AMENDMENT #4: 2020-31013A IOCL Carbon Capture and Utilization Project

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Please note that the Request for Proposals (RFP) for the feasibility study for the IOCL Carbon Capture and Utilization Project is amended, as follows:

Questions, Answers and Clarifications: This amendment consists of clarifying questions and answers submitted by potential Offerors regarding the RFP packet. Responses to submitted questions are below. Questions are in bold font.

In reference to Task 2 of the Terms of Reference (TOR), as this is a feasibility study, the utilities needed for the proposed Carbon Capture facilities will be identified. Details of existing facilities will be provided by IOCL. Contractor will NOT evaluate the adequacy of the existing utility systems in the refinery complex. Contractor will indicate the nearest proposed tie-in point. The engineering of the tie-ins and the expansion of existing facilities are a subject of detailed engineering. USTDA/IOCL may please confirm this approach.

Yes, the contractors’ understanding is correct. Data for existing utilities shall be provided by IOCL for review while engineering of the tie-ins and the expansion of existing facilities are a subject of detailed engineering. However, contractor has to completely analyze and complete the activities as per Task-2 of RFP (Refer page no 48/78) i.e.:

i. The Contractor shall review balance of plant equipment (BOP), fire protection, HVAC, and all other project systems.

ii. The Contractor shall analyze the electrical supply for the proposed Project, including at a minimum, electrical tie-in location and any new equipment requirements.

iii. The Contractor shall analyze the steam supply requirements for the proposed Project, including boiler size requirements and fuel supply or tie-in/modification to existing steam header and boiler, if applicable. This should also include the possibilities of heat integration for minimization of steam and other utilities with existing refinery system.

iv. The Contractor shall also analyze the availability/requirement data for other utilities like DM water, instrument air, plant air, Nitrogen etc.

Accordingly, contractor has to indicate the requirement of new utility units, if any, and its cost should also reflect in the cost estimate prepared by the contractor.

In reference to TOR Task 3, USTDA/IOCL may note that AACE Class 4 definition is:

L: -15% to -30%
H: +20% to +50%

And project definition of 1-15%.
USTDA/IOCL may please confirm this understanding.

As per RFP, required range for cost estimate is ± 30%. Accuracy of cost estimate on lower side within (-) 15% to (-) 30% is acceptable. However, it is to be noted that estimate accuracy above +30% will not be acceptable. Therefore, all offers to submit the cost estimate within ± 30% accuracy only. The +30% Cost estimate should be as per the Subtask 3(a) of the RFP including all the required components.

In reference to RFP Clause 2.13, please confirm that submission of the physical hard copy of the proposal is compulsory.

Refer RFP clause 2.13 Page 9/78 “Proposals shall also be submitted in electronic form, via e-mail attachment(s) to sharmamk2@indianoil.in.”, which implies that physical proposal in One (1) hard copy along with proposal in soft (through email) should be submitted by the offeror.

In reference to RFP Clause 2.13, is any supporting documentation required regarding the authorized signatory?

Yes, power of attorney or authorization or any other document consisting adequate proof of the signing ability of the signatory to bind the Offeror shall be annexed to the proposal.

The various award sub-criteria are inter-related, in that projects or studies generally would meet two or more sub-criteria. As we have seen in other USTDA funded feasibility study RFPs, please confirm that the *same* project reference can be used for meeting the sub-criteria across the sub-categories, as long as the project reference is relevant to such sub-criteria.

Confirmed. If applicable, then same project reference may be used for two or more award criteria / sub-criteria.

In reference to Award Criteria 1C, The CCUS applications in food & beverage industry typically involve small quantities of CO2 capture and utilization. Since these plants are owned, the feasibility study takes the form of an internal engineering and viability study before such projects are implemented, given the small scale of these plants customized for F&B CO2 requirements. We want to confirm that such internal studies (accompanied by a declaration from the senior management, as specified in Amendment 2) would be acceptable against this sub-criteria, as they address all the aspects of CCUS for supply to the F&B industry.

Agreed in line with Addendum-2. However, as per RFP section-4 and Addendum-2, verifiable documentary evidence is to be provided indicating the implementation of the specific project in this case.

Amendment 3 mentions several recent CCUS projects in the world, many of which are ongoing. In the same vein, we assume that *ongoing studies* being conducted by us would be acceptable as project references against the various sub-criteria of the Award Criteria
(except perhaps for maybe CCUS implementation, where implementation experience is specifically required). Request confirmation please.

For the projects which currently under construction, experience reference for feasibility study may be used if the feasibility study for the same project has been done and completed by the offeror i.e. this can only be used for Feasibility Study Criteria (Criteria 1 of Section-4 of RFP). However, these projects cannot be used as a reference for the "CCUS Project Implementation" criteria (Criteria-3 of Section 4 of RFP).

Kindly note that ongoing feasibility studies which are being conducted currently and not completed yet would NOT be acceptable as project references.