

INVITATION TO TENDER SUPPLY INSTALLATION, COMMISIONING & NET METERING OF 30KW ON-GRID SOLAR SYSTEM AT STATE LIFE BUILDING MINARA ROAD SUKKUR

Tender No. RE/SOLAR/SUK/APR/2026

INVITATION TO BID

1. *State Life Insurance Corporation of Pakistan*, invites bids via E-PADS under Single stage two envelope procedure, from the original authorized distributors/ suppliers/ Contractors etc., having relevant experience of installation of solar system in Federal Government organizations, Banks and Multinational Companies in Pakistan and registered with the concerned authorities for "**SUPPLY INSTALLATION, COMMISIONING & NET METERING OF 30KW ON-GRID SOLAR SYSTEM AT STATE LIFE BUILDING MINARA ROAD SUKKUR.**". The firms should have proper office, telephone number, N.T.N and should be duly registered with e-PADS, FBR on the ATL & GST list.
2. Bidding documents, containing detailed terms and conditions, etc. are available for download on E-PADS website <http://eprocure.gov.pk>
3. The bids prepared in accordance with the instruction in the bidding documents, must be submitted through E-PADS on or before **04-06-2026 at 11:00 AM**. Bids will be opened on same day at **11:30 AM**
4. Contractor is advised to submit original bid security and hard copies of original bids shall also be submitted in the office of In-charge (Real Estate Department) 7th floor, State Life Building, Thandi Sarak Hyderabad. On OR before 04-06-2026 at 11:00 AM.
5. This advertisement is also available on State Life website www.statelife.com.pk & PPRA website www.ppra.org.pk however, the bids shall be submitted through E-PADS. Any bid submitted other than E-PADS will not be consider.
6. State Life Insurance Corporation of Pakistan reserve right to accept / reject all bids in accordance with PPRA Rules.

Mazhar Uddin Shaikh
INCHARGE (Real Estate)
5th Floor, State-Life Building
Minara Road Sukkur
Ph:071-9310503

STATE LIFE BUILDING SUKKUR

Tender No. RE/SOLAR/SUK/APR/2026

Documents for

TECHNICAL BID

(NOTE: PRICE CAN NOT BE QUOTED IN TECHNICAL BID)

Name of work:

TENDER DOCUMENTS FOR THE:

SUPPLY INSTALLATION, COMMISSIONING & NET METERING OF 30KW ON-GRID SOLAR SYSTEM AT STATE LIFE BUILDING SUKKUR.

Contents:

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| <ul style="list-style-type: none">i. Instruction for Tender (02Pages).ii. The Tender and Performa 'A' & 'B' (04+01Pages)iii. The Scope of Work, terms conditions & Bill of Quantity (B.O.Q) (05Pages)iv. Technical Evaluation Criteria (TEC) (04Pages-Landscape)v. The General Conditions of Contract with the Form of the Agreement and Bond |
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Bid Security of Amount (Rs) 150,000/- in form of pay order (in original), must be delivered at **Office of In-Charge (Real Estate Department) 7th Floor, State Life Building Thandi Sarak Hyderabad** before the Time & Date mentioned in the Tender Notice.

Date.....

N. B: All tender documents read carefully, to be filled properly and duly signed & stamped each paper before uploading it to EPADS. Incomplete tender bids will not be considered.

STATE LIFE BUILDING SUKKUR

“INSTRUCTION FOR TENDER”

- 1. The Tenderer should examine carefully the General Conditions of Contract**, the Specification and the drawing supplied herewith. He should visit and inspect the Site on his own responsibility and at his own expense to obtain all the information which may be necessary for the purpose of making a Tender.
- 2. The Tenderer set down the rates and prices** against the items in the Bill of Quantities are to be the full inclusive value of the finished work described there under and shall cover profit and all obligations of every kind which under the Contract are to be borne by the Contractor.
- 3. The Quantities set out in the Bill of Quantities** are estimated only and their accuracy or inaccuracy shall in no way effect the validity of the Tender or of any Contract based thereon. The total amount of the various item set out in the Bill of Quantities at the rates or prices inserted by the Tenderer shall be stated in each case, but this figure is required solely for the purpose of facilitating the comparison of the various Tenders received and shall not be deemed to be the actual sum which is to be paid to the Contractor for the execution of the work. The actual sum to be paid to the Contractor whose Tender is accepted will be determine by measuring the work, actually done in accordance with the Contract and valuing it the rates or prices inserted by the Contractor in the Bill of Quantities.
- 4. The Contractor whose Tender accepted will be required to enter into an Agreement Form** of which (subject to any necessary adaptations) will be as set out in the Form appended to the General conditions of the Contract.
- 5. The Contractor whose Tender accepted will also be required to furnish as Security deposit/performance guarantee** in form of Bank guarantee from schedule bank of Pakistan till the successful completion of the Contract, for the sum equivalent to **Five percent (5%)** of the Contractor price for the due performance of the Contract, (see **Clause-9 of the General Conditions of Contract**).
- 6. Tenders must be made on the separate Form** supplied herewith must be accompanied by two copies of the Bill of quantities fully price, monies out and totaled in ink and sign by Tenderer. Tender must be reached to the Office of In-Charge (Real Estate Department) 7th Floor, State Life Building Thandi Sarak Hyderabad, not later than the time stated in the Tender Notice.
- 7. No unauthorized alteration may be made in the Form of Tender** or the accompanying Documents and if alteration is made or if the Bill of Quantities is not properly filled in, or if these instructions are not fully complied with the Tender may be rejected.
- 8. Tenderer must be produced evidence with their Tender**, that they had experience and are fully capable carrying out the work of this class and magnitude and must give full details of the plant they propose to use on the works in **Performa “A”**.
- 9. State Life Insurance of Corporation Pakistan reserves to themselves the right** to reject any Tender without any reason or to accept any Tender in whole or in part and do not hind themselves to accept the lowest or any Tender.
- 10. Should there be any doubt or obscurity as to the meaning of any Tender Documents** or if any further information is required, the Tenderer must address his enquiry in writing (in duplicate) to the Office of In-Charge (Real Estate Department) 7th Floor, State Life Building Thandi Sarak Hyderabad, not later than two weeks before the date fixed for the delivery of Tender.

- 11. Each Tender must be accompanied** by the requisite amount of Earnest money deposit either in Pay Order / Demand Draft /Bank Guarantee of a recognized Pakistan or a foreign bank with presence in Pakistan in favour of M/s. **State Life Insurance Corporation of Pakistan, Bankers Guaranteed Bond** valid for an indefinite period or a pay order drawn in favor of the **State Life Insurance Corporation of Pakistan**. The earnest money will be refunded to the unsuccessful Tenderer to after the Tender are decided. **(See Clause-9 of the General Conditions of Contract).**

- 12. The Tender must be submitted through Epads online** before the due time and date fixed for opening of the Tender. Physical submission shall not be accepted in any case before the due time and date fixed for opening of the Tender.

- 13. The Contractors have to quote items rate** as per schedule of quantities attached with Tender. Any insertion of percentage whether below or above on the rates after filling of the rates shall make the Tender invalid and the Tender will not be considered.

GENERAL INFORMATION

Sr. No.	Description
1	Enclosed, please find herewith Tender Documents for the subject work as per single stage two envelope procedure of PPRA Rules. Please submit the same duly filled and completed in all respects on E-PADs at the latest by 04-06-2026 at 11:00 AM.
2	The bid(s) shall be submitted on E-Pad(s) only.
3	Contractor is advised to submit Original Bid Security on or before 04-06-2026 at 11:00 hours in the office of In-charge (Real Estate), 7th Floor, State Life Building #03, Thandi Sarak, Hyderabad.
4	All queries / clarifications required from bidder shall be addressed on working days through E-PADs.
5	State Life will reject proposal for award of contract if it determines that the firm recommended for award of contract has engaged in corrupt or fraudulent activities in competing for the contract.
6	The successful contractor will follow all instructions issued by the Corporation.
7	The Agency may, at its discretion, extend the deadline for submission of bids by amending the bidding documents.
8	Any bid received after the submission deadline prescribed by the Procuring Agency will be rejected and returned unopened.
9	Tender shall be submitted through E-Procurement System of PPRA (E-PAD). No manual tender shall be accepted.
10	State Life Insurance Corporation of Pakistan reserves the right to accept or reject all bids in accordance with PPRA Rules.

MANDATORY REQUIREMENTS

Sr. No.	Requirement
I	Registration on Portal – EPADS
II	Valid Registration Certificate FBR – NTN with Return of last 03 years
III	Valid Registration Certificate – SST
IV	Undertaking in original for non-blacklisting of firm from any Govt. / Semi-Govt. / Autonomous Body or Private Organization on Rs. 100/- Stamp Paper.
V	Pakistan Engineering Council registration certificate in mandatory technical codes EE-04, EE-05, EE-11 & for financial limit in C-3 minimum.

SALIENT FEATURES OF CONTRACT

(Blanks to be filled by the Bidder)

Clause	Description	Details
A	Submission of Tender	Through EPADS
B	Title of Work	SUPPLY INSTALLATION & COMMISSIONING OF 30KW ON-GRID SOLAR SYSTEM AT STATE LIFE BUILDING, MINARA ROAD, SUKKUR.
C	Amount of Bid Security	Rs. 150,000/- in shape of Pay Order / Bank Draft in favor of State Life Insurance Corporation of Pakistan
D	Bid Security Forfeiture	i) If the bid is withdrawn after opening ii) If the bidder does not accept Letter of Award or refuses to enter into contract
E	Release of Bid Security	i) To unsuccessful bidders on acceptance of lowest bid ii) To lowest bidder on submission performance guarantee
F	Validity of Tender	One Hundred Twenty (120) Days from date of opening of bid
G	Commencement of Work	Not later than Seven (07) Days from date of issuance of Letter of Award
H	Period of Contract	3 Months from date of commencement of work
I	Working Days	Six (06) working days except gazetted holidays (08:30 hrs to 17:30 hrs)
J	Defect Liability Period	12 Months from date of completion of project including net metering.
K	Third Party Insurance	Rs. 500,000/- (Minimum for any one incident for loss of property or life)
L	Retention Money	5% deduction from each bill, released after defect liability period.
M	Performance Guarantee	5% of Quoted Amount and shall be release after completion of Defect liability period
N	Venue / City	State Life Building, Minara Road, Sukkur
O	Payment Terms	Payment shall be made according to the bill claimed by the Contractor against actual executed items, duly verified and certified by the Engineer / In-Charge. The minimum payable amount per bill shall not be less than Rs. 1,500,000/- (Rupees One Million Five Hundred Thousand only). Bills of lesser amount may be carried forward and paid once cumulative value reaches Rs. 1.5 Million. All statutory deductions shall apply.
P	Liquidated Damages	0.1% per day upto a maximum of (10%) of sum stated in the Letter of Acceptance/Award.
Q	Non-Blacklisting	Undertaking in original for non-blacklisting of firm from any Govt. / Semi-Govt. / Autonomous Body or Private Organization on Rs. 100/- Stamp Paper.
	Signing Of Contract Agreement	<ol style="list-style-type: none"> 1. Upon acceptance of the tender the supplier shall execute with the State Life Insurance Corporation of Pakistan a proper agreement on judicial stamp paper of containing certain terms and conditions in the form prescribed by the State Life Insurance Corporation of Pakistan within Seven (07) days from the acceptance of Letter of Award. 2. The contract shall be Governed and interpreted in all respects in accordance with the Law of Pakistan. 3. State Life Insurance Corporation of Pakistan reserves the right to reject any or all offers, as per provisions of PPRA Rules.

STATE LIFE BUILDING SUKKUR

“THE TENDER”

Tenderer required to fill in the blanks space in the is tender Form and the attached Performa “A”

To,
Office of In-Charge
(Real Estate Department) 7th Floor,
State Life Building Thandi Sarak Hyderabad

Description of work

.....
.....
.....
.....
.....

1. Having examined the drawing, General Conditions of Contract, and special condition of Contract (if any), specification and Bill of Quantities for the above – named works. We the undersigned offer to carry on the said works in conformity with the said Drawings General Conditions of the Contract, Special conditions of Contract (if any) specification and Bill of quantities for the sum of Rupees: _____ (Rs _____) or such other sums as may be ascertained with the said conditions.
2. We undertake if our tender is occupied in whole or in part to commence the work within..... days of receipt of the Engineer’ so order to commence and to complete and deliver the whole of the work comprised in the Contract within.....days calculated form the last days of the afore said period in which the works are to be commenced.
3. If our tender is accepted in whole or in part we will furnish a Security deposit for due performance of the Contract in accordance with **Clause-9 of the General Conditions of Contract**.
4. We agree to abide by the tender for a period of.....days from the date fixed for receiving Same and it shall remain binding up on us may be accepted at any time before expiration of that period.
5. Unless and until a formal Agreement is prepared and executed, this tender, together with your written acceptance thereof, shelf constitutes a binding Contract between us.
6. We understand that you are not bound to accept the lowest or any tender; you may receive and accept any tender in part or in whole.
7. We further agree to pay all cost toward the execution of the Contract Agreement including the cost of stamps.
8. We agree that should we withdraw the offer within the aforesaid period or fail to execute the formal Contract Agreement and / or make the required Security deposit in the name of, **State Life Insurance Corporation of Pakistan** shall be at liberty at their absolute discretion to appropriate our earnest money deposit of Rs. Either as agreed liquidated damages without any proof whatsoever of the extend of such damages or an account, reserving to themselves the right to recover from us any further loss or expenses to which they may have been put directly or indirectly by reason of any failure on our part as aforesaid.

9. *We have deposited/sent by Cheque No...../enclose a Pay Order/enclose Bank Certificate Cheque No..... / Enclose a Bank guaranteed Bond for Rs.....As Earnest money in favors of **State Life Insurance Corporation of Pakistan** and hold his receipt No Dated.....

10. We agree to maintain the working order for a period of.....Months, from the Date of its completion.

Dated.....

TENDERER.....

Place.....

(Full Signature).....

Signed by Mr...... **For and on**
Behalf of Messrs._____

*Delete whichever is Not Applicable

STATE LIFE BUILDING SUKKUR

PROFORMA "A"

(To be submitted with the Tender)

Particulars	Details
<p>1. Experience as a Contractor.</p> <p>2. Work carried out in the past with detailed cost, particulars and the year in which they were under taken etc.</p> <p>3. Bankers reference regarding financial status.</p> <p>4. Whether registered with any other Department or Organization? If so, give details.</p>	

Particulars	Details
5. Plant and equipment in possession (Give Detail with cost)	
6. Technical person & employed; give Names and other details.	
7. If your firm registered?	”
8. State Capital of your firm.	
9. Details of Income tax, Sales tax, registration etc.	
10. Number of years of actual work carried out in Pakistan.	
11. Attach attested copy of certificate of past work of the same nature carried out as that in tender.	
12. Electrical Contractor license No. and date.	
Date: _____	<hr/> SIGNATURE OF TENDERER Signed by Mr. _____
Place: _____	For and on behalf of _____

STATE LIFE BUILDING SUKKUR**PROFORMA – “B”**

<u>S.NO</u>	<u>PARTICULARS</u>	<u>DETAILS</u>
1.	<u>In case of “SOLE PROPRIETORSHIP” concern.</u> a. Full Name of the Proprietor. b. Business address and Phone No. If any. c. Residential address and Phone No. if any. d. Certified copy of certificate of registration with Registrar of Firms to be attached.	
2.	<u>In case of “PARTNERSHIP” Concern:</u> a. Name of the Partners with their business / residential address and Phone No. if any. b. Partnership Deed & Certificate of Registration (Certified copies to be attached)	
3.	<u>In case of “PRIVATE LIMITED COMPANY”.</u> a. Name of all Directors with their Business / Residential address and Phone No., if any. b. Memorandum & Articles of Association of the Company and Certificate of incorporation. (Certified copies to be attached.)	
4.	<u>In case of ”PUBLIC LTD., COMPANY”.</u> Memorandum & Articles of Association and (Certified copies to be attached).	
5.	<u>In case firm is to be represented by “ATTORNEY”.</u> a. Legal Status and full particular so of the Attorney. b. Period of validity of Power of Attorney (Certified copies of Special or General Power of Attorney duly executed on Stamp Paper of proper value and authenticated / attested by a competent Authority to be attached.	
6.	G.I.R. No: Income Tax and amount of Income paid during the last assessment year (state year of Assessment)	
7.	A Certificate from the Bankers, sealed and addressed to the State Life Insurance Corporation of Pakistan showing the financial position of the Institution tendering, should be enclosed.	

SIGNATURE & SEAL OF THE TENDERER SIGNED

BY MR. _____

FOR & ON BEHALF OF _____

**SUPPLY INSTALLATION, COMMISSIONING & NET METERING OF 30KW ON-GRID
SOLAR SYSTEM AT STATE LIFE BUILDING SUKKUR**

SCOPE OF WORK / BILL OF QUANTITY

S.NO	DESCRIPTIONS OF WORK	QTY	UNIT	ACKNOWLEDGE
1	Supply / Providing of Tier-1, Grade-A, 610W to 625W, Monoperc, Half cut, HIMO6, N-type of reputable make as per international standard, IEC61215, IEC61730, ISO9001, ISO14001, ISO45001. Brand: Longi / Jinko / Canadian or equivalent	56	No.	
2	Supply / Providing of Tier-1, Grade-A, on grid 30KW Inverter of reputable make as per international standard. IEC62109, IEC61727, IEC62116, IEC60068, IEC61683, IEC610006-2, IEC61000-6-4. Brand: Sungrow / Huawei / SMA or equivalent	1	No	
3	Supply/ Providing of WIFI Stick including all communication devices & peripherals of reputable make as per international standard.	1	No.	
4	Providing of AC Cable 16mm ² , 4 core Copper Wire PVC insulated make Pakistan Cables / Fast Cables / Universal cables or equivalent (from Inverter to AC Combiner Cabinet).	60	Mtr.	
	Providing of Earthing 6mm ² , single core Copper Wire PVC Green insulated make Pakistan Cables / Fast Cables or equivalent (for Structure Earthing).	180	Mtr.	
	Providing of DC Flexible Wire 6mm ² , single core 1500VDC, tin coated Copper Wire XLPO/XLPO insulated make Pakistan Cables / Fast, Cables / Universal cables or equivalent (for DC wiring of solar panels).	1800	Mtr.	
	Providing of Earthing 2.5mm ² , single core Copper Wire PVC Green insulated make Pakistan Cables / Fast Cables / Universal cables or equivalent (for Grounding Solar Panels).	90	Mtr.	
	Providing of Earthing Cable 25mm ² , Single core Copper Wire PVC insulated make Pakistan Cables / Fast Cables or equivalent (from Earth pit to Lightning Arrester).	180	Mtr.	
	Providing of Earthing 10mm ² , single core Copper Wire PVC Green insulated make Pakistan Cables / Fast Cables / Universal cables (for Inverter Earthing).	180	Mtr.	

5	Supply/ Providing of Elevated Structure including (Height of Front pole:12' & Back pole: 15' Tilt: 7 degrees) With Epoxy Paint, Anti rust epoxy primer & Supporting materials. MS pipe 114mm dia size 14-gauge thickness. MS Main girder I-beam 5"x3" size 10-gauge (3mm) thickness. 1.8kg/ft. MS Secondary girder I-beam 5"x3" size 10-gauge (3mm) thickness. 1.8kg/ft. MS top plate 6"x 6" size 4mm thickness. MS base plate 8"x8" size 8mm thickness. MS square pipe 1"x2" size 18-gauge thickness (for walkway & ladder). Aluminum T & Z clamps. Respective calculations (ASCE7-10) subject to wind speed will be provided with the bid.	1	Job.	
	Constructing of Cemented civil pads for PV Roof mounting shed structure with dimensions L x W x H = 12" x 12" x 6" with MS studs & bolts reinforcement for elevated Structure.	1	Job.	
6	Supply & Providing of Earth Electrodes (Rod Type) for Earthing System with 14mm Dia 3 meters (10feet) long driven Pure copper Solid rod, complete with clamps lugs, washer/bolts, connected with 1 x 25mmsq bare copper. I pipe/UPVC pipe class 'D/E' up to Earth chamber, job includes cad- welding of copper conductor to earth electrode rod at one end and provision/fixing of cable lugs at other end, including all accessories and RCC inspection chamber, heavy duty G.I. Cover having earth symbol, etc as per the specifications and Drawings and to the entire satisfaction and approval of the Engineer. Minimum depth of the earth pit should be 20ft, Earthing result should be less than 1 Ohm for AC/DC/LA.	3	Job.	
7	<p>16Guage IP-42 AC Combiner Box Floor mounted 400 X 6000 X 200mm with complete filling scheme, railings & isolators for placing AC breakers, RYB indications with energy analyzer. Followings are specifications of wall mounted combiner.</p> <p>MCCB 4-Pole,400 VAC, 63Amp x 1Nos.</p> <p>SPD 4-Pole, 400V AC, 40kA x 1Nos.</p> <p>Brand: ACCU-Panels Energy or similar</p> <p>Energy Analyzer x 1Nos Brand: Phoenix</p> <p>Phase Indication Lights x 1Nos</p>	1	Job.	
8	Providing of Wall Mounted DC Distribution Boxes of 16 Guage IP-42 reputable make for each inverter for placing DC Breakers & DC SPD, Size: WxHxD=1.5'x1.5'x1' with indication lamps, Digital Volt & Ammeter and with all necessary railings & fittings etc as per site requirements.	1	Job.	

9	Providing of Misc Items e.g. Cable tray GI 16SWG with 18SWG cover. Accessories (MC4 Connectors, Cables, UPVC conduits, anchor bolts, PVC flexible pipes & clamps, PVC tapes, Thimbles etc.)	1	Job.	
10	Supply & Providing of Early Streamer Emission (ESE) with remote testing option and having following specifications: Make: As per approved manufacturer's list Type: Generation 3 or Equivalent Reaction time: 45 - 50 micro seconds Maximum Discharge Rating: 100 kA Material: Stainless Steel or as per manufacturer's specifications Length: 400mm or as per manufacturer's specifications Level of Protection: Level 1 Protection Radius: 65 m Risk Assessment / Coverage Calculation Via Software. Mounting height (from Roof top to tip of ESE): 5m or as specified	1	No.	
11	Supply & Providing of Water Piping Network with PPRC Piping Network for Cleaning of Solar PV Panels with Water Booster Pumps etc. Note: 2No. 3-in-1 special brush, featuring integrated brush, wiper, and water inlet functions for the cleaning of solar panels, will be handed over to the client.	1	Job	
12	Installation, Commissioning, Net Metering (including NEPRA Charges & WAPDA Meter charges will be responsibility of contractor) and Services of S. No. 1 to 11.	1	Job	
13	Spares	1	Job	

1. ENERGY GENERATION SIMULATION

Year	PR (Performance Ratio)	TCPR (Temperature Corrected Performance Ratio)	Yearly Generation (MWh)	Global Horizontal Irradiance (W/m²)	Ambient Temperature (Degree Celsius)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

SCHEDULE-A TO BID: PROPOSED PROGRAMME OF WORKS

Following details must be submitted for evaluation of technical bids duly marked as “Response to Schedule C to bid”

Bidder shall provide a program in a bar-chart or Program Evaluation and Review Technique (PERT) or Critical Path Method (CPM) showing the sequence of work items by which he proposes to complete the works of the entire Contract. The program should indicate the sequence of work items and the period of time during which he proposes to complete the works including the activities like designing, schedule of submittal of drawings, ordering and procurement of materials, manufacturing, delivering, construction of installation works, erection, testing and commissioning of works to be supplied under the Contract

SCHEDULE–B TO BID: METHOD OF PERFORMING WORKS

Following details must be submitted for evaluation of technical bids duly marked as “Response to Schedule B to bid”

The bidder is required to submit a narrative outlining the method of performing the Works duly marked as “Response **to Schedule B to Bid**”. Detailed working on schedule B will help the bidder to prepare an exact and doable financial offer. The narrative should indicate in detail and include but not be limited to:

- The sequence and methods in which he proposes to carry out the Works, including the number of shifts per day and hours per shift, he expects to work.
- Provide strategy for training the users/user information strategy.
- A list of all major items of construction and plant erection, tools and vehicles proposed to be used in delivering/carrying out the works at site.
- The procedure for installation of equipment and transportation of equipment and materials to the site
- Organization chart indicating head office & field office personnel involved in management, supervision and engineering of the Works to be done under the Contract.

TERMS AND CONDITIONS

1. Work site :-

All the firms participating in bidding for this work must visit the work site for assessing the actual conditions, locations, spaces, logistics, etc before submitting their bids.

2. Operation and maintenance manuals and drawings: -

Contractor shall supply one set of Operation and maintenance Manual and 3 sets of Product Specs Catalogue for all the equipment before the supply, installation and commissioning of equipment for study of State Life Building Sukkur. Contractor shall supply 3 sets of manuals for all equipment after completion but before final handing over. Three sets of connection diagrams and schematic diagrams for the complete works showing actual as built condition shall be prepared by the contractor and provided for study and record prior to commissioning of the system. The contractor, if directed by In-Charge (Real Estate Department), shall incorporate any modifications / corrections, in the drawings.

3. Manufacturer catalogues along with tender document:-

Manufacturer catalogues, in English for offered equipment should be provided along with the tender documents for study of State Life Building Sukkur for verification of specifications and ascertaining the suitability of the equipment.

4. Load test and certificates:-

The Contractor along with the supply shall provide manufacturer's test certificate. Actual test trial to be carried out after completion and installation as per standard procedures for satisfactory commissioning.

5. Training

Contractor shall arrange for 4-days training of 4 nominated officials of State Life Building Sukkur at the manufacturing / assembling premises of the equipment to be supplied. Said training shall cover operation, routine maintenance, fault diagnosis, defect rectification etc pertaining to the main equipment to be supplied.

6. Service level agreement (SLA) for maintenance

The service level agreement (SLA) for maintenance will be for (1 year). The maintenance activities will be divided in to the following parts:

- Preventative maintenance-will include inspections and test so of Solar PV equipment to depict their performance.
- Corrective maintenance-will include trouble shooting and parts replacement (if required) in case of abnormal behavior, component failure or breakdown.
- Cleaning services of Solar plates three times in a month i-e on 10th , 20th & 30th of every month for period of one (01) year free on cost

Preventative Maintenance

Preventative maintenance shall encompass all the equipment installed, inverters, LV Panels, solar modules etc.

Inspections of Installed Equipment

- i. PV Modules on daily basis
 - a) All panels to be inspected.
 - b) All panels inspection will be completed in 7days
 - c) PV Modules Glass cracks checking
 - d) MC4 connectors check for any loose connections
- ii. PV Inverters on a daily and monthly basis
 - a) Visual checks for any damages
 - b) MC4 connectors checking
- iii. Structure daily, monthly, and annual inspections and maintenance
 - a) Nuts & Bolts Tightening
 - b) ZRC application

Sr.#	Inspection	Weekly	Monthly
1.	PV Modules Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.	PV Modules Cleaning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.	PV Inverters Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Structure Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Plant Performance Reporting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Preventative maintenance shall be carried out by the site teams throughout the calendar year.

Bi-Annual Inspections

Bi-Annual inspection will be performed twice a year. Once after six months and other at the end of the year

The scope must include the following

(Modules and Supporting Structure)

- 100% visual inspection of modules regarding damage in 1st bi-annual inspection. Modules will be inspected daily and damage/ replacement shall be reported. However, modules will be checked for any damage, decolonization, cracking, splitting will be covered in bi-annual inspections.
- Random check for loosening of module clips. Clips should be replaced if necessary
- ZRC application on rusty parts of the structure
- Nuts and bolts tightening of the structure and PV Modules

Inverter (100% per inspection to be covered)

- Functional check of inverters
- Testing of inverter features according to manufacturer's maintenance
- Maintenance of inverters according to manufacturer's instructions

Additional Inspections

- Functionality testing of the monitoring system
- Maintenance of all PV Plant components according to manufacturer's instructions
- Visual damage inspection of all accessible cable trenches and cable trays
- Dressing of the cables if and as required.

Additional Main Annual Inspection

In addition to the bi-annual inspections, one main annual PN Plant inspection will be conducted. The inspection is to follow the detailed inspection procedures and will be documented accordingly. Below is the scope of annual inspection:

- Visual damage inspection of all accessible cable trenches and cable trays
- Visual inspection and random testing of module string connector's clamps, All components and degree of pollution. Testing of over-voltage protection

Corrective Maintenance

The following corrective maintenance services shall be offered till system is under O&M contract:

- Critical Reactive Repair
- Condition Based Maintenance
- Warranty Enforcement
- Equipment Replacement through Spares(planned/unplanned)
- Complaint Management
- MC4s replacement and cable dressing, if and as required

Corrective maintenance shall be carried out by the site team if and as required.

The following additional spare parts will be ordered along with the project procurement

- 10 extra modules.
- 50 m DC cable
- Equipment to ensure low water consuming cleaning techniques.
- Miscellaneous Items.

Any additional spares that the bidder foresees that could be used should be additionally specified. These should not be consumable items and will be analyzed by the owner's engineer before being allowed to be added in the spares list. These spares are owned by State Life & stored within State Life, whereas it is the responsibility of the contractor to properly maintain, safeguard and store the spare parts. The spares can be acquired after an incident is properly reported where the installed inverters have become nonoperational.

Any additional spares non-availability impact on nonperformance of the plant will be the responsibility of the contractor during the O&M period. Any resulting damages due to nonperformance of the plant due to the unavailability of the inverters or any other equipment will be the responsibility of the O&M provider. Specialized low water consumption cleaning techniques and equipment to be used to avoid soiling and reduce portable water use. Unlimited water will not be available for cleaning modules.

6. WARRANTY AND GUARANTEE:

- One-year standard warranty of complete Project.
- International Standard warranty for Solar Panel (Product warranty 16 years and performance warranty 30 years, 5 years Inverter warranty).

Signature & Seal of the Bidder

STATE LIFE BUILDING SUKKUR

GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract have been approved by the of State Life Insurance Corporation of Pakistan Under their Resolution No.21, dated 9th April, 1958 for adoptions of works.

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General Conditions of Contract

DEFINITIONS & INTERPRETATION

1. (1) In the Contract (as hereinafter defined) the following words and expression shall have the meanings hereby assigned to them except where the context otherwise requires: -
 - (a) **“SLIC”** means State Life Insurance of Corporation Pakistan, and includes the SLIC’s representatives of successors.
 - (b) **“Contractors”** means the person or person firms or company whose Tender (as here in after defined) has been accepted by the SLIC and includes the Contractor’s personal representative successors and permitted assigns.
 - (c) **“Engineer”** means the Electrical Engineer of the State Life Building Sukkur or other Engineer appointed from time to time by the State Life Insurance of Corporation Pakistan.
 - (d) **“Representative of the Engineer”** means any Engineer Assistant Engineer and any other duly authorized Agents of Agents appointed from time to time by the SLIC of the Engineer to perform the duties set forth in **Clause-2** hereof.
 - (e) **“Works”** means the works to be executed in accordance with the Contract.
 - (f) **“Contracts”** means the conditions of Contract, Specification, Drawings, priced Bill of Quantities, Schedule of Rates and prices (if any), Tender and the Contract Agreement.
 - (g) **“Contract Price”** means the sum named in the Tender subject to such additions there to or deductions there from as may be made under the provisions hereinafter contained.
 - (h) **“Constructional Plant”** means all appliances things of what so ever nature required in or about the execution completion or maintenance of the works or Temporary works (as hereinafter defined) but does not include materials or other things, intended to from or forming part of the permanent work.
 - (i) **“Temporary works”** means all temporary works if every kind required in or about the execution completion or maintenance of the works.
 - (j) **“Drawing”** means the drawing referred to in the specification and any modifications of such drawings approved in writing by the Engineer and such other drawing as may from time to time be furnished or approved in writing by the Engineer.
 - (k) **“Site”** the lands and other places on, under in or through which the works are to be executed or carried out and any other lands or places provided by the State Life Insurance of Corporation Pakistan for the purpose of the Contract.
 - (l) **“Approved”** means approved in writing including subsequent written confirmation of previous verbal approval and “approval” means approved in writing including as aforesaid.
 - (m) **“Tender”** means the offer tendered by the Contractor for the works governed by the Contract.
- (2) Words importing the singular only also include the Plural and vice versa where the contents require.
- (3) The marginal headings or note in these General Condition shall not be deemed to be part there of or be taken in to consideration in the inter operation or construction there of or of the Contract.

**Singular and
Plural**

**Marginal Headings
or Notes**

Duties and Power of Representative of the Engineer.

REPRESENTATIVES OF THE ENGINEER

2. The duties of the Representative of the Engineer are to watch and supervise the works and to test and examine any material to be used or workmanship employed in connection with the works. He shall have no authority to relieve the Contractor of any of his duties or obligations neither under the Contract nor except as expressly provided here under or elsewhere in the Contract, neither to order any work involving delay or any extra payment by the SLIC nor to make any variation of or in the Works.

The Engineer may from time to time in writing delegate to the Representative of the Engineer any of the powers and authorities vested in the Engineer and shall furnish to the Contractor, a copy of all such written delegation of powers and authorities. Any written instructions or approval given by the Representative of the Engineer to the Contractor within the terms of such delegation (but not otherwise) shall bind the Contractor and the SLIC though it had been given by the Engineer, provided always as follows:-

- (a) Failure of the Representative of the Engineer to disapprove any work of material shall not prejudice the power of the Engineer there after to disapprove such work or materials and to order the pulling down removal or breaking up thereof.
- (b) If the Contractor shall be dissatisfied by reason of any decision of the Representative of the Engineer he shall be entitled to refer the matter to the Engineer who shall there upon confirm reverse or vary such decision.

Assignment and sub-letting

ASSIGNMENT AND SUB-LETTING

3. The Contractor shall not assign or Sub-let the Contractor any part there of or any benefit or interest or interest therein or there under without the written consent of the SLIC.

Extent of Contracts

EXTENT OF CONTRACT

4 .The Contract comprises the construction, completion and maintenance of the works and except in so far as the Contract otherwise provides provision of all LABOR materials. Constructional Plant. Temporary works as everything whether of temporary or permanent nature required in and for such construction completion and maintenance so far as the necessity for providing the same is specified in or reasonably to be inferred from the Contract.

Documents manually Explanatory

CONTRACT DOCUMENTS

5. The several documents forming the Contract are to be taken as mutually explanatory of one another and in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer whose decision in this respect shall be final.

Drawings

6. **Three (3) copies** of the approved drawings shall be furnished to the Contractor free of cost. The Contractor shall provide and make at his own expense any further copies required by him. At the completion of the Contract the Contractor shall return to the Engineer all drawings provided under the Contract.

One Copy of Drawings to be kept on Site

One copy of drawings furnished to the Contractor as aforesaid shall be kept by the Contractor on the Site and the same shall at all reasonable time be available for inspection and use by the Engineer and the representative of the Engineer.

Further Drawings and Instructions

7. The Engineer shall have full power and authority to supply to the Contractor from time to time during the progress of the works such further drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the works and the Contractor shall carry out and bound by the same.

Contract Agreement

GENERAL OBLIGATIONS

8. The Contractor shall within **Fourteen (14) days** after written notice of acceptance of the Tender has been posted to the Contractor enter in to and execute a Contract agreement, (to be prepared at the cost of the Contractor) in the form annexed, with such modifications as may be necessary.

9. Unless otherwise agreed between the SLIC and the Contractor the Contractor shall within **Fourteen(14) days** after written notice of acceptance of the Tender has been posted to the Contractor and before the Contract agreement is entered into and executed, furnish to the SLIC a security for the due fulfillment of the Contract in form of pay order / demand draft in approved Public Rupee Securities or Approved Banker's Guaranteed Bond valid till the successful completion of Contract endorsed in the favor STATE LIFE INSURANCE CORPORATION amounting to a sum equal to **Five percent 5%** of the Contract price.

Security Deposit

10. In the event of the Contractor failing to execute a formal Contract or to make a Security Deposit therefore in the manner aforesaid and in the period specified, the SLIC competent authority is entitled appropriate any earnest money or initial deposit made by the Contractor with his Tender without prejudice to their right to claim any further loss or damage which may result to them by reason of the aforesaid defaults of the Contractor as if a Contract is actually executed for purpose of such claim.

Contractor's Failure to Furnish Security Deposit

11. The Contractor shall inspect and examine the Site and its surroundings and shall satisfy himself before submitting the Tender as to the nature of ground and sub - soil, the from and nature of the Site the quantities and nature of the work and materials necessary for the completion of the works and the means of access to the Site of the accommodation he may requires and in general shall himself obtain all necessary information as to risk contingencies and other circumstances which may influence or affect his Tender.

Inspection of Site

12. The Contractor shall be deemed to have satisfied himself before tendering as to correctness and sufficiency of his Tender for the Works and of the rates and prices staged in the priced Bill of quantities and the Schedule of rates (if any) which rates and prices shall excepting so far otherwise provided in the Contract coverall his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.

Sufficiency of Tender

13. The Contractor shall execute, complete and maintain the works in strict accordance with the Contract to the satisfaction of the Engineer and shall comply with the adhere strictly to the Engineer's Instruction and directions on any matter (whether mentioned in the Contract or not) touching or connecting the work. The Contractor shall take instruction and direction only from the Engineer or (subject to the Limitations referred to in **Clause 2** hereof) from the Representative of the Engineer.

Work to be to Satisfaction of Engineer.

14. As soon as practicable after the acceptance of his Tender the Contractor shall if required submit to the Engineer for his approval a Program me showing the order of procedure and method in which he proposes to carry out the Works and shall whenever required by the Engineer or Representative of the Engineer furnish for his information particulars in writing of the Contractor's arrangements for the carrying out of the Works and of the Constructional Plant and Temporary Works which the Contractor intends to supply use or construct as the case the case may be. The submission to and approval by the Engineer or the Representative of the Engineer of such Program me or the furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

Program me to be furnished

15. The Contractor shall give or provide all necessary Superintendence during the execution of the Works and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor obligations under the Contract the Contractor or a competent and authorized agent or representative approved of in writing by the Engineer (which approval may at any time be withdrawn) is to be constantly on the Works and shall give his whole time to the Superintendence of the same. If such approval shall be withdrawn by the Engineer, the Contractor shall as soon as is practicable (having regard to the requirements of replacing him as hereafter mentioned) after receiving written notice of

Contractor's Superintendence

such withdrawal removes the agent from the Site and shall not thereafter employ him again on the Site in any capacity and shall replace him by another agent approved by the Engineer. Such authorized agent representative shall receive on behalf of the Contractor and directions instructions from the Engineer or (subject to the Limitations of **Clause 2** hereof) Representative of the Engineer.

**Contractor's
Employees**

16. (1) The Contractor shall provide and employ on the Site in connection with the execution and maintenance of the works:-

(a) Only such technical assistants are as skilled and experienced in their respective callings and such sub-agents' foremen and leading hands as are competent to give proper supervision to the work they are required to supervise.

(b) Such skilled semi- skilled and unskilled labor as is necessary for the proper and timely execution and maintenance of the Works.

(2) The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the work any person employed by the Contractor in or about the execution or maintenance of the Work who in the option of the Engineer misconducts himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Engineer to be undesirable and such person shall not be again employed upon the works without the written permission of the Engineer. Any person so removed from the Works shall be replaced without delay by a competent substitute approved by the Engineer.

(3) The Contractor shall if required by the Engineer deliver to the Engineer or the Representative of the Engineer returns in such form and at such intervals as the Engineer may prescribe showing in detail the supervisory staff and the number of the several classes of LABOR from time to time employed by the Contractor on the Site.

Setting Out

16. The Contractor shall be responsible for the true and proper setting out of the work and for the correctness of the position levels dimensions and alignment of all part of the Works and for the provision of all necessary instrument appliance and labor in connection therewith. If at any time during the progress of the Works any error shall appear or arise in the position levels dimensions or alignments of any part of the works, the Contractor on being required to do so by the Engineer or the Representative of the Engineer shall at his own expense rectify such error to the satisfaction of the Engineer or the Representative of the Engineer. The checking of any setting out of any line or level by the Engineer or the Representative of the Engineer shall not in any way relieve the Contractor of his responsibility for the correctness thereof and the Contractor shall carefully protect and preserve all bench-marks, Site- rails pegs and other things used in setting out the Works.

**Watching and
Lighting**

17. The Contractor shall in connection with the Works provide and maintain at his own cost all lights, guards fencing and watching when and where necessary or required by the Engineer or the Representative of the Engineer or by and duly constituted authority for the protection of the Works or for the safety and convenience of the public or others.

Care of Works

18.(a) From the commencement to the completion of the Works the Contractor shall take full responsibility for the care thereof and of all Temporary works and in case any damage loss or injury shall happen to the work or to any part thereof or to any Temporary Works from any cause whatsoever (save and except the excepted risks as defined in **sub-Clause (2)** of this **Clause**) shall at his own cost repair and make good the same so that at completion the works shall be in good order and condition and in conformity in every respect with the requirements of the Contract and the Engineer's instructions. The Contractor shall also be liable for any damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under **Clause 4** hereof.

Expected Risks

(b) The "**expected risks**" are war, hostilities (whether war be declared or not) Invasion, act of foreign enemies, rebellion, revolution, Insurrection or military usurped power, civil war or (otherwise than among the Contractor's own Employees) riot, commotion or disorders or the use or occupation by the SLIC of any portion of the Works

or disorders or the use or occupation by the SLIC of any portion of the Works in respect of which a Certificate of Completion has been issued or any such operation of the forces of nature as reasonable foresight and ability on the part of the Contractor could not foresee or reasonably provide against (all of which are herein collectively referred to as "the expected risks.")

19. The Contractor shall (expect if and so far as the Specification Provides otherwise) indemnify and keep indemnified the SLIC against all losses and claims for injuries or damage to any persons or any property whatsoever (other than surface or other damage to land being or crops being on the Site suffered by tenants or occupiers) which may arise out of or in consequences of the construction and maintenance of the works and against all claims demands proceeding damage, costs charges and expenses whatsoever in respect of or in relation thereto.

Damage to Persons and Property

20. The SLIC shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any Workman or other person in the employment of the Contractor or any sub-contractor and the Contractor shall indemnify and keep indemnified the SLIC against all such damages compensation and against claims demands proceeding costs charges and expenses whatsoever in respect thereof or in relation thereto.

Accident or Injury to workman

21. Contractor shall give all notices and pay all fees required to be given or paid by any National or state statute Ordinance or other Law or any Regulation or By-law of any local or other duly constituted authority in relation to the execution of the Works or of any Temporary Works and by the rules and regulations of all public bodies and companies whose property or right are affected or may be affected in any way by the Works or any Temporary Works.

Giving of Notices and Payment Of Fees

The Contractor shall confirm in all respects with the provisions of any such statute Ordinance or Law as aforesaid and the regulation or By-Law of any Local or other duly constituted authority which may be applicable to the Works or to any Temporary Works and with such rules and regulations of public bodies and companies as aforesaid and shall keep the SLIC indemnified against all penalties and liabilities of every kind for breach of any such statute Ordinance or Law regulation or By-law.

Compliance with statute Regulations etc.

22. All fossils coins articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the Site of the Works shall as between the SLIC and the Contractor be deemed to be the absolute property of SLIC and the Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall immediately upon discovery thereof and before removal acquaint the Representative of the Engineer of such discovery and carryout at the expense of the SLIC Representative of the Engineer's orders as to the disposal of the same. (NOT APPLICABLE)

Fossils, etc.

23. The Contractor shall save harmless and indemnify the SLIC from and against all claim and proceedings for or on account of infringement of any patent rights design trade-mark or name or other protected rights in respect of any constructional Plant machine work or material used for or in connection with the Works or Temporary Works or any of them and from and against all claims demands proceedings damages costs charges and expense whatsoever in respect thereof or in relation there to except where otherwise specified the Contractor shall pay all tonnage and other royalties and other payments or compensation (if any) for getting stone, sand, gravel clay or other materials required for the Works or Temporary Works or any if them.

Patent Rights and Royalties

24. The Contractor shall in accordance with the requirements of the Engineer afford all reasonable opportunities for carrying out their work to any other Contractor employed by the SLIC and their workmen and to the workmen of the SLIC and of any other duly constituted authorities who may be employed in the execution on or near the Site of any work not included in the Contract of any Contractor which the SLIC may enter into in connection with or ancillary to the works.

Opportunities for Other Contractor's

25. Except where otherwise specified the Contractor shall at his own expense supply and provide all the Constructional plant. Temporary Works Materials both for temporary

Supply of Plant Materials and Labor

and for permanent works labor (Including the supervision thereof) transport to or from the Site and in and about the work and other things of every kind required for the construction completion and maintenance of the works.

Clearance of Site on Completion

26. On the completion of the work the Contractor shall clear away and remove from the Site all constructional plant surplus material rubbish and Temporary works of every kind and leave the whole of the Site and works clean and in a workman like condition to the satisfaction of the Engineer.

LABOR

Hours of Employment and payment of Wages Return of LABOR Etc.

27. The Hours of Employment Regulation and payment of Wages Act so far these are Applicable to the Contractor's LABOR shall be adhered to by the Contractor.

28. The Contractor shall if required by the Engineer deliver to the Representative of the Engineer or at his office a return in detail in such form and at such Intervals as the Engineer may prescribe showing the number of the several classes of labor from time to time employed by the Contractor on the Site and such information respecting Constructional plant as the Representative of the Engineer may require.

WORK MATERIAL AND PLANT

Quality of Material and workmanship and Tests

29.(1) All Materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the Engineer's Instructions and shall be subjected from time to time to such tests as the Engineer may direct at the place of manufacture of fabrication or on the Site or at all or any or such places. The Contractor shall provide such assistance Instruments, machines, LABOR and materials as are normally required for examining measuring and testing any work and the quality, weights or quantity of any material used and shall supply samples of materials before incorporation in the works for testing as may be selected and required by the Engineer.

Cost of samples Cost of Test

(2) All samples shall be supplied by the Contractor at his own cost.

(3) The cost of making all tests specified in the Contract shall be borne by the Contractor.

Access to Site

30. The Engineer and any person authorized by him shall at all times have access to the works and to the Site and to all workshops and places where work is being prepared or whence materials, manufactured articles, or machinery are being obtained from works, and the Contractor shall afford every facility for and every assistance in or obtaining the right to such access.

Examination of Work Before Covering Up

31. No work shall be covered up or put out of view without approval of the Engineer or the Representative of the Engineer and the Contractor shall afford full opportunity for the Engineer or the Representative of the Engineer to Examine and measure any work which is about to be covered up or put out of view and to examine foundation before permanent work is placed thereon. The Contractor shall give notice to the Representative of the Engineer whenever any such work or foundation is ready or about to be ready for examination.

Removal of Improper Work and materials

32. (1) The Engineer shall during the progress the works have power to order from time to time.

(a) The removal from the Site within such time or times as may be specified of any materials which in the opinion of the Engineer are not in accordance with the Contract.

(b) The substitution of proper and suitable material sand

(c) The removal and proper re-execution (not-with-standing any previous test there of or interim payment therefore) of any work which in respire of materials or workmanship is not in the opinion of the Engineer in accordance with the Contract.

(2) In case of default on the part of the Contractor in carrying out such order the SLIC shall be entitled to employ and pay other person to carry out the same and all expenses consequent thereon incidental thereto shall be borne by the Contractor and

Default of Contractor In compliance

shall be recoverable from him by the SLIC or may be deducted by the SLIC from any monies due or which may become due to the Contractor.

33. The Contractor shall on the written order of the Engineer suspend the progress of the Works or any part thereof for such time to times and such manner as the Engineer may consider necessary and shall during such suspension property protect and secure the Works so far as is necessary in the opinion of the Engineer. The Extra cost (if any) incurred by the Contractor in giving effect to the Engineer's Instructions under this **Clause** shall be born and paid by the SLIC unless suspension is:-

- (a) Otherwise provided for in the Contractor
- (b) Necessary for the proper execution of the Works or by reason of weather conditions affecting the safety or quality of the Work or by some default on the part of the Contractor or.
- (c) Necessary for the safety of the Works or any part thereof. Provided that the Contractor shall not be entitled to the recover any such extra cost unless he give notice inwriting of his intention of claim to the Engineer within **28days** of the Engineer's order. The Engineer shall settle and determine the extra payment to be made to the Contractor in the respect of such claim as the Engineer shall consider fair and reasonable.

COMMENCEMENTTIMEANDDELAYS

34. The Contractor shall commence the Works on Site within the period named in the tender after the receipt by him on an order in writing to this effect from the Engineer and shall proceed with the same with the due expedition and without delay except as maybe expressly, sectioned or ordered by the Engineer or be wholly beyond the Contractor's control.

35. (1)Save in so far as the Contractor may prescribe the extent of options of the Site of which the Contractor is to be given possession from time to time and the order in which such portions shall be made available to him and subject to any requirement in the Contract as to the order in which the Work shall be executed, The Engineer will with the written order to commence the Works, give to the Contractor possession of so much of he Site as may be required to enable the Contractor to commence and proceed with the construction of the Works in accordance with the program referred to in **Clause 13** hereof (if any) and otherwise in accordance with such reasonable proposals of the Contractor as he shall by notices in writing to the Engineer make and will from time to time as the Works proceed give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the construction of Works with due dispatch is accordance with said program or proposals (as the case may be).

(2) The Contractor shall bear all expanses and charges for special or temporary way leaves required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional accommodation outside the Site required by him for the purpose of the Works.

36. Subject to any requirement in the specification as to completion of any portion of the Works before completion of the whole of the Work, the Work shall be completed within the time stated in the tender calculated from the last day of the period named in the tender as that within which the Works are to be commenced or such extended time as may be allowed under **Clause 37** hereof.

37. Should the amount of extra or additional Work of any kind or other special circumstances of any kind whatsoever which may occur be such as fairly to entitled the Contractor to any extension of time for the completion of the Works the Engineer shall determine the amount of such extension provided that the Engineer is not bound to take into account any extra or additional Works or other special circumstances unless the Contractor has, within **28 days** after such Works has been commenced or circumstances have arisen or as soon thereafter as is practicable delivered to the representative of the Engineer full and detailed particulars of any claim to extension of time to which may consider himself entitled in order to such claim may be investigated at the time.

Suspension of Works

Commencement of Works

Possession of Site

Way Leaves Etc.

Time for Completion

Extension of Time for Completion

Rate of Progress

38. (1) The whole of the material plant and LABOR to be provided by the Contractor under **Clause-4** hereof and mode manner and speed of execution maintenance of the Works are to be of a kind and conducted in a manner approved of by the Engineer. Should the rate of progress of the Works or any part thereof be at any time in the opinion of the Engineer to slow to ensure the completion of Works by the prescribed time or extended time for completion. The Engineer shall so notify the Contractor in writing and the Contractor shall thereupon take such step as the Contractor may think necessary and the Engineer may approved to expedite progress so as the complete the Works by the prescribed time or extended time for completion. If the Works is not being carried on by day and by night and the Contractor shall request permission to work by night as well as by day then if the Engineer shall grant such permission, the Contractor shall not be entitled to any additional payment for so doing.

Termination of Contract for slow progress

(2) Not-with-standing any thing contained hereto in the event of the rate of progress of the Works being such that in the opinion of the Engineer Works cannot be completed by the prescribed time or the extended time, the Engineer may have the Works constructed, completed through any other agency either concurrently with or independently of the Contractor at the risk and cost -of the Contractor or the Engineer may supplement the Contractor's LABOR plant equipment and materials at the Contractor' cost and risk and in all such cases provisions of **Clause-39** hereof shall apply. Further the SLIC shall have the power to terminate the Contract and withhold payment to the Contractor till the whole of the Works have been constructed completed and maintained in the manner laid down in the Contract and the Contractor shall be liable for any loss or damage which the SLIC may sustain on the account and forfeiture the provision of **Clause 56 and 57** here of shall apply.

Liquidated Damages for Delay

39. If the Contractor fails to complete the Works within the time prescribed under Clause 36 hereof or within the extended time granted, the Contractor shall be liable to pay liquidated damages at the rate of 0.5% of the total Contract Value for every week or part thereof of delay, calculated from the expiry of the prescribed or extended time until the actual date of completion of the Works, subject to a maximum of 10% of the total Contract Value. The liability for payment of such liquidated damages shall rest solely with the Contractor, and the deduction or recovery of such damages shall not be deemed the responsibility or obligation of SLIC. However, SLIC shall have the right, without prejudice to any other method of recovery available under the Contract or law, to recover the amount of such damages from any monies due or which may become due to the Contractor, including but not limited to interim payments, final bill, performance security, or through legal recourse. The payment or recovery of liquidated damages shall not relieve the Contractor from the obligation to complete the Works or from any other obligations, liabilities, or responsibilities under the Contract. Furthermore, the failure or omission of SLIC to deduct liquidated damages during the execution of the Works shall not prejudice or waive SLIC's right to recover such damages at any stage, including from the final bill or through legal proceedings.

Certificate of Completion of Works

40. As soon as in the opinion of the Engineer the Works shall have been substantially completed and shall have satisfactorily passed final test that may be prescribed by the Contract the Engineer shall on receiving a written undertaking by the Contractor to finish any outstanding Works during the Period of Maintenance issue a Certificate of Completion in respect of the Works, and the period of Maintenance of the Works shall commence from the date of such certificate. Provided that the Engineer may give such a certificate with respect to any part of Works before the completion of the whole of the Works and shall upon the written application of the Contractor give such certificate with respect to any substantial part of the Works which has been both completed to the satisfaction of the Engineer and occupied or used by the SLIC and when any such certificate is given in respect of a part of the Works such part shall be considered as completed and the period of Maintenance of such part shall commence from the date of such certificate. Provided also that a Certificate of Completion given accordance with the foregoing provisions of any part of the Works occupied and used as aforesaid shall not be deemed to certify completion of any ground of surfaces requiring reinstatement unless such certificate shall expressly so state.

MAINTENANCE AND DEFECTS

Definition of Period of Maintenance

41. (1) In these conditions the expression "period of Maintenance" shall mean the period of maintenance named in the Tender calculated from the date of completion of the Works certificate by the Engineer in accordance with **Clause 40** hereof or in the event of more then one certificate having been issued by the Engineer under the said **Clause** from the respective dates so certified and in relation to the period of Maintenance the expression '**the Works**' shall be construed accordingly.

Execution of Works of Repair, Etc.

(2) To the Intent that the Works shall at or as soon as practicable after the expiration of the period of Maintenance be delivered up to the SLIC in as good and perfect condition (fair wear and tear excepted) to the satisfaction of the Engineer as that in which they

Were at the commencement of the period of maintenance the Contractor shall execute all such Works for repair, amendment, reconstruction, reflection and making good of defects, imperfection, shrinkages or other fault as may be required of the Contractor in writing by the Engineer during the period of maintenance or with **Fourteen (14) days** after its expiration as a result of an inspection made by or on behalf of the Engineer.

(3) All such Work shall be carried out by the Contractor at his own expenses if the necessity thereof shall in the opinion of the Engineer be due to the use of materials of Workmanship not in accordance with the Contract or to neglect or failure on the part of the Contractor to comply with any obligation expressed or implied on the Contractor's part under the Contract. If in the opinion of the Engineer such necessity shall be due to any other cause the value of such Works shall be ascertained and paid for as if it were additional Works.

**Cost of Execution
works of Repair Etc.**

(4) If the Contractor shall fail to do any such Work as aforesaid required by the Engineer the SLIC shall be entitled to carry out such Works by its own Workman or by other Contractor and if such Works is Work which the Contractor should have carried out at the Contractor's own cost shall be entitled to recover from the Contractor the cost thereof or may deduct the same from any monies due or that become due to the Contractor.

**Remedy on
Contractor's Failure
to carry out Works
required**

ALTERATION ADDITIONS AND OMISSIONS

42. (1) The Engineer shall make any variation of the quality or quantity of the Works or any part thereof that may in his opinion be necessary and for that purpose or if for any other reason it shall in his opinion be desirable

Variation

shall have power to order the Contractor to do and the Contractor shall do any of the following:-

- (a) Increase or decrease the quality of any Work included in the Contract
- (b) Omit any such Work
- (c) Change the character or quality or kind of any such Work
- (d) Change the levels, lines, position and dimensions of any part of the Works and
- (e) Execute additional Works of any kind necessary for the completion of the Works.

And no such variations shall in any way validate or invalidate the Contract, but the value (if any) of all such variation shall be taken into account in ascertaining the amount of the Contract price.

(2) No such variation shall be made by the Contractor without an order in writing of the Engineer, provided that no order in writing shall be required for increase or decrease in the quantity of any Work where such increase or decrease is not the result of an order given under his **Clause** but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities. Provided also that if for any reason the Engineer shall consider it desirable to give any such order verbally, the Contractor shall comply with such order and any confirmation in writing of such verbal order given by the Engine whether before or after the carrying out the order shall be deemed to be an order, in writing within the meaning of this **Clause**.

**Order of variation to be
in writing**

43. (1) The Engineer shall determine the amount (if any) to be added to or deducted from the sum named in the tender in respect of any extra or additional Works done or Work omitted by his order. All such Works shall be valued at the rates set out in the Contract if in the opinion of the Engineer the same shall be applicable. If the Contract shall not contain any rates applicable to the extra or additional Work then reasonable prices shall be fixed by the Engineer.

(2) Provided that if the nature or amount of any omission or addition relative to the nature or amount of the whole of the Contract Work or to any part thereof shall be such that in the opinion of the Engineer the rate or price contained in the Contract for any time of the work is by reason of such omission or addition rendered unreasonable or inapplicable the Engineer shall fix such other rates or price as in the circumstances he shall think reasonable and proper.

**Valuation of
Variations**

**Power of Engineer to Fix
Rates**

PROPERTY IN MATERIALS AND PLANT

**Plant Etc. the
Property of the SLIC**

44. (1) All constructional plant, Temporary Works and materials provided by the Contractor shall when brought on to the Site immediately be deemed to become the property of the SLIC and the Contractor shall not remove the same or any part thereof without the consent in writing of the Engineer. But the Engineer will permit the Contractor the exclusive use of all such constructional plant, Temporary Works and material in and for the completion of the Works until the happening of an event which gives right to the SLIC to exclude Contractor from the Site and proceed with the completion of the Works.

**Revesting of Plant,
Etc.**

(2) Upon the removal of any such constructional plant, temporary Works or materials with consent as aforesaid the same shall be deemed to revert in and become the property of the Contractor and upon completion of the Works the remainder of the said constructional plant and temporary Works and any unused material provided by the Contractor shall be deemed to revert in and become the property of the Contractor who shall remove the same. If the Contractor fails to remove any of the said constructional plant, temporary Works or unused materials within such reasonable time after the completion of the Works as may be allowed by the SLIC then the SLIC may sell the same and shall after deducting from the proceeds the cost charges and expenses of and in connection with such sale pay the balance (if any) to the Contractor.

**SLIC not liable for
Damage to plant Etc.
No Approval by
Vesting**

(3) The SLIC shall not at any time be liable for loss or injury to any of the said constructional plant, Temporary Works, or material.

45. The operation of the **Clause 44** shall not be deemed to imply any approval by the Engineer of the materials or other matters referred to therein nor shall it prevent the rejection of any such materials at any such time by the Engineer.

MEASUREMENT

Quantities

46. The quantities set out in the Bill of Quantities are estimated quantities of the Work but they are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfillment of his obligations under the Contract.

**Work to be
Measured**

47. The Engineer shall, except as otherwise stated, ascertain and determine by measurements the value in accordance with the Contract of Work done in accordance with the Contract. He shall when he requires any part or parts of the Works to be measured give notice to the Contractor's agent or representative who shall forthwith attend or send a qualified agent to assist the Engineer or the representative of the Engineer in making such measurement and shall furnish all particulars required by the either of them. Should the Contractor not attend or neglect or omit to send such agent then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of the Works.

**Method of
Measurement**

48. The Works shall be measured net notwithstanding any general or local custom except where otherwise specially described or prescribed in the Contract.

PROVISIONAL SUMS

**Use of provisional
and Contingency
items**

49. All the sums set out in the Bill of Quantities which shall be stated to be provisional or for contingencies shall be used only at the direction and discretion of the Engineer and if not used either wholly or in part shall as to the amount not used be deducted from the Contract Price.

Item not monies

50. All items not monies set out in the Bill of Quantities shall be used at the direction and discretion of the Engineer and if used either wholly or in part shall as to amount used, be added to the Contract price.

CERTIFICATE AND PAYMENT

**Bill for On-account
Payments**

51. (1) The Contractor shall submit to the representative of the Engineer during the execution of the Works on-account bill signed by the Contractor showing the quantities and values of the permanent Works done on the Site as soon as measurements have been recorded as per **Clause 47** hereof.

Rates and Price

(2) The rates and prices in such on-account bills shall be in accordance with those in the priced Bill of Quantities so far as such rates and prices are applicable and on the approved rates and prices for other items or Works.

(3) The quantities in such on-account bills shall be in accordance with the agreed measurement recorded by the representative of the Engineer as per provision of **Clause 47** hereof.

Quantities

(4) The Contractor will be paid on the certificated of the Engineer the estimated Contract value of the permanent work executed and in addition such amount as the Engineer may consider fair and reasonable for any temporary Works for which separate amounts are provided in the Bill of Quantities subject so far as it applies to a retention of a percentage until the amount retained shall reach the amount of security deposit as per **Clause 9** hereof, after which time no further deduction or retention will be made. Retention money will be deducted as per SLIC practices.

Advances

52. No certificate other than maintenance certificate referred into **Clause 53** hereof shall be deemed to constitute approval of any Work or other matter in respect of which it is issued or shall be taken as an admission of the due performance of the Contract or any part thereof or of the accuracy of an claim or deemed made by the Contractor by the Contractor or of additional or varied Work having been ordered by the Engineer nor shall any other certificate conclude or prejudice any of the powers of the Engineer.

Approval only by Maintenance certificate

53. The Contractor shall not be consider as completed until a maintenance certificate shall have been signed by the Engineer and delivered to the RE Incharge SLIC stating that the Works have been completed and maintained to his satisfaction. The maintenance certificate shall be given by the Engineer Twenty-Eight (**28**) days after the expiration of the period of maintenance (or if different period of maintenance shall become applicable different part of the Works the expiration of the latest such period) and full effect shall be given to the **Clause** not withstanding any previous entry of the Works or the taking possession Working or using there of or any part thereof by the SLIC. The security deposit of the Contractor shall be refunded after the maintenance certificate has been issued by the Engineer after deducting any sums which may become due from Contractor in terms of provision of **Clause 38 (2), 39 and 41 (4)** hereof.

Maintenance certificate

54. When the Engineer granted a certificate or certificates of completion of the whole of the Works under **Clause 40** hereof and when the SLIC has ascertained the estimated final sum due to the Contractor the SLIC shall after allowing for the amount all of previous on account bills and certificate and after allowing for all other payments due form the Contractor to the SLIC pay to the Contractor such a sum out of balance so calculated as remaining due to the Contractor as will leave to be retained by the SLIC a sum equal to the security deposit (see **Clause 9** hereof).

Payment on Completion

55. Unless otherwise agreed between the SLIC and the Contractor all payment to be made to the Contractor under this Contract shall be in Pakistani rupee currency.

Currency of payment

REMEDIES AND POWER

56. (1) If the Contractor shall become bankrupt or have a receiving order made against him or shall present his petition in bankruptcy or shall make an arrangement with or assignment in favor of his creditors or shall agree to carry out the Contract under a committee of Inspection of his creditors or (being a corporation) shall go into liquidation (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) or if the Contractor shall assign the Contract without the consent in writing of the SLIC first obtained or shall have an execution levied on the goods or if the Engineer shall certify in writing to the SLIC that in his opinion the Contractor.

Forfeiture

- (a) Has abandoned the Contractor
- (b) Without reasonable excuse has failed to commence the Works or has suspended the progress of the Works for **Ten (10) days** after receiving from the Engineer written notice to proceed or
- (c) has failed to remove materials from the Site or to pull down and replace Work for **28 days** after receiving from the Engineer written notice that the said materials or Work had been condemned and rejected by the Engineer under these conditions or
- (d) is not executing the Works in accordance with the Contract or is persistently or flagrantly neglecting to carry out his obligations under the Contract or

(e) Has to the detriment of good Workmanship or in defiance of the Engineer's instructions to the contrary sublet any part of the Contract?

Then the Engineer may after giving **14 days'** notice writing to the Contractor enter upon the Site and the Works and expel the Contractor there from without hereby avoiding the Contract or releasing the Contractor from any of his obligations or liabilities under the Contract or affecting the rights and powers conferred on the SLIC of the Engineer by the Contract and may himself complete the Works or may employ any other Contractor to complete the Works and SLIC or such other Contract or may use for such completion so much of the constructional plant temporary Works or materials which have been deemed to become the property of the SLIC under the provision of the Contract as he or the SLIC may think proper and SLIC may at any time sell any of the said constructional plant, Temporary Works and used materials and apply the proceed or sale in or towards the satisfaction of any sums due which may become due to the SLIC from the Contractor under the Contract.

**Valuation at Date
forfeiture**

(2) The Engineer, as soon as practicable after such entry and expulsion by the SLIC, shall assess and determine the valuation in accordance with the established practice of SLIC for conducting valuation checks. After consultation with the concerned parties and after carrying out such investigations or enquiries as deemed necessary, the Engineer shall certify the amount (if any) reasonably earned or accrued to the Contractor in respect of the works actually executed under the Contract up to the date of such entry and expulsion. The Engineer shall further determine the value of any unused or partially used materials, constructional plant, and temporary works which, under the provisions of the Contract, are deemed to have become the property of the SLIC.

**Payment after
Forfeiture**

(3) In the event that the SLIC enters upon the Works and expels the Contractor under this **Clause**, the SLIC shall not be liable to make any further payment to the Contractor under the Contract until the expiry of the Defects Liability / Maintenance Period. Thereafter, payment shall only be considered once the total cost of completion of the Works, maintenance expenses, damages for delay (if any), and all other expenditures incurred by the SLIC have been fully ascertained and certified by the Engineer. The Contractor shall be entitled to receive only such amount, if any, as the Engineer certifies would have been payable to him upon proper completion of the Works, after deducting the aforesaid costs and expenses. In the event that the total costs and expenses incurred by the SLIC exceed the amount that would have been payable to the Contractor upon due completion, the excess amount shall be recoverable from the Contractor and shall be deemed a debt due and payable to the SLIC.

Urgent Repairs

57.If by reason or any accident or failure or other event occurring to in or in connection with the Works or any part thereof either during the execution of the Works or during the period of maintenance any remedial or other Works or repair shall in the opinion of the Engineer or the Representative of the Engineer be urgently necessary for security and the Contractor is enable or unwilling at once to do such Work or repair as the Engineer may by his own or other Workmen do such Works or repair as the Engineer or the Representative of the Engineer may consider necessary. If the Works repairs so done by the Engineer is Works which in the opinion of the Engineer the Contractor was liable to do at his own expense under the Contract all cost and charges property incurred by the SLIC in so doing shall no demand be paid by the Contractor to the SLIC or may be deducted by the SLIC from any monies due or which may become due to the Contractor. Provided always that the Engineer of the Representative of the Engineer (as the case may be) shall as soon as after the occurrence of any such emergency as may be reasonably practicable notify the Contractor thereof in writing.

**Bribes Commission
Etc.**

58. Any bribe commission if or advantages given promised or offered by or on behalf of the Contractor or his partner, agent or servant or any one on his or their behalf to any officer, servant, representative, or agent of the SLIC or any person on its behalf in relation to the obtaining or to the execution of this or any other Contractor with the SLIC shall in addition to any criminal liability which may incur subject the Contractor to cancellation of this and all other Contract and also to payments of any loose or damage resulting from such cancellation to the like extent as is provided in case of forfeiture under **Clause 56** hereof and the SLIC shall be entitled to deduct the amounts so payable from any monies otherwise due to the Contractor under this or any other Contract.

Any question or dispute as to the commission of any offence under this **Clause** shall be settled by the SLIC in such manner as it shall think fit and sufficient and its decision shall be final and conclusive.

In case hot Works is involved, the Contractor is liable to take permit from the Senior Fire Officer before start of the Works, and hot Work is to be carried out according to his directions.

SETTLEMENT OF DISPUTES

59. This Contract shall be governed by the law of Pakistan. Resort to court by either of the parties in respect of any dispute should be had only to an appropriate court within the limit of KARACHI.

Law Covering the Contract

60 Any dispute regarding the quality of material or Workmanship or currency of measurements or reasonableness of the rate for any item or any other question of an Engineering or Technical nature shall be decided by the Engineer and his decision shall be final and binding on all the parties.

Arbitration

Any other dispute of whatsoever nature (Including the Interpretation of this or any other relevant documents) arising under this Contract (except as to any matters, the decision of which is specially provided for by these conditions) shall be referred to as sole arbitrator to be pointed by the chief engineer, STATE LIFE BUILDING SUKKUR, who shall have absolute discretion either to appoint as officer or the STATE LIFE BUILDING SUKKUR or anyone else as the sole arbitrator. The decision as such sole arbitrator shall be final and conclusive and shall be binding on all the parties to the Contract and the provision of the arbitration Act 1940 and any statutory modification thereof and rules framed there under shall be deemed to apply to and be incorporated in this Contract.

The Contractor shall not stop the Work during the pendency of the arbitration proceedings, but he shall continue to execute the Work with full speed. However, the ELECTRICAL ENGINEER shall have the power to ask the Contractor in writing to stop the Work in full or in part if he considers it necessary.

FORMOF AGREEMENT

This Agreement made theday ofTwo Thousand..... between STATE LIFE BUILDING SUKKUR Karachi Incorporated under the STATE LIFE BUILDING SUKKUR Act VI of 1886 as amended from time to time there in after called the “SLIC” of the one part andof..... (Thereinafter called the “Contractor”) of the other part whereas the SLIC is desirous that certain Works should be constructed viz..... and has accepted a tender by the Contractor for the construction completion and maintenance of such Works and whereas the Contractor has already deposited with the SLIC the Sum of Rupees and has given to the SLIC a lien over such sum as security for the due fulfillment of the Contract now this agreement is witnessed as follows: -

1. In this agreement words and expression shall have the same meanings as are respectively assigned to them in the conditions of Contract hereinafter referred to.
2. The following Documents which for the purpose of identification have been signed by the.....On behalf of the Contractor and by (The Engineer of the SLIC) on behalf of the SLIC all of which shall be deemed to from and be read and construed as part of this agreement, viz: -
 - (a) The said Tender.
 - (b) The Drawing.
 - (c) The General Conditions of Contract.
 - (d) The special condition of the Contract.
 - (e) The specification.
 - (f) The bill of Quantities.
 - (g) The Relevant Correspondence: -
3. In Consideration of the payment to be made by the SLIC to the Contractor as herein after mentioned the Contractor hereby covenants with the SLIC to construct complete and maintain the Works in conformity in all respects with the provision of the Contract.
4. The SLIC hereby covenants to pay to the Contractor in consideration of the construction, completion and maintenance of the Works, the Contract price in the manner prescribed by the Contract.

In witness where of, the parties here to have hereinto set their respective hands and seals the day and year first above written.

Signed sealed and delivered by: -

The Chief Engineer and two Witnesses on behalf of the SLIC STATE LIFE BUILDING SUKKUR Karachi. Signed by

Chief Engineer

In the presence of	1 st Witness
Signed by	2 nd Witness
In the presence of	
And	
.....for and on behalf.....		(Contractor)
Signed by		
In the presence of	(Contractor)

P.C.No. _____

**STATE LIFE BUILDING
SUKKUR**

ELECTRICAL DEPARTMENT

FINANCIAL BID

Name of work:

TENDER DOCUMENTS FOR THE:

**SUPPLY INSTALLATION & COMMISSIONING OF 30KW ON-GRID SOLAR
SYSTEM AT STATE LIFE BUILDING SUKKUR.**

Contents:

- i. The Scope of Work, Terms conditions & Bill of Quantity (B.O.Q) (05 Pages)
(For Financial Bid).

Online submission through EPADs must be on or before the Time & Date mentioned in the tender notice and bid security of Amount (Rs) 150,000/- in form of Payorder (in original), must be delivered at **Office of In-Charge (Real Estate Department) 7th Floor, State Life Building Thandi Sarak Hyderabad** before the Time & Date mentioned in the Tender Notice.

Date.....

N. B: All tender documents read carefully, to be filled properly and duly signed & stamped each paper before uploading it to EPADS. Incomplete tender bids will not be considered.

STATE LIFE BUILDING SUKKUR
SCOPE OF WORK/BILLOF QUANTITY

SUPPLY INSTALLATION, COMMISSIONING & NET METERING OF 30KW ON-GRID SOLAR SYSTEM AT STATE LIFE BUILDING SUKKUR

SCOPE OF WORK/BILLOF QUANTITY

S.NO	DESCRIPTIONS OF WORK	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1	Supply/ Providing of Tier-1, Grade-A, 610W to 625W, Monoperc, Half cut, HIMO6, N-type of reputable make as per international standard, IEC61215, IEC61730, ISO9001, ISO14001, ISO45001. Brand: Longi/Jinko/Canadian.	56	No.		
2	Supply/ Providing of Tier-1, Grade-A, on grid 30KW Inverter of reputable make as per international standard. IEC62109, IEC61727, IEC62116, IEC60068, IEC61683, IEC610006-2, IEC61000-6-4 Brand: Sungrow/Huawei/SMA.	1	No.		
3	Supply/ Providing of WIFI Stick including all communication devices & peripherals of reputable make as per international standard.	1	No.		
4	Providing of AC Cable 16mm ² , 4 core Copper Wire PVC insulated make Pakistan Cables / Fast Cables or equivalent (from Inverter to AC Combiner Cabinet).	60	Mtr.		
	Providing of Earthing 6mm ² , single core Copper Wire PVC Green insulated make Pakistan Cables / Fast Cables or equivalent (for Structure Earthing)	180	Mtr.		
	Providing of DC Flexible Wire 6mm ² , single core 1500VDC, tin coated Copper Wire XLPO/XLPO insulated make Pakistan Cables / Fast, Cables (for DC wiring of solar panels).	1800	Mtr.		
	Providing of Earthing 2.5mm ² , single core Copper Wire PVC Green insulated make Pakistan Cables / Fast Cables or equivalent (for Grounding Solar Panels)	90	Mtr.		
	Providing of Earthing Cable 25mm ² , Single core Copper Wire PVC insulated make Pakistan Cables / Fast Cables or equivalent (from Earth pit to Lightning Arrester).	180	Mtr.		

	Providing of Earthing 10mm ² , single core Copper Wire PVC Green insulated make Pakistan Cables / Fast Cables (for Inverter Earthing)	180	Mtr.		
5	Supply/ Providing of Elevated Structure including (Height of Front pole: 12' & Back pole: 15' Tilt: 7 degrees) With Epoxy Paint, Anti rust epoxy primer & Supporting materials. MS pipe 114mm dia size 14-gauge thickness. MS Main girder I-beam 5"x3" size 10-gauge (3mm) thickness. 1.8kg/ft. MS Secondary girder I-beam 5"x3" size 10-gauge (3mm) thickness. 1.8kg/ft. MS top plate 6"x6" size 4mm thickness. MS base plate 8"x8" size 8mm thickness. MS square pipe 1"x2" size 18-gauge thickness (for walkway & ladder). Aluminum T & Z clamps. Respective calculations (ASCE7-10) subject to wind speed will be provided with the bid.	1	Job.		
	Constructing of Cemented civil pads for PV Roof mounting shed structure with dimensions LxWxH=12"x12"x6" with MS studs & bolts reinforcement for elevated Structure.	1	Job.		
6	Supply & Providing of Earth Electrodes (Rod Type) for Earthing System with 14mm Dia 3 meters (10feet) long driven Pure copper Solid rod, complete with clamps lugs, washer/bolts, connected with 1 x 25mm ² bare copper. I pipe/UPVC pipe class 'D/E' up to Earth chamber, job includes cad-welding of copper conductor to earth electrode rod at one end and provision/fixing of cable lugs at other end, including all accessories and RCC inspection chamber, heavy duty G.I. Cover having earth symbol, etc as per the specifications and Drawings and to the entire satisfaction and approval of the Engineer. Minimum depth of the earth pit should be 20ft, Earthing result should be less than 1 Ohm for AC/DC/LA	3	Job.		
7	16 Gauge IP-42 AC Combiner Box Floor mounted 400 X 600 X 200mm with complete filling scheme, railings & isolators for placing AC breakers, RYB indications with energy analyzer. Followings are specifications of floor mounted combiner. 1. I/PMCCB4-Pole, 400VAC, 63amp x 1 Nos. 2. SPD4-Pole, 400VAC, 40KA x 1 Nos. Energy Analyzer x 1 Nos Brand Phoenix Phase Indication Lights x 1 Nos	1	Job.		
8	Providing of Wall Mounted DC Distribution Boxes of 16 Gauge IP-42 reputable make for each inverter for placing DC Breakers & DC SPD, Size: WxHxD=1.5'x1.5'x1' with indication lamps, Digital Volt & Ammeter and with all necessary railings	1	Job.		

	&fittings etc as per site requirements.				
9	Providing of Misc Items e.g: Cable tray GI 16SWG with 18SWG cover. Accessories (MC4Connectors,Cableties,UPVCconduits,anchorbolts, PVCflexiblepipes & clamps, PVC tapes, Thimbles etc.)	1	Job.		
10	Supply & Providing of Early Streamer Emission (ESE) with remote testing option and having following specifications: Make: As per approved manufacturer's list Type: Generation 3 or Equivalent Reaction time: 45 - 50 micro seconds Maximum Discharge Rating: 100 kA Material: Stainless Steel or as per manufacturer's specifications Length: 400mm or as per manufacturer's specifications Level of Protection: Level 1 Protection Radius: 65 m Risk Assesment / Coverage Calculation Via Software. Mounting height (from Roof top to tip of ESE): 5m or as specified	1	No.		
11	Supply & Providing of Water Piping Network with PPRC Piping Network for Cleaning of Solar PV Panels with Water Booster Pumps etc. Note: 2No. 3-in-1 special brush, featuring integrated brush, wiper, and water inlet functions for the cleaning of solar panels, will be handed over to the client.	1	Job		
12	Installation, Commissioning, Net Metering (including NEPRA Charges & KE Meter charges will be responsibility of contractor) and Services of S. No. 1 to 11.	1	Job		
13	Spares	01	job		
Total Amount without tax					
Add 10%GSTon itemNo.1					
Add 15%SSTon itemNos.11 to 12					
Add 18%GSTonitemNos.1to 10					
Grand Total					
Total amount in words:					

TERMS AND CONDITIONS

6. Work site:-

All the firms participating in bidding for this work must visit the work site for assessing the actual conditions, locations, spaces, logistics, etc before submitting their bids.

7. Operation and maintenance manuals and drawings: -

Contractor shall supply one set of Operation and maintenance Manual and 3 sets of Product Specs Catalogue for all the equipment before the supply, installation and commissioning of equipment for study of STATE LIFE BUILDING SUKKUR Engineer. Contractor shall supply 3 sets of manuals for all equipment after completion but before final handing over. Three sets of connection diagrams and schematic diagrams for the complete works showing actual as built conditions shall be prepared by the contractor and provided for study and record prior to commissioning of the system. The contractor, if directed by STATE LIFE BUILDING SUKKUR Engineer, shall incorporate any modifications / corrections, in the drawings.

8. Manufacturer catalogues along with tender document: -

Manufacturer catalogues, in English for offered equipment should be provided along with the tender documents for study of STATE LIFE BUILDING SUKKUR Engineers for verification of specifications and ascertaining the suitability of the equipment.

9. Load test and certificates: -

The Contractor along with the supply shall provide manufacturer's test certificate. Actual test trial to be carried out after completion and installation as per standard procedures for satisfactory commissioning.

10. Training

Contractor shall arrange for 4-days training of 4 nominated officials of STATE LIFE BUILDING SUKKUR at the manufacturing / assembling premises of the equipment to be supplied. Said training shall cover operation, routine maintenance, fault diagnosis, defect rectification etc pertaining to the main equipment to be supplied.

7. SERVICE LEVEL AGREEMENT (SLA) FOR MAINTENANCE

The service level agreement (SLA) for maintenance will be for (1 year). The maintenance activities will be divided in to the following parts:

- Preventative maintenance-will include inspections and test so of Solar PV equipment to depict their performance.
- Corrective maintenance-will include trouble shooting and parts replacement (if required) in case of abnormal behavior, component failure or breakdown.
- Cleaning services of Solar plates three times in a month i-e on 10th , 20th & 30th of every month for period of one (01) year free on cost

Preventative Maintenance

Preventative maintenance shall encompass all the equipment installed, inverters, LV Panels, solar modules etc.

Inspections of Installed Equipment

- iv. PV Modules on daily basis
 - e) All panels to be inspected.
 - f) All panels inspection will be completed in 3 days
 - g) PV Modules Glass cracks checking
 - h) MC4connectorscheckforanylooseconnections
- v. PV Inverters on a daily and monthly basis
 - a) Visual checks for any damages
 - b) MC4connectorschecking
- vi. Structure daily, monthly, and annual inspections and maintenance
 - a) Nuts & Bolts Tightening
 - b) ZRC application

Sr.#	Inspection	Daily	Monthly	Annually
1.	PV Modules Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.	PV Modules Cleaning	<input checked="" type="checkbox"/>		
3.	PV Inverters Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Structure Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Plant Performance Reporting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Preventativemaintenanceshallbecarriedoutbythesiteteamthroughoutthe calendar year.

Bi-Annual Inspections

Bi-Annualinspectionwillbepformedtwiceayear.Onceaftersixmonthsand other at the end of the year

The scope must include the following

(PV Modules and Supporting Structure)

- 100% visual inspection of modules regarding damage in 1st bi-annual inspection. Modules will be inspected daily and damage/ replacement shall be reported. However, modules will be checked for any damage, decolonization, cracking, splitting will be covered in bi-annual inspections.
- Random check for loosening of module clips. Clips should be replaced if necessary
- ZRC application on rusty part soft the structure
- Nuts and bolts tightening of the structure and PV Modules

Inverter (100% per inspection to be covered)

- Functional check of inverters
- Testing of inverter features according to manufacturer’s maintenance
- Maintenance of inverters according to manufacturer’s instructions

Additional Inspections

- Functionality testing of the monitoring system
- Maintenance of all PV Plant components according to manufacturer's instructions
- Visual damage inspection of all accessible cable trenches and cable trays
- Dressing of the cables if and as required.

Additional Main Annual Inspection

In addition to the bi-annual inspections, one main annual PN Plant inspection will be conducted. The inspection is to follow the detailed inspection procedures and will be documented accordingly. Below is the scope of annual inspection:

- Visual damage inspection of all accessible cable trenches and cable trays
- Visual inspection and random testing of module string connector's clamps, All components and degree of pollution. Testing of over-voltage protection

Corrective Maintenance

The following corrective maintenance services shall be offered till system is under O&M contract:

- Critical Reactive Repair
- Condition Based Maintenance
- Warranty Enforcement
- Equipment Replacement through Spares(planned/unplanned)
- Complaint Management
- MC4s replacement and cable dressing, if and as required

Corrective maintenance shall be carried out by the site team if and as required.

The following additional spare parts will be ordered along with the project procurement

- 10 extra modules.
- 50 m DC cable
- Equipment to ensure low water consuming cleaning techniques.
- Miscellaneous Items.

Any additional spares that the bidder foresees that could be used should be additionally specified. These should not be consumable items and will be analyzed by the owner's engineer before being allowed to be added in the spares list. These spares are owned by State Life & stored within State Life, whereas it is the responsibility of the contractor to properly maintain, safeguard and store the spare parts. The spares can be acquired after an incident is properly reported where the installed inverters have become nonoperational.

Any additional spares non-availability impact on nonperformance of the plant will be the responsibility of the contractor during the O&M period. Any resulting damages due to nonperformance of the plant due to the unavailability of the inverters or any other equipment will be the responsibility of the O&M provider. Specialized low water consumption cleaning techniques and equipment to be used to avoid soiling and reduce portable water use. Unlimited water will not be available for cleaning modules.

8. WARRANTY AND GUARANTEE:

- One-year standard warranty of complete Project.
- International Standard warranty for Solar Panel (Product warranty 16 years and performance warranty 30 years, 5 years Inverter warranty).

Signature & Seal of the Bidder

ELECTRICAL ENGINEER

STATE LIFE BUILDINGSUKKUR

TECHNICAL EVALUATION CRITERIA

SUPPLY INSTALLATION & COMMISSIONING OF 30KW ON-GRID SOLAR SYSTEM AT STATE LIFE BUILDING SUKKUR.

I). MANDATORY REQUIREMENT:

The firms should fulfill the following mandatory requirement/condition and supporting documents should be submitted accordingly:

CAUTION: Non-compliance of any Mandatory Conditions will end in rejection of bid and no further evaluation: -

S.No.	Description			Remarks
1.	In case of companies and firms, last 03 years audited financial statements are to be provided showing minimum average turnover of Rs 50 million. OR In case of individuals / Sole proprietors, last 03 years tax returns filed with FBR are to be provided showing minimum turnover of Rs 50 million minimum on average for 03 years.			
2.	Pakistan Engineering Council registration certificate in mandatory technical codes EE-04, EE-05, EE-11 & for financial limit in C-3 minimum			
3.	Affidavits to be submitted on Rs100/- stamp paper mentioning therein that the firm has not been black listed by any Government/Semi Government/Autonomous/Semi-Autonomous body.			
4.	Copy of certificate of NTN, GST, SRB & fresh copy of Active tax payer list (ATL).			
5.	The bidder shall submit their bid on original tender documents duly filled with each page signed and stamped against each column as token of acceptance.			

6.	Valid copy of registration Certificate from private power & infrastructure SLIC (PPIB) in C1 category.			
7.	Valid copy of Electrical Contractors License issued by Electrical Inspectorate of Karachi.			
8	Joint Venture / Consortium strictly not allowed.			

II). TECHNICALREQUIRMENT

Minimum Qualifying Marks=70%ineachcategory

The points/marks shall be given in the following manners:

Summary of marks/points

	Category	Maximum point/ marks	To qualify Minimum points to be scored separately in each category
a.	Status of firm	10	07 i e70%of10marks
b.	Professional Capability	30	21 i e70%of30marks
c.	Relevant Experience	20	14 i e70%of20marks
d.	Projects in Hand	20	14 i e70%of20marks
e.	Financial	20	14 i e70%of20marks
Total		100	70 i e70%of100marks

S. No.	Description		Min. marks	Max. marks
a.	STATUSOFFIRM:(Max.marks-10)(Minmarks07)			
	i). Private Limited/corporation . Partnership . Proprietor	05marks 04marks 3.5marks	3.5Marks	05Marks
	ii).Completion of 06yearsoffirmestablished Completionof05yearsoffirmestablished .Completionof04yearsoffirmestablished . Below02yearsoffirmestablished (Evidence to be provided)	05marks 04marks 3.5marks 00marks	3.5Marks	05Marks
Total			07Marks	10Marks

b.	<u>PROFESSIONAL CAPABILITY</u> (Max.marks-30) (Minmarks21)		Min. marks	Max. marks		
	<p>i) <u>Managerial staff. (10 Marks)</u></p> <ul style="list-style-type: none"> • Director/Controller (10years' experience) 10marks • Manager Engineering (05years' experience) 8.5marks • Manager Finance (05years' experience) 07marks <p>ii) <u>.Technical staff.(10Marks)</u></p> <p>Provide detail of technical staff involved in Solar installation work:</p> <p>Electrical/Electronic/Mechatronics Engineer having 05-10 years' experience. 10marks</p> <p>Electrical/Electronic/Mechatronics Engineer having 03-05 years' experience. 8.5marks</p> <p>Electrical/Electronic/Mechatronics Engineer having 01-03 years' experience. 7marks</p> <p>iii. <u>Work Facility(10marks)</u></p> <p>Detail to be provided methodology of Solar repairing workshop facility, fully equipped with machine & tools required for subject work having following accessories.</p> <ul style="list-style-type: none"> ▪ Online facility 24/7 diagnosing fault. 2marks ▪ Insulation Resistance Tester (Megger) 1mark ▪ Air compressor 1mark ▪ Pneumatic tools 1mark ▪ Plate bending machine 1mark ▪ Welding plant 1mark ▪ Shaper grinding machine 1mark ▪ Electric grinders 1mark ▪ Tools for fabrication work 0.5 mark ▪ List of safety equipment such as helmet safety goggles hand gloves etc will carry. 0.5 mark 		7marks	10marks		
Total			21Marks	30Marks		

C.	<u>RELEVANT EXPERIENCE OF SOLARIZATION WORK.</u> Max.marks-20(Minmarks14) Give reference to (documentary proof) in. <ul style="list-style-type: none"> ▪ 05 contracts for Solar Installation work 100KW or above. ▪ 04 contracts for Solar Installation work 100KW or above. ▪ 3 contracts for Solar Installation work 100KW or above. 	20marks 16marks 14marks	14 Marks	20Marks		
Total			14Marks	20Marks		
D.	<u>PROJECTS IN HAND OF SOLARIZATION WORK.</u> Max.marks-20(Min marks 14) Give reference to (documentary proof) in. <ul style="list-style-type: none"> ▪ 05 contracts for Solar Installation work PKR 10 million and above ▪ 04 contracts for Solar Installation work PKR 10 million and above ▪ 03 contracts for Solar Installation work PKR 10 million and above 	20marks 16marks 14marks	14 Marks	20Marks		
Total			14Marks	20Marks		
E.	<u>FINANCIAL SOUNDNESS</u> (Max.marks-20)(Min marks 14)		Min. marks	Max. marks		
	<u>Turnover.</u> Rs 50 million and above. Rs 30 million and less than Rs 50 million. Rs 15 million and less than Rs 30 million. Below Rs 10 million.	20marks 16marks 14marks 00marks	14marks	20marks		
Total			14Marks	20Marks		
Grand Total (a+b+c+d+e)			70Marks	100Marks		

NOTE

The selection of firm would be made via “**Most Advantageous Bid**”
Criteria and **30% weightage** to be given to **Financial Bid**.

with **70% weightage** to be given to **Technical**

Formula for evaluation:

- **Technical Score=** $\frac{\text{Bidder's Technical Score} \times 70}{\text{Total Technical Score}}$
- **Financial Score=** $\frac{\text{Lowest Bid Price}}{\text{Bidder's Quoted Price}} \times 30$
- **Total Score=** Technical Score + Financial Score

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