Bid Evaluation Report

Name of Procuring Agency

Agriculture, Supply & Prices Department, Government of Sindh, through Directorate Agriculture Engineering, Sindh, Hyderabad

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

PROCUREMENT OF:-

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

As per Sindh Public Procurement Regulatory Authority Rules 2010.(amended 2013)

Tender Published

Tender Notice was published in Newspapers:-

 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:-

- 1. M/s Pak Oasis Industries Pvt. Ltd. Karachi
- 2. M/s EBR Energy Pakistan Pvt. Ltd. Lahore
- 3. M/s Nizam Energy Pvt. Ltd. Karachi
- 4. M/s Tesla Industries Pvt. Ltd. Islamabad
- 5. M/s K.K. B Karachi
- 6. M/s Orient Energy System Pvt. Ltd. Karachi
- 7. M/s Zahra Communication Pvt. Ltd. Karachi
- 8. M/s Smart International, Quetta
- 9. M/s Density Drilling, Karachi
- M/s Saztel Pvt. Ltd. Karachi
- M/s Spindle & Looms Pvt. Ltd. Lahore
- 12. M/s Catkin Sales & Service, Islamabad
- 13. M/s Renewable Energy Pvt. Ltd. Peshawar
- 14. M/s Jilaniz, Karachi
- 15. M/s Orient Water Technologies, Karachi
- M/s Yaseen Pvt. Ltd. Karachi.
- M/s Flow Pak Pvt. Ltd. Lahore
- M/s Global Business Service, Karachi.

Total Bids Received:

(16) bids documents were submitted by the following firms:-

- M/s Pak Oasis Industries Pvt. Ltd. Karachi
- M/s EBR Energy Pakistan Pvt. Ltd. Lahore
- 3. M/s Nizam Energy Pvt. Ltd. Karachi
- 4. M/s Tesla Industries Pvt. Ltd. Islamabad
- M/s K.K. B Karachi.
- M/s Orient Water Technologies, Karachi
- 7. M/s Zahra Communication Pvt. Ltd. Karachi
- 8. M/s Smart International, Quetta

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- 9. M/s Density Drilling, Karachi
- 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
- 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
- M/s K.K.B., Karachi.
- 4. M/s Catkin Engineering Sales & Service, Islamabad.
- M/s Global Business Service, Karachi
- 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	Nan	me of Firm or Bidder	Cost offered by the Bidder	Ranki ng in terms of cost	Comparison with Estimated cost	Reasons for acceptance/ rejection	Remarks
0		1	2	3	4	5	6
SO	LAR WA	TER PUMP LIFT PUM	MP 6x8 to 8x	8 inche	es		
1.		M/s EBR Energy Pakistan Pvt. Ltd. Lahore	Rs. 2,334,244	lst 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.	10 11 21
3	Solar Water	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	Pump / Lift Pump	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.	S 31 4
SOL	AR WA	TER PUMP 100 FT. 5	" Inch Deliv	ery			
1.		M/s Global Business Service, Karachi	Rs. 2,962,345	lst 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.	Solar Water	M/s K.K.B. Karachi	Rs. 3,680,043	3 rd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	-
4.	Pump 100 ft.	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.	**
SOL	AR WA	TER PUMP 150 FT. 5	" Inch Deliv	ery		11	
1.	Solar Water	M/s Global Business Service, Karachi	Rs. 4,009,223	lst Lowest	Lower then the estimated unit cost	Accepted as Lowest Evaluated bid.	
2.	Pump 150 ft.	M/s Smart International Quetta	Rs. 4,305,197	2 nd Lowest	Lower then the estimated unit	Rejected as higher bid.	(44)

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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.	**
SO	LAR WA	TER PUMP 250 FT. 5	" Inch Deliv	ery			
1.		M/s Smart International Quetta	Rs. 5,420,959	Ist Lowest	Lower then the estimated unit cost	Accepted as Lowest Evaluated bid.	New Control
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.	Solar Water	M/s K.K.B. Karachi	Rs. 6,412,648	3 rd Lowest	Lower then the estimated unit cost	Rejected as higher bid.	
4.	Pump 250 ft.	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

(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

(SHAKIL AHMED RAHEMOO

DIRECTOR

Water Management, Sindh Hyderabad

MEMBER

(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:

 Director, Agriculture Engineering Sindh, Hyderabad.

Chairman

 Director, Sindh On Farm Water Management, Hyderabad Division.

Member

 Representative of Industries & Commerce Department, Government of Sindh, Karachi

Member

 District Accounts Officer / Representative of District Accounts Officer, Hyderabad.

Member

 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 Managoment Sindh, Hyderabad.

All Members of Committee.

(ABDUL AXIZ 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.

-	Director General, Agricultural Engineering & Water Management Sindh, Hyderabad.	Chairman
2-	Mr. Ghulam Rasool Akhund	Member
	(An Independent Professional)	
}-	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.
- 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. Annual in whole or in part, any authorized act or decision of the procurement committee: and
 - 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.
- 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

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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

			Estimated			Source of		Timi	ng of Pr	ocurem	ent	KS. III IVIIIIOII
Sr. No.	Description of Procurement	Quantity (Where Applicable)	Unit Cost (Where Applicable)	Estimated Total Cost	Funds Allocated	Funds (ADP / Non-ADP	Proposed Procurement Method	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Remarks
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	1	~	-		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. 427.673 Million	Rs. 270.00 Million	ADP	Single Stage Two Envelope Procedure	-	~	1	-	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	-	-	1	~	All Procurement under SPPRA Rules and subjected to the approval of Scheme and release of funds.

DIRECTOR FURE ENGINEERING SINDH

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:-

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.

M/S PAK OASIS INDUSTRIES PVT. LTD. KARACHI

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

M/S EBR ENERGY PVT. LTD. LAHORE

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

M/S NIZAM ENERGY PVT. LTD. KARACHI

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

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

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

M/S SMART INTERNATIONAL, QUETTA

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

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 prequalification 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 prequalification 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 <u>not be</u> gualified.

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 <u>not</u> be qualified.

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 <u>not be</u> gualified.

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	5/2/m/21
03	SAIFULLAH MAGSI	Additional District Accounts Officer- District Accounts Office, Hyderabad MEMBER	WWW.
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	Last

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

ir.	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 Engineerin g Sales & Service, Islamabad	M/s Renewabl e 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. Islamabd
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 Internatio nal	Saztel Pvt. Ltd.	Global Business Services	Catkin Eng. Sales & Service	Renewable Energy Pvt. Ltd.	Zahra Communica tion Karachi	Yaseen Pvt. Ltd	Orient Water Technologie s 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 Badaruddi n & 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 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

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-			M/s Pak	M/s EBR	M/s	M/s K.K.	M/s Smart	M/s Saztel	M/s	M/s	M/s	M/s Zahra	M/s	M/s Orient	M/s Tesla
ir.	Information to be supplied	M/s Flow Pak Pump Industries, Lahore	Oasis Industries Pvt. Ltd. Karachi	Energy Pakistan Pvt. Ltd. Lahore	Nizam Energy System Pvt. Ltd. Karachi	B. Karachi	Int., Quetta	Pvt. Ltd. Karachi	Global Business Service, Karachi	Catkin Engineerin g Sales & Service, Islamabad	Renewabl e Energy Pvt. Ltd. Peshwar	Comm. Karachi	Yaseen Pvt. Ltd. Karachi	Water Tech. Karachi	Ind. Isl. Islamabd
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	wise List of IEC / EU / USA Standards wed 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	Qualified	Qualified	Qualified	Qualified	Qualified	<u>Dis-</u> qualified	Qualified	Qualified	Dis- qualified	<u>Dis-</u> qualified	<u>Dis-</u> qualified	<u>Dis-</u> gualified	<u>Dis-</u> qualified

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

MUSARRAT MOKHTAR DEPUTY DIRECTOR (INSPECTION) INDUSTRIES DEPARTMENT KARACHI SHAKIL AHMED RAHEMOON DIRECTOR WATER MANAGEMENT

SAIFULLAH MAGSI ADDITIONAL DISTRICT ACCOUNTS OFFICER-i, HYDERABAD DIVISION

DISTRICT ACCOUNTS OFFICE **HYDERABAD**

MEMBER

FARRUKH RASHEED ANSARI

DEPUTY DIRECTOR (MECH) AGRICULTURE ENGINEERING SINDH **HYDERABAD**

CHAIRMAN

MEMBER

MEMBER

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.	Water Tech. Karachi	M/s Tesla Ind Isl.
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Lift Po	ump (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	HMA Pump	NM- 80/250) CI- SP)+5.5w HMA Pump	Equivalent	DAB Pump KDN 80-16
3.	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 Dat Not Available
Э.	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	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	±5% to – 15%	Data Not Available	±5% to – 15%	±5% to –	±5% to - 10%	±6% to – 10%	±5% to - 15%	10% to ±2%	±5% to –	±5% to – 15% Data Not Available	Data Not Available	±6% to - 10%	±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	J 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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h. M/s Tesla Ind.	M/s Orient Water Tech. Karachi	M/s Yaseen Pvt. Ltd.	M/s Zahra Comm. Karachi	M/s Renewable Energy Pvt. Ltd. Karachi	M/s Catkin Engineering Sales & Service, Islamabad	M/s Global Business Service, Karachi	M/s Saztel Pvt. Ltd. Karachi	M/s Smart Int., Quetta	M/s K.K. B. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Pak Oasis Industries Pvt. Ltd. Karachi	M/s Flow Pak Pump Industries, Lahore	Specification	- Item
14	13	12	11	10	9	8	7	6	5	4	3	2	1		
e Data Not Available	Data Not Available	F	F	Data Not Available	F Data Not Available	Data Not Available	Y Data Not Available	Υ	F	F	F	F	F	Y or better	. Insulation Class
	Data Not Available	NEMA	NEMA	Data Not Available	NEMA Data Not Available	Data Not Available	Data Not Available	8" Nema	NEMA	ENGJL 250	NEMA	NEMA	Data Not Available	NEMA or Equivalent	Flange
Data Not	Data Not Available	1 year	1 year	Data Not Available	1 year	2 years	1 year	1 Year	One year	1 year	01 year	1 YEAR	Data Not Available	Atleast 1 year	Warranty
Data Not	Data Not Available	Europe Assemble in Pak	Europe Assemble in Pak	Germany	Turkey	Germany	China	Pump China & Pak Motor	Turkey	Denmark	German Brand, China made	EUROPE	Pump Pak Motor China / Czech Rep.	Please Specify	. Country of Origin
TPS6U	Data Not Available	Talesun Smart TP648M	Talesun Smart TP648M	Canadian Solar EIPS	TP672P Talesun	Canadian Solar	Ulica Solar UL-310P-72	JKM320PV Jinko Solar	Jinko Solar 255-270	Canadian Solar	Ever Exceed ESM 300- 156		LUX Power LNSE 315P		Solar Panels
	250 / 300 watt each	210 w	210 w	255 to 265 W	310 to 315 W	305 Watt	310 Watt	320 W	320 W	320 W	300 W	280 to 320W	315 W	280 to 320 W	Max. Power / No. of Panels
Data Not	Data Not Available	38.92 V	38.92 V	30.3 V	36.1 to 36.4 V	35.36 V	36.7 V	37.4 V	37.4 V	36.8 V	38V	35 to 37.5V	36.1 V	35 to 37 V	Optimum Operating Voltage
Data Not	Data Not Available	8.54 Amp	8.54 Amp	8.87 Amp	8.33 to 8.66 Amp	8.4 Amps	8.45	8.56 Amp	8.56 Amp	8.69 Amp	7.89A	7 to 9 Amp	8.31 Amp	7 to 9 Amp	Optimum Operating Current
Data Not	Data Not Available	16.45%	16.45%	16%	16%	16%	16%	16.49%	16.49%	16.68%	16.10%	16% to 16.5%	15.50%	Atleast 16% or higher	d. Module Efficiency
available	Data Not Available	- 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	e. Operating Temperature
25 p. 1	Data Not Available	Mono Crystalline	Mono Crystalline	N/A	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	Poly Crystalline	f. Type
No	Availa Data	85°C Mono	Mono	85°C	Poly	85°C Poly	85°C Poly	85°C Poly	85°C Poly	85°C Poly	85°C Poly	85°C Poly	85°C Poly		e. Temperature

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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
5.	Front Glass	4mm or better tempered glass	Agreed but not confirmed	4mm High Transmissio n 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
n.	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
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	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 68	IP 68	IP 65	IP 67	IP 67	Data Not Available	IP 68 Data Not available
i.	Connector	MC4 Compatible	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	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
0.	Linear Performance Wenty.	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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	ltem	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
	Invertor			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
œ.	МРРТ	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
00	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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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 Tesia Ind. Isi.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
n. 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 Structure	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



ltem	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	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.	Water Tech. Karachi	M/s Tesla Ind. Isi.
		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 tessary 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 requiremen t

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ATTA-U-REHMAN MARI DIRECTOR AGRICULTURE ENGINEERING SINDH

CHAIRMAN

MUSARRAT MOKHTAR
DEPUTY DIRECTOR (INSPECTION)
INDUSTRIES DEPARTMENT KARACHI

MEMBER

SHAKIL AHMED RAHEMOON

DIRECTOR WATER MANAGEMENT
HYDERABAD DIVISION

MEMBER

HIMINA

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 100 FT.)

Delivery Size : 5"

Capacity: 500,000 L/day (Min)

Depth: 100 ft.

Rated Power : 15 to 18 kw ±10%

Item		M/s Flow	M/s Pak	M/s EBR	M/s Nizam				**/- 61-1-1	M/s Catkin	M/s			M/s Orient	
	Specification	Pak Pump Industries, Lahore	Oasis Industries Pvt. Ltd. Karachi 2	Pakistan 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	Engineering Sales & Service, Islamabad	Renewable Energy Pvt. Ltd. Karachi 10	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	Water Tech. Karachi	M/s Tesla Ind. Isl.
Submersible Pu	ump (Make & Model)	Flow Pak 8FMC/2 MUTLUSU MSM620	Grundfos I		SP 77-4 BAQE Grundfos	XSP-95/3 MAXISU	KOMAX KM6 200T KPS8-80/3 Pump	SPB815K- 700 Solar Tech	Grundfos SP	0.1	5S75-3-D Lorentz	02+12.5HP	02+12.5HP	Equivalent	DAB SS7B3
ted Power		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	Market Street	15kw Data not available
charge (anacity	Average 500,000 Litre / day	Data not available	The state of the s		501,480 Litre / day	500,000 Litre / day	540,000 Litre / day	500,000 Litre / day	500,000 Litre / day	540,000 Litre / day				and the same	520,000 litre/day Data not available
ted Speed	2660 – 3000 RPM	Data not available			2900 rpm	2900 rpm	2850 rpm	Data not available	3000 rpm	2660 – 3000 RPM	Data Not Available	2850 rpm	12850 rnm	Data not available	2840 rpm Data not available
iciency	More than 75%	Data not available	75%+	79%	75%	81%	81%	Data not available	85%	75%+	Data Not Available	75.85%	/5 X5%	lavailable	77.9% Data not available
wer 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
oltage Tolerance	±5% to – 15%	Data not available		±5% to -	±5% to -	-6% to -	±6% to -	Data not available	±5% to – 15%	±5% to -15%	Data Not Available	±6% to - 10%		Data not available	±6% to – 10% Data not available
Ction 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
t	ed Power charge Capacity ed Speed ciency wer factor	Average 500,000 Litre / day ed Speed 2660 – 3000 RPM ciency More than 75% wer factor 0.8 to 0.9 Itage Tolerance ±5% to – 15%	Submersible Pump (Make & Model) Flow Pak 8FMC/2 MUTLUSU MSM620 15 to 18 Kw (±10%) both limits Charge Capacity Average 500,000 Litre / day Data not available ciency More than 75% Data not available ver factor 0.8 to 0.9 Data not available	Submersible Pump (Make & Model) Flow Pak 8FMC/2 MUTLUSU MSM620 and Power	Submersible Pump (Make & Model) Flow Pak 8FMC/2 MUTLUSU MSM620	Submersible Pump (Make & Model) Flow Pak 8FMC/2 MUTLUSU MSM620 Sed Power 15 to 18 Kw (±10%) 15 kw 15 to 18 Kw (±10%) 15 kw 15 kw	Submersible Pump (Make & Model) Flow Pak 8FMC/2 MUTLUSU MSM620 SP 77-4 BAQE Grundfos SP 77-4 BAQE Grundfos MAXISU	Submersible Pump (Make & Model)	Submersible Pump (Make & Model) Flow Pak 8FMC/2 MUTLUSU MSM620 To the pump (Make & Model) MSM620 To the pump (Make & Model) Soundfos MAXISU MSM8620 MSM620 To the pump (Make & Model) MSM620 To the pump (MSS8-80/3 Pump (MS	Submersible Pump (Make & Model)	Submersible Pump (Make & Model) Flow Pak & FMC/2 MUTLUSU MSM620 Grundfos C-SJ75-4 Lorentz SP 77-4 BAQE Grundfos MAXISU SP8815K-700 Solar Tech Pump MAXISU SP880/3 Pump SP80/3 Pump	Flow Pak SFMC/2 MUTLUSU MSM620 To the Pak SFMC/2 MUTLUSU MSM620 To the Pak SFMC/2 MUTLUSU MSM620 To the Pak September 15 to 18 kw (±10%) both limits To 18 kw (±10%) To 18 kw (±10	Submersible Pump (Make & Model) Sem	Submersible Pump (Make & Mode) Submersible Pump (Make & Mode)	Submersible Pump (Make & Model) Submersible Pump (Make & Model



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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 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
١.	Insulation Class	Y or better	F	F Class	F	F	F	E	Y Data not in brochure	Data not available	F	Data Not Available	Y	I V I	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
C.	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
So	lar 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
а.	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
ъ.	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.	Ognating 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	Karachi	M/s Smart Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	Engineering Sales & Service, Islamabad	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
Гуре	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	iron toughened	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		aluminum	Anodized aluminum alloy	Yes	Yes	Agreed but not confirmed	Anodized Aluminum	Anodized Aluminum alloy	CONTRACTOR STATES	Control of the second of	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
To o. 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
	Frame Product Warranty Standards Junction box Connector Country of Origin To o. of Panels	Front Glass 4mm or better tempered glass Anodized aluminum alloy Product Warranty Atleast 10 years. IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent Junction box IP68 Rated Connector MC4 Compatible Country of Origin Please Specify. Tcolo. of Panels Please Specify.	Item Specification Pak Pump Industries, Lahore 1 Type Poly Crystalline Poly Crystalline Front Glass Amm or better tempered glass Anodized aluminum alloy Product Warranty Atleast 10 years. 10 years IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent 61732 Junction box IP68 Rated IP 67 Connector MC4 Compatible MC4 Country of Origin Please Specify. 50 pcs	Item Specification Pak Pump Industries, Lahore Pvt. Ltd. Karachi 1 2 Type Poly Crystalline Poly Crystalline Poly Crystalline Poly Crystalline Front Glass Amm or better tempered glass Product Warranty Atleast 10 years. IEC 61701, IEC 62716, DIN 60068 – 2 – 68 or Equivalent 61732 61215 Junction box IP68 Rated IP 67 IP 68 Connector MC4 Compatible Mc4 MC4 Country of Origin Please Specify. So pcs 50 pcs	Item Specification Specification Pak Pump Industries, Lahore Pvt. Ltd. Karachi 1 2 3 Type Poly Crystalline	Item Specification Patent Paten	Specification Specification Poly Crystalline Poly Crystalline	Item Specification M/s Flow Pak Pump Industries Industries Industries Pvt. Ltd. Karachi Lahore Poly Crystalline 1 2 3 4 5 6	Specification Pak Pump Industries, Lahore Pak Pump Industries, Lahore Pvt. ttd. Karachi T Pvt. ttd. Karachi T Poly Crystalline P	Item Specification Specification Play Pump Industries, Lahore Play Pump Industries, Lahore Play Parkistan Play	Specification Product Warranty Atleast 10 years Anodized aluminum alloy Product Warranty Atleast 10 years 1	Renewable Rene	Mys Flow Pak Pum Industries Lahore Pak Pum Industries Lahore Pak Pum Industries Lahore Pak Pum Industries Lahore Pak Pum Industries Pak Ltd. Karachi Pak Ltd. Karachi Pak Ltd. Karachi Rarachi Pak Ltd. Karachi Rarachi Pak Ltd. Rarachi Pak Pum Pak Pak Pak Ltd. Pak Pum Pak	Remain	Hem Pake Pump Pa

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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 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
o 1	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	75 Vears	Data not available	20 years Data not available
	Invertor			Grundfos	PSk2-21	RSI Grundfos	JINTECH	ADA SPI200- 4T-018B	SPB815K- 700 Solar Tech	INVT CHF- 100A	HOBER	Lorentz	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 Amn	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/ 1	Data not	18.5 kw Data not available
G.	ou	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		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	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	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.
. Country of Origin	Please Specify	Brochure not available	2 China	German brand china	4 Denmark	China	China	China	China	9 China	Data Not Available	Europe	Furone	Data not	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 Vears	Data not	2 years Data not available
Cable: Vires	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 2	M/s EBR Energy Pakistan Pvt. Ltd. Karachi 3	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 10	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
	Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for invertor, 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 inventor	Rust Free coated of Iron & GI with environment protection for inventor	Data not	Powder coated mounting plate/box
	bore, casing & excavation with necessary support	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 requiremen t

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%

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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	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 Pu	ımp (Make & Model)	Flow Pak 8FMC/3 MUTLUSU MSM6/30	Grundfos I	Terretter of	SP 77-6 BAQE Grundfos	XSP-7715 MAXISU	KOMAX KM6250T PKS8-80/4	SPB822K- 700 Solar Tech	Grundfos SP	ALK 8075/4 ALARKO	5J75-4-D	05+15HP	05+15HP	UK/Italian/G erman or Equivalent	DAB 77SA5
Rated Power		22 KW		21 kw	22 kw	19 kw	20 kw		30 HP	18.5 kw	Data Not Available	15 HP	15 HP	20-24 kw	18.75 kw Data not available
Discharge Canacity		Data not available	450,000	CANCEL STATE	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		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		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 –	±5% to -	Yes	-6% to -	±6% to -	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	Υ	F	Data not available	F Data not available
	Submersible Pu Rated Power Discharge Capacity Rated Speed	Submersible Pump (Make & Model) Rated Power 20 to 24 Kw (±10%) both limits Average 450,000 Litre / day Rated Speed 2700 – 3000 RPM Efficiency More than 75% Power factor 0.8 to 0.9 Voltage Tolerance ±5% to – 15% Protection Type IP68 or Equivalent	Specification Pak Pump Industries, Lahore 1 Flow Pak 8FMC/3 MUTLUSU MSM6/30 22 kw	Submersible Pump (Make & Model) Pak Pump Industries Pvt. Ltd. Karachi 1 2 Flow Pak 8FMC/3 MUTLUSU MSM6/30 MUTLUSU MSM6/30 Grundfos MUTLUSU MSM6/30	Specification Specification Pak Pump Industries, Lahore Pvt. Ltd. Karachi 3 Tlow Pak Specification 1 2 3 Tlow Pak SpmC/3 MUTLUSU MSM6/30 Grundfos C-SJ75-4 Lorentz MSM6/30 C-SJ75-4 Lorentz C-SJ75-4 Lorentz MSM6/30 C-SJ75-4 Lorentz MSM6/30 C-SJ75-4 Lorentz MSM6/30 C-SJ75-4 Lorentz C-SJ75-4 Lo	Specification Specification Pak Pump Industries, Lahore Capacity Ltd. Karachi Submersible Pump (Make & Model) Submersible Pump (Ma	Note Note	New Specification Specification Pak Pump Industries, Lahore Pak Pump Industries, Lahor	Note Note	New Pack Pump New Pack Pump Industries Lahore Pack Pump Industries Lahore Pvt. ttd. Karachi Pvt. ttd. Karachi Vert. ktd. Ve	No. Pak Pump Industries Pak Pump Industries Pak Pump Industries Lahore Pak Pump Industries Lahore Pak Pump Industries Industries Pak Pump Industries Industri	Specification Specificatio	Note Note	No. Specification Specif	New Pack P



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	Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	Put Itel	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	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
ķ.	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
Sol	ar 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
a.	Magower / 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
b.	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
c.	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
d.	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
e.	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
f.	тур	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	System Pvt. Ltd. Karachi		Int., Quetta	Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	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
3.	Front Glass	4mm or better tempered glass	Agreed but not confirmed	better tempered	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
1.	Frame	Anodized aluminum alloy	Agreed but not confirmed	aluminum	Anodized aluminum alloy	Yes	Yes	Yes	Comply	Anodized Aluminum	Anodized Aluminum alloy	The fact of the second section and	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
	Staterds	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	61215.	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
Κ.	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
١.	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
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.	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
0.	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
	Nvertor				PSk2-21	RSI Grundfos	JINTECH	ADA SPI200 4T-022B	SPB822K- 700 Solar Techy	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	Energy Pvt. Ltd. Karachi	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
а.	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
g.	ME	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
۲.	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
ŋ.	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
***	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
Ca	bles & 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
Gı	ounding 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
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	I N/A	H122-2-5 1000-2-50	Rust Free coated		Rust Free coated Data not available
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	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inventor	Rust Free coated of Iron & GI with environment protection for inventor	Data not available	Powder coated rust free mounting plate/box
Execution of Tubewell bore, casing & excavation wit essary 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

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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 TONAL DISTRICT ACCOUN

ADDITIONAL DISTRICT ACCOUNTS OFFICER-

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		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	/	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 Canacity	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
2.	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	79%	Yes	84%	82%	Data not available	85%	73%	Data Not Available	75.65%	75.65%	Data not available	77.9% Data not available
е.	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	±5% to – 15%	Agreed but not confirmed	±5% to –	±5% to -	Yes	-6% to - 10%	±6% to – 10%	Data not available	±5% to - 15%	±5% to -15%	Data Not Available	±6% to - 10%	±6% to -	Data not available	±6% to – 10% Data not available
g.	Pr tion 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



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Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	Dut Itd I	M/s Nizam Energy System Pvt. Ltd. Karachi		111111111111111111111111111111111111111	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	Engineering	Renewable	M/s Zahra Comm. Karachi	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
Y or better	F	F	F	F	F	F	Υ	Data not available	Y	Data Not Available	Υ	F	Data not available	F Data not available
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
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
Please Specify	Pump Pakistan Motor Turkey	Europe	brand, made in	Denmark	Turkey	UAE	China	Germany	Turkey	Germany	Europe Assemble in Pak	Europe Assemble in Pak	Data not available	Italy Data not available
	LUX Power LNSE 315P	-	Ever Exceed ESM300-156		Jinko Solar 255-270			Canadian Solar CS6X- 305P	TP672P Talesun	Canadian Solar EIPS	Talesun Smart TP648M	Talesun Smart TP648M	Data not available	TPSP6U
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
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
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
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
- 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
	Y or better NEMA or Equivalent Atleast 1 year Please Specify 280 to 320 W 35 to 37 V 7 to 9 Amp Atleast 16% or higher	Specification Pak Pump Industries, Lahore 1 Y or better F NEMA or Equivalent Alleast 1 year Pump Pakistan Motor Turkey LUX Power LNSE 315P 280 to 320 W 315 W 35 to 37 V 36.1 V 7 to 9 Amp Atleast 16% or higher -40°C to 85°C -40°C to -40°C to	Specification Mys Flow Pak Pump Industries, Lahore Lux Power LNSE 315P	Specification M/s Flow Pak Pump Industries, Lahore Specification Specification	Specification	New New	Specification M/s Now Pak Pump Industries, Lahore Put. Ltd. Karachi Pvt. Ltd.	Nematon Specification Sp	Nema	Specification Pak Pump Industries Pak Pump Pak Pump Industries Pak Pump Pak Pump Pak Pump Pak Pump Pak Pak Pump Pak Pump Pak Pump Pak Pump Pak Pump Pak Pak P	Specification Specification Pak Pump Industries Lahore Pak Pump Industries Pvt. ttd. Karachi Pvt. ttd. Pvt. Pakitan Pvt. ttd. Pvt. Pvt.	Specification Mys Flow Pak Pump Pak Pump Pakistan Motor Turkey	Specification Mys Flow Pask Pump Pask Pump Industries, Lahore Pask Pump Pask P	Mys Flow Pak Pump Pakitan Motor Turkey 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.	Tech. Karachi	M/s Tesla Ind. Isl.
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
4.2	Туре	Poly Crystalline	Poly Crystalline	- 2	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	Company of the Company	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
100	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
	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

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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
٠ I	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
5 I	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
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
o.	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
(i	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
αģ	Effency	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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ltem	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi	Dvt Itd	System Pvt.	Karachi	Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	Renewable Energy Pvt. Ltd. Karachi	Karachi	M/s Yaseen Pvt. Ltd.	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	Protection of matching	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
DIMPOSITION TO STATE OF STATE		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
	Country of Origin Warranty Cables & Wires Grounding Kit Water out let & accessories	Country of Origin Please Specify Warranty Two years minimum 99.9% Copper UV Protection of matching configuration. Grounding Kit Standard Water out let & accessories S" HDPE or M/s Steel Pipes Mounting Structures Rust free powdered	Item Specification Pak Pump Industries, Lahore 1 Country of Origin Please Specify Brochure not available Warranty Two years minimum Brochure not available 99.9% Copper UV Protection of matching configuration. Brochure not available Brochure not available Brochure not available Brochure not available Standard Brochure not available Water out let & 5" HDPE or M/s Steel Pipes Rust free powdered Agreed but not	Specification Pak Pump Industries, Lahore Pak Pump Pak Pump Industries, Lahore Pak Pump Pak Pump	Item Specification Mys Flow Pak Pump Industries, Lahore Specification Pak Pump Industries, Lahore Pak Pak Pump Industries, Lahore Pak Pak Pump Industries, Lahore Pak	Specification Specification M/s Flow Pale Pump Industries, Lahore Specification Ltd. Karachi Specification Speci	Specification Specification Pak Pump Industries, Lahore China System Pvt. Ltd. Karachi Nys Kixan System Pvt. Ltd. Karachi Nys Kixan Nys Ki	Specification Specificatio	Specification Specificatio	Remain Specification Please Specify Pak Pump Industries, Lahore Pak Pump Industries, Pak Int., Quetta Pak Int., Quett	Item Specification Name Place Pump Industries Pakistan Pakista	Item Specification Plant Pump Industries, Lahore Port, Ltd., Karachi 1 Le Renergy Put. Ltd., Karachi 1 Le Renergy Put. Ltd., Karachi 1 Le Renergy Put. Ltd., Karachi 1 Ltd. Karachi 2 Ltd.	Note Note	My Flow Pakstam Pryt. Ltd. Karachi Pryt. Ltd. Karac	Specification Pale Pump Industries, In

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e 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	Karachi	Int., Quetta	Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	M/s Catkin Engineering Sales & Service, Islamabad	Energy Pvt. Ltd. Karachi	Comm. Karachi	Yaseen Pvt. Ltd.	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	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inventor	Rust Free coated of Iron & GI with environment protection for inventor	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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ATTA-U-REHMAN MARI
DIRECTOR
AGRICULTURE ENGINEERING SINDH
HYDERABAD

CHAIRMAN

MUSARRAT MOKHTAR
DEPUTY DIRECTOR (INSPECTION)
INDUSTRIES DEPARTMENT KARACHI
MEMBER

SHAKIL AHMED RAHEMOON

SHAKIL AHMED RAHEMOON
DIRECTOR WATER MANAGEMENT
HYDERABAD DIVISION
MEMBER

SAIFULLAH MAGSI ADDITIONAL DISTRICT ACCOUNTS OFFICERi, DAO OFFICE

HYDERABAD MEMBER 40 abs

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 prequalification 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 Gobal 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 Gobal 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:-

Category of Tubewell	Subsidy Amount in Rs.
Solar Power Water Lift Pump	Rs. 1,867,395
Solar Water Pump / Tubewell 100 ft.	Rs. 2,369,876
Solar Water Pump / Tubewell 150 ft.	Rs. 3,207,378
Solar Water Pump / Tubewell 250 ft.	Rs. 4,336,767
	Solar Power Water Lift Pump Solar Water Pump / Tubewell 100 ft. Solar Water Pump / Tubewell 150 ft.

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 / 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	SPANIE
03	SAIFULLAH MAGSI	Additional District Accounts Officer-i District Accounts Office, Hyderabad MEMBER	Miller .
04	MUSARRAT MOKHTAR	Deputy Director (Inspection) Industries & Commerce Department, Government of Sindh, Karachi MEMBER	off =
05	ENGR. FARRUKH RASHEED ANSARI	Deputy Director (Mech) Agriculture Engineering Sindh Hyderabad MEMBER / SECRETARY	A

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 PREQUALIFICATION 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 Wyjid Ar. 0332 5508402	S Mhz
02	EBR Energy Parestem	M. Adeel Khom 0300-8414816	Ashullo
03	Glober Business Sesvices	B57-3163398	ARM
04	NIZAM ENERGY	0300-2022387	John John Marie Ma
05	Cathin Enginery Sales & Servicy	Fasal Nisus 10334-189)983	52-8
06	Smert de	Tafweeg Bozdas 0300-9380777	The state of the s
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								AN	AMOUNT IN RS.		
	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 pe 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 WELL	S										
	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 WELL	S										
	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 WELL	S										
	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.	-			-						

ON

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) (U.C.)
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,

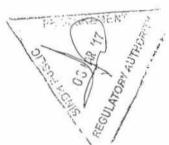
SPPRA Sindh,

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



DIRECTORATE AGRICULTURE ENGINEERING SINDH HYDERABAD

022-9200059 director.dae@gmail.com No: DAE/Stores-966/ 506 /17 Hyderabad dated: 20 | 03 | 2017

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 \$R. 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 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 φn 16.03.2017.
- vii. List of Pre-qualified firms.
- viii. Extension of Bid Validity.

An early response is requested.

DIRECTOR

AGRICULTURE ENGINEERING SINDH HYDERABAD

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.

DIRECTOR

AGRICULTURE ENGINEERING SINDH HYDERABAD





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. <u>COMPOSITION:</u>

 Director, Agriculture Engineering Sindh, Hyderabad.

Chairman

 Director, Sindh On Farm Water Management, Hyderabad Division.

Member

3. Representative of Industries & Commerce Department, Government of Sindh. Karachi

Member

 District Accounts Officer / Representative of District Accounts Officer, Hyderabad.

Member

 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:-

COMPOSITION.

1-	Director General, Chairman Agricultural Engineering & Water Management Sindh, Hyderabad
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:
 - Prohibit the procurement committee from acting or decision in a manner, inconsistent with these rules and regulations
 - b. Annual 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.

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- 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 Committeel

v. Mere fact of lodging of a complaint shall not warrant suspension of the procurement proceedings.

il with the state of

DR. SAEED AHMED MANGNEJO
SECRETARY TO GOVT. OF SINDH

Contd.:P/2...

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

Karachi, dated the 05-01-2017

Karachi, dated the 05-01-20

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

- The Principal Secretary to Governor of Sindh, Karachi.
- 2. The Principal Secretary to Chief Minister, Sindh, Klarachi,
- 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, Tangojam.
- 9. Members of the Committee!

(ABDUL AZIZ CHANNA)

DEPUTY SECRETARY (TECH:)

Č.c. to:

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

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

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

Rs. in Million

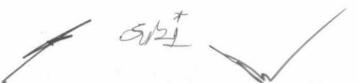
												Rs. in Million
-			Estimated			Source of	Proposed	Timi	ng of Pr	ocurem	ent	
生化	Description of Procurement	Quantity (Where Applicable)	Unit Cost (Where Applicable)	Estimated Total Cost	Funds Allocated	Funds (ADP / Non-ADP	Procurement Method	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Remarks
1	ADP # 23 Provision 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	1	1	-		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	1	~		٠	All Procurement under SPPRA Rules and subjected to the Release of funds.
1	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	_	*	~	1	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	-	-	~	1	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 Engineerin g Sales & Service, Islamabad	M/s Renewabl e 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. Islamabd
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 Internatio nal	Saztel Pvt. Ltd.	Global Business Services	Catkin Eng. Sales & Service	Renewable Energy Pvt. Ltd.	Zahra Communica tion Karachi	Yaseen Pvt. Ltd	Orient Water Technologie s 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 Badaruddi n & 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



ir.	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 Engineerin g Sales & Service, Islamabad	M/s Renewabl e 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. Islamabd
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
.0.	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-</u> qualified	Qualified	Qualified	Qualified	Qualified	Qualified	Dis- qualified	Qualified	Qualified	<u>Dis-</u> qualified	<u>Dis-</u> qualified	<u>Dis-</u> qualified	Dis- qualified	<u>Dis-</u> qualified

ATTA-U-REHMAN MARI

DIRECTOR AGRICULTURE ENGINEERING SINDH **HYDERABAD**

MUSARRAT MOKHTAR DEPUTY DIRECTOR (INSPECTION) INDUSTRIES DEPARTMENT KARACHI SHAKIL AHMED RAHEMOON DIRECTOR

WATER MANAGEMENT HYDERABAD DIVISION

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

MEMBER

FARRUKH RASHEED ANSARI

DEPUTY DIRECTOR (MECH) AGRICULTURE ENGINEERING SINDH **HYDERABAD**

MEMBER / SECRETARY

CHAIRMAN

MEMBER

MEMBER

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%

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 Tesia Ind Isi.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
el)	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	CI-SP)+5.5W	SP)+5.5w	UK/Italian/ German or Equivalent	DAB Pump KDN 80-160
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
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
: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
More than 75%	Data Not Available	75%+	79%	91.9	82%	80%	Data Not Available	80%	80%+ Data Not Available	Data Not Available	70%	70%	Data Not Available	72.23% Data Not Available
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
±5% to – 15%	Data Not Available	±5% to -	±5% to –	±5% to - 10%	±6% to -	±5% to – 15%	10% to ±2%	±5% to –	±5% to – 15% Data Not Available	Data Not Available	±6% to - 10%	±6% to -	Data Not Available	Data N.A. +6% to - 10%
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
	12 to 15 Kw (±10%) both limits Average 650,000 Litre / day 2400 – 3000 RPM More than 75% 0.8 to 0.9 ±5% to – 15% IP68 or Equivalent	Specification Pump Industries, Lahore 1 Flowpak Siemens 150 FCM-259 12 to 15 Kw (±10%) both limits Average 650,000 Data Not Available 2400 – 3000 RPM Data Not Available More than 75% Data Not Available 0.8 to 0.9 Data Not Available ±5% to – 15% Data Not Available Data Not Available	Pump Industries, Lahore Industries Pvt. Ltd. Karachi	Specification	Pump Industries, Lahore Pump Industries, Industries Pvt. Ltd. Karachi Pump Industries, Industries Pvt. Ltd. Karachi Pv	Specification	Specification	Pump Industries, Pt. tdd. Karachi Lahore L	Specification Pump Industries, Lahore Pump Industries Pvt. Ltd. Karachi Pv	Nys Pake Oasib Energy Vittle, Narachi Pump Industries, Utahore Vittle, Karachi Vittle, Vittle, Karachi Vittle, Karachi Vittle, Karachi Vittle, Vit	New Specification Pump Industries Industries Industries Industries Industries Industries Industries Industries Pakistan Pvt. Itd. Karachi Industries Pakistan Pvt. Itd. Karachi Industries Pakistan Pvt. Itd. Karachi Industries Pvt. Itd. Karachi Industries Pvt. Itd. Karachi Industries Sarvies Sarvies Sales & Servies Sal	Specification Pump Industries Enterprise Enterp	Specification	Specification Pump Industries Pyte Lish or Communication Pyte Lish Mys Smart Karachi Pyte Lish Mys Smart Karachi Pyte Lish Karachi Pyte Lish Mys Smart Mys Smart Mys Smart Sale & Service Sale & Service Energy Pyte Lish Karachi Pyte Lish Mys Smart Mys Smart Mys Smart Mys Smart Sale & Service Sale & Service Energy Pyte Lish Karachi Pyte Lish Mys Smart Mys S

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	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	Υ	Y Data Not Available	Data Not Available	F Data Not Available	Data Not Available	F	F	Data Not Available	F 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	Data Not Available	NEMA	NEMA	Data Not Available	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
olar 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
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
Туре	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
		-	1	•		-		7	/						

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lkem	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 Transmissio n 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	Anodized aluminum	Anodized Aluminum	Andozid Aluminum	Andozid Aluminum	Andozid Aluminum	Andozid Aluminum	Andozid Aluminum	Anodized	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum	Data Not	Anodized Aluminum alloy
	alloy	alloy	alloy	alloy	alloy	alloy	alloy	alloy	Aluminum	alloy	alloy	alloy	alloy	Available	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 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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<u>Invertor</u> Amperage	Specification 25 to 32 Amp 12 to 15 kw	M/s Flow Pak Pump Industries, Lahore 1 Brochure not available	M/s Pak Oasis Industries Pvt. Ltd. Karachi 2 Grundfos 25 to 32	M/s EBR Energy Pakistan Pvt. Ltd. Karachi 3 PSK2-21	M/s Nizam Energy System Pvt. Ltd. Karachi 4 RSI Grundfos	M/s K.K. B. Karachi 5	M/s Smart Int., Quetta 6 ADA SPI	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 11	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
		Brochure not	Grundfos 25 to 32						8	9	10	11	12	13	44
		Brochure not	Grundfos 25 to 32		RSI Grundfos	200000000	ADA SPI			_		**		4.3	14
Amperage						JNTECH	200-4T- 015B	SPB815K- 700 Solar Tech	INVT CHF- 100A	HOBER	Lorentz	HMA Inverter	HMA Inverter	Data Not Available	JFY Data not Available
	12 to 15 kw		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 10 13 111	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
МРРТ	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

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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.	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
ibles & 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
rounding 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
fater out let & ccessories	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



<u>J</u> tem	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 Tesia Ind. Isi.
		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 requiremen t

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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 OFFICERi, DAO OFFICE

HYDERABAD MEMBER FARRUKH RASHEED ANSARI
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 2	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 10	M/s Zahra Comm. Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
omersible Pump (Mak	se & 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/G erman or Equivalent	DAB SS7B3
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
Discharge Capacity	Average 500,000 Litre / day	Data not available		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	±5% to – 15%	Data not available	±5% to – 15%	±5% to -	±5% to -	-6% to -	<u>+</u> 6% to –	Data not available	±5% to 15%	±5% to -15%	Data Not Available	±6% to – 10%	±6% to –	Data not available	±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	I V	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
lar 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
	1	1	+ .	1		1			- //						

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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	and the second section of	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
Туре	Poly Crystalline	Poly Crystalline	Poly Crystalline	10000	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		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
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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
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
Invertor			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
МРРТ	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	Karachi	M/s Yaseen Pvt. Ltd.	M/s Orient Water Tech. Karachi	M/s Tesla Ind. Isl.
a		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
		0									Data Not			Data not	2 years
Warranty	2 years minimum	Brochure not available	Two Years	2 years	Yes	2 years	2 years	Comply	2 years	2 years	Available	2 years	2 years	available	Data not available
bles & 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



· i æ m	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi 2	M/s EBR Energy Pakistan Pvt. Ltd. Karachi 3	M/s Nizam Energy System Pvt. Ltd. Karachi		M/s Smart Int., Quetta	Pvt. Ltd.	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.
Mounting Plate / box.	Rust free powder coated of Iron & G.I. with environmental protection for invertor, 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 inventor	of Iron & GI with environment		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 requiremen t

ATTA-U-REHMAN MARI DIRECTOR AGRICULTURE ENGINEERING SINDH

CHAIRMAN

MUSARRÁT MOKHTAR

DEPUTY DIRECTOR (INSPECTION)

DH 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.)

Delive 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	System Pvt. Ltd. Karachi		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
omersible Pump (Mak	e & 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/G erman or Equivalent	DAB 77SA5
Rated Power	20 to 24 Kw (±10%) both limits		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 –	±5% to -	Yes	-6% to -	±6% to – 10%	Data not available	Data not available	±5% to -15%	Data Not Available	±6% to - 10%	±6% to -	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	Υ	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
ar 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
Туре	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 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	Aluminum		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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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 Saztel Pvt. Ltd. Karachi	M/s Global Business Service, 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
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
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
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
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
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
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	PV reserve polarity, short	Yes	Yes	Over current over load anti lightening	Yes	Data Not Available	IP 20	IP 20	Data not available	Inbuilt Data not available
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
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
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
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
Standard	Brochure not available	Yes	Yes	Yes	Standard	Std	Yes	Standard	Yes	Data Not Available	Standard	Standard	Data not available	Standard Data not available
	30 to 45 Amp 20 to 24 kw 3 Phase 370 to 385 Vac 340to 650 Vdc Inbuilt In built for over current, over load, anti-lightening etc. 95% or more. Please Specify Two years minimum 99.9% Copper UV Protection of matching configuration.	Specification Pak Pump Industries, Lahore 1 30 to 45 Amp Brochure not available 3 Phase 370 to 385 Vac Brochure not available Brochure not available	Specification M/s Flow Pak Pump Industries, Lahore China	Specification Mys Flow Pak Pump Industries, Lahore Pvt. Ltd. Karachi 1 2 3 3 3 4 4 4 4 4 4 4	Specification Mys Flow Pak Pump Industries, Lahore China Energy Pakistan Pvt. Ltd. Karachi Tambuilt Tambuilt	Specification M/S HOW Pak Pump Industries, Lahore Specification M/S HOW Pak Pump Industries, Lahore 1 2 3 4 5 30 to 45 Amp Brochure not available 30 to 45 Amp Brochure not available 3 Phase 370 to 385 Vac 460 to 880 Vdc Vdc In built for over current, over load, antilightening etc. 3 Pry port. Tankful Pyr seeve polarity, short lightening etc. 3 Pry port. Tankful Pyr seeve polarity, short lightening etc. 4 Pry port. Tankful Pyr seeve polarity, short lightening etc. 4 Phase 370 to 385 Vac 4 Pes 4 Pes	Specification M/s Flow Pak Pump Industries, Lahore 1 2 3 4 5 6 30 to 45 Amp Brochure not available 30 to 24 kw 3 Phase 370 to 385 Vac 3 Prochure not available 3 Prochure not available 3 Prochure not available 3 Phase 370 to 385 Vac 3 Prochure not available 4 Prochure not available 4 Prochure not available 4 Prochure not available 4 Prochure not available 5 Prochure not available 5 Prochure not available 5 Prochure not available 6 Prochure not available 7 Procection of matching configuration. 5 Prochure not available 7 Procection of matching configuration. 5 Prochure not available 7 Procection of matching configuration. 5 Prochure not available 7 Procection of matching configuration. 8 Prochure not available 8 Prochure not available 9 Proch	Specification M/s Plump Industries In	Specification Pak Pump Industries Put. Ltd. Karachi 1 2 3 4 5 6 7 8 30 to 45 Amp 20 to 24 kw 30 to 45 Amp Poblication of Brochure not available 31 hase 370 to 385 Prochure not available 32 to 22 kw 33 Amp Poblication of Mark of Comply 34 Amp 35 to 45 Amp 26 to 24 kw 37 hase 370 to 385 Prochure not available 38 Amp Poblication of Mark of Comply 38 Amp Poblication of Mark of Comply 39 Amse 370 to 385 Poblication of Mark of Comply 30 to 45 Amp 40 Amp	Specification Name	Specification Nys Flow Pak Pump Industries, Lahore Recompled to the port of the complete in the complete in the port of the complete in the	Specification My S Flow Pak Pump Characterist Industries, Lahore Rarachi Pvt. Ltd. Karachi Pvt. Ltd. Karachi Tut. Ltd. Karach	Specification N/S Flow Poak Pump Poak Pump Poak Pump Poak Pump Industries, Lahore Lahore Pvt. Ltd. Karachi 1 2 3 3 30 to 45 Amp 40 Amp 40 Amp 45 Amp 45 Amp 46 to 45 Amp 46 to 45 Amp 37 hase 370 to 385 Vac 38 to 415 Vac 46 to 48 to 48 Vac 45 to 48 Vac 46 to 48 Vac	Specification plant from the plant p

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ltem Y	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 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
	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	I N/A	DO SER AND LONG.	Rust Free coated		Rust Free coated Data not available
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	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inventor	Rust Free coated of Iron & GI with environment protection for inventor	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 requiremen

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 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		Int., Quetta	M/s Saztel Pvt. Ltd. Karachi	M/s Global Business Service, Karachi	Sales & Service, Islamabad	M/s Renewable Energy Pvt. Ltd. Karachi	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
mersible Pump (Mak	e & 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 –	±5% to -	Yes	-6% to -	<u>+</u> 6% to – 10%	Data not available	±5% to - 15%	±5% to -15%	Data Not Available	±6% to – 10%	±6% to –	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







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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	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
nsulation Class	Y or better	F	F	F	F	F	F	Υ	Data not available	Y	Data Not Available	Υ	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
ar Panels		LUX Power LNSE 315P	-	Ever Exceed ESM300-156		Jinko Solar 255-270		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	- 40°C to 85°C	- 40°C to 85°C	- 40°C to 85°C	- 40°C to	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		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
Туре	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
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	Data not available	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

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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
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 OB	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
МРРТ	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. Tankfu 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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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 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	Karachi	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	e Yes	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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Item	Specification	M/s Flow Pak Pump Industries, Lahore	M/s Pak Oasis Industries Pvt. Ltd. Karachi 2	M/s EBR Energy Pakistan Pvt. Ltd. Karachi	M/s Nizam Energy System Pvt. Ltd. Karachi		M/s Smart Int., Quetta	Pvt. Ltd.	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.
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	Yes	Yes	Yes	Yes	Rust Free Standard Installation	Yes	Data Not Available	Rust Free coated of Iron & GI with environment protection for inventor	Rust Free coated of Iron & GI with environment protection for inventor	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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ATTA-U-REHMAN MARI
DIRECTOR
AGRICULTURE ENGINEERING SINDH

CHAIRMAN

MUSARRAT MOKHTAR
DEPUTY DIRECTOR (INSPECTION)
INDUSTRIES DEPARTMENT KARACHI
MEMBER

SHAKIL AHMED RAHEMOON

DIRECTOR WATER MANAGEMENT HYDERABAD DIVISION

MEMBER

A STATE OF THE PARTY OF THE PAR

SAIFULLAH MAGSI 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

OF SOLAR WATER PUMP / TUBEWELL IN SINDH 2016-17.

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

Name of Tender:

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 1.

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. Ist 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
- 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 then 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 Tax install & Sen	on ation	Income Tax	Total Cost	Qty Firm willing to install	Total Amount
	SOLAR POWER WATER LI	FT 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 / TU	JBE 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 / TU	JBE 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 / TU	JBE 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.									
								OTAL BU	DVALUE	
					Amour	nt of Bi	d 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

Dated:

Contract Number:

Contract Value:

Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.

Contract Title:	
[Name of Supplier/ContractorConsultant] hereby declares the procurement of any contract, right, interest, privilege Government of Sindh (GoS) or any administrative subdiventity owned or controlled by it (GoS) through any corru	or other obligation or benefit from vision or agency thereof or any other
Without limiting the generality of the for represents and warrants that it has fully declared the broken payable to anyone and not given or agreed to give and anyone within or outside Pakistan either directly or indirectly or including its affiliate, agent, associate, broken shareholder, sponsor or subsidiary, any commission, kickback, whether described as consultation fee or other inducing the procurement of a contract, right, interest, proin whatsoever form, from Procuring Agency (PA), exceeded and pursuant hereto. [Name of SupplierContractionConsultant] certifies the disclosure of all agreements and arrangements with all patransaction with PA and has not taken any action or will in above declaration, representation or warranty.	cerage, commission, fees etc. paid or d shall not give or agree to give to ectly through any natural or juridical er, consultant, director, promoter, gratification, bribe, finder's fee or wise, with the object of obtaining or ivilege or other obligation or benefit, cept that which has been expressly at it has made and will make full ersons in respect of or related to the
[Name of Supplier/Contraction/Consultant] accepts full, making any false declaration, not making full disclosure, action likely to defeat the purpose of this declaration, re that any contract, right, interest, privilege or other obligates as aforesaid shall, without prejudice to any other right a any law, contract or other instrument, be voidable at the other lights and remedie.	misrepresenting facts or taking any presentation and warranty. It agrees ition or benefit obtained or procured and remedies available to PA under ption of PA.
[Name of Supplies/Contractos/Consultant] agrees to indemnify PA for a account of its corrupt business practices and further pay equivalent to ten time the sum of any commission, kickback given by [Name of Supplies/Contractos/Consultant] as afores inducing the procurement of any contract, right, interestent, in whatsoever form, from PA.	any loss or damage incurred by it on compensation to PA in an amount gratification, bribe, finder's fee or said for the purpose of obtaining or
[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 evaluation of the offered bids and examining the extension of bid validity, the procurement committee as under:-

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.

M/S PAK OASIS INDUSTRIES PVT. LTD. KARACHI

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

M/S EBR ENERGY PVT. LTD. LAHORE

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

M/S NIZAM ENERGY PVT. LTD. KARACHI

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

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

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

M/S SMART INTERNATIONAL, QUETTA

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

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 prequalification of M/s Global Business Service, Karachi is meeting all necessary requirements and declared them as <u>Pre-qualified</u>.

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

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

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 <u>not be qualified</u>.

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 <u>not be</u> qualified.

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 <u>not</u> 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 <u>not be</u> 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 / 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	513m21
03	SAIFULLAH MAGSI	Additional District Accounts Officer-I District Accounts Office, Hyderabad MEMBER	William Co
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	Last

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

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.

5#	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

Feounday with the

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

SPPRA Notifications SPPRA Board SPP Act 2009 SPP Rules 2010 Ammendments SPPRA Team Contact Us . Serial No. Text Evaluation Reports Tender Title SPPRA ID , submit Advance Search Black Listed Firms Advertise Date Closing Date Committee City Semple Documents 1 Page 1 Documents Viewed 952931 Policy Instructions Uploaded Advertised Closing Corrigendum Comments S.No. Tender Title Download Review Panel SPPRA ID On YA YL Capacity Building Agriculture Engineering BER CS. TER MIT 14-11-2016 14 Nov. 2016 01. Dec. 2016 SITTER ID Solar Request NET WITH SED CLERITOR Agriculture Dojil. On Farm Water Management DER CS. FLR ADE; Seuth Hydoratian SHPRA ID + 14-11-2016 14.Nov 2016 61.Dec 2016 Hargament NIT WITH SUD Williamilto Procurement Plans Agriculture Doyl. On Farth Water Management BESS, US. TESS, ACK Ste Statistics Sindh Hyderaliad UI AFFER ڻ Hegianoid MIT WITH SUD WITHELD Lagin Agricultury Engineering BER, CS, TER, ADE Sends thy decision. 59170430 11-11-2916 Heyword NIT WITH SHO WITEELD Agriculture Engineering BUH, CS. TER, ADC. Users Online 6 30455 SPPHA ID 11-11-2016 10 Nov. 2016 01 Dec. 2016 02-Aug-16 Update NIT WITH 580 ULBRITAN Sindh Agriculture University BURLES, HER ADD Policy Letter 08-11-2016 67 Nov 2016 22 Nov 2016 FITTER ID Added 01 Aug NIT WITH SED WITHERED Bulldozer. Agriculture Engineering DEPLOS TEREADO Smith Hyderatical 30327 SPPRATO 03-11-2016 02 Nov 2016 01 Dec 2016 Represent NIT WITH \$80 YW7100-1.17

SPPRA Notification

SPPRA Board Smish Public Procurement Act 2004 Transparency International Pakistan

Sindh Public Procurement Rules 2010

Contact Us

Web Mail

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