3” voting logic through PLC to provide requisite redundancy.

2.13.45 Licensor shall specify metallurgy based on process considerations. If Licensor has specific stipulation towards either an associated upstream / downstream unit for, say, piping metallurgy, exchanger tube metallurgy etc., the same shall be identified.

2.13.46 The plant design shall incorporate the use of modern state of art control and shut down logic/systems. Necessary interlocks and automation to enhance operation safety shall be provided by Licensor.

2.13.47 Licensor to ensure that all hydrocarbon and other hazardous releases are directed to closed systems (Flare, CBD, etc.). In case some releases cannot be directed to close systems, they should be released at safe location. Hydrocarbon gaseous releases to atmosphere at safe location to be provided with a steam ring to disperse the released vapour in the atmosphere.

2.13.48 Licensor to ensure that all equipment producing high noise during operation (for example venting of high pressure vapour / gaseous streams directly to atmosphere) are provided with silencers to reduce noise to acceptable levels. Necessary vents with silencer shall be provided on steam lines.

2.13.49 Licensor to follow Occupational Health, Safety and Environmental requirements (part of HSE) in all their process activities.

2.13.50 Steam heaters are preferred over fired heaters.

2.13.51 Emissions:

- a) Burners shall be Low NO_x type.
- b) Default permissible emission (as per MOEF notification) is:

Table 2.13.3: Permissible Emission

S.No.	Parameter	Maximum emission limit (mg/Nm ³)-Existing plants	Maximum emission limit (mg/Nm ³)-New plants/ Expansion
1	NO _x - Oil firing	450	350
2	NO _x - Gas firing	350	250
3	CO - Oil firing	200	150
4	CO - Gas firing	150	100
5	Particulate matter- Oil firing	100	50
6	Particulate matter - Gas firing	10	5

Notes:

- 1) All values are corrected to 3% oxygen vol (dry basis).
- 2) For combination firing, limit should be computed based on heat supplied by gas and liquid fuel.
- 3) Noise limitation, dBA: 85 at 1.0 m from burner.

2.14 BASIS/ CRITERIA FOR PERFORMANCE GUARANTEES

For the purpose of reporting Estimated and Guaranteed values for utility/ energy consumptions, following criteria shall be used by licensors to ensure uniform basis for evaluation. For any other type of equipment/ driver application not covered below, the assumed efficiency shall be reported by licensor. However actual guarantees shall be adjusted based on selected equipment/ driver efficiencies at the time of performance guarantee test run (PGTR).

2.14.1 Efficiencies

Table 2.14.1: Efficiency

Equipment	Efficiency for Hydraulic Power Calculation/ Steam Consumption
Compressors	
Centrifugal Gas Compressor (Polytropic Efficiency)	77 %
Expander-Compressor (Expander Wheel Isentropic Efficiency)	79 %
Expander-Compressor (Compressor Wheel Polytropic Efficiency)	75 %
Reciprocating Gas Compressor (Adiabatic Efficiency)	85%

Equipment	Efficiency for Hydraulic Power Calculation/ Steam Consumption
Centrifugal Pumps	
Large Centrifugal Pumps (BKW above 160 kW)	60 %
Medium Centrifugal Pumps (BKW 50 kW - 160 kW)	50 %
Small Centrifugal Pumps (BKW below 50 kW)	35 %
Electric Motor	
Large Motors (above 160 kW)	95 %
Small Motors (below 160 kW)	90 %
Steam Turbine	
Extraction Section / Back Pressure Exhaust Section	77 %
Condensing Section	79 %
For Boiler Feed Water Pump Driver	45 %
For Other Pump Driver	25 %

2.15 SAFETY AND ENVIRONMENTAL ASPECTS

- 2.15.1 Basic Engineering Design Packages (BEDP) shall incorporate various safety features in design in line with international safety standard and design practices. LICENSOR shall furnish brief write-up in the proposal highlighting such safety features.
- 2.15.2 Licensor shall furnish complete details of the effluents (including peak/ average/ minimum flow rates, frequency & duration of generation, detailed characteristics, etc.) which shall be routed from their unit battery limit to the centralized effluent treatment plant.
- 2.15.3 The unit design shall incorporate state-of-art environmental control strategies. The proposed HPG-2nd Stage Unit is being set up in an environmentally sensitive area and hence it has to be ensured that the impact of this unit on the environment is minimal. Bidder shall furnish brief write-up in the proposal highlighting environmental controls included by bidder. While Licensor is expected to be aware of local environmental standards applicable to Indian Units, a complete list of environmental standards to be followed shall be finalized at the time of actual design.
- 2.15.4 Bidder to provide information regarding quantity & quality of continuous & intermittent (duration & rate), Gaseous, Liquid and Solid effluents generated during operation, start-up, shutdown, etc. from the unit including the duration & rate of intermittent streams. Definition of collection and treatment facilities for all process effluents i.e. liquids, gases and solids waste/ effluents, generated during normal operation as well as during start-ups and shutdowns shall be provided by licensor. Recommendation for effective and proven treatment method description is to be submitted in the proposal.
- 2.15.5 All releases continuous and intermittent to even closed system (Flare or CBD) needs to be minimised by suitable facility and implementation of SIL/ mitigation strategy.
- 2.15.6 The low NO_x burners and other latest technology for lowering noxious components in flue gas shall be adopted.

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- 2.15.7 Basic Engineering Design Package (BEDP) shall incorporate various safety features in the design in line with international safety standards and design practices. Licensor shall furnish brief write-up in the proposal highlighting such safety features and environmental control.
- 2.15.8 Release of gaseous streams to the atmosphere is not permitted. In case of operational upset, all pressure relief valves handling flammable components are discharged into a closed system for safe disposal. For this purpose, a common closed blow down (CBD) vessel with suitable facility for slop pumping will be located inside the battery limit. Also, a common flare knock out drum (KOD) with suitable condensate pumping provision will be considered within the unit battery limit
- 2.15.9 Licensor shall include following safety features as a minimum in the design required for specific process reasons:
- (i) Fire and Gas detector philosophy indicating number, type and location of F&G detector.
 - (ii) Philosophy of safety equipment like safety shower, eye wash etc.
 - (iii) Catalyst, Co-catalyst, adsorbents/ absorbents, additives, solvents and chemicals handling procedure.
 - (iv) Equipment isolation philosophy.
 - (v) Any other safety specification which licensor deems necessary.
 - (vi) Measures for handling emergency shutdown.
- 2.15.10 Proper facilities for handling & disposal of solid effluent, if any shall form a part of ISBL facility. Licensor shall indicate quantity, composition and disposal methods for solid effluent.
- 2.15.11 Disposal streams containing pyrophoric substances are to be clearly mentioned with the method of disposal by Licensor.
- 2.15.12 The liquid & solvent waste generated during Catalyst regeneration/ solution preparation before dosing, or during any such operations within ISBL also needs to be defined in totality by Licensor.
- 2.15.13 In case, some of the effluents produced in the Licensor's process need incineration as the mode of disposal, the same shall be included in the licensor's scope. Licensor shall provide necessary details as part of proposal and shall furnish complete specifications for the procurement of such incinerator during BEDP stage.
- 2.15.14 It is specifically clarified that land filling as an option for disposal of any solid waste is not acceptable. In case the solid waste cannot be avoided, LICENSOR shall design/ specify suitable facility for safe handling and evacuation of such waste. LICENSOR shall note cost of such facility shall be considered as part of plant capital Cost.
- 2.15.15 Any treatment facility for continuous or intermittent gaseous vents shall be provided by the LICENSOR and is to be included in LICENSOR scope before discharging to atmosphere/ flare header. The discharge to atmosphere should meet standards for ambient air quality laid by Central and State Pollution Control Board as specified in Annexure IV G of technical specification.

2.16 GENERAL

- 2.16.1 The offer shall primarily be based on Design Capacity & Design Feed case mentioned earlier. However, BCPL reserves the right to make reasonable changes ($\pm 10\%$) in plant capacity, composition of feedstock (including adding another alternate design feed/ composition), properties of feed components etc. for design case, utility specifications and battery limit conditions of process streams. These changes, if made, will be accepted by Licensor without any cost or schedule implications.
- 2.16.2 List of Design Standards to be followed with respect to BEDP preparation would be advised at the time of finalizing the basis of design post award. Wherever Licensor's own engineering standards are to be necessarily followed with respect to equipment design, piping design, instrumentation design, etc., the same shall be issued to owner at no extra cost.
- 2.16.3 Licensor shall agree to sign a Basic Engineering Design Basis comprising of Part-A and Part-B which shall form the basis of the BEDP preparation. Part-A design basis constitutes of unit design basis providing necessary data for specific process unit.
- Part-B design basis defines overall project requirements for making all units compatible and ensuring uniform design practices for the total complex. The basic Engineering design basis Part-B shall be furnished two weeks before kick-off meeting and the requirements applicable to the unit shall be agreed and complied by Licensor. The agreed document shall be signed by the Licensor and this will form part of design basis.
- 2.16.4 All data, as relevant to LICENSOR's scope for this unit, required for approval of the plant from concerned Authorities to be provided by LICENSOR during implementation.

3.0 SCOPE OF LICENSOR'S SERVICES & SUPPLIES

The scope of services & supplies to be provided by the selected Licensor shall be as follows:

3.1 GRANT OF TECHNOLOGY KNOWHOW & LICENSE

Licensor shall supply/ provide to Owner the technology knowhow and license of their State-of-the-art technology for constructing, operating and maintaining HPG-2nd Stage Unit.

3.2 SUPPLY OF BEDP

- 3.2.1 Preparation and supply of Basic Engineering Design Package (BEDP) that will have all information and documents necessary for a reputed engineering contractor to perform the residual basic engineering, detailed engineering, procurement and construction of the HPG-2nd Stage Unit as defined above in Clause 2. Such technical information and process book shall be in English language using metric system of measurements and shall contain, but not limited to, items defined in Annexure-IV A (Scope of Basic Engineering Design Package).
- 3.2.2 The Bidder may prepare the BEDP on his own or engage an engineering consultant for the same. This engineering consultant must have experience of preparing BEDP based on Bidder's offered technology in the Proposal. Further, the Bidder shall engage the same engineering consultant post award for BCPL BEDP. Bidder will declare the arrangement for BEDP preparation in the proposal.
- 3.2.3 Owner will appoint technically competent Consultant/ Contractor for carrying out Front-end Engineering/ Detailed Engineering based on the BEDP, which would be developed by the Licensor. It is necessary that the Licensor shall allow the Owner to share the related information contained in the Basic Engineering Design Package with such Consultants/ contractors for the needed purpose after signing required secrecy agreement. Licensor will furnish to Owner and Owner's Consultant a reasonable amount of general consultation/ clarification, while using the inputs provided by the Licensor in the BEDP for carrying out detailed engineering of the unit. Owner's Consultant and Project Management Consultant (PMC) inputs/ suggestion shall be suitably taken care of by LICENSOR during BEDP preparation.
- 3.2.4 In case, Licensor wants to essentially include detailed design/ engineered datasheets/ specifications/ drawings for any process equipment/ facilities which is considered essential by the Licensor for meeting process performance guarantees, the same shall be included in Licensor's firm scope of work as part of BEDP deliverables and the fee for such detailed engineering activity shall be quoted as part of BEDP fees. This requirement is over and above those deliverables for the proprietary items defined in Clause 3.3 for which Licensor would anyway be giving requisite details/ specifications as part of their standard BEDP. However, all related performance guarantees based on Licensor's design for such equipment/ facilities shall be provided by Licensor.
- 3.2.5 Licensor shall review and approve detailed engineering documents, including fabrication drawings/ data of vendors of critical equipment to the extent Licensor deems necessary for meeting process performance guarantees. Licensor shall furnish list of documents/ drawings requiring their approval/ review for this purpose in their offer. The charges, if any, on this account has to be included in fees for the BEDP. Licensor to note that no extra payment shall be made for these services separately. Licensor shall furnish in the offer a list of afore mentioned documents/ drawings requiring review/ approval. Any clarification or queries raised by Owner/ Consultant during course of

detailed engineering on BEDP shall be provided by Licensor without any additional cost.

- 3.2.6 Licensor to confirm in the BEDP that P&IDs included as part of BEDP has undergone an internal HAZOP/SIL by Licensor itself and Licensor shall ensure to the effect that the design of the unit is safe for operation and HAZOP recommendations have been incorporated.
- 3.2.7 Licensor shall identify the special equipment, which are unique for the relevant unit operation and provide complete design specifications for the same in BEDP.
- 3.2.8 Licensor shall provide complete specifications of Long Lead Items (LLI)/ major equipment in sufficient detail so that procurement action can be initiated for the same at the earliest. Licensor shall provide a list of such long lead items/ major equipment in the proposal. This would facilitate Owner to initiate procurement of these LLI/ major equipment prior to the complete BEDP delivery to save on project execution time. List of such Long lead items/ major equipment will be informed during KOM after evaluation of Licensor's offer. Following equipments shall be considered as Long Lead Items (i.e. Equipment whose delivery period is expected to be more than 10 months) as a minimum, for which data sheets are to be released by Bidder on priority.
- Feed Charge Pump
 - Reactors
 - Compressors
 - Reactor effluent exchanger
 - Separators
 - Heater
 - Strippers
 - Stabilisers

Additional items in case required after evaluation of Licensor's offer will be informed during Kick Off meeting (KOM).

- 3.2.9 Licensor may have a preference towards providing certain services on their own where such services are deemed to be utilizing Licensor's exclusive knowledge, Licensor's proprietary engineering software or practices, etc., and directly influencing plant safety and reliability and to meet the guarantee requirements. The cost of such exclusive services is to be included in the fees towards BEDP.
- 3.2.10 Licensor will agree to participate in the following meetings as and when required by Owner.
- a. Meeting at Owner's/ Consultant's office:
- i. Commercial/Technical meeting on offers
 - ii. Finalization of Agreement
 - iii. Design Basis finalization meeting /Kick off Meeting
 - iv. Review meeting on Process Flow Diagrams (PFDs) submitted by Licensor. Equipment Layout meeting will be conducted at that stage itself and dimensioned equipment layout shall be finalized within the plot defined on the owner in overall Plot Plan

b. Meeting at Licensor's office:

i. Piping & Instrumentation Diagram (P&ID) review.

All the expenses on account of attending aforesaid meetings are to be borne by Licensor.

3.2.11 Fees for all services for supply of BEDP, including, but not limited to, items listed under Clause 3.2.1 to 3.2.10 above, shall be included in the BEDP fee quoted by Licensor.

3.2.12 Licensor shall provide the list of mandatory and recommended vendors for major equipments along with BEDP.

3.2.13 Licensor to note that no change in equipment specification (number, size, configuration) shall be permitted during BEDP preparation after Licensor's selection unless it is warranted due to change in technical specifications of NIT by owner.

3.2.14 Licensor shall quote lump sum fee for grant of know-how and BEDP separately as per the schedule of prices included in the bidding document.

3.2.15 Licensor shall permit participation of representatives of the Owner / Owner's Consultant/ PMC for preparation of BEDP in Licensor's office for review of drawings/ documents (including, but not limited to Heat and Material Balance, PFD, P&ID, Product Specifications and Key Equipment Drawings) from process and operation point of view. Participation of owner / owner's consultant shall be during PFDs, equipment layout, LLI, P&ID review and also towards the end of BEDP preparation. Licensor shall provide required facilities for performance of job and logistics and the same shall not be limited to space / internet / telephone /printing etc.

3.2.16 By responding to this bid, the Licensor understands that they will be required to provide all the information, not only to OWNER but also to OWNER's Engineer / Consultant / PMC / Technical Advisor. OWNER's Engineer / Consultant /PMC / Technical Advisor will sign the appropriate Non-Disclosure Agreement with the licensor.

3.2.17 Supply of Catalysts/ Adsorbents/ Absorbents:

Licensor shall supply first charge of all Catalyst(s)/ Adsorbent(s)/ Absorbent(s). Owner shall enter into Catalyst(s)/ Adsorbent(s)/ Absorbent(s) supply agreement with Licensor only. Licensor shall indicate different types of Catalyst(s)/ Adsorbent(s)/ Absorbent(s) requirement (including margin on handling losses as agreed basis on prorated basis at the time of purchase) indicating quantity, loading density, and cost per unit weight for each type of catalyst / adsorbent / absorbent. Owner reserves the right to order for extra quantity (upto 5% towards contingency) as per the unit cost of Catalyst(s)/ Adsorbent(s)/ Absorbent(s) quoted by Licensor.

For dense loading of fixed bed catalyst (s)/ adsorbent(s)/ absorbent(s) in the reactor / vessel, if applicable, LICENSOR shall furnish list of recommended vendors for Dense loading Machine at site and related Technical advisor at mutually agreed date. The technical advisor will be responsible for supervising/regulating operation of loading machine. Licensor shall quote price as requested in the schedule of prices for the dense loading of fixed bed catalyst /adsorbent in the reactor / vessel.

The supply of First charge of all the Catalysts and proprietary adsorbents/absorbents shall be the sole responsibility of the Bidder and not of the Catalyst/adsorbent/ absorbent manufacturer, and the Bidder shall not be absolved of his liability to supply the catalyst/adsorbent/ absorbent as and when required by the Owner on the grounds

that the catalyst/adsorbent/ absorbent has become obsolete or that it is no longer being manufactured. No change in name, type and quantity of catalyst(s)/absorbent(s)/ adsorbent(s) shall be permitted post bid submission.

3.3 PROPRIETARY ITEMS

3.3.1 Licensors shall specify clearly the proprietary items/equipment and proprietary catalyst(s)/ absorbent(s)/ adsorbent(s)/ additive(s)/ chemicals, if any, used in the process, and the cost thereof, separately. The proprietary equipment/ items/ catalyst/absorbent/ adsorbent/additive/ chemical are defined as the item for which specification, engineering, manufacturing and supply shall be exclusively by the Licensor. This implies that the specification, engineering, manufacture, supply, engineering guarantee, workmanship guarantee, replacement guarantee and Performance guarantees & their liabilities will be by Process Licensor without any precondition. Licensor shall provide justification/basis for such items to be proprietary in nature. Proprietary equipment supply shall preferably be minimized. Shortest delivery period of such proprietary equipment is also to be indicated.

3.3.2 Licensor shall supply initial fill and six (06) months' consumption of continuously consumed proprietary solvents, proprietary chemicals and proprietary additives as follows:

A) Initial fill: For proprietary solvents, proprietary chemicals and proprietary additives which are required to be filled in the system initially, their supplied quantity shall be sufficient for meeting the inventory of the system.

For other proprietary solvents, proprietary chemicals and proprietary additives which are not required to be filled in the system initially, supplied quantity of initial fill will be for fifteen (15) days of continuous operation of the unit unless specified otherwise elsewhere in the bidding document.

B) Consumption of proprietary solvents, proprietary chemicals and proprietary additives for six (06) months of continuous operation of the unit

The supplied quantities of each of the above materials shall include 5% contingency towards handling and other losses and shall be rounded off to the nearest higher drum/barrel.

Licensor shall quote prices for the above supplies in the priced bid as per the schedule of prices.

3.3.3 Licensor should quote the firm price with minimum validity for such proprietary items with escalation rate after expiry of validity as per schedule of price in the Offer.

3.3.4 In case, Licensor has specified single source/ single recommended vendor for procurement of any items the same shall be identified in the proposal. Licensor shall also provide justification for such recommendation.

3.3.5 Licensor shall clearly specify items, if any, used in the process for which proprietary design is by the Licensor. Licensor shall provide specification, engineering documents and manufacturing specifications for such items along with recommended vendors, if any as part of BEDP. The cost of such services is to be included in the fees towards BEDP.

3.3.6 In case fixed bed catalyst (s)/ adsorbent(s)/ absorbent(s) is supplied as part of proprietary item, then the evaluation of the offer shall be done considering catalyst/ adsorbent/ absorbent guaranteed life specified.

3.3.7 The LICENSEE shall have the option, at its sole discretion, to change over to Licensor's latest commercially proven catalyst/adsorbent (other than the catalyst/adsorbent offered at the time of signing the Agreement).

- 3.3.8 Licensors shall furnish to the LICENSEE, instruction for suitable disposal of the spent catalyst/adsorbent without hazard to health or environment.

3.4 MANDATORY SERVICES

- 3.4.1 Licensors shall carry out/ participate for the following minimum mandatory services. Any additional mandatory services that the Licensor deems necessary for fulfilling the guarantees offered and other responsibilities shall be informed by the Licensor in the proposal.
- HAZOP and SIL studies during detail engineering stage at Owner/ Consultant's office.
 - 3D Model review at Owner/ Consultant's office.
 - Assistance during pre-commissioning/ commissioning and startup activities at project site.
 - Conducting performance guarantee test runs at project site.
 - Assistance during catalyst loading at project site.
 - Review and Approval of detail engineering documents including fabrication drawing and vendor data for critical equipment that Bidder deems necessary.
 - Any additional mandatory services that Bidder deems necessary for fulfilling the guarantees offered and other responsibilities.

Licensors shall furnish in their proposal a list of above mentioned mandatory services.

- 3.4.2 Licensors shall send persons with complete know how of the process and knowledge as well as expertise on the project requirements for services specified above.
- 3.4.3 Licensors shall carry out performance guarantee test run. The guarantee test run shall be conducted on design capacity within one year from the commissioning of the plant. Licensors to submit the performance guarantee test run report. Format for the report will be agreed with the selected Licensor. Performance guarantee test run may or may not be conducted immediately after commissioning of the unit. Date for conducting the guarantee test run will be decided by Owner and informed to Licensors for making necessary arrangements including deputation of their personnel to project site.
- 3.4.4 An estimated total of 500 man-days (inclusive of travel time and Sunday as holiday) will be considered for evaluation of the above mandatory services. Licensors shall quote lump sum fee for the same as per the Schedule of Prices.
- 3.4.5 In case the actual number of man-days utilized for the above Mandatory Services is more or lower than 500, the lump sum amount quoted shall be prorated based on the actual number of man-days to arrive at the amount payable and payment shall be made accordingly.
- 3.4.6 Bidder to provide the estimated number of man-days for each category of mandatory services listed above. This is for information purpose only.

3.5 ADDITIONAL SERVICES

- 3.5.1 Licensors shall extend assistance through expert personnel with sufficient experience and knowledge for the following activities (under the service categories indicated) during detailed engineering/ procurement/ construction/ commissioning/ operation, if and as required by the Owner:

Engineering:

- Development of APC Strategies

b) Development of specifications for process simulators

Inspection:

- a) Procurement/ Inspection/ Expediting of critical equipment
- b) Supervision during construction
- c) Inspection at vendor's shop floor/ pre-qualification of vendors.

Any other activity/ service related to the project implementation.

3.5.2 Licensor shall render assistance for Detailed Engineering to Engineering Contractor/ Consultant at Licensor's office, if any.

3.5.3 Licensor shall quote personnel rates for Licensor's personnel for rendering the above Additional Services at Owner's/ Consultant's / Contractor's/ Vendor's places as well as at Licensor's office as per the Schedule of Prices. An estimated 150 man-days including travel time shall be considered for the Additional Services for evaluation.

3.5.4 Single rates applicable for Licensor's personnel for each of the following service categories shall be quoted (number of man-days at Licensor's office + number of mandays in Owner/ Consultant's office considered against each for evaluation are indicated):

- a) Engineering (50+50)
- b) Inspection (20+30)

3.5.5 Documentary evidence is to be furnished by the bidder for services carried out in the Bidder's office.

3.5.6 Licensor shall quote Man-day rate for services rendered at Licensor's office as per the Schedule of Prices."

3.6 TRAINING

3.6.1 Licensor shall provide Training to Owner's personnel on process design, operation, maintenance, analytical procedures and product & applications training etc. as indicated below:

- a) One week classroom training for up to thirty (30) persons at Owner's office/ plant in two batches in single span.

3.6.2 Licensor shall quote lump sum prices for the above mentioned trainings as per Schedule of Prices (SOP).

3.7 BEDP DELIVERY & TIME SCHEDULE

3.7.1 Licensor shall agree to carry out services and deliver complete BEDP and other deliverables as per schedule given at Annexure-IV B. Licensor must comply with the schedule indicated in the technical proposal.

3.7.2 Licensor shall indicate shortest possible time schedule, which should be assured, for proprietary catalyst(s)/ Adsorbent(s)/ chemical(s) and hardware items if any, in their proposal. Licensor to note that the quoted delivery schedule from date of order placement shall be valid till the completion of the project

4.0 GUARANTEES AND LIABILITIES

Licensor shall be required to fulfill the guarantees as detailed below and liabilities will apply in case of failure to meet the guarantees. Licensor shall furnish the guarantees conforming to the design specifications as per format Annexure-IV C along with the proposal.

4.1 PROCESS PERFORMANCE GUARANTEES

While providing the guarantees, Licensor to note that it is essential to meet minimum guarantees as defined in clause 4.1.3 below. No deviation against this would be accepted. Licensor will be required to take all necessary corrective measures, if required, at their own expense to meet the minimum guarantees as defined in clause 4.1.3

4.1.1 Licensor shall furnish **process performance guarantee** including, but not limited, to the following parameters at both SOR/ EOR with guaranteed values for design feed case for the overall unit (as per Annexure-IV C).

- a) Capacity of unit in metric Kilogram per Hour and KTPA of total feed based on design stream hours.
- b) Turn-down ratio.
- c) Quality of 2nd stage Hydrogenated Pygasoline product corresponding to guaranteed yield of the respective product for both SOR & EOR conditions.
- d) Total Make up Hydrogen consumption as wt% on Fresh feed at battery limit. Including chemical consumption and dissolution losses and excluding mechanical losses.
- e) Consumption / Generation of utilities (Fuel, Steam & Power) as percentage of estimated values.
- f) Ex-unit product yield of 2nd stage Hydrogenated Pygasoline as wt% of fresh feed.
- g) Guaranteed life and quantity of catalyst/ adsorbents/ absorbents

4.1.2 For establishing the above performance guarantees, test runs will be conducted with feed stocks having substantially similar characteristics as those of design feed stocks as defined in clause 2.6.

4.1.3 Out of the above parameters, some are Minimum Process Guarantees which are to be met on priority:
Minimum process performance criteria for acceptance of HPG-2nd Stage Unit shall be as follows:

- i) 100% of the guaranteed unit throughput for HPG 2nd Stage unit as per section 1 of Annexure-IV C.
- ii) Product quality
2nd Stage Hydrogenated Pygasoline:
 - Sulphur wt%(max): As indicated by Licensor in section 10 of Annexure IV C
 - Benzene vol%(max): As indicated by Licensor in section 10 of Annexure IV C

4.1.4 Licensor to provide correlation/s for predicting unit performances with respect to feed processing rate, product yield pattern, hydrogen consumption, product quality, utility consumption, etc., in case the feed stock quality is different with respect to critical parameters from the design feed stock. Based on the same, In that case after consultation and mutual agreement with Owner, a new guarantee equivalent to the guarantee mentioned above shall be established

4.2 TEST RUN AND PROOF OF GUARANTEES

- 4.2.1 Prior to the test run, detailed methods to be used in the test run shall be agreed upon in writing between LICENSOR and LICENSEE. These methods shall be in accordance with normal practice, and will include methods for measuring various process streams by calibrated measuring devices, methods for calibrating such measuring devices, methods for sampling and analyzing process streams, as well as methods for evaluating the results of the measurements and analysis. Furthermore, acceptable tolerance for all results shall be specified.
- 4.2.2 The test run shall commence when the unit is operating under stable conditions and shall be conducted for a period of not less than 72 (seventy two) consecutive hours. Based on mutually agreed and jointly collected measurements during the test run, Licensor and Owner shall evaluate the results of the test run to confirm the guaranteed process performance guarantees.
- 4.2.3 The unit shall be deemed to have passed a successful test run, if during the test run, the unit has performed as guaranteed and the guarantees specified in this document have been successfully fulfilled.
- 4.2.4 If during the test run, the unit fails to perform as guaranteed for reasons attributable to the LICENSOR, the LICENSOR shall as soon as possible investigate the reasons for such failure and suggest modifications to the unit or its operation, as the Licensor may deem necessary for enabling the unit to perform as guaranteed.

The owner shall, as promptly as is reasonably feasible in the circumstances, carry out any modifications in the unit, which may be suggested by the licensor. A test run shall be re-conducted for the modified unit.

- 4.2.5 Licensor and owner shall mutually establish a date by which the second performance test can be commenced after the modification. If required, a third performance test or more will be mutually decided.
Licensor shall at its own cost and expense in all respects continue to perform such engineering, supplies and/ or modifications as are necessary to ensure that the unit performs to meet the process performance guarantees specified in this document.
- 4.2.6 The foregoing procedure will be repeated at least three times within a period of 12 (twelve) months from the date of commencement of remedial actions to meet the guaranteed parameters
- 4.2.7 The Licensor shall pay and bear the cost of deputing its personnel for witnessing and supervising modifications and repeat test runs.
- 4.2.8 The liabilities against the guarantee parameters specified above have been defined in Clause 4.3 (Liabilities towards Process Performance Guarantees) below.

4.3 LIABILITIES FOR PROCESS GUARANTEES

- 4.3.1 Licensor shall be liable for rectification of defects in Licensor services to correct owner's plant due to faulty design, information and services furnished and rendered by the licensor.
- 4.3.2 If any operational problems are encountered in the unit for reasons attributable to Licensor including detailed engineering documents approved by Licensor, the Licensor shall provide the corrective engineering at his own expense.

- 4.3.3 If any of the aspects of performance fail to satisfy the Minimum Process Performance Guarantees (as defined in section 4.1.3 above) and Process Performance Guarantees (as defined in section 4.1.1 above) during the Performance Guarantee Test Run as per clause 4.2 above, Licensor will perform corrective engineering and shall incur the entire expenditure related to this corrective engineering to achieve satisfactory results without any limit related to the corrective engineering, licensor supplies and licensor services.

The resultant cost caused by this re-engineering leading to replacement of any non-proprietary hardware and re-engineering/ redesign by detail engineering contractor/ others required for implementation shall be limited to Overall Aggregate Liability (OAL). Overall aggregate liability is defined in the commercial section.

- 4.3.4 However, in case even taking all necessary measures, the licensor is not able to meet the Minimum process guarantees, owner may accept the plant with application of liability equal to Overall Aggregate liability.
- 4.3.5 If after meeting Minimum Guarantees, any of the aspects of performance fail to satisfy the Process Performance Guarantees (defined in section 4.1.1 above) during the Performance Guarantee Test Run, Licensor will perform corrective engineering and shall incur the entire expenditure related to this corrective engineering without any limit as required to achieve satisfactory results.
- 4.3.6 After meeting minimum performance guarantees on priority, in case after taking all measures the LICENSOR is not able to ensure meeting Process performance guarantees, owner may accept the plant with application of liabilities indicated under table 4.3.1(b). The liabilities are on a sliding scale over a range of performance. The overall aggregate liability for not meeting process performance guarantees shall be as defined in the commercial section.

Table-4.3.1(a): Liability for minimum process guarantees (excluding catalyst, adsorbents & proprietary items)

S No	Process Performance Guarantees	Liability (% of OAL*)
Minimum Process Performance Guarantees		
1	100% Unit Throughput-HPG-2 nd Stage	100 % of OAL
2	Product Quality: Sulphur(max)ppm in 2nd Stage Hydrogenated Pygasoline from HPG-2 nd Stage	100 % of OAL
3	Product Quality: Benzene (max) vol% in 2nd Stage Hydrogenated Pygasoline from HPG-2 nd Stage	100 % of OAL

Table-4.3.1(b): Liability Schedule for Process Performance Guarantees other than Minimum Process Guarantees (excluding catalyst, adsorbents & proprietary items)

S No	Process Performance Guarantees	Begin Liquidation at	Fully Liquidated at	Amount liquidated as % of OAL (*), applicable on prorated basis
Process Performance Guarantees				
1	Turndown ratio	>100% guarantee	120% guarantee	10 %
2	2nd Stage Hydrogenated Pygasoline Gasoline yield (Note-2) wt% of unit feed	<100% Guarantee	95% Guarantee	30%
3	Make-up Hydrogen Consumption (Chemical + Dissolution Losses)	>100% Guarantee	105 % Guarantee	20 %
4	HP Steam net consumption	>100% Guarantee	110% Guarantee	5%
5	MP Steam net consumption	>100% Guarantee	110% Guarantee	5%
6	LP Steam net consumption	>100% Guarantee	110% Guarantee	5%
7	Fuel consumption	>100% Guarantee	110% Guarantee	5%
8	Power consumption	>100% Guarantee	110% Guarantee	5%
9	Cooling water, m ³ /hr	>100% Guarantee	110% Guarantee	5%
10	BFW, kg/hr	>100% Guarantee	110% Guarantee	5%
2nd Stage Hydrogenated Pygasoline				
11	Cu strip corrosion test	>100% guarantee	100% guarantee	5%
12	RVP@38 deg C, kg/cm ² a	>100% Guarantee	120% Guarantee	10%
13	Aromatics max vol%	>100% Guarantee	105% Guarantee	10%
14	RON C, min	<100% Guarantee	95% Guarantee	10%
15	MON C, min	<100% Guarantee	95% Guarantee	10%

Notes:

1. Above liabilities are independent of each other and are additive to the extent of Overall Aggregate Liability (OAL (*)) as specified elsewhere in ITB.
2. Product yield imply yields meeting the guaranteed product quality of the respective products. Even if any one of the guaranteed product properties is not met by the bidder, the product will be considered off-specification and then the liquidated amount (% of OAL) will be considered as the maximum liquidation corresponding to yield of that respective product.

A. GUARANTEES AND LIABILITIES FOR CATALYST/ ABSORBENT/ ADSORBENT

Table-4.3.2: Liability Schedule for Catalyst/ Adsorbent/ Absorbent Performance Guarantees

Guarantee parameter	Liability
Life of Catalysts / Absorbents / Adsorbents (with guaranteed life more than one year)	a) If catalyst/ Absorbent/ Adsorbent fails to perform and because of which any of the performance guarantees specified (attributable to Catalyst/Adsorbent/ Absorbent) are not met within (C/2) (**) months of introduction of feed stock, Licensor shall fully replace the non-performing catalyst/ Absorbent/ Adsorbent at designated complex site free of any cost to the Licensee. (Limited to landed cost value of catalyst at the time of replacement at site). b) If catalyst/ Absorbent/ Adsorbent fails any time from (C/2 + 1)th month to the guaranteed life, the penalty to be given by the Licensor shall be calculated as the percentage of total cost incurred by Owner for purchase of catalyst/ Absorbent/ Adsorbent, excluding cost of precious metal arrived at by the following formula as per the applicable clause indicated above. Percentage= $\frac{(((\text{Guarantee life in months}) - (\text{Actual achieved life in months})) / (\text{Guaranteed life in months})) \times 100}{100}$ ** C = Guarantee life in months c) The Licensor's liability to replace the catalyst/ absorbent/ adsorbent shall apply to each replacement charge, which shall, unless otherwise agreed, carry a guaranteed life, which is not less than the residual guaranteed life of the original charge. d) The cost incurred by Owner for procurement of catalyst/ Absorbent/ Adsorbent shall be on the landed cost excluding the cost of precious metal if any. However while calculating the landed cost for liability provisions the custom duty, transportation cost etc, on base catalyst as well as metals including precious metal, if any shall be considered.
Life of catalysts/ adsorbents/ absorbents (with guaranteed life less than or equal to one year)	Licensor shall be liable for the full replacement of the catalyst/ absorbent/ adsorbent at designated complex site free of any cost to the Owner.

B. GUARANTEES AND LIABILITIES FOR PROPRIETARY ITEMS

Table-4.3.3: Liability Schedule for Proprietary items

Guarantee parameter	Liability
Proprietary items (excluding catalyst)	In case of any defect/failure within 12 months of commissioning of the unit or 24 months from the last dispatch of the equipment, whichever is earlier, Licensor shall replace the Proprietary items or damaged part of the proprietary items (excluding removing and reinstallation) required at site. Delayed Delivery: Liabilities for delay in delivery of proprietary items, for reasons attributable to Licensor, then LICENSOR shall credit to owner a discount for delays calculated as 0.5% (half percent) of the value of proprietary items, per each week of delay or part thereof. The total amount of discount shall be limited to 5% (five percent) of the total order value of the proprietary items.

5.0 TECHNICAL EVALUATION CRITERIA

Bidders/ Licensors offer shall be evaluated based on the following criteria for technical acceptance and final selection.

5.1 TECHNICAL QUALIFICATION CRITERIA

5.1.1 Minimum Qualification Criteria: Minimum Qualification Criteria for bidders shall be as per clause "Bidder Qualification Criteria (BQC)" specified in "Invitation for Bids (IFB)".

5.1.2 Technical evaluation of Licensor's proposal will be based on the following criteria:

- a) Proven Experience: Provenness of offered technology and the extent of Licensor experience in having successfully implemented plants, which are similar in nature and objectives to the plant desired by the owner, shall be considered. Licensor should have reference operating units where the offered/ guaranteed performance for process and equipment had been demonstrated.
- b) Technical Assessment: Operability, reliability, guaranteed process performance, product quality, run-length, etc.
- c) Technical Services and Support: Adequacy of scope and quality of Licensor's Basic Engineering Design Package and conformance with the desired scope, engineering support services during design, follow-up engineering and plant commissioning and ongoing technical support after plant start-up.
- d) Catalyst: The catalyst proposed by the Licensor for the HPG-2nd Stage Unit shall have completed minimum one year of satisfactory operation in a commercial application meeting design yields and hydraulic performance. The evaluation will be based on the proposed catalyst. Additionally, Licensor may provide information on alternate latest generation catalyst (estimated yield, quantity required, per unit cost) which is suitable for meeting the processing objectives

5.1.3 Licensor shall provide filled in Annexure-IV D for all reference units. Additionally, Licensor shall also include documents required as per the BQC in this offer.

5.1.4 Technically acceptable offers will be identified based on compliance to the bid document including Technical Specifications and Commercial Terms and Conditions.

5.2 TECHNO-ECONOMIC EVALUATION

Techno Economic evaluation of technically and commercially acceptable offers will be carried out for the final selection of Licensor as described below.

5.2.1 Net Present Value (NPV) of the offer will be calculated as net cash inflow for the plant operating life at a discount rate of 12% per annum. The cash flows/ NPV shall be arrived at by Owner at its option, through a competent Consultant, based on the information furnished and prices quoted by the bidder, after due review by the Owner/consultant.

5.2.2 Estimation of NPV will be carried out on the following basis:

- i. The NPV shall be computed for the facilities limited to unit battery limit.
- ii. Expenses towards License fee, Basic Engineering Design Package fee, fees towards Training and other services quoted by Bidder as well as other related costs as necessary e.g. Training fee, cost of proprietary/ hardware items etc. if any, shall be considered for estimation of capital cost.

- iii. Owner will consider the equipment/ plant cost, as estimated by Owner/ Consultant, as per the process configuration and relevant equipment data furnished by bidder in his offer, after due rationalization. Licensor shall agree to furnish additional information, if required, to facilitate plant costing.
- iv. Feed to the unit, products from the unit and utilities will be priced as given under Optimization Criteria in this document.
- v. Guaranteed values of feed rate and product yields furnished by Licensor as per performance guarantee for the design feed case shall be considered for the evaluation purpose.
- vi. Bidder's guaranteed fuel, catalysts, adsorbents, chemicals and utility consumption figures shall be considered. The cost of fuel & utilities, catalysts, adsorbents/ chemicals etc. shall be included in the operating costs.

The utility consumption provided by bidders shall be reviewed with respect to machine efficiencies, motor efficiencies and heater efficiencies, steam consumption and rationalized utility consumption figures shall be used for evaluation.
- vii. Taxes, duties, freight and other indirect costs on plant/ equipment as applicable, shall be considered.
- viii. Plant operating life for economic calculation shall be 15 years, with 5% salvage value. Construction period shall be considered as 2.5 years with phasing of investment as 30% for the first year, 50% for the second year and 20% for the third year.
- ix. Escalation rate quoted by Bidder shall be used for estimating the cost of respective items based on expected date of award.
- x. In case of discrepancy in the equipment details given in the equipment list and other places in the Bidder's offer such as process description, PFD etc., the details as per equipment list shall be considered.
- xi. Bidder's fee towards Mandatory Services and Additional Services, Training, detail engineering etc. shall be considered for evaluation as explained elsewhere in this document.
- xii. Operating revenue and operating cost for NPV calculation will be done for design case based on 8000 on stream hours per year.
- xiii. To facilitate evaluation and comparison of prices, all bid prices shall be converted in to Indian Rupees. Exchange rate shall be the rate prevalent on the date of opening of priced bid.
- xiv. For proprietary catalyst (s)/ adsorbent (s) price as quoted by bidder shall be considered for initial loading as well as for subsequent loadings.

- 5.2.3 100% weightage shall be given for final NPV and the Bidder who obtains maximum NPV shall be considered as the successful bidder and recommended for selection.
- 5.2.4 No technical deviations shall be accepted
- 5.2.5 The information/data required from Bidder for estimation of NPV shall be furnished in Annexure IV-C as per parameters sought in table enclosed in Annexure-IV E.
- 5.2.6 Overall yields for NPV evaluation shall be based on 2/3rd SOR and 1/3rd EOR.
- 5.2.7 The evaluation data / documentation including CAPEX, OPEX, etc. worked out by owner/ owner's consultant for Licensor evaluation shall not be shared with Licensor.

6.0 INFORMATION REQUIRED FROM LICENSOR IN THE PROPOSAL

Information to be furnished, as a minimum, in the Proposal are defined in this section. Licensor shall submit their proposal containing comprehensive information on the process technology offered, commercial experience, process economics, any specific safety features w.r.t comparable plants etc. such that their offer is evaluated comprehensively. Data/ information shall be given item wise and metric system of units of measurement shall be followed for all information. Please refer to 'Instructions to Bidders' for details on submission of bid.

Bidder's offer should be in complete conformance to the ITB and its subsequent amendments. No stipulation, exception, deviation, terms & conditions, presumption, basis, assumption, clarification, etc. should be included in the Bidder's offer.

In case stipulations, exceptions, deviations, terms and conditions, presumptions, basis, assumptions, clarifications, etc to the ITB and subsequent amendments are considered essential by the Licensor, the same shall be separately listed in the Licensor's offer, as per the format provided elsewhere in the bidding document.

Any stipulation, exception, deviation, terms and condition, presumption, basis, assumption, clarification, etc not listed as per the above section, even if reflected in any other portion of the proposal shall not be taken cognizance of and all such stipulations, exceptions, deviations, terms and conditions, presumptions, basis, assumptions, clarifications, etc shall be deemed to have been withdrawn by the Licensor.

In case no stipulations, exceptions, deviations, terms and conditions, presumptions, bases, assumptions, clarifications, etc are furnished in the above section, it shall be construed that the Licensor's proposal is in total compliance to Bid document requirements.

The items listed under the section "List of deviations/exceptions to the enquiry document" shall be discussed with the Licensor during technical discussions on their bid and resolved.

6.1 TECHNICAL INFORMATION & GUARANTEES

- 6.1.1 Acceptance of Time Schedule as per Annexure-IV B shall be submitted along with the proposal.
- 6.1.2 Licensor shall submit all the details and technical information including data with respect to Process Performance Guarantees as per format given in ANNEXURE-IV C, duly signed and complete in all respects, along with the offer.
- 6.1.3 The technical data including guaranteed values for all parameters required to be guaranteed wherever applicable (minimum/ maximum values as indicated in the respective tables) should be included in the proposal as these values are essentially required for evaluation of the offer. Guaranteed values shall conform to the specifications given in this document. Proposal without these values may not be evaluated. Reason for omission if any, should be brought out.

6.2 PROCESS INFORMATION

- 6.2.1 Licensor to provide the following information, as a minimum, in the proposal (metric system of units of measurement shall be followed for all information) for the Design case. All technical information requested like product yields, product qualities, utility consumptions, etc. shall be furnished for the design case.

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- a. Outstanding features of process technology. Wherever possible, these points are to be quantified. The steps where Licensor differs from competing process technologies should be emphasized.
 - b. Improvement and development in technology done in the recent past with special reference to product quality and applicability, safety, energy conservation and environmental considerations.
 - c. Process description
 - d. Process flow diagrams for overall and individual process sections (including facilities for chemical injection) indicating processing scheme, flow rates, major operating parameters, all equipment and process control scheme.
 - e. Overall material balance and component-wise flow rates of each in-coming/ out-going streams for both Start of Run (SOR)/ Start of Life (SOL) and End of Run (EOR)/ End of Life (EOL) conditions for the design case. The information must include flow rate, pressure and temperature for these streams along with composition break-ups. Material balance is to be provided for the design case in the proposal.
 - f. Product specifications as per Annexure-IV C.
 - g. Key operating conditions at SOR/ SOL and EOR/ EOL.
 - i. Reactor temperature at inlet and outlet
 - ii. Weighted Average Bed Temperatures (WABT) for each bed
 - iii. Reactor inlet and outlet pressure
 - iv. Hydrogen partial pressure
 - v. LHSV
 - vi. Recycle gas to oil ratio
 - vii. Recycle gas purity in terms of hydrogen content and CO content.
 - viii. Percentage desulphurisation & Olefin Saturation
 - ix. Percentage of hydrogenation of Benzene in C6 streams.
 - x. Quench gas to oil ratios expressed as Nm³/Sm³ raw oil.
 - xi. Chemical Hydrogen consumption and dissolved Hydrogen consumption.
 - xii. Composition break ups for streams.
 - xiii. Minimum expected run length of reactor.
 - h. Ex reactor and Ex unit yields (as wt.% of feed) component wise (at SOR/SOL and EOR /EOL conditions as applicable) along with light ends composition, product cut points, product specifications, product distillation etc.
 - i. Unit start-up methodology
 - j. Qualitative Description on the operating variables: Operating variables and their effects, the effects of variation of feed composition and feed rates.
 - k. Benefits of any technical features incorporated in the proposed design.
 - l. Turndown ratio for various sections of the plant and overall turndown ratios for the total plant, along with reasons for the limitations.
 - m. Design features for Environment Protection and Occupational Safety.
 - n. Number & type of on-line analyzer in proposal.
 - o. Estimated maximum flare load (without and with mitigation measures), molecular weight and relieving temperature corresponding to
-

- Cumulative failure (For eg. General power/ cooling water failure)
- Discreet Failure (For eg. Local reflux failure etc.)

Bidder to inform the philosophy adopted for arriving at the mitigated load.

- p. Indicative P&ID's for a similar plant.
- q. Requirement of any utility during emergency such as general power failure or any other exigency.
- r. Equipment wise consumption of following utilities to be given separately as applicable to the process.
 - HP steam
 - MP steam
 - LP steam
 - Power
 - Stripped sour water/ raw water
 - DM water
 - Boiler feed water
 - Cooling water (circulating)
 - Nitrogen
 - Instrument air
 - Plant air (general purpose use)
 - Fuel gas

Where start-up requirement for any utility is significantly large compared to normal consumption, the same shall be specified.

- s. Consumption figure given for the above utilities shall include requirement of chilled water/ brine/ refrigeration/ hot oil units as may be necessary and included within battery limit.
- t. Characteristics of feedstock considered by the Licensor and maximum acceptable limits of impurities.
- u. Type, capacity and number of reactor/ regenerator. Normal and emergency reactor cooling methods and safety measures.
- v. Normally feed from 1st stage Pygasoline Hydrogenation unit will be processed in the unit. However, to take care of planned / emergency shutdowns, feed storage tanks have been envisaged. Licensor shall indicate the type of storage tank (whether fixed/floating roof etc.) required for feedstock along with blanketing requirements. In case blanketing is required, Licensor shall indicate the N2 requirement in their proposal.
- w. Reaction kinetics: operating variables and their effects, the effects of variation of feed composition and feed rates.
- x. Write-up on safety and environment control features offered in the design. Safety and environmental aspects shall be as per clause 2.15.
- y. Equipment layout with dimensioned equipment and overall dimensions.
- z. Licensor is to indicate whether an Advance Process Control Package needs to be installed in the unit.
- aa. B/L interconnection for all process, utility, flare and effluent lines leaving & entering the unit.
- bb. Effluent stream summary from the unit, comprising of all gaseous, liquid and solid waste streams/ material from the unit along with stream-wise quantity, quality and composition and suggested/recommended method of disposal. For wastewater discharge, in addition to the level of specific organic or inorganic contaminants,

BOD, COD, pH, TSS, TDS, total HC (state whether soluble or insoluble) etc. for each stream are to be specified.

- cc. If any effluent treatment facility is included inside the battery limit, details of such facility to be described along with cost of such facilities.
- dd. Proper facilities for handling & disposal of solid effluent, if any shall form a part of ISBL facilities. LICENSOR shall indicate quantity, composition and disposal methods for solid effluent.
- ee. Closed loop sampling system

6.3 CATALYST/ ADSORBENT/ABSORBENT & CHEMICALS CONSUMPTION

6.3.1 Licensor to provide Catalyst/ adsorbent/ absorbent details including the following information with respect to all the catalysts/ adsorbents/ absorbents of the unit:

- a. Name, type and size.
- b. Initial charge quantity(volume and weight)
- c. Subsequent fills quantity(volume and weight), if applicable.
- d. Handling losses as percentage of initial charge
- e. Bulk density and other specifications.
- f. Estimated and guaranteed catalyst/ adsorbent/ absorbent cycle life (without regeneration).
- g. Duration of unit shutdown towards catalyst/ adsorbent/ absorbent change over.
- h. Recommended procedure for safe disposal of spent catalyst/ adsorbent/ absorbent.
- i. Delivery period of catalyst/ adsorbent/ absorbent.
- j. Reactor-wise catalyst distribution.
- k. Details of manufacturers/ suppliers of catalysts/ adsorbents/ absorbents.
- l. Recommended list of vendors for dense loading machine.
- m. Details for metal reclamation agencies from spent catalyst.
- n. Type of loading for catalyst.
- o. Recommended procedure for safe disposal of spent catalyst.
- p. Shelf life of the catalyst

Licensor shall provide list of approved catalyst/ adsorbent/ absorbent suppliers.

6.3.2 Licensor shall provide a list of chemicals used in the process with their initial charge and consumption rate during normal operation, start-up and shutdown for the units. Use of proprietary chemicals, if any, is to be clearly indicated along with chemical name, list of recommended suppliers.

6.3.3 Licensor shall indicate whether usage of any additive has been considered for boosting yields. If so, quantity of the same to be mentioned.

6.4 EQUIPMENT DATA

6.4.1 Dimensioned Equipment List

Licensor to provide an equipment list showing dimensions and other key design parameters, including Materials of Construction (MOC), lining if applicable and

corrosion allowances in the proposal. Information concerning proprietary equipment shall also be included. The equipment list shall contain information in sufficient details so as to enable Owner or their consultant to estimate equipment cost with an accuracy of $\pm 10\%$. Given below is the typical format in which the equipment specifications are to be provided by the Licensor. The data listed is the minimum information required, Licensor to provide any additional significant design information having cost implication.

EQUIPMENT	VALUE
Reactor	
Diameter	
Height	
Type of head	
Design Pressure	
Design Temperature	
MOC of shell/ internals	
Corrosion Allowance of equipment and internals	
Cladding thickness (if applicable)	
Estimated Weight (with internals & cladding)	
Estimated Weight (without internals & with cladding)	
Weight of internals	
Features/ Type of Internals and typical sketch	
Column (Tray/ Packed) (Note-1)	
Diameter	
Height (considering actual number of trays)	
Type of head	
Design Pressure	
Design Temperature	
MOC of shell / internals	
Corrosion Allowance	
Cladding thickness (if applicable)	
Estimated Weight (with internals & cladding)	
Estimated Weight (without internals & with cladding)	
Weight of internals	
Refractory/abrasions resistant lining details	
For Trayed column:	
Number of actual trays	
Type of trays	
For Packed column:	
Volume & density of packing	
Type of packing	
Packing material	
Features/ Type of Internals and typical sketch	
Drum/ Vessel	
Diameter (including boot if applicable)	

EQUIPMENT	VALUE
Height (including boot length if applicable)	
Type of head	
Design Pressure	
Design Temperature	
MOC of shell/ internals/ boot	
Corrosion Allowance	
Cladding thickness (if applicable)	
Estimated Weight (with internals & cladding)	
Estimated Weight (without internals & with cladding)	
Weight of internals	
Features/ Type of Internals and typical sketch	
Orientation (horizontal/ vertical)	
Fired Heater	
Design Duty - Fired/ Absorbed, Estimated	
Normal Operating Duty – Fired/ Absorbed, Estimated	
Type of Furnace	
MOC	
Design Pressure	
Design Temperature	
Steam generating/ superheating coil details	
Fired heater: Thermal efficiency	
Exchanger	
Type (TEMA Type to be provided)	
Duty (Operating and Design)	
Heat Transfer Area	
MOC (Shell/ Tube) including corrosion allowance	
Number of shells required	
Design Pressure (Shell/ Tube)	
Design Temperature (Shell/ Tube)	
Air Cooler	
Drive Shaft Power	
Duty (Operating and Design)	
Heat Transfer Area(Bare tube area)	
MOC including corrosion allowance	
Number required	
Design Pressure	
Design Temperature	
Pump	
Type	
Capacity	
Head	
Density of fluid @ pumping temperature	
Number required	
MOC	
Driver (Motor or turbine)	

EQUIPMENT	VALUE
Shaft Power	
Pump efficiency	
Motor efficiency	
Motor rating	
Total power	
Compressor	
Type	
Capacity	
Molecular weight	
Suction & Discharge Pressure	
Number of stages	
Number of Compressors	
MOC	
Driver (Type: Motor or turbine (Backpressure or extraction cum condensing))	
Shaft Power	
Compressor efficiency	
Motor efficiency	
Total power	
Filter	
Type	
Number	
Filtering area	
MOC	
Minimum specifications required for cost estimates or budgetary prices to be provided.	
Miscellaneous Equipment, Specialty items, package equipment	
Minimum Specifications required for costing	

Notes:

1. In case of columns with varying diameters, specify length and diameters of each section.
2. Special requirements for e.g. PWHT, HIC, and NACE etc. shall be specified for each of the equipment. This is required for costing purpose.
3. All items of expensive metallurgy must be defined and any requirement of cladding etc., for equipment to be identified.

6.4.2 Proprietary Equipment/ Items

For proprietary equipment/ items, refer clause 3.3.

6.5 EQUIPMENT LAYOUT

Estimated footprint plot area and preliminary plot plan of the plant showing optimum layout and indicating overall dimensions and locations of major equipment including accesses, operating and maintenance requirements, Analyzer sheds for pollution monitoring etc. as applicable shall be submitted along with the proposal. Licensor shall conceptualize the equipment layout so as to accommodate the facilities in the specified plot size. Licensor shall also furnish the recommended practice to be followed by

owner/ consultant for development of equipment layout. HPG-2nd Stage unit plot dimensions are of 59m x 40m.

Licensors to confirm in the offer that all the inside battery limit facilities can be accommodated in the specified plot size.

6.6 MANPOWER FOR OPERATION

Licensors to provide an estimate of the manpower required for operation of the plant assuming that the DCS Control Panel would be located in a Central Control Room. Indicative maintenance manpower is also to be provided.

LICENSOR to furnish indicative operating, maintenance and laboratory manpower requirement for shift and general shift operation separately. Any other manpower required shall also be indicated by LICENSOR.

6.7 UTILITY DATA

Licensors to provide following information of utilities in the proposal:

- Equipment wise breakup of fuel, steam, power, cooling water and BFW (for heaters, pumps, compressors, heat exchangers, package items etc.) for the design case for both SOR and EOR conditions.
- Efficiencies considered for estimation of power consumption for each equipment and efficiency considered for each fired heaters for estimation of fired duty

6.8 COMMERCIAL INFORMATION

Prices for all supplies, services and proprietary items are to be quoted in the specified format given as Schedule of Prices. The prices shall be quoted in the Priced Bid only.

6.9 COMMERCIAL REFERENCE

Information in respect of the reference operating units shall be submitted as per format given in Annexure-IV D.

6.10 INFORMATION ABOUT LICENSOR

Licensors are required to bring out the salient features of the technology being offered.

The following information/ documents in respect of Licensor's process shall be submitted in addition to filled up Annexure-IV D for all reference units:

- Reference list (complete list of grass root plants licensed by the Licensor) containing details of operating HPG-2nd Stage plants indicating owner, licensed capacity (annualised)/ feed rate, feed type/ quality, product quality, purity, start-up date, scope of Licensor services provided, equipment supplied by Licensor etc. Generally only grass root facilities should be listed. As additional information, Licensor may give separate list of revamped plants, if any, giving details of Licensor's scope of services.
- List of grass root plants currently under design, engineering and construction and their details as in (a) above. Details of revamp jobs presently under design, engineering/ construction should be given separately as explained above.
- Complete list of plants currently under design, engineering or construction based on technology being offered against this NIT as well as their details as per (a) above.
- Certificate from the users on their experience on the units licensed by the Licensor along with documentary proof for licensing of the reference unit.

- e) Reference information about the best commercial plant in operation (at an installation other than that owned by Licensor or its associate companies) for a plant of like capacity, nature of feed, products and which has demonstrated offered process performance. Reference must include plant manager's name, as Licensee may like to visit such plants and expects the Licensor to facilitate such visit. The Licensor shall identify similarities and point out design advances between this reference plant and the proposed plant.
- f) Proposal for potential plants suitable for site visit.
- g) Process/ product catalogues (standard brochures) and relevant recent publications.
- h) Safety and environmental aspects in respect of the offered technology and process scheme.
- i) Experience in the application of DCS and Advance Process control systems.
- j) Details of latest technology developments with reference to reduction in investment, reduction in operating and maintenance costs, product quality improvements, new safety and environmental considerations, new product developments, etc.

6.11 Information on the following shall be provided:

- a. Details of the office which will support the project.
- b. Resume of project manager and lead engineers who will prepare the BEDP for this specific project.
- c. Organization chart of the Licensor's team who will be providing the required services.

Format of all agreements including general terms and conditions by Licensor, if any, which will need to be executed for the contract, for information. The agreement of successful bidder shall be mutually agreed post award.

ANNEXURE-IV A

SCOPE OF BASIC ENGINEERING DESIGN PACKAGE

1.0 INTRODUCTION

- a. The Basic Engineering Design Package (BEDP) shall be prepared conforming to the design cases specified in Section 2.3 with independent:
- Process flow diagrams indicating operating conditions
 - Heat and Material balances
 - Control and Set Point Summary
 - Utility & Effluent summary
 - Catalyst & Chemical summary.
 - Datasheets conforming to the design case and the equipment selection/design case shall be specified in the datasheets.
- b. Licensor to note that the following information (as a minimum) is required to be submitted for check case:
- Heat and Material Balance
 - PFDs indicating operating conditions
 - Maximum throughput achievable and limiting equipments to achieve 100% throughput.
 - All properties of all products.

- 1.1 The Basic Engineering Design Package (BEDP) which will be prepared by the Licensor shall contain adequate process and mechanical design data and information necessary to enable a competent engineering/ construction contractor to undertake and proceed with the detailed engineering, procurement, construction and commissioning of the unit. All documents are to be prepared with sound design and engineering standards followed in hydrocarbon industry. Licensor to note that the BEDP should comprise of all the data that is required to carry out detailed engineering by detail engineering contractor.

Licensor shall agree to sign a Basic Engineering Design Basis comprising of Part-A and Part-B which shall form the basis of BEDP preparation. Part-A design basis constitutes of unit design basis providing necessary data for the specific process unit.

Basic Engineering Design Basis Part-B defines overall project requirements for making all units compatible and ensuring uniform design practices for the total complex. The Basic Engineering Design Basis Part-B shall be furnished to the selected licensor during kick-off meeting and the general requirements of the complex which are applicable to the unit shall be agreed and complied by Licensor. The agreed document shall be signed by Licensor and this will form part of the design basis. All documents in Licensor package shall be in line with agreed PART B. In Case licensor has any issue in following certain design practices outlined in Part B, same shall be discussed during Kick-Off Meeting.

- 1.2 The scope of deliverables shall be in strict conformance with the details given in this document. In case some of the deliverables listed herein do not form part of the usual

basic engineering package, for this specific project, Licensor shall make necessary arrangements to satisfy the complete scope of BEDP as defined herein.

- 1.3 Further Licensor is required to provide thermal designs of all Heat exchangers, air coolers and furnaces, all control valve sizes with expander reducers and all PSV sizes with inlet/ outlet line sizing as part of BEDP. These shall be depicted in the P&ID's provided as part of the BEDP. Hydraulics shall be performed as per the equipment layout agreed and finalized during PFD review stage.
- 1.4 All documents shall be in accordance with the Project specifications. Document numbering and document/ drawing template shall be as per owner's specifications. Metric system of units shall be used for all deliverables (except for pipe and nozzle sizes in inches) with the only exception being extended to Licensors own standards which are issuable with their existing units of measurement. Wherever Licensor's own engineering standards are to be necessarily followed with respect to equipment design, piping design, instrumentation design, etc., the same shall be issued to Owner as part of BEDP at no extra cost.
- 1.5 All documents including draft BEDP issued for review to be submitted in soft form
- 1.6 Final Basic Engineering Design Package (BEDP) and operating manuals shall be submitted in 8 hard copies each. The complete package will also be supplied in editable soft form (native format) for the DEC to update during execution.
- 1.7 Licensor shall provide editable soft copies (in native format) of PFDs, P&IDs and Full BEDP. All Drawings/ documents shall be executed on software such as Microsoft word, Microsoft Excel, AutoCAD etc., as per requirement specified below:
 - All P&IDs to be developed using AUTOCAD (Latest Version)
 - Develop all other PFD's and engineering drawings using AUTOCAD (Latest Version)
 - All drawings to be given in editable soft form.
 - All drawings shall be made in layer concept and not in single layer basis.
- 1.8 Line list and Equipment/ Instrument Data Sheets shall be provided in MS Excel.
- 1.9 The contents of BEDP shall be, but not necessarily limited to, in accordance with the details described in subsequent sections.
- 1.10 Document revision procedure and Change request format shall be established during KOM.

2.0 BASIS OF DESIGN

- 2.1 The Basis of Design (BOD) will provide all the information agreed upon between Licensor and Owner upon which the design and engineering will be based. It will contain the following minimum information as applicable:
 - a) Plant definition including function and scope of the unit.
 - b) Plant capacity, turndown ratio and on stream hours per year.
 - c) Definition of cases (design/ alternate check cases)
 - d) Feed stock source and specifications highlighting limiting specifications and their impact on unit design.

- e) Products and their desired target specifications and destinations.
- f) Estimated and guaranteed products and effluent qualities
- g) Operating conditions of the major equipment
- h) Specific design criteria and basis of selecting critical parameters.
- i) Battery limit conditions.
- j) Utility source and specifications.
- k) Environmental requirements.
- l) Safety requirements.
- m) Codes and standards followed.
- n) Site location and infrastructure requirements.
- o) Local meteorological conditions.
- p) Units of measurement.
- q) Drawing standards.
- r) Special owner requirements, if any.
- s) Schedule of deliverables including advance release of critical Equipment data
- t) Co-ordination procedure

3.0 PROCESS DEFINITION

3.1 PROCESS DESCRIPTION

A detailed process description of the unit following the Process (and Utility) Flow Diagrams shall be provided. This shall also include a description of the reaction chemistry, kinetics, range of critical operating parameters and their impact on product quality and operability, energy consumption, etc.

3.2 PROCESS FLOW DIAGRAM

The Process Flow Diagrams (PFDs) shall show the functionality of the unit, with all process streams, process equipment, main utility streams and process control philosophy. PFDs should be prepared for each of the design and check cases for start of run and end of run conditions.

The following minimum information will be shown on the diagrams:

- a) Process flow with all process streams (including start-up lines) and main utility streams (where they influence process configuration). Intermediate streams such as compressor interstage etc., also to be indicated in the PFD.
- b) Main control loops and instrumentation necessary for understanding the process and utility systems regulation philosophy. Where a PFD is inadequate in explaining the complete control and interlock philosophy or as per Licensor standard philosophy, Process Control Diagrams (PCD) shall be additionally generated and issued along with PFD at review stage itself.
- c) Normal operating conditions of major process streams including temperature and pressure profiles along with flow rates.
- d) Equipment number and equipment name shall appear for all major equipment including number of shells for exchangers and number of bundles for air coolers.
- e) Number of passes and functional outlines of convection and radiation section, coil arrangements consistent with furnace efficiency improvement strategies such as steam generation, steam superheating, etc. for fired heaters.

-
- f) Diagrammatic outlines of columns, vessels and reactors indicating operating pressure and temperature at key locations like top, bottom, flash zone and including details of trays, packed sections and other internals, relative location of feed / product and other nozzles, etc.
- g) Functional depiction of heat exchangers indicating operating duties and types of exchangers such as air cooler, shell & tube, plate or spiral, double pipe etc. Allocation of shell and tube side streams.
- h) Functional depiction of pumps and compressors indicating normal flows and types of pumps and compressors such as centrifugal, reciprocating, etc. Driver details in case of turbine driven (Extraction/ condensing)
- i) All process and main utility streams shall be numbered. The numbering shall correspond to Heat and Material balances. When there is a change in temperature, pressure or flow rate of the stream, a new stream number shall be assigned. The enthalpy and material balance information issued with PFD's shall have complete thermo-physical and transport property data for all numbered process streams.
- j) All incoming and outgoing streams shall be flagged showing battery limit pressures and temperatures and indicating their source/ destination.
- k) Preferably stream details to be provided at the bottom of the each PFD.
- l) Broad specifications of equipment required are as follows:
- **Reactors:**
 - Item number
 - Service
 - Diameter & Height
 - **Columns:**
 - Item number
 - Service
 - Diameter & Height
 - **Vessels:**
 - Item number
 - Service
 - Diameter & Height/ Length
 - **Heat exchangers:**
 - Item number
 - Service
 - Normal duty
 - **Air Cooled Exchangers:**
 - Item number
 - Service
 - Number of bundle
 - Normal duty
 - **Furnace:**
 - Item number
 - Service
 - Normal duty (absorbed / fired)
 - **Pump:**
 - Item number
 - Service

- Rated Capacity
- Differential head
- Power
- **Compressor:**
 - Item number
 - Service
 - Rated Capacity
 - Differential head
 - Power

3.3 OVERALL UNIT BALANCE AND PRODUCT PROPERTIES

An overall unit material balance shall be provided for each of the design and check cases for start of run and end of run conditions. This overall balance shall include all feed streams to the unit and all product streams from the unit. Section-wise material balance and stream-wise material balance report with component break-down shall be provided. It shall also include a list of all relevant product properties.

3.4 HEAT AND MATERIAL BALANCE

Heat and Material Balances shall be provided for all design and check cases, for each revision of PFD and will include as a minimum the following information.

- a) Stream number (corresponding to PFD).
- b) Stream name and phase of fluid.
- c) Total mass & volume flow.
- d) Total Component wise Heat & material balance
- e) Normal operating temperature.
- f) Normal operating pressure.
- g) Density of fluid at operating conditions. (Vapour and Liquid separately also for 2-phase streams)
- h) Specific gravity of liquid components.
- i) Molecular weight of vapour components.
- j) Kinematic Viscosity at operating conditions. (Vapour and liquid separately also for 2-phase streams)
- k) Thermal conductivity at operating conditions. (Vapour and liquid separately also for 2-phase streams)
- l) Specific heat at operating conditions. (Vapour and liquid separately also for 2-phase streams)
- m) Cp/Cv, Compressibility Factor of vapour
- n) Surface Tension
- o) Critical temperature and critical pressure.
- p) Stream composition in both weight and mole basis (Vapour and liquid separately for 2-phase streams)
- q) Stream enthalpy (Vapour and liquid separately for 2-phase streams)
- r) Percentage of free water
- s) True Vapor Pressure
- t) H₂/H₂S content and other corrosive components of relevant streams that may affect the selection of MOC (Vapour and liquid separately for 2-phase streams)

- u) Latent heat of vaporization of each stream.
- v) Distillation data for Naphtha and Heavier streams
- w) Component breakdown for pure/ pseudo components in mole and weight.

For mixed phase streams, the vapour and liquid phases along with above listed properties will be shown separately. For the total stream: average enthalpy, viscosity, mixed density and mol. wt. shall also be given. Weight % of vapour & free water shall be indicated.

PFD shall include overall Material Balance for design/check/operating cases for both SOR/EOR condition.

3.5 PROCESS CONTROL PHILOSOPHY & DIAGRAMS

The control philosophy shall cover complete depiction/ explanation of critical and complex controls of the individual sections of the unit indicating all instrumentation for the unit operations inclusive of start-up, shutdown, emergencies, etc. The description of the control philosophies shall be aided by Process Control Diagrams (PCD). Advanced process control strategies, if employed, shall be specifically elaborated.

4.0 MECHANICAL DESIGN

4.1 MATERIAL OF CONSTRUCTION

Material Selection Diagrams (MSDs) shall be prepared (coloured) showing the design temperature and pressure, and selected materials of construction of all equipment (including internals) and piping including utility side, with corrosion allowance and cladding requirements in sufficient details. Maximum operating temperature scenario shall also be mentioned in the MSD. All equipment data sheets shall clearly detail special requirements if any like Wet H₂S service, NACE, PWHT, H₂ service etc. and other corrosive contents for determining the MOC's. The information on hydrogen content and Hydrogen partial pressure must be included, and requirement of consideration of hydrogen services to be specified. All information for material selection must be included in MSD, P&ID's (in PMS selection) and spec breaks. Equipment datasheets must have complete specification of MOC's as per MSD. MSD's are required for any additional insight.

5.0 UTILITIES, CHEMICALS AND CATALYSTS

5.1 UTILITIES

Utility summary shall be provided to cover estimated normal and maximum utility consumption and/or production of the following utilities at process design/ operating conditions:

- a) Service water (Raw water), if required in process.
- b) Boiler Feed Water.
- c) Demineralised (DM) Water.
- d) Cooling Water.
- e) Steam at each level (VHP/HP/MP/LP).
- f) Condensate (of different types i.e., pure, suspect, surface, etc) at each level (VHP/HP/MP/LP).

- g) Blow down Streams to atmosphere, flare etc
- h) Electric Power*.
- i) Nitrogen (Inert Gas).
- j) Plant Air, if required in process.
- k) Instrument Air.
- l) Fired Fuel Gas/ Natural gas
- m) Bearing cooling water

* Refer to Section-10.1 for electrical power consumption.

The estimates are to be provided as minimum, normal and maximum. Apart from continuous utility requirements, complete data must be given on intermittent utility requirements during start-up, shut down, catalyst regeneration (in case applicable) and emergencies, etc. Some items of the utility summary require vendor design information such as steam for turbines or power for pumps. In such cases, Licensor shall use good engineering judgment or in-house data in arriving at the estimates.

In case due to requirements of the specific process technology or in order to safeguard the facilities by bringing them to a safe shutdown condition, or for any other reason, some utilities (like electric power, cooling water, steam, etc) are required to be made available to the unit during a general power failure, the same shall be clearly indicated by the licensor in the BEDP. The information provided shall cover the following as a minimum:

- a) Names of utilities (like Steam, LT Power, Cooling Water, etc) required during a power failure. Instrument air will be available for 30 minutes after a power failure to facilitate safe shut-down of the unit.
- b) Whether these utilities are required on an uninterruptible basis or they can be restarted after some time upon demand.
- c) Duration for these emergency utilities are required .In case Instrument air is required for more than 30 minutes, same shall be indicated.
- d) Emergency operations to be performed and equipments to be operated using these emergency utilities.

Utility flow diagrams and summary for steam shall be submitted for all possible operating scenarios including start-up, shut down, tripping of steam user, power failure, etc

5.2 CATALYSTS, CO-CATALYSTS, ADSORBENTS, S, ADDITIVES AND CHEMICALS

Complete Catalyst/Co-catalysts properties like trade name, and manufacturers, function, characteristics including bulk density, metal content, gravimetric and volumetric analysis of loaded catalyst, catalyst quantity (including contingencies) for initial load as well as annual consumption, expected cycle length and ultimate life, list of vendors, etc., shall be given. This information will also be provided for additives, adsorbents, s, inert balls and grading materials. Recommended method of loading and disposal methods shall also be provided.

Chemical name, characteristics, function, initial load, annual consumption, handling precautions, injection rate, concentration, etc., shall be given for additives and chemicals. For specialty additives and chemicals, list of vendors needs to be included. Chemical/ additive requirement during normal operation, start-up, shutdown and regeneration shall be summarised.

Licensor shall provide adequate definition of storage and handling requirements, additive/ chemical injection requirements such as normal and maximum dosing rates, delivery pressure and temperature, dosing pattern/frequency, properties which have to be necessarily specified, etc., with which a detailed engineering contractor can develop the full system design without reverting to licensor.

Chemical neutralization/passivation requirements to be identified and suggestions for disposal of passivation effluent to be provided based on earlier experience

MSDS for catalysts, additives, adsorbents, s, speciality chemicals etc. shall be provided.

Licensor shall provide the detailed specifications and specific consumption data of catalysts, chemicals and additives as required (per ton of product). Quantity of different types of fixed bed catalysts shall be indicated in kgs indicating loading density where applicable.

Licensor shall confirm to undertake supply of catalyst as per catalyst supply agreement to be finalized between Licensee and Licensor.

6.0 PROCESS EQUIPMENT DATA

6.1 PROCESS EQUIPMENT LIST

A Process Equipment List shall be provided showing the following information:

- Equipment name/ tag number.
- Equipment type and service.
- Special remarks. This will include information like critical or proprietary items including vendor lists, specific testing and acceptability criteria, if any.
- Whether the equipment is a Long Lead Item.
- Single vendor item should be listed and reason of single vendor to be specified.

6.2 EQUIPMENT SPECIFICATIONS

Specifications for equipment shall be provided with the following, but not limited to, points:

- Each equipment, major as well as minor, proprietary or otherwise, shall be specified through individual Equipment Process Data Sheets.
- Each datasheet shall carry a separate document number and include equipment name, service and identify the case to which the data corresponds.
- Data sheets shall include information on process fluids including physical properties, operating conditions and mechanical design conditions.
- Sketches showing shape, dimensional details of internals and other design information shall be provided for static equipment. Information in the data sheets shall be sufficient to carryout detailed mechanical design.
- Arrangements for steaming/ Vacuum Design/ Nitrogen blanketing of vents, drains, etc., for making the equipment (including heat exchangers) free of hydrocarbons shall be shown in the P&IDs and data sheets.
- Data sheet to be provided for controlling case, Additional cases will be shown for proper design of equipment wherever relevant. Also defined design cases must be included in data sheet. In case intermittent or alternate operating cases (for example catalyst regeneration (if applicable), emergency depressurization, etc)

dictate selection of equipment or some component thereof, then the impact of the same shall be reflected appropriately in the equipment data sheet.

- Equipment list and specifications will be reviewed by Owner and Owner's consultant to identify equipments for which performing fatigue analysis will be necessary. This list will be shared with Licensor and Licensor will provide all data necessary for performing fatigue analysis of these equipments.
- All requirements of Design Basis Part B as applicable to the design of equipments shall be incorporated in their specifications by licensor.
- In case steam tracing is required for some equipment, details of steam coil, i.e., size, pitch, number of turns and number of coils will be included in the data sheet.
- For all equipment to be designed as per Indian Boiler Regulations (IBR) requirements, a note shall be included by the Licensor stating "IBR applies". Details of IBR requirements to be followed will be provided to Licensor during Kick-Off Meeting.

The information to be provided for specific types of equipment is given below:

6.2.1 HEAT EXCHANGERS/AIR COOLERS

- a) For all Heat exchangers and Air coolers, thermal design is included in Licensors scope. The guarantees of the designs also rest with Licensor. HTRI files (Input/ Output) for the thermal design and firm TEMA datasheets (including utility side data) ,tube layout shall be provided as part of BEDP.
- b) Process conditions including fluid flow rates with breakup of vapour/ liquid/ steam/ water/ non-condensables, density, viscosity, thermal conductivity, surface tension (for two-phase conditions), critical temperature and pressure (for re-boiled streams), Mol Wt (if vapour), specific heat, over capacity on flow and duty etc.
- c) Operating temperature and pressure for inlet and outlet streams.
- d) Heat transfer duty and heating/ cooling curves as required. Any limitations with respect to fluid velocity, heat flux, etc. to be included.
- e) Vaporisation & condensation data including critical pressure/ temperatures shall be provided for exchangers encountering two phase flow.
- f) Mechanical design conditions. Licensor shall follow good engineering practice in evaluating system hydraulics and accordingly fix mechanical design conditions. It shall be reasonably ensured that such design conditions will not require to be revised upwards during Detailed Engineering.
- g) Fouling factors
- h) Materials of construction and corrosion allowance (for shell and tube side components).
- i) Type of exchanger/ number of shells.
- j) Insulation requirement and insulation thickness shall be indicated.
- k) Allowable and calculated pressure drop as per thermal design.
- l) Allowable pressure drops as used for thermal designs should be used in unit hydraulics executed by Licensor. When a group of exchangers, say multiple shells in series, together are designed within a pressure drop limit, the same shall be indicated. Any preference/ limitation in stacking of heat exchangers also to be indicated, where applicable.
- m) For proprietary heat exchangers, for which detail/mechanical design are included in Licensor's scope as per agreed scope of engineering services, the details shall be

complete to the extent relevant and necessary for procurement as per industry practice.

- n) Number of fans and sections for air coolers based on thermal design, standard mechanical specifications and design temperature & pressure requirements
- o) Type of control required in air cooler
- p) Schematic arrangement of shells/ bays and special piping requirements for inlet and outlet manifolds etc., if any (for e.g. distance, symmetrical arrangement etc.)
- q) For congealing services, i.e., services handling fluids having their pour point below minimum ambient temperature, LP steam coils for preheating the air to a temperature at least equal to the fluid pour point before it enters the air cooler shall be provided. Hot air recirculation will not be specified for the air cooled exchangers.
- r) Requirement of emergency power supply for air cooler fans.

6.2.2 PUMPS

- a) Process conditions such as minimum, normal and maximum flow rates/ normal & upset suction & discharge conditions/operating temperature & pressure, rated discharge pressure and NPSH available.
- b) Fluid density, viscosity, pour point, vapours pressure and annotations towards presence of toxic, corrosive or erosive materials.
- c) Mechanical design conditions. Licensor shall follow good engineering practice and typical vendor information in specifying these. It shall be reasonably ensured that such design conditions are not required to be revised upward during detailed engineering.
- d) Materials of construction, corrosion allowance of casing & internals and insulation / tracing requirements.
- e) Number of operating & spare pumps.
- f) Type of pumps
- g) Recommended type of pump drive for main and spare pumps and estimated brake KW, assumed efficiency, Estimated utility of driver
- h) Requirement of VFD, Auto start, reacceleration, Emergency power supply
- i) Capacity control and ranges where relevant.
- j) Differential head.
- k) Type of seal (Single / Double) and Recommended API seal Plan
- l) Any other specific construction data (e.g., cooling requirements, external flushing requirements, etc.).
- m) Estimated Shut – off pressures to be reported in pump datasheet.
- n) For pumps in congealing service, pour point to be mentioned in pump datasheet.
- o) For pumps handling sludge / solid particles, details of solid particles such as max concentration of solid handled and max particle size diameter to be reported in pump datasheet.

6.2.3 VESSELS/ COLUMNS/ REACTORS/ DRUMS

This section covers the minimum specifications for reactors, columns, drums required in the BEDP, covering the process design of the vessels including internals (distributor, outlet collector, unloading nozzle, etc.)

- a) Vessel/ Column/ Reactor/ Drum name and tag number, Quantity, Diameter and height or length
- b) Sketches of Vessel/ Column/ Reactor/ Drum layouts showing dimensions, tentative elevations, location of nozzles and man ways, internals such as trays, demisters, packed sections, catalyst sections, collector trays, Tray spacing, number of trays, Key tray numbers and locations, gravity or spray distributors, support grids, type of head, etc. Vessel diameter shall be expressed as ID for vessel shells and OD for vessel boots.
- c) Process design conditions (including Density of liquid at operating conditions). Mechanical design conditions to be reported for both top and bottom of the columns and reactors.
- d) Mechanical design condition (internal and external if any) including recommendations, if any, on jacketing, stress relieving, insulation, surface finishing, etc. Licensor shall follow good engineering practice in evaluating system hydraulics and pressure relieving conditions (including considerations such as impact of vapour blow backs for high pressure vessel to low pressure vessel letdowns) and accordingly fix the mechanical design conditions. It shall be reasonably ensured that such design conditions will not require to be revised upwards in the course of detailed engineering.
- e) Materials of construction and corrosion allowance of shell & internals, Insulation requirements. Cladding requirements, Recommendations for post weld heat treatment, if required for corrosion reason.
- f) Number, type and spacing of trays for towers.
- g) Number, type & height of packed beds.
- h) Elevation, size and service of nozzles.
- i) Process data sheets for trays/ packed bed sections.
- j) Details and design data of other internals like demisters, distributors, linings, etc.
- k) High, low and normal liquid levels in vessels and tower bottoms/ collector trays (including interface levels).
- l) Vapour-liquid traffic data for trays and packed internals, indicating fluid flowrates, operating conditions, fluid density, fluid viscosity, liquid surface tension, allowable pressure drop, vapour molecular weight, etc.
- m) For reactors: Mechanical design conditions (including temperature, pressure drops, loads), and arrangement for reactor internals, catalyst beds arrangement and arrangement drawings for thermocouples and wells in reactors, Catalyst regeneration conditions if applicable.
- n) For columns: Other specific inputs:
 - Additional sketches, as required to show locations, sizes or orientation for particular column components especially for top tray, bottom tray and transition zones (sketches of distributors and redistributors):
 - Type of flow: single, double, 4-way cross flow
 - Typical arrangement of down-comer for top and bottom

- Typical arrangement of inlet/outlet weirs and notching, if required
- Special tray features such as seal pans, draw-off pots when required
- o) For packed columns, sketches of support trays, distributors, redistributors are out of Licensor scope and shall be supplied by packing supplier.
- p) Separate tray design data sheets for each column section, which detail the following:
 - Type of tray (definition of valves, sieve, bubble-cap, or baffle tray)
 - Reference column number
 - Tray number as labeled on column process sketch
 - Inside diameter
 - Normal tray spacing
 - Material of construction
 - Operating temperature and pressure
 - Number of passes
 - Turn down and over-design requirements
 - At normal loading, the vapor and liquid loadings, vapor and liquid density, liquid viscosity, surface tension
 - Allowable pressure drop
 - Design maximum flooding factor
 - Foaming factor
 - Tray support details (in case trays are proprietary or supplied by mandatory vendor)

Separate packing design data sheets for each column section, which detail the following:

- Type of packing
- Reference column number
- Bed number and estimated height
- Inside diameter
- Material of construction of packing
- Operating temperature and pressure
- Turn down and over-design requirements
- At normal loading, the data for vapor and liquid loadings, vapor and liquid density, liquid viscosity, surface tension
- Allowable pressure drop
- Design maximum flooding factor
- Foaming factor

6.2.4 HEATERS

- a) For all Furnaces, thermal designs shall be part of Licensor deliverables including depiction of passes, line numbers, instrumentation etc. against each of the passes. The guarantees of the designs including performance and efficiency guarantees also rest with Licensor. Firm API datasheet shall be provided by Licensor.
- b) Fluid flow rates with breakup of vapor/ liquid/ steam/ water/ non-condensable, density, viscosity, thermal conductivity, surface tension and vaporisation curve correlating pressure, temperature, enthalpy and percent vaporised, Mol Wt (if vapour), specific heat, over capacity on flow and duty, turndown achievable.
- c) Operating temperature and pressure.

- d) Mechanical design conditions. Licensor shall follow good engineering practice in evaluating system hydraulics and accordingly fix the mechanical design conditions. It shall be reasonably ensured that such design conditions will not require to be revised upwards in the course of detailed engineering
- e) Allowable and calculated pressure drop as per thermal design.
- f) Allowable pressure drops as used for thermal design shall be used in unit hydraulics executed by Licensor.
- g) Materials of construction and corrosion allowance.
- h) Fouling factor or expected coke thickness.
- i) Type of heater, e.g., cabin type or vertical cylindrical, natural draft or forced draft, double fired or single fired, etc.
- j) Heat transfer duty/ absorbed heat for each section. Whether limitations such as minimum fluid velocities, maximum heat flux, maximum skin temperature etc., apply.
- k) Fuel data for fired heaters.
- l) Design requirements (e.g. number & size of passes, coil configuration, heat flux and/or velocity limitations, efficiency, excess air, NO_x emission, maximum skin temperature, etc.)
- m) Burners will be designed only with fuel gas firing.
- n) Thermal efficiency of heater and strategies for improving efficiency towards a target of 90% or more. These shall be evaluated in the course of BEDP preparation and review, discussed with owner, and included as directional instructions for detailed engineering contractor.
- o) For heaters included in Licensor scope for thermal/ mechanical design, as per agreed scope of engineering services, the details shall be complete to the extent relevant and necessary as per industry practice and would include detailed evaluation of heater efficiency measures.
 - Conceptual Heater/ APH system P&ID's along with Logic shutdown and heater schematic sketch
 - In case Licensor requires special burners, Details of burner(s) along with details of ignition equipment and flame scanning devices shall be provided. Insulation details, including notes on recommended method of application and precautions, if any.
- p) For CO boilers and waste heat boilers, when envisaged within unit, a duty specification will be provided, A Process data sheet will be supplied with following information :
Service, Type when relevant, Operating Case identification, controlling case for design

6.2.5 COMPRESSORS/ TURBINES/ BLOWERS/ FANS

- a) Gas flow rates with pure component composition breakup, dry and wet molecular weights, range of molecular weights for machine specification, compressibility factor, C_p/C_v ratio, gas density, gas viscosity, etc.
- b) Operating temperature and pressure at inlet and outlet conditions.
- c) Minimum/ normal/ maximum flow rates.
- d) Turndown and turn up ratios.
- e) Mechanical design conditions. Licensor shall follow good engineering practice and typical vendor information in specifying these. It shall be reasonably ensured that such design conditions will not require to be revised upward in the course of detail engineering.

- f) Number of stages
- g) Number of operating & spare units.
- h) Materials of construction and corrosion allowance (casing and internals).
- i) Recommended type of main and spare machine and machine drive including estimated shaft KW, assumed polytropic/ adiabatic efficiency and head,
- j) Estimated utility consumptions,
- k) Recommended seal type,
- l) Dew Point of vapour at each stage
- m) Capacity control mechanism and ranges, where relevant. (Step control process requirements)
- n) Estimated settle out pressure
- o) Anti surge facilities.
- p) Operating conditions for start-up/ regeneration (if applicable).
- q) It is clarified that for multiple stage machines, specification of each stage and of all interstage equipments shall be provided by the licensor and the machine will not be specified as a package unit (with terminal conditions specification and design of all intermittent equipments and piping kept in the scope of others).
- r) For reciprocating compressors, the spill back lines and coolers will be separate for each stage and no clubbing of spillback lines will be practised. Spillback circuits including lines, control valves and coolers shall be specified for 100% of relevant compressor stage rated flow through spillback.
- s) For centrifugal compressors, the anti surge circuit including line, control valve and anti surge cooler, if applicable, shall be sized for minimum 100% of relevant compressor stage rated flow. In case anti surge cooler is specified, the same shall be specified as cooling water cooled exchanger. These specifications will be further reviewed and updated by the compressor vendor during detailed engineering.
- t) For centrifugal compressors, in case free draining of inlet and/or outlet lines of some or all stages is required away from the compressor, a note shall be provided as follows: "In case of bottom entry and/or bottom exit compressor, low pocket(s) with appropriate draining arrangements to closed blow down system shall be provided to limit the elevation of the compressor to reasonable levels."
- u) Type of compressor, if the machine is lubricated or non- lubricated based on the service required.

6.2.6 FILTERS/ STRAINERS

- a) Design flow rates, fluid density and viscosity, pour point and annotations towards presence of toxic, corrosive and erosive materials. Adequate particle size distribution and % solids data shall be included for design of filters.
- b) Operating temperature and pressure, allowable system pressure drop, filtration efficiency, etc.
- c) Mechanical design conditions. Licensor shall follow good engineering practice and typical vendor information in specifying these. It shall be reasonably ensured that such design conditions will not require to be revised upward in the course of detail engineering.
- d) Materials of construction and corrosion allowance of filter casing & internals and insulation / tracing requirements.
- e) Type of filter.
- f) In case of automatic backwash type filter: maximum flux rate, information on backwash system design like applicable back wash fluid (i.e., filtered fluid or external fluid), frequency of backwash, supply and return pressures of backwash

fluid, size of backwash fluid supply/ return holdup & pumping arrangements, etc. P&IDs and datasheets for equipment in backwash handling system shall also be provided.

- g) Noise limitations (if applicable).
- h) Mesh Size, filter feed particle distribution.

6.2.7 MIXERS

- a) Process design conditions.
- b) Mechanical design conditions.
- c) Materials of construction.
- d) Type & extent of mixing action.
- e) Type of mixer and driver (if applicable).
- f) Power consumption (if applicable).
- g) Noise limitations.
- h) Allowable pressure drop in mixers.

6.2.8 MISCELLANEOUS EQUIPMENT

The datasheets/ characteristics for miscellaneous equipment (chemical injection system, vacuum system, ejector, eductor, desuperheaters, flame arrestor, silencers or any other miscellaneous equipment envisaged in the unit) shall be provided. This shall also include process performance specifications, fluid properties as relevant, mechanical design conditions, materials of construction and corrosion allowance, power consumption (if applicable), noise limitations (if applicable), etc. Licensor shall follow good engineering practice and typical vendor information in specifying these.

Datasheets for Chemical injection facilities (data sheet of vessels, pumps, metering, unloading facility etc) in detail shall be provided. Licensor shall provide adequate definition of chemical injection requirements such as normal and maximum dosing rates, delivery pressure and temperature, properties which have to be necessarily specified, etc., with which a detailed engineering contractor can develop the full system design without reverting to licensor.

Datasheet for Specialty piping items (mixers, injection nozzles, low delta P check valve, etc.) to be provided in BEDP.

7.0 SAFETY, HEALTH & ENVIRONMENT

7.1 HAZARDOUS CHEMICALS

Physical and chemical properties of all hazardous chemicals and streams present in the unit shall be defined and provided in completeness. The applicable Material Safety Data Sheets (MSDS) shall be included. In case, any additional MSDS is required for any intermediate stream handled within the unit during detail engineering, the same shall be furnished to Licensee by Licensor without any extra charges.

7.2 SAFETY REQUIREMENTS

Design shall incorporate latest features of environment protection & occupational safety. It shall incorporate various safety features in line with international safety

standards and design practices. These should include but not limited to following provisions.

- a. Necessary interlocks and automation to enhance operational safety.
- b. Special safety requirements such as leak detectors, snuffing rings around leak prone flanges and online analyzers required during operation, decoking etc.
- c. Provision for H₂S, hydrogen and hydrocarbon detectors in the platform or location where operators will be required to approach during operation/ maintenance.
- d. Special fire fighting and safety system as necessary.
- e. Measures for handling of emergency shut-down; shut down valve required for emergency isolation/ inventory containment shall be evaluated and specified on the P&ID wherever required.
- f. Smart positioners for Emergency Shut Down (ESD) valves.
- g. In-built facilities for safe guarding the process system in any type of emergency/ failure.
- h. Use of combustion and burner technology to achieve low levels of noxious components in the flue gases.
- i. Closed sampling systems.
- j. Audio visual alert devices, Safe positioning of control panels.
- k. Necessary interlocks with appropriate SIL ratings to enhance operational safety
- l. Barrier walls, fire walls at elevators and stairways
- m. Open deck piping layout which are ergonomically designed
- n. Clean lanes for emergency exit.
- o. Design of overpressure relieving systems based on international safety standards/ codes.

The following shall be provided by the Licensor in their design.

- Special safety requirement such as Hydrogen/ H₂S/ Hydrocarbon leak detectors
- Snuffing steam rings around leak prone flanges etc. to be indicated wherever necessary. The number required along with the location to be identified.
- Guidelines for any specialized fire protection and gas detection system for protection of equipment and personnel shall be provided. A conceptual layout & design of any specialized fire-fighting system and personnel protective facilities to be provided by Licensor, showing recommended sensory instruments, protective apparatus etc.

P&ID furnished in the Process Package would incorporate preventive measures for the identified hazards based on HAZOP studies conducted by the Licensor. Licensor shall ensure to the effect that the design of the unit is safe for operation. However, during detailed engineering, the identified hazards will be analyzed and preventive measures will be incorporated in the design to prevent the hazards. Licensor to include data on release rates, conditions etc. for hazardous release cases, so as to enable carrying out consequence analysis using Dispersion Model.

BEDP shall contain a description of the major potential hazards and safety system employed to control those potential hazards and sufficient information for HAZID.

BEDP shall specify the Safety Integrity Level (SIL) for the design of the unit. System shall be designed for appropriate SIL rating required as per accepted international practices/ standards.

7.3 PLANT WASTE EFFLUENTS

All unit waste effluents and by-products (gaseous, liquid and solid) produced continuously or intermittently shall be identified and estimated quantity and quality shall be described (physical and chemical characteristics in format by Owner). For intermittent users frequency with quantity shall be specified. Recommended treatment/disposal methodologies shall be given. An estimate of emissions, leaks and losses of chemical compounds shall be provided.

7.4 FLARE LOAD SUMMARY

For gaseous effluents connected to flare, a summary of flare loads shall be provided which will summarise the unit flare load for all relevant cases such as cooling water failure, general power failure, fire case, blocked discharge, any operational failure etc. . General power failure shall mean complex wide power failure including cooling water failure. Loads like venting of Hydrogen and any other gases during start-ups and emergency depressurizations etc. are to be provided to enable design the flare network and stack accordingly.

Flare mitigation measures will be adopted to bring down the relief loads from the unit, with the instrumented reduction of flare load, studies like HIPPS (High Integrity Pressure Protection System) and SIL (Safety Integrity Level) shall have to be carried out in BEDP in order to ensure safety of the plant under various eventualities.

To reduce the resulting flare load, highly reliable safety Instrumented systems (SIS) will be adopted that take action during a global overpressure event to reduce the number of pressure relief devices discharging concurrently.

Licensors to carry out Flare mitigation study for minimising flare load from the unit as a part of BEDP without any extra implication to the Owner.

Flare mitigation study will be provided as a report which would be finalized with the licensor during P&ID review. The recommendations/ provisions of this report (Hardware, instrument, specifications etc.) finalized thereof shall be incorporated by the licensor in P&IDs and other documents of the BEDP.

Licensor will provide unmitigated as well as mitigated loads for PSVs of the mitigated services for both liquid and vapor based on the agreed mitigation philosophies. The flare mitigation strategy will be applicable for both vapour as well as liquid Loads.

8.0 PIPING & INSTRUMENTATION DIAGRAMS

8.1 PIPING & INSTRUMENTATION DIAGRAMS

Piping and Instrumentation Diagrams (P&IDs) of the unit shall be provided. The purpose of P&IDs is to allocate, identify and specify all piping items and instruments in the unit, consistent with the process flow scheme on the PFDs. The P&IDs shall include all process lines, utility lines to individual process consumers, all start-up/shut down lines, instrumentation for control, monitoring and interlocks.

P&IDs, equipment numbering, equipment naming, instrument numbering and line numbering philosophies and symbols /legends shall be as per Owner's system which shall be provided at the time of Design Basis finalisation.

Licensor to develop P&IDs in AUTOCAD (Latest version).

The following information, as a minimum, shall be included in the P&IDs by Licensor:

8.1.1 PIPING

- a) All process lines required for all operating modes of the unit including normal operation and abnormal conditions such as start-up, shutdown, flushing and regeneration, if applicable. Lines traversing between P&IDs as well as lines at unit battery limits will bear flagged connecting arrow-boxes.
- b) All utility lines with line number, size, piping class and insulation type required to individual process consumers. It stands clarified that a cooling water line to an exchanger such as product cooler is a process service and will have to be shown whereas cooling water line to a pump casing cooling is a non-process service and need not be shown. Also, utility distribution P&ID, showing unit utility headers and connections as per equipment layout, is excluded from Licensor's scope.
- c) Line size, Line number & piping class designation and insulation types for all process lines, process drain/ vent lines and utility lines. Line numbering philosophy shall be as per owner.
- d) Separate line numbers to be provided for individual pump suction and discharge lines or inlet/outlet lines of any spare/ standby equipment, and lines connecting number of shells of heat exchangers as applicable. For air cooler bundle inlet and outlet, separate line number to be adopted with appropriate spec breaks (if required) (in general, separate line number is to be provided wherever line crosses any equipment, piping spec break and for all branch lines including drain and vent) . The detailing of Line numbering philosophy will be worked out during KOM in detail.
- e) Special piping items, like valves, spool pieces, spectacle blinds, process drains, vents, etc. will all be indicated. Owner shall furnish his own standard details for selected licensor to review and follow as agreed upon.
- f) Pressure relief valve inlet and outlet piping sizes and annotations towards location relative to connected equipment.
- g) Insulation, heat tracing (steam or electrical) and jacketing wherever required for process reasons.
- h) Requirements for sampling to be indicated. List and types of sample connections to be used based on Owner/ licensor standard drawings and specifications to be indicated in P&IDs.
- i) Special arrangements like relative elevation differences of lines, sloping of lines, hot or cold flushing, purge/blanketing, minimum distance requirements, etc. shall be clearly identified wherever relevant.
- j) Two phase line to be clearly identified with a note specifying appropriate supporting requirements for the same.
- k) Lines for alternate destination, off-spec (to be reviewed and approved by LICENSEE)
- l) Equipment by-pass lines for alternate operation (to be reviewed and approved by Owner as well as Licensor)
- m) Spec breaks, insulation break to be clearly indicated for all the lines.
- n) Requirement for flushing oil injection on lines handling high pour point fluid
- o) Details of injection points to be provided wherever required.
- p) Valving: Air failure position of control and on/off valves, TSO requirements for on/off valves or control valves, LO/LC requirements, Check valves required on process lines, Check valves required on utilities lines(excluding utilities distribution Network), Control valve bypass, Hand wheel, Mechanical or key interlocks, Limit switches, Actuator type pneumatic/electric etc.
- q) Fittings: Spectacle blinds on lines used only for Start-up and Shutdown, Spectacle blinds required for positive isolation between two process fluids, spectacle/ spacer blinds for equipment isolation for positive isolation/ maintenance.

- r) Any Special valve trim, in case required.
- s) All the details indicated in the legend P&ID or elsewhere in the P&ID shall be cross referenced at relevant location as part of P&ID.
- t) Special piping items (Special Valves, low pressure drop check valve, injection quills etc) shall be provided with tag number and indicated in the P&ID. Datasheet for the same shall be provided.
- u) Single interface P&ID indicating all incoming and outgoing lines from the unit along with their battery limit isolation valve assemblies.
- v) IBR requirements as applicable to piping and instrumentation will be followed in the P&IDs. IBR requirements will be informed to Licensor as part of BEDB Part B during the Kick-Off Meeting.
- w) Interface P&IDs showing all lines (process and utility) entering or leaving the unit along with their battery limit instruments and isolation arrangements shall be included in the BEDP.
- x) Inventory Isolation valves, as applicable, to be provided in P&IDs. ESD on pump suction where rotary equipments are operating with Hydrocarbon fluids above auto ignition temperature, as applicable to be provided.

8.1.2 INSTRUMENTATION

- a) All instruments with their tag numbers for all operating modes of the unit including start-up, shutdown and emergency situations. Signals traversing between P&IDs as well as at battery limits will bear flagged connecting arrow-boxes.
- b) All instruments required from a process stand point on utility lines to individual process consumers. Definition of a process service is as defined above for piping.
- c) Instrument number, instrument designation as per ISA, insulation/ tracing requirements for all instruments. Instrument numbering philosophy shall be as per Owner's system. All instrument P&ID symbols shall follow ISA symbols.
- d) Control loops and instruments for proper and safe operation.
- e) Size and air failure position of control valves. Type of control valve manifold either in the P&ID itself or as a legend referring to a specific table of valve size vis-a-vis manifold valve sizes to be followed.
- f) All control valve sizes to be incorporated in the P&IDs along with the depiction of the required reducers and expanders.
- g) Clear identification of all hardware and software instruments both in field and in control room, philosophy of automated trips and start-ups, alarms, etc.
- h) Set pressure and recommended size of pressure relief valves.
- i) All PSV sizes to be incorporated in the P&IDs along with the inlet and outlet line sizing/ numbering and piping spec break wherever applicable by Licensors. Rupture disk to be provided for PSVs, if required based on the process conditions and fluid properties being handled.
- j) Owner's philosophy towards use of single tapping points for multiple instruments, permitted use of a transmitter signal for both monitoring and interlocking, etc. shall be adopted after review.
- k) Additional instrumentation for flare mitigation as agreed and instruments as required for operation as per owner's requirements to be incorporated with tagging and specification.
- l) Process switches, shall be realised only through field transmitters.
- m) All instruments required for demonstrating performance guarantees of Licensors shall be ensured by the Licensor in the P&IDs.

- n) In case locked open (LO) gate valves are provided on the inlet and/or outlet lines of safety valves, the same shall be arranged with their stems either in the horizontal or in the vertically down position so that breakage of stem and falling of gate does not block the PSV discharge line.
- o) A summary I/O count for the Distributed Control System/programmable logic controller shall be furnished.
- p) Analysers/ sample connections supply and return tapping shall be indicated in P&IDs.

8.1.3 EQUIPMENT

The equipment on the P&IDs will show the tag number and service name, mechanical design pressure and temperature of all equipment (major as well as minor, normal as well as spare) along with the following data in line with the information provided on equipment data sheets:

- a) Functional outline sketch of equipment as per legends (using licensor's symbology of depicting equipment) showing all connected process and process related utility piping and nozzles
- b) Columns: Diameter, height, all nozzles, Manholes, Drain, vent (connected on pipe by default), Utility connections (only nozzle and isolation valve), Steam out connections to columns, Tracing/Steam coil, Columns major Internals (columns shall be shown on P&IDs in accordance with general arrangement of column Data sheet, except for trays. For trays show transition zones, draw off, top, bottom, feed and reflux trays and whenever required for instrument localization). Vortex breakers shall be shown. All internals such as trays, demisters, packed sections, collector trays, gravity or spray distributors, etc. shall be shown.
- c) Vessels/ Reactors: Diameter, length/ height. All nozzles, Manholes, Drain, vent (connected on pipe by default), Utility connections (only nozzle and isolation valve), Steam out connections to vessels, Tracing/Steam coil, Drums internals including demisters, baffles etc (drums/ reactors shall be shown on P&IDs in accordance with general arrangement of drum/ reactor Datasheet). Vortex breakers shall be shown. Dryers and reactors major internals to be shown.
- d) Heat exchangers: Rated heat duty, type of equipment, etc. Number of shells with piping arrangement, line numbers, instrumentation details etc. (coldest shell is tagged as "Shell A". For utilities, cooled fluids will be shown from top to bottom and heated fluid from bottom to top. For process fluid, no specific recommendation. Stacking of shells where relevant. Line numbering for lines connecting two shells (if these are not stacked). Detail piping arrangement for exchanger shells.
- e) Compressors: Type, Rated volumetric flow rate, differential pressure/ head, Strainers, Motor/Steam/Gas turbine, Power recovery turbine as applicable, Nitrogen and Flare connection lines (process purpose)
- f) Pumps: Type, Rated volumetric flow rate, differential pressure/ head, Strainers, Steam/Gas turbine, Power recovery turbine, as applicable.
- g) Air Coolers: Complete information related to this on the P&IDs like: Number of air cooler bundles, Inlet and outlet line numbers from each bundle and the complete detailed piping arrangement, Instrumentation and control system, line numbers, instrumentation details etc. as per agreed philosophy: Variable Speed Driver, Variable Pitch (if required for process reasons), Vibration switches on each fan to trip respective fan on sensing high vibration.
- h) Fired Heaters: Typical representation, Number of heater passes, with dedicated line numbers and instrumentation for common feed/transfer line as well as for each passes, Neutralization nozzles (if applicable), Instrumentation and control system on process side (including skin Thermocouple). Any additional instrument in flue gas side as applicable.

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- i) Filters: type etc., instruments required and safety valves.
 - j) Miscellaneous:
 - Vendor Packages (shown as a empty box) with the connection of the minimum instrumentation and control required from process point of view.
 - Desuperheater's representation.
 - Silencers representation (shown only after ejectors)
 - Flame arrestors representation
 - Static mixer representation
 - k) Position and elevation requirements. For vessels with connected pumps, this elevation will correspond to equipment elevation in equipment layout after ensuring that pump NPSHA requirements have been met.
 - l) Type and number of static and rotating equipment with driver type.
 - m) Insulation/ tracing requirements.
 - n) All equipment required in the unit, major as well as minor, normal as well as spare, shall be shown in the P&IDs.
 - o) Licensor shall indicate the number of stages along with interstage coolers and knock out drums in the P&ID's including all the instrumentation and piping requirements.

8.2 PROCESS CAUSE AND EFFECT DIAGRAM

A Process Cause and Effect Diagram (PC&ED) shall be provided. The PC&ED gives an overview of the process related safeguarding controls ("trips" or "shutdowns") as described in the Process Control Philosophy and shown on the P&IDs.

The PC&ED shows causes (e.g.: high pressure protection by a switch) and their effects (e.g.: plant depressurizing, compressor trip) in the form of a matrix-diagram.

The PC&ED forms the basis for the detailed design of the safeguarding system and has to be considered as an integral part of the P&IDs.

8.3 INTERLOCK DESCRIPTION AND LOGIC DESCRIPTIONS

Interlock descriptions and logic descriptions shall be provided. Logic description shall indicate the emergency shutdown causes and the effects on the emergency shutdown valves as installed in the unit. Control algorithms of special loops, if any, used for operability/ optimization will be provided with explanation.

Minimum SIL requirement for each Safety Instrumented System (SIS) shall be identified by Licensor.

9.0 PLANT DESIGN

9.1 EQUIPMENT LAYOUT

A conceptual equipment layout for the unit with major dimensions showing all process equipment, accessories and battery limit shall be provided 2 weeks before PFD review meeting. The equipment layout shall meet all stipulations of Oil Industry Safety Directorate (OISD 118). This drawing shall include the following:

- Specific location of equipment based on construction/ operating/ maintenance requirements, and on safety aspects taking into consideration owner's broad requirement towards inter equipment distances and other applicable safety norms, codes, standards/ guidelines.
- Plant limits and overall dimensions.
- Access roads and surrounding roads.

- Main pipe racks and main structures.
- Plant North, actual North and predominant wind direction data furnished by owner.
- Catalyst loading/unloading/exchanger tube pull out/column internals drop zone shall be also considered while preparing equipment layout.

A dimensional equipment layout for the process unit shall be prepared by the licensor and duly agreed between licensor and owner/ owner's consultant at the time of PFD completion milestone. This layout shall be part of BEDP provided by licensor.

Licensor's hydraulic calculations have to necessarily correspond to this dimensional equipment layout and Licensor will ensure that all hydraulic calculation data (pump/compressor head, line sizes, control valve pressure drops, etc.) provided by the Licensor in BEDP will be as per this dimensional layout.

Licensor shall review and approve the final unit plot plan developed during detailed engineering.

9.2 CONCURRENT ENGINEERING

Concurrent engineering will be carried out by owner/ consultant during plot plan, hydraulics and equipment datasheet preparation. Licensor has to provide all the input/ assistance parallel to BEDP preparation. Modalities will be decided at kick off meeting. Licensor shall ensure that process data sheets along with P&ID's for LLI items are provided to owner/ consultant for concurrent engineering.

9.3 PIPING SPECIFICATIONS

Licensor shall employ Owner's Piping Material Specification (PMS) to standardise the design which would be provided to Licensor at the outset of the project. Licensor is obliged to provide his observations on Owner's PMS and deviations required therein to meet Licensor's requirement prior to the stage of BEDP finalisation. Equivalent Line Class will be jointly developed by Owner and Licensor. Requirement of special services, NACE, PWHT, wet H₂S, Hydrogen service to be included in the PMS suitably.

P&ID's, line list and all other documents shall indicate owner's PMS. Piping specifications shall be provided based on fluid properties, corrosion allowance, operating and design pressures/ temperature. Specifications will also indicate nominal size, rating and wall thickness (schedule), valving and welding requirements, gasket types, flange facings and reinforcing requirements, if any. Requirement of special valve (if there is any) must be shown on PID and tagged suitably. This section shall also contain specifications for relief valves, ejectors, strainers and where required, special check valves, expansion joints etc.

9.3 LINE SCHEDULE

Line Schedules shall list all lines shown in the P&IDs and include line number, service, description, line size, piping class designation, starting and ending points, operating/ design conditions, upset condition temperature and pressure (when exceeding mechanical design conditions), steam out requirement (if applicable) and flow regime (slug flow etc.), velocity, pressure drop, material specification, tracing and insulation designation and details of any special piping items. Line Schedule to categorically identify two phase flow lines and provide the required data like vapour flow rate and density, liquid flow rate and density, mixed density etc. Two phase flow with vapour fraction needs to be specifically identified by licensor in line schedule.

9.4 INSULATION SPECIFICATIONS

Specifications for the various insulation types covering the requirements of all equipment and piping shall be provided.

10.0 ELECTRICAL AND INSTRUMENTATION

10.1 ELECTRICAL

A summary of all process electrical consumers and their estimated normal and maximum power consumptions shall be provided. Consumers requiring emergency power shall be indicated and specification for emergency power shall also be furnished.

10.2 INSTRUMENT DATA SHEETS

Process data sheets for all instruments covering all instrument loops (open or closed and field or control room) indicating main components, operating conditions, special conditions, etc. shall be provided. Instrument list with process data (tag no., min. value, low and high alarm limits, engineering units) shall also be supplied in the package.

Instrumentation and controls specifications for all in line instruments (such as flow instruments, relief valves and control valves, etc., on stream analyzers, alarm and shutdown systems) shown on the P&IDs shall be provided. Process datasheets to be provided for all the following types of instruments:

- a) Flow
- b) Level
- c) Pressure
- d) Temperature
- e) Control Valves
- f) Safety Valves
- g) Analyzers
- h) Gas Detectors
- i) Other Miscellaneous instrumentation (as applicable)

Instrument data sheets shall provide for the specification of service indicating normal, steady state the applicable operating conditions and physical properties of process streams, mechanical design pressure and temperature.

All the above instrument datasheet {item a) to item i)} shall specifically cover the steam out requirement, if applicable.

Datasheets and arrangement drawings shall be provided for thermocouples and thermowells in reactors.

For all instruments to be designed as per Indian Boiler Regulations (IBR) requirements, a note shall be included by the Licensor stating "IBR applies"

For the specific types of instruments, the following minimum information shall be provided in the Instrument Data Sheet:

10.2.1 CONTROL VALVES

For control valves, information supplied in the control valve process data sheets shall contain the following minimum:

- Tag number, location, flow rates (minimum, normal and maximum),
- Applicable flowing operating conditions with operating range, (minimum/normal/maximum)

- Properties at flowing conditions (density and viscosity for liquids, molecular weight and compressibility factor for gases, whether liquid is congealing,)
- Mechanical design conditions
- Pressure drop at minimum/normal/maximum flow
- Valve specific characteristics (Fail safe position, limit switches, tight shut-off, hand wheel and solenoid requirements etc.).
- Applicable maximum differential pressure with valve closed
- Control valve size, mechanical limit stops (if applicable), spring action, etc.

Licensors shall carryout sizing of control valves and incorporate these sizes in the P&IDs final issue.

10.2.2 SHUTDOWN VALVES

Tag number, location, operating & mechanical design conditions, air failure position, mechanical limit stops (if applicable), action, quick opening/closing requirement (if applicable), leakage class, limit switch requirement (if applicable), requirement of smart positioners (if applicable) etc.

10.2.3 SAFETY/ RELIEF VALVES

Tag number, location, sizing flow rates, set pressure, operating & relieving conditions, allowable over pressure, density and viscosity and other characteristics (such as congealing nature etc.) for liquids, molecular weight and compressibility factor for gases, all other applicable physical properties of relieving streams are to be provided in each emergency/ Relieving cases (including fire case) as applicable for the service, valve size, recommended orifice size etc.. In the case of flashing liquid discharges, outlet condition liquid and vapour flows and physical properties will be provided for the project specified superimposed back pressure.

Licensors shall carryout sizing of safety valves and incorporate these sizes in the P&IDs final issue.

10.2.4 ANALYZERS

Tag number, location, type of analyser, composition of fluid to be analysed, physical properties to be analysed, ranges of measurement, density and viscosity for liquids, molecular weight and compressibility factor for gases, operating & mechanical design conditions, alarm set point, control set point, etc. Composition of the fluid shall be indicated in terms of mol% for vapours and wt% for liquids. Type and details of on-line analysers and their desired range of measurement during normal operation, catalyst regeneration, start-up etc. should be clearly mentioned.

10.2.5 TEMPERATURE AND PRESSURE INSTRUMENTS

Tag number, location, ranges, fluid properties data, operating & mechanical design conditions, alarm set point, control set point, etc. as minimum. Data for performing wake frequency calculations like velocity, etc shall be provided for all thermowells.

10.2.6 FLOW INSTRUMENTS

Tag number, location, flow rates (minimum, normal & maximum), allowable pressure drop, density & viscosity , special properties (such as congealing nature etc.) for liquids, molecular weight and compressibility factor for gases, operating & mechanical design

conditions, alarm set point, control set point, recommendation for type of instrument, recommended orifice size etc.

10.2.7 LEVEL INSTRUMENTS

Tag number, location, upper and lower fluid density & viscosity, whether fluid is congealing, operating & mechanical design conditions, alarm set point, control set point, etc. Type of instrument and dielectric constant for radar type instrument shall be provided.

10.2.8 Alarms and shutdowns:

Prepare a preliminary alarms and shutdowns summary of general instrumentation with set points for alarm trips and alarms shown on P&IDs.

10.2.9 Analyzer Points:

List and types of sample connections to be used based on LIENSOR standard drawings and specifications.

10.2.10 Hand switches process data sheets: Provide list.

10.2.10 OTHER MISCELLANEOUS INSTRUMENTS

Tag number, location, process performance specifications and fluid properties as relevant including physical properties, operating & mechanical design conditions, alarm set point, control set point etc.

10.2.11 SAMPLING POINTS

List and types of sample connections to be used based on LIENSOR standard drawings and specifications.

10.3 GENERAL INSTRUMENT SPECIFICATIONS

- Centralized control center shall have DCS to support Foundation Field Bus (FF Bus) technology. All field instruments shall be compatible with FF Bus technology with digital signal processing.
- Instrument Technical specification and Instrument data sheets shall be provided in BEDP according to FF Bus technology. However, FF Bus technology shall be excluded for ESD, Fast loops like compressor controls, Critical process loops where faster execution time is recommended and for analyzers.
- Hardware (Instruments) required for future APC implementation to be included as per Licensor's experience.
- Functional Schematics for Complex schemes with complete description and write-up shall be provided.

11.0 SUPERVISORY OPERATING MANUAL

The supervisory manual will refer to process description and shall contain the following as a minimum:

- Processing objective of plant along with brief details of the project/ Unit like capacity, Feed/ product properties etc. as a minimum
- Process description along with process chemistry and kinetics

-
- Advanced technical features of the process
 - Impact of variation in feed characteristics
 - Operating variables and their effect on unit operation
 - General Equipment operating procedures along with Equipment list with broad specifications
 - Description of instrumentation, interlocks and permissives, control narratives
 - Procedure for preparation of start-up (pre-commissioning and commissioning)
 - Bar chart indicating each activity against time required (proposed) for start up
 - Procedures/ operating instructions for normal operation, start-up, short-term shutdown, planned long-term shutdown and emergencies
 - Troubleshooting in various scenarios
 - Catalyst loading/ Unloading, handling and regeneration procedures, if applicable
 - Special procedures as applicable to heaters (e.g.: decoking), reactors, etc.
 - Emergency & safety information
 - Description of normal operating practices along with Normal operating parameters
 - Operating flexibilities
 - Recommended laboratory test procedures, Licensors' own procedures if different from ASTM methods, frequency of analysis, parameters to be analysed for feed streams, products & intermediates
 - Safety data and other process safeguarding devices
 - Guidelines for troubleshooting individual problems along with possible causes and remedial actions against each shall be specified.
 - List of alarms and trips
 - Start-up diagrams
 - Brief write up on Health, Safety and Environment safeguard

The manual shall be adequate for the Owner or Detailed Engineering/ Procurement/ Construction contractor to develop a detailed operating manual subsequently. Licensors shall review the manual so developed.

12.0 SPECIAL EQUIPMENT

Datasheets/ specification for special equipment for operation of the unit shall be provided. Details of such equipment including process, instrument, mechanical, metallurgical, electrical, structural etc. aspects shall be provided completely to enable Owner to obtain offers without requiring any further engineering by Owner/ Detailed Engineering contractor and also take up erection/ execution subsequently. The list of such special equipment shall be finalized during Design Basis finalization.

ANNEXURE-IV B

TIME SCHEDULE

Time Schedule for preparation of BEDP, completion of Detailed Engineering and release of deliverables by Licensor are as follows from the date of finalization of design basis (from Zero date):

Sr. No	Activity	Schedule (in Week) w.r.t LOA
1.	Kick off meeting and Design Basis Finalization (Note 1)	Within 2 weeks of issue of LOA
2.	Heat & Material Balances and Process Flow Diagrams (PFDs) for Owner/consultant review	6th Week
3.	Indicative Equipment Layout	6th Week
4.	PFD Review by Licensor/Consultant/Owner	8th Week
5.	Finalization of dimensional Equipment Layout	8th Week
6.	Release of all critical & LLI equipment Datasheets(Note-3)	9th week
7.	Finalization of LLI datasheets	10th week
8.	Utility Summary	11th week
9.	Submission of Thermal Design of Heaters/ Exchangers/ Air coolers	11th week
10.	P&IDs with preliminary HAZOP incorporated for Owner review(Note-4)	12th week
11.	Balance Equipment Datasheets	13th Week
12.	P&ID Review by Consultant/Owner	14th Week
13.	Cause & effect Diagram	15th Week
14.	Mechanical Design Drawings/ Datasheets , where applicable	16th Week
15.	Final BEDP (Rev 0) submission for owner/consultant review(soft copy)	18th Week
16.	Owner/Consultant comments(soft copy)	19th Week
17.	Updated BEDP(soft copy)	20th Week
18.	Operating Instructions/ Laboratory Manual	21st Week
19.	BEDP hard copies	22nd Week

Notes:-

1. Kick-Off Meeting for Finalization of Design Basis will be considered as "Zero date" for Licensor, the same will be held within two weeks from the date of issue of Fax/ Letter of Acceptance in which design basis shall be finalized. In any case, "Zero Date" for the project shall start latest by 2nd week of issue of Fax / Letter of Acceptance (in case KOM is not conducted within 2 weeks due to any limitation from Licensor side)
2. "Weeks" refer to calendar weeks after the zero date.
3. The list of long lead items and other major equipment to be indicated in the bid and to be finalised in the Kick of Meeting.

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4. P&IDs shall be submitted for review incorporating line size, line number and piping material specifications for all lines. Also Material flow diagram shall be submitted along with P&IDs for review of PMS.

(SIGNATURE OF LICENSOR)

ANNEXURE-IV C

TECHNICAL INFORMATION AND PROCESS PERFORMANCE GUARANTEES

1.0 Feed rate, Kg/hr & KTPA

- Design: -----
- Guaranteed: -----

2.0 TurnDown

- Guaranteed: -----

3.0 Feedstock Data

Feed quality considered for the design: (in tabular form indicating properties of individual feed component as well as that of feed-blend including detailed component breakdown in wt%).

4.0 Feed Impurities

The maximum permissible limits of impurities up to which the cycle length and catalyst life mentioned in the document does not get affected.

Table 1A: Feed Impurities

Sr. No	Feed Impurities	Design	Permissible limit
1	Existent Gum, mg/100 ml		
2	Antioxidant, ppmw		
3	Any other impurities		

Licensors to confirm/specify dosing of antioxidant in 1st stage hydrogenated pygasoline (SC pygasoline)

Licensors to estimate & specify the permissible limit of any additional feed impurity not available in the above tabulation but may be critical for unit design and indicate the same in the offer.

Table 1B: Make up Hydrogen Impurities

Sr. No.	Make up Hydrogen Impurities	Design	Permissible limit
1.	Nitrogen, ppmv (max)		
2.	Water, ppmv (max)		
3.	CO+CO ₂ , ppmv (max)		
4.	Chlorine & Chlorides, ppmv (max)		
5.	Methane, vol% (max)		
6.	H ₂ S, ppmv (max)		
7.	HCl, ppmv (max)		
8.	COS, ppmv (max)		

Licensors to estimate & specify the permissible limit of any additional feed impurity not available in the above tabulation but may be critical for unit design and indicate the same in the offer.

5.0 Operating Conditions Summary

Table 2: Operating Conditions

Parameters		Design Case	
		SOR	EOR
1.	LHSV hr-1		
	-Hydrogenation/ Desulphurization Catalyst(Catalyst -1)		
	-Benzene Saturation Catalyst (Catalyst -2)		
	-Catalyst-3 (if any)		
2.0	Temperature		
2.1	Hydrogenation/ Desulphurization Reactor WABT each bed		
2.2	Benzene saturation Reactor WABT each bed		
2.3	Hydrogenation/ Desulphurization Reactor Design each bed		
2.4	Benzene Saturation Reactor Design each bed		
3	Pressure kg/cm2(g)		
	Hydrogenation/ Desulphurization Reactor in/out		
	Benzene saturation Reactor in/out		
	Hydrogenation/ Desulphurization Reactor Design Pressure		
	Benzene Saturation Reactor Design Pressure		
	Pressure drop across Hydrogenation/ Desulphurization reactor & benzene saturation reactor		
4.	Recycle Gas, Pressure in kg/cm2 g, temperature in deg C and flow in Nm3/hr For Hydrogenation/ Desulphurisation reactor		
	Recycle Gas, Pressure in kg/cm2 g, temperature in deg C and flow in Nm3/hr For benzene saturation reactor		
	RGC loop pressure drop (Hydrogenation/ Desulphurisation reactor)		
	RGC loop pressure drop (Benzene saturation reactor)		

Parameters	Design Case	
4.1 Hydrogenation/ Desulphurization Reactor		
• Reactor inlet		
• Quench for each bed		
4.2 Benzene Saturation Reactor in/out		
• Reactor inlet		
• Quench for each bed		
5. Recycle Gas (for Both Hydrogenation/ Desulphurisation reactor & benzene saturation reactor, if applicable)		
• Purity %		
• H ₂ S%		
• CO%		
Recycle gas flow, Nm ³ /hr		
6. Make –up Gas Purity % Make-up H ₂ flow, Nm ³ /hr		
7. Catalyst cycle length		
Hydrogenation/ Desulphurisation Catalyst(Catalyst-1)		
Benzene saturation Catalyst(catalyst-2)		
8. Hydrogenation/ Desulphurization Reaction loop Pressure drop, kg/cm ² Benzene saturation Reaction loop Pressure drop, kg/cm ²		
9. Separator		
Hydrogenation/ Desulphurisation reactor loop		
9.1 Pressure-kg/cm ² (g)		
- Design		
- Operating		
9.2 Temperature °C		
-Design		
-Operating		
Benzene saturation reactor loop		

Parameters	Design Case	
9.3 Pressure-kg/cm ² (g)		
- Design		
- Operating		
9.4 Temperature °C		
-Design		
-Operating		
10. Hydrogen partial pressure both at Hydrogenation/ desulphurization reactor inlet and outlet Hydrogen partial pressure both at Benzene saturation reactor inlet and outlet		
11. Unit run length, months		
12. Percentage olefin saturation		
13. Percenatge Desulphurisation		
14. Delta Octane loss (RON/MON)		
15. Percentage Benzene Saturation		

6.0 Yield Estimates

For the purpose of evaluation overall yields will be taken as 2/3rd SOR and 1/3rd EOR yields of Design case. It should be noted that the yield distribution to be indicated below, both for estimated as well as guaranteed values, should correspond to product streams Ex-Unit.

Table 3: Yield Distribution

Sr. no.	Attribute	Yield, % wt. on feed	
		Estimated (SOR/EOR)	Guaranteed (SOR/EOR)
1.0	Feed rate, Kg/hr, KTPA		
2.0	Turn-down ratio , % of design		
3.0	Yield (ex unit-dry basis)		
3.1	H ₂ S		
3.2	Off Gas from HPG 2nd Stage Stripper wt% on feed		
3.3	Off Gas from Benzene Saturation Stabilizer , wt% on feed		
3.4	2 nd Stage Hydrogenated Pygasoline, wt% on feed		Guarantee (Note:1)
3.5	Total Make-up hydrogen (chemical + solution) (wt%. of feed)		Guarantee (Note:1)

3.6	Chemical Hydrogen Consumption (wt.% of feed)		
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Notes:

1.The values w.r.t. 'Process guarantees' on these items need to be confirmed by Licensor along with the offer, as these values are essentially required for evaluation of the offer, and an offer without these values may not be evaluated.

7.0 Reactor Details

Table 4: Reactor Details

	Reactor –1	Reactor-2
Diameter, m		
No. of beds		
No. of Quench		
Length, m		
MOC		
Reactor Weight, MT		
Reactor Internals weight, MT		

8.0 Utilities Consumption/Generation

Table-5A: Utilities Data (Generation & Consumption)

Utility Item		Estimated (SOR/EOR)		Guaranteed (SOR/EOR)	
		Gen.	Con.	Gen.	Con.
Steam MT/hr.	HP			(min.) (Note-1,14)	(Max.) (Note-1,14)
	MP			(min.) (Note-1,14)	(Max.) (Note-1,14)
	LP			(min.) (Note-1,14)	(Max.) (Note-1,14)
Power, KW					(Max.) (Note-1,14)
Fuel(Absorbed duty), MMKcal/hr (Note-3)					(Max.) (Note-1,14)
Fired duty), MMKcal/hr (Note-3)					(Max.) (Note-1,14)
Demineralised (DM) Water, m3/hr.					
Boiler Feed Water, m3/hr. (Note-4)					(Max.) (Note-1,14)
Cooling Water, m3/hr. (Note-5)					(Max.)

Utility Item	Estimated (SOR/EOR)		Guaranteed (SOR/EOR)	
	Gen.	Con.	Gen.	Con.
				(Note-1,14)
Condensate (Surface), m3/hr.				
Condensate (Reboiler), m3/hr.				
Process Water (Raw), m3/hr.				
Nitrogen, Nm3/hr.				
Instrument Air, Nm3/hr.				

Table-5B: Intermittent Utilities Consumption (Net)

Utility Item		Purpose(s)	Unit of Rate	Consumption	
				Hours/ Day	Rate
Steam	HP				
	MP				
	LP				
Power					
DM Water					
Boiler Feed Water					
Cooling Water					
Condensate (Surface)					
Condensate (Reboiler)					
Raw Water (Raw)					
Nitrogen					
Instrument Air					

Notes:

1. Guaranteed figures for all items (minimum/ maximum values as indicated), wherever applicable, in the above table should be included in the offer.
2. The above Table should be used for representing data with respect to continuous consumption/ generation of utilities. In addition, Licensor should include the intermittent consumption figures separately, indicating purpose, rate and duration for each such item as per Table-5B above.
3. Fuel gas consumption based on fired duty will be calculated considering a uniform value of heater efficiency from the absorbed duty provided by Licensor. Net calorific value of Fuel will be taken as 10,000 Kcal/Kg
4. The indicated figures based on 3% blow-down.
5. The indicated figures based on 10°C temperature rise.
6. The guaranteed utilities shall be based on design conditions of feed to HPG 2nd Stage Unit (refer clause.2.10) and products running down at cold conditions.

7. Bidder shall indicate separately the power required and steam usage considering maximum usage of electricity power for drive of pumps/compressor etc.
8. For maximum machine efficiencies, clause 2.14.1 to be considered.
9. Licensor shall provide estimated consumption and generation figures separately for each level of steam –HP, MP and LP. However guarantee shall be for net consumption/ generation for each level of steam HP, MP and LP.
10. Estimation of quantity of steam generated shall be based on a steam header pressure corresponding to the maximum header pressure at unit battery limit. Estimation of quantity of steam consumed shall be based on a steam header pressure corresponding to the normal header pressure at unit battery limit. Any steam generated in the unit will be superheated either to at least the maximum header temperature or to provide export steam at unit battery limit at the maximum header temperature, as applicable.
11. In addition to the information requested in above tables, consumer wise utility consumption / generation shall also be provided by Licensor in the proposal.
12. Bidders to provide equipment-wise break up of all the utility consumption/generation for Table-5A and Table 5B.
13. Utility consumption figures to be reported as (+) and Utility generation figures to be reported as (-).
14. Bidder to ensure that the guaranteed values of utilities include the utility requirement of all consumers like pumps, compressors, heaters, heat exchangers, package items (like refrigeration system), etc.

9.0 Catalyst/ Adsorbent/ Absorbent

Table 6: Catalyst/ Adsorbent/ Absorbent System Details

Parameter	Name & Service	Guaranteed Value (Note-1)	
		Catalyst/ Adsorbent/ Absorbent cycle life (without regeneration) (Note-1)	Loading density (kg/m ³)
Catalyst/ Adsorbent/ Absorbent			
Catalyst-1			
Catalyst-2			
Catalyst-3			
Catalyst-4			
Catalyst-5			
Catalyst-6			
Adsorbent-1			
Absorbent-1			
Catalyst Bed Support-1 (Ceramic/ Inert Balls, size & quantity)			
Catalyst Bed Support-2 (Ceramic/ Inert Balls, size & quantity)			
Catalyst Bed Support-3 (Ceramic/ Inert Balls, size & quantity)			
Catalyst Bed Support-4 (Ceramic/ Inert Balls,			

Parameter	Name & Service	Guaranteed Value (Note-1)	
		Catalyst/ Adsorbent/ Absorbent cycle life (without regeneration) (Note-1)	Loading density (kg/m ³)
size & quantity)			
Catalyst Bed Support-5 (Ceramic/ Inert Balls, size & quantity)			
Catalyst Bed Support-6 (Ceramic/ Inert Balls, size & quantity)			
Adsorbent Bed Support-1 (Ceramic/ Inert Balls, size & quantity)			
TOTAL			
Type of packing			
Drum Size			
Delivery schedule			
SOR/ EOR pressure drop across each reactor, kg/cm ²			

Notes:

1. Licensor to indicate the guaranteed values as a mandatory specification.
2. Unit of measurement chosen by the Licensor/ bidder to report the catalyst/ adsorbent/ absorbent quantity shall be same across the entire priced and unpriced bid including the bidder qualification section.
3. Values specified above includes spillage and handling allowances of 5% and the catalyst quantity reported shall be rounded off to nearest drum/bag size.
4. Licensor to state catalyst / adsorbent/ absorbent quantities in SOP document. The same will be considered for guarantees and NPV calculations.
5. Bidder to include in the above table, all the adsorbents/ absorbents and any other material used in the unit.
6. Licensor's guaranteed cycle life shall be considered for evaluation. After the guaranteed life, catalyst shall be replaced with fresh catalyst. No regeneration of catalyst shall be considered. Therefore, evaluation shall be carried out based on catalyst replacement on completion of guaranteed catalyst cycle life.

Table 6(a): HPG-2nd Stage Non-Proprietary Adsorbents/Absorbents/ Additives quantities

	Estimated value			Guaranteed Value
	(M3)	Loading density (kg/m ³)	(Kg)	(Kg)
Adsorbent-1 quantity				
Adsorbent-2 quantity				
Absorbent-1 quantity				
Absorbent-2 quantity				

Note-1: The guaranteed quantities of non-proprietary adsorbents/absorbents/ additives not quoted by bidder in SOP table are to be reported in the above table.

10.0 Product Properties

Table-7A: Product specification- Off Gas from HPG 2nd Stage Stripper

Property	Unit	Specification	Estimated		Guaranteed		Remarks
			SOR	EOR	SOR	EOR	
H ₂ S, max.	ppmv	Report					
Mercaptan Sulfur	ppmw	Report					
NH ₃	ppmw	Report					
Chloride	ppmw	Report					
Hydrogen	ppmw	Report					
Molecular weight	Kg/Kgmol	Report					
Composition	Vol%,wt%	Report					
Net calorific value	Kcal/kg	Report					

Table-7B: Product specification- Off Gas from Benzene saturation Stabilizer

Property	Unit	Specification	Estimated		Guaranteed		Remarks
			SOR	EOR	SOR	EOR	
H ₂ S, max.	ppmv	Report					
NH ₃	ppmw	Report					
Chloride	ppmw	Report					
Hydrogen	ppmw	Report					
Molecular weight	Kg/Kgmol	Report					
Composition	Vol%	Report					
Net calorific value	Kcal/kg	Report					

Table-7C: Product specification- 2nd Stage Hydrogenated Pygasoline

Property	Unit	Specific ation	Estimated		Guaranteed		Remarks
			SOR	EOR	SOR	EOR	
Density @15deg C	kg/m ³						
Min.	kg/m ³	Report					
Max.	kg/m ³	Report					
ASTM D-86 Distillation :(vol%) (IBP,5,10,30,50,70,90, 95,FBP)	Deg C	Report					
Total Sulphur, max.	Ppm w max	<10 ppmw					Guarantee
Paraffins, max.	Vol%	Report					
Olefins, max.	Vol%	Report					
Naphthenes	Vol%	Report					
Aromatics, max	Vol%	Report and not more than feed					Guarantee
RVP at 38 Deg C, max	kPa	Report					Guarantee
Cu Strip Corrosion,3 hrs @ 50 deg C, max	Ratin g	Not worse than class 1					Guarantee
Total Nitrogen, max	ppm w	Report					
Basic Nitrogen	ppmw	Report					
Chlorine + Chlorides, max	ppm w	Report					
Mercaptan Sulphur, max	ppm w	Report					
RON (Clear), min		Report					Guarantee
MON (Clear), min		Report					Guarantee
Benzene, max	Vol%	1					Guarantee
Potential gum	gm/m ³	Report					
Existent gum	gm/m ³	Report					
Gum content (solvent washed), max	mg/10 0 ml	Report					

Property	Unit	Specific ation	Estimated		Guaranteed		Remarks
			SOR	EOR	SOR	EOR	
Carbon number wise composition	Vol%, wt%	Report					
Metals (Fe, Si, As, Pb, Cu, Ni, Na, V, Heavy metals)	ppbw	Report					
C4 content	Wt %Max	Report					
Moisture content	ppm w	Report					
Bromine no./Bromine index		Report					
Diene value		Report					
Maleic Anhydride		Report					
Flash point	°C	Report					
Component wise breakdown of PONA	Vol%	Report					

Notes:

1. The values with respect to Process Guarantees for above parameters (maximum/ minimum values as indicated) should be included in the offer.
2. Guaranteed values should correspond to guaranteed yield of respective product and should conform to the values specified in the design specifications, where applicable.
3. Guaranteed values should correspond to guaranteed feed rate and design feed quality.
4. The various properties of products should be reported in accordance with the test methods and unit mentioned against respective properties of the particular product.
5. For balance properties, test Method/ Alternatives to be followed shall be discussed during Kick Off Meeting.

11.0 Start –up/shut down requirement of Hydrogen

11.1 Battery limit conditions:- As required by Licensor.

Parameters	Min.	Normal	Max.
Pressure kg.cm ² (g)			
Temp, °C			

11.2 Quantity, Nm³/hr

	Start-up				Shut-down			
	Normal	Duration Hr	Peak	Duration Hr	Normal	Duration Hr	Peak	Duration Hr
Hydrogen								

11.3 Also, indicate emergency Hydrogen requirements and duration.

12 Start-up/ shutdown requirement of Inert gas (Nitrogen)

12.1 Battery limit conditions:- As required by Licensor.

Parameters	Min.	Normal	Max.
Pressure kg.cm ² (g)			
Temp, °C			

12.2 Quantity of Nitrogen required, Nm³/hr

	Start-up				Shut-down			
	Normal	Duration Hr	Peak	Duration Hr	Normal	Duration Hr	Peak	Duration Hr
Nitrogen								

12.3 Inert gas Purity ----- %

13 Requirement of Utilities during start-up/shutdown

	Start-up				Shut-down			
	Normal	Duration Hr	Peak	Duration Hr	Normal	Duration Hr	Peak	Duration Hr
HP steam								
MP steam								
LP steam								

14 Need for coalescer/dryer:

15 List of Proprietary Items along with delivery schedule

- a)
- b)
- c)
- d)

16 Any specific comments/information.

17 CHEMICAL/ SOLVENT/ CONSUMPTION:

Chemicals/ Solvent/ Additives	Estimated Value	Guaranteed Value	Proprietary/Non Proprietary
Daily consumption, kg/hr			
Chemical-1 Name & Manufacturer			
Chemical-2 Name & Manufacturer			
Chemical-3 Name & Manufacturer			
First Charge,Kg			
Chemical-1			
Chemical-2			
Chemical-3			

Notes:

1. Guaranteed values of chemical consumption mentioned in the above table by bidder will be used for NPV calculations.
2. Bidder to include all the Chemical / Solvent/ Additive etc to be used in their process in the table.

ANNEXURE-IV D

Form I

INFORMATION IN RESPEPCT OF REFERENCE UNITS (REFERENCE UNIT # 1A)

Hydrogenation of Pygasoline Unit				
S. No.	Description	Details		
1.	- Name of the Reference Unit - Owner Name - Location of Plant - Details of Contact person - Name - Address - Telephone - Fax nos. - Email ID			
2.	Technology Licensor			
3.	Month & Year of Signing of License Agreement			
4.	Type of Unit/ Project status			
4.1	Captive/ Non-captive			
4.2	Type of Unit (Grass root/ revamp/ De-Bottleneck)			
4.3	Unit is commercial/ Non-commercial (Lab. scale/ pilot plant/ demonstration Plant)			
4.4	Commercially Operational (Yes/ No): If Yes: Date of Commissioning If No : Expected Date of Commissioning			
4.5	Process Package/BEDP By & Completion Date			
4.6	Detailed Engg. Contractor			
4.7	Month & Year of start-up of the unit			
Design/ Guaranteed/ Operating Values for the following (item no 5 to 12)		Design	Guaranteed	Operating
5.	Capacity of train (KTPA)			
6.	On stream factor, hours / year			

Hydrogenation of Pygasoline Unit				
S. No.	Description	Details		
7.	Feedstock Composition			
8.	Feedstock Quality - TBP cut - Sp. Gr. - PONA (vol%) - Total Sulphur content (ppmw) - Olefins - RON - MON			
9.	Yield of products - 2nd Stage Hydrogenated Pygasoline - Off Gas from HPG 2nd Stage stripper			
10.	2nd Stage Hydrogenated Pygasoline quality - Total sulphur content (ppmw) - RON - MON - Specific gravity - RVP @38 deg C - Cu strip corrosion - Distillation			
11.	Chemical Hydrogen consumption for SOR and EOR conditions			
12.	Catalyst/ Absorbent/ Adsorbent System (furnish for each type of catalyst)			
	Name & Type of catalyst / Absorbent/ Adsorbent used			
	Date since when the above catalysts have been put in operation			
	Additives, if any			
		Design	Guaranteed	Achieved
	Quantity / consumption rate of each type of catalyst / Absorbent/ Adsorbent in unit volume			
	Cycle length of each type of Catalyst / Absorbent/ Adsorbent , months - Initial - Ultimate			
13.	Details regarding Process Configuration and variation if any w.r.t the process configuration offered by Licensor.			
14.	Start-up time required after mechanical completion			

Hydrogenation of Pygasoline Unit		
S. No.	Description	Details
15.	Modifications required (if any) to meet Guarantees	
16.	How soon performance Guarantees were met after commissioning of the plant?	
17.	Whether the unit performs as originally proposed by the Licensor and meets all the guarantees. If not, the reasons thereby	
18.	Any operational or other problems faced in the unit and remedial measures adopted	

Notes:

1. Bidder to fill the above data for all reference units.
2. Detailed references for at least one actual operating units using Licensor's technology close to the offered process and conforming to the conditions specified in the document are to be submitted.
3. Documents required as per "Technical Criteria" given in "Invitation for Bids (IFB)".

(SIGNATURE OF BIDDER)

Form II

INFORMATION IN RESPEPCT OF REFERENCE UNITS (REFERENCE UNIT # 1B)

Benzene Saturation of Naphtha Range Material/ Hydrogenated Pygasoline				
S. No.	Description	Details		
1.	- Name of the Reference Unit - Owner Name - Location of Plant - Details of Contact person - Name - Address - Telephone - Fax nos. - Email ID			
2.	Technology Licensor			
3.	Month & Year of Signing of License Agreement			
4.	Type of Unit/ Project status			
4.1	Captive/ Non-captive			
4.2	Type of Unit (Grass root/ revamp/ De-Bottleneck)			
4.3	Unit is commercial/ Non-commercial (Lab. scale/ pilot plant/ demonstration Plant)			
4.4	Commercially Operational (Yes/ No): If Yes: Date of Commissioning If No : Expected Date of Commissioning			
4.5	Process Package/BEDP By & Completion Date			
4.6	Detailed Engg. Contractor			
4.7	Month & Year of start-up of the unit			
Design/ Guaranteed/ Operating Values for the following (item no 5 to 12)		Design	Guaranteed	Operating
5.	Capacity of train (KTPA)			
6.	On stream factor, hours / year			

Benzene Saturation of Naphtha Range Material/ Hydrogenated Pygasoline				
S. No.	Description	Details		
7.	Feedstock Composition			
8.	Feedstock Quality - TBP cut - Sp. Gr. - PONA (vol%) - Total Sulphur content (ppmw) - Benzene vol% in feed - Benzene vol % in C6 cut of feed			
9.	Yield of products - Naphtha Range Material/ Hydrogenated Pygasoline - Off gas from Benzene saturation unit			
10.	Naphtha Range Material/ Hydrogenated Pygasoline a. Specific gravity b. Benzene in Vol% c. Distillation			
11.	Chemical Hydrogen consumption for SOR and EOR conditions			
12.	Catalyst/ Absorbent/ Adsorbent System (furnish for each type of catalyst)			
	Name & Type of catalyst / Absorbent/ Adsorbent used			
	Date since when the above catalysts have been put in operation			
	Additives, if any			
		Design	Guaranteed	Achieved
	Quantity / consumption rate of each type of catalyst / Absorbent/ Adsorbent in unit volume			
	Cycle length of each type of Catalyst / Absorbent/ Adsorbent , months - Initial - Ultimate			
13.	Details regarding Process Configuration and variation if any w.r.t the process configuration offered by Licensor.			
14.	Start-up time required after mechanical completion			
15.	Modifications required (if any) to meet Guarantees			
16.	How soon performance Guarantees were met after commissioning of the plant?			

Benzene Saturation of Naphtha Range Material/ Hydrogenated Pygasoline		
S. No.	Description	Details
17.	Whether the unit performs as originally proposed by the Licensor and meets all the guarantees. If not, the reasons thereby	
18.	Any operational or other problems faced in the unit and remedial measures adopted	

Notes:

1. Bidder to fill the above data for all reference units.
2. Detailed references for at least one actual operating units using Licensor's technology close to the offered process and conforming to the conditions specified in the document are to be submitted.
3. Documents required as per "Technical Criteria" given in "Invitation for Bids (IFB)".

(SIGNATURE OF BIDDER)

Form III

**INFORMATION IN RESPECT OF REFERENCE UNIT USING LICENSOR'S OFFERED
CATALYST (REFERENCE UNIT # 2A)**

Hydrogenation of Pygasoline Unit				
S. No.	Description	Details		
1.	- Name of the Reference Unit - Owner Name - Location of Plant - Details of Contact person - Name - Address - Telephone - Fax nos. - Email ID			
2.	Technology Licensor			
3.	Month & Year of Signing of License Agreement			
4.	Type of Unit/ Project status			
4.8	Captive/ Non-captive			
4.9	Type of Unit (Grass root/ revamp/ De-Bottleneck)			
4.10	Unit is commercial/ Non-commercial (Lab. scale/ pilot plant/ demonstration Plant)			
4.11	Commercially Operational (Yes/ No): If Yes: Date of Commissioning If No : Expected Date of Commissioning			
4.12	Process Package/BEDP By & Completion Date			
4.13	Detailed Engg. Contractor			
4.14	Month & Year of start-up of the unit			
Design/ Guaranteed/ Operating Values for the following (item no 5 to 12)		Design	Guaranteed	Operating
5.	Capacity of train (kTPA)			
6.	On stream factor, hours / year			

Hydrogenation of Pygasoline Unit				
S. No.	Description	Details		
7.	Feedstock Composition			
8.	Feedstock Quality - TBP cut - Sp. Gr. - PONA (vol%) - Total Sulphur content (ppmw) - Olefins - RON - MON			
9.	Yield of products - 2nd Stage Hydrogenated Pygasoline - Off Gas from HPG 2nd Stage stripper -			
10.	2nd Stage Hydrogenated Pygasoline quality - Total sulphur content (ppmw) - RON - MON - Specific gravity - RVP @38 deg C - Cu strip corrosion - Distillation			
11.	Chemical Hydrogen consumption for SOR and EOR conditions			
12.	Catalyst/ Absorbent/ Adsorbent System (furnish for each type of catalyst)			
	Name & Type of catalyst / Absorbent/ Adsorbent used			
	Date since when the above catalysts have been put in operation			
	Additives, if any			
		Design	Guaranteed	Achieved
	Quantity / consumption rate of each type of catalyst / Absorbent/ Adsorbent in unit volume			
	Cycle length of each type of Catalyst / Absorbent/ Adsorbent , months - Initial - Ultimate			
13.	Details regarding Process Configuration and variation if any w.r.t the process configuration offered by Licensor.			
14.	Start-up time required after mechanical completion			

Hydrogenation of Pygasoline Unit		
S. No.	Description	Details
15.	Modifications required (if any) to meet Guarantees	
16.	How soon performance Guarantees were met after commissioning of the plant?	
17.	Whether the unit performs as originally proposed by the Licensor and meets all the guarantees. If not, the reasons thereby	
18.	Any operational or other problems faced in the unit and remedial measures adopted	

Notes:

1. Bidder to fill the above data for all reference units.
2. Detailed references for at least one actual operating units using Licensor's technology close to the offered process and conforming to the conditions specified in the document are to be submitted.
3. Documents required as per "Technical Criteria" given in "Invitation for Bids (IFB)".

(SIGNATURE OF BIDDER)

Form IV

**INFORMATION IN RESPECT OF REFERENCE UNIT USING LICENSOR'S OFFERED
CATALYST (REFERENCE UNIT # 2B)**

Benzene Saturation of Naphtha Range Material/ Hydrogenated Pygasoline				
S. No.	Description	Details		
1.	- Name of the Reference Unit - Owner Name - Location of Plant - Details of Contact person - Name - Address - Telephone - Fax nos. - Email ID			
2.	Technology Licensor			
3.	Month & Year of Signing of License Agreement			
4.	Type of Unit/ Project status			
4.8	Captive/ Non-captive			
4.9	Type of Unit (Grass root/ revamp/ De-Bottleneck)			
4.10	Unit is commercial/ Non-commercial (Lab. scale/ pilot plant/ demonstration Plant)			
4.11	Commercially Operational (Yes/ No): If Yes: Date of Commissioning If No : Expected Date of Commissioning			
4.12	Process Package/BEDP By & Completion Date			
4.13	Detailed Engg. Contractor			
4.14	Month & Year of start-up of the unit			
Design/ Guaranteed/ Operating Values for the following (item no 5 to 12)		Design	Guaranteed	Operating
5.	Capacity of train (KTPA)			
6.	On stream factor, hours / year			

Benzene Saturation of Naphtha Range Material/ Hydrogenated Pygasoline				
S. No.	Description	Details		
7.	Feedstock Composition			
8.	Feedstock Quality - TBP cut - Sp. Gr. - PONA (vol%) - Total Sulphur content (ppmw) - Benzene vol% in feed - Benzene vol % in C6 cut of feed			
9.	Yield of products - Naphtha Range Material/ Hydrogenated Pygasoline - Off gas from Benzene saturation unit			
10.	Naphtha Range Material/ Hydrogenated Pygasoline a. Specific gravity b. Benzene in Vol% c. Distillation			
11.	Chemical Hydrogen consumption for SOR and EOR conditions			
12.	Catalyst/ Absorbent/ Adsorbent System (furnish for each type of catalyst)			
	Name & Type of catalyst / Absorbent/ Adsorbent used			
	Date since when the above catalysts have been put in operation			
	Additives, if any			
		Design	Guaranteed	Achieved
	Quantity / consumption rate of each type of catalyst / Absorbent/ Adsorbent in unit volume			
	Cycle length of each type of Catalyst / Absorbent/ Adsorbent , months - Initial - Ultimate			
13.	Details regarding Process Configuration and variation if any w.r.t the process configuration offered by Licensor.			
14.	Start-up time required after mechanical completion			
15.	Modifications required (if any) to meet Guarantees			
16.	How soon performance Guarantees were met after commissioning of the plant?			

Benzene Saturation of Naphtha Range Material/ Hydrogenated Pygasoline		
S. No.	Description	Details
17.	Whether the unit performs as originally proposed by the Licensor and meets all the guarantees. If not, the reasons thereby	
18.	Any operational or other problems faced in the unit and remedial measures adopted	

Notes:

1. Bidder to fill the above data for all reference units.
2. Detailed references for at least one actual operating units using Licensor's technology close to the offered process and conforming to the conditions specified in the document are to be submitted.
3. Documents required as per "Technical Criteria" given in "Invitation for Bids (IFB)".

(SIGNATURE OF BIDDER)

ANNEXURE-IV E

INFORMATION REQUIRED FOR NPV CALCULATION (Note-1)

Sr. No.	Evaluation case : Design Case
	Overall Unit Material Balance
1.	Feed, kg/hr (at Unit B/L)
i	SC Pygasoline, kg/hr
ii	Total Make-up hydrogen (chemical+ solution), kg/hr
	Total, kg/hr
2.	Products (at Unit B/L)
	Off Gas from HPG 2nd Stage Stripper, kg/hr
	Off Gas from Benzene saturation Stabilizer, kg/hr
	2 nd Stage Hydrogenated Pygasoline, kg/hr
	Total, kg/hr
3.	Overall Utility Summary
A	Power consumed, kW
B	Steam, (kg/hr)
i	HP Steam Consumption/ Generation (P= kg/cm ² g, T= °C)
ii	MP Steam Consumption/ Generation (P= kg/cm ² g, T= °C)
iii	LP Steam Consumption/ Generation (P= kg/cm ² g, T= °C)
C	Absorbed Heat duty, MM Kcal/hr
D	Fired duty, MM Kcal/hr
E	Cooling Water ,m3/hr(Del T=10 deg C)
F	Boiler feed water, kg/hr
G	Any other utility required / hour (LICENSOR to specify)

Catalyst/ Adsorbent/ Absorbent and Chemical Summary

S. No.	Catalysts/ Adsorbent/ Absorbent
1.	Catalyst 1, name/ quantity, tons
2.	Catalyst 2, name/ quantity, tons
3.	Catalyst 3, name/ quantity, tons
4.	Catalyst 4, name/ quantity, tons
5.	Catalyst 5, name/ quantity, tons
6.	Catalyst 6, name/ quantity, tons
7.	Adsorbent 1
8.	Absorbent 1
1.	Cycle life of catalyst/ Adsorbent/ Absorbent, years
2.	Catalyst 1
3.	Catalyst 2
4.	Catalyst 3
5.	Catalyst 4

6.	Catalyst 5
7.	Catalyst 6
8.	Adsorbent 1
9.	Absorbent 1

S. No.	Ceramics/ Inert Balls
1.	Catalyst Bed Support (Ceramic/ Inert Balls) – Name
2.	Catalyst Bed Support (Ceramic/ Inert Balls) – Size & Quantity, Tons

S. No.	Chemicals/ Solvent/ Additives
1.	Daily consumption, kg/hr
2.	Chemical-1 Name & Manufacturer
3.	Chemical-2 Name & Manufacturer
4.	Chemical-3 Name & Manufacturer
5.	Chemical-4 Name & Manufacturer

Notes:

1. No data to be filled in this Annexure IV E .Bidder shall ensure the information sought in above tables is provided (complete-in all respects) in Annexure-IV C for performing NPV evaluation of their offer. Licensor to state catalyst / adsorbent/ absorbent quantities in SOP document. The same will be considered for guarantees and NPV calculations.
2. Guaranteed values of feed and product rates furnished by licensor as per performance guarantees shall be considered for the NPV evaluation.
3. Licensor's guaranteed fuel and utility consumption figures shall be considered for NPV evaluation.
4. Operating revenue and operating cost for NPV calculation will be based on 8000 on stream hours per year.
5. Overall yields for NPV evaluation shall be based on 2/3rd SOR and 1/3rd of EOR.
6. Licensor to provide information for all the chemicals/ solvents used in all the process units.
7. Utility consumption figures to be reported as (+) and utility generation figures to be reported as (-).
8. Bidder to consider 5% handling losses and the catalyst quantity reported shall be rounded off to nearest drum/ bag size. Licensor to provide information for all catalyst/ adsorbents used in all the process units.
9. Licensor's guaranteed cycle life shall be considered for evaluation. After the guaranteed life, catalyst shall be replaced with fresh catalyst. No regeneration of catalyst shall be considered. Therefore, evaluation shall be carried out based on catalyst replacement on completion of guaranteed catalyst cycle life.
10. Fuel gas consumption based on fired duty will be calculated considering a uniform value of heater efficiency from the absorbed duty provided by Licensor. Net calorific value of Fuel will be taken as 10,000 Kcal/Kg for evaluation

ANNEXURE-IV F

PLOT PLAN

(Will be provided to successful Bidder post award)

Preliminary Area for HPG-2nd Stage Unit = 59m x 40m.

ANNEXURE-IV G

EMISSION NORMS

Licenser to comply all the requirements specified in this annexure (except those which are not relevant to the offered technology) in his design.

A. TOLERANCE LIMITS FOR EFFLUENT TO BE DISCHARGED INTO INLAND SURFACE WATER

Treated effluent from ETP of BCPL project shall meet the quantitative and qualitative limits of parameters stipulated in proposed Minimal National Standards (MINAS-Refineries) as given below:

Table IV G-A: ETP Treated Effluent Characteristics

S. No.	Parameter	Limiting value for Concentration (mg/l, except for pH)
1	PH	6.0 – 8.5
2	Oil & Grease	5
3	BOD ₃ days, 27 °C	15
4	COD	125
5	Suspended Solids	20
6	Phenols	0.35
7	Sulphides	0.5
8	CN	0.2
9	Ammonia as N	15
10	TKN	40
11	P	3
12	Cr (Hexavalent)	0.1
13	Total Cr	2.0
14	Pb	0.1
15	Hg	0.01
16	Zn	5.0
17	Ni	1.0
18	Cu	1.0
19	V	0.2
20	Benzene	0.1
21	Benzo(a) Pyrene	0.2

B. EMISSION STANDARDS FOR DISCHARGE INTO AMBIENT AIR

Tolerance Limits for gaseous effluents to be discharged into Ambient Air is as given below:

Table IV G-B: Standards for Emissions from Furnaces, Boilers, Heater, Vaporizer

Emission from Chimney/ Stack			
S. No.	Parameter	Fuel Type	Limiting concentration in mg/Nm ³ , unless stated
			New refineries, furnaces, boilers commissioned after January 01, 2006
1.	Sulphur Dioxide (SO ₂)	Gas firing	50
		Liquid firing	850
2.	Oxides of Nitrogen (NO _x)	Gas firing	250
		Liquid firing	350
3.	Particulate Matter (PM)	Gas firing	5
		Liquid firing	50
4.	Carbon Monoxide (CO)	Gas firing	100
		Liquid firing	150
5.	Nickel + Vanadium (Ni+V)	Liquid firing	5
6.	Hydrogen Sulphide (H ₂ S) in fuel gas	Liquid/ gas firing	150
7.	Sulphur content in liquid fuel, weight %	Liquid/ gas firing	0.5

Notes:

1. In case of mixed fuel (gas and liquid) use, the limit shall be computed based on heat supplied by gas and liquid fuels.
2. All the furnaces/ boilers with heat input of 10 million kCal/hr or more shall have continuous systems for monitoring of SO₂ and NO_x. Manual monitoring for all the emission parameters in such furnaces/ boilers shall be carried out once in two months.
3. All the emission parameters in furnaces/ boilers having heat input less than 10 million kCal/hr will be monitored once in a three months.
4. In case of continuous monitoring, one hourly average concentration values shall be complied with 98% of the time in a month. Any concentration value obtained through manual monitoring, if exceeds the limiting concentration value, shall be considered as noncompliance.
5. Data on Nickel and Vanadium content in the liquid fuel (in ppm) shall be reported. Ni + V content in the liquid fuel shall be monitored once in six months, if liquid fuel source & quality are not changed. In case of changes, measurement is necessary after a change.
6. All values shall be corrected to 3% Oxygen.

Table IV G-C: Standards for Process Emission

S.No.	Parameter	Source	Limiting concentration in mg/Nm3
			New Plants
Specific Pollutant			
1	Chlorine	EDC/ VCM Plant and Incinerator	10
2	Hydrochloric Acid Mist	EDC/VCM Plant and Incinerator	30
3	Ammonia	Waste Water stripper, Acrylonitrile Plant, Caprolactum Plant	75
4	Hydrogen Sulphide	Naphtha Pre-Treatment Plant, Olefin Plant	5
5	Phosgene	(TDI) and (MDI) Plant	1
6	Hydrogen Cyanide (HCN)	Acrylonitrile Plant	10
7	VOC (HAPs) – TDI and MDI	TDI, Methylenediphenyl Di-isocyanate (MDI) Plants	0.1
8	VOC (HAPs), Benzene and Butadiene	Benzene, Butadiene Plants	5
9	VOC (HAPs), EO,VCM,EDC,AC N and PO	EO,VCM,EDC,ACN and PO Plants	10
10	Organic Particulate	PA, MA and TDI Plant	25
General Pollutant			
11	VOC (MA, PA and Phenol)	MA, PA, Phenol Plants	20
12	VOC (EB, Styrene, Toluene, Xylene, Aromatics, EG nd PG)	Ethyl Benzene (EB), Styrene, Toluene, Xylene, Aromatics, EG, PG Plants	100
13	VOC (Paraffin, Acetone and Olefins)	Non-Methane, HC (Paraffin), Acetone, Olefins Plants	150

NOTE- HAP - Hazardous Air Pollutants are those pollutants that cause cancer or other serious health effects, or adverse environmental and ecological effects.

AMBIENT AIR STANDARDS

The ambient air quality around the premises will be limited to those limits as per National Ambient Air Quality Standards, which are given below:

Table IV G-D: National Ambient Air Quality Standards

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural & other areas	Ecologically Sensitive Area (notified by Central Govt.)	Methods of measurement
1	Sulphur Dioxide (SO ₂)	Annual Average*	50 µg/m ³	20 µg/m ³	-Improved West and Gaeke
		24 hours**	80 µg/m ³	80 µg/m ³	-Ultraviolet Fluorescence
2	Nitrogen Di Oxides (NO ₂)	Annual Average*	40 µg/m ³	30 µg/m ³	-Modified Jacob & Hochheiser (Na-Arsenite)
		24 hours**	80 µg/m ³	80 µg/m ³	-Chemiluminescence
3	Particulate Matter, Size<10 µm, PM ₁₀	Annual Average*	60 µg/m ³	60 µg/m ³	-Gravimetric -TOEM
		24 hours**	100 µg/m ³	100 µg/m ³	-Beta attenuation
4	Particulate Matter, Size<2.5 µm, PM _{2.5}	Annual Average*	40 µg/m ³	40 µg/m ³	-Gravimetric -TOEM
		24 hours**	60 µg/m ³	60 µg/m ³	-Beta attenuation
5	Ozone (O ₃)	8 hours**	100 µg/m ³	100 µg/m ³	-UV Photometric -Chemiluminescence
		1 hour	180 µg/m ³	180 µg/m ³	Chemical method
6	Lead (Pb)	Annual Average*	0.5 µg/m ³	0.5 µg/m ³	- AAS/ ICP method after sampling on EPM 2000 or equivalent filter paper
		24 hours**	1.0 µg/m ³	1.00 µg/m ³	-ED-XRF using Teflon filter
7	Carbon Monoxide (CO)	8 hours**	2 mg/m ³	2 mg/m ³	-Non Dispersive Infrared (NDIR)
		1 hour**	4 mg/m ³	4 mg/m ³	Spectroscopy
8	Ammonia (NH ₃)	Annual*	100 µg/m ³	100 µg/m ³	-Chemiluminescence
		24 hours**	400 µg/m ³	400 µg/m ³	- Indophenol blue Method
9	Benzene	Annual *	05 µg/m ³	05 µg/m ³	- Gas chromatography based continuous analyser - Adsorption and Desorption followed by GC analysis

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural & other areas	Ecologically Sensitive Area (notified by Central Govt.)	Methods of measurement
10	Benzo(a) Pyrene (BaP), Particulate Phase Only	Annual*	01 ng/m ³	01 ng/m ³	- Solvent extraction followed by HPLC/ GC analysis
11	Arsenic (As)	Annual *	06 ng/m ³	06 ng/m ³	- AAS/ ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni)	Annual *	20 ng/m ³	20 ng/m ³	- AAS/ ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual Arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a Week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.