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## INVITATION TO BID

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### Supply and Installation of 10 Solar System Water Pumps & 10 Spare Solar System Water Pumps for Herat Province

اعلان داوطلبی برای تهیه و نصب 10 ست واتر پمپ با سیستم انرژی آفتابی و 10 ست واتر پمپ آفتابی برای ولایت هرات

**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Date: September 28, 2017**

DACAAR invites interested parties to submit their sealed offers for Supply & Installation of 10 Set. Solar Water Pump with Fixed Stands Solar System and 10 Set. Spare Solar System Water Pump for Engile District of Herat Province which are described by detail under Annex (I).

The offers must be submitted to DACAAR Main Office Logistics Unit located in (Street No. 12, Paykobe-Naswar, Qala-e-Fathullah, Kabul) till 4:00 PM Oct 18, 2017.

The offers will be opened on Oct 19, 2017 at 10:00 AM in DACAAR Main Office in Kabul Province and the winner of the bidding will be notified shortly after the opening session.

داکار از کمپنی های علاقمند و واجد شرایط که خواهش اشتراک در پروسه داوطلبی داکار را داشته باشند دعوت به عمل می‌آورد تا در داوطلبی برای تهیه و نصب 10 ست سولر غیر متحرک واتر پمپ زیر آبی مجهز با سیستم انرژی آفتابی و 10 ست واتر پمپ آفتابی اضافه برای ولسوالی انجیل ولایت هرات اشتراک نمایند که تفصیلات آن در ضمیمه (I) تذکر یافته است.

آفرها باید الی تاریخ 18 اکتوبر 2017 ساعت 4:00 عصر به شعبه لجستیک دفتر مرکزی داکار واقع (پایکوب نسوار سرک 12 قلعه فتح الله ولایت کابل) سپرده شود.

مجلس آفرگشایی ساعت 10:00 قبل از ظهر تاریخ 19 اکتوبر 2017 در دفتر مرکزی داکار در ولایت کابل صورت می‌گیرد که متعاقباً برنده داوطلبی در اسرع وقت اطلاع خواهد یافت.

#### Terms and Conditions of Contract:

#### شرایط قرارداد:

1. Delivery and Installation of Solar Water Pump with Fixed Stands Solar System are in Engile District of Herat Province.

Detail for Delivery & installation timetable is described under Annex (II).

2. Installation & Delivery of Solar pumps & solar systems will be carried out by the company technicians.

3. DACAAR technical staff will inspect the function of solar system pumps, before delivery and after installation in the targeted areas.

4. The bidders have to provide solely information regarding the panels, type of panels stand and pumps, e.g. (name of manufacturer both for pumps and panels and also pump daily output design); otherwise, the offer will not be accepted.

5. Minimum three years warranty is required after successful installation of solar systems and this fact must be clearly mentioned in the offer.

1. انتقال و نصب سولر غیر متحرک واتر پمپ زیر آبی مجهز با سیستم انرژی آفتابی در ولسوالی انجیل ولایت هرات صورت می‌گیرد.

معلومات در مورد انتقال، نصب و تهیه واتر پمپ و پنل های آن در ضمیمه (II) تذکر یافته است.

2. نصب سولر سیستم و انتقال آن باید توسط اشخاص مسلکی صورت بگیرد.

3. پرسونل داکار نحوه کار سولر سیستم و واتر پمپ را در قبل از انتقال و بعد از نصب کردن نظارت خواهند نمود.

4. داوطلبان مکلف اند تا معلومات مکمل را در مورد پنل های سولر و پمپ که توسط انرژی سولر کار میکند، آب دهی روزانه، و کمپنی ساخت پنل ها و پمپ ها را ارائه نماید، در غیر آن آفر که معلومات فوق الذکر در آن گنجانیده نشده باشد، داکار از آن صرف نظر خواهد کرد.

5. حد اقل معیاد تضمین و خدمات بعد از فروش برای سولر سیستم مدت سه سال بعد از نصب موفقانه سولر سیستم میباشد، که این موضوع باید بشکل واضح و روشن در اسناد داوطلبی مشخص گردد.

6. 3% of total contract value will be seized as a service guarantee with DACAAR for three years, and after successful completion of mentioned period, the service guarantee will be refund to supplier.
7. In case of delay without logical reasons in delivery & installation of Solar Systems 0.5% of total cost of undelivered items/ incomplete work will be charged as penalty for each official day of delay.
8. Prices shall be given in Afghani (AFN) and shall include transport plus loading, unloading and complete installation of the systems in targeted areas. Offers without sign and stamp will not accepted.
9. All bidders should deposit 150,000 AFN as a bid security; otherwise, DACAAR has the right to make the decision.
- Submission methods of bid security is as follows:
- a) Put a Bank Guarantee with this amount with bidding documents.  
Or,  
b) Deposit (150,000 AFN) to DACAAR Kabul Bank Afghani Account (60019598).
- All deposits are refundable after completion of procurement process.
10. 2% Tax will be applicable on the companies that has valid business license and 7% Tax will be applicable on the companies that have invalid business license, or on individuals who don't have business license, will be deducted from the contractor as a withholding tax and DACAAR will pay that amount to Ministry of Finance, the amount starts from (1 AFN).
11. The winner of the tender must deposit 10% of total contract value as a contract performance guarantee, the amount is refundable after successful completion of the contract.
12. Payment will be made after successful & complete installation of solar pump with submission of invoice, confirmation of DACAAR relevant sites accountable within 25 days.
13. Award of contract will be based on the quality, price, capacity & potentiality of the bidders which will be decided after evaluation of the company; it is the right of DACAAR to make the decision of awarding contract.
6. 3% از مجموع ارزش قرارداد بطور ضمانت به مدت سه سال نزد داکار محفوظ میماند، و بعد از تکمیل موفقانه دوره ضمانت کار کرده گی سیستم این مبلغ به قراردادی قابل پرداخت میباشد.
7. در صورت تأخیر رساندن سیستم ها بدون عذر موجه در وقت معینه آن، مبلغ 0.5 فیصد از ارزش اموال/کار تأخیر شده به طور جرمانه در برابر هر روز رسمی تأخیر از طرف قراردادی تأدیه خواهد گردید.
8. قیمت ها باید به پول افغانی داده شود و شامل قیمت انتقال، بارگیری، تخلیه و نصب سولر سیستم به عهده قراردادی میباشد. قیمت های بدون مهر و امضاقابل قبول نمیباشد.
9. آفرها باید همراه با سند 150,000 افغانی تضمین آفر باشد در غیر آنصورت داکار حق تصمیم گیری را دار میباشد.  
روش های ارایه تضمین آفر عبارتند از:
- a. گذاشتن تضمین بانکی از بانک های معتبر داخل پاکت آفرها.  
و یا،  
b. جمع نمودن 150,000 افغانی به حساب افغانی داکار (60019598) در کابل بانک میباشد.
- مبلغ ذکر شده بعد از طی مراحل پروسه تدارکات قابل باز پرداخت میباشد.
10. 2% مالیه برای شرکت هائیکه دارای جواز با اعتبار میباشند، و 7% مالیه برای شرکت هائیکه دارای جواز معیاد اعتبار آن ختم باشد، و یا اشخاصیکه جواز ندارند توسط داکار وضع گردیده و به وزارت مالیه دولت اسلامی افغانستان پرداخت میشود، آغاز مبلغ از (1 افغانی).
11. شرکت برنده باید مبلغ 10% از مجموع ارزش قرارداد را بحیث تضمین اجراییوی موفقانه قرارداد را به حساب داکار جمع نماید، و مبلغ متذکره بعد از تکمیل موفقانه قرارداد باز پرداخت میباشد.
12. تأدیه پول بعد از تکمیل نمودن موفقانه قرارداد و بعد از تصدیق نمودن مسؤل ساحوی داکار در جریان 25 روز قابل اجرا میباشد.
13. برنده شدن قرارداد نظر به کیفیت، قیمت، توانائی و ظرفیت داوطلب بوده، و بعد از بررسی کمپنی صورت خواهد گرفت. البته تنها داکار حق تصمیم گیری در این زمینه را دارا میباشند.

14. DACAAR (Logistics Unit) adheres to National and International laws on child labour DACAAR makes sure all its suppliers and vendor abide by such laws preventing child labour in all DACAAR activities countrywide. دفتر داکار (شعبه لوژیستیک) با در نظر داشت قوانین ملی و بین المللی برای جلوگیری از کار کودکان مصمم بوده و سعی میکند که تمام فعالیتهای تهیه کننده گان و مشتریان این اداره به این اصل پایند باشند.
15. The Humanitarian Organizations (HO) may conduct on- site visit in the contractor's premises (or may take similar measures) to ensure compliance. سازمان های بشر دوستانه (HO) ممکن است تا از محلات و سایت ها به بخاطر اطمینان خاطر و تطبیق درست کار توسط قرار داد گیرنده بازدید بعمل آورده و یا ممکن است اقدامات مشابهی را انجام دهند.

For more details, please visit DACAAR Logistics Unit Main Office Kabul, Sunday through Thursday, from 8:00AM to 03:00PM. Or contact on below Email Addresses:

[jamal@dacaar.org](mailto:jamal@dacaar.org) or [shaker@dacaar.org](mailto:shaker@dacaar.org)

Head of Logistics Unit

Date: September 28, 2017



**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (I): Upper & Lower Sakhiabad and Salihahad, Engile District of Herat Province:**

S/No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	3					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	3				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	420					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (II): Jalilabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	1					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	1				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	140					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (III): Faqirabad Solar Pipe Scheme, Engile District of Herat Province:**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	1					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	1				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	140					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (IV): Noorabad & Malikabad Solar Pipe Scheme, Engile District of Herat Province:**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	2					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	2				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	280					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (V): Ghoryan Solar Pipe Scheme, Engile District, Herat Province**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	1					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	1				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	140					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:



**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (VI): Two New Sites in Engile District of Herat Province**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	2					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	2				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	280					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**  
**Information about Types and Warranty of Solar Panels and Solar Pumps**

S/N	Manufacturer of solar pumps (Name of Company)	Warranty period of solar panels (year)	Name of submersible pumps (Name of company )	Warranty period of submersible pumps (year)

**ANNEX (II)**  
**Tentative Work Plan / پلان تخمینی کار**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Supply & Installation of Solar System in Engile District of Herat Province:**

Lot#	QTY	Items Description	Location of Installations	Contract Sign Date	Date of Inspection before delivery	Delivery Date	Installation Date
I	3 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Upper & Lower Sakhiabad and Salihahad, Engile District of Herat Province	Upon DACAAR Final Approval	Nov 05, 2017	Nov 08, 2017	Nov 30, 2017
II	1 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Jalilabad Solar Pipe Scheme, Engile District of Herat Province:				
III	1 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Faqirabad Solar Pipe Scheme, Engile District of Herat Province:				

Lot#	QTY	Items Description	Location of Installations	Contract Sign Date	Date of Inspection before delivery	Delivery Date	Installation Date
IV	2 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Noorabad & Malikabad Solar Pipe Scheme, Engile District of Herat Province:	Upon DACAAR Final Approval	Nov 05, 2017	Nov 08, 2017	Nov 30, 2017
V	1 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Ghoryan Solar Pipe Scheme, Engile District, Herat Province				
VI	2 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Two New Sites in Engile District of Herat Province				

**Note:** The above mentioned date's are tentative; and will be changed while signing of the contract as per DACAAR Tentative Work Plan.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part I: Upper & Lower Sakhiabad and Salihahad, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw down/Dynamic Level	Meter	70	Assumed
5	Pump Installation Depth	Meter	85	Assumed
6	High of water tank from well surface (ground) to top of Tank	Meter	15	H=15m
7	Length of delivery pipe from pump to Water Tank	Meter	130	-
8	Head Loss due to delivery pipe friction	Meter	4.55	3.5m/100m length for Q=1.4 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	lit/day	35,000	-
<b>Total Head:</b>			<b>105</b>	The actual total head depends on delivery pipe size

**Some other necessary specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min (50x50x4) mm.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE -16 bar
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, the system can be adjustable according to the actual dates after drilling the production well.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part II: Jalilabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw Down/Dynamic Level	Meter	70	Assumed
5	Pump Installation Depth	Meter	85	Assumed
6	High of water tank from well surface (ground) to top of Tank	Meter	18	H=3+15=18m,
7	Length of delivery pipe from pump to Water Tank	Meter	133	-
8	Head Loss due to delivery pipe friction	Meter	12.635	9.5m/100m length for Q=2.7 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Lit/day	68,000	-
<b>Total Head:</b>			<b>116</b>	The actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground surface, with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min (50x50x4)mm.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE -16bar.
6. The pumps, controller, panel and some other important accessories be Made In German.  
**Note:** Since most of the dates are assumed, the system can be adjustable according to the to the actual dates after drilling the production well.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part III: Faqirabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw down/Dynamic Level	Meter	70	Assumed
5	Pump Installation Depth	Meter	85	Assumed
6	High of water tank from well surface (ground) to top of Tank	Meter	15	H=14+1=15m,
7	Length of delivery pipe from pump to Water Tank	Meter	130	-
8	Head Loss due to delivery pipe friction	Meter	6.5	5 length for Q=1.7 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	42,000	-
<b>Total Head:</b>			<b>107</b>	The actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand .
2. If there are multiple Fixed Stands , there is needed reinforced concrete walls 2m center to center, 40cm thick,60 to 80 cm above ground surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min(50x50x4)mm.
4. Painting of the Channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE -16bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production well.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part IV: Noorabad & Malikabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	100	Proposed
3	Static water level	Meter	20	Assume
4	Draw down/Dynamic Level	Meter	90	Assume
5	Pump Installation Depth	Meter	95	Assume
6	High of water tank from well surface (ground) to top of Tank	Meter	18	$H=3+15m=18m$
7	Length of delivery pipe from pump to Water Tank	Meter	143	-
8	Head Loss due to delivery pipe friction	Meter	11.44	8m/100m length for $Q=2.3l/s$ DN=50mm-outer dia.
9	Electric Cable Length	Meter	125	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	56,000	-
<b>Total Head:</b>			<b>124</b>	Actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground surface, with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min(50x50x4)mm, should be rigid.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE -16 bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production well.



**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part V: Ghoryan Solar Pipe Scheme, Engile District, Herat Province**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	100	Proposed
3	Static water level	Meter	20	Assume
4	Draw down/Dynamic Level	Meter	90	Assume
5	Pump Installation Depth	Meter	95	Assume
6	High of water tank from well surface (ground) to top of Tank	Meter	15	H=15m,
7	Length of delivery pipe from pump to Water Tank	Meter	140	-
8	Head Loss due to delivery pipe friction	Meter	4.9	3.5m/100m length for Q=1.4 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	125	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	36,000	-
<b>Total Head:</b>			<b>115</b>	Actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis Stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground, surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min (50x50x4)mm, should be rigid.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE-16 bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part VI: Two New Sites in Engile District of Herat Province**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling Plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw down/Dynamic Level	Meter	70	Assume
5	Pump Installation Depth	Meter	85	Assume
6	High of water tank from well surface (ground) to top of Tank	Meter	18	$H = 3+15=18m$
7	Length of delivery pipe from pump to Water Tank	Meter	133	-
8	Head Loss due to delivery pipe friction	Meter	12.635	9.5m/100m length for $Q=2.7$ l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	30,000	-
<b>Total Head:</b>			<b>116</b>	Actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis Stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground, surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min (50x50x4)mm, should be rigid.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE-16 bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production.

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## INVITATION TO BID

دفتر مرکزی  
پایکوب نسوار، وزیرآباد  
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ایمیل: [dacaar@dacaar.org](mailto:dacaar@dacaar.org)  
[www.dacaar.org](http://www.dacaar.org)

### Supply and Installation of 10 Solar System Water Pumps & 10 Spare Solar System Water Pumps for Herat Province

اعلان داوطلبی برای تهیه و نصب 10 ست واتر پمپ با سیستم انرژی آفتابی و 10 ست واتر پمپ آفتابی برای ولایت هرات

**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Date: September 28, 2017**

DACAAR invites interested parties to submit their sealed offers for Supply & Installation of 10 Set. Solar Water Pump with Fixed Stands Solar System and 10 Set. Spare Solar System Water Pump for Engile District of Herat Province which are described by detail under Annex (I).

The offers must be submitted to DACAAR Main Office Logistics Unit located in (Street No. 12, Paykobe-Naswar, Qala-e-Fathullah, Kabul) till 4:00 PM Oct 18, 2017.

The offers will be opened on Oct 19, 2017 at 10:00 AM in DACAAR Main Office in Kabul Province and the winner of the bidding will be notified shortly after the opening session.

داکار از کمپنی های علاقمند و واجد شرایط که خواهش اشتراک در پروسه داوطلبی داکار را داشته باشند دعوت به عمل می‌آورد تا در داوطلبی برای تهیه و نصب 10 ست سولر غیر متحرک واتر پمپ زیر آبی مجهز با سیستم انرژی آفتابی و 10 ست واتر پمپ آفتابی اضافه برای ولسوالی انجیل ولایت هرات اشتراک نمایند که تفصیلات آن در ضمیمه (I) تذکر یافته است.

آفرها باید الی تاریخ 18 اکتوبر 2017 ساعت 4:00 عصر به شعبه لجستیک دفتر مرکزی داکار واقع (پایکوب نسوار سرک 12 قلعه فتح الله ولایت کابل) سپرده شود.

مجلس آفرگشایی ساعت 10:00 قبل از ظهر تاریخ 19 اکتوبر 2017 در دفتر مرکزی داکار در ولایت کابل صورت می‌گیرد که متعاقباً برنده داوطلبی در اسرع وقت اطلاع خواهد یافت.

#### Terms and Conditions of Contract:

#### شرایط قرارداد:

1. Delivery and Installation of Solar Water Pump with Fixed Stands Solar System are in Engile District of Herat Province.

Detail for Delivery & installation timetable is described under Annex (II).

2. Installation & Delivery of Solar pumps & solar systems will be carried out by the company technicians.

3. DACAAR technical staff will inspect the function of solar system pumps, before delivery and after installation in the targeted areas.

4. The bidders have to provide solely information regarding the panels, type of panels stand and pumps, e.g. (name of manufacturer both for pumps and panels and also pump daily output design); otherwise, the offer will not be accepted.

5. Minimum three years warranty is required after successful installation of solar systems and this fact must be clearly mentioned in the offer.

1. انتقال و نصب سولر غیر متحرک واتر پمپ زیر آبی مجهز با سیستم انرژی آفتابی در ولسوالی انجیل ولایت هرات صورت می‌گیرد.

معلومات در مورد انتقال، نصب و تهیه واتر پمپ و پنل های آن در ضمیمه (II) تذکر یافته است.

2. نصب سولر سیستم و انتقال آن باید توسط اشخاص مسلکی صورت بگیرد.

3. پرسونل داکار نحوه کار سولر سیستم و واتر پمپ را در قبل از انتقال و بعد از نصب کردن نظارت خواهند نمود.

4. داوطلبان مکلف اند تا معلومات مکمل را در مورد پنل های سولر و پمپ که توسط انرژی سولر کار میکند، آب دهی روزانه، و کمپنی ساخت پنل ها و پمپ ها را ارائه نماید، در غیر آن آفر که معلومات فوق الذکر در آن گنجانیده نشده باشد، داکار از آن صرف نظر خواهد کرد.

5. حد اقل معیاد تضمین و خدمات بعد از فروش برای سولر سیستم مدت سه سال بعد از نصب موفقانه سولر سیستم میباشد، که این موضوع باید بشکل واضح و روشن در اسناد داوطلبی مشخص گردد.

6. 3% of total contract value will be seized as a service guarantee with DACAAR for three years, and after successful completion of mentioned period, the service guarantee will be refund to supplier.
7. In case of delay without logical reasons in delivery & installation of Solar Systems 0.5% of total cost of undelivered items/ incomplete work will be charged as penalty for each official day of delay.
8. Prices shall be given in Afghani (AFN) and shall include transport plus loading, unloading and complete installation of the systems in targeted areas. Offers without sign and stamp will not accepted.
9. All bidders should deposit 150,000 AFN as a bid security; otherwise, DACAAR has the right to make the decision.
- Submission methods of bid security is as follows:
- a) Put a Bank Guarantee with this amount with bidding documents.  
Or,  
b) Deposit (150,000 AFN) to DACAAR Kabul Bank Afghani Account (60019598).
- All deposits are refundable after completion of procurement process.
10. 2% Tax will be applicable on the companies that has valid business license and 7% Tax will be applicable on the companies that have invalid business license, or on individuals who don't have business license, will be deducted from the contractor as a withholding tax and DACAAR will pay that amount to Ministry of Finance, the amount starts from (1 AFN).
11. The winner of the tender must deposit 10% of total contract value as a contract performance guarantee, the amount is refundable after successful completion of the contract.
12. Payment will be made after successful & complete installation of solar pump with submission of invoice, confirmation of DACAAR relevant sites accountable within 25 days.
13. Award of contract will be based on the quality, price, capacity & potentiality of the bidders which will be decided after evaluation of the company; it is the right of DACAAR to make the decision of awarding contract.
6. 3% از مجموع ارزش قرارداد بطور ضمانت به مدت سه سال نزد داکار محفوظ میماند، و بعد از تکمیل موفقانه دوره ضمانت کار کرده گی سیستم این مبلغ به قراردادی قابل پرداخت میباشند.
7. در صورت تأخیر رساندن سیستم ها بدون عذر موجه در وقت معینه آن، مبلغ 0.5 فیصد از ارزش اموال/کار تأخیر شده به طور جرمانه در برابر هر روز رسمی تأخیر از طرف قراردادی تأدیه خواهد گردید.
8. قیمت ها باید به پول افغانی داده شود و شامل قیمت انتقال، بارگیری، تخلیه و نصب سولر سیستم به عهده قراردادی میباشند. قیمت های بدون مهر و امضاقابل قبول نمیباشند.
9. آفرها باید همراه با سند 150,000 افغانی تضمین آفر باشد در غیر آنصورت داکار حق تصمیم گیری را دار میباشند.
- روش های ارایه تضمین آفر عبارتند از:
- a. گذاشتن تضمین بانکی از بانک های معتبر داخل پاکت آفرها.  
ویا،  
b. جمع نمودن 150,000 افغانی به حساب افغانی داکار (60019598) در کابل بانک میباشند.
- مبلغ ذکر شده بعد از طی مراحل پروسه تدارکات قابل باز پرداخت میباشند.
10. 2% مالیه برای شرکت هائیکه دارای جواز با اعتبار میباشند، و 7% مالیه برای شرکت هائیکه دارای جواز معیاد اعتبار آن ختم باشد، و یا اشخاصیکه جواز ندارند توسط داکار وضع گردیده و به وزارت مالیه دولت اسلامی افغانستان پرداخت میشود، آغاز مبلغ از (1 افغانی).
11. شرکت برنده باید مبلغ 10% از مجموع ارزش قرارداد را بحیث تضمین اجراییوی موفقانه قرارداد را به حساب داکار جمع نماید، و مبلغ متذکره بعد از تکمیل موفقانه قرارداد باز پرداخت میباشند.
12. تأدیه پول بعد از تکمیل نمودن موفقانه قرارداد و بعد از تصدیق نمودن مسؤل ساحوی داکار در جریان 25 روز قابل اجرا میباشند.
13. برنده شدن قرارداد نظر به کیفیت، قیمت، توانائی و ظرفیت داوطلب بوده، و بعد از بررسی کمپنی صورت خواهد گرفت. البته تنها داکار حق تصمیم گیری در این زمینه را دارا میباشند.

14. DACAAR (Logistics Unit) adheres to National and International laws on child labour DACAAR makes sure all its suppliers and vendor abide by such laws preventing child labour in all DACAAR activities countrywide. دفتر داکار (شعبه لوژیستیک) با در نظر داشت قوانین ملی و بین المللی برای جلوگیری از کار کودکان مصمم بوده و سعی میکند که تمام فعالیتهای تهیه کننده گان و مشتریان این اداره به این اصل پایند باشند.
15. The Humanitarian Organizations (HO) may conduct on- site visit in the contractor's premises (or may take similar measures) to ensure compliance. سازمان های بشر دوستانه (HO) ممکن است تا از محلات و سایت ها به بخاطر اطمینان خاطر و تطبیق درست کار توسط قرار داد گیرنده بازدید بعمل آورده و یا ممکن است اقدامات مشابهی را انجام دهند.

For more details, please visit DACAAR Logistics Unit Main Office Kabul, Sunday through Thursday, from 8:00AM to 03:00PM. Or contact on below Email Addresses:

[jamal@dacaar.org](mailto:jamal@dacaar.org) or [shaker@dacaar.org](mailto:shaker@dacaar.org)

Head of Logistics Unit

Date: September 28, 2017



**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (I): Upper & Lower Sakhiabad and Salihahad, Engile District of Herat Province:**

S/No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	3					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	3				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	420					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (II): Jalilabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	1					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	1				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	140					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (III): Faqirabad Solar Pipe Scheme, Engile District of Herat Province:**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	1					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	1				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	140					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:



**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (IV): Noorabad & Malikabad Solar Pipe Scheme, Engile District of Herat Province:**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	2					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	2				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	280					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (V): Ghoryan Solar Pipe Scheme, Engile District, Herat Province**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	1					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	1				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	140					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Lot (VI): Two New Sites in Engile District of Herat Province**

S/ No	Required Item	Technical Specifications	Unit	Total QTY	Unit Price (AFN)	Total Price (AFN)	Transportation Cost to the Site (AFN)	Installation Charges (AFN)	Total Cost in (AFN)
1	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made.	<i>Annex (III)</i>	Set	2					
2	Solar system water pump with controller, well prob sensor, cable splice kit 2.5-6m2, wire tire white & black, German Made.	<b>Additional (Spare)</b> <i>Annex (III)</i>	Set	2				No Installation for Spare Pump	
3	Delivery Pipe	(PE Pipe - 16 Bar) PE (80)	MTR	280					
<b>Total Price: AFN</b>									

Offerer Name: \_\_\_\_\_ اسم آفر دهنده:

Address & Stamp: \_\_\_\_\_ آدرس کمپنی و مهر کمپنی:

Mobile No: \_\_\_\_\_ نمبر موبائیل:

Email Address: \_\_\_\_\_ آدرس ایمل:

Delivery Time: \_\_\_\_\_ زمان تحویلدهی:

**ANNEX (I)**  
**Budget Breakdown / فورم ارانه آفر**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**  
**Information about Types and Warranty of Solar Panels and Solar Pumps**

S/N	Manufacturer of solar pumps (Name of Company)	Warranty period of solar panels (year)	Name of submersible pumps (Name of company )	Warranty period of submersible pumps (year)

**ANNEX (II)**  
**Tentative Work Plan / پلان تخمینی کار**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Supply & Installation of Solar System in Engile District of Herat Province:**

Lot#	QTY	Items Description	Location of Installations	Contract Sign Date	Date of Inspection before delivery	Delivery Date	Installation Date
I	3 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Upper & Lower Sakhiabad and Salihahad, Engile District of Herat Province	Upon DACAAR Final Approval	Nov 05, 2017	Nov 08, 2017	Nov 30, 2017
II	1 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Jalilabad Solar Pipe Scheme, Engile District of Herat Province:				
III	1 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Faqirabad Solar Pipe Scheme, Engile District of Herat Province:				

Lot#	QTY	Items Description	Location of Installations	Contract Sign Date	Date of Inspection before delivery	Delivery Date	Installation Date
IV	2 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Noorabad & Malikabad Solar Pipe Scheme, Engile District of Herat Province:	Upon DACAAR Final Approval	Nov 05, 2017	Nov 08, 2017	Nov 30, 2017
V	1 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Ghoryan Solar Pipe Scheme, Engile District, Herat Province				
VI	2 Set	Solar System water pump with Controller, Solar Panels, fixed stand, electric cables and installation, German Made, and installation with Additional Solar Pumps ( <b>Spare</b> ) based on specification on Annex (III)	Two New Sites in Engile District of Herat Province				

**Note:** The above mentioned date's are tentative; and will be changed while signing of the contract as per DACAAR Tentative Work Plan.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part I: Upper & Lower Sakhiabad and Salihahad, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw down/Dynamic Level	Meter	70	Assumed
5	Pump Installation Depth	Meter	85	Assumed
6	High of water tank from well surface (ground) to top of Tank	Meter	15	H=15m
7	Length of delivery pipe from pump to Water Tank	Meter	130	-
8	Head Loss due to delivery pipe friction	Meter	4.55	3.5m/100m length for Q=1.4 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	lit/day	35,000	-
<b>Total Head:</b>			<b>105</b>	The actual total head depends on delivery pipe size

**Some other necessary specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min (50x50x4) mm.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE -16 bar
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, the system can be adjustable according to the actual dates after drilling the production well.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part II: Jalilabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw Down/Dynamic Level	Meter	70	Assumed
5	Pump Installation Depth	Meter	85	Assumed
6	High of water tank from well surface (ground) to top of Tank	Meter	18	H=3+15=18m,
7	Length of delivery pipe from pump to Water Tank	Meter	133	-
8	Head Loss due to delivery pipe friction	Meter	12.635	9.5m/100m length for Q=2.7 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Lit/day	68,000	-
<b>Total Head:</b>			<b>116</b>	The actual total head depends on delivery pipe size

**Some other necessary Specification:**

- Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand.
- If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground surface, with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
- The angle iron for panel stand will be min (50x50x4)mm.
- Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
- Delivery Pipe should be PE -16bar.
- The pumps, controller, panel and some other important accessories be Made In German.  
**Note:** Since most of the dates are assumed, the system can be adjustable according to the to the actual dates after drilling the production well.



**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part III: Faqirabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw down/Dynamic Level	Meter	70	Assumed
5	Pump Installation Depth	Meter	85	Assumed
6	High of water tank from well surface (ground) to top of Tank	Meter	15	H=14+1=15m,
7	Length of delivery pipe from pump to Water Tank	Meter	130	-
8	Head Loss due to delivery pipe friction	Meter	6.5	5 length for Q=1.7 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	42,000	-
<b>Total Head:</b>			<b>107</b>	The actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand .
2. If there are multiple Fixed Stands , there is needed reinforced concrete walls 2m center to center, 40cm thick,60 to 80 cm above ground surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min(50x50x4)mm.
4. Painting of the Channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE -16bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production well.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part IV: Noorabad & Malikabad Solar Pipe Scheme, Engile District of Herat Province:**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	100	Proposed
3	Static water level	Meter	20	Assume
4	Draw down/Dynamic Level	Meter	90	Assume
5	Pump Installation Depth	Meter	95	Assume
6	High of water tank from well surface (ground) to top of Tank	Meter	18	$H=3+15m=18m$
7	Length of delivery pipe from pump to Water Tank	Meter	143	-
8	Head Loss due to delivery pipe friction	Meter	11.44	8m/100m length for $Q=2.3l/s$ DN=50mm-outer dia.
9	Electric Cable Length	Meter	125	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	56,000	-
<b>Total Head:</b>			<b>124</b>	Actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground surface, with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min(50x50x4)mm, should be rigid.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE -16 bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production well.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part V: Ghoryan Solar Pipe Scheme, Engile District, Herat Province**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	100	Proposed
3	Static water level	Meter	20	Assume
4	Draw down/Dynamic Level	Meter	90	Assume
5	Pump Installation Depth	Meter	95	Assume
6	High of water tank from well surface (ground) to top of Tank	Meter	15	H=15m,
7	Length of delivery pipe from pump to Water Tank	Meter	140	-
8	Head Loss due to delivery pipe friction	Meter	4.9	3.5m/100m length for Q=1.4 l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	125	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	36,000	-
<b>Total Head:</b>			<b>115</b>	Actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis Stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground, surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min (50x50x4)mm, should be rigid.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE-16 bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production.

**ANNEX (III)**  
**Technical Specification for Solar Pump Systems**  
**DACAAR ITB 41 PRF-996-1048/1704-50/DFD2.9/09.2017**

**Part VI: Two New Sites in Engile District of Herat Province**

S/No	Specification	Unit	Quantity	Remark
1	Diameter of PVC Casing	Inch	8	-
2	Depth of well	Meter	90	Drilling Plan
3	Static water level	Meter	15	Based on the surrounding wells
4	Draw down/Dynamic Level	Meter	70	Assume
5	Pump Installation Depth	Meter	85	Assume
6	High of water tank from well surface (ground) to top of Tank	Meter	18	$H = 3+15=18m$
7	Length of delivery pipe from pump to Water Tank	Meter	133	-
8	Head Loss due to delivery pipe friction	Meter	12.635	9.5m/100m length for $Q=2.7$ l/s DN=50mm-outer dia.
9	Electric Cable Length	Meter	115	Assume panel is 30 m away from T-W
10	Average Daily Requirement	Liter/Day	30,000	-
<b>Total Head:</b>			<b>116</b>	Actual total head depends on delivery pipe size

**Some other necessary Specification:**

1. Concrete foundation with steel reinforcement (minimum 0.18-cum/sqm) of modules for single-axis Stand.
2. If there are multiple Fixed Stands, there is needed reinforced concrete walls 2m center to center, 40cm thick, 60 to 80 cm above ground, surface with suitable depth (min 80cm) of foundation, embedded strong hooks in the mentioned concrete.
3. The angle iron for panel stand will be min (50x50x4)mm, should be rigid.
4. Painting of the channel and the angle iron of panel stand with anti corrosive and anti stain paint.
5. Delivery Pipe should be PE-16 bar.
6. The pumps, controller, panel and some other important accessories be Made In German.

**Note:** Since most of the dates are assumed, The system can be adjustable according to the to the actual dates after drilling the production.