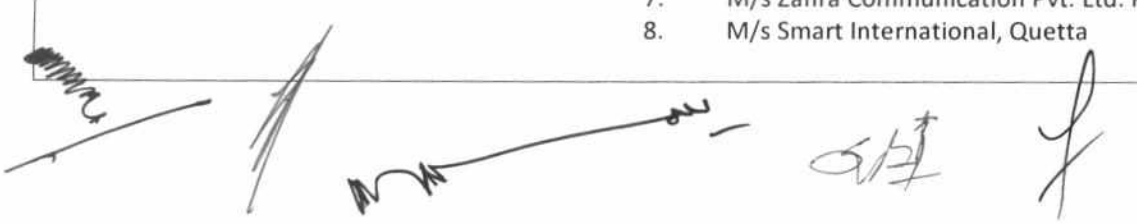


Bid Evaluation Report

Name of Procuring Agency	<u>Agriculture, Supply & Prices Department, Government of Sindh, through Directorate Agriculture Engineering, Sindh, Hyderabad</u>												
Tender Reference No:	TENDER NOTICE NO. DAE/Stores-966/2145/16 DATED: 07.11.2016. SPPRA SR. NO. 30476												
Tender Description/Name of work/item	<u>PROCUREMENT OF:-</u> PRE-QUALIFICATION OF FIRMS FOR THE INSTALLATION OF SOLAR WATER PUMP / TUBEWELLS FOR THE YEAR 2016-17. Under ADP Scheme No. 24 "Provision of Solar Water Pumps / Tubewells on Subsidized Rate to Farmers in Sindh",												
Method of Procurement	<u>As per Sindh Public Procurement Regulatory Authority Rules 2010.(amended 2013)</u>												
Tender Published	<u>Tender Notice was published in Newspapers:-</u> <table><tr><td>▪ Daily Awami Awaz</td><td>dt: 12-11-2016</td></tr><tr><td>▪ Daily Moomal Karachi</td><td>dt: 13-11-2016</td></tr><tr><td>▪ Daily Express</td><td>dt: 12-11-2016</td></tr><tr><td>▪ Daily Ibrat</td><td>dt: 13-11-2016</td></tr><tr><td>▪ Daily Beopar</td><td>dt: 13-11-2016</td></tr><tr><td>▪ Daily Dawn</td><td>dt: 13-11-2016</td></tr></table>	▪ Daily Awami Awaz	dt: 12-11-2016	▪ Daily Moomal Karachi	dt: 13-11-2016	▪ Daily Express	dt: 12-11-2016	▪ Daily Ibrat	dt: 13-11-2016	▪ Daily Beopar	dt: 13-11-2016	▪ Daily Dawn	dt: 13-11-2016
▪ Daily Awami Awaz	dt: 12-11-2016												
▪ Daily Moomal Karachi	dt: 13-11-2016												
▪ Daily Express	dt: 12-11-2016												
▪ Daily Ibrat	dt: 13-11-2016												
▪ Daily Beopar	dt: 13-11-2016												
▪ Daily Dawn	dt: 13-11-2016												
Total Bid documents Sold	(18) Bid documents were purchased by the following firms:- <ol style="list-style-type: none">1. M/s Pak Oasis Industries Pvt. Ltd. Karachi2. M/s EBR Energy Pakistan Pvt. Ltd. Lahore3. M/s Nizam Energy Pvt. Ltd. Karachi4. M/s Tesla Industries Pvt. Ltd. Islamabad5. M/s K.K. B Karachi6. M/s Orient Energy System Pvt. Ltd. Karachi7. M/s Zahra Communication Pvt. Ltd. Karachi8. M/s Smart International, Quetta9. M/s Density Drilling, Karachi10. M/s Saztel Pvt. Ltd. Karachi11. M/s Spindle & Looms Pvt. Ltd. Lahore12. M/s Catkin Sales & Service, Islamabad13. M/s Renewable Energy Pvt. Ltd. Peshawar14. M/s Jilaniz, Karachi15. M/s Orient Water Technologies, Karachi16. M/s Yaseen Pvt. Ltd. Karachi.17. M/s Flow Pak Pvt. Ltd. Lahore18. M/s Global Business Service, Karachi.												
Total Bids Received:	(16) bids documents were submitted by the following firms:- <ol style="list-style-type: none">1. M/s Pak Oasis Industries Pvt. Ltd. Karachi2. M/s EBR Energy Pakistan Pvt. Ltd. Lahore3. M/s Nizam Energy Pvt. Ltd. Karachi4. M/s Tesla Industries Pvt. Ltd. Islamabad5. M/s K.K. B Karachi.6. M/s Orient Water Technologies, Karachi7. M/s Zahra Communication Pvt. Ltd. Karachi8. M/s Smart International, Quetta												



9. M/s Density Drilling, Karachi
10. M/s Saztel Pvt. Ltd. Karachi
11. M/s Catkin Engineering Sales & Service, Islamabad
12. M/s Renewable Energy Pvt. Ltd. Peshawar
13. M/s Jilaniz, Karachi
14. M/s Flow Pak Industries, Lahore
15. M/s Global Business Service, Karachi
16. M/s Yaseen Pvt. Ltd. Karachi

Solar Water Technologies, Lahore

- M/s Solar Technology Pvt. Ltd. Lahore submitted the pre-qualification and failed to submit the Tender Fee with the Pre-qualification document, hence the procurement committee reject the Pre-qualification document of M/s Solar Technology Pvt. Ltd. Lahore.

M/s Jilaniz, Karachi

- M/s Jilaniz, Karachi have submitted a blank pre-qualification document without seal and signatures, whereas submitted supporting documents are not readable. The procurement committee refuses to endorse the pre-qualification document and rejected the same.

M/s Density Drilling, Karachi

- M/s Density Drilling, Karachi have submitted a blank pre-qualification documents without seal, signatures without confirming the Schedule of requirement / Technical Specification / Brochure, the procurement committee refuses to endorse the pre-qualification document and rejected the same.

Technical Bid Opening date:

01.12.2016. ✓

No. of Bid technically qualified

(07) firms qualified in the Pre-qualification of Solar Water Pump / Tubewells for the year 2016-17:-

1. M/s Nizam Energy Pvt. Ltd. Karachi
2. M/s EBR Energy Pvt. Ltd. Lahore
3. M/s K.K.B., Karachi.
4. M/s Catkin Engineering Sales & Service, Islamabad.
5. M/s Global Business Service, Karachi
6. M/s Smart International, Quetta.
7. M/s Pak Oasis Industries Pvt. Ltd. Karachi.

Bid(s) Rejected

(07) firms rejected due to following reason:-

M/S FLOW PAK PUMP INDUSTRIES PVT. LTD. LAHORE

- M/s Flow Pak Pump Industries Pvt. Ltd. Lahore has not indicated the details of similar nature work and performance certificate from Government and Private Sector Organizations whom they supplied and install Solar Water Tubewells, which is a requirement for shortlisting in the pre-qualification document.
- They have also not provided vital data essentially required to evaluate the technical performance of their offered products such as efficiency of pumps, power factor, voltage tolerance,

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type of flange and warranties, whereas for Solar Panel vital specification like operating voltage, optimum operating current, module efficiency, operating temperature, type of panels, thickness of front glass, type of frame, International standards etc. are not available.

M/S SAZTEL PVT. LTD. KARACHI

- Procurement Committee observed that, the firm is not registered with Sindh Revenue Board as per requirement of SPPRA and tender documents,
- Firm has also not submit certificate from the original manufacturer regarding nomination of the bidder as authorized dealer / agent, even name & address of the manufacturer is not found.
- Firm also not committed for After Sales Service, International IEC / EU / USD / DIN standard and warranty obligations are also not committed the procurement committee.

M/S RENEWABLE ENERGY, ISLAMABAD

- The Procurement Committee observed that vital technical specifications are not in line with the requirement of document.
- The firm also not extended their bid validity.

M/S ZAHRA COMMUNICATION, KARACHI.

- The firm has also not extended their bid validity.

M/S YASEEN PRIVATE LIMITED, KARACHI.

- The firm has also not extended their bid validity.

M/S ORIENT WATER TECHNOLOGIES, KARACHI.

- M/s Orient Water Technologies lacks almost every vital information.
- The firm has also not extended their bid validity.

M/S TESLA INTERNATIONAL, ISLAMABAD.

- The firm has also not extended their bid validity.

Financial Bid Opening date

24.04.2017. ✓

M/s Pak Oasis Industries Pvt. Ltd. has not submitted the financial bid, following six firm submitted their financial bids.

- M/s EBR Energy Pvt.Ltd. Lahore.

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- M/s Nizam Energy Pvt. Ltd Karachi
- M/s Global Business Service, Karachi.
- M/s Catkin Engineering Sales & Service, Islamabad
- M/s K.K.B. Karachi.
- M/s Smart International, Quetta.

12. Bid Evaluation Report:

S No	Name of Firm or Bidder	Cost offered by the Bidder	Ranking in terms of cost	Comparison with Estimated cost	Reasons for acceptance/rejection	Remarks
0	1	2	3	4	5	6

SOLAR WATER PUMP LIFT PUMP 6x8 to 8x8 inches

1.	Solar Water Pump / Lift Pump	M/s EBR Energy Pakistan Pvt. Ltd. Lahore	Rs. 2,334,244	1st Lowest	Lower then the estimated unit cost	Accepted as Lowest Evaluated bid.	--
2		M/s Global Business Service, Karachi	Rs. 2,553,698	2 nd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
3		M/s Catkin Engg. Sales & Service, Islamabad	Rs. 2,925,000	3 rd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
4		M/s Smart International Quetta	Rs. 2,936,172	4 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
5		M/s K.K.B. Karachi	Rs. 3,259,333	5 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
6		M/s Nizam Energy Pvt. Ltd. Karachi	Rs. 3,442,213	6 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--

SOLAR WATER PUMP 100 FT. 5" Inch Delivery

1.	Solar Water Pump 100 ft.	M/s Global Business Service, Karachi	Rs. 2,962,345	1st Lowest	Lower then the estimated unit cost	Accepted as Lowest Evaluated bid.	--
2.		M/s Smart International Quetta	Rs. 3,256,740	2 nd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
3.		M/s K.K.B. Karachi	Rs. 3,680,043	3 rd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
4.		M/s Nizam Energy Pvt. Ltd. Karachi	Rs. 3,800,600	4 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
5.		M/s EBR Energy Pakistan Pvt. Ltd. Lahore	Rs. 3,933,317	5 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
6.		M/s Catkin Engg. Sales & Service, Islamabad	Rs. 4,040,600	6 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--

SOLAR WATER PUMP 150 FT. 5" Inch Delivery

1.	Solar Water Pump 150 ft.	M/s Global Business Service, Karachi	Rs. 4,009,223	1st Lowest	Lower then the estimated unit cost	Accepted as Lowest Evaluated bid.	--
2.		M/s Smart International Quetta	Rs. 4,305,197	2 nd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--

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3.		M/s K.K.B. Karachi	Rs. 4,685,714	3 rd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
4.		M/s EBR Energy Pakistan Pvt. Ltd. Lahore	Rs. 4,874,038	4 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
5.		M/s Catkin Engg. Sales & Service, Islamabad	Rs. 4,960,500	5 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
6.		M/s Nizam Energy Pvt. Ltd. Karachi	Rs. 5,202,094	6 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--


SOLAR WATER PUMP 250 FT. 5" Inch Delivery

1.	Solar Water Pump 250 ft.	M/s Smart International Quetta	Rs. 5,420,959	1 st Lowest	Lower then the estimated unit cost	Accepted as Lowest Evaluated bid.	--
2.		M/s Global Business Service, Karachi	Rs. 5,815,234	2 nd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
3.		M/s K.K.B. Karachi	Rs. 6,412,648	3 rd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
4.		M/s Nizam Energy Pvt. Ltd. Karachi	Rs. 6,765,962	4 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
5.		M/s EBR Energy Pakistan Pvt. Ltd. Lahore	Rs. 6,785,298	5 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--
6.		M/s Catkin Engg. Sales & Service, Islamabad	Rs. 6,867,800	6 th Lowest	Lower then the estimated unit cost	Rejected as higher bid.	--

SIGNATURES OF THE MEMBERS OF THE PROCUREMENT COMMITTEE.



(ATTA-U-REHMAN MARI)
Director
Agriculture Engineering
Sindh, Hyderabad
CHAIRMAN



(SHAKIL AHMED RAHEMOON)
DIRECTOR
Water Management,
Sindh Hyderabad
MEMBER



(SAIFULLAH MAGSI)
Additional District Accounts Officer-i
District Accounts Office,
Hyderabad
MEMBER



(FARRUKH RASHEED ANSARI)
DEPUTY DIRECTOR (MECH)/HQ
Agriculture Engineering Sindh
Hyderabad
MEMBER / SECRETARY



(Musarrat Mokhtar)
Deputy Director (Inspection)
Industries & Commerce
Department,
Government of Sindh, Karachi
MEMBER



GOVERNMENT OF SINDH
AGRICULTURE, SUPPLY &
PRICES DEPARTMENT

NOTIFICATION

No.13(347)SO(DEV:)/2013: In Supersession of this department's Notification of even number dated 30.11.2016, in pursuance of Rule-7 of SPP Rules, 2010, Government of Sindh, Agriculture, Supply & Prices Department is pleased to reconstitute a Procurement Committee for the schemes / Projects of Agriculture Engineering Sindh with following composition and Terms of References:-

iii. COMPOSITION:

- | | | |
|------|--|------------------|
| ✓ 1. | Director,
Agriculture Engineering Sindh, Hyderabad. | Chairman |
| 2. | Director, Sindh On Farm Water Management,
Hyderabad Division. | Member |
| 3. | Representative of Industries & Commerce Department,
Government of Sindh, Karachi | Member |
| 4. | District Accounts Officer /
Representative of District Accounts Officer, Hyderabad. | Member |
| 5. | Deputy Director (Headquarter),
Agriculture Engineering Sindh, Hyderabad | Member/Secretary |

IV. Terms of References:

- Prepare bidding documents;
- Carryout Technical as well as Financial evaluation of the bids;
- Prepare evaluation report as provided in Rule-45 of SPPRA;
- Make recommendations for the award of Contract to the competent authority and;
- Perform any other function ancillary and incidental to the above.

SECRETARY TO GOVT. OF SINDH

Karachi, dated the 06-02-2017

No.13(347)SO(DEV)/2013

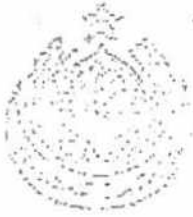
A copy is forwarded to information & necessary action to:

- The Secretary to Government of Sindh, Finance Department, Karachi.
- The Secretary to Government of Sindh, Industries Department, Karachi.
- The Managing Director, SPPRA, Karachi.
- The Director General, Agricultural Engineering & Water Management Sindh, Hyderabad.
- All Members of Committee.

(ABDUL AZIZ CHANNA)
DEPUTY SECRETARY (TECH:)

C.c. to:-

- 1- P.S. to Minister, Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.
- 2- P.S. to Secretary, Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.



GOVERNMENT OF SINDH
AGRICULTURE, SUPPLY &
PRICES DEPARTMENT

NOTIFICATION

No.13(347)SO(DEV:)/2017: In supersession of this Department Notification of even number Dated 05.01.2017 and in compliance with Rule 31 of SPP Rules, 2010, Government of Sindh, Agriculture, Supply & Prices Department is pleased to re-constitute a Committee for Complaint Redressal with the following composition and terms of reference:-

I. COMPOSITION.

1-	Director General, Agricultural Engineering & Water Management Sindh, Hyderabad.	Chairman
2-	Mr. Ghulam Rasool Akhund (An Independent Professional)	Member
3-	Representative of Office of the Accountant General Sindh, Karachi,	Member

II. Terms of References:

- i. Committee may examine the complain of bidder as per SPPRA Rules.
- ii. The Complaint Redressal Committee upon receiving a complaint from an aggrieved bidder may, if satisfied:
 - a. Prohibit the procurement committee from acting or decision in a manner, inconsistent with these rules and regulations
 - b. Annul in whole or in part, any authorized act or decision of the procurement committee: *and*
 - c. Reverse any decision of the procurement committee or substitute its own decision for such a decision :
Provide that the Complaint Redressal Committee shall not make any decision to award this contract.
- iii. The committee shall announce its decision within seven days. The decision shall be intimated to the bidder and the Authority within three working days by procuring agency. In case of failure of the committee to decide the complaint, the procuring agency shall not award the contract.
- iv. The procuring agency shall award the contract after the decision of the Complaint Redressal Committee.
- v. Mere fact of lodging of a complaint shall not warrant suspension of the procurement proceedings.

DR. SAEED AHMED MANGNEJO
SECRETARY TO GOVT. OF SINDH

Contd..P/2..

..P/2..

No.13 (347) SO (DEV :)/2017/6948

Karachi, dated the 31-03-2017

A copy is forwarded for information & further necessary action to:-

1. The Principal Secretary to Governor of Sindh, Karachi.
2. The Principal Secretary to Chief Minister, Sindh, Karachi.
3. The Accountant General Sindh, Karachi.
4. The Managing Director, Sindh Public Procurement Regulatory Authority, Karachi.
5. The Additional Secretary (Staff) to Chief Secretary, Sindh, Karachi.
- ✓ 6. The Director General, Agricultural Engineering & Water Management, Sindh, Hyd.
7. Members of the Committee.



(ABDUL AZIZ CHANNA)
DEPUTY SECRETARY (TECH:)


C.c. to:

- 1- P.S. to Minister Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.
- 2- P.S. to Secretary Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.

ANNUAL PROCUREMENT PLAN OF DIRECTORATE AGRICULTURE ENGINEERING SINDH HYDERABAD FOR FISCAL YEAR 2016-17 (REVISED)

Rs. in Million

Sr. No.	Description of Procurement	Quantity (Where Applicable)	Estimated Unit Cost (Where Applicable)	Estimated Total Cost	Funds Allocated	Source of Funds (ADP / Non-ADP)	Proposed Procurement Method	Timing of Procurement				Remarks
								1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	
1	<u>ADP # 23</u> Provision of Assistance to Farmers on Purchase of Wheel Type Tractors Phase-IV	5402 Nos. Wheel Type Tractors	-	Rs. 1500.0 Million	Rs. 1500.0 Million	ADP	Pre-qualification of Tractors Manufacturers	✓	✓	-	-	All Procurement under SPPRA Rules and subjected to the Release of funds.
2	<u>ADP # 24</u> Provision of Solar Water Pumps / Tubewells on Subsidized Rate Farmers in Sindh	63 Nos. Solar Water Pumps	-	Rs. 238.143 Million	Rs. 238.143 Million	ADP	Pre-qualification of Contractors	✓	✓	-	-	All Procurement under SPPRA Rules and subjected to the Release of funds.
3	<u>ADP # 25</u> Installation of Tubewells on 50% Subsidy to Farmers in Sindh Phase-II	669 Nos. Tubewells in Various Categories	-	Rs. 100.0 Million	Rs. 133.575 Million	ADP	Pre-qualification of Contractors	✓	✓	-	-	All Procurement under SPPRA Rules and subjected to the Release of funds.
4	<u>ADP # 27</u> Replacement of Earth Moving Machinery Phase-III	Bulldozers + Spare Parts & Transportation & Office Equipment	-	Rs. 427.673 Million	Rs. 270.00 Million	ADP	Single Stage Two Envelope Procedure	-	✓	✓	✓	All Procurement under SPPRA Rules and subjected to the Release of funds.
5	<u>ADP # 28</u> Subsidy Assistance on Agriculture Implements for Farm Mechanization Phase-II	Various Agriculture Implement	-	Rs. 80.00 Million	Rs. 80.00 Million	ADP	Pre-qualification of Contractors	-	-	✓	✓	All Procurement under SPPRA Rules and subjected to the Release of funds.
6	<u>ADP # 30</u> Preservation and Storage Facility of Fruits & Vegetable through Hot Water Treatment & Controlled Atmospheric Store on Subsidy to Farmers	01 No. Hot Water Treatment Plant 01 No. Controlled Atmospheric Stores	-	Rs. 170.0 Million	Rs. 170.00 Million	ADP	Single Stage Two Envelope Procedure	-	-	✓	✓	All Procurement under SPPRA Rules and subjected to the approval of Scheme and release of funds.


 DIRECTOR
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD

MINUTES OF THE MEETING OF PROCUREMENT COMMITTEE HELD ON 16.03.2017 AT 01:00 PM UNDER THE CHAIRMANSHIP OF DIRECTOR, AGRICULTURE ENGINEERING SINDH HYDERABAD IN THE COMMITTEE ROOM OF DIRECTORATE, AGRICULTURE ENGINEERING SINDH TO EVALUATE THE PRE-QUALIFICATION DOCUMENT FOR THE PREQUALIFICATION OF CONTRACTORS FOR THE INSTALLATION OF SOLAR WATER PUMP / TUBEWELLS IN SINDH AGAINST TENDER NO. DAE/STORES-966/2145/16 DATED 07.11.2016

Meeting started with the name of Almighty Allah.

List of participants attached.

The Chairman welcomed all the participants of the meeting and asked the Member / Secretary to brief the participants about the agenda of the meeting, after briefing the procurement committee evaluated the pre-qualification document and after detail evaluation of the offered bids and examining the extension of bid validity, the procurement committee as under:-

1. M/S FLOW PAK PUMP INDUSTRIES PVT. LTD. LAHORE

M/s Flow Pak Pump Industries Pvt. Ltd. Lahore has not indicated the details of similar nature work and performance certificate from Government and Private Sector Organizations whom they supplied and install Solar Water Tubewells, which is a requirement for shortlisting in the pre-qualification document, They have also not provided vital data essentially required to evaluate the technical performance of their offered products such as efficiency of pumps, power factor, voltage tolerance, type of flange and warranties, whereas for Solar Panel vital specification like operating voltage, optimum operating current, module efficiency, operating temperature, type of panels, thickness of front glass, type of frame, International standards etc. are not available, the procurement committee after detailed evaluation decided to declared the application of M/s Flow Pak as Not Qualified.

2. M/S PAK OASIS INDUSTRIES PVT. LTD. KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s Pak Oasis Industries is meeting all necessary requirements and declared them as Pre-qualified.

3. M/S EBR ENERGY PVT. LTD. LAHORE

The Procurement Committee observed that the application for the pre-qualification of M/s EBR Energy Pvt. Ltd. Lahore is meeting all necessary requirements and declared them as Pre-qualified.

4. M/S NIZAM ENERGY PVT. LTD. KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s Nizam Energy Pvt. Ltd. Karachi is meeting all necessary requirements and declared them as Pre-qualified.

5. M/S K. K. B. KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s K.K.B. Karachi is meeting all necessary requirements and declared them as Pre-qualified.

6. M/S SMART INTERNATIONAL, QUETTA

The Procurement Committee observed that the application for the pre-qualification of M/s Smart International, Quetta is meeting all necessary requirements and declared them as Pre-qualified.

7. M/S SAZTEL PVT. LTD. KARACHI

Procurement Committee observed that, the firm is not registered with Sindh Revenue Board as per requirement of SPPRA and tender documents, firm has also not submit certificate from the original manufacturer regarding nomination of the bidder as authorized dealer / agent, even name & address of the manufacturer is not found. Firm also not committed for After Sales Service, International IEC / EU / USD / DIN standard and warranty obligations are also not committed the procurement committee declares the application of M/s Saztel Pvt Ltd. Karachi as Not Qualified.

8. M/S GLOBAL BUSINESS SERVICE, KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s Global Business Service, Karachi is meeting all necessary requirements and declared them as Pre-qualified.

9. M/S CATKIN ENGINEERING SALES & SERVICE, ISLAMABAD

The Procurement Committee observed that the application for the pre-qualification of M/s Catkin Engineering Sales & Service, Islamabad is meeting all necessary requirements and declared them as Pre-qualified.

10. M/S RENEWABLE ENERGY, ISLAMABAD

The Procurement Committee observed that vital technical specification are not in line with the requirement of document. The procurement committee also observed that the firm not extended their bid validity, hence the firms has dropped out of the evaluation and could not be qualified.

11. M/S ZAHRA COMMUNICATION, KARACHI.

The Procurement Committee observed that the firm has also not extended their bid validity, hence dropped out of the evaluation and could not be qualified.

12. M/S YASEEN PRIVATE LIMITED, KARACHI.

The Procurement Committee observed that the firm has also not extended their bid validity, hence dropped out of the evaluation process and could not be qualified.

13. M/S ORIENT WATER TECHNOLOGIES, KARACHI.

The Procurement Committee observed that, the technical offer of M/s Orient Water Technologies lacks almost every vital information and also not extended their bid validity. Hence dropped out of the evaluation process and could not be qualified.

14. M/S TESLA INTERNATIONAL, ISLAMABAD.

The Procurement Committee observed that, firm has not extended their bid validity. Hence dropped out of the evaluation process and could not be qualified.

The Procurement committee further advice the department to inform all participants regarding their pre-qualification status as per provision of relevant SPPRA Rules, and issue letter of pre-qualification to qualified firms for submitting their financial offers.

The meeting ended with vote of thanks.


MEMBER / SECRETARY
PROCUREMENT COMMITTEE

NO. DAE/STORES-966/ 473 /17

Dated: 17/03/2017.

C.C. to:

- The Director General Agricultural Engineering & Water Management Sindh, Hyderabad for kind information.
- The Additional Secretary (Tech) Agriculture Department Government of Sindh Karachi for kind information.
- PS to Secretary Agriculture Department Government of Sindh, Karachi for kind information.
- Member Procurement Committee _____ (All).


MEMBER / SECRETARY
PROCUREMENT COMMITTEE


**LIST OF MEMBERS OF PROCUREMENT COMMITTEE PARTICIPATED
FOR THE TECHNICAL EVALUATION OF PRE-QUALIFICATION
DOCUMENT FOR THE YEAR 2016-17, IN THE COMMITTEE ROOM OF
DIRECTOR, AGRICULTURE ENGINEERING SINDH HYDERABAD ON
16.03.2017 AT 01:00 PM UNDER ADP SCHEME "PROVISION OF SOLAR
WATER PUMP / TUBEWELL ON SUBSIDIZED RATES TO FARMERS IN
SINDH"**

S. #.	NAME	DESIGNATION	SIGNATURES
01	ATTA-U-REHMAN MARI	Director, Agriculture Engineering Sindh, Hyderabad	IN CHAIR
02	SHAKIL AHMED RAHEMOON	Director, Water Management, Hyderabad Division MEMBER	
03	SAIFULLAH MAGSI	Additional District Accounts Officer-1 District Accounts Office, Hyderabad MEMBER	
04	MUSARRAT MOKHTAR	Deputy Director (Inspection) Industries & Commerce Department, Government of Sindh, Karachi MEMBER	
05	ENGR. FARRUKH RASHEED ANSARI	Deputy Director (Mech) Agriculture Engineering Sindh Hyderabad MEMBER / SECRETARY	


Evaluation Report / Qualification Criteria for the Pre-qualification of firms for the Installation of Solar Water Pump / Tubewells

Sr. No.	Information to be supplied	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Lahore	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Peshwar	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd. Karachi	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl. Islamabad
1.	Name of the Bidder	Flow Pak Pump Industries Pvt. Ltd.	Pak Oasis Industries Pvt. Ltd.	EBR Energy System Pvt. Ltd.	Nizam Energy Pvt. Ltd.	K.K.B	Smart International	Saztel Pvt. Ltd.	Global Business Services	Catkin Eng. Sales & Service	Renewable Energy Pvt. Ltd.	Zahra Communication Karachi	Yaseen Pvt. Ltd	Orient Water Technologies Karachi	Tesla Industries
2.	Legal status of the Bidder (Company / Partnership / Joint Venture)	Private Limited Company	Private Limited Company	Private Limited Company	Private Limited Company	Proprietor	Joint Venture with Haji Badaruddin & Sons	Private Limited Company	Proprietor	Private Limited Company	Private Limited Company	Private Ltd. Co:	Private Limited Company	Proprietor	Private Limited Company
3.	Valid Registration Certificate of Pakistan Engineering Council in relevant category.	C4 Responsive	C1 Responsive	C4 Responsive	C2 Responsive	C1 Responsive	C5 + C2 Responsive	C5 Responsive	C4 Responsive	C3 Responsive	C3 Responsive	C4 Responsive	C5 Responsive	Non-Responsive	C2 Responsive
4.	Certificate from the original Manufacturer certifying the nomination of the Bidder/Tenderer as Authorized Sole Agent for one year of nomination and current year's renewal agreement.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Responsive	Authorized HMP Pump Pvt. Ltd.	Non-Responsive	Non-Responsive	Responsive
5.	Registered with Income Tax, Sales Tax Departments, Sindh Revenue Board Provide Registration Number. With documentary evidence.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	SRB Certificate Not Attached	Responsive	Responsive	Responsive	Responsive	Responsive	SRB Certificate Not Attached	Responsive
6.	Name and address of the quoted equipment Manufacturer. Please provide the details in separate sheet.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive
7.	Names, qualification and experience of the service engineers and technicians. Location where they are posted / working provide complete address and detail of equipment and machinery. Details of service center /workshops to provide the repair and after sale services in Sindh (Location, Address, Telephone numbers to be provided)	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive
8.	Reference list of Similar works where same / Similar Equipment were installed locally or internationally.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive


Sr. No.	Information to be supplied	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Lahore	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Peshwar	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd. Karachi	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl. Islamabad
9.	Performance certificate from the Organization in Government or private companies to whom the bidder or the company has supplied and installed the similar kind goods in Pakistan or abroad.	Non-Responsive Attached <u>but not of Solar Water Pump</u>	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
10.	Bank reference, name of banks and address may be given. The Banker's certificate regarding financial capability of the Bidder/Tenderer shall be furnished.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive
11.	Details of similar nature projects under execution.	Non-Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
12.	Facilities of After Sales Service facilities in Sindh.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
13.	Item wise List of IEC / EU / USA Standards followed by the manufacturer	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
14.	Item wise warranty periods	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
15.	Confirmation of Schedule of Requirement	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Attached	Responsive	Responsive	Non-Responsive	Responsive
16.	Confirmation of Delivery Schedule.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Attached	Responsive	Responsive	Non-Responsive	Responsive
17.	Extension of Bid Validity	Extended	Extended	Extended	Extended	Extended	Extended	Extended	Extended	Extended	Not Extended	Not Extended	Extended	Not Extended	Not Extended
		Dis-qualified	<u>Qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Qualified</u>	Dis-qualified	<u>Qualified</u>	<u>Qualified</u>	Dis-qualified	Dis-qualified	Dis-qualified	Dis-qualified	Dis-qualified


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 HYDERABAD

CHAIRMAN


MUSARRAT MOKHTAR
 DEPUTY DIRECTOR (INSPECTION)
 INDUSTRIES DEPARTMENT KARACHI


MEMBER


SHAKIL AHMED RAHEMOON
 DIRECTOR
 WATER MANAGEMENT
 HYDERABAD DIVISION

MEMBER


SAIFULLAH MAGSI
 ADDITIONAL DISTRICT ACCOUNTS
 OFFICER-i,
 DISTRICT ACCOUNTS OFFICE
 HYDERABAD

MEMBER


FARRUKH RASHEED ANSARI
 DEPUTY DIRECTOR (MECH)
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD

MEMBER / SECRETARY

COMPARISON OF TECHNICAL DATA (LIFT PUMP)

Size : 6X8" to 8x8"

Capacity : 500,000 L/day (Min)

Depth : 50 ft.

Rated Power : 12 to 15 kw $\pm 10\%$

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Lift Pump (Make & Model)		Flowpak Siemens 150 FCM-259	Grundfos	CS-G100-22/2 Lorentz	NB 125-35/338 A-F2-AE-BAQE Grundfos	XSP-125 MAXISU	2005-95 PEM Electric Motors	SPB815K-700 Solar Tech	Grundfos PACO LCS	ALK 8131N/1 ALARKO	PSK2-15 C-SJ75-3-D Lorentz	NM-80/250) CI-SP)+5.5w HMA Pump	NM-80/250) CI-SP)+5.5w HMA Pump	UK/Italian/German or Equivalent	DAB Pump KDN 80-160	
a.	Rated Power	12 to 15 Kw ($\pm 10\%$) both limits	15 kw	12 – 15 kw	10 kw	15 Kw	13 kw	13 kw 20 HP	15 kw	22 kw	11 KW	Data Not Available	5.5 kw	5.5 kw	10-12kw	15 KW Data Not Available
b.	Discharge Capacity	Average 650,000 Litre / day	Data Not Available	650,000 Litre / day	694,000 L/d	918,000 litre/day	720,000 litre / day	650,000 litre / day	700,000 litre / day	650,000 Litre / day	700,000 litre /day Data Not Available	Data Not Available	500,000 litre/day as per pump curve	650,000 litre / day donot match with brochure	675,000 litre/day	700,000 litre/day Data Not Available
c.	Rated Speed	2400 – 3000 RPM	1450 rpm Data Not Available	2400-3000 rpm	1400 – 2905 rpm	975 rpm	2900	2960 rpm	Data Not Available	3000 rpm	2400 – 2900 rpm Data Not Available	Data Not Available	1445 rpm	1445 rpm	Data Not Available	2943 rpm Data Not Available
d.	Efficiency	More than 75%	Data Not Available	75%+	79%	91.9	82%	80%	Data Not Available	80%	80%+	Data Not Available	70%	70%	Data Not Available	72.23% Data Not Available
e.	Power factor	0.8 to 0.9	Data Not Available	0.8 to 0.9	0.87	0.8	0.85	0.8 to 0.9	Data Not Available	0.85	0.8 to 0.9 Data Not Available	Data Not Available	0.82	0.82	Data Not Available	0.8 Data Not Available
f.	Voltage Tolerance	$\pm 5\%$ to – 15%	Data Not Available	$\pm 5\%$ to – 15%	$\pm 5\%$ to – 10%	$\pm 5\%$ to – 10%	$\pm 6\%$ to – 10%	$\pm 5\%$ to – 15%	10% to $\pm 2\%$	$\pm 5\%$ to – 15%	$\pm 5\%$ to – 15% Data Not Available	Data Not Available	$\pm 6\%$ to – 10%	$\pm 6\%$ to – 10%	Data Not Available	Data N.A. +6% to - 10%
g.	Protection Type	IP68 or Equivalent	IP 65	IP 68	IPX4	IPX4	IP 68	IP 68	IP 68	Data Not Available	IP 68 Data Not Available	Data Not Available	IP 55	IP 55	Data Not Available	IP 55 Data Not Available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Insulation Class	Y or better	F	F	F	F	F	Y	Data Not Available	Data Not Available	F	Data Not Available	F	F	Data Not Available	F
2. Flange	NEMA or Equivalent	Data Not Available	NEMA	NEMA	ENGJL 250	NEMA	8" Nema	Data Not Available	Data Not Available	NEMA	Data Not Available	NEMA	NEMA	Data Not Available	EN 705 PN16 Data Not Available
3. Warranty	Atleast 1 year	Data Not Available	1 YEAR	01 year	1 year	One year	1 Year	1 year	2 years	1 year	Data Not Available	1 year	1 year	Data Not Available	1 year Data Not Available
4. Country of Origin	Please Specify	Pump Pak Motor China / Czech Rep.	EUROPE	German Brand, China made	Denmark	Turkey	Pump China & Pak Motor	China	Germany	Turkey	Germany	Europe Assemble in Pak	Europe Assemble in Pak	Data Not Available	Italy Data Not Available
Solar Panels		LUX Power LNSE 315P	--	Ever Exceed ESM 300-156	Canadian Solar	Jinko Solar 255-270	JKM320PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data Not Available	TPS6U
a. Max. Power / No. of Panels	280 to 320 W	315 W	280 to 320W	300 W	320 W	320 W	320 W	310 Watt	305 Watt	310 to 315 W	255 to 265 W	210 w	210 w	250 / 300 watt each	265 w Data Not available
b. Optimum Operating Voltage	35 to 37 V	36.1 V	35 to 37.5V	38V	36.8 V	37.4 V	37.4 V	36.7 V	35.36 V	36.1 to 36.4 V	30.3 V	38.92 V	38.92 V	Data Not Available	30.8 V Data Not available
c. Optimum Operating Current	7 to 9 Amp	8.31 Amp	7 to 9 Amp	7.89A	8.69 Amp	8.56 Amp	8.56 Amp	8.45	8.4 Amps	8.33 to 8.66 Amp	8.87 Amp	8.54 Amp	8.54 Amp	Data Not Available	8.6 Amp Data Not available
d. Module Efficiency	Atleast 16% or higher	15.50%	16% to 16.5%	16.10%	16.68%	16.49%	16.49%	16%	16%	16%	16%	16.45%	16.45%	Data Not Available	16.29% Data Not available
e. Operating Temperature	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	Data Not Available	Data Not available - 40°C to 85°C
f. Type	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data Not Available	Poly Crystalline Data Not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
g. Front Glass	4mm or better tempered glass	Agreed but not confirmed	4mm High Transmission low Iron tempered Glass	3.2 mm low iron toughend glass	3.2 mm tempered glass	4.00mm	4mm	3.2 mm	3.2 mm	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data Not Available	3.2 mm tempered glass standard 4mm also available	
h. Frame	Anodized aluminum alloy	Anodized aluminum alloy	Anodized Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data Not Available	Anodized Aluminum alloy Data Not available	
Product Warranty	Atleast 10 years.	10 years	10 years	10 years	Yes	10 years	10 years	Agreed but not confirmed	15 years	10 years	10 years	10 years	10 years	Data Not Available	10 years Data Not available	
Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	IEC 61215 IEC 61731 IEC 61732	61215 61730 61215	IEC 61215 IEC 61730 EN 61215 EN 61730 EN 61730	IEC 61215 IEC 61730	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61730 IEC 61215 IEC 61761	IEC 61215 IEC 61730	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215 IEC 61730 UL 1703	IEC 61215 IEC 61730 UL 1703	A grade IEC / EU Data Not Available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716	
k. Junction box	IP68 Rated	IP 67	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data Not Available	IP 68 Data Not available
l. Connector	MC4 Compatible	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	Data Not Available	MC4 Data Not available
m. Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	China	Canadian	China	Canadian	China	China	Data Not Available	China Data Not available
n. Total no. of Panels for the rated power.	Please Specify.	50 pcs	50 pcs	36 pcs	68 Nos.	54 Nos.	54 Nos.	30	72x305 305 Watt	60 Nos. 315 Watts	N/A	34 Nos.	34 Nos.	10-12kw Data not available	100 Data Not available	
o. Linear Performance Warranty.	20 to 25 years	25 years	25 years linear performance warranty	25 years	20 years	25 years	25 Years	Agreed but not confirmed	20 years	20 to 25 years	23 years	25 years	25 years	Data Not Available	20 years Data not Available	

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
<u>Invertor</u>			Grundfos	PSK2-21	RSI Grundfos	JNTECH	ADA SPI 200-4T-015B	SPB815K-700 Solar Tech	INVT CHF-100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data Not Available	JFY Data not Available
a. Amperage	25 to 32 Amp	Brochure not available	25 to 32 Amp	17 Amp	46 Amp	29 Amp	32 Amp	32 Amps	25-30 Amp	30 Amp	Data Not Available	16.5 Amp	16.5 Amp	Data Not Available	39 Amp Data not Available
b. Power	12 to 15 kw	Brochure not available	12 to 15 kw	10 kw	22 kw	15 kw	15 kw	18.5 kw	15 kw	15 kw	Data Not Available	7.5 kw	7.5 kw	Data Not Available	18.5 kw Data not Available
c. Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	3 Phase	380 to 415 Vac	380 to 415 Vac	Yes	3 Phase 370 to 400 Vac	3 Phase 370 to 385 Vac	Data Not Available	400V	400V	Data Not Available	3 Phase 380 Vac Data not Available
d. Input	340to 650 Vdc	Brochure not available	350 to 750 Vdc	350 to 850 Vdc	800 vdc	460 to 880 Vdc	500 to 540 Vdc	350-600 VDC	350to 700 Vdc	480 to 750 vdc	Data Not Available	380 to 480 Vdc	380 to 480 Vdc	Data Not Available	250-900 vdc Data not Available
e. MPPT	Inbuilt	Brochure not available	Inbuilt	In built	In built	Inbuilt	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data Not Available	Inbuilt Data not Available
f. Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	Inbuilt over current / voltage over load dry run, short circuit	Inbuilt	In built	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Inbuilt	Inbuilt	Inbuilt	Inbuilt	Data Not Available	IP 20	IP 20	Data Not Available	Inbuilt Data not Available
g. Efficiency	95% or more.	Brochure not available	95%	98%	95%	98%	97%	Agreed but not confirmed	95%	95%+	Data Not Available	98%	98%	Data Not Available	98% Data not Available

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		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Country of Origin	Please Specify	Brochure not available	China	German Brand Made in China	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data Not Available	China Data not Available
Warranty	Two years minimum	Brochure not available	Two years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	Data Not Available	2 years	2 years	Data Not Available	2 years Data not Available
Cables & Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.9% Copper	99.9% Copper	99.9% Copper	99.9% Copper	99.9% Copper	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data Not Available	99.9% with uv prot. Data not Available
Grounding Kit	Standard	Brochure not available	Yes	Yes	Std	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data Not Available	Standard Data not Available
Water out let & accessories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	Suction 8" Discharge 6"	8"x6"	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	M/s steel Pipes	M/s steel Pipes	Data Not Available	5" M/s steel pipe Data not Available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI Structure	G.I. Galavani-zed	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust free coated	Rust free coated	Data Not Available	Rust free Data not Available

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		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for inverter, switches, junction box etc.	Data Not Available	Yes	GI Plate	GI Plate	GI Plate	GI Plate	GI Plate	Rust Free Standard Installation	GI Plate	Data Not Available	Rust free powder coated of iron & G.I. with environmental prot. For inverter	Rust free powder coated of iron & G.I. with environmental prot. For inverter	Data Not Available	Powder coated mounting plate/box
Execution of Tubewell bore casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Agreed	Agreed	Agreed	Agreed	Agreed	Agreed	Agreed	Agreed	As per requirement of Solar Pump	As per requirement of Solar Pump	Data Not Available	As per requirement


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 i, DAO OFFICE
 HYDERABAD
MEMBER


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 DEPUTY DIRECTOR (MECH)
 AGRICULTURE ENGINEERING SINDH HYDERABAD
MEMBER/ SECRETARY

COMPARISON OF TECHNICAL DATA (SUBMERSIBLE PUMP 100 FT.)

Delivery Size : 5"

Capacity : 500,000 L/day (Min)

Depth : 100 ft.

Rated Power : 15 to 18 kw ±10%

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Submersible Pump (Make & Model)		Flow Pak 8FMC/2 MUTLUSU MSM620	Grundfos	C-SJ75-4 Lorentz	SP 77-4 BAQE Grundfos	XSP-95/3 MAXISU	KOMAX KM6 200T KPS8-80/3 Pump	SPB815K-700 Solar Tech	Grundfos SP	ALK 8090 n/2 ALARKO	PSK2-15C-5S75-3-D Lorentz Germany	HVP 75-02+12.5HP HMA Pak	HVP 75-02+12.5HP HMA Pak	UK/Italian/German or Equivalent	DAB SS7B3
a. Rated Power	15 to 18 Kw (±10%) both limits	15 kw	15 to 18 Kw (±10%)	15 kw	15 kw	15 kw	15 kw	15 kw	18 kw	15kw	Data Not Available	12.5 HP	12.5 HP	15 to 18Kw	15kw Data not available
b. Discharge Capacity	Average 500,000 Litre / day	Data not available	500,000 Litre / day	502,000 Litre / day	501,480 Litre / day	500,000 Litre / day	540,000 Litre / day	500,000 Litre / day	500,000 Litre / day	540,000 Litre / day	Data Not Available	500,000 Litre / day	500,000 Litre / day	480,000 to 525,000	520,000 litre/day Data not available
c. Rated Speed	2660 – 3000 RPM	Data not available	2660 – 3000 RPM	1400-2850 rpm	2900 rpm	2900 rpm	2850 rpm	Data not available	3000 rpm	2660 – 3000 RPM	Data Not Available	2850 rpm	2850 rpm	Data not available	2840 rpm Data not available
d. Efficiency	More than 75%	Data not available	75%+	79%	75%	81%	81%	Data not available	85%	75%+	Data Not Available	75.85%	75.85%	Data not available	77.9% Data not available
e. Power factor	0.8 to 0.9	Data not available	0.8 to 0.9	0.87	0.9	0.85	0.84	Data not available	0.85	0.8 to 0.9	Data Not Available	0.84	0.84	Data not available	0.8 Data not available
f. Voltage Tolerance	±5% to – 15%	Data not available	±5% to – 15%	±5% to – 10%	±5% to – 10%	–6% to – 10%	±6% to – 10%	Data not available	±5% to – 15%	±5% to – 15%	Data Not Available	±6% to – 10%	±6% to – 10%	Data not available	±6% to – 10% Data not available
g. Protection Type	IP68 or Equivalent	Data not available	IP 68	IP 68	IP 68	IP 68	IP 68	IP 68	Data not available	IP 68	Data Not Available	IP 55	IP 55	Data not available	IP 68 Data not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Insulation Class	Y or better	F	F Class	F	F	F	F	Y Data not in brochure	Data not available	F	Data Not Available	Y	Y	Data not available	F Data not available	
Flange	NEMA or Equivalent	Data not available	NEMA	NEMA	Yes	NEMA	6" to 8" Nema	Data not available	Data not available	NEMA	Data Not Available	NEMA	NEMA	Data not available	NEMA Data not available	
Warranty	Atleast 1 year	Data not available	1 Year	1 Year	Yes	1 year	1 year	1 Year	1 years	1 year	Data Not Available	1 year	1 year	Data not available	1 year Data not available	
Country of Origin	Please Specify	Pump Pakistan Motor Turkey	Europe	German brand, made in china	Denmark	Turkey	UAE	China	Germany	Turkey	Germany	Europe Assemb in Pak	Europe Assemb in Pak	Data not available	Italy Data not available	
Solar Panels		LUYX Power LNSE 315P	--	ESM300-156 Ever Exceed	Canadian Solar	Jinko Solar 255-270	JKM 320 PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar CS6X-305P	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data not available	TPSP6U	
a.	Max. Power / No. of Panels	280 to 320 W	315 W	280 to 320 W	300 W	320 W	320 W	320 W	310 W	305 Watt	310 to 315 W	255 to 265 W	210 W	210 W	Data not available	265 w Data not available
b.	Optimum Operating Voltage	35 to 37 V	36.1 V	35 to 37 V	38 V	36.8 V	37.4 V	37.4 V	36.7 V	35-36.5 Volts	36.3 to 36.4	30.3 V	38.92 V	38.92 V	Data not available	30.8 V Data not available
c.	Optimum Operating Current	7 to 9 Amp	8.31 Amp	7 to 9 Amp	7.89 A	8.69 Amp	8.56 Amp	8.56 Amp	8.45	8.4 Amps	8.66 Amp	8.87 Amp	8.54 Amp	8.54 Amp	Data not available	8.61 Amp Data not available
d.	Module Efficiency	Atleast 16% or higher	15.50%	16.50%	16.10%	16.68%	16.49%	16.49%	16%	16%	16.2	16%	16.45%	16.45%	Data not available	16.29% Data not available
e.	Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to +85°C	-40°C to +85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	Agreed but not confirmed	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	Data not available	Data not available -40°C to 85°C






Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
f. Type	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Yes	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data not available	Poly Crystalline Data not available
g. Front Glass	4mm or better tempered glass	Data not available	N/A	3.2mm low iron toughened glass	3.2mm low iron toughened glass	4.00mm	4mm	Agreed but not confirmed	Dotted tempered	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data not available	3.2 mm tempered glass Data not available
h. Frame	Anodized aluminum alloy	Anodized aluminum alloy	4mm high transmission low iron, tempered glass	Anodized aluminum alloy	Anodized aluminum alloy	Yes	Yes	Agreed but not confirmed	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data not available	Anodized Aluminum alloy Data not available
i. Product Warranty	Atleast 10 years.	10 years	10 years	10 Years	10 Years	10 years	10 years	Yes	15 years	10 years	10 years	10 Years	10 Years	Data not available	10 years Data not available
j. Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	IEC 61215 IEC 61731 IEC 61732	61215 61730 61215	61215, 61730, 61730, 61730 61215 61730	ENI 4301 AISI 304	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61730 61215, 61701	Equivalent	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215, IEC 61730, UL 1703	IEC 61215, IEC 61730, UL 1703	Data not available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716
k. Junction box	IP68 Rated	IP 67	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data not available	IP 68 Data not available
l. Connector	MC4 Compatible	MC4	MC4	MC4	MC4	MC4	MC4	Yes	MC4	MC4	MC4	MC4	MC4	Data not available	MC4 Data not available
m. Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	Canadian	China	Canadian	China	China	Data not available	China Data not available
n. Total no. of Panels for the rated power.	Please Specify.	50 pcs	50 pcs	57 pcs	68 Nos.	64 Nos.	64 Nos.	56	72x305 21 kw	80 Nos. 315 Watts	N/A	64 Nos.	64 Nos.	Data not available	100 Data not available





Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
a. Linear Performance Warranty.	20 to 25 years	25 years	25 years	25 Years	20 years	25 years	25 Years	25 years	20 years	20 to 25 years	23 years	25 years	25 years	Data not available	20 years Data not available
<u>Invertor</u>			Grundfos	PSk2-21	RSI Grundfos	JINTECH	ADA SPI200-4T-018B	SPB815K-700 Solar Tech	INVT CHF-100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data not available	JFY Data not available
a. Amperage	30 to 40 Amp	Brochure not available	30 to 40 Amp	33 Amp	31 Amp	36 Amp	37 Amp	33.3 Amp	30-40 A	39 Amp	Data Not Available	25 Amp	25 Amp	Data not available	39 Amp Data not available
b. Power	15 to 18 kw	Brochure not available	15 to 18 kw	21 kw	15 kw	18.5 kw	18 kw	18.5 kw	18 kw	18 kw	Data Not Available	11 kw	11 kw	Data not available	18.5 kw Data not available
c. Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	3 Phase 380 VAc	380 to 415 Vac	380 to 415 Vac	Comply	3 Phase 370 to 400 Vac	3 Phase 370 to 385 Vac	Data Not Available	3 Phase 400 vac	3 Phase 400 vac	Data not available	3 Phase 380 vac Data not available
d. Input	340to 650 Vdc	Brochure not available	340to 750 Vdc	300to 850 Vdc	850 Vac	460 to 880 Vdc	500 to 540 Vdc	500 to 600 Vdc	350to 700 Vdc	480 to 750 vdc	Data Not Available	380 to 650 vdc	380 to 650 vdc	Data not available	250-900 vdc Data not available
e. MPPT	Inbuilt	Brochure not available	Inbuilt	In Built	Yes	Yes	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data not available	Inbuilt Data not available
f. Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	In built for over current, over load, anti-lightening etc.	In Built	Yes	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Yes	Yes	Over current over load anti lightening	Yes	Data Not Available	IP 20	IP 20	Data not available	Inbuilt Data not available
g. Efficiency	95% or more.	Brochure not available	95 %+	98%	Yes	98%	97%	Yes	95%	95%+	Data Not Available	98%	98%	Data not available	98% Data not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Country of Origin	Please Specify	Brochure not available	China	German brand china	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data not available	China Data not available
Warranty	2 years minimum	Brochure not available	Two Years	2 years	Yes	2 years	2 years	Comply	2 years	2 years	Data Not Available	2 years	2 years	Data not available	2 years Data not available
Cables Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.90%	Yes	99.9% Copper	99.90%	Yes	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data not available	99.9 % copper Data not available
Grounding Kit	Standard	Brochure not available	Yes	Yes	Yes	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data not available	Standard Data not available
Water out let & accessories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	5" steel iron pipe	Yes	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	Steel pipes	Steel pipes	Data not available	5" M/s steel pipe Data not available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI Structre	Yes	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust Free coated	Rust Free coated	Data not available	Powder coated Data not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for inverter, switches, junction box etc.	Data Not Available	Yes	G.I. Plate	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inverter	Rust Free coated of Iron & GI with environment protection for inverter	Data not available	Powder coated mounting plate/box
Execution of Tubewell bore, casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Yes	Yes	Yes	Yes	Yes	--do--	Yes	Agreed	Yes as per requirement of Solar Pump	Yes as per requirement of Solar Pump	Data not available	As per requirement


ATTA-U-REHMAN MARI
 DIRECTOR
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD
CHAIRMAN


MUSARRAT MOKHTAR
 DEPUTY DIRECTOR (INSPECTION)
 INDUSTRIES DEPARTMENT KARACHI
MEMBER


SHAKIL AHMED RAHEMOON
 DIRECTOR WATER MANAGEMENT
 HYDERABAD DIVISION
MEMBER


SAIFULLAH MAGSI
 ADDITIONAL DISTRICT ACCOUNTS OFFICER-
 i, DAO OFFICE
 HYDERABAD
MEMBER


FARRUKH RASHEED ANSARI
 DEPUTY DIRECTOR (MECH)
 AGRICULTURE ENGINEERING SINDH HYDERABAD
MEMBER/ SECRETARY

COMPARISON OF TECHNICAL DATA (SUBMERSIBLE PUMP 150 FT.)

Delivery Size : 5"


Capacity : 450,000 L/day (Min)

Depth : 150 ft.

Rated Power : 20 to 24 kw ±10%

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Submersible Pump (Make & Model)		Flow Pak 8FMC/3 MUTLUSU MSM6/30	Grundfos	C-SJ75-4 Lorentz	SP 77-6 BAQE Grundfos	XSP-7715 MAXISU	KOMAX KM6250T PKS8-80/4	SPB822K-700 Solar Tech	Grundfos SP	ALK 8075/4 ALARKO	PSK2-21C-5J75-4-D Lorentz Germany	VP 60-05+15HP HMA Pak	VP 60-05+15HP HMA Pak	UK/Italian/German or Equivalent	DAB 77SA5	
a.	Rated Power	20 to 24 Kw (±10%) both limits	22 kw	20 to 24 Kw (±10%)	21 kw	22 kw	19 kw	20 kw	22 kw brochure not available	30 HP	18.5 kw	Data Not Available	15 HP	15 HP	20-24 kw	18.75 kw Data not available
b.	Discharge Capacity	Average 450,000 Litre / day	Data not available	Average 450,000 Litre / day	460,500 Litre / day	481,000 litre / day	450,000 Litre / day	540,000 Litre / day	Data not available	450,000 Litre / day	490,000 Litre / day	Data Not Available	450,000 Litre / day	450,000 Litre / day	480,000 to 500,000	450,000 litre/day Data not available
c.	Rated Speed	2700 – 3000 RPM	Data not available	2700 – 3000 RPM	1400-2850 rpm	2900 rpm	2900 rpm	2855 rpm	Data not available	3000 rpm	2700 – 2900 RPM	Data Not Available	2810 rpm	2810 rpm	Data not available	2845 rpm Data not available
d.	Efficiency	More than 75%	Data not available	More than 75%	79%	Yes	82%	83%	Data not available	80%	73%+	Data Not Available	77.58%	77.58%	Data not available	77.8% Data not available
e.	Power factor	0.8 to 0.9	Data not available	0.8 to 0.9	0.87	0.9	0.84	0.86	Data not available	0.85%	0.8 to 0.9	Data Not Available	0.86	0.86	Data not available	0.8 Data not available
f.	Voltage Tolerance	±5% to – 15%	Data not available	±5% to – 15%	±5% to – 10%	Yes	-6% to – 10%	±6% to – 10%	Data not available	Data not available	±5% to -15%	Data Not Available	±6% to – 10%	±6% to – 10%	Data not available	±6% to – 10% Data not available
g.	Protection Type	IP68 or Equivalent	Data not available	IP68 or Equivalent	IP 68	IP 68	IP 68	IP 68	IP 68	Data not available	IP 68	Data Not Available	IP 68	IP 55	Data not available	IP 68 Data not available
h.	Insulation Class	Y or better	F	F	F	F	F	F	Y	Data not available	Y	Data Not Available	Y	F	Data not available	F Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Flange	NEMA or Equivalent	Data not available	NEMA	NEMA	Yes	NEMA	6" to 8" Nema	Comply	Equivalent	NEMA	Data Not Available	NEMA	NEMA	Data not available	NEMA Data not available
Warranty	1 year minimum	Data not available	1 Year	1 Year	Yes	1 year	1 year	1 Year	1 years	1 year	Data Not Available	1 year	1 year	Data not available	1 year Data not available
Country of Origin	Please Specify	Pump Pakistan Motor Turkey	Europe	German brand, china	Denmark	Turkey	UAE	China	Germany	Turkey	Germany	Europe Assemble in Pak	Europe Assemble in Pak	Data not available	Italy Data not available
Solar Panels		LUX POWER LNSE 315P	--	Ever Exceed ESM300-156	--	Jinko Solar 255-270	JKM320PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data not available	TPSP6U
Max Power / No. of Panels	280 to 320 W	22 kw / 76	280 to 320 W	300 W	320 W Canadian Solar	320 W	320 W	310 W	305 Watt	310 W	255 to 265 W	210 W	210 W	Data not available 250/300 watt each	265 W Data not available
Optimum Operating Voltage	35 to 37 V	Agreed but not confirmed	35 to 37 V	38 V	36.8 V	37.4 V	37.4 V	36.7 V	35-36.5 Volts	36.3	30.3 V	38.92 V	38.92 V	Data not available	30.8 V Data not available
Optimum Operating Current	7 to 9 Amp	Agreed but not confirmed	7 to 9 Amp	7.89 A	8.69 Amp	8.56 Amp	8.56 Amp	8.45 A	8.4 Amps	8.55	8.87 Amp	8.54 Amp	8.54 Amp	Data not available	8.16 Amp Data not available
Module Efficiency	Atleast 16% or higher	Agreed but not confirmed	Atleast 16% or higher	16.10%	16.68%	16.49%	16.49%	16%	16%	16%	16%	16.45%	16.45%	Data not available	16.29% Data not available
Operating Temperature	- 40°C to 85°C	Agreed but not confirmed	- 40°C to 85°C	- 40°C to +85°C	Yes	- 40°C to 85°C	- 40°C to 85°C	Comply	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	Data not available	Data not available - 40°C to 85°C Data not available
Type	Poly Crystalline	Agreed but not confirmed	Poly Crystalline	Poly Crystalline	Yes	Poly Crystalline	Poly Crystalline	Comply	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data not available	Poly Crystalline Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
g. Front Glass	4mm or better tempered glass	Agreed but not confirmed	4mm or better tempered glass	3.2mm low iron toughened glass	Yes	4.00mm	4mm	Comply	Dotted tempered	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data not available	3.2 mm tempered glass Data not available
n. Frame	Anodized aluminum alloy	Agreed but not confirmed	Anodized aluminum alloy	Anodized aluminum alloy	Yes	Yes	Yes	Comply	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data not available	Anodized Aluminum alloy Data not available
. Product Warranty	Atleast 10 years.	Agreed but not confirmed	10 years	10 Years	Yes	10 years	10 years	Yes	15 years	10 years	10 years	10 Years	10 Years	Data not available	10 years Data not available
. Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	Agreed but not confirmed	61215 61730 61215	IEC 61215, IEC 61730, IEC 61730, EN 61215 EN 61730 EN 61730	Yes	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61701, 61730, 61215	Equivalent	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215, IEC 61730, UL 1703	IEC 61215, IEC 61730, UL 1703	A grade IEC / EU Data not available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716
k. Junction box	IP68 Rated	Agreed but not confirmed	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data not available IP 68 Data not available
l. Connector	MC4 Compatible	Agreed but not confirmed	MC4	MC4	MC4	MC4	MC4	MC4	Yes	MC4	MC4	MC4	MC4	MC4	Data not available MC4 Data not available
m. Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	China	Canadian	China	Canadian	China	China	Data not available China Data not available
n. Total no. of Panels for the rated power.	Please Specify.	76	50 Nos.	76 pcs	102 Nos.	85 Nos.	80 Nos.	75	72x305 21 kw	105 Nos. x 310 Watts	N/A	85 Nos.	85 Nos.	20-24 kw	120 Data not available
o. Linear Performance Warranty.	20 to 25 years	Agreed but not confirmed	25 years	25 Years	Yes	25 years	25 Years	Comply	20 years	20 to 25 years	23 years	25 years	25 years	Data not available	20 years Data not available
 Inverter				PSK2-21	RSI Grundfos	JINTECH	ADA SPI200-4T-022B	SPB822K-700 Solar Tech	INVT CHF-100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data not available	JFY Data not available








Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
a. Amperage	30 to 45 Amp	Brochure not available	30 to 45 Amp	33 Amp	Yes	42 Amp	45 Amp	42 Amp	40 Amp	45 Amp	Data Not Available	31 Amp	31 Amp	Data not available	45 Amp Data not available
b. Power	20 to 24 kw	Brochure not available	20 to 24 kw	21 kw	22 kw	22 kw	22 kw	30 kw	24 kw	22 kw	Data Not Available	15 kw	15 kw	Data not available	22 kw Data not available
c. Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	Yes	380 to 415 Vac	380 to 415 Vac	Comply	3 Phase 370 to 385 Vac	3 Phase 370 to 385 Vac	Data Not Available	3 Phase 400 vac	3 Phase 400 vac	Data not available	3 Phase 380 vac Data not available
d. Input	340to 650 Vdc	Brochure not available	340to 750 Vdc	350 to 850 Vdc	Yes	460 to 880 Vdc	500 to 540 Vdc	Comply	350to 700 Vdc	450 to 750 vdc	Data Not Available	380 to 650 vdc	380 to 650 vdc	Data not available	250-900 vdc Data not available
e. MP	Inbuilt	Brochure not available	In Built	In built	Yes	Yes	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data not available	Inbuilt Data not available
f. Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	In built for over current, over load, anti-lightening etc.	Inbuilt	Yes	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Yes	Yes	Over current over load anti lightening	Yes	Data Not Available	IP 20	IP 20	Data not available	Inbuilt Data not available
g. Efficiency	95% or more.	Brochure not available	95 %+	98%	Yes	98%	97%	Yes	95%	95%+	Data Not Available	98%	98%	Data not available	98% Data not available
h. Country of Origin	Please Specify	Brochure not available	China	German Brand made in China	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data not available	China Data not available
i. Warranty	Two years minimum	Brochure not available	Two Years	2 years	Yes	2 years	2 years	Comply	2 years	2 years	Data Not Available	2 years	2 years	Data not available	2 years Data not available
Cables & Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.90%	Yes	99.9% Copper	99.90%	Yes	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data not available	99.9% with uv Prot. Data not available
Grounding Kit	Standard	Brochure not available	Yes	Yes	Yes	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data not available	Standard Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Water out let & accessories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	5" Steel iron pipe	Yes	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	Steel pipes	Steel pipes	Data not available	5" steel pipe Data not available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI structure	Yes	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust Free coated	Rust Free coated	Data not available	Rust Free coated Data not available
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for inverter, switches, junction box etc.	Data Not Available	Yes	GI Plate	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inverter	Rust Free coated of Iron & GI with environment protection for inverter	Data not available	Powder coated rust free mounting plate/box
Execution of Tubewell bore, casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Yes	Yes	Yes	Yes	Yes	--do--	Yes	Agreed	Yes	Yes	Data not available	As per requirement


ATTA-U-REHMAN MARI
 DIRECTOR
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD
CHAIRMAN


MUSARRAT MOKHTAR
 DEPUTY DIRECTOR (INSPECTION)
 INDUSTRIES DEPARTMENT KARACHI
MEMBER


SHAKIL AHMED RAHEMOON
 DIRECTOR WATER MANAGEMENT
 HYDERABAD DIVISION
MEMBER


SAIFULLAH MAGSI
 ADDITIONAL DISTRICT ACCOUNTS OFFICER-
 DAO OFFICE
 HYDERABAD
MEMBER


FARRUKH RASHEED ANSARI
 DEPUTY DIRECTOR (MECH)
 AGRICULTURE ENGINEERING SINDH HYDERABAD
MEMBER/ SECRETARY

COMPARISON OF TECHNICAL DATA (SUBMERSIBLE PUMP 250 FT.)

Delivery Size : 5"

Capacity : 400,000 L/day (Min)

Depth : 250 ft.

Rated Power : 28 to 32 kw $\pm 10\%$

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Submersible Pump (Make & Model)		Flow Pak 7FMC/5 MUTLUSU MSM6/40	Grundfos	C-SJ75-4 Lorentz	SP 77-8 BAQE Grundfos	XSP-77/7 MAXISU	KOMAX KM6400T KPS8-80/7	SPB625K-450 Solar Tech Outer dia 3"	Grundfos SP	ALK 8075/6 ALARKO	PSK12-25 C-SJ42-11-D Lorentz Germany	HVP 60-08+25HP HMA Pak	HVP 60-08+25HP HMA Pak	UK/Italian/German or Equivalent	DAB 40NP	
a.	Rated Power	28 to 32 Kw ($\pm 10\%$) both limits	30 kw	28 to 32 Kw ($\pm 10\%$) both limits	21 kw	30 kw	26 kw	28 kw	25 kw	30kw	30 kw	Data Not Available	18.65 kw	25 HP	32-40 kw	30 kw
b.	Discharge Capacity	Average 400,000 Litre / day	Agreed but not confirmed	Average 400,000 Litre / day	402,000 Litre / day	478,320 Litre / day	400,000 Litre / day	540,000 Litre / day	260000 to 450000 L/d	400,000 Litre / day	440,000 Litre / day	Data Not Available	400,000 Litre / day	450,000 Litre / day	475,000 to 500,000	430,000 litre/day Data not available
c.	Rated Speed	2700 – 3000 RPM	Agreed but not confirmed	2700 – 3000 RPM	1400-2850 rpm	2900 rpm	2900 rpm	2865 rpm	Data not available	3000 rpm	2700 – 2900 RPM	Data Not Available	2850 rpm	2850 rpm	Data not available	2830 rpm Data not available
d.	Efficiency	More than 75%	Agreed but not confirmed	More than 75%	79%	Yes	84%	82%	Data not available	85%	73%	Data Not Available	75.65%	75.65%	Data not available	77.9% Data not available
e.	Power factor	0.8 to 0.9	Agreed but not confirmed	0.8 to 0.9	0.87	0.9	0.85	0.86	Data not available	0.85%	0.8 to 0.9	Data Not Available	0.83	0.83	Data not available	0.85 Data not available
f.	Voltage Tolerance	$\pm 5\%$ to $- 15\%$	Agreed but not confirmed	$\pm 5\%$ to $- 15\%$	$\pm 5\%$ to $- 10\%$	Yes	-6% to $- 10\%$	$\pm 6\%$ to $- 10\%$	Data not available	$\pm 5\%$ to $- 15\%$	$\pm 5\%$ to $- 15\%$	Data Not Available	$\pm 6\%$ to $- 10\%$	$\pm 6\%$ to $- 10\%$	Data not available	$\pm 6\%$ to $- 10\%$ Data not available
g.	Protection Type	IP68 or Equivalent	Agreed but not confirmed	IP 68	IP 68	IP 68	IP 68	IP 68	IP 68	Data not available	IP 68	Data Not Available	IP 68	IP 55	Data not available	IP 68 Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
n. Insulation Class	Y or better	F	F	F	F	F	F	Y	Data not available	Y	Data Not Available	Y	F	Data not available	F Data not available
. Flange	NEMA or Equivalent	Agreed but not confirmed	NEMA	NEMA	Yes	NEMA	6" to 8" Nema	Comply	Data not available	NEMA	Data Not Available	NEMA	NEMA	Data not available	NEMA Data not available
. Warranty	Atleast 1 year	Agreed but not confirmed	1 year	1 Year	Yes	1 year	1 year	1 Year	1 years	1 year	Data Not Available	1 year	1 year	Data not available	1 year Data not available
k. Country of Origin	Please Specify	Pump Pakistan Motor Turkey	Europe	German brand, made in china	Denmark	Turkey	UAE	China	Germany	Turkey	Germany	Europe Assemble in Pak	Europe Assemble in Pak	Data not available	Italy Data not available
<u>Solar Panels</u>		LUX Power LNSE 315P	--	Ever Exceed ESM300-156	--	Jinko Solar 255-270	JKM320PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar CS6X-305P	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data not available	TPSP6U
a. Max. Power / No. of Panels	280 to 320 W	315 W	280 to 320 W	300 W	320 W Canadian Solar	320 W	320 W	310 W	305 Watt	310 W	255 to 265 W	260 W	260 W	Data not available 250/300 watt each	265 W Data not available
b. Optimum Operating Voltage	35 to 37 V	36.1 V	35 to 37 V	38 V	36.8 V	37.4 V	37.4 V	36.7 V	35-36.5 Volts	36.3	30.3 V	30.70 V	30.70 V	Data not available	30.8 V Data not available
c. Optimum Operating Current	7 to 9 Amp	8.31 Amp	7 to 9 Amp	7.89 A	8.69 Amp	8.56 Amp	8.56 Amp	8.45 A	8.4 Amps	8.55	8.87 Amp	8.51 Amp	8.51 Amp	Data not available	8.16 Amp Data not available
d. Module Efficiency	Atleast 16% or higher	15.50%	16.50%	16.10%	16.68%	16.49%	16.49%	16%	16%	16%	16%	16.01%	16.01%	Data not available	16.29% Data not available
e. Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to +85°C	Yes	-40°C to 85°C	-40°C to 85°C	Comply	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	Data not available	Data not available -40°C to 85°C

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
f. Type	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Yes	Poly Crystalline	Poly Crystalline	Comply	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data not available	Poly Crystalline Data not available
g. Front Glass	4mm or better tempered glass	Agreed but not confirmed	4mm or better tempered glass	3.2mm low iron toughened glass	Yes	4.00mm	4mm	Comply	Dotted tempered	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data not available	3.2 mm tempered glass Data not available
h. Frame	Anodized aluminum alloy	Anodized aluminum alloy	Anodized aluminum alloy	Anodized aluminum alloy	Yes	Yes	Yes	Comply	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data not available	Anodized Aluminum alloy Data not available
i. Product Warranty	Atleast 10 years.	10 years	10 years	10 Years	Yes	10 years	10 years	Yes	15 years	10 years	10 years	10 Years	10 Years	Data not available	10 years Data not available
j. Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	IEC 61215 IEC 61731 IEC 61732	61215 61730 61215	IEC 61215, IEC 61730, IEC 61730, EN 61215 EN 61730 EN 61730	Yes	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61730 IEC 61215 IEC 61701	Equivalent	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215, IEC 61730, UL 1703	IEC 61215, IEC 61730, UL 1703	A grade IEC / EU Data not available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716
k. Junction box	IP68 Rated	IP 67	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data not available	IP 68 Data not available
l. Connector	MC4 Compatible	MC4	MC4	MC4	MC4	MC4	MC4	Yes	MC4	MC4	MC4	MC4	MC4	Data not available	MC4 Data not available
m. Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	Canadian	China	Canadian	China	China	Data not available	China Data not available




Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
a. Total no. of Panels for the rated power.	Please Specify.	50 pcs	50 Pcs	76 pcs	102 Nos.	119 Nos.	126 Nos.	120	72x305 44 kw	165 Nos. x 310 Watts	N/A	105 Nos.	105 Nos.	20-24 kw	198 Data not available
b. Linear Performance Warranty.	20 to 25 years	25 years	25 years	25 Years	Yes	25 years	25 Years	Comply	20 years	20 to 25 years	23 years	25 years	25 years	Data not available	20 years Data not available
Invertor				PSk2-25	RSI Grundfos	JINTECH	ADA SPI2004T04 OB	SPB625K-450 Solar Tech	INVT CHF-100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data not available	JFY Data not available
a. Amperage	55 to 75 Amp	Brochure not available	55 to 75 Amp	40 Amp	Yes	57 Amp	70 Amp	67 Amp	70 Amp	60 Amp	Data Not Available	38 to 45 Amp	38 to 45 Amp	Data not available	91 Amp Data not available
b. Power	28 to 32 kw	Brochure not available	28 to 32 kw	25 kw	30 kw	30 kw	40 kw	30 kw	32 kw	30 kw	Data Not Available	22 kw	22 kw	Data not available	45 kw Data not available
c. Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	Yes	380 to 415 Vac	380 to 415 Vac	Comply	3 Phase 340 Vac	3 Phase 370 to 385 Vac	Data Not Available	3 Phase 400 vac	3 Phase 400 vac	Data not available	3 Phase 380 vac Data not available
d. Input	340to 650 Vdc	Brochure not available	340 to 750 Vdc	350 to 850 Vdc	Yes	460 to 880 Vdc	500 to 540 Vdc	Comply	340 to 700 Vdc	450 to 750 vdc	Data Not Available	380 to 650 vdc	380 to 650 vdc	Data not available	250-900 vdc Data not available
e. MPPT	Inbuilt	Brochure not available	Inbuilt	In built	Yes	Yes	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data not available	Inbuilt Data not available
f. Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	In built for over current, over load, anti-lightening etc.	Inbuilt	Yes	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Yes	Yes	Over current over load anti lightening	Yes	Data Not Available	IP 20	IP 20	Data not available	Inbuilt Data not available
g. Efficiency	95% or more.	Brochure not available	95 %+	98%	Yes	98%	97%	Yes	95%	95%+	Data Not Available	98%	98%	Data not available	98% Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Country of Origin	Please Specify	Brochure not available	China	German Brand made in China	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data not available	China Data not available
Warranty	Two years minimum	Brochure not available	Two Years	2 years	Yes	2 years	2 years	Comply	2 years	2 years	Data Not Available	2 years	2 years	Data not available	2 years Data not available
Cables & Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.90%	Yes	99.9% Copper	99.90%	Yes	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data not available	99.9% with uv Prot. Data not available
Grounding Kit	Standard	Brochure not available	Yes	Yes	Yes	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data not available	Standard Data not available
Water out let & accessories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	5" Steel iron pipe	Yes	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	Steel pipes	Steel pipes	Data not available	5" steel pipe Data not available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI structure	Yes	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust Free coated	Rust Free coated	Data not available	Rust free Data not available








Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for inverter, switches, junction box etc.	Data Not Available	Yes	GI Plate	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inverter	Rust Free coated of Iron & GI with environment protection for inverter	Data not available	Powder coated mounting plate/box
Execution of Tubewell bore, casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Yes	Yes	Yes	Yes	Yes	--do--	Yes	Agreed	Yes as per req.	Yes	Data not available	As per req.


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 ADDITIONAL DISTRICT ACCOUNTS OFFICER-
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 HYDERABAD
MEMBER


FARRUKH RASHEED ANSARI
 DEPUTY DIRECTOR (MECH)/HQ
 AGRICULTURE ENGINEERING SINDH HYDERABAD
MEMBER/ SECRETARY

LIST OF PRE-QUALIFIED FIRMS FOR YEAR 2016-17
FOR THE INSTALLATION OF SOLAR WATER PUMP /
TUBEWELLS TO FARMERS IN SINDH

Sr. No.	Name of firm
1.	M/s Nizam Energy Pvt. Ltd. Karachi
2.	M/s EBR Energy Pvt. Ltd. Lahore
3.	M/s K.K.B., Karachi.
4.	M/s Catkin Engineering Sales & Service, Islamabad.
5.	M/s Global Business Service, Karachi
6.	M/s Smart International, Quetta.
7.	M/s Pak Oasis Industries Pvt. Ltd. Karachi.

**MINUTES OF MEETING OF THE PROCUREMENT COMMITTEE HELD ON 24-04-2017 AT 01:30 PM
IN THE COMMITTEE ROOM OF DIRECTORATE, AGRICULTURE ENGINEERING SINDH
HYDERABAD UNDER THE CHAIRMANSHIP OF DIRECTOR, AGRICULTURAL ENGINEERING SINDH
HYDERABAD TO OPEN THE FINANCIAL PROPOSAL OF FOR THE PREQUALIFICATION OF
CONTRACTORS FOR THE INSTALLATION OF SOLAR WATER PUMP / TUBEWELLS IN SINDH
AGAINST TENDER NO. DAE/STORES-966/2145/16 DATED 07.11.2016**

List of participants attached.

The meeting started with the name of Allah.

Opening the discussion Chair welcomed the participants, and provided a short brief of the pre-qualification process and informed that Sixteen firms submitted their bid offers for the Installation of Solar Water Pump / Tubewells, out of them Seven firms were declared technically responsive by the Procurement Committee in its meeting held on 16.03.2017. The Financial proposals of the Responsive firms were opened in today's meeting. 01 pre-qualified firm M/s Pak Oasis Industries Pvt. Ltd. Karachi, did not submit financial proposal, remaining 06 firms submitted their financial proposals.

With the permission of the Chair, the sealed financial proposals were shown to the participants and opened accordingly in the presence of the representatives of firms. The rates were read aloud and noted down by the participant's alongwith the position of their bid security.

Position of Rates Offered (Including Taxes) by the firms are as under:-

M/S K.K.B KARACHI

Sr. No.	Tubewell	Rates Offered inclusive all applicable taxes
1	Solar Power Water Lift Pump	Rs. 3,259,333 Per Unit
2	Solar Water Pump / Tubewell 100 ft.	Rs. 3,680,043 Per Unit
3	Solar Water Pump / Tubewell 150 ft.	Rs. 4,685,714 Per Unit
4	Solar Water Pump / Tubewell 250 ft.	Rs. 6,412,648 Per Unit

M/S SMART INTERNATIONAL, QUETTA

Sr. No.	Tubewell	Rates Offered inclusive all applicable taxes
1	Solar Power Water Lift Pump	Rs. 2,936,172 Per Unit
2	Solar Water Pump / Tubewell 100 ft.	Rs. 3,256,740 Per Unit
3	Solar Water Pump / Tubewell 150 ft.	Rs. 4,305,197 Per Unit
4	Solar Water Pump / Tubewell 250 ft.	Rs. 5,420,959 Per Unit

M/S EBR ENERGY PAKISTAN PVT. LTD., LAHORE

Sr. No.	Tubewell	Rates Offered inclusive all applicable taxes
1	Solar Power Water Lift Pump	Rs. 2,334,244 Per Unit
2	Solar Water Pump / Tubewell 100 ft.	Rs. 3,933,317 Per Unit
3	Solar Water Pump / Tubewell 150 ft.	Rs. 4,874,038 Per Unit
4	Solar Water Pump / Tubewell 250 ft.	Rs. 6,785,298 Per Unit

M/S CATKIN ENGINEERING SALES & SERVICE, ISLAMABAD

Sr. No.	Tubewell	Rates Offered inclusive all applicable taxes
1	Solar Power Water Lift Pump	Rs. 2,925,000 Per Unit
2	Solar Water Pump / Tubewell 100 ft.	Rs. 4,040,600 Per Unit
3	Solar Water Pump / Tubewell 150 ft.	Rs. 4,960,500 Per Unit
4	Solar Water Pump / Tubewell 250 ft.	Rs. 6,867,800 Per Unit

M/S GLOBAL BUSINESS SERVICE, KARACHI

Sr. No.	Tubewell	Rates Offered inclusive all applicable taxes
1	Solar Power Water Lift Pump	Rs. 2,553,698 Per Unit
2	Solar Water Pump / Tubewell 100 ft.	Rs. 2,962,345 Per Unit
3	Solar Water Pump / Tubewell 150 ft.	Rs. 4,009,223 Per Unit
4	Solar Water Pump / Tubewell 250 ft.	Rs. 5,815,234 Per Unit

M/S NIZAM ENERGY PVT. LTD., KARACHI

Sr. No.	Tubewell	Rates Offered inclusive all applicable taxes
1	Solar Power Water Lift Pump	Rs. 3,442,213 Per Unit
2	Solar Water Pump / Tubewell 100 ft.	Rs. 3,800,600 Per Unit
3	Solar Water Pump / Tubewell 150 ft.	Rs. 5,202,094 Per Unit
4	Solar Water Pump / Tubewell 250 ft.	Rs. 6,765,692 Per Unit

Comparison & Position of Bid Security Submitted by the firms are as under:-

S. #.	Name of Firms	No. of Case Offered	Total Bid Value	Amount required (1%)	Amount Deposited
1	M/s K.K.B. Karachi	63 Nos.	276,565,680	2,765,656	3,000,000
2	M/s Smart International, Karachi	63 Nos.	224,337,072	2,243,370	2,400,000
3	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	63 Nos.	232,020,028	2,320,200	2,370,500
4	M/s Catkin Engineering Sales & Service, Islamabad	33 Nos.	150,253,300	1,502,533	1,600,000
5	M/s Global Business Service, Karachi	14 Nos.	47,820,835	478,208	500,000
6	M/s Nizam Energy Pvt. Ltd. Karachi	63 Nos.	267,663,173	2,676,632	2,800,000

The Procurement Committee evaluated the financial proposal and observed that the lowest rates were offered by following firms in each category.

Sr. No.	Name of Category	Unit Cost of Solar Water Pump inclusive Taxes	Offered by firm
a.	Solar Power Water Lift Pump	Rs. 2,334,244	Lowest Rate is Rs. 2,334,244 offered by M/s EBR Energy Pakistan Pvt. Ltd. Lahore
b.	Solar Water Pump / Tubewell 100 ft.	Rs. 2,962,345	Lowest Rate is Rs. 2,962,345 offered by M/s Gobar Business Service, Karachi
c.	Solar Water Pump / Tubewell 150 ft.	Rs. 4,009,223	Lowest Rate is Rs. 4,009,223 offered by M/s Gobar Business Service, Karachi
d.	Solar Water Pump / Tubewell 250 ft.	Rs. 5,420,959	Lowest Rate is Rs. 5,420,959 offered by M/s Smart International, Quetta

The Procurement Committee calculated the amount of Subsidy on the basis of lowest rates offered as under:-

Sr. No.	Category of Tubewell	Subsidy Amount in Rs.
1	Solar Power Water Lift Pump	Rs. 1,867,395
2	Solar Water Pump / Tubewell 100 ft.	Rs. 2,369,876
3	Solar Water Pump / Tubewell 150 ft.	Rs. 3,207,378
4	Solar Water Pump / Tubewell 250 ft.	Rs. 4,336,767

The procurement committee recommended the rates to competent authorities for further approval.

The meeting ended with vote of thanks.


MEMBER / SECRETARY
PROCUREMENT COMMITTEE

NO. DAE/TIC/ 723 /17

Dated: 25/04/2017.


C.C. to:

- The Director General Agricultural Engineering & Water Management Sindh, Hyderabad for kind information.
- The Additional Secretary (Tech) Agriculture Department Government of Sindh Karachi for kind information.
- PS to Secretary Agriculture Department Government of Sindh, Karachi for kind information.
- Member Procurement Committee _____ (All).






MEMBER / SECRETARY
PROCUREMENT COMMITTEE

LIST OF PARTICIPANTS

1	ATTA-U-REHMAN MARI DIRECTOR AGRICULTURE ENGINEERING SINDH HYDERABAD	CHAIRMAN
2	SHAKIL AHMED RAHEMOON DIRECTOR, WATER MANAGEMENT, HYDERABAD DIVISION	MEMBER
3	MUSARRAT MOKHTAR DEPUTY DIRECTOR (INSPECTION) INDUSTRIES & COMMERCE DEPARTMENT, GOVERNMENT OF SINDH KARACHI	MEMBER
4	SAIFULLAH MAGSI ADDITIONAL DISTRICT ACCOUNTS OFFICER-I DISTRICT ACCOUNTS OFFICE, DISTRICT HYDERABAD	MEMBER
5	ENGR. FARRUKH RASHEED ANSARI DEPUTY DIRECTOR (MECH) AGRICULTURE ENGINEERING SINDH HYDERABAD	MEMBER / SECRETARY



LIST OF MEMBERS OF PROCUREMENT COMMITTEE PARTICIPATED FOR
THE OPENING OF FINANCIAL PROPOSAL, IN THE COMMITTEE ROOM OF
DIRECTOR, AGRICULTURE ENGINEERING SINDH HYDERABAD ON
24.04.2017 at 01:00 PM AGAINST TENDER NO. DAE/STORES-
966/2145/16 DATED 07.11.2016 FOR THE PRE-QUALIFICATION OF
CONTRACTORS FOR THE INSTALLATION OF SOLAR WATER PUMP /
TUBEWELL IN SINDH

S. #.	NAME	DESIGNATION	SIGNATURES
01	ATTA-U-REHMAN MARI	Director, Agriculture Engineering Sindh, Hyderabad	IN CHAIR
02	SHAKIL AHMED RAHEMOON	Director, Water Management, Hyderabad Division MEMBER	
03	SAIFULLAH MAGSI	Additional District Accounts Officer-i District Accounts Office, Hyderabad MEMBER	
04	MUSARRAT MOKHTAR	Deputy Director (Inspection) Industries & Commerce Department, Government of Sindh, Karachi MEMBER	
05	ENGR. FARRUKH RASHEED ANSARI	Deputy Director (Mech) Agriculture Engineering Sindh Hyderabad MEMBER / SECRETARY	

LIST OF FIRM PARTICIPATED IN THE PROCUREMENT COMMITTEE MEETING FOR THE OPENING OF FINANCIAL PROPOSAL, IN THE COMMITTEE ROOM OF DIRECTOR, AGRICULTURE ENGINEERING SINDH HYDERABAD ON 24.04.2017 at 01:00 PM AGAINST TENDER NO. DAE/STORES-966/2145/16 DATED 07.11.2016 FOR THE PRE-QUALIFICATION OF CONTRACTORS FOR THE INSTALLATION OF SOLAR WATER PUMP / TUBEWELL IN SINDH

S. #.	NAME OF FIRM	NAME OF REPRESENTATIVE WITH DESIGNATION & CELL NUMBER	SIGNATURES
01	KKB.	Raja Wajid Ar. 0332 5508402	
02	EBR Energy Pakistan	M. Adeel Khan 0300-8414816	
03	Global Business Services	0333-3163398	
04	NIZAM ENERGY	0300-2022387	
05	Catkin Engineering Sales & Service	Faisal Nisari 0334-1891983	
06	Smart International	Tajwar Bagdar 0300-9380777	
07			

**COMPARATIVE STATEMENT SHOWING OFFERED RATES (INCLUDING ALL APPLICABLE TAXES) AGAINST
TENDER NOTICE NO. DAE/Stores-966/2145/16 DATED: 07.11.2016 FOR PRE-QUALIFICATION OF CONTRACTORS FOR THE
INSTALLATION OF SOLAR WATER PUMP / TUBEWELLS IN SINDH 2016-17**

S #	Description	Qty	PC-I Rates	K.K.B Karachi	Smart Int'l Karachi	EBR Energy Pakistan Pvt. Ltd Lahore	Catkin Engg: Sales & Service Islamabad	Global Business Service, Karachi	Nizam Energy Pvt. Ltd Karachi	Pak Oasis Industries Pvt Ltd Karachi
1	SOLAR POWER WATER LIFT PUMP									
	Water Pump 6"x8" to 8"X8" Suction pipe upto 50 ft. Capacity minimum 650000 L/P/day, Built on Iron frame with Solar Panels minimum of 12kw.	30 Nos.	Rs. 4.00 Million Per Unit	3,259,333 per unit	2,936,172 per unit	2,334,244 per unit	2,925,000 per unit	2,553,698 per unit	3,442,213 per unit	Not participated
2	SOLAR WATER PUMP / TUBE WELLS									
	Delivery 5" inch, Depth 100 ft. Capacity minimum 500,000 L/P/day, Water Pump / Submersible Pump with Solar Panels minimum of 15kw Allied piping & civil work.	13 Nos.	Rs. 5.00 Million Per Unit	3,680,043 per unit	3,256,740 per unit	3,933,317 per unit	4,040,600 per unit	2,962,345 per unit	3,800,600 per unit	Not participated
3	SOLAR WATER PUMP / TUBE WELLS									
	Delivery 5" inch, Depth 150 ft. Capacity minimum 450,000 L/P/day, Water Pimp / Submersible Pump with Solar Panels minimum of 22kw Allied piping & civil work.	13 Nos.	Rs. 6.00 Million Per Unit	4,685,714 per unit	4,305,197 per unit	4,874,038 per unit	4,960,500 per unit	4,009,223 per unit	5,202,094 per unit	Not participated
4	SOLAR WATER PUMP / TUBE WELLS									
	Delivery 5" inch, Depth 250 ft. Capacity minimum 400000 L/P/day, Water Pump / Submersible Pump with Solar Panels minimum of 30kw Allied piping & civil work.	07 Nos.	Rs. 7.00 Million Per Unit	6,412,648 per unit	5,420,959 per unit	6,785,298 per unit	6,867,800 per unit	5,815,234 per unit	6,765,962 per unit	Not participated
	TOTAL	63 Nos.	--	--	--	--	--	--	--	--



ATTA-U-REHMAN MARI
DIRECTOR
AGRICULTURE ENGINEERING SINDH
HYDERABAD
CHAIRMAN



MUSARRAT MOKHTAR
DEPUTY DIRECTOR (INSP.)
INDUSTRIES DEPARTMENT
KARACHI
MEMBER



SHAKIL AHMED RAHEMOON
DIRECTOR WATER
MANAGEMENT
HYDERABAD DIVISION
MEMBER



SAIFULLAH MAGSI
ADDITIONAL DISTRICT ACCOUNTS
OFFICER-I, DAO OFFICE,
HYDERABAD
MEMBER



FARRUKH RASHEED ANSARI
DEPUTY DIRECTOR (MECH)
AGRICULTURE ENGINEERING SINDH
HYDERABAD
MEMBER/ SECRETARY



022-9200059

DIRECTORATE
AGRICULTURE ENGINEERING
SINDH HYDERABAD

344
No: DAE/Stores-967/ /17
Hyderabad dated: 28/02/2017

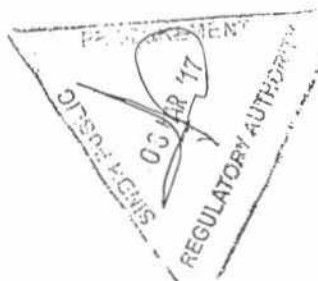
To,

→ The Manager A&F,
SPPRA Sindh,

Subject: EXTENSION OF BID VALIDITY FOR THE SCHEME INSTALLATION OF TUBE WELL ON 50% SUBSIDY TO FARMERS IN SINDH PHASE II SPPRA SR# 30454.

In continuation of this office letter No. DAE/TIC/264/17 dated: 16/02/2017 and as per provision of SPPRA rule 38 sub rule (2) the competent authority extended the bid validity of the following scheme for further 90 days vide letter No. 13(347)SO(DEV)/Engg dated: 27/02/2017.

S#	Name of Scheme	Tender No. & Date	SPPRA SR#
1	Subsidy Assistance on Agriculture Implements for Farm Mechanization Phase II	DAE/Stores-967/2146/16 dated; 07/11/2016	30456
2	Replacement of Earth Moving Machinery Phase III.	DAE/Stores-965/2070/16 dated; 28/10/2016	30327
3	Installation of Tubewell on 50% Subsidy to Farmers in Sindh Phase II.	DAE/TIC/2147/16 dated; 07/11/2016	30454
4	Provision of Solar Water Pump /Tubewell on Subsidized Rates to Farmers in Sindh	DAE/Stores-966/2145/16 dated; 07/11/2016	30476



DEPUTY DIRECTOR (HQ)
AGRICULTURE ENGINEERING
SINDH HYDERABAD

C.C to the:-

- The Director General, Agriculture Engineering & Water Management Sindh Hyderabad for kind information.
- Additional Secretary (Tech), Agriculture Supply & Prices Department, Government of Sindh, Karachi for kind information.
- The Director Agriculture Engineering Sindh Hyderabad for kind information.

DEPUTY DIRECTOR (HQ)
AGRICULTURE ENGINEERING
SINDH HYDERABAD



022-9200059
director.dae@gmail.com

To,

The Director (A&F),
Sindh Public Procurement Regulatory Authority,
Secretariat No. A4, Court Road,
KARACHI

Subject: **HOISTING OF FINANCIAL OFFER ON SPPRA WEBSITE AGAINST TENDER NO. DAE/STORES-966/2145/16 DATED 07.11.2016 FOR THE PREQUALIFICATION OF CONTRACTORS FOR INSTALLATION OF SOLAR WATER PUMP / TUBEWELLS IN SINDH 2016-17 – SPPRA SR. NO. 30476.**

Enclosed herewith please find a original copy of Technical Evaluation for the Pre-qualification of Contractors for the Installation of Solar Water Pump / Tubewell under the ADP Scheme “Provision of Solar Water Pumps / Tubewells on Subsidized Rates to Farmers” alongwith hard & soft copy of Financial offer for publication on the SPPRA website.

Following documents are enclosed.

- i. Notification of Procurement Committee (Copy).
- ii. Notification of Complaint Redressal Committee (Copy).
- iii. Procurement Plan 2016-17 (Copy).
- iv. Original Technical Evaluation Report.
- v. Document for submission of Financial Offer (for publication on SPPRA website).
- vi. Minutes of Technical Committee Meeting held on 16.03.2017.
- vii. List of Pre-qualified firms.
- viii. Extension of Bid Validity.

An early response is requested.


CC to:-

- The Director General, Agricultural Engineering & Water Management Sindh Hyderabad for kind information.
- The Additional Secretary (Tech), Agriculture, Supply & Prices Department, Government of Sindh, Karachi for kind information.
- The PS to Secretary, Agriculture, Supply & Prices Department, Government of Sindh, Karachi for information.

**DIRECTORATE
AGRICULTURE ENGINEERING
SINDH HYDERABAD**

No: DAE/Stores-966/ ⁵⁰⁶ /17
Hyderabad dated: 20/03/2017.


**DIRECTOR
AGRICULTURE ENGINEERING
SINDH HYDERABAD**


**DIRECTOR
AGRICULTURE ENGINEERING
SINDH HYDERABAD**

SPPRA INWARD DIARY
NO: 2424
DATED: 22-03-17



GOVERNMENT OF SINDH
AGRICULTURE, SUPPLY &
PRICES DEPARTMENT

NOTIFICATION

No.13(347)SO(DEV:)/2013: In Supersession of this department's Notification of even number dated 30.11.2016, in pursuance of Rule-7 of SPP Rules, 2010, Government of Sindh, Agriculture, Supply & Prices Department is pleased to reconstitute a Procurement Committee for the schemes / Projects of Agriculture Engineering Sindh with following composition and Terms of References:-

iii. COMPOSITION:

- | | | |
|------|--|------------------|
| ✓ 1. | Director,
Agriculture Engineering Sindh, Hyderabad. | Chairman |
| 2. | Director, Sindh On Farm Water Management,
Hyderabad Division. | Member |
| 3. | Representative of Industries & Commerce Department,
Government of Sindh, Karachi | Member |
| 4. | District Accounts Officer /
Representative of District Accounts Officer, Hyderabad. | Member |
| 5. | Deputy Director (Headquarter),
Agriculture Engineering Sindh, Hyderabad | Member/Secretary |

IV. Terms of References:

- Prepare bidding documents;
- Carryout Technical as well as Financial evaluation of the bids;
- Prepare evaluation report as provided in Rule-45 of SPPRA;
- Make recommendations for the award of Contract to the competent authority and;
- Perform any other function ancillary and incidental to the above.

SECRETARY TO GOVT. OF SINDH

No.13(347)SO(DEV)/2013

Karachi, dated the 06-02-2017

A copy is forwarded to information & necessary action to:

- The Secretary to Government of Sindh, Finance Department, Karachi.
- The Secretary to Government of Sindh, Industries Department, Karachi.
- The Managing Director, SPPRA, Karachi.
- The Director General, Agricultural Engineering & Water Management Sindh, Hyderabad.
- All Members of Committee.

(ABDUL AZIZ CHANNA)
DEPUTY SECRETARY (TECH:)

C.c. to:-

- 1- P.S. to Minister, Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.
- 2- P.S. to Secretary, Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.



GOVERNMENT OF SINDH
AGRICULTURE, SUPPLY &
PRICES DEPARTMENT

NOTIFICATION

No.13(347)SO(DEV:)/2016: In supersession of this Department Notification of even number Dated 22.3.2013 and in compliance with Rule 31 of SPP Rules, 2010, Government of Sindh, Agriculture, Supply & Prices Department is pleased to re-constitute a Committee for Complaint Redressal with the following composition and terms of reference:-

I. COMPOSITION.

1-	Director General, Agricultural Engineering & Water Management Sindh, Hyderabad	Chairman
2-	Col. (Rtd.) Zia Siddiqui, (An Independent Professional)	Member
3-	Representative of Office of the Accountant General Sindh, Karachi	Member

II. Terms of References:

- i. Committee may examine the complain of bidder as per SPPRA Rules.
- ii. The Complaint Redressal Committee upon receiving a complaint from an aggrieved bidder may, if satisfied:
 - a. Prohibit the procurement committee from acting or decision in a manner, inconsistent with these rules and regulations
 - b. Annul in whole or in part, any authorized act or decision of the procurement committee; and
 - c. Reverse any decision of the procurement committee or substitute its own decision for such a decision;
Provide that the Complaint Redressal Committee shall not make any decision to award this contract.
- iii. The committee shall announce its decision within seven days. The decision shall be intimated to the bidder and the Authority within three working days by procuring agency. In case of failure of the committee to decide the complaint, the procuring agency shall not award the contract.
- iv. The procuring agency shall award the contract after the decision of the Complaint Redressal Committee.
- v. Mere fact of lodging of a complaint shall not warrant suspension of the procurement proceedings.

DR. SAEED AHMED MANGNEJO
SECRETARY TO GOVT. OF SINDH

Contd.:P/2..

..P/2..

9499

No.13 (347) SO (DEV :)/2017:

Karachi, dated the 05-01-2017

A copy is forwarded for information & further necessary action to:-

1. The Principal Secretary to Governor of Sindh, Karachi.
2. The Principal Secretary to Chief Minister, Sindh, Karachi.
3. The Accountant General Sindh, Karachi.
4. The Managing Director, Sindh Public Procurement Regulatory Authority, Karachi.
5. The Additional Secretary (Staff) to Chief Secretary, Sindh, Karachi.
6. ✓ The Director General, Agricultural Engineering & Water Management, Sindh, Hyd.
7. The Director General, Agriculture Extension Sindh, Hyderabad.
8. The Director General, Agriculture Research Sindh, Tandojam.
9. Members of the Committee.

(ABDUL AZIZ CHANNA)
DEPUTY SECRETARY (TECH.)

C.c. to:

- 1- P.S. to Minister Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.
- 2- P.S. to Secretary Agriculture, Supply & Prices Department, Govt. of Sindh, Karachi.



Director
12/1/17

Subj
13/01/17

Mrs. Kaniz

270
1/2/17

S.P.H.

ANNUAL PROCUREMENT PLAN OF DIRECTORATE AGRICULTURE ENGINEERING SINDH HYDERABAD FOR FISCAL YEAR 2016-17

Rs. in Million


Sl. No.	Description of Procurement	Quantity (Where Applicable)	Estimated Unit Cost (Where Applicable)	Estimated Total Cost	Funds Allocated	Source of Funds (ADP / Non-ADP)	Proposed Procurement Method	Timing of Procurement				Remarks
								1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	
1	ADP # 23 Provision of Assistance to Farmers on Purchase of Wheel Type Tractors Phase-IV	5402 Nos. Wheel Type Tractors	-	Rs. 1500.0 Million	Rs. 1500.0 Million	ADP	Pre-qualification of Tractors Manufacturers	✓	✓	-	-	All Procurement under SPPRA Rules and subjected to the Release of funds.
2	ADP # 24 Provision of Solar Water Pumps / Tubewells on Subsidized Rate Farmers in Sindh	63 Nos. Solar Water Pumps	-	Rs. 238.143 Million	Rs. 238.143 Million	ADP	Pre-qualification of Contractors	✓	✓	-	-	All Procurement under SPPRA Rules and subjected to the Release of funds.
3	ADP # 25 Installation of Tubewells on 50% Subsidy to Farmers in Sindh Phase-II	669 Nos. Tubewells in Various Categories	-	Rs. 100.0 Million	Rs. 133.575 Million	ADP	Pre-qualification of Contractors	✓	✓	-	-	All Procurement under SPPRA Rules and subjected to the Release of funds.
4	ADP # 27 Replacement of Earth Moving Machinery Phase-III	Bulldozers + Spare Parts & Transportation & Office Equipment	-	Rs. 270.00 Million	Rs. 270.00 Million	ADP	Single Stage Two Envelope Procedure	-	✓	✓	✓	All Procurement under SPPRA Rules and subjected to the Release of funds.
5	ADP # 28 Subsidy Assistance on Agriculture Implements for Farm Mechanization Phase-II	Various Agriculture Implement	-	Rs. 80.00 Million	Rs. 80.00 Million	ADP	Pre-qualification of Contractors	-	-	✓	✓	All Procurement under SPPRA Rules and subjected to the Release of funds.
6	ADP # 30 Preservation and Storage Facility of Fruits & Vegetable through Hot Water Treatment & Controlled Atmospheric Store on Subsidy to Farmers	01 No. Hot Water Treatment Plant 01 No. Controlled Atmospheric Stores	-	Rs. 170.0 Million	Rs. 170.00 Million	ADP	Single Stage Two Envelope Procedure	-	-	✓	✓	All Procurement under SPPRA Rules and subjected to the approval of Scheme and release of funds.


DIRECTOR
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD

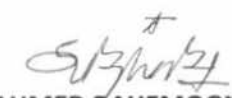
Evaluation Report / Qualification Criteria for the Pre-qualification of firms for the Installation of Solar Water Pump / Tubewells

Sr. No.	Information to be supplied	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Lahore	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Peshwar	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd. Karachi	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl. Islamabad
1.	Name of the Bidder	Flow Pak Pump Industries Pvt. Ltd.	Pak Oasis Industries Pvt. Ltd.	EBR Energy System Pvt. Ltd.	Nizam Energy Pvt. Ltd.	K.K.B	Smart International	Saztel Pvt. Ltd.	Global Business Services	Catkin Eng. Sales & Service	Renewable Energy Pvt. Ltd.	Zahra Communication Karachi	Yaseen Pvt. Ltd	Orient Water Technologies Karachi	Tesla Industries
2.	Legal status of the Bidder (Company / Partnership / Joint Venture)	Private Limited Company	Private Limited Company	Private Limited Company	Private Limited Company	Proprietor	Joint Venture with Haji Badaruddin & Sons	Private Limited Company	Proprietor	Private Limited Company	Private Limited Company	Private Ltd. Co:	Private Limited Company	Proprietor	Private Limited Company
3.	Valid Registration Certificate of Pakistan Engineering Council in relevant category.	C4 Responsive	C1 Responsive	C4 Responsive	C2 Responsive	C1 Responsive	C5 + C2 Responsive	C5 Responsive	C4 Responsive	C3 Responsive	C3 Responsive	C4 Responsive	C5 Responsive	Non-Responsive	C2 Responsive
4.	Certificate from the original Manufacturer certifying the nomination of the Bidder/Tenderer as Authorized Sole Agent with year of nomination and current year's renewal agreement.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Responsive	Authorized HMP Pump Pvt. Ltd.	Non-Responsive	Non-Responsive	Responsive
5.	Registered with Income Tax, Sales Tax Departments, Sindh Revenue Board Provide Registration Number. With documentary evidence.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	SRB Certificate Not Attached	Responsive	Responsive	Responsive	Responsive	Responsive	SRB Certificate Not Attached	Responsive
6.	Name and address of the quoted equipment Manufacturer. Please provide the details in separate sheet.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive
7.	Names, qualification and experience of the service engineers and technicians. Location where they are posted / working provide complete address and detail of equipment and machinery. Details of service center /workshops to provide the repair and after sale services in Sindh (Location, Address, Telephone numbers to be provided)	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive
8.	Reference list of Similar works where same / Similar Equipment were installed locally and or internationally.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive

Sr. No.	Information to be supplied	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Lahore	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Peshwar	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd. Karachi	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl. Islamabad
9.	Performance certificate from the Organization in Government or private companies to whom the bidder or the company has supplied and installed the similar kind goods in Pakistan or abroad.	Non-Responsive Attached but not of Solar Water Pump	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
10.	Bank reference, name of banks and address may be given. The Banker's certificate regarding financial capability of the Bidder/Tenderer shall be furnished.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive
11	Details of similar nature projects under execution.	Non-Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
12	Facilities of After Sales Service facilities in Sindh.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
13	Item wise List of IEC / EU / USA Standards followed by the manufacturer	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
14	Item wise warranty periods	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive	Responsive	Non-Responsive	Responsive
15	Confirmation of Schedule of Requirement	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Attached	Responsive	Responsive	Non-Responsive	Responsive
16	Confirmation of Delivery Schedule.	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Responsive	Attached	Responsive	Responsive	Non-Responsive	Responsive
17	Extension of Bid Validity	Extended	Extended	Extended	Extended	Extended	Extended	Extended	Extended	Extended	Not Extended	Not Extended	Extended	Not Extended	Not Extended
		<u>Dis-qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Dis-qualified</u>	<u>Qualified</u>	<u>Qualified</u>	<u>Dis-qualified</u>	<u>Dis-qualified</u>	<u>Dis-qualified</u>	<u>Dis-qualified</u>


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 DIRECTOR
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD
CHAIRMAN


MUSARRAT MOKHTAR
 DEPUTY DIRECTOR (INSPECTION)
 INDUSTRIES DEPARTMENT KARACHI
MEMBER


SHAKIL AHMED RAHEMOON
 DIRECTOR
 WATER MANAGEMENT
 HYDERABAD DIVISION
MEMBER


SAIFULLAH MAGSI
 ADDITIONAL DISTRICT ACCOUNTS
 OFFICER-i,
 DISTRICT ACCOUNTS OFFICE
 HYDERABAD
MEMBER


FARRUKH RASHEED ANSARI
 DEPUTY DIRECTOR (MECH)
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD
MEMBER / SECRETARY

COMPARISON OF TECHNICAL DATA (LIFT PUMP)

Size : 6X8" to 8x8"

Capacity : 500,000 L/day (Min)

Depth : 50 ft.

Rated Power : 12 to 15 kw ±10%

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Water Pump (Make & Model)		Flowpak Siemens 150 FCM-259	Grundfos	CS-G100-22/2 Lorentz	NB 125-35/338 A-F2-AE-BAQE Grundfos	XSP-125 MAXISU	2005-95 PEM Electric Motors	SPB815K-700 Solar Tech	Grundfos PACO LCS	ALK 8131N/1 ALARKO	PSK2-15 C-SJ75-3-D Lorentz	NM-80/250) CI-SP)+5.5w HMA Pump	NM-80/250) CI-SP)+5.5w HMA Pump	UK/Italian/German or Equivalent	DAB Pump KDN 80-160
Rated Power	12 to 15 Kw (±10%) both limits	15 kw	12 – 15 kw	10 kw	15 Kw	13 kw	13 kw 20 HP	15 kw	22 kw	11 KW	Data Not Available	5.5 kw	5.5 kw	10-12kw	15 KW Data Not Available
Discharge Capacity	Average 650,000 Litre / day	Data Not Available	650,000 Litre / day	694,000 L/ d	918,000 litre/day	720,000 litre / day	650,000 litre / day	700,000 litre / day	650,000 Litre / day	700,000 litre /day Data Not Available	Data Not Available	500,000 litre/day as per pump curve	650,000 litre / day donot match with brochure	675,000 litre/day	700,000 litre/day Data Not Available
Rated Speed	2400 – 3000 RPM	1450 rpm Data Not Available	2400-3000 rpm	1400 – 2905 rpm	975 rpm	2900	2960 rpm	Data Not Available	3000 rpm	2400 – 2900 rpm Data Not Available	Data Not Available	1445 rpm	1445 rpm	Data Not Available	2943 rpm Data Not Available
Efficiency	More than 75%	Data Not Available	75%+	79%	91.9	82%	80%	Data Not Available	80%	80%+	Data Not Available	70%	70%	Data Not Available	72.23% Data Not Available
Power factor	0.8 to 0.9	Data Not Available	0.8 to 0.9	0.87	0.8	0.85	0.8 to 0.9	Data Not Available	0.85	0.8 to 0.9 Data Not Available	Data Not Available	0.82	0.82	Data Not Available	0.8 Data Not Available
Voltage Tolerance	±5% to – 15%	Data Not Available	±5% to – 15%	±5% to – 10%	±5% to – 10%	±6% to – 10%	±5% to – 15%	10% to ±2%	±5% to – 15%	±5% to – 15% Data Not Available	Data Not Available	±6% to – 10%	±6% to – 10%	Data Not Available	Data N.A. +6% to – 10%
Protection Type	IP68 or Equivalent	IP 65	IP 68	IPX4	IPX4	IP 68	IP 68	IP 68	Data Not Available	IP 68 Data Not Available	Data Not Available	IP 55	IP 55	Data Not Available	IP 55 Data Not Available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Insulation Class	Y or better	F	F	F	F	F	Y	Data Not Available	Data Not Available	F	Data Not Available	F	F	Data Not Available	Data Not Available
Flange	NEMA or Equivalent	Data Not Available	NEMA	NEMA	ENGJL 250	NEMA	8" Nema	Data Not Available	Data Not Available	NEMA	Data Not Available	NEMA	NEMA	Data Not Available	EN 705 PN16 Data Not Available
Warranty	Atleast 1 year	Data Not Available	1 YEAR	01 year	1 year	One year	1 Year	1 year	2 years	1 year	Data Not Available	1 year	1 year	Data Not Available	1 year Data Not Available
Country of Origin	Please Specify	Pump Pak Motor China / Czech Rep.	EUROPE	German Brand, China made	Denmark	Turkey	Pump China & Pak Motor	China	Germany	Turkey	Germany	Europe Assemble in Pak	Europe Assemble in Pak	Data Not Available	Italy Data Not Available
<u>Solar Panels</u>		LUX Power LNSE 315P	--	Ever Exceed ESM 300-156	Canadian Solar	Jinko Solar 255-270	JKM320PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data Not Available	TPS6U
Max. Power / No. of Panels	280 to 320 W	315 W	280 to 320W	300 W	320 W	320 W	320 W	310 Watt	305 Watt	310 to 315 W	255 to 265 W	210 w	210 w	250 / 300 watt each	265 w Data Not available
Optimum Operating Voltage	35 to 37 V	36.1 V	35 to 37.5V	38V	36.8 V	37.4 V	37.4 V	36.7 V	35.36 V	36.1 to 36.4 V	30.3 V	38.92 V	38.92 V	Data Not Available	30.8 V Data Not available
Optimum Operating Current	7 to 9 Amp	8.31 Amp	7 to 9 Amp	7.89A	8.69 Amp	8.56 Amp	8.56 Amp	8.45	8.4 Amps	8.33 to 8.66 Amp	8.87 Amp	8.54 Amp	8.54 Amp	Data Not Available	8.6 Amp Data Not available
Module Efficiency	Atleast 16% or higher	15.50%	16% to 16.5%	16.10%	16.68%	16.49%	16.49%	16%	16%	16%	16%	16.45%	16.45%	Data Not Available	16.29% Data Not available
Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	Data Not Available	Data Not available -40°C to 85°C
Type	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data Not Available	Poly Crystalline Data Not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Front Glass	4mm or better tempered glass	Agreed but not confirmed	4mm High Transmission low Iron tempered Glass	3.2 mm low iron tougend glass	3.2 mm tempered glass	4.00mm	4mm	3.2 mm	3.2 mm	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data Not Available	3.2 mm tempered glass standard 4mm also available
Frame	Anodized aluminum alloy	Anodized aluminum alloy	Anodized Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Andozid Aluminum alloy	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data Not Available	Anodized Aluminum alloy Data Not available
Product Warranty	Atleast 10 years.	10 years	10 years	10 years	Yes	10 years	10 years	Agreed but not confirmed	15 years	10 years	10 years	10 years	10 years	Data Not Available	10 years Data Not available
Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	IEC 61215 IEC 61731 IEC 61732	61215 61730 61215	IEC 61215 IEC 61730 EN 61215 EN 61730 EN 61730	IEC 61215 IEC 61730	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61730 IEC 61215 IEC 61761	IEC 61215 IEC 61730	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215 IEC 61730 UL 1703	IEC 61215 IEC 61730 UL 1703	A grade IEC / EU Data Not Available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716
Junction box	IP68 Rated	IP 67	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data Not Available	IP 68 Data Not available
Connector	MC4 Compatible	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	MC4	Data Not Available	MC4 Data Not available
Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	Canadian	China	Canadian	China	China	Data Not Available	China Data Not available
Total no. of Panels for the rated power.	Please Specify.	50 pcs	50 pcs	36 pcs	68 Nos.	54 Nos.	54 Nos.	30	72x305 305 Watt	60 Nos. 315 Watts	N/A	34 Nos.	34 Nos.	10-12kw Data not available	100 Data Not available
Linear Performance Warranty.	20 to 25 years	25 years	25 years linear performance warranty	25 years	20 years	25 years	25 Years	Agreed but not confirmed	20 years	20 to 25 years	23 years	25 years	25 years	Data Not Available	20 years Data not Available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
<u>Invertor</u>			Grundfos	PSK2-21	RSI Grundfos	JNTECH	ADA SPI 200-4T-015B	SPB815K-700 Solar Tech	INVT CHF-100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data Not Available	JFY Data not Available
Amperage	25 to 32 Amp	Brochure not available	25 to 32 Amp	17 Amp	46 Amp	29 Amp	32 Amp	32 Amps	25-30 Amp	30 Amp	Data Not Available	16.5 Amp	16.5 Amp	Data Not Available	39 Amp Data not Available
Power	12 to 15 kw	Brochure not available	12 to 15 kw	10 kw	22 kw	15 kw	15 kw	18.5 kw	15 kw	15 kw	Data Not Available	7.5 kw	7.5 kw	Data Not Available	18.5 kw Data not Available
Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	3 Phase	380 to 415 Vac	380 to 415 Vac	Yes	3 Phase 370 to 400 Vac	3 Phase 370 to 385 Vac	Data Not Available	400V	400V	Data Not Available	3 Phase 380 Vac Data not Available
Input	340to 650 Vdc	Brochure not available	350 to 750 Vdc	350 to 850 Vdc	800 vdc	460 to 880 Vdc	500 to 540 Vdc	350-600 VDC	350to 700 Vdc	480 to 750 vdc	Data Not Available	380 to 480 Vdc	380 to 480 Vdc	Data Not Available	250-900 vdc Data not Available
MPPT	Inbuilt	Brochure not available	Inbuilt	In built	In built	Inbuilt	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data Not Available	Inbuilt Data not Available
Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	Inbuilt over current / voltage over load dry run, short circuit	Inbuilt	In built	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Inbuilt	Inbuilt	Inbuilt	Inbuilt	Data Not Available	IP 20	IP 20	Data Not Available	Inbuilt Data not Available
Efficiency	95% or more.	Brochure not available	95%	98%	95%	98%	97%	Agreed but not confirmed	95%	95%+	Data Not Available	98%	98%	Data Not Available	98% Data not Available







Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Country of Origin	Please Specify	Brochure not available	China	German Brand Made in China	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data Not Available	China Data not Available
Warranty	Two years minimum	Brochure not available	Two years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	Data Not Available	2 years	2 years	Data Not Available	2 years Data not Available
Cables & Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.9% Copper	99.9% Copper	99.9% Copper	99.9% Copper	99.9% Copper	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data Not Available	99.9% with uv prot. Data not Available
Grounding Kit	Standard	Brochure not available	Yes	Yes	Std	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data Not Available	Standard Data not Available
Water out let & accessories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	Suction 8" Discharge 6"	8"x6"	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	M/s steel Pipes	M/s steel Pipes	Data Not Available	5" M/s steel pipe Data not Available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI Structure	G.I. Galavani- zed	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust free coated	Rust free coated	Data Not Available	Rust free Data not Available










Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for invertor, switches, junction box etc.	Data Not Available	Yes	GI Plate	GI Plate	GI Plate	GI Plate	GI Plate	Rust Free Standard Installation	GI Plate	Data Not Available	Rust free powder coated of iron & G.I. with environmental prot. For invertor	Rust free powder coated of iron & G.I. with environmental prot. For invertor	Data Not Available	Powder coated mounting plate/box
Execution of Tubewell bore, casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Agreed	Agreed	Agreed	Agreed	Agreed	Agreed	Agreed	Agreed	As per requirement of Solar Pump	As per requirement of Solar Pump	Data Not Available	As per requirement


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MEMBER/ SECRETARY

COMPARISON OF TECHNICAL DATA (SUBMERSIBLE PUMP 100 FT.)

Delivery Size : 5"

Capacity : 500,000 L/day (Min)

Depth : 100 ft.

Rated Power : 15 to 18 kw $\pm 10\%$

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Submersible Pump (Make & Model)		Flow Pak 8FMC/2 MUTLUSU MSM620	Grundfos	C-SJ75-4 Lorentz	SP 77-4 BAQE Grundfos	XSP-95/3 MAXISU	KOMAX KM6 200T KPS8-80/3 Pump	SPB815K-700 Solar Tech	Grundfos SP	ALK 8090 n/2 ALARKO	PSK2-15C-5S75-3-D Lorentz Germany	HVP 75-02+12.5HP HMA Pak	HVP 75-02+12.5HP HMA Pak	UK/Italian/German or Equivalent	DAB SS7B3
Rated Power	15 to 18 Kw ($\pm 10\%$) both limits	15 kw	15 to 18 Kw ($\pm 10\%$)	15 kw	15 kw	15 kw	15 kw	15 kw	18 kw	15kw	Data Not Available	12.5 HP	12.5 HP	15 to 18Kw	15kw Data not available
Discharge Capacity	Average 500,000 Litre / day	Data not available	500,000 Litre / day	502,000 Litre / day	501,480 Litre / day	500,000 Litre / day	540,000 Litre / day	500,000 Litre / day	500,000 Litre / day	540,000 Litre / day	Data Not Available	500,000 Litre / day	500,000 Litre / day	480,000 to 525,000	520,000 litre/day Data not available
Rated Speed	2660 – 3000 RPM	Data not available	2660 – 3000 RPM	1400-2850 rpm	2900 rpm	2900 rpm	2850 rpm	Data not available	3000 rpm	2660 – 3000 RPM	Data Not Available	2850 rpm	2850 rpm	Data not available	2840 rpm Data not available
Efficiency	More than 75%	Data not available	75%+	79%	75%	81%	81%	Data not available	85%	75%+	Data Not Available	75.85%	75.85%	Data not available	77.9% Data not available
Power factor	0.8 to 0.9	Data not available	0.8 to 0.9	0.87	0.9	0.85	0.84	Data not available	0.85	0.8 to 0.9	Data Not Available	0.84	0.84	Data not available	0.8 Data not available
Voltage Tolerance	$\pm 5\%$ to – 15%	Data not available	$\pm 5\%$ to – 15%	$\pm 5\%$ to – 10%	$\pm 5\%$ to – 10%	-6% to – 10%	$\pm 6\%$ to – 10%	Data not available	$\pm 5\%$ to – 15%	$\pm 5\%$ to – 15%	Data Not Available	$\pm 6\%$ to – 10%	$\pm 6\%$ to – 10%	Data not available	$\pm 6\%$ to – 10% Data not available
Protection Type	IP68 or Equivalent	Data not available	IP 68	IP 68	IP 68	IP 68	IP 68	IP 68	Data not available	IP 68	Data Not Available	IP 55	IP 55	Data not available	IP 68 Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Insulation Class	Y or better	F	F Class	F	F	F	F	Y Data not in brochure	Data not available	F	Data Not Available	Y	Y	Data not available	F Data not available
Flange	NEMA or Equivalent	Data not available	NEMA	NEMA	Yes	NEMA	6" to 8" Nema	Data not available	Data not available	NEMA	Data Not Available	NEMA	NEMA	Data not available	NEMA Data not available
Warranty	Atleast 1 year	Data not available	1 Year	1 Year	Yes	1 year	1 year	1 Year	1 years	1 year	Data Not Available	1 year	1 year	Data not available	1 year Data not available
Country of Origin	Please Specify	Pump Pakistan Motor Turkey	Europe	German brand, made in china	Denmark	Turkey	UAE	China	Germany	Turkey	Germany	Europe Assemb in Pak	Europe Assemb in Pak	Data not available	Italy Data not available
Solar Panels		LUYX Power LNSE 315P		ESM300-156 Ever Exceed	Canadian Solar	Jinko Solar 255-270	JKM 320 PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar CS6X-305P	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data not available	TPSP6U
Max. Power / No. of Panels	280 to 320 W	315 W	280 to 320 W	300 W	320 W	320 W	320 W	310 W	305 Watt	310 to 315 W	255 to 265 W	210 W	210 W	Data not available	265 w Data not available
Optimum Operating Voltage	35 to 37 V	36.1 V	35 to 37 V	38 V	36.8 V	37.4 V	37.4 V	36.7 V	35-36.5 Volts	36.3 to 36.4	30.3 V	38.92 V	38.92 V	Data not available	30.8 V Data not available
Optimum Operating Current	7 to 9 Amp	8.31 Amp	7 to 9 Amp	7.89 A	8.69 Amp	8.56 Amp	8.56 Amp	8.45	8.4 Amps	8.66 Amp	8.87 Amp	8.54 Amp	8.54 Amp	Data not available	8.61 Amp Data not available
Module Efficiency	Atleast 16% or higher	15.50%	16.50%	16.10%	16.68%	16.49%	16.49%	16%	16%	16.2	16%	16.45%	16.45%	Data not available	16.29% Data not available
Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to +85°C	-40°C to +85°C	-40°C to 85°C	-40°C to 85°C	Agreed but not confirmed	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	Data not available	Data not available -40°C to 85°C

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Type	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Yes	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data not available	Poly Crystalline Data not available
Front Glass	4mm or better tempered glass	Data not available	N/A	3.2mm low iron toughened glass	3.2mm low iron toughened glass	4.00mm	4mm	Agreed but not confirmed	Dotted tempered	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data not available	3.2 mm tempered glass Data not available
Frame	Anodized aluminum alloy	Anodized aluminum alloy	4mm high transmission low iron, tempered glass	Anodized aluminum alloy	Anodized aluminum alloy	Yes	Yes	Agreed but not confirmed	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data not available	Anodized Aluminum alloy Data not available
Product Warranty	Atleast 10 years.	10 years	10 years	10 Years	10 Years	10 years	10 years	Yes	15 years	10 years	10 years	10 Years	10 Years	Data not available	10 years Data not available
Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	IEC 61215 IEC 61731 IEC 61732	61215 61730 61215	61215, 61730, 61730, 61730 61215 61730	ENI 4301 AISI 304	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61730 61215, 61701	Equivalent	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215, IEC 61730, UL 1703	IEC 61215, IEC 61730, UL 1703	Data not available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716
Junction box	IP68 Rated	IP 67	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data not available	IP 68 Data not available
Connector	MC4 Compatible	MC4	MC4	MC4	MC4	MC4	MC4	Yes	MC4	MC4	MC4	MC4	MC4	Data not available	MC4 Data not available
Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	Canadian	China	Canadian	China	China	Data not available	China Data not available
Total no. of Panels for the rated power.	Please Specify.	50 pcs	50 pcs	57 pcs	68 Nos.	64 Nos.	64 Nos.	56	72x305 21 kw	80 Nos. 315 Watts	N/A	64 Nos.	64 Nos.	Data not available	100 Data not available





Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Linear Performance Warranty.	20 to 25 years	25 years	25 years	25 Years	20 years	25 years	25 Years	25 years	20 years	20 to 25 years	23 years	25 years	25 years	Data not available	20 years Data not available
<u>Invertor</u>			Grundfos	PSk2-21	RSI Grundfos	JINTECH	ADA SPI200-4T-018B	SPB815K-700 Solar Tech	INVT CHF-100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data not available	JFY Data not available
Amperage	30 to 40 Amp	Brochure not available	30 to 40 Amp	33 Amp	31 Amp	36 Amp	37 Amp	33.3 Amp	30-40 A	39 Amp	Data Not Available	25 Amp	25 Amp	Data not available	39 Amp Data not available
Power	15 to 18 kw	Brochure not available	15 to 18 kw	21 kw	15 kw	18.5 kw	18 kw	18.5 kw	18 kw	18 kw	Data Not Available	11 kw	11 kw	Data not available	18.5 kw Data not available
Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	3 Phase 380 VAc	380 to 415 Vac	380 to 415 Vac	Comply	3 Phase 370 to 400 Vac	3 Phase 370 to 385 Vac	Data Not Available	3 Phase 400 vac	3 Phase 400 vac	Data not available	3 Phase 380 vac Data not available
Input	340to 650 Vdc	Brochure not available	340to 750 Vdc	300to 850 Vdc	850 Vac	460 to 880 Vdc	500 to 540 Vdc	500 to 600 Vdc	350to 700 Vdc	480 to 750 vdc	Data Not Available	380 to 650 vdc	380 to 650 vdc	Data not available	250-900 vdc Data not available
MPPT	Inbuilt	Brochure not available	Inbuilt	In Built	Yes	Yes	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data not available	Inbuilt Data not available
Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	In built for over current, over load, anti-lightening etc.	In Built	Yes	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Yes	Yes	Over current over load anti lightening	Yes	Data Not Available	IP 20	IP 20	Data not available	Inbuilt Data not available
Efficiency	95% or more.	Brochure not available	95 %+	98%	Yes	98%	97%	Yes	95%	95%+	Data Not Available	98%	98%	Data not available	98% Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Country of Origin	Please Specify	Brochure not available	China	German brand china	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data not available	China Data not available
Warranty	2 years minimum	Brochure not available	Two Years	2 years	Yes	2 years	2 years	Comply	2 years	2 years	Data Not Available	2 years	2 years	Data not available	2 years Data not available
Cables & Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.90%	Yes	99.9% Copper	99.90%	Yes	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data not available	99.9 % copper Data not available
Grounding Kit	Standard	Brochure not available	Yes	Yes	Yes	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data not available	Standard Data not available
Water out let & accessories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	5" steel iron pipe	Yes	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	Steel pipes	Steel pipes	Data not available	5" M/s steel pipe Data not available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI Structre	Yes	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust Free coated	Rust Free coated	Data not available	Powder coated Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for inverter, switches, junction box etc.	Data Not Available	Yes	G.I. Plate	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inverter	Rust Free coated of Iron & GI with environment protection for inverter	Data not available	Powder coated mounting plate/box
Execution of Tubewell bore, casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Yes	Yes	Yes	Yes	Yes	--do--	Yes	Agreed	Yes as per requirement of Solar Pump	Yes as per requirement of Solar Pump	Data not available	As per requirement


ATTA-U-REHMAN MARI
 DIRECTOR
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD
CHAIRMAN


MUSARRAT MOKHTAR
 DEPUTY DIRECTOR (INSPECTION)
 INDUSTRIES DEPARTMENT KARACHI
MEMBER


SHAKIL AHMED RAHEMOON
 DIRECTOR WATER MANAGEMENT
 HYDERABAD DIVISION
MEMBER


SAIFULLAH MAGSI
 ADDITIONAL DISTRICT ACCOUNTS OFFICER-
 i, DAO OFFICE
 HYDERABAD
MEMBER


FARRUKH RASHEED ANSARI
 DEPUTY DIRECTOR (MECH)
 AGRICULTURE ENGINEERING SINDH HYDERABAD
MEMBER/ SECRETARY

COMPARISON OF TECHNICAL DATA (SUBMERSIBLE PUMP 150 FT.)

Delivery Size : 5"

Capacity : 450,000 L/day (Min)

Depth : 150 ft.

Rated Power : 20 to 24 kw ±10%

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Submersible Pump (Make & Model)		Flow Pak 8FMC/3 MUTLUSU MSM6/30	Grundfos	C-SJ75-4 Lorentz	SP 77-6 BAQE Grundfos	XSP-7715 MAXISU	KOMAX KM6250T PKS8-80/4	SPB822K-700 Solar Tech	Grundfos SP	ALK 8075/4 ALARKO	PSK2-21C-5J75-4-D Lorentz Germany	VP 60-05+15HP HMA Pak	VP 60-05+15HP HMA Pak	UK/Italian/German or Equivalent	DAB 77SA5
Rated Power	20 to 24 Kw (±10%) both limits	22 kw	20 to 24 Kw (±10%)	21 kw	22 kw	19 kw	20 kw	22 kw brochure not available	30 HP	18.5 kw	Data Not Available	15 HP	15 HP	20-24 kw	18.75 kw Data not available
Discharge Capacity	Average 450,000 Litre / day	Data not available	Average 450,000 Litre / day	460,500 Litre / day	481,000 litre / day	450,000 Litre / day	540,000 Litre / day	Data not available	450,000 Litre / day	490,000 Litre / day	Data Not Available	450,000 Litre / day	450,000 Litre / day	480,000 to 500,000	450,000 litre/day Data not available
Rated Speed	2700 – 3000 RPM	Data not available	2700 – 3000 RPM	1400-2850 rpm	2900 rpm	2900 rpm	2855 rpm	Data not available	3000 rpm	2700 – 2900 RPM	Data Not Available	2810 rpm	2810 rpm	Data not available	2845 rpm Data not available
Efficiency	More than 75%	Data not available	More than 75%	79%	Yes	82%	83%	Data not available	80%	73%+	Data Not Available	77.58%	77.58%	Data not available	77.8% Data not available
Power factor	0.8 to 0.9	Data not available	0.8 to 0.9	0.87	0.9	0.84	0.86	Data not available	0.85%	0.8 to 0.9	Data Not Available	0.86	0.86	Data not available	0.8 Data not available
Voltage Tolerance	±5% to – 15%	Data not available	±5% to – 15%	±5% to – 10%	Yes	-6% to – 10%	±6% to – 10%	Data not available	Data not available	±5% to -15%	Data Not Available	±6% to – 10%	±6% to – 10%	Data not available	±6% to – 10% Data not available
Protection Type	IP68 or Equivalent	Data not available	IP68 or Equivalent	IP 68	IP 68	IP 68	IP 68	IP 68	Data not available	IP 68	Data Not Available	IP 68	IP 55	Data not available	IP 68 Data not available
Insulation Class	Y or better	F	F	F	F	F	F	Y	Data not available	Y	Data Not Available	Y	F	Data not available	F Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Flange	NEMA or Equivalent	Data not available	NEMA	NEMA	Yes	NEMA	6" to 8" Nema	Comply	Equivalent	NEMA	Data Not Available	NEMA	NEMA	Data not available	NEMA Data not available
Warranty	1 year minimum	Data not available	1 Year	1 Year	Yes	1 year	1 year	1 Year	1 years	1 year	Data Not Available	1 year	1 year	Data not available	1 year Data not available
Country of Origin	Please Specify	Pump Pakistan Motor Turkey	Europe	German brand, china	Denmark	Turkey	UAE	China	Germany	Turkey	Germany	Europe Assemble in Pak	Europe Assemble in Pak	Data not available	Italy Data not available
<u>Solar Panels</u>		LUX POWER LNSE 315P	--	Ever Exceed ESM300-156	--	Jinko Solar 255-270	JKM320PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data not available	TPSP6U
Max. Power / No. of Panels	280 to 320 W	22 kw / 76	280 to 320 W	300 W	320 W Canadian Solar	320 W	320 W	310 W	305 Watt	310 W	255 to 265 W	210 W	210 W	Data not available 250/300 watt each	265 W Data not available
Optimum Operating Voltage	35 to 37 V	Agreed but not confirmed	35 to 37 V	38 V	36.8 V	37.4 V	37.4 V	36.7 V	35-36.5 Volts	36.3	30.3 V	38.92 V	38.92 V	Data not available	30.8 V Data not available
Optimum Operating Current	7 to 9 Amp	Agreed but not confirmed	7 to 9 Amp	7.89 A	8.69 Amp	8.56 Amp	8.56 Amp	8.45 A	8.4 Amps	8.55	8.87 Amp	8.54 Amp	8.54 Amp	Data not available	8.16 Amp Data not available
Module Efficiency	Atleast 16% or higher	Agreed but not confirmed	Atleast 16% or higher	16.10%	16.68%	16.49%	16.49%	16%	16%	16%	16%	16.45%	16.45%	Data not available	16.29% Data not available
Operating Temperature	-40°C to 85°C	Agreed but not confirmed	-40°C to 85°C	-40°C to +85°C	Yes	-40°C to 85°C	-40°C to 85°C	Comply	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	Data not available	Data not available -40°C to 85°C Data not available
Type	Poly Crystalline	Agreed but not confirmed	Poly Crystalline	Poly Crystalline	Yes	Poly Crystalline	Poly Crystalline	Comply	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data not available	Poly Crystalline Data not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Front Glass	4mm or better tempered glass	Agreed but not confirmed	4mm or better tempered glass	3.2mm low iron toughened glass	Yes	4.00mm	4mm	Comply	Dotted tempered	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data not available	3.2 mm tempered glass Data not available
Frame	Anodized aluminum alloy	Agreed but not confirmed	Anodized aluminum alloy	Anodized aluminum alloy	Yes	Yes	Yes	Comply	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data not available	Anodized Aluminum alloy Data not available
Product Warranty	Atleast 10 years.	Agreed but not confirmed	10 years	10 Years	Yes	10 years	10 years	Yes	15 years	10 years	10 years	10 Years	10 Years	Data not available	10 years Data not available
Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	Agreed but not confirmed	61215 61730 61215	IEC 61215, IEC 61730, IEC 61730, EN 61215 EN 61730 EN 61730	Yes	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61701, 61730, 61215	Equivalent	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215, IEC 61730, UL 1703	IEC 61215, IEC 61730, UL 1703	A grade IEC / EU Data not available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716
Junction box	IP68 Rated	Agreed but not confirmed	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data not available	IP 68 Data not available
Connector	MC4 Compatible	Agreed but not confirmed	MC4	MC4	MC4	MC4	MC4	Yes	MC4	MC4	MC4	MC4	MC4	Data not available	MC4 Data not available
Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	Canadian	China	Canadian	China	China	Data not available	China Data not available
Total no. of Panels for the rated power.	Please Specify.	76	50 Nos.	76 pcs	102 Nos.	85 Nos.	80 Nos.	75	72x305 21 kw	105 Nos. x 310 Watts	N/A	85 Nos.	85 Nos.	20-24 kw	120 Data not available
Linear Performance Warranty.	20 to 25 years	Agreed but not confirmed	25 years	25 Years	Yes	25 years	25 Years	Comply	20 years	20 to 25 years	23 years	25 years	25 years	Data not available	20 years Data not available
Invertor				PSK2-21	RSI Grundfos	JINTECH	ADA SPI200-4T-022B	SPB822K-700 Solar Tech	INVT CHF-100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data not available	JFY Data not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Amperage	30 to 45 Amp	Brochure not available	30 to 45 Amp	33 Amp	Yes	42 Amp	45 Amp	42 Amp	40 Amp	45 Amp	Data Not Available	31 Amp	31 Amp	Data not available	45 Amp Data not available
Power	20 to 24 kw	Brochure not available	20 to 24 kw	21 kw	22 kw	22 kw	22 kw	30 kw	24 kw	22 kw	Data Not Available	15 kw	15 kw	Data not available	22 kw Data not available
Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	Yes	380 to 415 Vac	380 to 415 Vac	Comply	3 Phase 370 to 385 Vac	3 Phase 370 to 385 Vac	Data Not Available	3 Phase 400 vac	3 Phase 400 vac	Data not available	3 Phase 380 vac Data not available
Input	340to 650 Vdc	Brochure not available	340to 750 Vdc	350 to 850 Vdc	Yes	460 to 880 Vdc	500 to 540 Vdc	Comply	350to 700 Vdc	450 to 750 vdc	Data Not Available	380 to 650 vdc	380 to 650 vdc	Data not available	250-900 vdc Data not available
MPPT	Inbuilt	Brochure not available	In Built	In built	Yes	Yes	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data not available	Inbuilt Data not available
Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	In built for over current, over load, anti-lightening etc.	Inbuilt	Yes	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Yes	Yes	Over current over load anti lightening	Yes	Data Not Available	IP 20	IP 20	Data not available	Inbuilt Data not available
Efficiency	95% or more.	Brochure not available	95 %+	98%	Yes	98%	97%	Yes	95%	95%+	Data Not Available	98%	98%	Data not available	98% Data not available
Country of Origin	Please Specify	Brochure not available	China	German Brand made in China	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data not available	China Data not available
Warranty	Two years minimum	Brochure not available	Two Years	2 years	Yes	2 years	2 years	Comply	2 years	2 years	Data Not Available	2 years	2 years	Data not available	2 years Data not available
ables & Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.90%	Yes	99.9% Copper	99.90%	Yes	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data not available	99.9% with uv Prot. Data not available
rounding Kit	Standard	Brochure not available	Yes	Yes	Yes	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data not available	Standard Data not available

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
ter out let & essories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	5" Steel iron pipe	Yes	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	Steel pipes	Steel pipes	Data not available	5" steel pipe Data not available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI structure	Yes	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust Free coated	Rust Free coated	Data not available	Rust Free coated Data not available
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for inverter, switches, junction box etc.	Data Not Available	Yes	GI Plate	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inverter	Rust Free coated of Iron & GI with environment protection for inverter	Data not available	Powder coated rust free mounting plate/box
Execution of Tubewell bore, casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Yes	Yes	Yes	Yes	Yes	--do--	Yes	Agreed	Yes	Yes	Data not available	As per requirement

ATA-U-REHMAN MARI

DIRECTOR
AGRICULTURE ENGINEERING SINDH
HYDERABAD
CHAIRMAN

MUSARRAT MOKHTAR

DEPUTY DIRECTOR (INSPECTION)
INDUSTRIES DEPARTMENT KARACHI
MEMBER

SHAKIL AHMED RAHEMOON

DIRECTOR WATER MANAGEMENT
HYDERABAD DIVISION
MEMBER

SAIFULLAH MAGSI

ADDITIONAL DISTRICT ACCOUNTS OFFICER-
i, DAO OFFICE
HYDERABAD
MEMBER

FARRUKH RASHEED ANSARI
DEPUTY DIRECTOR (MECH)

AGRICULTURE ENGINEERING SINDH HYDERABAD
MEMBER/ SECRETARY

COMPARISON OF TECHNICAL DATA (SUBMERSIBLE PUMP 250 FT.)

Delivery Size : 5"

Capacity : 400,000 L/day (Min)

Depth : 250 ft.

Rated Power : 28 to 32 kw ±10%

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Submersible Pump (Make & Model)		Flow Pak 7FMC/5 MUTLUSU MSM6/40	Grundfos	C-SJ75-4 Lorentz	SP 77-8 BAQE Grundfos	XSP-77/7 MAXISU	KOMAX KM6400T KPS8-80/7	SPB625K-450 Solar Tech Outer dia 3"	Grundfos SP	ALK 8075/6 ALARKO	PSK12-25 C-SJ42-11-D Lorentz Germany	HVP 60-08+25HP HMA Pak	HVP 60-08+25HP HMA Pak	UK/Italian/German or Equivalent	DAB 40NP
Rated Power	28 to 32 Kw (±10%) both limits	30 kw	28 to 32 Kw (±10%) both limits	21 kw	30 kw	26 kw	28 kw	25 kw	30kw	30 kw	Data Not Available	18.65 kw	25 HP	32-40 kw	30 kw
Discharge Capacity	Average 400,000 Litre / day	Agreed but not confirmed	Average 400,000 Litre / day	402,000 Litre / day	478,320 Litre / day	400,000 Litre / day	540,000 Litre / day	260000 to 450000 L/d	400,000 Litre / day	440,000 Litre / day	Data Not Available	400,000 Litre / day	450,000 Litre / day	475,000 to 500,000	430,000 litre/day Data not available
Rated Speed	2700 – 3000 RPM	Agreed but not confirmed	2700 – 3000 RPM	1400-2850 rpm	2900 rpm	2900 rpm	2865 rpm	Data not available	3000 rpm	2700 – 2900 RPM	Data Not Available	2850 rpm	2850 rpm	Data not available	2830 rpm Data not available
Efficiency	More than 75%	Agreed but not confirmed	More than 75%	79%	Yes	84%	82%	Data not available	85%	73%	Data Not Available	75.65%	75.65%	Data not available	77.9% Data not available
Power factor	0.8 to 0.9	Agreed but not confirmed	0.8 to 0.9	0.87	0.9	0.85	0.86	Data not available	0.85%	0.8 to 0.9	Data Not Available	0.83	0.83	Data not available	0.85 Data not available
Voltage Tolerance	±5% to – 15%	Agreed but not confirmed	±5% to – 15%	±5% to – 10%	Yes	-6% to – 10%	±6% to – 10%	Data not available	±5% to – 15%	±5% to – 15%	Data Not Available	±6% to – 10%	±6% to – 10%	Data not available	±6% to – 10% Data not available
Protection Type	IP68 or Equivalent	Agreed but not confirmed	IP 68	IP 68	IP 68	IP 68	IP 68	IP 68	Data not available	IP 68	Data Not Available	IP 68	IP 55	Data not available	IP 68 Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Insulation Class	Y or better	F	F	F	F	F	F	Y	Data not available	Y	Data Not Available	Y	F	Data not available	F Data not available
Flange	NEMA or Equivalent	Agreed but not confirmed	NEMA	NEMA	Yes	NEMA	6" to 8" Nema	Comply	Data not available	NEMA	Data Not Available	NEMA	NEMA	Data not available	NEMA Data not available
Warranty	Atleast 1 year	Agreed but not confirmed	1 year	1 Year	Yes	1 year	1 year	1 Year	1 years	1 year	Data Not Available	1 year	1 year	Data not available	1 year Data not available
Country of Origin	Please Specify	Pump Pakistan Motor Turkey	Europe	German brand, made in china	Denmark	Turkey	UAE	China	Germany	Turkey	Germany	Europe Assemble in Pak	Europe Assemble in Pak	Data not available	Italy Data not available
lar Panels		LUX Power LNSE 315P	--	Ever Exceed ESM300-156	--	Jinko Solar 255-270	JKM320PV Jinko Solar	Ulica Solar UL-310P-72	Canadian Solar CS6X-305P	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data not available	TPSP6U
Max. Power / No. of Panels	280 to 320 W	315 W	280 to 320 W	300 W	320 W Canadian Solar	320 W	320 W	310 W	305 Watt	310 W	255 to 265 W	260 W	260 W	Data not available 250/300 watt each	265 W Data not available
Optimum Operating Voltage	35 to 37 V	36.1 V	35 to 37 V	38 V	36.8 V	37.4 V	37.4 V	36.7 V	35-36.5 Volts	36.3	30.3 V	30.70 V	30.70 V	Data not available	30.8 V Data not available
Optimum Operating Current	7 to 9 Amp	8.31 Amp	7 to 9 Amp	7.89 A	8.69 Amp	8.56 Amp	8.56 Amp	8.45 A	8.4 Amps	8.55	8.87 Amp	8.51 Amp	8.51 Amp	Data not available	8.16 Amp Data not available
Module Efficiency	Atleast 16% or higher	15.50%	16.50%	16.10%	16.68%	16.49%	16.49%	16%	16%	16%	16%	16.01%	16.01%	Data not available	16.29% Data not available
Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to +85°C	Yes	-40°C to 85°C	-40°C to 85°C	Comply	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	Data not available	Data not available -40°C to 85°C

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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Type	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Yes	Poly Crystalline	Poly Crystalline	Comply	Poly Crystalline	Poly Crystalline	N/A	Mono Crystalline	Mono Crystalline	Data not available	Poly Crystalline Data not available
Front Glass	4mm or better tempered glass	Agreed but not confirmed	4mm or better tempered glass	3.2mm low iron toughened glass	Yes	4.00mm	4mm	Comply	Dotted tempered	4mm High tempered Glass	3.2 mm	3.2 mm tempered glass	3.2 mm tempered glass	Data not available	3.2 mm tempered glass Data not available
Frame	Anodized aluminum alloy	Anodized aluminum alloy	Anodized aluminum alloy	Anodized aluminum alloy	Yes	Yes	Yes	Comply	Anodized Aluminum	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Anodized Aluminum alloy	Data not available	Anodized Aluminum alloy Data not available
Product Warranty	Atleast 10 years.	10 years	10 years	10 Years	Yes	10 years	10 years	Yes	15 years	10 years	10 years	10 Years	10 Years	Data not available	10 years Data not available
Standards	IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent	IEC 61215 IEC 61731 IEC 61732	61215 61730 61215	IEC 61215, IEC 61730, IEC 61730, EN 61215 EN 61730 EN 61730	Yes	IEC 61215, IEC 61730	61701, 62716, 61215, 60068-2-68	IEC 61730 IEC 61215 IEC 61701	Equivalent	IEC 61701, IEC 62716, DIN 60068 – 2 – 68	IEC 61215 IEC 61730 IEC 61701	IEC 61215, IEC 61730, UL 1703	IEC 61215, IEC 61730, UL 1703	A grade IEC / EU Data not available	IEC 61701, EN 61730-1, EN 61730-2 IEC 62716
Junction box	IP68 Rated	IP 67	IP 68	IP 65	IP 67	IP 67	IP 67	IP 67	IP 68	IP 68	IP 65	IP 67	IP 67	Data not available	IP 68 Data not available
Connector	MC4 Compatible	MC4	MC4	MC4	MC4	MC4	MC4	Yes	MC4	MC4	MC4	MC4	MC4	Data not available	MC4 Data not available
Country of Origin	Please Specify.	China	China	China	Canada	China	China	China	Canadian	China	Canadian	China	China	Data not available	China Data not available

Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total no. of Panels for the rated power.	Please Specify.	50 pcs	50 Pcs	76 pcs	102 Nos.	119 Nos.	126 Nos.	120	72x305 44 kw	165 Nos. x 310 Watts	N/A	105 Nos.	105 Nos.	20-24 kw	198 Data not available
Linear Performance Warranty.	20 to 25 years	25 years	25 years	25 Years	Yes	25 years	25 Years	Comply	20 years	20 to 25 years	23 years	25 years	25 years	Data not available	20 years Data not available
Invertor				PSk2-25	RSI Grundfos	JINTECH	ADA SPI2004T04 0B	SPB625K- 450 Solar Tech	INVT CHF- 100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data not available	JFY Data not available
Amperage	55 to 75 Amp	Brochure not available	55 to 75 Amp	40 Amp	Yes	57 Amp	70 Amp	67 Amp	70 Amp	60 Amp	Data Not Available	38 to 45 Amp	38 to 45 Amp	Data not available	91 Amp Data not available
Power	28 to 32 kw	Brochure not available	28 to 32 kw	25 kw	30 kw	30 kw	40 kw	30 kw	32 kw	30 kw	Data Not Available	22 kw	22 kw	Data not available	45 kw Data not available
Output	3 Phase 370 to 385 Vac	Brochure not available	3 Phase 370 to 385 Vac	380 to 415 Vac	Yes	380 to 415 Vac	380 to 415 Vac	Comply	3 Phase 340 Vac	3 Phase 370 to 385 Vac	Data Not Available	3 Phase 400 vac	3 Phase 400 vac	Data not available	3 Phase 380 vac Data not available
Input	340to 650 Vdc	Brochure not available	340 to 750 Vdc	350 to 850 Vdc	Yes	460 to 880 Vdc	500 to 540 Vdc	Comply	340 to 700 Vdc	450 to 750 vdc	Data Not Available	380 to 650 vdc	380 to 650 vdc	Data not available	250-900 vdc Data not available
MPPT	Inbuilt	Brochure not available	Inbuilt	In built	Yes	Yes	Inbuilt	Yes	Inbuilt	Inbuilt	Data Not Available	Inbuilt	Inbuilt	Data not available	Inbuilt Data not available
Protection	In built for over current, over load, anti-lightening etc.	Brochure not available	In built for over current, over load, anti-lightening etc.	Inbuilt	Yes	Dry port. Tankful PV reserve polarity, short circuit overload over temp,	Yes	Yes	Over current over load anti lightening	Yes	Data Not Available	IP 20	IP 20	Data not available	Inbuilt Data not available
Efficiency	95% or more.	Brochure not available	95 %+	98%	Yes	98%	97%	Yes	95%	95%+	Data Not Available	98%	98%	Data not available	98% Data not available

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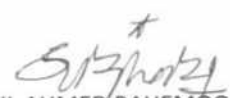
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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Country of Origin	Please Specify	Brochure not available	China	German Brand made in China	Denmark	China	China	China	China	China	Data Not Available	Europe	Europe	Data not available	China Data not available
Warranty	Two years minimum	Brochure not available	Two Years	2 years	Yes	2 years	2 years	Comply	2 years	2 years	Data Not Available	2 years	2 years	Data not available	2 years Data not available
Cables & Wires	99.9% Copper UV Protection of matching configuration.	Brochure not available	Yes	99.90%	Yes	99.9% Copper	99.90%	Yes	99.9% with uv Prot.	Yes	Data Not Available	99.9% copper	99.9% copper	Data not available	99.9% with uv Prot. Data not available
Grounding Kit	Standard	Brochure not available	Yes	Yes	Yes	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data not available	Standard Data not available
Water out let & accessories	5" HDPE or M/s Steel Pipes	Brochure not available	Yes	5" Steel iron pipe	Yes	5" HDPE	5" GI Pipe	HDPE	Steel Pipe	5" HDPE	Data Not Available	Steel pipes	Steel pipes	Data not available	5" steel pipe Data not available
Mounting Structures	Rust free powdered coated.	Agreed but not confirmed	Yes	GI structure	Yes	Yes	Yes	Yes	Rust Free	Yes	N/A	Rust Free coated	Rust Free coated	Data not available	Rust free Data not available


Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s K.K. B. Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for inverter, switches, junction box etc.	Data Not Available	Yes	GI Plate	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inverter	Rust Free coated of Iron & GI with environment protection for inverter	Data not available	Powder coated mounting plate/box
Execution of Tubewell bore, casing & excavation with necessary support structures & pipping	Yes as per requirement of Solar Pump at specified depth.	Data Not Available	As per requirement of Solar Pump at specified depth	Yes	Yes	Yes	Yes	Yes	--do--	Yes	Agreed	Yes as per req.	Yes	Data not available	As per req.


ATTA-U-REHMAN MARI
 DIRECTOR
 AGRICULTURE ENGINEERING SINDH
 HYDERABAD
CHAIRMAN


MUSARRAT MOKHTAR
 DEPUTY DIRECTOR (INSPECTION)
 INDUSTRIES DEPARTMENT KARACHI
MEMBER


SHAKIL AHMED RAHEMOON
 DIRECTOR WATER MANAGEMENT
 HYDERABAD DIVISION
MEMBER


SAIFULLAH MAGHSI
 ADDITIONAL DISTRICT ACCOUNTS OFFICER-
 i, DAO OFFICE
 HYDERABAD
MEMBER


FARRUKH RASHEED ANSARI
 DEPUTY DIRECTOR (MECH)
 AGRICULTURE ENGINEERING SINDH HYDERABAD
MEMBER/ SECRETARY

GOVERNMENT OF SINDH



FINANCIAL OFFER

PRE-QUALIFICATION OF CONTRACTORS FOR INSTALLATION OF SOLAR WATER PUMP / TUBEWELL IN SINDH 2016-17.

Name of Tender:	TENDER NOTICE NO. DAE/Stores-966/2145/16 DATED: 07.11.2016 Pre- Qualification Documents for Installation of Solar Water Pump / Tubewells in Sindh.
Name Project /Scheme:	"Provision of Solar Water Pump / Tubewells on Subsidized Rates to Farmers in Sindh".
Name of Department :	Agriculture, Supply & Prices Department
Name of Procuring Agency :	Director Agriculture Engineering Sindh Hyderabad
Date of Submission	05-04-2017 upto 11:30 AM
Date of Opening	05-04-2017 upto 12:00 Noon
Place of Opening	Directorate, Agriculture Engineering Sindh, Block B Shahbaz building, Hyderabad. Phone # 022-9200059 / 9200061.
Bid Security	1% of bid offer in the shape of demand draft / Pay order in favour of Directorate, Agriculture Engineering Sindh Hyderabad



ATTACHMENT REQUIRED

CHECK LIST

1. NTN CERTIFICATE
2. SALES TAX CERTIFICATE
3. SINDH REVENUE BOARD (SRB) REGISTRATION CERTIFICATE
4. BANK STATEMENT OF LAST 03 YEARS
5. BANK CERTIFICATE OF FINANCIAL STABILITY
6. SIGNED COPY OF INTEGRITY PACT
7. BID SECURITY AS PER ITEM 2 OF TOR
8. CONFIRMATION FOR PERFORMANCE SECURITY AS PER ITEM 3 OF TOR

IMPORTANT NOTE

Bidders are required to use provided financial document, any other format would not be considered.



TERMS & CONDITION

- 1) All rates of Installation of Solar Water Pump / Tubewell will be on turnkey basis.
- 2) Bid security amount 1% of the bid price in shape of bank draft / pay order in favour of Director, Agriculture Engineering Sindh, having a validity period of 28 days beyond bid validity.
- 3) Performance security 10% of the total Contract price in shape of Bank draft / Pay order / Bank Guarantee in favour of Director Agriculture Engineering Sindh having valid upto 90 days beyond the date of completion of contract. (To be submitted after award of contract).
- 4) Firms are required to be registered with Sindh Revenue Board having NTN & SNTN and all the Provincial as well as Federal Taxes and Duties would be borne by the Supplier.
- 5) Solar Water Pump / Tubewell will be installed with the brand new material, machinery & equipment with good quality verified by departmental verification committee.
- 6) No conditional Bid would be accepted.
- 7) The firm will be responsible for installation of Solar Water Pump / Tubewell in prescribed time, after receiving of allotment order.
- 8) The Firm will sign an assignment agreement with farmer and department on Rs. 100/- Judicial Stamp paper and will submit to department before starting the installation work.
- 9) The Government share will be paid to installation firm in three installation against the submitted bills of firm through District Accounts Officer Hyderabad. The payment of subsidy will be made in three installments.
 - a. 1st Installment 10% at bore completion / testing of water.
 - b. 2nd Installment 40% at Supply of Equipment & Machinery at Site.
 - c. 3rd Installment 30% at completion of Installment & Operationalization / testing / Verification.
- 10) The farmer cost share of 20% would be provided to the installing firm with the work order.
- 11) The scheme would be announced on print media and application would be collected accordingly.
- 12) The Departmental inspection committee will inspect the material, installation process and completion of work.
- 13) The Rates offered remain valid till 30.06.2017.
- 14) For the orders of more than 2.50 Million an integrity pact is required to be executed in pursuance of SPPRA Rule 89 (Sample attached).

**SIGNATURE & STAMP
OF CONTRACTOR**



NOTICE NO. DAE/Stores-966/2145/16 DATED: 07.11.2016

FINANCIAL PROPOSAL

Sr. No.	Description	Cost of Equipment & Accessories	Cost of Installation & Services	GST on Cost of Equipment	Sindh Sales Tax on installation & Services	Income Tax	Total Cost	Qty Firm willing to install	Total Amount
SOLAR POWER WATER LIFT PUMP									
1	Water Pump 6"x8" to 8"x8" Suction pipe upto 50 ft. Capacity minimum 650000 L/P/day, Built on Iron frame with Solar Panels minimum of 12kw.								
SOLAR WATER PUMP / TUBE WELLS									
2	Delivery 5" inch, Depth 100 ft. Capacity minimum 500,000 L/P/day, Water Pump / Submersible Pump with Solar Panels minimum of 15kw Allied piping & civil work.								
SOLAR WATER PUMP / TUBE WELLS									
2	Delivery 5" inch, Depth 150 ft. Capacity minimum 450,000 L/P/day, Water Pimp / Submersible Pump with Solar Panels minimum of 22kw Allied piping & civil work.								
SOLAR WATER PUMP / TUBE WELLS									
4	Delivery 5" inch, Depth 250 ft. Capacity minimum 400000 L/P/day, Water Pump / Submersible Pump with Solar Panels minimum of 30kw Allied piping & civil work.								
							TOTAL BID VALUE		
							Amount of Bid Security 1% of Bid Amount		

*All rates are inclusive of taxes.
Bidders are required to fill this profoma, any other
Format would not be entertained.*

**SIGNATURE & STAMP
OF CONTRACTOR**



Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

Contract Number: _____

Dated: _____

Contract Value: _____

Contract Title: _____

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, _____
[Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[Name of Supplier/Contractor/Consultant] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

Notwithstanding any rights and remedies exercised by PA in this regard, _____
[Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by _____
[Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

[Supplier /Contractor/Consultant]

MINUTES OF THE MEETING OF PROCUREMENT COMMITTEE HELD ON 16.03.2017 AT 01:00 PM UNDER THE CHAIRMANSHIP OF DIRECTOR, AGRICULTURE ENGINEERING SINDH HYDERABAD IN THE COMMITTEE ROOM OF DIRECTORATE, AGRICULTURE ENGINEERING SINDH TO EVALUATE THE PRE-QUALIFICATION DOCUMENT FOR THE PREQUALIFICATION OF CONTRACTORS FOR THE INSTALLATION OF SOLAR WATER PUMP / TUBEWELLS IN SINDH AGAINST TENDER NO. DAE/STORES-966/2145/16 DATED 07.11.2016

Meeting started with the name of Almighty Allah.

List of participants attached.

The Chairman welcomed all the participants of the meeting and asked the Member / Secretary to brief the participants about the agenda of the meeting, after briefing the procurement committee evaluated the pre-qualification document and after detail evaluation of the offered bids and examining the extension of bid validity, the procurement committee as under:-

1. M/S FLOW PAK PUMP INDUSTRIES PVT. LTD. LAHORE

M/s Flow Pak Pump Industries Pvt. Ltd. Lahore has not indicated the details of similar nature work and performance certificate from Government and Private Sector Organizations whom they supplied and install Solar Water Tubewells, which is a requirement for shortlisting in the pre-qualification document, They have also not provided vital data essentially required to evaluate the technical performance of their offered products such as efficiency of pumps, power factor, voltage tolerance, type of flange and warranties, whereas for Solar Panel vital specification like operating voltage, optimum operating current, module efficiency, operating temperature, type of panels, thickness of front glass, type of frame, International standards etc. are not available, the procurement committee after detailed evaluation decided to declared the application of M/s Flow Pak as Not Qualified.

2. M/S PAK OASIS INDUSTRIES PVT. LTD. KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s Pak Oasis Industries is meeting all necessary requirements and declared them as Pre-qualified.

3. M/S EBR ENERGY PVT. LTD. LAHORE

The Procurement Committee observed that the application for the pre-qualification of M/s EBR Energy Pvt. Ltd. Lahore is meeting all necessary requirements and declared them as Pre-qualified.

4. M/S NIZAM ENERGY PVT. LTD. KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s Nizam Energy Pvt. Ltd. Karachi is meeting all necessary requirements and declared them as Pre-qualified.

5. M/S K. K. B. KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s K.K.B. Karachi is meeting all necessary requirements and declared them as Pre-qualified.

6. M/S SMART INTERNATIONAL, QUETTA

The Procurement Committee observed that the application for the pre-qualification of M/s Smart International, Quetta is meeting all necessary requirements and declared them as Pre-qualified.

7. M/S SAZTEL PVT. LTD. KARACHI

Procurement Committee observed that, the firm is not registered with Sindh Revenue Board as per requirement of SPPRA and tender documents, firm has also not submit certificate from the original manufacturer regarding nomination of the bidder as authorized dealer / agent, even name & address of the manufacturer is not found. Firm also not committed for After Sales Service, International IEC / EU / USD / DIN standard and warranty obligations are also not committed the procurement committee declares the application of M/s Saztel Pvt Ltd. Karachi as Not Qualified.

8. M/S GLOBAL BUSINESS SERVICE, KARACHI

The Procurement Committee observed that the application for the pre-qualification of M/s Global Business Service, Karachi is meeting all necessary requirements and declared them as Pre-qualified.

9. M/S CATKIN ENGINEERING SALES & SERVICE, ISLAMABAD

The Procurement Committee observed that the application for the pre-qualification of M/s Catkin Engineering Sales & Service, Islamabad is meeting all necessary requirements and declared them as Pre-qualified.

10. M/S RENEWABLE ENERGY, ISLAMABAD

The Procurement Committee observed that vital technical specification are not in line with the requirement of document. The procurement committee also observed that the firm not extended their bid validity, hence the firms has dropped out of the evaluation and could not be qualified.

11. M/S ZAHRA COMMUNICATION, KARACHI.

The Procurement Committee observed that the firm has also not extended their bid validity, hence dropped out of the evaluation and could not be qualified.

12. M/S YASEEN PRIVATE LIMITED, KARACHI.

The Procurement Committee observed that the firm has also not extended their bid validity, hence dropped out of the evaluation process and could not be qualified.

13. M/S ORIENT WATER TECHNOLOGIES, KARACHI.

The Procurement Committee observed that, the technical offer of M/s Orient Water Technologies lacks almost every vital information and also not extended their bid validity. Hence dropped out of the evaluation process and could not be qualified.

14. M/S TESLA INTERNATIONAL, ISLAMABAD.

The Procurement Committee observed that, firm has not extended their bid validity. Hence dropped out of the evaluation process and could not be qualified.

The Procurement committee further advice the department to inform all participants regarding their pre-qualification status as per provision of relevant SPPRA Rules, and issue letter of pre-qualification to qualified firms for submitting their financial offers.

The meeting ended with vote of thanks.




MEMBER / SECRETARY
PROCUREMENT COMMITTEE

NO. DAE/STORES-966/ 473 /17

Dated: 17/03/2017.




C.C. to:

- The Director General Agricultural Engineering & Water Management Sindh, Hyderabad for kind information.
- The Additional Secretary (Tech) Agriculture Department Government of Sindh Karachi for kind information.
- PS to Secretary Agriculture Department Government of Sindh, Karachi for kind information.
- Member Procurement Committee _____ (All).



MEMBER / SECRETARY
PROCUREMENT COMMITTEE

**LIST OF MEMBERS OF PROCUREMENT COMMITTEE PARTICIPATED
FOR THE TECHNICAL EVALUATION OF PRE-QUALIFICATION
DOCUMENT FOR THE YEAR 2016-17, IN THE COMMITTEE ROOM OF
DIRECTOR, AGRICULTURE ENGINEERING SINDH HYDERABAD ON
16.03.2017 AT 01:00 PM UNDER ADP SCHEME "PROVISION OF SOLAR
WATER PUMP / TUBEWELL ON SUBSIDIZED RATES TO FARMERS IN
SINDH"**

S. #.	NAME	DESIGNATION	SIGNATURES
01	ATTA-U-REHMAN MARI	Director, Agriculture Engineering Sindh, Hyderabad	IN CHAIR
02	SHAKIL AHMED RAHEMOON	Director, Water Management, Hyderabad Division MEMBER	
03	SAIFULLAH MAGSI	Additional District Accounts Officer-1 District Accounts Office, Hyderabad MEMBER	
04	MUSARRAT MOKHTAR	Deputy Director (Inspection) Industries & Commerce Department, Government of Sindh, Karachi MEMBER	
05	ENGR. FARRUKH RASHEED ANSARI	Deputy Director (Mech) Agriculture Engineering Sindh Hyderabad MEMBER / SECRETARY	

LIST OF PRE-QUALIFIED FIRMS FOR YEAR 2016-17
FOR THE INSTALLATION OF SOLAR WATER PUMP /
TUBEWELLS TO FARMERS IN SINDH

Sr. No.	Name of firm
1.	M/s Nizam Energy Pvt. Ltd. Karachi
2.	M/s EBR Energy Pvt. Ltd. Lahore
3.	M/s K.K.B., Karachi.
4.	M/s Catkin Engineering Sales & Service, Islamabad.
5.	M/s Global Business Service, Karachi
6.	M/s Smart International, Quetta.
7.	M/s Pak Oasis Industries Pvt. Ltd. Karachi.



022-9200059

**DIRECTORATE
AGRICULTURE ENGINEERING
SINDH HYDERABAD**

No: DAE/Stores-967/ ³⁴⁴ /17
Hyderabad dated: 28/02/2017

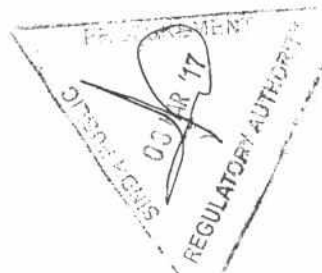
To,

➔ The Manager A&F,
SPPRA Sindh,

Subject: EXTENSION OF BID VALIDITY FOR THE SCHEME INSTALLATION OF TUBE WELL ON 50% SUBSIDY TO FARMERS IN SINDH PHASE II SPPRA SR# 30454.

In continuation of this office letter No. DAE/TIC/264/17 dated: 16/02/2017 and as per provision of SPPRA rule 38 sub rule (2) the competent authority extended the bid validity of the following scheme for further 90 days vide letter No. 13(347)SO(DEV)/Engg dated: 27/02/2017.

S#	Name of Scheme	Tender No. & Date	SPPRA SR#
1	Subsidy Assistance on Agriculture Implements for Farm Mechanization Phase II	DAE/Stores-967/2146/16 dated; 07/11/2016	30456
2	Replacement of Earth Moving Machinery Phase III.	DAE/Stores-965/2070/16 dated; 28/10/2016	30327
3	Installation of Tubewell on 50% Subsidy to Farmers in Sindh Phase II.	DAE/TIC/2147/16 dated; 07/11/2016	30454
4	Provision of Solar Water Pump /Tubewell on Subsidized Rates to Farmers in Sindh	DAE/Stores-966/2145/16 dated; 07/11/2016	30476




DEPUTY DIRECTOR (HQ)
AGRICULTURE ENGINEERING
SINDH HYDERABAD

C.C to the:-

- The Director General, Agriculture Engineering & Water Management Sindh Hyderabad for kind information.
- Additional Secretary (Tech), Agriculture Supply & Prices Department, Government of Sindh, Karachi for kind information.
- The Director Agriculture Engineering Sindh Hyderabad for kind information.

/

DEPUTY DIRECTOR (HQ)
AGRICULTURE ENGINEERING
SINDH HYDERABAD

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Tenders * Serial No.
Text
Evaluation Reports Tender Title
Black Listed Firms SPPRA ID , submit Advance Search
Committee Advertise Date
Sample Documents Closing Date
Policy Instructions City

1 Page 1 Documents Viewed 952931

Review Panel	S.No.	SPPRA ID	Tender Title	Download	Uploaded On	Advertised On	Closing On	Corrigendum	Comments
Capacity Building			Agriculture Engineering						
Downloads	30476	SPPRA ID WITH SLD	Sindh Hyderabad NT WITH SBD <i>Solar</i>	↓	14-11-2016	14 Nov 2016	01 Dec 2016		BLR, CS, TER, AHC Required
Gallery			Agriculture Dept. On Farm Water Management						
Notifications	30477	SPPRA ID WITH SLD	Sindh Hyderabad NT WITH SBD	↓	14-11-2016	14 Nov 2016	01 Dec 2016		BLR, CS, TER, AHC Required
Procurement Plans			Agriculture Dept. On Farm Water Management						
Site Statistics	30484	SPPRA ID WITH SLD	Sindh Hyderabad NT WITH SBD	↓	14-11-2016	14 Nov 2016	30 Nov 2016		BLR, CS, TER, AHC Required
Login			Agriculture Engineering						
	30484	SPPRA ID WITH SLD	Sindh Hyderabad NT WITH SBD <i>Tubewell</i>	↓	11-11-2016	10 Nov 2016	01 Dec 2016		BLR, CS, TER, AHC Required
Users Online 6 02-Aug-16 Update	30455	SPPRA ID WITH SLD	Sindh Hyderabad NT WITH SBD <i>Implement</i>	↓	11-11-2016	10 Nov 2016	01 Dec 2016		BLR, CS, TER, AHC Required
Policy Letter Added 01 Aug	30366	SPPRA ID WITH SLD	Sindh Agriculture University Tendopar NT WITH SBD	↓	08-11-2016	07 Nov 2016	22 Nov 2016		BLR, CS, TER, AHC Required
	30322	SPPRA ID WITH SLD	Agriculture Engineering Sindh Hyderabad NT WITH SBD <i>Bulldozer</i>	↓	03-11-2016	02 Nov 2016	01 Dec 2016		BLR, CS, TER, AHC Required