
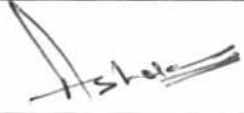


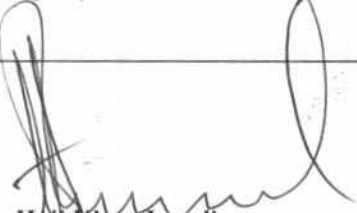



## ATTENDANCE SHEET OF BIDDERS

The Following Contractor / Firms Have Participated in the Supplying & Fixing New 2 X 2.5 MW HFO GTG I Open Cycle Power project.

On 25-01-2017


| S.No. | Name of Contractor / Firms                 | Signature   |
|-------|--|---|
| 1     | MBC & Sons Builders Developers             |    |
| 2     | M/s Thadani Enterprises                    |    |
| 3     | M/s Madni Engineering Construction Company |   |
| 4     | M/s Hafiz Rab Nawaz & Company              |  |

  
Haji Khan Jamali  
Superintending Engineer,  
Thar Coal Water Works Circle,  
Mirpurkhas  
CHAIRMAN

  
Muhammad Faheem Soomro  
Executive Engineer,  
Thar Coal Water Works  
Division, Mirpurkhas  
MEMBER / SECRETARY

  
Muhammad Mam Rahojo  
Executive Engineer,  
Thar Coal Water Carrier Works  
Division, Mirpurkhas  
MEMBER

  
Shafique Hussain Memon  
Executive Engineer,  
Public Health  
Division, Jamshoro  
MEMBER


  
Qamaruddin Solangi  
Divisional Accounts Officer,  
Thar Coal Water Works  
Division, Mirpurkhas  
MEMBER

## BID EVALUATION REPORT

- |                                   |   |
|-----------------------------------|---|
| 1 Name of Procuring Agency        | Executive Engineer Thar Coal Water Works Division Mirpurkhas  |
| 2 Tender Reference No.            | SC/G-148/439 dated 09.11.2016.  |
| 3 Name of Work                    | Supplying & Fixing New 2 x 2.5 MW HFO GTG Open Cycle Power Project at Nabisar-Thar District Province of Sindh.  |
| 4 Method of Procurement           | Single Stage-Two Envelop Procedure  |
| 5 Tender Published                | Published in daily News paper Express Karachi dated 17.11.2016, Daily Dawn Karachi dated 18.11.2016, Daily Times dated 18.11.2016, Daily Awami Awaz dated 18.11.2016, Daily Intakhab dated 18.11.2016, Daily Khabreen dated 17.11.2016 Hosted on SPPRA web site S.No 30501 dated 16.11.2016 |
| 6 Total Bid Documents Sold        | 4   |
| 7 Total Bid Received              | 4   |
| 8 Technical Bid Opening Date      | 25.01.2017  |
| 9 No.of Bid Technically Qualified | 0   |
| 10 Bid (s) Rejected               | 0   |
| 11 Financial Bid Opening Date     | 25.01.2017  |
| 12 Evaluation.                    |   |


| Sno. | Name of firm Bidder                        | Cost offered by the Bidder (M) | Ranking in term of Cost | Comparision with estimate cost | Reasons for acceptance / Rejection | Remarks |
|------|--|--------------------------------|-------------------------|--------------------------------|------------------------------------|---------|
| 1    | M/S M.B.C & Sons Builders & Developers.    | 1174.430                       | 2nd                     | 19.76% Above                   | -                                  |         |
| 2    | M/S Madni Engineering Construction Company | 1194.420                       | 3rd                     | 21.80% Above                   | -                                  |         |
| 3    | M/S Hafiz Rab Nawaz & Co                   | 1250.000                       | 4th                     | 27.47% Above                   | -                                  |         |
| 4    | M/S Thadani Enterprises.                   | 1159.600                       | 1st                     | 18.25% Above                   | Ist Lowest Hence accepted          |         |

  
 Muhammad Faheem Soomro  
 Executive Engineer  
 Thar Coal Water Works  
 Division Mirpurkhas/Member

  
 Haji Khan Jamali  
 Superintending Engineer  
 Thar Coal Water Works Circle  
 Mirpurkhas/Chairmen

  
 Muhammad Aam Rahpoto  
 Executive Engineer  
 Water Carrier Works Division  
 Mirpurkhas/Member

  
 Shafique Hussain Memon  
 Executive Engineer  
 Public Health Engineering  
 Division Jamshoro/Member

  
 Qamaruddin Solangi  
 Divisional Accounts officer  
 Thar Coal Water Works Division  
 Mirpurkhas/Member

## TECHNICAL EVALUATION REPORT

Short listing of contractors for construction of HFO generator water supply scheme at Nabisar for Thar Coal Power Plant for 2x2.5 MW Power generation capacity @ Nabisar for water carrier from LBOD to Nabisar .

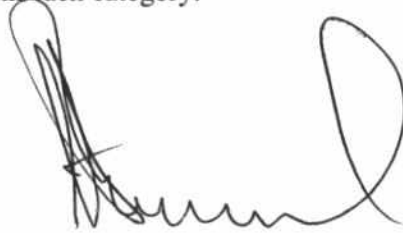
### Qualification Criteria

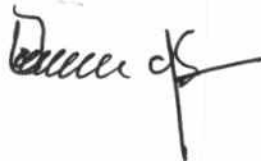
*M/s Thadani Enterprises.*

| Sr. | Category               | Mark assigned | Marks Obtained |
|-----|------------------------|---------------|----------------|
| 1.  | Experience record      | 35            | 15             |
| 2.  | Personal capabilities  | 15            | 14             |
| 3.  | Equipment capabilities | 20            | 16             |
| 4.  | Financial soundness    | 30            | 29             |
|     | <b>Total</b>           | <b>100</b>    | <b>74</b>      |

**Note:-** Qualification status shall be decided on Pass/Fail basis. The applicant must secure at least 60% score in each category.

*m.* 










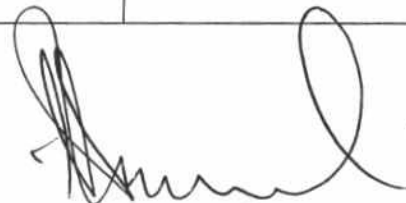
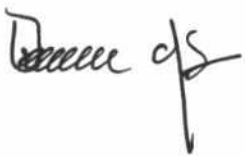


*Standard Procedure for Pre-Qualification*

Divided into packages the user may do the same however decide the packages keeping in view of interfacing and co-ordi result of smaller packaging of a Project.

- iv) Under para 7 of Invitation for Pre-qualification, minimum re have to be specified. For guidance, the following may be considered; however the Employer/User can fix his own criteria depending upon nature, size and requirements of the specific projects. An example merely as guideline is given hereinafter for reference of users of this document.

a) General Experience

| Sr.No                        | Description   | Mark assigned | Marks Obtained |
|------------------------------|---|---------------|----------------|
| a)                           | Projects of similar nature and complexity Completed in last ten years.              | 15            | 3              |
| b)                           | Projects of similar nature and complexity in-hand during last 3 years.              | 10            | 2              |
| c)                           | Electrical works carried out during last 3 years by the sub-contractor / JV partner | 5             | 5              |
|                              | Registration record with Pakistan Engineering Council                               | 5             | 5              |
| <b>Total Marks Allocated</b> |   | <b>35</b>     | <b>15</b>      |

m.    
  

**b) Personnel Capabilities**

Requirement of Employer/User will be varied from Project to Project.  
However following factors may be used as a guideline:

| Sr.No                        | Description   | Mark assigned | Marks Obtained |
|------------------------------|---|---------------|----------------|
| 1.                           | B.Sc Engineers registered with Pakistan Engineering Council (PEC) | 9             | 9              |
| ii)                          | Associates Engineer (D.A.E)                                       | 6             | 5              |
| <b>Total Marks Allocated</b> |   | <b>15</b>     | <b>14</b>      |

**c). Equipment Capability**

Critical equipment required for the Project shall be specified by the User/Employer under para 3.2.4 (a). High value equipment should be an option to purchase, lease or hire.

| Sr.No                        | Description          | Mark assigned | Marks Obtained |
|------------------------------|----------------------|---------------|----------------|
| 1.                           | Equipment Capability | 20            | 16             |
| <b>Total Marks Allocated</b> |                      | <b>20</b>     | <b>16</b>      |

*m.*     
 

d) **Financial Soundness**

For Financial Status assessment, the Applicants may be required to submit Audited financial statements for the last five years or any other document which verifies their Financial Status..

Employer/User may amend para 3.2.5 of Instruction to Applicants in accordance with Project requirements and the minimum essential requirements mentioned in Invitation for Pre-qualifications.

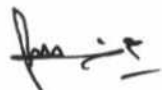
- The following may be used merely as a guideline

| Sr.No                        | Description  | Mark assigned | Marks Obtained |
|------------------------------|--|---------------|----------------|
| a.                           | Available Bank Credit Line                                       | 5             | 4              |
| b.                           | Working Capital in last 3 years                                  | 5             | 5              |
| c.                           | Registration with income tax department                          | 5             | 5              |
| d.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | 5              |
| e.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | 5              |
| f.                           | Blacklisting from any agency                                     | 5             | 5              |
| <b>Total Marks Allocated</b> |  | <b>30</b>     | <b>29</b>      |

on 





## TECHNICAL EVALUATION REPORT

Short listing of contractors for construction of HFO generator water supply scheme at Nabisar for Thar Coal Power Plant for 2x2.5 MW Power generation capacity @ Nabisar for water carrier from LBOD to Nabisar .

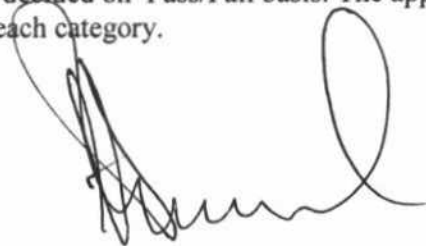
### Qualification Criteria

*M/s M.B.C & Sons Builders & Developers.*

| Sr. | Category               | Mark assigned | Marks Obtained   |
|-----|------------------------|---------------|------------------|
| 1.  | Experience record      | 35            | <i>12</i>        |
| 2.  | Personal capabilities  | 15            | <i>13</i>        |
| 3.  | Equipment capabilities | 20            | <i>15</i>        |
| 4.  | Financial soundness    | 30            | <i>22</i>        |
|     | <b>Total</b>           | <b>100</b>    | <b><i>62</i></b> |

**Note:-** Qualification status shall be decided on Pass/Fail basis. The applicant must secure at least 60% score in each category.

*3.* 







Standard Procedure for Pre-Qualification

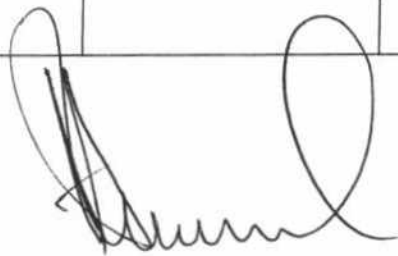
Divided into packages the user may do the same however decide the packages keeping in view of interfacing and co-ordi result of smaller packaging of a Project.

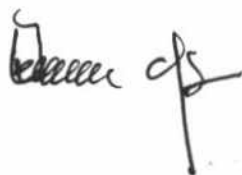
- iv) Under para 7 of Invitation for Pre-qualification, minimum re have to be specified. For guidance, the following may be considered; however the Employer/User can fix his own criteria depending upon nature, size and requirements of the specific projects. An example merely as guideline is given hereinafter for reference of users of this document.

a) General Experience

| Sr.No                        | Description   | Mark assigned | Marks Obtained                                 |
|------------------------------|---|---------------|--|
| a)                           | Projects of similar nature and complexity Completed in last ten years.              | 15            | 01   |
| b)                           | Projects of similar nature and complexity in-hand during last 3 years.              | 10            | 01   |
| c)                           | Electrical works carried out during last 3 years by the sub-contractor / JV partner | 5             | 05   |
|                              | Registration record with Pakistan Engineering Council                               | 5             | 05<br>C-1, Spec: CE-01, CE-04<br>CE-09, CE-10. |
| <b>Total Marks Allocated</b> |   | <b>35</b>     | <b>12</b>                                      |

M-  









**b) Personnel Capabilities**



Requirement of Employer/User will be varied from Project to Project.  
However following factors may be used as a guideline:

| Sr.No                        | Description   | Mark assigned | Marks Obtained |
|------------------------------|---|---------------|----------------|
| 1.                           | B.Sc Engineers registered with Pakistan Engineering Council (PEC) | 9             | 9              |
| ii)                          | Associates Engineer (D.A.E)                                       | 6             | 4              |
| <b>Total Marks Allocated</b> |   | <b>15</b>     | <b>13</b>      |

**c). Equipment Capability**

Critical equipment required for the Project shall be specified by the User/Employer under para 3.2.4 (a). High value equipment should be an option to purchase, lease or hire.

| Sr.No                        | Description          | Mark assigned | Marks Obtained |
|------------------------------|----------------------|---------------|----------------|
| 1.                           | Equipment Capability | 20            | 15             |
| <b>Total Marks Allocated</b> |                      | <b>20</b>     | <b>15</b>      |

m.   


d) **Financial Soundness**

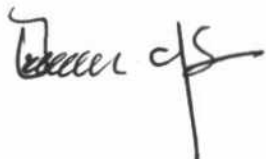
For Financial Status assessment, the Applicants may be required to submit Audited financial statements for the last five years or any other document which verifies their Financial Status..

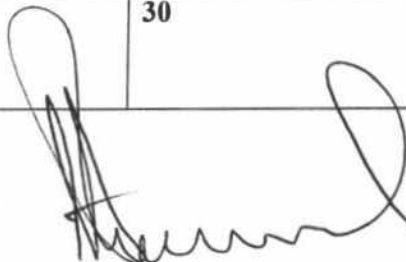
Employer/User may amend para 3.2.5 of Instruction to Applicants in accordance with Project requirements and the minimum essential requirements mentioned in Invitation for Pre-qualifications.

- The following may be used merely as a guideline

| Sr.No                        | Description  | Mark assigned | Marks Obtained |
|------------------------------|--|---------------|----------------|
| a.                           | Available Bank Credit Line                                       | 5             | 5              |
| b.                           | Working Capital in last 3 years                                  | 5             | 3              |
| c.                           | Registration with income tax department                          | 5             | 5              |
| d.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | 2              |
| e.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | 2              |
| f.                           | Blacklisting from any agency                                     | 5             | 5              |
| <b>Total Marks Allocated</b> |  | <b>30</b>     | <b>22</b>      |

m - 









## TECHNICAL EVALUATION REPORT

Short listing of contractors for construction of HFO generator water supply scheme at Nabisar for Thar Coal Power Plant for 2x2.5 MW Power generation capacity @ Nabisar for water carrier from LBOD to Nabisar .

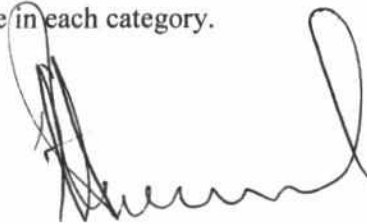
### Qualification Criteria

*M/s Madri Engineering Construction Co.*

| Sr. | Category               | Mark assigned | Marks Obtained |
|-----|------------------------|---------------|----------------|
| 1.  | Experience record      | 35            | 18             |
| 2.  | Personal capabilities  | 15            | 07             |
| 3.  | Equipment capabilities | 20            | 16             |
| 4.  | Financial soundness    | 30            | 20             |
|     | <b>Total</b>           | <b>100</b>    | <b>61</b>      |

**Note:-** Qualification status shall be decided on Pass/Fail basis. The applicant must secure at least 60% score in each category.

*M.* 









Standard Procedure for Pre-Qualification

Divided into packages the user may do the same however decide the packages keeping in view of interfacing and co-ordi result of smaller packaging of a Project.

- iv) Under para 7 of Invitation for Pre-qualification, minimum re have to be specified. For guidance, the following may be considered; however the Employer/User can fix his own criteria depending upon nature, size and requirements of the specific projects. An example merely as guideline is given hereinafter for reference of users of this document.


a) General Experience

| Sr.No                        | Description   | Mark assigned | Marks Obtained   |
|------------------------------|---|---------------|--|
| a)                           | Projects of similar nature and complexity Completed in last ten years.              | 15            | —  |
| b)                           | Projects of similar nature and complexity in-hand during last 3 years.              | 10            | 8  |
| c)                           | Electrical works carried out during last 3 years by the sub-contractor / JV partner | 5             | 5  |
|                              | Registration record with Pakistan Engineering Council                               | 5             | 5<br>C-2, Spec: CE-01, CE-04<br>CE-07, CE-10, EE-11, ME-06 |
| <b>Total Marks Allocated</b> |   | <b>35</b>     | <b>18</b>  |

3- 









**b) Personnel Capabilities**

Requirement of Employer/User will be varied from Project to Project.  
However following factors may be used as a guideline:

| Sr.No                        | Description   | Mark assigned | Marks Obtained |
|------------------------------|---|---------------|----------------|
| 1.                           | B.Sc Engineers registered with Pakistan Engineering Council (PEC) | 9             | 7              |
| ii)                          | Associates Engineer (D.A.E)                                       | 6             | -              |
| <b>Total Marks Allocated</b> |   | 15            | 7              |

**c). Equipment Capability**

Critical equipment required for the Project shall be specified by the User/Employer under para 3.2.4 (a). High value equipment should be an option to purchase, lease or hire.

| Sr.No                        | Description          | Mark assigned | Marks Obtained |
|------------------------------|----------------------|---------------|----------------|
| 1.                           | Equipment Capability | 20            | 16             |
| <b>Total Marks Allocated</b> |                      | 20            | 16             |

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d) **Financial Soundness**

For Financial Status assessment, the Applicants may be required to submit Audited financial statements for the last five years or any other document which verifies their Financial Status..

Employer/User may amend para 3.2.5 of Instruction to Applicants in accordance with Project requirements and the minimum essential requirements mentioned in Invitation for Pre-qualifications.

- The following may be used merely as a guideline

| Sr.No                        | Description  | Mark assigned | Marks Obtained |
|------------------------------|--|---------------|----------------|
| a.                           | Available Bank Credit Line                                       | 5             | —              |
| b.                           | Working Capital in last 3 years                                  | 5             | —              |
| c.                           | Registration with income tax department                          | 5             | 5              |
| d.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | 5              |
| e.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | 5              |
| f.                           | Blacklisting from any agency                                     | 5             | 5              |
| <b>Total Marks Allocated</b> |  | <b>30</b>     | <b>20</b>      |

m. 




## TECHNICAL EVALUATION REPORT

Short listing of contractors for construction of HFO generator water supply scheme at Nabisar for Thar Coal Power Plant for 2x2.5 MW Power generation capacity @ Nabisar for water carrier from LBOD to Nabisar .

### Qualification Criteria

M/S Hafiz Raza Nawaz & Co.

| Sr. | Category               | Mark assigned | Marks Obtained |
|-----|------------------------|---------------|----------------|
| 1.  | Experience record      | 35            | 14             |
| 2.  | Personal capabilities  | 15            | 12             |
| 3.  | Equipment capabilities | 20            | 16             |
| 4.  | Financial soundness    | 30            | 20             |
|     | <b>Total</b>           | <b>100</b>    | <b>62</b>      |

**Note:-** Qualification status shall be decided on Pass/Fail basis. The applicant must secure at least 60% score in each category.

3.     
 

*Standard Procedure for Pre-Qualification*

Divided into packages the user may do the same however decide the packages keeping in view of interfacing and co-ordi result of smaller packaging of a Project.

- iv) Under para 7 of Invitation for Pre-qualification, minimum re have to be specified. For guidance, the following may be considered; however the Employer/User can fix his own criteria depending upon nature, size and requirements of the specific projects. An example merely as guideline is given hereinafter for reference of users of this document.

a) General Experience

| Sr.No                        | Description   | Mark assigned | Marks Obtained                                      |
|------------------------------|---|---------------|---|
| a)                           | Projects of similar nature and complexity Completed in last ten years.              | 15            | 02  |
| b)                           | Projects of similar nature and complexity in-hand during last 3 years.              | 10            | 02  |
| c)                           | Electrical works carried out during last 3 years by the sub-contractor / JV partner | 5             | 05  |
|                              | Registration record with Pakistan Engineering Council                               | 5             | 05<br>CA Spec: CE-01, CE-04,<br>CE-09, CE-10, ME-07 |
| <b>Total Marks Allocated</b> |   | <b>35</b>     |   |

3. 











**b) Personnel Capabilities**

Requirement of Employer/User will be varied from Project to Project.  
However following factors may be used as a guideline:

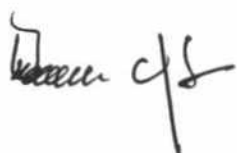
| Sr.No                        | Description   | Mark assigned | Marks Obtained |
|------------------------------|---|---------------|----------------|
| i.                           | B.Sc Engineers registered with Pakistan Engineering Council (PEC) | 9             | 06             |
| ii)                          | Associates Engineer (D.A.E)                                       | 6             | 06             |
| <b>Total Marks Allocated</b> |   | <b>15</b>     | <b>12</b>      |

**c). Equipment Capability**

Critical equipment required for the Project shall be specified by the User/Employer under para 3.2.4 (a). High value equipment should be an option to purchase, lease or hire.

| Sr.No                        | Description          | Mark assigned | Marks Obtained |
|------------------------------|----------------------|---------------|----------------|
| 1.                           | Equipment Capability | 20            | 16             |
| <b>Total Marks Allocated</b> |                      | <b>20</b>     | <b>16</b>      |

3 







d) **Financial Soundness**

For Financial Status assessment, the Applicants may be required to submit Audited financial statements for the last five years or any other document which verifies their Financial Status..

Employer/User may amend para 3.2.5 of Instruction to Applicants in accordance with Project requirements and the minimum essential requirements mentioned in Invitation for Pre-qualifications.

- The following may be used merely as a guideline

| Sr.No                        | Description  | Mark assigned | Marks Obtained |
|------------------------------|--|---------------|----------------|
| a.                           | Available Bank Credit Line                                       | 5             | 05             |
| b.                           | Working Capital in last 3 years                                  | 5             | 05             |
| c.                           | Registration with income tax department                          | 5             | 05             |
| d.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | —              |
| e.                           | Copy of Valid electrical license from Sub-Contractor/ JV Partner | 5             | —              |
| f.                           | Blacklisting from any agency                                     | 5             | 05             |
| <b>Total Marks Allocated</b> |  | <b>30</b>     | <b>20</b>      |

3  
5



## MINUTES OF MEETING OF TENDER OPENING COMMITTEE TECHNICAL BID.

Name of Work:- Supplying & Fixing New 2 x 2.5 MW HFO GTG.

Date of Opening:- 25.01.2017.

1. Mr.Haji Khan Jamali Superintending Engineer Thar Coal Water Works Circle Mirpurkhas. (chairmen).
2. Mr.Muhammad Faheem Soomro Executive Engineer Thar Coal Water Works Division Mirpurkhas. Secretary/Member
3. Mr.Muhammad Alam Rahpoto Executive Engineer Water Carrier Works Division Mirpurkhas. (Member).
4. Mr.Shafique Hussain Memon Executive Engineer Public Health Engineering Division Jamshoro. (Member).
5. Mr.Qamaruddin Solangi Divisional Accounts Officer Thar Coal Water Works Division Mirpurkhas. (Member).
6. Mr.Tarique Aziz Channa of M/S M.B.C & Sons Builders & Developers.
7. Mr.Abdul Qudoos Chachar of M/S Hafiz Rab Nawasz Construction Company.
8. Mr.Mansoor Iqbal Sheikh of M/S Madni Engineering Construction Company.
9. Mr. Ashok Thadani of Thadani Enterprises.

The sealed Technical Proposals for the above noted work opened before the Tender Opening Committee M/S M.B.C & Sons Builder & Developer obtained 62 Pionts out of 100 Pionts the Minimum Pionts are 60 Pionts for pass.

The sealed Technical Proposals for the above noted work opened before the Tender Opening Committee M/S Hafiz Rab Nawaz Construction Co obtained 62 Pionts out of 100 Pionts the Maximum Pionts are 60 Pionts for pass.

(P-02)

The sealed Technical Proposals for the above noted work opened before the Tender opening committee M/S Madni Engineering Construction Co obtained 61 Points out of 100 Points the Maximum Points are 60 Points for pass.

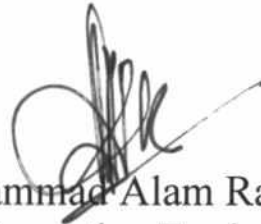
The sealed Technical Proposals for the above noted work opened before the Tender opening committee M/S Thadani Enterprises obtained 74 Points out of 100 Points the Maximum Points are 60 Points for pass.



(Haji Khan Jamali)  
Superintending Engineer  
Thar Coal Water Works Circle  
Mirpurkhas.



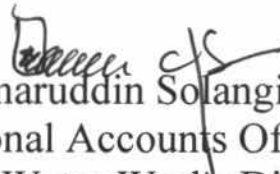
Muhammad Faheem Soomro  
Executive Engineer  
Thar Coal Water Works Division  
Mirpurkhas  
Member/Secretary



Muhammad Alam Rahpoto  
Executive Engineer  
Water Carrier Works Division  
Mirpurkhas/Member



Shafique Hussain Memon  
Executive Engineer  
Public Health Engineering  
Division Jamshoro Member

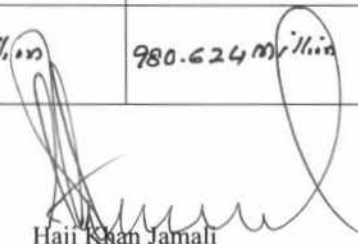



Qamaruddin Solangi  
Divisional Accounts Officer  
Thar Coal Water Works Division  
Member Mirpurkhas


## COMPARATIVE STATEMENT

### COMPARATIVE STATEMENT FOR THE WORK SUPPLYING & FIXING NEW 2 X 2.5 MW HFO GTG OPEN CYCLE POWER PROJECT AT NABISAR THAR DISTRICT PROVINCE OF SINDH.


| S.No | Name of Builder                            | Bid Cost         | Estimated Cost  | Above/Below   | Remarks  |
|------|--|------------------|-----------------|---------------|--|
| 1    | M/S MBC & Sons Builders & Developers       | 1174.43 Million  | 980.624 Million | 19.76% above  | CD NO: 05794416<br>UBL Gearien Branch<br>Karachi Rs: 23488712/-  |
| 2    | M/S Madni Engineering Construction Company | 1194.42 Million  | 980.624 Million | 21.80% above  | CD NO: 0149653<br>JS Bank citizen colony<br>Branch Hyderabad.<br>Rs: 23,888,436/-  |
| 3    | M/S Hafiz Rab Nawaz Construction Company   | 1250.0 Million   | 980.624 Million | 27.47% above  | CD NO: 10831957<br>ABL Masum Khan Bx<br>Hyderabad 25000000/-<br>Rs:  |
| 4.   | M/s Thadani Enterprises                    | 1159.600 Million | 980.624 Million | 18.25% above. | CD NO: 6379 Rs: 15,000,000/-<br>CD NO: 6380 Rs: 8,000,000/-<br>CD NO: 6382 Rs: 500,000/-<br>Total Rs: 23500000/-<br>Semi-Mil Bank Hyd: Branch. |

  
 Haji Khan Jamali  
 Superintending Engineer  
 Thar Coal Water Works Circle  
 Mirpurkhas/Chairman

  
 Muhammad Faheem Soomro  
 Executive Engineer  
 Thar Coal Water Works Division  
 Mirpurkhas Secretary/Member

  
 Muhammad Alam Raho  
 Executive Engineer  
 Water Carrier Works Division  
 Mirpurkhas Member

  
 Shafique Hussain Memon  
 Executive Engineer  
 Public Health Engineering Division  
 Jamshoro Member

  
 Qamaruddin Solangi  
 Divisional Accounts Officer  
 Thar Coal Water Works Division  
 Mirpurkhas/Member

# MINUTES OF MEETING OF TENDER OPENING COMMITTEE FINANCIAL BID.

Name of Work:- Suplllying & Fixing New 2 x 2.5 MW HFO GTG.  
Date of Opening:- 25.01.2017.

1. Mr.Haji Khan Jamali Superintending Engineer Thar Coal Water Works Circle Mirpurkhas. (chairmen).
2. Mr.Muhammad Faheem Soomro Executive Engineer Thar Coal Water Works Division Mirpurkhas. Secretary/Member
3. Mr.Muhammad Alam Rahpoto Executive Engineer Water Carrier Works Division Mirpurkhas. (Member).
4. Mr.Shafique Hussain Memon Executive Engineer Public Health Engineering Division Jamshoro. (Member).
5. Mr.Qamaruddin Solangi Divisional Accounts Officer Thar Coal Water Works Division Mirpurkhas. (Member).
6. Mr.Tarique Aziz Channa of M/S M.B.C & Sons Builders & Developers.
7. Mr.Abdul Qudoos Chachar of M/S Hafiz Rab Nawasz Construction Company.
8. Mr.Mansoor Iqbal Sheikh of M/S Madni Engineering Construction Company.
9. Mr. Ashok Thadani of Thadani Enterprises.

The sealed Financial Proposals for the above noted work opened before the Tender Opening Committee M/S M.B.C & Sons Builder & Developer submit his bid cost amounting to Rs.1174.430 Million 19.72% above the Engineers Estimate with call deposite No.05794416 dated 04.01.2017 of United Bank Sea view Branch Karachi amounting to Rs.23,488,712/-.

The sealed Financial Proposals for the above noted work opened before the Tender Opening Committee M/S Madni Engineering Construction Company submit his bid cost amounting to Rs.1194.420 Million 21.80% above the Engineers Estimate with call deposite No.0149653 dated 04.01.2017 of JS Bank Citizen Colony Branch Hyderabad amounting to Rs.23,888,436/-.

The sealed Financial Proposals for the above noted work opened before the Tender Opening Committee M/S Hafiz Rab Nawaz Construction Company submit his bid cost amounting to Rs.1250.0 Million 27.47% above the Engineers Estimate with call deposit No.10831957 dated 04.01.2017 of Allied Bank Limited Nasim Nagar Branch Hyderabad amounting to Rs.25,000,000/-.


The sealed Financial Proposals for the above noted work opened before the Tender Opening Committee M/S Thadani Enterprises submit his bid cost amounting to Rs.1159.600 Million 18.25% above the Engineers Estimate with call deposit No.6379 of Rs.15,000,000/-, 6380 of Rs.8,000,000/- & 6382 of Rs.500,000/- Total 23,500,000/- dated 16.01.2017 of Summit Bank Hyderabad Branch.

M/S Thadani Enterprises submit the Financial proposal of Rs.1159.600 Million 18.25% above the Engineers Estimate which is lowest and tender opening committee submit the bid for approval to competent authority.

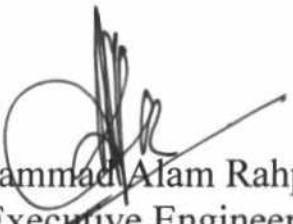


(Haji Khan Jamali)


Superintending Engineer  
Thar Coal Water Works Circle  
Mirpurkhas.



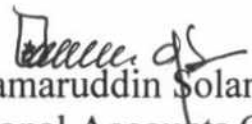
Muhammad Faheem Soomro  
Executive Engineer  
Thar Coal Water Works Division  
Mirpurkhas  
Member/Secretary



Muhammad Alam Rahpoto  
Executive Engineer  
Water Carrier Works Division  
Mirpurkhas/Member



Shafique Hussain Memon  
Executive Engineer  
Public Health Engineering Division  
Jamshoro/ Member



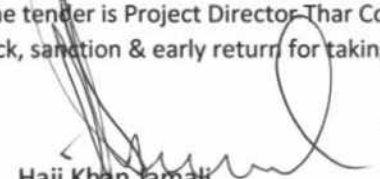
Qamaruddin Solangi  
Divisional Accounts Officer  
Thar Coal Water Works Division  
Mirpurkhas/ Member


**COMPARATIVE STATEMENT**


**COMPARATIVE STATEMENT FOR THE WORK SUPPLYING & FIXING NEW 2 X 2.5 MW HFO GTG OPEN CYCLE  
POWER PROJECT AT NABISAR THAR DISTRICT PROVINCE OF SINDH.**


| SNO | Name of Bidder                             | Bid Cost         | Estimated Cost  | Above/Below the Estimate | Remarks       |
|-----|--|------------------|-----------------|--------------------------|---------------|
| 1   | M/S M.B.C & Sons Builders & Developers     | 1174.430 Million | 980.624 Million | 19.76% Above             |               |
| 2   | M/S Madni Engineering Construction Company | 1194.420 Million | 980.624 Million | 21.80% Above             |               |
| 3   | M/S Hafiz Rab Nawaz Construction Company   | 1250.000 Million | 980.624 Million | 27.47% Above             |               |
| 4   | M/S Thadani Enterprises.                   | 1159.600 Million | 980.624 Million | 18.25% Above             | <b>Lowest</b> |

**SUBMITTED:-** The Bids were called by the Executive Engineer Thar Coal Water Works Division Mirpurkhas vide his office letter No. SC/G-148/439 dated 09.11.2016. Published in daily News paper Express Karachi dated 17.11.2016, Daily Dawn Karachi dated 18.11.2016, Daily Times dated 18.11.2016, Daily Awami Awaz dated 18.11.2016, Daily Intakhab dated 18.11.2016, Daily Khabreen dated 17.11.2016 Hosted on SPPRA web site S.No 30501 dated 16.11.2016 with the date of issue and opening is 31.12.2016 & 05.01.2017 respectively & corrigendum issued and the date of submission & opening is fixed on 25.01.2017 opened by the Tender opening Committee in the office of the Superintending Engineer Thar Coal Water Works Mirpurkhas on the same day at 3.0 PM in the presence of the intending firms / contractors. The (04) Contractors have been purchased the bidding document and among them M/S Thadani Enterprises has quoted the amount to Rs.1159.600 Million which is 18.25% above the Estimate Cost. Because the bidder is lowest cost hence approval for contract award. The competency to sanction the tender is Project Director Thar Coal Water Works @ Mirpurkhas. If approved the tender of the lowest contractor may be prepared and sent for favour of check, sanction & early return for taking further necessary action.

  
 Haji Khan Jamali  
 Superintending Engineer  
 Thar Coal Water Works Circle  
 Mirpurkhas/Chairman

  
 Shafique Hussain Memon  
 Executive Engineer  
 Public Health Engineering  
 Division Jamshoro/Member

  
 Muhammad Faheem Soomro  
 Executive Engineer  
 Thar Coal Water Works  
 Division Mirpurkhas/Member

  
 Muhammad Aam Rahpoto  
 Executive Engineer  
 Water Carrier Works Division  
 Mirpurkhas/Member

  
 Qamaruddin Solangi  
 Divisional Accounts officer  
 Thar Coal Water Works Division  
 Mirpurkhas/Member




## BIDDERS QUALIFICATION REPORT


Name of Work:-Supplying & Fixing New 2 x 2.5 MW HFO GTG Open Cycle Power Project at Nabisar-Thar District Province of Sindh.


| S.No | Name of Bidder                             | Registration with Incom Tax and Engineering Council | NTN No      | Annual Turn Over | Provide minimum experience | Affidavit/Undertaking regarding firm never been black listed |
|------|--|---|-------------|------------------|----------------------------|--|
| 1    | M/S M.B.C & Sons Builders & Developers     | Yes   | Yes Provide | Provided         | Provided 10 years          | Yes Provided   |
| 2    | M/S Madni Engineering Construction Company | Yes   | Yes Provide | Provided         | Provided 10 years          | Yes Provided   |
| 3    | M/S Hafiz Rab Nawaz Construction Company   | Yes   | Yes Provide | Provided         | Provided 10 years          | Yes Provided   |
| 4    | M/S Thadani Enterprises.                   | Yes   | Yes Provide | Provided         | Provided 10 years          | Yes Provided   |


  
Haji Khan Jamali

Superintending Engineer  
Thar Coal Water Works Circle  
Mirpurkhas/Chairmen

  
Muhammad Faheem Soomro  
Executive Engineer  
Thar Coal Water Works  
Division Mirpurkhas/Member

  
Muhammad Alam Rahpoto  
Executive Engineer  
Water Carrier Works Division  
Mirpurkhas/Member

  
Shafique Hussain Memon  
Executive Engineer  
Public Health Engineering  
Division Jamshoro/Member

  
Qamaruddin Solangi  
Divisional Accounts officer  
Thar Coal Water Works Division  
Mirpurkhas/Member



پاکستان کے 11 شہروں سے ایک وقت شائع ہونے والا واحد اخبار

**دفتر ایگزیکٹو انجینئر تھر کول واٹر ورکس ڈویژن میرپور خاص**

No.SC/G-148/439 of 2016 Mirpurkhas Dated: 09-11-2016

**ٹینڈر طلبی نوٹس**

SPPRA رول 2010 (ترمیم شدہ 2013) کی روٹی میں (Lump Sum) لگنڈ پر اس کی بنیاد پر EPC فرم کی (کنٹریکٹ) پر محدود ذیل کام کی پراویز سہ اول کیلئے ڈیپٹی کے عالی افسر ایگزیکٹو انجینئر ڈویژن میرپور خاص سے SPP رول 2010 (ترمیم شدہ 2013) سق (ii) کے تحت سہ ماہیہ ٹینڈر مطلوب ہیں۔

| نمبر | کاموں کے نام   | بولی کی رقم کا ذریعہ | ٹینڈر فیس | مدت |
|------|--|----------------------|-----------|-----|
| 1-   | سوار حر ملع صوبہ سندھ میں نو 2x2.5MW HFO اور GTG اور این سائیکل پاور پروڈیکٹ کی فراہمی و تنصیب | 2%                   | 3000      | 407 |

تمام کنٹریکٹرز ایگزیکٹو انجینئر تھر کول واٹر ورکس ڈویژن میرپور خاص سے مل کر ٹینڈر فرم کی ایف ڈی کی بنیاد پر NIT کی افہامات / SPPRA رول 2010 (ترمیم شدہ 2013) کی تاریخ سے 2016-12-31 تک خرید سکتی ہیں۔ یہ 2017-01-05 کو 01:00 بجے تک وصول کئے جائیں گے۔ ڈیگ کنٹریکٹرز ایگزیکٹو انجینئر ڈویژن میرپور خاص کی موجودگی میں اس دن بوقت دوپہر 02:00 بجے کو ختم ہو جائیں گی۔

- ڈیپٹی کے عالی افسر کیلئے شرائط اہلیت درج ذیل ہیں:
  - ایگزیکٹو انجینئر آف ورک کے حلقہ شعبہ میں (سال 2016 کیلئے قابل مبادی) پاکستان انجینئرنگ کونسل سے رجسٹریشن
  - فرم میں کام کرنے والے انجینئر ڈیپٹی انجینئر کے کوائف
  - ذریعہ عملیہ عمل شدہ کام کا دستاویز کی قیمت اور آجمن کی جانب سے کام کے عملیہ عمل کا سرٹیفکیٹ
  - فرم میں کام کی تاریخ کی صورت کیساتھ جاری کام کی فہرست اور لٹریچر آف ایمر آف ورک کی کاپی
  - شرط اور عملی کرانک ٹینڈرز پر غور نہیں لایا جائے گا۔
  - آر کام کے حوالے سے کسی بھی قسم کی شکوکہ و گمان ہوں تو ڈیگ کے دستاویزات کے متعلق جاننے کے 28 دنوں کے اندر شکوکہ کر لیں۔

- عملیہ کم لگنڈ سے رجسٹریشن (NTN سرٹیفکیٹ) اور NIC کی نقل
- اس بات کا حلف نامہ کہ فرم کی تاریخ سے ملوث نہیں رہی یا ادارے میں کوئی کام اور امور نہیں چھوڑے۔
- بولی رہندہ کو ہر کام کے متعلق صورت کردہ ذریعہ عملیہ عمل کا لاپازت جو شہید والدہ بینک سے ذریعہ عملیہ عمل نام تیار کردہ ہونے کو مانا ہوگا۔
- اس بات کا حلف نامہ کہ فرم ایگزیکٹو انجینئر ڈویژن میرپور خاص کی جانب سے ہائی میں بائیکاٹ نہیں ہے۔
- اس بات کا حلف نامہ کہ فرم کو تمام دستاویزات اور تفصیلات / معلومات بالکل صحیح اور درست ہیں۔
- فرم کی صورت میں پاور آف ایمر ڈیپٹی کے عالی افسر ایگزیکٹو انجینئر ڈویژن میرپور خاص کی طرف سے ملے ہوئے پاور آف ایمر کی فہرست پائز شپ یا سول پراویزنگ کی صورت میں اس طرح کی تفصیلات ہائی افسر سے پیش کی جائیں۔
- مقررہ وقت کے بعد ٹینڈرز وصول نہیں کئے جائیں گے۔
- PC-I میں سقن کے مطابق بولی کی قیمت Rs. 650.0 ملین سے زائد نہیں ہوگی۔

**ٹینڈرز کے قواعد و ضوابط**

- شرط ٹینڈرز پر غور نہیں لائے جائیں گے۔
- کال لاپازت کے لئے ٹینڈرز پر غور نہیں لایا جائے گا۔
- SPP رول 2010 (ترمیم شدہ 2013) کی حلقہ سق سے شرط پراویزنگ ایگزیکٹو انجینئر ڈویژن میرپور خاص سے پیش کر سکتے ہیں۔
- پراویزنگ سقن کے کسی رکن کے ایڈوارڈ سے باہر ہونے کی صورت میں پیشکشیں آئندہ کام والے دن دیئے گئے شہید والدہ بینک کے مطابق جمع کرائی اور کھولی جائیں گی۔

ایگزیکٹو انجینئر  
تھر کول واٹر ورکس ڈویژن  
میرپور خاص  
INF-KRY-NO.4305/16

Mirpurkhas

No. SC





**انگریزوں اور دیگر لوگوں کو روکنا اور پھیلنے سے روکنا**

1- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 2- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 3- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 4- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 5- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔

6- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 7- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 8- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 9- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔  
 10- پریور جاس کی قیمت فی ٹن 4000 روپے ہے۔

|                |    |      |     |
|----------------|----|------|-----|
| 1- 2x2.5MW HFO | 2% | 3000 | 407 |
| GTP            |    |      |     |

**پاپیٹری**  
 No. SG/G-148/439 of 2016  
 Mirpurkhas  
 Dated: 09-11-2016

318 نمبر 1438  
 23 نومبر 2016

318 نمبر 1438  
 23 نومبر 2016

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**انٹیکیاہ**  
 Karachi  
 Daily

ABC CERTIFIED

Simultaneously Published from Karachi Hub and Quetta

DAWN FRIDAY, NOVEMBER 18, 2016

**OFFICE OF THE EXECUTIVE ENGINEER, THAR COAL WATER WORKS DIVISION MIRPURKHAS**

NO. SC/G-148/439 of 2016

Mirpurkhas, dated: 09-11-2016

**NOTICE INVITING TENDER**

Sealed tenders under SPP Rules 2010 (Amended 2013) Clause 5.2(ii) are invited from the interested persons / suppliers / contractors / firms for procurement / execution of the following work on EPC Turnkey Contract on Lump Sum Fixed Price Basis:

| S. No. | NAME OF WORK  | EARNEST MONEY    | TENDER FEE | TIME ALLOWED |
|--------|---|------------------|------------|--------------|
| 1.     | SUPPLYING & FIXING NEW 2x2.5 MW HFO GTG OPEN CYCLE POWER PROJECT AT NABISAR THAR DISTT. PROVINCE OF SINDH | 2% OF BID AMOUNT | 3000/-     | 7 MONTHS     |

All the contractors / interested participants / firms can purchase the blank tenders on payment of tender fee for each work from the date of publication of this NIT in newspapers / SPPRA website upto 31-12-2016. The same should be received on 05-01-2017 upto 1:00 PM. The bids would be opened on the same day at 02:00 PM in presence of the contractors and committee.

**2. Eligibility conditions for intending participants are as under:-**

- i. Registration with Pakistan Engineering Council (Valid for the year 2016) in relevant field of specialization of work is CE-01.
  - ii. Bio-data of engineers and technical staff working with the firm.
  - iii. Documentary evidence of works executed / works in progress and certificate of satisfactory completion of works by the employers.
  - iv. List of works in progress indicating cost of each work and copy of letter of award of work.
  - v. Conditional and telegraphic tenders will not be entertained.
  - vi. If any discussion regarding the work is required which will be discussed within 28 days of submission of bidding document.
3. Registration with Income Tax Department (NTN Certificate) and copy of NIC.
  4. Undertaking on stamp paper that the firm is not involved in any litigation or has abandoned any work in the department.
  5. The bidder should submit earnest money as shown above in shape of call deposit prepared from the scheduled bank in the name of the undersigned.

6. Affidavit to the effect that the firm / contractor has not been blacklisted previously by any executing agency.
7. Affidavit to the effect that all documents / particulars / information furnished are true & correct.
8. In case of firm, list of partners / partnership deed, giving full particulars of directors / proprietors or other connected information along with Power of Attorney. In case of being sole proprietors such undertaking on stamp paper be furnished.
9. Tenders will not be received after the scheduled time.
10. Bid cost should not exceed Rs. 650.0 Million as per provision PC-I.

**TERMS AND CONDITIONS OF THE TENDER**

- (i) No conditional tenders will be entertained.
- (ii) No tender without call deposit will be considered.
- (iii) Procuring Agency may reject all or any bid subject to relevant provisions of SPP Rules 2010 / Amendment of 2013.
- (iv) In case any member of Procurement Committee happens to be out of Headquarters, the bids shall be submitted and opened as per given schedule on the next working day.

**Executive Engineer**  
Thar Coal Water Works Division, Mirpurkhas

INF-KRY No. 4305/16

Say No to Corruption

محمد علی احمد

**OFFICE OF THE EXECUTIVE ENGINEER, EDUCATION**

AT D.C. COMPLEX KAMBER P. NO. 04-94110

No: XEN/Edu/(W)/-3035

**NOTICE INVITING**

PID(K)1728/16



## PHILIP MORRIS (PAKISTAN) LIMITED

The pack prices of Philip Morris (Pakistan) Limited's following cigarette brands are revised as per the schedule below:

| Brands  | Effective Date | Packing | Retail Price (Rs.) | Sales Tax (Rs.) | Total Price (Rs.) |
|---|----------------|---------|--------------------|-----------------|-------------------|
| MARLBORO RED/GOLD   | 17-10-16       | 20HL    | 106.84             | 18.16           | 125.00            |
| RED & WHITE KSF   | 02-06-16       | 20HL    | 57.26              | 9.74            | 67.00             |
| MORVEN BY<br>CHESTERFIELD ROYAL<br>SMOOTH KING SIZE               | 09-06-16       | 20HL    | 57.26              | 9.74            | 67.00             |
| MORVEN BY<br>CHESTERFIELD<br>ROYAL RICH/ROYAL<br>SMOOTH LONG SIZE | 09-06-16       | 20HL    | 57.26              | 9.74            | 67.00             |
| PHILIP MORRIS   | 09-06-16       | 20HL    | 52.99              | 9.01            | 62.00             |

### Notice Inviting Tender

Sealed tenders Under SPP Rule 2010 (Amended 2013) clause 5.2(i) are invited from the interested persons / suppliers / contractors/Firms for procurement / execution of the following work on (EPC turnkey contract on Lump-Sum Fixed price Basis) in the light of SPPRA rule 2010 (Amended 2013).

| S# | Name of Works  | Earnest Money of Bid Amount | Tender Fee | Time Allowed |
|----|--|-----------------------------|------------|--------------|
| 1. | SUPPLYING & FIXING NEW 2X2.5 MW HFO GTG OPEN CYCLE POWER PROJECT AT NABISAR - THAR DIST PROVINCE OF SINDH. | 2%                          | 3000       | 7 Month      |

All the contractors / interested participant firms can purchase the blank Tenders on payment of tender fee for each work from the date of publication of NIT in News papers / SPPRA website upto 31.12.2016. The same should be received on 05.01.2017 upto 1:00 PM. The bidding would be opened on the same day @ 02:00 PM in presence of the contractors and committee.

2. Eligibility conditions for interested participants are as under:
  - i. Registration with Pakistan Engineering Council (Valid for the year 2016) in the relevant field of specialization of work in (CE-01).
  - ii. Bio data of Engineers and Technical staff working with the firm.
  - iii. Documentary evidence of works executed / works in progress and certificate of satisfactory completion of works by the employers.
  - iv. List of works in progress indicating cost of each work and copy of letter of award of work.
  - v. Conditional and Telegraphic Tender will not be entertained.
  - vi. List of Machinery and equipment available with documentary evidence of its ownership certificate of Bank showing credit worthiness alongwith Bank statement.
  - vii. If any discussion regarding the work are required which will be discussed within 28 days of submission of bidding document.
3. Registration with Income Tax Department (NTN Certificates) and copy of N.I.C.
4. Under taking on Affidavit that firm is not involved in any litigation or abandoned any work in the Department.
5. The bidder should submit earnest money as shown against each work in shape of call deposit prepared from the scheduled bank in favour of the undersigned.
6. Affidavit to the effect that the Firm/Contractor have not been black listed previously by any executing agency.
7. Affidavit with effect that all documents/particulars/information furnished are true correct.
8. In case of Firm, list of partners / Partnership Deed, giving full particulars of Directors/promoters or others connected alongwith Power of Attorney. In case of being sole proprietors such undertaking on Affidavit be furnished.
9. Tenders will not be received after the schedule time.
10. Bid cost shall not be exceed Rs. 650.0 Million as per provision in PC-I.

- TERMS AND CONDITION OF THE TENDER**
- (i) No Conditional Tenders will be entertained.
  - (ii) No Tender without call deposit will be considered.
  - (iii) The procuring agency may reject all or any bids to relevant provision of SPP Rules 2010 / Amended of 2013.
  - (iv) In case of any member of Procurement committee happens to be out of head quarters the bids shall be submitted and opened as per given schedule on the next working day.

INF-KRY No. 4305/2016

Executive Engineer  
Thar Coal Water Works Division  
Mirpurkhas

Say No To Corruption

WE STAND UNITED AGAINST TERRORISM

**افيس آف ڊي ايگزيڪيوٽو انجنيئر ٽرڪول**  
**وائر ورڪس ڊويزن ميرپورخاص**

No.SC/G..148/439 of 2016, Mirpurkhas, Dated: 09.11.2016

**ٽينڊر گھراڻن لاءِ نوٽيس**

ايس پي اي آر اي ڊي 2010 (ترميم ٿيل 2013) جي روشني و (الٽر سٽر فلڪيڊ پرايس جي بنيادن تي EPC ٽرن ڪي ڪانٽريڪٽ) تي هيٺين ڪمن جي پروڪيورمينٽ/سراجامي جي لاءِ دلچسپي رکندڙ فردن/سيلائيڙز/ٽيڪنيڊرن/فرمن کان ايس پي اي ڊي 2010 (ترميم ٿيل 2013) جي دفعو 5.2(ii) هيٺ مهربند ٽينڊر طلب ڪجن ٿا.

| سهيڊل نمبر | ڪم جو نالو  | واڪ جي سونهي رقم | ٽينڊري رقم | مدو      |
|------------|---|------------------|------------|----------|
| 1          | سيڪورٽي سٽر و اوين سائيڪل باور پروٽيڪٽ لاءِ 2 x 2.5 MW HFO جي سيلان و فلڪيڊ GTG | 2 سيڪڙو          | 3000       | 07 مهينا |

دلچسپي رکندڙ ٽيڪنيڊرن/فرمن هن اشتهار جي اختيارن و اشاعت/ايس پي اي آر جي ويب سائيٽ تي پڌرائي کان وٺي 2016. 12. 12 تائين هر ڪم سامهون ڄاڻايل ٽينڊر تي ادا ڪرڻ تي ڪورڊ ٽينڊر فارم وٺي سگهن ٿا جيڪي 2017. 01. 05 تي منجھند 01:00 وڳي وصول ڪيا و ساڳي ڏينهن تي پورٽ 02:00 وڳي ٽيڪنيڊرن و ڪميٽي جي موجودگي و ڪوليا ويندا.

2. شرڪت ڪندڙن جي لاءِ اهلڪيت جا شرط هيٺين ريت آهن:
- (i) پاڪستان انجنيئرنگ ڪائونسل وٽ (سال 2016 جي لاءِ ڪارآمد) ڪم جي لاڳاپيل اسپيشلائيزيشن و (CE-01) تحت رجسٽريشن
- (ii) ٽن وٽ ڪم ڪندڙ انجنيئر و ٽيڪنيڪل ٽيم جي باهريتا
- (iii) مڪمل ڪيل/هلندڙ ڪمن جا دستاويزي ڏيوت. ايمپلائير کان ڪم جي تسلي بخش ڏڪيل جوڙيل سرٽيفڪيٽ
- (iv) هر هڪ ڪم جي لاڳت سان هلندڙ ڪمن جي اهلڪيت و ڪم جي اڀار جي ليٽر جي فوٽو ڪاپي
- (v) مفروضو و ٽيلگرافڪ ٽينڊرن تي غور نه ڪيو ويندو
- (vi) ڪم متعلق ڳالهه پوراهه جي ضرورت هئڻ تي واڪ دستاويزن جمع ڪرائڻ جي 28 ڏينهن اندر ڳالهه پوراهه ڪري سگهجي ٿي
3. ان ڪم تي ڪم ڏيارڻ وٽ رجسٽريشن (اين تي اين سرٽيفڪيٽ) سي اين آءِ سي جي نقل ڪاپي
4. حلف نامي تي خاطري ذر ذر ڪاتي سان ڪنهن مقدمي بازي و ملوث نه آهي و نه ئي ڪم ڪرڻ و چڙهي آهي
5. واڪ ڏيندڙ کي هر هڪ ڪم سامهون ڄاڻايل رقم هيٺ صحيح ڪندڙ جي نالي تي شيڊول بيڪ مان ٺهرايل ڪال ڊيپازٽ جي صورت و سونهي رقم طور جمع ڪرائڻي پوندي
6. ان ڳالهه جو حلف نامو ذر ذر ٽيڪنيڊر اڳ ڪنهن به ايگزيڪيوٽو انجنيئر وٽ بيڪ لسٽ نه رهيا آهن
7. ان ڳالهه جو حلف نامو ذر ذر ڪم ڪيل سمورا دستاويز/تفصيل/معلومات درست و سچي آهي
8. فرم هئڻ جي صورت و پارٽنرز جي لسٽ/پارٽنرز شپ ڊيڊ. جنهن و پارٽنرز/پروپرائيٽرز يا ٻين واسطيدار فردن جا پاور آف اٿارٽي سميت سمورا تفصيل فراهم ڪيا وڃن اڪيلي مالڪ هئڻ جي صورت و اهڙو حلف نامو جمع ڪرايو وڃي
9. فرم شيڊول ٽيگيئر کانپوءِ ٽينڊر وصول نه ڪيا ويندا
10. ايس پي اي ڊي جي پروويڊن مطابق واڪ جي لاڳت 650.0 ملين کان وڌيڪ نه هئڻ گهرجي ٽينڊر جا شرط و ضابطا:
- (i) مفروضو ٽينڊرن تي غور نه ڪيو ويندو
- (ii) ڪال ڊيپازٽ وٽ ٽينڊر تي ڌيان نه ڏنو ويندو
- (iii) ايس پي اي ڊي وٽ 2010 (ترميم ٿيل 2013) جي لاڳاپيل شرڪت تحت پروڪيورنگ ايجنسي ڪنهن به يا سمورن واڪن کي رد ڪري سگهجي ٿي
- (iv) پروڪيورمينٽ ڪميٽي جي ڪنهن ميمبر جي هيڊ ڪوارٽر کان باهر هئڻ جي صورت و واڪ ساڳي شيڊول تحت ايندڙ ڪم واري ڏينهن تي وصول ڪيا و ڪوليا ويندا

صحيح

ايگزيڪيوٽو انجنيئر

ٽرڪول وائر ورڪس ڊويزن

ميرپورخاص

INF/KRY/NO.4305/2016

ڪاروشن کان انڪار ڪريو اسان دهشتگردي خلاف متحيد آهيون  
 سنڌ تعليم جي بهتري Text علمي و پنهنجو بيطار لکي 8398 تي ايس ايس ڪريو

ڪم جي لاءِ نوٽيس  
 ٽينڊر گھراڻن لاءِ نوٽيس  
 ايس پي اي ڊي 2010 (ترميم ٿيل 2013) جي روشني و (الٽر سٽر فلڪيڊ پرايس جي بنيادن تي EPC ٽرن ڪي ڪانٽريڪٽ) تي هيٺين ڪمن جي پروڪيورمينٽ/سراجامي جي لاءِ دلچسپي رکندڙ فردن/سيلائيڙز/ٽيڪنيڊرن/فرمن کان ايس پي اي ڊي 2010 (ترميم ٿيل 2013) جي دفعو 5.2(ii) هيٺ مهربند ٽينڊر طلب ڪجن ٿا.

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AR COAL WATER WORKS DIVISION

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**OFFICE OF THE EXECUTIVE ENGINEER THAR COAL  
WATER WORKS DIVISION, MIRPURKHAS.**

Thandi Sarak Gama Staduim, Neer Director Nara Canal Office Mirpurkhas

No.SC/G-148/ 45 of 2017, Mirpurkhas , Dated 13 / 02 / 2017.

To,

The Assistant Director (Assesment),  
Sindh Public Procurement Regulatory Authority,  
Karachi.

**SUBJECT:- NIT: NO.SKP/G-148/439/2016/DATED.09.11.2016 (SR#30501).**

REF'NCE:- Your office letter No.Mng(Assest)/SPPRA/30501/16-17/10541  
DATED 10.02.2017.

Kindly refer your good office letter No.Cited above, it is submitted as  
under.

i In compliance of Rule-11 of SPP Rule 2010 (Amended 2013), the  
Revised PC-I is approved by the ECNEC and the provision of the component is  
already exist in the Revised PC-I (Copy of PC-I is attached).

ii. In compliance to Rule7 of SPP Rule 2010 (Amended 2013) the  
Procurement committee comprises of 05 Nos. members from which 1/3 members  
one from Executive Engineer Public Health Engineering Division Jamshoro and  
2<sup>nd</sup> Divisional Accounts officer from Accountant General Sindh Karachi.

iii. In compliance of Rule-31(2)(b) of SPP Rule 2010 (Amended 2013) the  
Complaint Redressal Committee constitute an independent professional from the  
Accountant General Sinsh Karachi.

iv. In compliance to Rule-17(1A) the press clipping of News papers has  
already submitted vide this office letter SC/G-148/37 dated 08.02.2017 which is  
again submitted as desired.

v. The Procuring Agency is hereby ensured that the compliance of para  
2.21 of guidelines and 2.10 of guidelins strictly.

vi. The procuring agency confirming the estimate cost of the Instant NIT/  
procurement (Copy of Engineers Estimate attached).

SPPRA INWARD DIARY  
NO: 1373  
DATED: 15-2-17.

Pi: process  
(Maitis sb)  
15/2

vii. The Procurement plan of the component is submitted as required as the all the works were carried out at site and the last work were invited, and the bid evaluation submitted for hoisting on authority web site.

In compliance of SPP Rule 2010 (Amended 2013) all the infirmities rectifying with letter and spirit as desired.

You are requested to kindly hoist the documents on the authority website in the best intrest of national cause.

DA/As above.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.


EXECUTIVE ENGINEER  
THAR CAOL WATER WORKS  
MIRPURKHAS

A small handwritten mark or flourish, possibly a stylized letter or symbol, located below the typed name.

**ANNENURE A**

**PROCUREMENT PLAN DEVELOPMENT/INSTALLATION OF HFO PLANT.**

| SR.NO.A<br>DP No. | Name of Scheme &<br>Estimated cost  | Allocated<br>funds for<br>Scheme | cost of<br>ongoing<br>works<br>(expendit<br>ure<br>already<br>accured | funds<br>earmarked<br>for ongoing<br>works | cost of new<br>works<br>(Components)   | funds for<br>new<br>works | Nature of<br>Procurem<br>ent | Method<br>of<br>Procurem<br>ent        | Anticipated<br>Actual<br>Date of<br>Advertisem<br>ent | Anticipated<br>actual date<br>of start | Anticipated<br>actual date<br>of<br>completion |
|-------------------|---|----------------------------------|---|--|--|---------------------------|------------------------------|--|---|--|--|
| ADP<br>NO.2213    | Construction of Water<br>Carrier Channel with<br>Capacity of 100 cusecs from<br>LBOD Spinal Drain RD<br>362.0 to Nabisar for Power<br>Generation Units. | 12472.160<br>Million             | 9471.40<br>Million  |  | Supplying &<br>Fixing New 2 x<br>2.5 MW HFO<br>GTG Open<br>Cycle Power<br>Project At<br>Nabisar Thar<br>Distt Province of<br>Sindh | 980.624<br>Million        | Standard                     | 1.SPPRA2<br>.News<br>Paper<br>3.Notice | 19.11.2016  | 01.03.2017                             | 31.12.2017                                     |

  
**EXECUTIVE ENGINEER**  
**THAR COAL WATER WORKS DIVISION**  
**MIRPURKHAS**

# GOVERNMENT OF SINDH



## SINDH IRRIGATION DEPARTMENT

### Revised / Modified PC-1

Construction of Water Carrier with Capacity of 100 Cusec from  
Spinal Drain at RD 362 (LBOD) to Nabisar for Thar Coal Power  
Generation Units

Cost Rs. 12,472.160 Million

March, 2015

## Cost Estimate for Water Carrier from LBOD Spinal Drain to Nabisar

| S#                     | Description  | Amount<br>Pak.Rs<br>(Million) |
|------------------------|--|-------------------------------|
| 1                      | Pumping Station (RD 362 Spinal Drain) Elevated Pumping Station cumulative Discharge 100 cusec for Raw Water (25 cusec vertical turbine pumps each 5 Nos.) including Elevated Discharge Box | 232.697 ✓                     |
| 2                      | Pumping Station (RD 362 Spinal Drain) Pumping Station cumulative 30 cusec (15 cusec vertical turbine pumps each 3 Nos.)  | 184.091 ✓                     |
| 3                      | Supply & Installation of Pumps for Raw and Brine Water Pumping Station   | 132.732 ✓                     |
| 4                      | CC line Channel from Spinal Drain (LBOD) RD 362 to Nabisar Reservoir.  | 1,917.805 ✓                   |
| 5                      | CC line Channel from Nabisar to LBOD for Brine water (Brine generation from RO plant about 30%)  | 905.780 ✓                     |
| 6                      | Weir at Spinal Drain 364 including activating 2 spans at RD 362 Road Bridge and Raising & Strengthening NIP U/S RD 362   | 435.225 ✓                     |
| 7                      | Pre treatment Saline / Raw water reservoir at Nabisar ✓  | 2,330.900 ✓                   |
| 8                      | Treated Water Reservoir at Nabisar ✓   | 1,536.592 ✓                   |
| 9                      | Installation of RO plant capacity 24 MGD based on feed water upto TDS 10,000 ppm   | 3,210.000 ✓                   |
| 10                     | Installation of 20 Nos. new tubewells of 0.5 cusec each including construction of pumphouse complete in all respect  | 134.824 ✓                     |
| 11                     | Mini Grid Station of 10000 KVA including Feeder Line and Step Down Transformers  | 99.182 ✓                      |
| 12                     | Ancillary works (Fencing, Approach Roads, Water Testing Laboratory)  | 29.037 ✓                      |
| 13                     | Offices and Residential Complex  | 120.772 ✓                     |
| 14                     | HFO (High Furnace Oil) Power Plant/ Generator for RO Plant   | 700.143 ✓                     |
| <b>Total Base Cost</b> |  | <b>11,969.780</b>             |
| 15                     | Operation & Maintenance Cost   | 123.470                       |
| 16                     | Survey, Designing and Supervision Cost (1%)  | 119.080                       |
| 17                     | Establishment For 3 Years (as per SNE attached)  |                               |
| 18                     | Escalation   |                               |
| 19                     | Contingencies  | 121.830                       |
| 20                     | Land Compensation  | 138.000                       |
| <b>Grand Total</b>     |  | <b>12,472.160</b>             |



DAWN FRIDAY NOVEMBER 18, 2016

**OFFICE OF THE EXECUTIVE ENGINEER, THAR COAL WATER WORKS DIVISION MIRPURKHAS**

NO. SC/G-148/439 of 2016

Mirpurkhas, dated: 09-11-2016

**NOTICE INVITING TENDER**

Sealed tenders under SPP Rules 2010 (Amended 2013) Clause 5.2(ii) are invited from the interested persons / suppliers / contractors / firms for procurement / execution of the following work on EPC Turnkey Contract on Lump Sum Fixed Price Basis.

| S. No. | NAME OF WORK   | EARNEST MONEY    | TENDER FEE | TIME ALLOWED |
|--------|--|------------------|------------|--------------|
| 1.     | SUPPLYING & FIXING NEW 2x2.5 MW HFO GTG OPEN CYCLE POWER PROJECT AT NABISAR - THAR DIST. PROVINCE OF SINDH | 2% OF BID AMOUNT | 3000/-     | 7 MONTHS     |

All the contractors / interested participants / firms can purchase the blank tenders on payment of tender fee for each work from the date of publication of this NIT in newspapers / SPPRA website upto 11-12-2016. The same should be received on 05-01-2017 upto 1:00 PM. The bids would be opened on the same day at 02:00 PM in presence of the contractors and committee.

**2. Eligibility conditions for intending participants are as under:-**

- i. Registration with Pakistan Engineering Council (Valid for the year 2016) in relevant field of specialization of work is CE-01.
  - ii. Bio-data of engineers and technical staff working with the firm.
  - iii. Documentary evidence of works executed / works in progress and certificate of satisfactory completion of works by the employers.
  - iv. List of works in progress indicating cost of each work and copy of letter of award of work.
  - v. Conditional and telegraphic tenders will not be entertained.
  - vi. If any discussion regarding the work is required which will be discussed within 28 days of submission of bidding document.
3. Registration with Income Tax Department (NTN Certificate) and copy of NIC.
  4. Undertaking on stamp paper that the firm is not involved in any litigation or has abandoned any work in the department.
  5. The bidder should submit earnest money as shown above in shape of call deposit prepared from the scheduled bank in the name of the undersigned.

6. Affidavit to the effect that the firm / contractor has not been blacklisted previously by any executing agency.
7. Affidavit to the effect that all documents / particulars / information furnished are true & correct.
8. In case of firm, list of partners / partnership deed, giving full particulars of directors / proprietors or other connected information along with Power of Attorney, in case of being sole proprietors such undertaking on stamp paper be furnished.
9. Tenders will not be received after the scheduled time.
10. Bid cost should not exceed Rs. 650.0 Million as per provision PC-I.

**TERMS AND CONDITIONS OF THE TENDER**

- (i) No conditional tenders will be entertained.
- (ii) No tender without call deposit will be considered.
- (iii) Procuring Agency may reject all or any bid subject to relevant provisions of SPP Rules 2010 / Amendment of 2013.
- (iv) In case any member of Procurement Committee happens to be out of Headquarters, the bids shall be submitted and opened as per given schedule on the next working day.

**Executive Engineer  
Thar Coal Water Works Division, Mirpurkhas**

INF-KRY No. 4305/16

Say No to Corruption

— [Signature] —

PID(K)1726/16

**OFFICE OF THE EXECUTIVE ENGINEER, EDUCATION**

AT D.C. COMPLEX KAMBER P. NO. 04-94110

No: XEN/Edu:/(W)-3035







**DAILY EXPRESS**

**ایکسپریس**

روزنامہ

پاکستان کے 11 شہروں سے ایک وقت شائع ہونے والا واحد اخبار

**دفتر ایگزیکٹو انجینئر تھر کول واٹر ورکس ڈویژن میرپور خاص**

No.SCI/G-148/439 of 2016 Mirpurkhas Dated: 09-11-2016

**ٹینڈر طلبی نوٹس**

SPPRA رول 2010 (ترمیم شدہ 2013) کی روٹی میں (Lump Sum) ٹکنڈ پرائس کی بنیاد پر EPC فرم کی (کنٹریکٹ) پر منحصر ذیل کام کی پروکویرمنٹ / قبول کیلئے دلچسپی کے حامل افراد / سپلائرز / کنٹریکٹرز (فرم سے SPP رول 2010 (ترمیم شدہ 2013) شیڈ (ii) کے تحت سرٹیفائیڈ درخواستیہ ہیں۔

| نمبر | کاموں کے نام   | بولی کی رقم کا | ٹینڈر | مہت |
|------|--|----------------|-------|-----|
| نمبر |  | نرخہ           | فیس   |     |
| 1-   | سولر حرارتی سولر سسٹم میں جو 2x2.5MW HFO GTG اور این سائیکل پاور پروڈیکٹ کی فراہمی و تنصیب | 2%             | 3000  | 407 |

تمام کنٹریکٹرز دلچسپی کی حامل شرکت کرنے والی فرم سولر سسٹم، ہر کام کیلئے ٹینڈر فیس کی ادائیگی پر NIT کی اخراجات / SPPRA رول 2010 (ترمیم شدہ 2013) پر اشاعت کی تاریخ سے 2016-12-31 تک خرید سکتی ہیں۔ یہ 2017-01-05 کو 01:00 بجے تک وصول کیے جائیں گے۔ بڈجٹ کنٹریکٹرز اور کئی کی موجودگی میں اس دن بوقت دوپہر 02:00 بجے کھولی جائیں گی۔

- 2- دلچسپی کے حامل شرکت کیلئے شرائط اہلیت درج ذیل ہیں:
  - (i) ایجنٹ / انجینئر آف ورک کے متعلقہ شعبے میں (سال 2016 کیلئے تین سالہ) پاکستان انجینئرنگ کونسل سے رجسٹریشن
  - (ii) فرم میں کام کرنے والے انجینئر اور ٹیکنیکل اسٹاف کے کوائف
  - (iii) زیر عمل / بحال شدہ کام کا دستاویزی ثبوت اور آجوں کی جانب سے کام کے عملی عمل کا سرٹیفکیٹ
  - (iv) ہر کام کی مالیت کی صورت کی گواہی دہانی کام کی فہرست اور لیز آف اور آف ورک کی کاپی
  - (v) مشروہ اور ملٹی کراکٹ ٹینڈرز پر فوٹو نہیں لایا جائے گا۔
  - (vi) اگر کام کے 10% سے کسی بھی قسم کی گھٹنگو ورکار ہوں تو بڈجٹ دستاویزات کے متعلق کرانے کے 28 دنوں کے اندر گھٹنگو کر لیں۔

- 3- عملی رقم ٹیکس سے رجسٹریشن (NTN) سرٹیفکیٹس اور NIC کی نقل
- 4- اس بات کا حلف نامہ کہ فرم کسی تنازعے میں ملوث نہیں رہی یا ادارے میں کوئی کام اور امور نہیں چھوڑا۔
- 5- بولی دہندہ کو ہر کام کے متعلقہ شرائط کے درج ذیل شرائط سے آگاہ کیا جائے گا۔
- 6- اس بات کا حلف نامہ کہ فرم ایک کنٹریکٹرز کی ایگزیکٹو ایسوسی ایشن کی جانب سے ماسی میں بڈجٹ نہیں ہے۔
- 7- اس بات کا حلف نامہ کہ فرم کو تمام دستاویزات / تصدیقات / اسطوانات / ٹیکنیکل ڈیٹا اور دستاویزات ہیں۔
- 8- فرم کی صحت میں پانچ آف اٹارنی کے سرٹیفکیٹس / فرم پرائیمری / ممبر شپ کی مکمل تصدیقات دینے والے پانچ آف اٹارنی کی فہرست پانچ آف اٹارنی کے سرٹیفکیٹس میں اس شرط کی پابندی طلب نامہ پر پیش کی جائے۔
- 9- مشروہ وقت کے بعد ٹینڈرز وصول نہیں کیے جائیں گے۔
- 10- PC-1 میں شیڈ کے مطابق بولی کی قیمت Rs. 650.0 ملین سے زائد نہیں ہوگی۔

**ٹینڈرز کے قواعد و ضوابط**

- (I) مشروہ ٹینڈرز فرم کو لائے جائیں گے۔
- (II) کال اپازٹ کے لئے ٹینڈرز فرم کو لائے جائیں گے۔
- (III) SPP رول 2010 / ترمیم شدہ 2013 کی متعلقہ شیڈ سے مشروہ پر بڈجٹنگ ایسوسی ایشن تمام ایسوسی ایشن کو سب سے رجسٹر کر سکتی ہے۔
- (IV) پروکویرمنٹ کئی کے کسی رکن کے ایڈووکیٹ سے باہر ہونے کی صورت میں بڈجٹنگ ایسوسی ایشن تمام کام والے دن دینے کے لئے شیڈول کے مطابق جمع کرائی اور کھولی جائیں گی۔

ایگزیکٹو انجینئر  
تھر کول واٹر ورکس ڈویژن  
میرپور خاص

INF-KRY-NO.4305/16

8398



**OFFICE OF THE EXECUTIVE ENGINEER THAR COAL  
WATER WORKS DIVISION, MIRPURKHAS.**

Thandi Sarak Gama stadium, Near Director Nara Canal Office Mirpurkhas,

No. SC/G-148/ \ of 2017

Mirpurkhas dated 13 /01/2017

**CORRIGENDUM**

Read This office NIT No.SC/G-148/03 of 05.01.2017 for issue and opening of tenders.

The Submission & opening of bids of HFO on 16-01-2017. Due to non Submission of drawings from the consultant, the submission & opening date of the bids is fixed on 25-01-2017. ✓

However the terms & condition as well as venue will remain same.

**MUHAMMAD FAHEEM SOOMRO**

Executive Engineer,  
Thar Coal Water Works  
Division, Mirpurkhas

Copy forwarded with compliment to the:-

1. Director Information Advertisement Public Relation Department Sindh Secretariat Block No.95 Karachi.
- ✓ 2. Director (A&F) Government of Sindh, Sindh Public Procurement Regulatory authority Block-8 Sindh Secretariat 4-A Court Road Karachi for publicity on SPPRA.
3. Project Director Thar Coal Water Works Project Mirpurkhas.
4. Superintending Engineer Thar Coal Water Works Circle Mirpurkhas.
5. Executive Engineer All of Thar Coal Water Works Project Mirpurkhas.

761  
20-01-17

For n/a plz  
R. ~~Ex~~ 20/1  
AD (Malik SB)

# OFFICE OF THE PROJECT DIRECTOR THAR COAL WATER WORKS @ MIRPURKHAS

Camp at Left Bank Barrage Colony, Hyderabad.

Email.Address:pdtcwwp@hotmail.com Fax:022-9210133 Tel:022-9210131

NO.SE/Asstt/TCWWC/MPS/ 1885 OF 2015, MIRPURKHAS, DATED 21/12/2015.

## CORRINGDEM.

Read:- This office letter No.PD/TCWWM/TC/2015/1707 dated 14.12.2015.

**SUBJECT:- RE-CONSTITUTION OF COMMITTEE FOR REDRESSAL OF COMPLAINTS RULE-31 (2) (b) SPP RULE 2010 (AMENDED 2013).**

In compliance of Rule-31 (2) (b) the Complaint Redressal Committee

Re-Constitute as under.

1. Superintending Engineer, Thar Coal Water Works Circle Mirpurkhas. Chairmen.
2. Independent Professional. Member.  
Will be nominated at the time of compliant
3. Divisional Accounts Officer. Member.



JAWED AHMED MEMON  
PROJECT DIRECTOR  
Thar Coal Water Works  
@ Mirparkhas



**CIRCULAR**

No.SO(R&S)8-110/2012-13: The responsibility of formulation of Procurement Committee is hereby delegated to concerned regional heads, in capacity of Head of Department, in respect of Rule 7 of Sindh Public Procurement Rules-2010.

**SYED ZAHEER HYDER SHAH**  
SECRETARY TO GOVT. OF SINDH

No.SO(R&S)8-110/2012-13

Karachi, dated the <sup>14/12</sup> December 2015.

Copy forwarded for information and necessary action to:-

1. All Chief Engineers in Irrigation, Sindh
2. The Managing Director, Sindh Irrigation & Drainage Authority (SIDA), Hyderabad.
3. The Managing Director Sindh Public Procurement Regulatory Authority Karachi.
4. The Section Officer (Planning) Irrigation Department Government of Sindh, Karachi.
5. PS to Secretary Irrigation, Govt. of Sindh, Karachi.
6. P.A. to Additional Secretary Technical, Irrigation Department, Govt. of Sindh.

*Handwritten signature*  
**SECTION OFFICER (RR&S)**  
FOR SECRETARY TO GOVT OF SINDH

*Handwritten initials and date*  
14/12/15

RESPAL/KA  
Irrigation & Power Department  
Government of Sindh  
Karachi

|    |                                 |                             |          |     |  |
|----|---------------------------------|-----------------------------|----------|-----|--|
| 4  | HSD Flow Meter                  | Analogue (As Per MAN Specs) | Imported | 2   |  |
| 5  | Fuel Booster Unit               | As per MAN Specification    | Imported | 1   |  |
| 6  | Fuel Return Oil Unit            | As Per MAN Specs            | Imported | 2   |  |
| 7  | Fuel Return Oil Pump Unit       | As Per MAN Specs            | Imported | 2   |  |
| 8  | Fuel Primary Filters            | Mesh Type                   | Imported | 1   |  |
| 9  | Fuel Secondary Filters          | Mesh Type                   | Imported | 1   |  |
| 10 | HFO Supply Pump                 | As Per MAN Specs            | Imported | 2   |  |
| 11 | HSD Supply Pump                 | As Per MAN Specs            | Imported | 2   |  |
| 12 | Fuel Fine Filters               | Cat ridge Type              | Imported | 1   |  |
| 13 | HFO/HSD Change Over valve       | As Per MAN Specs            | Imported | 1   |  |
| 14 | Fuel Circulation Pump           | As Per MAN Specs            | Imported | 2   |  |
| 15 | Fuel Oil Accumulator            | As per MAN Specs            | Imported | 1   |  |
| 16 | Fuel Heating Unit               | Steam Heating               | Imported | 1   |  |
| 17 | Fuel Viscosity Controller       | Steam Heating               | Imported | 1   |  |
| 18 | Light Fuel Oil Cooler           |                             | Imported | 2   |  |
|    |                                 |                             |          |     |  |
| H  | <b>STARTING AIR SYSTEM</b>      |                             |          |     |  |
| 1  | Air Compressor                  | Sperre/Sinwa/LG/eqv         | Imported | 2   |  |
| 2  | Air Dryer                       | As per MAN Specs            | Imported | 1   |  |
| 3  | Air Regulating Unit             | As per MAN Specs            | Imported | 2   |  |
| 4  | Starting Air Vessels            | 500 Ltrs                    | Imported | 2   |  |
| 5  | Air System Piping & Fittings    |                             |          | Lot |  |
|    |                                 |                             |          |     |  |
|    | <b>Local – Balance of Plant</b> |                             |          |     |  |
| I  | <b>H T WATER SYSTEM</b>         |                             |          |     |  |
| 1  | H T Water H.Exchanger           | NKR                         | Local    | 2   |  |
| 2  | HT Water Thermostatic V/V       | As Per MAN Specs            | Imported | 2   |  |
| 3  | HT Water Expansion Tank         | 500 Ltrs MS 3.5mm           | Local    | 2   |  |
| 4  | HT Water Pre Heating Unit       | Electric Heating            | Local    | 2   |  |
| 5  | HT Water Piping & Fitting Lot   |                             |          | Lot |  |
| 6  | Expansion Vessel HT             | Imported                    |          | 2   |  |
|    |                                 |                             |          |     |  |

|          |  |  |               |     |  |
|----------|--|--|---------------|-----|--|
| <b>J</b> | <b>LT WATER SYSTEM</b>                               |  |               |     |  |
| 1        | LT Water H.Exchanger                                 | NKR                                    |               | 2   |  |
| 2        | LT Water Thermostatic V/V                            | As Per MAN Specs                       | Imported      | 2   |  |
| 3        | LT Water Expansion Tank                              | As Per MAN Specs                       | Local         | 2   |  |
| 4        | HT Water Piping & Fitting Lot                        |  |               | Lot |  |
| 5        | Expansion Vessel LT                                  | Imported                               |               | Lot |  |
|          |  |  |               |     |  |
| <b>K</b> | <b>COOLING WATER SYSTEM</b>                          |  |               |     |  |
| 1        | Cooling Water Pumps                                  | As Per MAN Specs                       |               | 2   |  |
| 2        | Cooling Towers                                       | As Per MAN Specs                       |               | 2   |  |
| 3        | Chemical Dozing System                               | 1 Lot                                  | Imported      | 2   |  |
| 4        | High Temp Mounted Circuit                            |  | Imported      | 2   |  |
|          |  |  |               |     |  |
| <b>L</b> | <b>INTAKE AIR SYSTEM</b>                             |  |               |     |  |
| 1        | Air Intake Suction Filters including intake silencer | Oil bath filter complete plus silencer | AAF France    | 2   |  |
| 2        | Air Intake Ducting                                   | As per MAN Specs.                      |               | 2   |  |
| 3        | Air Intake Expansion Below                           | As per MAN Specs.                      | Imported      | 2   |  |
| 4        | Piping & Fitting Lot                                 |  |               | Lot |  |
| 5        | Weather Hood   |  | Local         | 2   |  |
|          |  |  |               |     |  |
| <b>M</b> | <b>EXHAUST GAS SYSTEM</b>                            |  |               |     |  |
| 1        | Exhaust Gas Expansion Below                          | As per MAN Specs.                      | Imported      | 2   |  |
| 2        | Exhaust Gas Ducting                                  | As per MAN Specs.                      |               | 2   |  |
| 3        | Exhaust Gas Silencer                                 |  | Imported      | 2   |  |
| 4        | Exhaust Gas Chimney                                  | As per MAN Specs.                      |               | 1   |  |
| 5        | Piping & Fitting Lot                                 |  |               | Lot |  |
|          |  |  |               |     |  |
| <b>N</b> | <b>ELECTRICAL SYSTEMS</b>                            |  |               |     |  |
| 1        | Control Panels                                       |  | Imported      | 1   |  |
| 2        | VCBs   | 630 AMP                                | Schnieder/Eqv | 2   |  |
| 3        | MCC Panels   | Auxiliary Load                         | Schnieder/Eqv | 2   |  |

|    |  |                         |                                   |         |  |
|----|--|-------------------------|-----------------------------------|---------|--|
| 4  | Out Going Feeder                                       | As per MAN Specs        | Schnieder/Eqv                     | 1       |  |
| 5  | Battery & Battery Charger(110V & 24 V DC Power Supply) | As per MAN Specs        | Schnieder/Eqv                     | 1       |  |
| 6  | Main Bus Bar   | As per MAN Specs        | Local                             | 2       |  |
| 7  | Transformer  | 500 KVA                 | Local                             | 1       |  |
| 8  | SCADA System Complete                                  |                         | Imported                          | 1       |  |
| 9  | NGR  |                         | Imported                          | 2       |  |
| 10 | Bus Bar Measuring Cubical                              |                         | Imported                          | 1       |  |
|    |  |                         |                                   |         |  |
| O  | Tools  |                         |                                   |         |  |
| 1  | Set Engine Maintenance Tools                           | As per MAN Specs        | Imported                          | 1 Set   |  |
| 2  | Engine Hand Tools                                      | As per MAN Specs        | Imported                          | 1 Set   |  |
| 3  | Set Tools for Turbocharger                             | As per MAN Specs        | Imported                          | 1 Set   |  |
| 4  | HFO & LO Sep. Units Tools                              | As per MAN Specs        | Imported                          | 1 Set   |  |
|    |  |                         |                                   |         |  |
| P  | Basic Engineering                                      | Electrical & Mechanical | All Mech. & Elect. Basic Drawings | 1       |  |
|    |  |                         |                                   |         |  |
| Q  | Detail Engineering                                     | Provided equipment      | All Mech. & Elect.                | 1 Set   |  |
|    |  |                         |                                   |         |  |
| R  | Advisory Project Management Services at Site           | MAN                     |                                   | 200 HRS |  |
|    |  |                         |                                   |         |  |
| S  | STEAM TRACING LINES                                    |                         |                                   | 1       |  |
|    |  |                         |                                   |         |  |
| T  | TANK FARM  |                         |                                   |         |  |
| 1  | Maintenance water tank                                 | 10 Tons                 | Local                             | 1       |  |
| 2  | HSD Service Tank                                       | 15 Tons                 | Local                             | 1       |  |
| 3  | HFO Storage Tank                                       | 150 Tons                | Local                             | 1       |  |
| 4  | HFO Settling Tank                                      | 25 Tons                 | Local                             | 1       |  |
| 5  | HFO Service Tank                                       | 25 Tons                 | Local                             | 1       |  |
| 6  | HSD Storage Tank                                       | 35 Tons                 | Local                             | 1       |  |



|   |   |                  |          |   |       |
|---|---|------------------|----------|---|-------|
| 7 | All sensors, gauges, transmitters and supporting equipment for Tanks  |                  | Imported |   | Local |
| U | <b>TRANSFER PUMPS</b>   |                  |          |   |       |
| 1 | HSD unloading & transfer pump unit  | As Per MAN Specs | Imported | 1 |       |
| 2 | HFO unloading & transfer pump unit  | As Per MAN Specs | Imported | 1 |       |
| 3 | LO Transfer Pump  | As per MAN Specs | Imported | 1 |       |
| 4 | Sludge transfer pumps   |                  | Imported | 1 |       |
| 5 | Oily water transfer pump  |                  | Imported | 1 |       |
| V | <b>Civil Works:</b>   |                  |          |   |       |
| 1 | Soil Investigation, Landscaping road and related activities   |                  |          |   | X     |
| 2 | Grouting work of sole plates, auxiliaries, equipment, frames etc.   |                  |          |   | X     |
| 3 | Engine Hall & Control Room as per MAN plant standards , Civil Works for all Equipment and engine foundation, Paint material and works |                  |          |   | X     |
| 4 | Steel Structure for piping, Cabling supports, platforms & ladder and supporting Structures  |                  |          |   | X     |

|   |  |                     |  |     |   |
|---|--|---------------------|--|-----|---|
| 5 | Grouting work of sole plates, auxiliaries, equipment, frames etc.  |                     |  |     | X |
| 6 | Engine Hall & Control Room as per MAN plant standards, Civil Works for all Equipment and engine foundation, Paint material and works |                     |  |     | X |
| 7 | Steel Structure for piping, Cabling supports, platforms & ladder and supporting Structures   | As per MAN Specs    |  | Lot |   |
| 8 | Drainage and Sludge Management system  |                     |  |     |   |
| W | Civil drawings   | Foundation Drawings |  |     | X |

|   |  |                      |          |           |   |
|---|--|----------------------|----------|-----------|---|
| X | E & I  |                      |          |           |   |
| 1 | Installation and Commissioning Electric side is at customer end  |                      |          |           | X |
| 2 | Plant Area Electrification, Lighting Arrester and Earthing system  |                      |          |           | X |
| 3 | IT Network and communication Systems   |                      |          |           | X |
|   |  |                      |          |           |   |
| Y | <b>Plant Auxiliaries:</b>  |                      |          |           |   |
| 1 | Steam/Auxiliary Boiler or Heat Recovery System   | 01 Ton Duplex Boiler | Local    | 1         |   |
| 2 | Over Head Crane 3-5 Ton  |                      |          |           | X |
| 3 | Water Treatment System   |                      |          |           | X |
| 4 | Ventilation System as specified by MAN   |                      |          | Lot       |   |
| 5 | HVAC System  |                      |          | Lot       |   |
|   |  |                      |          |           |   |
|   | <b>MISCELLANEOUS</b>   |                      |          |           |   |
| 1 | Local Training of personals  | MAN Pakistan         |          | 4 Persons |   |
| 2 | Fire detection & alarm system, Fire Fitting System   | As per MAN Specs     | Imported |           | X |
| 3 | First fill of systems, Lube, Fuel, Water, Antifreeze etc. as specify by MAN, Electricity during installation and plant erection. |                      |          |           | X |
| 4 | Accommodation, boarding and lodging for EPC Personal   |                      |          |           | X |

|   |   |  |  |  |   |
|---|---|--|--|--|---|
| 5 | Applicable Taxes, Duties , Insurance, port clearing charges           |  |  |  | X |
| 6 | Environmental & Local Government Approvals if required                |  |  |  | X |
| 7 | Access Ways to Project Site , Soil Investigation and Site Preparation |  |  |  | X |
| 8 | In-land freight & loading and unloading                               |  |  |  | X |



## Section V Terms and Conditions

### Terms of Payment:

Down Payment equal to 20 % payable 2 weeks after signature. 2<sup>nd</sup> Installment equal to 80% shall become due and payable at the readiness of shipment.

The 2<sup>nd</sup> installment shall be payable under an irrevocable an confirmed Letter of Credit to be established by the Purchaser 2 weeks after signing of the Contract.

### Warranty

The period of warranty shall be 1 year after the equipment is put into operation. In any case, it shall terminate 27 months after commencement date of the contract. For replacement parts, it shall start anew and end latest 33 months after commencement date.

### Delivery Time:

The delivery time of generator and all auxiliary is to be 08 to 09 months after project commencement date.

### Validity of quotation:

This offer is valid for 30 days from the date of the proposal. Your acceptance of this offer must have reached us on or before the said time and is subject to our Confirmation

We trust our budgetary Gen Set quotation will be of interest to you and should be pleased to supply any further information you may require.

With best regards,

A handwritten signature in dark ink, appearing to read 'Dine'.

Tariq Khokhar / Juan Magana  
Conso Private Ltd.

Training:

- Our commissioning engineer will answer all your questions during control of the installation and its startup.
- Supplementary training in the factory in Gent as well as at clients facilities remains possible.

| PRICE OVERVIEW   |                        |                    |                          |
|--|------------------------|--------------------|--------------------------|
| Description  | Unit price in millions | Units              | Total price in millions  |
| Complete EPC as per above scope of supply & Technical Data | PKR 1,075.00           | 5 MW Complete Unit | Less Discount = PKR 971M |
| C&F KARACHI BY SEA -TOTAL:                                 |                        |                    | PKR 971M                 |

**5MW HFO Genset PowerPlant**

| <u>Description</u>                         | <u>Amount in Millions</u> |
|--|---------------------------|
| <u>Civil/Structural</u>                    | 35 M                      |
| <u>Mechanical</u>                          | 58 M                      |
| <u>Gensets&amp; Auxiliaries</u>            | 310 M                     |
| <u>Electrical</u>                          | 105 M                     |
| <u>Piping</u>                              | 40 M                      |
| <u>Instruments and Controls</u>            | 84 M                      |
| <u>Balance of Plant/General Facilities</u> | 310 M                     |
| <b><u>Total Direct Costs</u></b>           | <b>942 M</b>              |
| <u>Indirect Costs</u>                      | 9 M                       |
| <u>Engineering &amp; Office Cost</u>       | 10 M                      |
| <u>Process Contingency</u>                 | 0 M                       |
| <u>Project Contingency</u>                 | 10 M                      |
| <b><u>Total Indirect Cost</u></b>          | <b>29 M</b>               |
| <b><u>Total Plant Cost</u></b>             | <b>971 M</b>              |

Mitas, Feb/3/2017

TERMS AND CONDITIONS OF SALE

Prices:

Prices - excluding VAT - Equivalent Euros of Quoted are Quoted in PKR

Payment conditions:

20 % downpayment

80 % at delivery ex-works

Payment to be covered by an irrevocable letter of credit (LC), opened and confirmed by a west-european bank of first rank.

Delivery time: 9 months

After having received final order and downpayment as well as all information required for starting the execution of the order. Faster deliveries only after confirmation of the factory.

General sales conditions:

After the United Nations Economic Commission for Europe held in Geneva on March 1957. (Ref. 188A)

Particular conditions:

Prices are firm for delivery before 30/6/2017.

After this date they are revisable and submitted to the ABC price escalation rules.

Guarantee on engine and auxiliaries:

12 months from date of commissioning; maximum

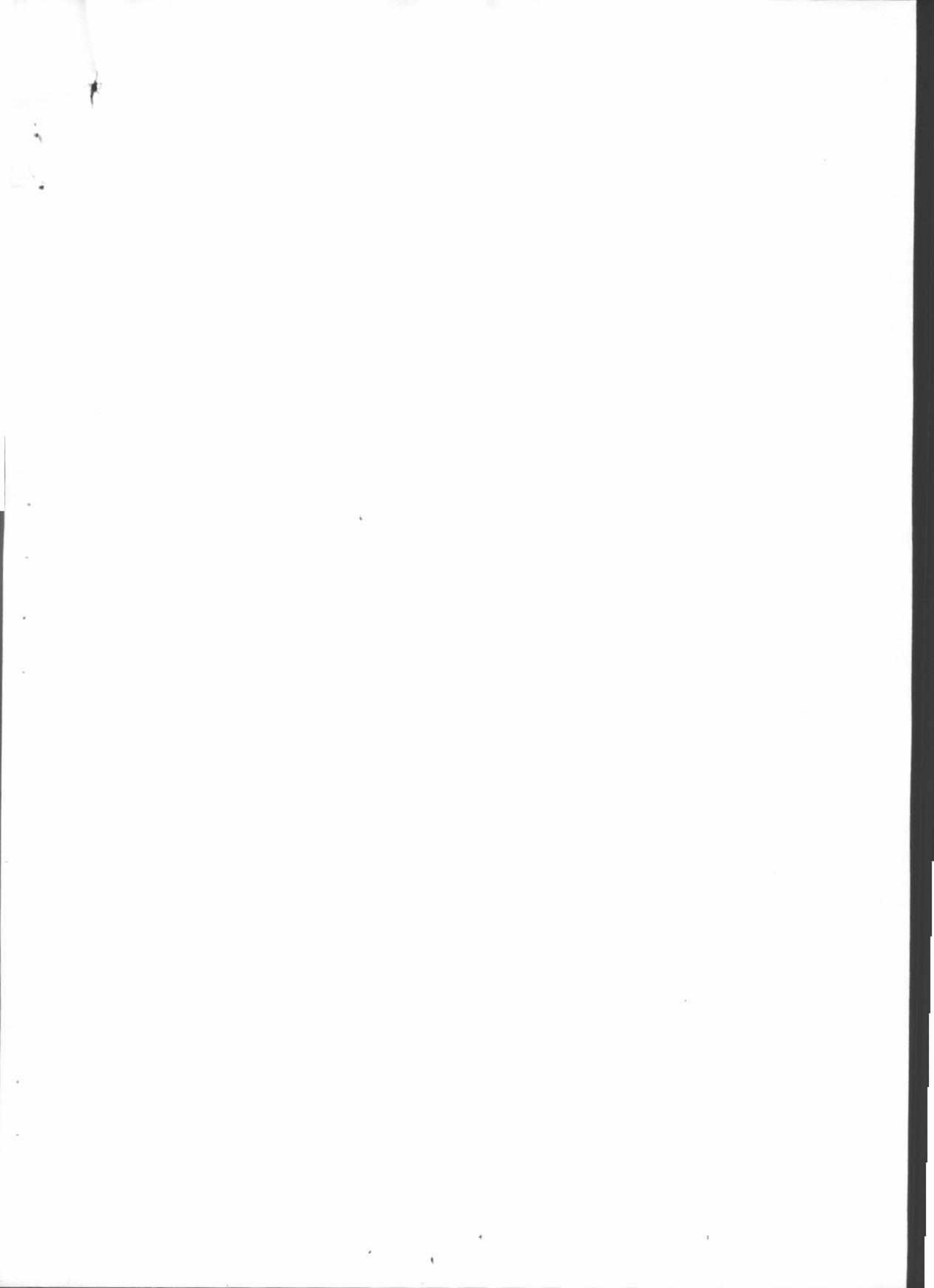
18 months after delivery EX-WORKS.

Validity of the offer: 3 months



**Valentin Bularca**  
**Electrical Engineer**  
**Sales Director & Marketing**







Dated, Feb 4th 2017

M/S G3 Consultants,  
Lahore,

Dear Sirs,

Reference to your request for additional discount on the budgetary price for the complete 5 MW Thar HFO EPC Project, Our special discounted price for MAN German Equipment who are the world leader in Diesel/HFO Generators. For the below stated SOW will be 972M Pk Rs.

For any Questions and Clarification, we remain at your services.

Looking forward to your Response and early order.



Scope of Supply and Services for 2X9L 27/38 MAN Engines

| Sr. # | Description   | Specification   | Origin         | Quantity | End User Scope |
|-------|---|---|----------------|----------|----------------|
|       | <b>Section – Imported Components</b>                    |   |                |          |                |
| A     | MAN 9L 27/38 S, MAN DIESEL ENGINE                       | 2*2,881 KWE @ ISO Conditions                            | Germany/Europe | 2        |                |
| 1     | Engine resilient mountings complete set                 |   |                | 2        |                |
| B     | Alternator  | 11KV  | Germany/Europe | 2        |                |
| C     | Freight   | Sea Freight   |                | Included |                |
| D     | Erection/Commissioning                                  | 30 Man working Days(Mon-Sat), 1 Man working day @ 8 Hrs |                | included |                |
| E     | FAT Test Report & witness*                              |   |                | Included |                |
|       | Imported – Balance of Plant                             |   |                |          |                |
| F     | <b>LUBE OIL SYSTEM</b>                                  |   |                |          |                |
| 1     | LO Purifier   | Alfalaval/GEA   | Imported       | 2        |                |
| 2     | Purifier maintenance tools set and supporting equipment | Alfalaval/GEA   | Included       | 2        |                |
| 3     | LO Drain Tanks  | As Per MAN Specs  | Imported       | 2        |                |
| 4     | LO Drain Pumps  | As Per MAN Specs  | Imported       | 2        |                |
| 5     | Pre Lubricated Pumps & Thermostatic Valves              |   | MAN            | 2        |                |
| G     | <b>FUEL OIL SYSTEM</b>                                  |   |                |          |                |
| 1     | HFO Purifier  | Alfalaval/GEA   | Imported       | 1        |                |
| 2     | Purifier maintenance tools set and supporting equipment | Alfalaval/GEA   | Included       | 1        |                |
| 3     | HFO Flow Meter  | Analogue (As Per MAN Specs)                             | Imported       | 2        |                |

## SCOPE OF SUPPLY

### Basic engine:

- The design of the engine considers first of all simplicity in maintenance.
- Cylinder block casting in special alloyed nodular cast iron; under slung main bearings. Both sides equipped with big inspection doors; providing easy access to internal components.
- The main bearing caps are secured by hydraulically tensioned studs and side bolts to ensure a maximum integrity of the crankshaft system.
- Crankshaft in Cr-Mo-steel; completely balanced.
- MIBA Rillen: both for main bearings and conrod bearings.
- Camshaft and fuel injection pumps, easy accessible on front of the engine.
- The camshaft is driven from the crankshaft through hardened gears; at flywheel side of engine.
- For easy assembling and disassembling the camshaft is modular built up.
- At the free end of the engine all water pumps, lub-oil pumps and fuel booster pump are driven from the crankshaft through a train of hardened gears housed in the pumps drive casing.
- Oblique split conrod, that can be disassembled through the liner.
- The stepped small end of the conrod features a lead-bronze bearing bush.
- Both air-collector and exhaust system in the common V-space of the engine.
- Pistons in nodular iron; piston rings specially shaped and top ring with chrome surface layer.
- Cylinder liner with anti-bore polishing ring, honed in 3 phases.
- Cylinder heads foreseen with 2 inlet- and 2 exhaust valves.
- Inlet valves equipped with rotating system.
- Nimonic exhaust valves equipped with rotating system.
- Further also a start-air-valve, an overload valve and an indicator cock per cylinder

### Speed governor:

- The actuator of the electronic speed governor is built on the engine and controls the position of the racks of each fuel pump. Additional electronic equipment is delivered as a loose item for mounting in a control panel.
- Electric actuator Heinzmann with 24 V DC speed setting type Stg 16-01.
- Digital control unit Heinzmann - IP55.
- Speed pick-up IA-02-76.

### Torsional vibration damper:

- The torsional vibration damper will be specified according to the results of the torsional vibration calculation of your own, specific installation.
- If required an alternative damper will be supplied without price supplement.
- A viscous damper has been foreseen as standard solution.

### Flywheel and flexible coupling:

- The flywheel and the flexible coupling will be chosen in function of the results of the torsional vibration calculations which are dependent of the layout of the complete specific installation.

- The cast iron flywheel is balanced at high precision.
- Gear mounted to the flywheel - for turning the engine.
- Cover over the flywheel, supporting the air cooler.
- Flexible coupling Stromag for rigid mounting - without torsional limit device.
- Main flexible coupling will be final bored and with groove for key.

#### Starting arrangement:

- Compressed air starting on the cylinders (30 bar):
  - servo command for compressed air starting valve on the engine.
  - start air distributor and start air valve on each cylinder.
  - automatic air lubricator.
  - automatic water separator filter.
  
- Starting equipment for mounting in the installation: 1 set per power plant
  - Air bottle(s): 2 pcs
    - volume: 350 liters (dm<sup>3</sup>)
    - pressure: 30 bar
    - complete; with manometer, shutting valve and safety valve.
  - Electro-compressor: 2 pcs
    - manufacturer: ERVOR
    - type: GO6 Air cooled
    - air intake: 34.0 m<sup>3</sup>/h & 1 bar

#### Air supply to the engine:

- Turbocharger: 2pcs
  - Axial turbine and radial compressor.
  - At the flywheel side of the engine.
  - Cleaning equipment for the compressor wheel.
  - For turbine cleaning, a waterjet can be injected in the turbine entrance.
- Air filter:
  - Standard air filter on the turbocharger.
- Standard common intercooler.

#### Engine lubrication:

- System choice: Wet sump - extra deep.
- The engine is equipped with a single lubrication pump.
- All the oil pipes can be arranged in the factory.
- Extra deep lubeoil sump.
- Engine driven lubeoil pump
- Lubeoil pressure regulating valve.
- Triple oil filter on the engine; 2 elements continuously in operation.
- These filters can be cleaned with a running engine.
- Hydraulic valve for engine shut-down.
- Centrifugal lubeoil filter, mounted in by-pass on the engine.

- Crankcase breather, for separate exhaust pipe.
- Plate type lubeoil cooler.
- Lubeoil piping inside and outside the engine.
  
- Lubeoil filtration module: 1 per engine
  - Manufacturer: Mitsud'ishi / IKL - ;Alfa Laval -> + j666 €]
  - Separator filter: 300 l/h - 3.6 kW
  - Feeding pump: 300 l/h - 0.4 kW
  - Heating coil: 14 kW
  - Sedimentation tank. 300 l
  - Electric control cabinet for viscosity and temperature control.
  - Assembling as one unit.

Lubeoil preheating:

Prelubrication and preheating module:

- Prelubrication pump set - 250/440 V AC - 60 Hz.
- Electrical heating of engine cooling water at engine stand-still - 12 kW.
- Circulation pump.
- Electrical unit controlling the engine heating module.

Engine cooling:

- Cylinder heads, liners and turbo cooled in closed circuit by treated water.
- Thermostatic valve controlling the water outlet temperature.
- 2 x HT cool water pumps driven by the engine.
- Split cooling circuit, including 2d thermostatic valve of 41°C.
- Connections for preheating of the engine.
  
- Cooling Tower

Fuel feeding on engine:

- The fuel is injected by means of individual fuel injection pumps, following an accurately studied cam profile, in order to obtain a very short injection and combustion period. This together with the low engine speed results in very low fuel consumptions.
- Individual fuel-injection pumps equipped with unloading valves.
- Fuel booster pump driven by the engine.
- Duplex fuel filters, commutable and cleanable with running engine.
- Shielded fuel injection pipes.
- Nozzles in nozzle holders.
- Hand pump for filling and deaeration of the fuel pipes.
- Diesel stop arrangement acting on the racks of the injection pumps.

- Fuel circuit on engine and fuel leakage lines.
- Heavy fuel circuit on engine.
- Fuel leakage tank with alarm.
  
- Fuel feeding installation equipment; delivered as loose items:
  - Lubrification pump for injection pumps, driven by electromotor - 250/440 V AC - 60 Hz.
  - Water separator gasoil filter Separ with alarm set, vacuum gauge, by-pass.
  
- Switchover module HFO at gasoil - per engine.
  - Permits each engine running on a different fuel.
  - Switchover on gasoil is needed for engine load below 25 %.

▪ Heavy fuel separator: One per engine

- Each fuel separator module exist of the following :
  - Large potential discharge separator, with cast iron frame, and inox bowl on vertical spindle ; driven by electric motor through a friction coupling and flat belt.
    - Manufacturer: Alfa Laval / Westfalia
    - Type: S815 (or similar)
    - Installed power: 11200 kW
    - Requested flow: 2710 kg/h
  
    - Number of centrif. separators: 4
    - Nominal Capacity 1200 kg/h / centrifugal separator
  
    - Heating Capacity: 24 kW
    - Fuel density: < 991 kg/m<sup>3</sup>
    - Fuel viscosity: ≤ 106 cSt (50°C / 122°F)
  - Electric motor: 2850 rpm - B5 - IP55 - 2.2 kW.
  - Screw type supply pump (3 bar); electric motor driven (1400 rpm; B5; IP55; 0.4 kW)
  - Electric heating system for heating the oil from 50°C to 98°C.
  - with high temperature switch, safety valve, PT100 sensor and isolation.
  - Control (PI-type) and monitoring system, with micro-processor, and memory chips.
  - All necessary control valves, sensors, thermometers and manometers.
  - Plate steel cabinet for combined starter and power supply panel (48 V)
  - Intermediate tank for sludge.
  - Assembling to a module and electric wiring.
  - Standard set of special tools.
  - Standard set of commissioning spares.

▪ Fuel booster unit: one per engine

- Double booster unit
  - Installed Power: 11200 kW
  - Requested flow: 1694 kg/h per unit
  - Nominal Capacity 1800 kg/h per unit
  - Number of fuel boosters: 4
  - Fuel density: < 991 kg/m<sup>3</sup>



- Fuel viscosity:  $\leq 106$  cSt (50°C / 122°F)
- Suction strainer of 200 microns.
- Feeder pump: Self-priming screw pump with Pressure relief valve.
  - Nominal Capacity 700 kg/h
  - Number of centrifuges: 2 per module
  - Nominal pressure: 5 bar
- Pressure Control line and by-pass cooler.
- Pressurised, isolated desaerator vessel with heating coils.
- Circulation pump:
  - Nominal Capacity 1800 kg/h
  - Number of centrifuges: 2 per module
  - Nominal pressure: 4 bar
- Electrical fuel heater.
- Automatic filter and separate manual by-pass filter (20 mu).
- Viscosity Control system.
- Alarm cabinet:
  - Feeder and circulation pumps activated.
  - Low level in desaerator tank.
  - Differential pressure over the automatic filter.
  - Viscosity alarms (high and low).
  - Electrical heater overheated.
  - Manometers before and after feeder pump and Booster pump.
  - Thermometers after feeder pump and heater.
  - Flowmeter - local reading.
- HFO-MDO switch-over valve.
- Certificate of classification society.

#### Exhaust System:

- Insulated exhaust pipes between cylinders and turbine inlet.
- Supplementary protection screen for exhaust manifold.
- Adaptation piece on turbocharger and connecting flange.
- Nominal exhaust pipe diameter: 650 mm Dn
- Dilatation compensators:
  - Dilatation compensator for gas exhaust of resilient mounted engines.
- Exhaust silencer:
  - Type: Absorption
  - Attenuation: 25 dB
  - Dn: 650 mm
  - Standard: Axial inlet - Central exhaust outlet:
  - Alternative: Radial inlet MorepriDe:  $\kappa\theta\delta$  € / eŶg.  
 Out of centre outlet MorepriDe:  $\beta\kappa\delta$  € / eŶg.
  - Counter flanges, seals and bolts for exhaust silencer.

- Welded supports for exhaust silencer.

Control instruments, safeties and securities:

- Control instruments on the engine itself:
  - Push buttons for start, stop, reset monitoring box and test overspeed.
  - Control lights for engine in service, alarm and stop.
  - Wiring on the engine of all sensors up to central connecting box.
  - Start and stop lever.
- Securities on the engine:
  - Electromagnetic valve for automatic stop by emitting/omitting current.
  - Mechanical stop at too low oil pressure.
  - Crankcase explosion valves.
  - Safety valve in each cylinder head.
  - Indicator cock on each cylinder.
  - Overload limiter.
- Panel mounted on the engine:
  - Engine speed indicator, with impulse sensor (pickup):
    - Engine speed indicator.
  - Temperature indication:
    - Luboil temperature at engine inlet.
    - HT cooling water temperature at engine outlet.
  - Pressure indication:
    - Luboil pressure at inlet of the engine.
    - HT cooling water pressure at inlet of the engine.
    - Charge air pressure.
- Filthiness indicator on filters:
  - On luboil filter.
- Local thermometers:
  - Luboil temperature at inlet of luboil cooler.
  - Luboil temperature at outlet of luboil cooler.
  - Cooling water temperature at inlet of luboil cooler.
  - Cooling water temperature at outlet of luboil cooler.
  - Charge air temperature at inlet of charge air cooler.
  - Charge air temperature at outlet of charge air cooler.
- Exhaust thermometers:
  - On each cylinder.
  - At turbocharger inlet.
  - At turbocharger outlet.

- Alarm signals (on/off):
  - Pressure switches:
    - Luboil pressure too low.
    - HT water pressure too low.
  - Thermo switches:
    - Luboil temperature too high.
    - HT cooling water temperature at engine outlet too high.
  - Float switches foreseen from ABC:
    - Minimum level in oil tank.
    - Fuel leakages from shielded injection pipes.
  - Contactors:
    - Overload microswitch.
- Engine stops (on/off):
  - Engine overspeed.
  - Luboil pressure too low at inlet of engine.
  - Cooling water temperature too high at outlet of the engine.
  - Oil mist detector.
- Analogue sensors (4-20 mA):
  - Analogue pressure sensors:
    - Luboil pressure at engine inlet.
    - HT cooling water at engine inlet.
    - Fuel oil supply after the filter.
    - Charge air pressure.
    - Starting air pressure.
  - Analogue temperature sensors:
    - Luboil temperature at inlet of the engine.
    - Luboil temperature at outlet of luboil cooler.
    - HT cooling water temperature at engine outlet.
    - Charge air temperature before charge air cooler.
    - Charge air temperature after charge air cooler.
- Exhaust-gas temperature instrumentation:
  - Analog sensors (4-20 mA) for exhaust temperature per cylinder and at inlet turbo.
  - Pyrometric pipe on engine.
  - Analog sensor (4-20 mA) for exhaust temperature after the turbine.
  - Measuring and control unit CMR (4-20 mA) delivered as loose item.
- Local control and monitoring panel:
  - Push buttons for start, stop, reset monitoring box and test overspeed.
  - Controllights for engine in service, alarm and stop.
  - Convertor for electromagnetic impulses to a 4-20 mA signal (engine).

- Converter for electromagnetic impulses to a 4-20 mA signal (turbo).
- Diesel monitoring unit built in eurorack 19".
- Speed-control-unit:
  - Firing speed.
  - Overspeed control.
  - Speed setting card with two additional levels.
- Alarm management unit:
  - Additional alarm print.
  - Automatic switching from main power feed to back-up power feed.
  - Wire break control.
- Hour-counter in diesel monitoring unit.

2 / 1 eng.

Assembling and running on trial of the engine in ABC:

- Assembling of the engine.
- Running-in and running on first trial.
- Engine test bench reception in presence of client.

Alternator:

- Brushless synchronous generator with built-in compound excitor and automatic electronic voltage regulation.
  - Manufacturer: Leroy Somer or equivalent
  - Type: LSA 56 - 60
  - Nominal speed : 750 rpm
  - Frequency: 50 Hz
  - Tension: 11 kV
  - Standard Rules: IEC 34 / VDE 0530
  - Ambient air temperature: 40 °C
  - Ambient height: 0 m
  - Power factor: 0.8
  - Protection: IP23
  - Insulation class: H
  - Temperature rise class: F
  - Net capacity - on site: 2622 kWe / 3277 kVA
  - Requested power - on site: 2500 kWe / 3125 kVA
  - Overload: 1 hr every 12 hrs
  - Execution: Double bearing with roller bearings
  - Droop setting included: 0 - 6 %
  - Anti condensation heater: 230 V
  - 6 x PT100 in stator windings.
  - 1 x PT100 per bearing.
  - Terminal box on top of the stator - IP54.
  - Equipment for parallel operation of alternators.
  - Equipment for manuel voltage adjustment.
  - Air filter on alternator inlet.

Welded frame:

- Frame for engine and alternator.
- Foundation bolts for rigid mounted engine and alternator on base plate.
- Vibracon chocks between frame and alternator.
- Cushifeet, base plates and foundation bolts.

Assembling of the genset:

- Assembling of engine and alternator on frame, alignment flexible coupling.

Test run of the genset

- Test run of engine and generator.

Electrical system:

- Electrical switchboard:
  - Panel internally and externally spray painted in RAL 7032, mounting plate alu-zinc.
  - All components fully wired, layed in PVC trenches with removable covers.
  - Signal leds, switches and push buttons finished with engraved text plates.
  - Wiring conform to IEC; and respect to colour code.
  - All wiring coded with a number with the connection terminal.
  - All parts carrying 50V or more protected against accidental touch by isolating covers.
  - Each panel with forced ventilation system, ventilating grids and illumination.
  
- Power cubicle with circuit breaker per genset:
  - Switchboard in metal sheet construction - Protection IP54-7.
    - Busbar for power distribution - 3 x 11 kV.
      - Nominal power: 15500 kVA
      - Nominal voltage: 11 kV - 3 phases
      - Nominal current: 814 A
    - Current transformers for current and power measurement. 6 pcs
    - Voltage transformers. 3 pcs
    - Circuit breaker with built-in short-circuit and overload protection.
      - Nominal power: 3875 kVA
      - Nominal voltage: 11 kV - 3 phases
      - Nominal current: 203 A
    - Motorised operation of the circuit breaker.
    - Circuit breaker drawout frame.
    - Breaker position indication lamps and nameplates.
  
- Cubicle with measuring and control instruments:
  - Switchboard in metal sheet construction - Protection IP54-7.
    - Intelisys genset control system.
    - Bus-bar measuring:
      - Voltmeter between phases and between phases and neutral line.
    - Bus-bar protections:

- Overvoltage between 3 phases.
- Undervoltage between 3 phases.
- Voltage asymmetry control.
- Control of over/under frequency.
- Generator measuring:
  - Voltmeter between phases and between phases and neutral line.
  - 3 ammeters.
  - Frequency meter.
  - Cosinus phi meter.
  - Kilowatt meter.
  - kVAR-meter.
  - Kilowatt hour meter.
  - Kilo-VAh-meter.
- Alarms and stops for the alternator:
  - Overvoltage between 3 phases.
  - Undervoltage between 3 phases.
  - Voltage asymmetry control.
  - Current unbalance.
  - Control of over/under frequency.
  - Overintensity control 3 phases.
  - Overload security.
  - Short-circuit relay.
  - Checking insulation fault.
  - Reverse power relay.
- Engine control switch (Stop - Off - Auto - Test off-line - Test on-line).
- PLC control part:
  - 32 digital inputs:
    - Generator circuit breaker in.
    - Remote start/stop.
    - Emergency stop.
    - Remote reset of engine.
    - Remote start of engine.
    - Alarm - compressor failure.
    - Alarm - cooling water pre-heater failure.
    - Alarm - cooling unit failure.
    - Alarm - Bucholz.
    - Alarm - generator anti-condensation heater fault.
    - Stop - lubrication oil pressure too low.
    - Stop - lubrication oil temperature too high.
    - Stop - cooling water temperature too high.
    - Stop - cooling water level too low.
    - Stop - engine overload.
    - Alarm - lubrication oil pressure low.
    - Alarm - lubrication oil temperature high.

- Alarm - cooling water temperature high.
- Alarm - high level in fuel leakage tank.
- Alarm - fuel level too low.
- Fuel level low: start pump.
- Fuel level high: stop pump.
- 12 analog inputs:
  - Control of generator winding temperature.
  - Control of generator bearings temperature.
  - Lubrication oil pressure.
  - Cooling water temperature.
  - Luboil temperature.
  - Engine room temperature.
- 24 digital outputs:
  - Engine start/stop.
  - Circuit breaker on/off.
  - Release AVR.
  - Release PF controller.
  - Engine speed-up/down.
  - Service hour counter.
  - Acoustic alarm.
  - Alarm lamps.
  - Potential free contact for genset not available.
  - Potential free contact for genset in operation.
  - Start/stop prelubrication pump.
  - Start/stop cooling water preheater.
  - Start/stop cooling water circulation pump.
  - Start/stop cooling unit fan.
  - Start/stop fuel tank feeding pump.
  - Start/stop fuel booster module.
  - Start/stop fuel centrifuge.
- Display: 4 lines of 20 characters, 4 function keys and 10 numerical keys.
- Values: generator status, each alarm and stop, 24 V feeding.
- Program: start/stop of engine and auxiliaries.
- Function keys:
  - Accept alarm.
  - Reset failure.
  - Automatic, stand-by, manual.
  - Manual start.
  - Manual stop.
  - Genset out of operation.
- Internal protection for:
  - Overspeed.
  - 24 V DC backup voltage low.
  - Start failure.

- PLC control part (16 inputs and 16 outputs) for multiple gensets: 1 / 4 eng.
  - Program for: start/stop generator 6, 1, 2, ...
  - Control of generator circuit breaker 1,2,3,..
  - Control of main circuit breaker.
  - Synchronisation control, control of the auxiliaries.
  - Annunciator and horn.
  - Display: 4 lines of 20 characters, 4 function keys and 10 numerical keys.
  - Values: Generator status, mains status, prelubrication, fuel tank level.
  - Function keys: reset failure, accept failure.
  
- Neutral earthing: 1 x for the power plant
  - Metal cubicle for floor mounting, with copper busbar.
    - Protection class IP42 according to DIN/IEC.
    - 1 isolation switch, motor operated, single pole, load break type.
    - 1 overcurrent relay.
    - 1 mechanical indicator for ON/OFF position of isolation switch.
    - Neutral earthing resistor in IP20 enclosure, galvanized 30A/30s.
    - Cable type current transformer.
  
- Cubicle with synchronising and load sharing equipment: 1 x for the power plant
  - Synchronoscope for manual synchronisation with:
    - Synchro check relay.
    - Double voltmeter.
    - Double frequency meter.
    - Push buttons for increasing / decreasing engine speed.
    - Push buttons for increasing / decreasing alternator voltage.
    - Push buttons for opening / closing the main circuit breaker.
    - Selector switch for choosing the alternator to be synchronised.
  - Automatic synchronisation:
    - Automatic governing of tension and frequency.
    - Selector switch: automatic/off/manual.
  - Load sharing module (kW).
  - Load sharing module (VAR).
  - Reverse power protection.
  
- MCC - Motor control panel: 1 x for the power plant
  - Incoming panel: 11 kV
    - Maintenance switch 4 poles 1600 A
    - 3 current transformers.
    - 1 voltmeter and selector switch.
    - 3 ammeters.
    - 1 kWh meter.



- Feeder lines for each engine: With 3 phase magnetic contactor.
  - Lube oil centrifuge. 16 A
  - Preheating and circulation pump. 5 A
  - Cooling tower. 20 A
  - Fuel centrifuge. 32 A
  - Fuel booster module. 60 A    40 kVA
  - Anti-condensation heater for the alternator. 6 A    4 kVA
- Common feeder lines for the powerhouse: 1 x for the power plant
  - Start air compressor. 4 A
  - Ventilation of the machine room. 640 A
  - Fuel tank heating. 160 A
  - Overhead crane. 16 A
  - Powerhouse lighting. 16 A
  - Each line foreseen with indication lamp and selector auto/manual.
- DC system: 1 x for the power plant
  - Automatic battery charger with a capacity of 24 V DC x 84 A :
    - Alarm for fault in battery charging.
    - Voltmeter and ampere-meter.
    - Warning lights.
    - Fuses for battery charger.
  - Set of DC distribution exits with circuit breaker double pole.
    - Number of exits: 4
    - Capacity : 18 A
  - Lead batteries with a total capacity of 80 Ah.
- UPS system, complete with: 1 x for the power plant
  - Rectifier bridge 320 kVA
  - Batteries 24 V
  - AC generator 60 Hz
  - Suitable for 5 min continuous operation

#### Finishing:

- Painting of the group. RAL 6011
- Painting frame of compressor and starting air bottles. RAL 6011

#### Standard Tools:

1 set per power plant

- Normal tools in box delivered with the engine:
  - Dynamo key with accessories.
  - Lever for priming the fuel pumps.
  - Tool for dismounting nozzle holder.
  - Tool for controlling opening pressure of the nozzle.
  - Tool for lifting a cylinder head.
  - Tool for assembling and disassembling exhaust and inlet valves.

- Tool for valve grinding.
- Tool for disassembling water pump.
- Turning rod with protective spring.
- Turning equipment.

Installation accessories: delivered as loose items.

- Engine will be delivered with counter flanges and pipe couplings.
- Lifting eyes for the engines.
- Levelling and aligning accessories.
- Nameplate and 2 small flags ABC.
- Greater ABC flag of 2 m length.
- 1 kg paint.
  
- Flexible hoses: delivered as loose items.
  - Flexible hoses for the deaeration of the jacket cooling circuit.
  - Flexible hoses for jacket cooling circuit.
  - Flexible hoses for fuel circuit.
  - Flexible hoses for start air system.
  - Flexible hoses for the lube oil circuit.

Spare parts for the engine:

1 ser for the power plant

- Standard spare parts for engines without approval prescriptions:
  - set of piston rings
  - valve springs & collars
  - valve seat inserts
  - nozzle
  - cylinder head gasket
  - safety valve
  - air starting valve
  - valve guides
  - inlet and exhaust valve
  - injection pipe
  - spring and non-return valve from fuel pump
  - set joints and O-rings

## STUDIES, DESIGN, INSTALLATION AND SITE CONSTRUCTION THROUGH LOCAL CONTRACTORS

Design and documentation for installation contractor:

- Over all dimensional drawings for the engine.
- Over all dimensional drawings for the genset.
- Schematics for cooling water circuits.
- Schematics for fuel circuits.
- Schematics for starting air circuits.
- Schematics for lube oil circuit.
- Schematics for engine alarm and control system.
- Installation prescriptions
- Data requested for determining auxiliaries; on demand.
- Discussion in ABC of installation works with installation contractor.
- Torsional vibration calculation for the complete installation
- Control calculation for the flexible suspension of the engine.
- Control of engine foundation design made by the installation contractor.

- Control of the layout as made by the contractor for installing.
- Calculation of the thermal balance.
- Calculation of the flow of of the exhaust gases.
- Calculation of the flow of all water cooling circuits.

Documentation for the final client:

- Choice for the language: Dutch, French, English, German or Spanish.
- Number of copies: 2
- Description and applications manual.
- Installation prescriptions
- Overall dimensional drawings for the genset.
- Schematics for cooling water circuit.
- Schematics for fuel circuit.
- Schematics for starting air circuit.
- Schematics for luboil circuit.
- Operating manual.
- Spare parts book.
- Maintenance manual.
- Testbench report.
- Classification certificate.

Control and startup of the installation:

- The works here mentioned are only controls and assistance in starting-up the installation, and not at all the installation works themselves.
  - Inspection of correct placing of engine and auxiliaries.
  - Control of the correct alignment of the engine.
  - Control of the correct functioning of all engine circuits.
  - Control of the alarms and securities of the engine.
  - Control for correct cabling of the genset(s).
  - Control of any short-circuits, insulation and earthing tests.
  - Control of the electrical switchboard.
  - Control of the fuel treatment system.
  - Start-up of the engine and test-run.



IRRIGATION DEPARTMENT  
GOVERNMENT OF SINDH  
NABISAR POWER PROJECT

BUDGETARY ESTIMATE



G3 Engineering Consultants Pvt Ltd

57-M, Gulberg-III, Lahore, Pakistan

Ph: 042-35441641-3

Fax: 042-35441645

Website: [www.g3ec.com](http://www.g3ec.com) , E-mail: [info@g3ec.com](mailto:info@g3ec.com)



# G3 ENGINEERING CONSULTANTS (PVT.) LTD.

www.g3ec.com



Ref: G3/0073/158

Dated: October 12, 2016

The Executive Engineer  
Thar Coal Water Works  
Mirpurkhas.

**SUBJECT: Consultancy Services for Designing/Supervision and Monitoring the Works for of Pre-Treatment System for RO Plant LBOD Water Supply Scheme at Nabisar for Thar Coal Power Project**

- SUBMISSION OF COST ESTIMATE

Dear Sir,

Refer to subject mention project we have pleasure in submitting here with the cost estimate of the project for further necessary action.

Assuring you of our best professional services.

Yours faithfully,

For and on behalf of J.V of  
G3 Engineering Consultants (Pvt.) Ltd.

(Engr. Syed Ali Abbas Gillani)  
Managing Director



CC:

- Project Director, Thar Coal Water Works Mirpurkhas.
- Chief Executive, G3 Engineering Consultants (Pvt.) Ltd.
- Project Manager, Thar Coal, G3 Engineering Consultants (Pvt.) Ltd.
- Project File

Attached:

- Engineer Estimate

Head Office: House No.57- M, Gulberg-111, Lahore,  
Pakistan  
Tel: ( 92-42 ) 35441641-3  
Fax: ( 92-42 ) 35441645 ; Email: info@g3ec.com





IRRIGATION DEPARTMENT  
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NABISAR POWER PROJECT

BUDGETARY ESTIMATE



G3 Engineering Consultants Pvt Ltd

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Ph: 042-35441641-3

Fax: 042-35441645

Website: [www.g3ec.com](http://www.g3ec.com) , E-mail: [info@g3ec.com](mailto:info@g3ec.com)

*D. Fakhr*

## PROJECT INFORMATION

|           |    |                                   |
|-----------|----|-----------------------------------|
| CONTENTS: | A: | GENERAL                           |
|           | B: | CIVIL & SITE CONDITIONS           |
|           | C: | MECHANICAL                        |
|           | D: | ELECTRICAL                        |
|           | E: | ADDITIONAL INFORMATION ABOUT SITE |

### A: GENERAL

Expected timeline for project completion - *December / 2017*

#### Client's Name:

Client's contact person : Haji khan Jamali

Address:

E-mail:

Telephone:

Fax:

### B: CIVIL & SITE CONDITIONS

#### Communication & Accommodation

|  |            |
|--|------------|
| Telephone lines available :                        | <i>no</i>  |
| High speed internet connection at site available : | <i>no</i>  |
| Cellular phones functional at site :               | <i>yes</i> |
| Accommodation availability :                       | <i>no</i>  |

#### Roads

|                                |            |
|--------------------------------|------------|
| Existing access road to site : | <i>Yes</i> |
| New access road required :     | <i>No</i>  |

#### Site layout

|                                       |                   |
|---------------------------------------|-------------------|
| Altitude above sea level:             | <i>150 Meters</i> |
| Estimated height differences at site: | <i>02 Meters</i>  |
| Site slopes towards:                  | <i>north-west</i> |

|                                  |            |
|----------------------------------|------------|
| Area of site in m <sup>2</sup> : | <i>TBA</i> |
| Measured length (m):             | <i>TBA</i> |
| Measured width (m):              | <i>TBA</i> |

#### Ambient conditions

|  |  |
|--|--|
| Ambient temp:                          | <i>MAX 44 Deg C /MIN 4 Deg C/YEARLY AVERAGE 20 Deg C</i> |
| Average Relative Humidity (%):         | <i>35%</i>   |
| Average Wet Bulb Temperature: (°C):    |  |
| Prevailing wind direction (from → to): | <i>TBA</i>   |
| Maximum rainfall (mm/h):               | <i>40 mm / year, rare</i>                                |
| Rainy months:                          | <i>Feb – March – Nov - December</i>                      |

#### Wind loads

|                           |               |
|---------------------------|---------------|
| Maximum wind speed (m/s): | <i>40 MPH</i> |
|---------------------------|---------------|

#### Seismic activity

|              |           |
|--------------|-----------|
| Seismic area | <i>no</i> |
|--------------|-----------|

*D. Fakheri*  


Seismic zone:  
Code:  
Last Seismic activity (year / strength): NA  
Frequency of seismic activity:  
Strongest seismic activity registered: TBA

**Existing site structures, obstacles and contamination**

Any contamination observed at site area Chlorides & Nitrates at surface / below  
Existing structures at site no  
Other obstacles interfering with construction no – Soil Filling / Compaction required

**Estimation of extent of site preparation**

Ground water level at what depth (m): 400 Mtrs  
Large landfill requirement: no  
Quantity estimation in m<sup>3</sup>:  
Large cut or dredging: yes  
Quantity estimation m<sup>3</sup>:  
Soil Investigation Report: Results to be provided by client  
How site drainage is presently arranged:  
Size of discharge pipes: Open

**Air quality for air-filtration**

Estimate air quality (Tick one please):  
 Rural country side, light industrial areas; No heavy dust concentration  
 Heavy dust concentration in industrial areas or dust storm areas

Dust level (mg/m<sup>3</sup>):

Any special air pollutant (like cement factory, corrosive atmosphere...): Dust Storm Area

**Environmental requirements**

Environmental / Emission regulations (default being World Bank Guidelines):  
Environmental study required: yes  
Environmental study performed: no- Client action awaited  
Environmental permits obtained: TBA  
Special noise requirements ( normal default 70 dB(A) at perimeter fence): Yes, against engine noise  
Other noise sources that produces background noise above 70 dB(A), Air Compressors  
Estimated distance to closest noise receptor: Contained Within the plant site  
Any other special local environmental regulations and laws: EPA

**Construction issues**

Electrical power available to contractor for carrying out construction activities at site: not yet  
Voltage/Frequency (V/Hz): 400 V- 50 CPS

Water available to contractor for carrying out construction activities at site: By Client  
Water source:

Existing sewage infrastructure: NA

**Other observations and recommendations (civil & site conditions):** Remote Site – 250 KM from Karachi port





**C: MECHANICAL**

**Liquid fuel** (composition to be attached)

HFO – Viscosity at 50°C: Per Tender Supplied Specs, LHV: Per Tender Supplied Specs  
LFO – Viscosity at 50°C: Per Tender Supplied Specs, LHV: Per Tender Supplied Specs

**Gas fuel** (composition to be attached) N/A.

Line Pressure (bar, absolute):  
LHV:

Primary fuel: LFO  
Secondary fuel: HFO

**Cooling**

Radiators required (preferred for water conservation reasons): Yes  
or, Cooling Towers required: Optional

Water source:

Water analysis: (results to be provided by client) TBA

**Steam Requirement**

Full heat recovery or no  
Only for fuel heating yes  
Superheated / Saturated (please tick one), NA - Pressure: \_\_\_ bar(a), Flow: \_\_\_ kg/h (yes/no)

**D: ELECTRICAL**

Generated Voltage: 11 kV ± 0.5%  
Generated Frequency: 50 Hz ± 1%  
Auxiliary Voltage (V): 400

**Parallel Operation Requirements**

With Grid: yes  
With Existing DG Sets (tech. specs of existing DG sets to be attached, if applicable): NA

**Power Requirement**

Total connected load (kW):  
Maximum load (kW):  
Minimum load (kW):  
Critical loads (kW):  
Biggest load / Starting Torque of biggest motor or load source (kW):  
Expected running hours per year:  
Daily load profile for a typical day in summers: (to be attached)  
Daily load profile for a typical day in winters: (to be attached)  
Expansion Plan (if any):

Total captive power capacity required (MWe): 05 MWe  
Genset capacity preference (if any) (MWe): 2X2.5 Net at site  
Preference for no. of gensets (if any): 2

**E: ADDITIONAL INFORMATION ABOUT SITE**

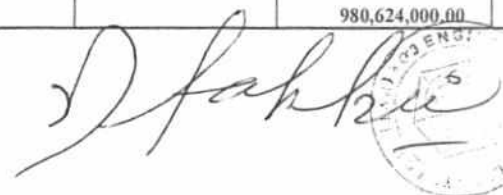

- Site layout and site coordinates – to be attached -
- Electrical single line diagram (SLD) – to be attached
- Client's intention to propose on EPC basis:
- Client's intention for performing civil/mech/elec works themselves:

TBA  
Included in Tender Document  
yes  
no

*D. Fahkha*  


**ESTIMATE AND BOQ FOR 5 MW NABISAR HFO POWER GENERATION PLANT ON TURNKEY EPC BASIS**

| S.No     | ACTIVITY  | Unit | Qty | Unit Price          | Unit Price (Pak Rs) | Total Price           |
|----------|---|------|-----|---------------------|---------------------|-----------------------|
| <b>A</b> | <b>05 MW NABISAR THAR HFO BASED POWER PLANT - 2 X 2.5 MW not at site</b>  | Lot  | 1   |                     |                     |                       |
|          | <b>OFF-SHORE SUPPLIES INCLUDING INSURANCE AND FREIGHT UPTO KARACHI</b>  |      |     | <b>USD</b>          | <u>1USD@106</u>     |                       |
| 1        | HFO generating set as per bidder design and to fulfill the conituous working of Load connected with Plant as per SLD attached. Tentative specification are given in Specification Chapter of the Tender documents   | Lot  | 1   | 3,050,000.00        | 323,300,000.00      | 323,300,000.00        |
| 2        | Cooling Water System  | Lot  | 1   | 65,000.00           | 6,890,000.00        | 6,890,000.00          |
| 3        | Exhaust Gas Boiler System   | Lot  | 1   | 175,000.00          | 18,550,000.00       | 18,550,000.00         |
| 4        | HFO/LFO Modules and system  | Lot  | 1   | 825,000.00          | 87,450,000.00       | 87,450,000.00         |
| 5        | Lube Oil System   | Lot  | 1   | 125,000.00          | 13,250,000.00       | 13,250,000.00         |
| 6        | Starting Air and Instrument Air System  | Lot  | 1   | 110,000.00          | 11,660,000.00       | 11,660,000.00         |
| 7        | Electrical Auxiliary Equipment<br>New Electrical auxiliaries<br>- Incl. switchgear panels & PT panels<br>- Incl. Busbars & Outgoing Feeders<br>- Incl. DC power supply 24 VDC / 110 VDC<br>- Incl. DC battery charger & batteries<br>- New MCC for misc aux equipments<br>- Black-start Generator Set 250 kVA | Lot  | 1   | 869,000.00          | 92,114,000.00       | 92,114,000.00         |
| 8        | Spare Parts & Necessary Tools   | Lot  | 1   | 45,000.00           | 4,770,000.00        | 4,770,000.00          |
| 9        | Power House Maintenance Overhead Crane approx 10T   | Lot  | 1   | 140,000.00          | 14,840,000.00       | 14,840,000.00         |
| 11       | Basic and detailed Design of Plant  | Lot  | 1   | 130,000.00          | 13,780,000.00       | 13,780,000.00         |
| 12       | Technical Training, On-site   | Lot  | 1   | 20,000.00           | 2,120,000.00        | 2,120,000.00          |
|          |   |      |     | <b>5,554,000.00</b> |                     | <b>588,724,000.00</b> |
|          | <b>ON-SHORE SUPPLIES INCLUDING SITE SERVICES</b>  |      |     |                     |                     |                       |
| 11       | Design and supply of HFO, LFO and Lube Oil, Storage, Daily and separate Tanks Farms as per Plant design and requirements  | Lot  | 1   |                     | 25,000,000.00       | 25,000,000.00         |
| 12       | Plant 2x3.5MVA distribution transformer, panels and necessary Power Cables  | Lot  | 1   |                     | 19,900,000.00       | 19,900,000.00         |
| 13       | Installation & Commissioning, Inland Transportation + Clearance and Handling at port, Insurance, Supervision by Expat including taxes   | Job  | 1   |                     | 45,000,000.00       | 45,000,000.00         |
| 14       | Power House Building, Foundations for Gensets and Tank Farm and other necessary civil works including Boundary and fence of power plant   | Job  | 1   |                     | 90,000,000.00       | 90,000,000.00         |
| 15       | Testing and testing expat for Reliable Run Testing  | Job  | 1   |                     | 15,000,000.00       | 15,000,000.00         |
|          |   |      |     |                     |                     | <b>194,900,000.00</b> |
|          | <b>Total Price</b>  |      |     |                     |                     | <b>783,624,000.00</b> |
|          | Provisional Sum (duties, Taxes at Port, contingencies, Unforseen, and fuel for testing)   |      |     |                     |                     | 197,000,000.00        |
|          | <b>GRAND TOTAL PROJECT COST</b>   |      |     |                     |                     | <b>980,624,000.00</b> |

M/S G3 Consultants,  
Lahore,

Dear Sirs,

In line with your request for the special discount in budgetary price for the complete 5 MW Thar HFO EPC Project, we hereby attach the best quote from our principles M/S Mitas who are well competent and experienced in power sector EPC projects.

In case of any further assistance and placing your valued order, kindly do not hesitate to contact us.

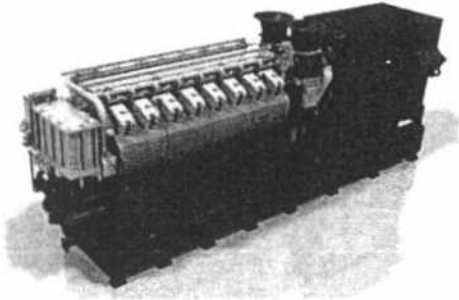
Counting towards your great cooperation as usual.

Best Regards



**Adnan Mubasher**  
Regional Sales Manager





G3 - 5 MW THAR HFO EPC PROJECT

PAKISTAN

Mitas, Feb/3/2017

**Quotation:** A2196 - 2 x 16VDZC-750 -2.500 kW e G3 - 5 MW THAR HFO EPC PROJECT

M/s ANJ Global Management

Dear Sir,

We sincerely thank you for your price enquiry and have the honour to present you, herewith enclosed and according to our general sales conditions, our detailed quotation.

For any Queries Kindly Contact our Local Rep ANJ Global Management

Yours sincerely,

**Valentin Bularca**  
**Electrical Engineer**  
**Sales Director & Marketing**

## TECHNICAL DATA

Application: C0

- Industrial genset 2 engines

Basic characteristics of the engine:

- Engine manufacturer: ABC Anglo Belgian Corporation nv
- Engine type: 16 DZC Turbocharged and intercooled
- Cycle: 4 stroke - single working
- Sense of rotation: Counter clockwise - looking to the flywheel
- Number of cylinders: 16
- Bore: 256 mm
- Stroke: 310 mm
- Swept volume per cylinder: 15.96 liters (dm<sup>3</sup>)
- Total swept volume: 255.30 liters (dm<sup>3</sup>)
- Compression ratio: 12.10 : 1
- Nominal speed: 750 rpm
- Idling speed: 400 rpm (minimum)
- Engine torque: 34377 Nm
- Break mean effective pressure: 16.9 bar

Ambient conditions:

- |   | ISO:    | On site:     |
|---|---------|--------------|
| ▪ Ambient air temperature:                | 25 °C   | 40 °C        |
| ▪ Water temperature at intercooler inlet: | 25 °C   | 47 °C        |
| ▪ Barometric pressure:                    | 100 kPa | 0 m (height) |
| ▪ Relative humidity:                      | 30 %    | 60 %         |
| ▪ Derating:                               | 0 %     | 3.6 %        |

Engine power rating according to ISO 3046-1:

- |                                   | HP   | kW                   | rpm |
|-----------------------------------|------|----------------------|-----|
| ▪ Engine nominal power [ISO]:     | 3861 | 2840                 | 750 |
| ▪ Requested engine power [ISO]:   | 3807 | 2800                 | 750 |
| ▪ Requested engine power at site: | 3671 | 2700                 | 750 |
| ▪ Permitted overload:             | 10%  | maximum 1h every 12h |     |

Luboil consumption according to ISO 3046-1:

- Luboil consumption at full load: 0.45 g/kWh
- Tolerance: +/- 0,3 g/kWh

Fuel consumption according to ISO 3046-1 conditions:

- Engine built for burning: HFO - Heavy fuel oil
- Reference fuel caloric value Hu: Diesel 42700 kJ/kg
- Fuel consumption at full load: 139.0 g/HP/h 189.0 g/kWh

+ 5%

without engine driven pumps