

**Attached list of special condition and requirement**

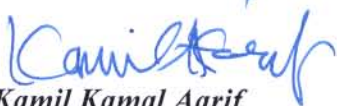
**Ministry of oil**

**North Gas Company**

**Indent number: 2177/2013**

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1. Offer should be worked out on the basis of CIP Kirkuk
2. Kindly state the following:-
  - a. Delivery date & offer validity (90) days
  - b. Country of origin.
  - c. Port & country of export
  - d. Performance certificate and all relevant documents involved.
  - e Specify shipment route.
  - f. Offers must be signed and stamped alive & must be in sealed envelope (Technical offer) with indent number and closing date clearly mentioned on the envelope.
3. Yr offer must be submitted before: 02 / 06 /2013(prior to 3:00pm), is highly appreciated.
4. If you are not interested in offering quotations, please let us know within given period.
5. Offers will neglect one or more of a/m conditions, shall be neglected.
6. supplier to present a full set of shipping documents authenticated from Iraqi embassy at supplier country, including epidemic-free license for export materials.
7. Offers should be from manufacturing companies or authorized agents
8. Agents-suppliers ... Should submit authorization from the main manufacturer(s) (all relevant documents to be originals being authenticated by Iraqi commercial attaché.
9. Signing contracts may be through/by authorized regional agent, within Iraq embassy in supplies' .country
10. Tenders should be pursued definitely via corresponding NGC/E-mail or communicating NGC reception.
11. Final account statement approved by a charter account in past year for financial efficiency to be submitted.
12. **Incorporation papers& origin certificate** are to authenticated by Iraqi commercial attaché.
13. Commercial offers must be submitted after technical ones had been studied well by our concerned staff & you will be informed later on.
- 14- Before delivering the envelopes containing offer(s), the bidder requested to pay (ID 100000) **one hundred thousand Iraqi Dinars** against receipt (copy to be attached with technical offer & could be reimbursed if the relevant tender would be cancelled by NGC).
- 15- Certificate of inspection of the third party to be from **French Bureau Veritas** or any equivalent one **exclusive of SGS** is to be submitted definitely .



**Kamil Kamal Aarif**  
**PP/Director General**

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P. O. BOX (16) KIRKUK

E-MAIL: [gas@ngc.oil.gov.iq](mailto:gas@ngc.oil.gov.iq)

BAIJI-KIRKUK ROAD

WEBSITE: [www.ngc.oil.gov.iq](http://www.ngc.oil.gov.iq)

شركة غاز الشمال (شركة عامة)

نموذج رقم ( )

طلبية شراء  
MATERIALS INDENT

NEEDED FOR.....

|                       |                                           |
|-----------------------|-------------------------------------------|
| S<br>T<br>O<br>R<br>E | C<br>E<br>A<br>L<br>R<br>A<br>D<br>S<br>S |
| 1                     | 23                                        |

|                        |
|------------------------|
| INDENT<br>SERIAL<br>NO |
| 5 8                    |
| 2177                   |

| DATE REQUIRED |    |
|---------------|----|
| MM            | YY |
|               | 20 |

| DATE RAISED |    |      |
|-------------|----|------|
| DD          | MM | YY   |
| 15          |    | 20   |
| 7           | 4  | 2013 |

| ITEM | الرقم الرمزي<br>VOCABULARY | DESCRIPTION المواصفات                                                                                                                                                                                                   | الوحدة<br>UNIT | الكمية<br>QUANTITY | المبلغ<br>VALUE | REMARKS                                                                                                 |
|------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|-----------------|---------------------------------------------------------------------------------------------------------|
| 23   | 24 33                      |                                                                                                                                                                                                                         | 62 64          | 65 70              | 71 80           | ملاحظات                                                                                                 |
| 1    |                            | Engineering , supply , installation and commissioning of complete nitrogen generating package unit based on Pressure Swing Adsorption (PSA) with all necessary accessories on turnkey basis as per attached documents . | UNIT           | 2 (TWO)            |                 | <u>GENERAL</u><br>من المنشآت أوربا الغربية<br>أو الأمريكية أو اليابانية<br>أو الكورية الجنوبية<br>حصراً |

مستند طلب المواد /

مستند الوظيفة /

هيئة الطاقة والخدمات الصناعية

مدير الهيئة الهندسية

مجموع البعثات  
TOTAL ITEMS

سيطرة مخزنية

المدير العام

مستند

قسم المراجل والأفران

قسم الكهرباء والاتصالات

قسم الهندسة المدنية

قسم الأنابيب واللحام

قسم السيطر والقياس

قسم السيطر والقياس

٢٠١٢/١/٢٥

# INQUIRY FOR PROVIDING COMPLETE NITROGEN GENERATING UNIT PACKAGE

## 1- scope of supply:

Engineering, supply, installation and commissioning (turn key ) of complete continuous operation nitrogen generating package unit based on Pressure Swing Adsorption (PSA) with all necessary accessories on turnkey basis to produce nitrogen gas for blanketing ,purging & preservation , with under mentioned specification the offer should be enhanced with drawings .

### Scope of work/supply should include ,but not limited to, the following items :

- integrate the package with existing nitrogen header pipe at site.
- Painting the unit and piping.
- Site survey for estimating the requirement of integration.
- Provide consumable material for absorber for five year operation.
- Exhaust silencer .
- Outlet filter for preventing the powder resulting from the adsorption bed to ingress to the process units
- Nitrogen pressure regulator.
- Residual oxygen analyzer.
- Nitrogen gas out Dew point analyzer
- The amount of utilities required (inst. air ,electrical & control voltage and power) to be mentioned clearly in the offer .
- Air cooled air compressor enough to supply the unit with air at design condition ( 55°C) continuous operating with electric motor drive totally enclosed fan cooled (IP55) complete with indoor type switch board and control panel .
- Necessary power & control cables for above motor ( min. 500 meter each )

## 2- Design condition :

The provided package should meet the following Design consideration:

- **Two identical package units each of 400 Nm<sup>3</sup>/hr at ambient temperature of 55 deg. C.**
- All equipment and instruments to be suitable for classified area(explosion proof )
- Nitrogen purity required : 99.99%.

- Nitrogen supply pressure at battery limit : 7 bar.
- Max. oxygen content allowed 200 ppm.
- each unit with two columns ,one in operation the other regenerating.
- no air compressor is required ( sufficient air is available ) .
- Site elevation is 300 meters A.S.L.
- necessary drying or water separation unit (air cooled by fin fan coolers & using environment friendly gas in case of using refrigerant gas coolers).

**Important note** : the supplier has to prove and justify the reason for choosing either desiccant dryer or refrigeration dryer .

### **3- INSTRUMENTATION REQUIREMENT:**

- bidder shall provide state of the art control system with common PLC with redundant processor , power supply , input/output cards & communication , the package PLC shall be installed in local control panel located on the skid & to be suitable for class I group D division 1 hazardous area with all construction material for signal & power cable, cable gland, junction boxes , cable trays,.....
- provide suitable operator station (explosion proof) touch screen to be integrated in the PLC panel.
- Provide all necessary software, license.
- Provide instruction maintenance & operation manuals for instrument, control system (hard & software copy).
- Provide suitable UPS power supply to installed inside PLC panel ready to supply the PLC & accessories.
- Provide suitable oxygen analyzer for purity monitoring as mentioned above, controlling, output signal to be integrated with PLC.
- Skid mounted instrument to be explosion proof as specified above.
- The bidder shall operate , commission the package unit obtaining the design condition.

### **4- ROTARY MACHINES REQUIREMENT**

- all the rotary machines must be according to API standards.
- Special tools for maintenance.
- Optimum design for easy removal and installation for rotary machines.

### **5- ELECTRICAL REQUIREMENT:**

- The electrical motors specification to be :  
EX, INSULATION CLASS F, TEMP RISE B, D.O.L. starting duty S1.

- All the cables should be of type XLPE and the distance from the source station to be calculated during site survey.
- Providing control panel for motors (estimated during site survey).

**6- CIVIL ENGINEERING REQUIREMENT:**

- The supplier have to design the foundation of the package unit according to soil investigation for the site where the unit to be installed , we will provide the supplier with soil investigation report.
- The foundation will done by the purchaser according to the designs that prepared by the supplier & to supply us copies of all civil works documents & drawings .
- The supplier to provide all the fasteners and necessary tools to fix the package on the foundation.
- Design and provide the frame and sandwich panels for the unit's roof.

**7- PIPING REQUIREMENT:**

- providing and integrating the package unit with existing nitrogen header pipe without shutting down the existing units.
- Providing all necessary fittings, supports,.....etc for the integration.

**8- Applicable codes & standards:**

- API
- ASME
- CENELEC
- IEC
- UL

**9- Tests and certificates:**

- FAT: factory acceptance test witnessed by at least 5 of our engineers for full capacity successful commissioning of the unit (details will be agreed upon during contract signing ).
- SAT : site acceptance test .
- Third party inspection & approval for materials used in different piping & equipment from well known company except **SGS**.

**10- Environmental: the supplier should submit complete study, report about the impact of the unit on the environment.**

**11- Spare parts :**

- Commissioning spare parts for all rotary, electrical, instrument .
- Itemized priced spare parts list including the PLC to select by us from it the operation spare part for two years.

**12- TRAINING**

Training at manufacturer firm for (10 persons other than FAT group) in topic of maintenance, operation and installation note that our company will bear the pocket money all other costs of (local transportation, air ticket accommodation, training class room, .....etc) will be borne by the supplier .

**13- WARRANTY**

The supplier must guarantee the package unit for one year after successful operation .

**14- Available utilities :**

- Electrical power : 3 phase 380 V , 50 HZ & 3.3 kv , 50 Hz , 3 phase
- Inst. Control power :110 V AC .50Hz.
- Inst. Air supply : 7 kg/cm2.
- Water : no water cooling is required . wherever needed preferred to use air coolers

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