



**Indian Farmers Fertiliser Cooperative Limited**  
**Kalol Unit**  
**P.O. Kasturinagar, Distt.: Gandhinagar, Gujarat, PIN Code : 382 423 (INDIA)**

**Date: 15<sup>th</sup> March, 2019**

**INVITATION FOR  
EXPRESSION OF INTEREST (EOI)  
FOR SETTING UP OF HYDROGEN PEROXIDE PLANT  
ON LUMP SUM TURN KEY (LSTK) BASIS AT IFFCO KALOL UNIT**

**1.0 PREAMBLE**

Indian Farmers Fertiliser Cooperative Limited (IFFCO) is a National level Cooperative Society engaged in the manufacturing and marketing of fertilizers. The Society, registered as an autonomous cooperative under the Multi State Cooperative Societies Act, 2002, is the largest manufacturer and marketer of fertilizers in India. IFFCO produces around 4.2 Million tonnes of Urea and 4.3 Million tonnes of complex fertilizers (NPK/DAP) per annum in its five fertiliser manufacturing Units, located at Kalol and Kandla in Gujarat, Phulpur and Aonla in Uttar Pradesh, and Paradeep in Orissa.

IFFCO Kalol Unit operates gas based 1100 MTPD capacity Ammonia Plant and 1650 MTPD capacity Urea Plant along with associated Offsite / Utilities Facilities. About 100 MTPD liquid Ammonia is generated as surplus. IFFCO Kalol intends to diversify into value added products at the existing location.

As one of the avenues, IFFCO Kalol intends to install & operate Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) plant of capacity of 150-200 MT per day as 100% basis with available make-up synthesis gas at Ammonia Plant. All the other utilities like steam, power, cooling water, air, instrument air, plant air, inert gas etc. can be made available from existing Ammonia/Urea Plant Complex at Kalol Unit.



## **2.0 PROJECT SITE LOCATION**

IFFCO-Kalol is located 25 Kms North-East of Ahmedabad city and about 7 km from Kalol town in Gandhinagar district of Gujarat State, India. Site location is adjacent to the 4-lane Ahmedabad-Mehsana State Highway. The nearest railway station is Kalol, and the nearest Airport is Ahmedabad, which is about 25 km from plant site. The site location for Hydrogen Peroxide plant shall be within the premises of existing Kalol Unit.

## **3.0 EXPRESSION OF INTEREST (EOI)**

Expression of Interest is invited from selected group of Parties for setting up Hydrogen Peroxide ( $H_2O_2$ ) plant. The philosophy for setting up of Plant shall be on Engineering, Procurement & Construction (EPC) basis. However, IFFCO shall not be limited to philosophy of EPC basis. Options for Joint Ventures (JV) & Engineering, Procurement & Construction (EPC) and Management (EPCM) are also available. The Party may also like to operate a marketing network or assist IFFCO in marketing for sale of  $H_2O_2$  final product. IFFCO has pan India presence for marketing of Fertilizers.

## **4.0 DESIGN PHILOSOPHY - PROCESS**

The Hydrogen Peroxide Plant ( $H_2O_2$ ) shall be designed for net production capacity (at battery limit) of 150-200 MTPD with 100 % purity. The Hydrogen Peroxide ( $H_2O_2$ ) Plant will have all latest features provided in any world class plant by the Process Licensor / EPC contractor. The plant shall have all the features of safety and environment management and meet all international norms of safety and environment in general and of India in particular. The Plant will also include various process features provided in other plants of the same Process Licensor as per good engineering practice.



## 5.0 SCOPE OF WORK

Intent of this EOI is to short list PARTIES who shall be interested in bidding to build Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) Plant based on Synthesis gas available in Ammonia Plant, so that it can operate continuously meeting all the guarantees of product quality, design capacity, environmental norms and guidelines in safest and energy efficient way. Hence, PARTY's Scope of Work will include all the activities required for building the project, including its commissioning leading to successful Performance Test Run and thereafter its acceptance.

### 5.1 Raw Materials and Utilities Specifications

Feedstock: Synthesis gas in Ammonia Plant

Name	:	Synthesis gas
Flow	:	10,000-12,000 NM <sup>3</sup> /hr
Pressure	:	24- 26 kg/cm <sup>2</sup>
Temperature	:	10-40 degC
Composition (Dry basis)		
CH <sub>4</sub>	:	0.7 - 0.9 % (v/v)
H <sub>2</sub>	:	72.0 - 74.0% (v/v)
Ar	:	0.3 - 0.4% (v/v)
N <sub>2</sub>	:	27.0 - 24.7% (v/v)

Utilities: Utilities available in existing complex shall be made available for new H<sub>2</sub>O<sub>2</sub> Plant. However, the Party shall indicate the requirement of Utilities.

### 5.2 Product Quality / Specification:

Specification of final product shall be as under:

H<sub>2</sub>O<sub>2</sub> : 100% (pure)

OR

H<sub>2</sub>O<sub>2</sub> : 50% Conc. or as per Market Demand

Balance : DM Water



### **5.3 Liquid Effluent, Gaseous Emissions, Ambient Air Quality and Noise Level:**

To meet all statutory and regulatory limits specified by State Pollution Control Board (SPCB) and Central Pollution Control Board (CPCB).

### **5.4 Compliance of Statutory Rules and Regulation:**

Party will ensure Compliance to various statutory rules and regulation prevailing in India and State of Gujarat during construction, pre-commissioning and commissioning stage.

### **5.5 Electrical Power:**

Party will state its requirement of Electrical Power in EOI so that provisions can be made for uninterrupted Power source from the State Electricity Board.

### **5.6 Battery Limits:**

Battery Limit of Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) Plant has been defined. 4" tapping in Synthesis gas line has already been taken within Ammonia plant. The line shall run upto the location of Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) Plant. Cooling water can be supplied from the existing setup of Cooling towers subject to 500 m<sup>3</sup>/hr max of Cooling water. Requirement of Cooling water higher than specified flow rate shall require Cooling tower, Cooling water Pumps and associated facilities which shall be in battery limit of Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) Plant. Flare System and Flare Stack, if required, will be inside the battery limits of Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) Plant. All works including civil foundations, steel structure, building, shelter, interconnecting piping, Illumination, Fire Hydrant System, Safety Showers, Earthing network, Lightning Arrestor, underground/ above ground piping, underground storage tanks, pipe rack, cable rack/cable trays, cable laying, provision of utility stations, fencing, roads, floor paving, area grading, etc. which are required for safe, secured, automated, reliable and trouble-free operation/maintenance of plants, within the battery limits, will be carried out by the EPC Contractor.



Utilities like instrument air (IA). Plant air (PA), inert gas (IG), fire water (FW) shall be provided at Hydrogen Peroxide Plant battery limit by IFFCO. Electrical power cables from 66 KV yard upto MCC including MCC shall be in scope of IFFCO. However, cables from MCC upto Hydrogen Peroxide Plant shall be in Scope of the Party.

Scope shall include all the work or material required for satisfactory completion and safe & smooth operation of the Hydrogen Peroxide Plant meeting the guaranteed consumption figures and meeting all the regulatory/ statutory requirement of State/ Center government of India. HAZOP study, wherever required will also be carried out by the Party. Scope of work shall also include all the equipment / auxiliaries required for catalyst loading, unloading and handling at Hydrogen Peroxide Plant.

## **6.0 COMPLETION PERIOD:**

Party shall also indicate the stipulated time for mechanical completion for Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) plant from the date of award of contract.

## **7.0 RESPONSE TO EOI:**

IFFCO Kalol Unit welcomes the EPC Contractors to visit the IFFCO Kalol plant site to assimilate the scope of EOI, if required. Prior confirmation of date and time is must in advance for the said visit. Interested EPC Contractors shall send their willingness along with following details on or before **15<sup>th</sup> April, 2019**:

- 7.1 Contact details, Name, Address, e-mail, phone, Fax etc. of Contact /authorized Person of EPC Contractors.
- 7.2 Status of the EPC Contractors company i.e. Private limited, Proprietorship, Government, Public limited, Partnership, any other, etc.
- 7.3 Document showing approval of the Process Licensor that the LSTK Contractor is authorized to construct the plant based on their process.
- 7.4 Experience and reference list of Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) Plant completed in last 15 years on LSTK basis with plants' details like capacity, raw materials specific consumption, cost etc.



7.5 Financial statement / balance sheet, Turnover, profit/loss statement etc. of EPC Contractors of last three years

7.6 Recent Hydrogen Peroxide Plant completed on LSTK basis

Year of completion : \_\_\_\_\_  
Location : \_\_\_\_\_  
Capacity, MTPD : \_\_\_\_\_  
Technology supplier : \_\_\_\_\_  
Installed Project Cost : \_\_\_\_\_  
Land area : \_\_\_\_\_

7.7 EPC Contractors may submit additional information about their credentials for LSTK job carried, if any.

7.8 Details of inclusion and exclusion for Project on LSTK basis.

7.9 EPC Contractors may show their “Interest for tie up for Marketing of Hydrogen Peroxide” and if yes, then confirm the Quantity and Grade of Hydrogen Peroxide.

## 8.0 COMMUNICATION:

EPC Contractors may contact General Manager (Technical) for clarifications, if any and submit their EOI along with the required details/documents to:

O.P. Dayama

General Manager (Technical),

Indian Farmers Fertiliser Cooperative Limited (IFFCO), Kalol Unit

P.O. Kasturinagar, Dist.:Gandhinagar,

Gujarat (India), PINCODE-382423

Phone - (Office) +91-79-2328 2022

- (Mobile) +91-9426725505

Fax - (Office) +91-79-23286035

Email: [opdayama@iffco.in](mailto:opdayama@iffco.in)

Website: [www.iffco.in](http://www.iffco.in)

**Date: 15<sup>th</sup> March, 2019**

**Place: IFFCO Kalol, Dist.: Gandhinagar, Gujarat (India)**