



GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

MINISTRY OF URBAN DEVELOPMENT, CONSTRUCTION AND HOUSING



SRI LANKA LAND DEVELOPMENT CORPORATION

Contract

for

**SUPPLYING, INSTALLATION, COMMISSIONING AND MAINTAINING OF
04kW GRID TIED SOLAR INVERTER BY REPLACING THE DAMAGED
INVERTER IN JAPAN FRIENDSHIP ROAD WALKWAY AT KIMBULAWELA**

PROCUREMENT NO. : S/646/24

CLOSING DATE : 04th DECEMBER 2024 AT 13.30 HRS

Sri Lanka Land Development Corporation

No. 03, Sri Jayawardenapura Mawatha

Welikada

Rajagiriya

Tel. No. : 0112866832 Fax No. : 0112871637 Email : supplies@slrldc.lk

NOVEMBER 2024

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Section – 1

INSTRUCTIONS TO BIDDERS

Notes:

Instructions to Bidders shall be read in conjunction with Bidding Data under Section 5 (Volume 2). Matters governing the performance of the Contractor, payments under the Contract, or matters affecting the risks, rights, and obligations of the parties under the Contract are included under Section 3 – Conditions of Contract (Volume 1) and Contract Data under Section 5 (Volume 2). However, some information is reproduced in this section to facilitate the bidders to price their bids.

Instruction to Bidders will not be part of the Contract and will cease to have effect once the Contract is signed.

Note:

Please refer the ICTAD standard Bidding Document Procurement of Works, ICTAD/SBD/03, Second Edition-January 2007 (not attached with this document) for the following sections.

Section 01 – Instructions to Bidders

Section 02 – Standard Forms (Contract)

Section 03 – Conditions of Contract

Section 04 – Form of Bid Qualification Information

Ministry of Urban Development and Housing



SRI LANKA LAND DEVELOPMENT CORPORATION

INVITATION FOR BIDS (IFB)

Supplying, Installation, Commissioning and Maintaining of 04kW Grid Tied Solar Inverter by Replacing the Damaged Inverter in Japan Friendship Road Walkway at Kimbulawela

The Department Procurement Committee of Sri Lanka Land Development Corporation (SLLDC) now invites sealed bids from eligible and qualified bidders for Supplying, Installation, Commissioning and Maintaining of 04kW Grid Tied Solar Inverter by Replacing the Damaged Inverter in Japan Friendship Road Walkway at Kimbulawela.

1.

Procurement No	Description	Required Bid security
S/646/24	Supplying, Installation, Commissioning and Maintaining Of 04 kW Grid Tied Solar Inverter by Replacing the Damaged Inverter in Japan Friendship Road Walkway at Kimbulawela	Rs. 10,000.00

2. Bidding will be conducted through Limited Competitive Bidding (LCB) procedure.
3. To be eligible for contract award, the successful bidder shall have not been blacklisted and shall meet the following requirements.
- Bidder must be registered in Sri Lanka Sustainable Energy Authority.
 - The bidder shall have at least **five (05) experiences** in similar kind of contracts in last 05 years. A list of such project name, location, contact person and telephone number to be submitted.
 - Completed Technical Schedule and Manufacturer's Technical Catalogue clearly identifying the equipment offered shall be submitted.
 - Technical details of major equipment offered along with manufacturer's literature, service record of Make and Type of Equipment offered in Sri Lanka shall be submitted. (All documents shall be in English language)
 - Bidder shall be a reputed solar installation company which has a business registration in Sri Lanka for solar installation. Certificate of business registration issued by a government authority for companies / provincial register of business in the relevant field should be submitted.
4. Interested eligible bidders may obtain further information from Deputy General Manager (Drainage & Reclamation), Sri Lanka Land Development Corporation, Tel 0112886965 Fax 0112862058 and inspect the bidding documents at the office of Deputy General Manager (Supplies & Stores), Sri Lanka Land Development Corporation during the office hours, from **22nd November 2024 to 03rd December 2024.**

5. A complete set of Bidding Document in English language may be purchased by interested bidders on the submission of a written application to the Deputy General Manager (Supplies & Stores), Sri Lanka Land Development Corporation (SLLDC) during **09:00 hrs to 15:30 hrs** working days from **22nd November 2024 to 03rd December 2024**, upon payment of a non-refundable fee of **Rs. 1,000.00**. The method of payment will be in cash to Sri Lanka Land Development Corporation.

6. Bids shall be delivered with duplicate separately sealed to the address given below, or deposited to the identified Tender Box kept in Supplies & Stores Division (1st Floor in New Head office Building).

Deputy General Manager (Supplies & Stores)
Sri Lanka Land Development Corporation,
No.03, Sri Jayawardenapura Mw.,
Welikada, Rajagiriya.
Tel – 0112866832 Fax – 0112871637
Email – supplies@slldc.lk
Web – www.landdevelopment.lk

The deadline for submission of bids shall be on or before **04th Dec 2024**. Late-bids will be rejected. Bids will be opened soon after closing in the presence of the bidders' representatives, who nominate to attend.

7. Bid shall be valid **22nd January 2025 (49 days)**

8. All Bids shall be accompanied by a bid security of **Rs 10,000.00** and the bid security shall be from a licensed commercial bank operating in Sri Lanka and approved by the Central Bank of Sri Lanka. It shall be irrevocable and unconditionally encashable upon the first written demand by the employer. Bid security shall be valid **19th Feb 2025 (77 days)**. Bid security shall be addressed to General Manager, SLLDC.

(Cash bonds also could be submitted. Bidder could pay cash to Cashier, SLLDC and attach receipt to the bid).

8.a Procurement Committee reserves the right to accept a suitable bid receive or reject all bids and the decision of the Procurement Committee is final.

8.b All the alterations in bidding document shall be signed by the bidder.

9. Bidders are instructed to clarify any matter regarding this contract by,

Deputy General Manager (Drainage & Reclamation),
Sri Lanka Land Development Corporation,
No. 03, Sri Jayawardenapura Mawatha, Welikada, Rajagiriya.
Tel- 0112886965 Fax- 0112862058

Chairman – Procurement Committee
SLLDC

FORM OF BID

Name of Contract: Supplying, Installation, Commissioning and Maintaining Of 04kW Grid Tied Solar Inverter by Replacing the Damaged Inverter in Japan Friendship Road Walkway at Kimbulawela

Procurement No : S/646/24

Gentlemen:

1. Having examined the Standard Bidding Document – Procurement of Works – [ICTAD/SBD/03 – Second Edition, January 2007] Specifications, Drawings and Bills of Quantities and Addenda for the execution of the above named work, we the undersigned the offer to execute and complete such works and remedy any defect therein in conformity with the aforesaid conditions of Contract, Specifications, Drawings, Bill of Quantities and addenda for the sum of Sri Lankan Rupees.
.....(SLR..... Excluding Taxes) or such other sums as may be ascertained in accordance with the said Conditions.
2. I/We acknowledge that the Contract Data forms part of our Bid.
3. I/We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the works comprised in the Contract within the time stated in the Contract Data.
4. I/We agree to abide by this Bid until the date specified in ITB Clause 15.1[insert date], and it shall remain binding upon us and may be accepted at any time before that date.
5. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us.
6. I/We understand that you are not bound to accept the lowest or any bid you may receive.
7. I/We certify/confirm that we comply with the eligibility requirements as per ITB Clause 3 of the Bidding Documents.

Dated this day of20..... Signature in the capacity of duly authorized to sign bids for and on behalf of
..... (in block capitals or typed)

Signature :

Name :

Designation :

Address:

Witness:

Section - 5

BIDDING DATA AND CONTRACT DATA

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BIDDING DATA

1. The Employer : General Manager
Name : Sri Lanka Land Development Corporation
Address : No.03, Sri Jayawardenapura Mawatha, Welikada, Rajagiriya.
2. The Works consists of : Supplying, Installation, Commissioning and Maintaining of 04kW Grid Tied Solar Inverter by replacing the damaged Inverter in Japan Friendship Road Walkway at Kimbulawela
3. Commencement Date : Date of commencement shall be **07** days from the letter of acceptance.
4. Time for Completion : Intended Completion Date is **30 days** from the Commencement date.
5. The following information shall be provided :
 - (a) Detail of Company Registration
 - (b) VAT Registration number
 - (c) The bidder shall have at least **five (05) experiences** in similar kind of contracts in last 05 years. A list of such project name, location, contact person and telephone number to be submitted.
 - (d) Bidder shall be a reputed solar installation company which has a business registration in Sri Lanka for solar installation. Certificate of business registration issued by a government authority for companies / provincial register of business in the relevant field should be submitted. Bidder shall be registered in Sri Lanka Sustainable Energy Authority
 - (e) Bidder shall submit documents to prove technical and financial strength to execute this type of project and attend required after sales services.
 - (f) Bidder shall submit manufacture's authorization certificate for the provided equipment
 - (g) Manufacture recommended maintenance schedule indicating the frequency and details of the maintenance.
 - (h) Technical Schedule and Manufacturer's Technical Catalogue clearly identifying the equipment offered
 - (i) Technical details of major equipment offered along with manufacturer's literature, service record of Make and Type of Equipment offered in Sri Lanka. (All documents shall be in English language)
6. The Bid shall be submitted to: : Deputy General Manager (Supplies)
Sri Lanka Land Development Corporation,
No.03, Sri Jayawardenapura Mw.,
Welikada, Rajagiriya.

7. The deadline for submission of Bids shall be on or before **04th December 2024 at 13.30 hrs**
The Bids will be opened immediately thereafter at the above address (6)
8. The amount of Performance Security is 5% of the Initial Contract Price from a reputed commercial bank and It shall be irrevocable. It shall be valid until 28 days beyond the expiry date of the intended completion date.
9. Bid Price : VAT component shall not be included in the rates.
VAT component shall be shown separately at the end of the BOQ.
NBT shall not be considered separately.
The contract is not subjected to Price adjustment.
10. Award of Contract : SLLDC reserves the right to accept or reject any Bid.
11. SLLDC reserves the right to increase or decrease the BOQ quantity by 10% without any change to the unit price.
12. Bidders are instructed to clarify any matter regarding the above contract by contacting Deputy General Manager (Drainage & Reclamation), Sri Lanka Land Development Corporation, Tel 0112886965, Fax 0112862058.
13. The bidders are instructed to inspect the site before pricing.
14. Work to be proceed after inspection and approval by the Engineer.

CONTRACT DATA

(Please note that the Clause nos. given hereunder are that of Conditions of Contract)

(1.1.8) The Employer is

Name: **Sri Lanka Land Development Corporation**

Address: **No. 3, Sri Jayawardenapura Mawatha, Welikada, Rajagiriya.**

Name of Authorized Representative: **General Manager**

(1.1.10) The Engineer is

Name: **Deputy General Manager (Drainage & Reclamation)**

Address: **Sri Lanka Land Development Corporation, No. 03, Sri Jayawardenapura Mawatha, Welikada, Rajagiriya.**

(1.1.21) The Works consists of Supplying, Installation, Commissioning and Maintaining of 04KW Grid Tied Solar Inverter by replacing the damaged inverter in Japan Friendship road walkway at Kimbulawela.

(1.1.14) The Intended Completion Date for the whole of Works is **30 days from the start date.**

(4.4) The Performance Security shall be **5%** of the Initial contract Price.

(6.4) Liquidated Damage : **Rs: 2,500.00** per day
Maximum amount of Liquidated Damage: **10%** of Initial Contract Price.

(8.1) The Defects Liability Period is **03 years**. The contractor shall maintain the Solar Inverter during the first 3 years free of charge after the handing over of the projects.

(10.3) The retention from each payment shall be **10%** of the certified work done.
The limit of retention shall be **05%** of the Initial contract Price.

(13.1) Minimum Insurance Cover per occurrence is Rs. **1,000,000.00** and Number of occurrence shall be unlimited.

LABOUR DISCIPLINE & BEHAVIOUR

1. Workers shall be worked as per the rules and regulations of the Corporation.
2. List of workers assigned for this work (Including their permanent address, copied of National Identity cards) to be submitted to the Project Engineer.
3. The project Engineer reserves the right to dismiss any kind of manpower who is not suit the site in any ways.
4. Contractor should not allocate his employees who may be a threat to the National Security. If any kind of situation arise, Contractor is fully responsible for the same.

PAYMENTS

1. Project Engineer reserves the right to fully or Partial payment of the bill with considering the specifications & Drawings.
2. All the payment will be made with crossed cheques by the Snr. Accountant (Payment) of the Finance Division, 03rd Floor at SLLDC Head Office.

Section - 6
SPECIFICATIONS

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A. GENERAL TECHNICAL SPECIFICATION

1. Scope

This bid document covers the general requirements for Supplying, Installation and Commission of 04kW Grid Tied Solar Inverter by replacing the damaged Inverter in the Japan Friendship road walkway at Kimbulawela. Bidders are strongly advised to visit the site prior to submit their bids. Bidder shall provide only brand new equipment

Scope of the work shall be as follows.

1. It has been installed 255Wp, **ALEO** Branded, **P18** Model solar panels (14 Nos) in the above location and existing Inverter is defective. The contractor is required to install a new 4kW Inverter for the same. The necessary all the other standard components, Cables shall be supplied by the contractor to complete the installation.
2. The contractor has to obtain the necessary approvals for above Solar Inverter from Sri Lanka Sustainable Energy Authority (SLSEA) and CEB, before commencing the installation and testing shall be carried out by the contractor.
3. Supply and install of solar On Grid Inverter and associated civil works on the allocated space of the site.
4. Supply and installation of all the other standard components to complete the system including solar inverter, power box, AC and DC cables, Isolators, MCB's, RCCB's, surge protection and other protection devices.
5. Interconnection with existing CEB supply and commissioning of the system. Contractor should provide necessary arrangements to fix the Distribution board and inverter.
6. The system shall be certified accordance with the CEB regulations to obtain Net-Accounting facility with fulfillment of terms and conditions.
7. Contractor shall sign an agreement to be obtained the after sales services for operating the system sustainability (solving any faults, spare parts, warranty claim).
8. Maintenance Training for the client staff.

All the equipment offered shall be brand new, efficient, quality products, latest in model/versions and technology and currently in production. It shall be completed with standard components and accessories to perform the desired functions and conform to the given specifications.

2. Operation Conditions

- | | |
|---------------------------------------|-------|
| a) Annual average ambient temperature | 30° C |
| b) Maximum ambient temperature | 38° C |
| c) Maximum relative humidity | 95% |

3. System Parameters

- | | |
|-----------------------|----------------------|
| a) Nominal voltage | 230 V |
| b) No of phases | Single ph. & neutral |
| c) System frequency | 50 Hz |
| d) Method of earthing | Solidly Earthed |

4. General

Complete system shall be comply with CEB requirements for net accounting facility and auto isolation feature shall be available when failure or malfunction of the grid connection.

5. Technical Requirements

5.1 Inverter

Rating of the Inverter shall be greater than or same as maximum output of solar system. Bidder shall decide the capacity of inverters and it shall meet the output capacity. Inverter unit shall convert DC produced by SPV array and adjust the voltage and frequency levels to suit the Grid connection. Nominal AC voltage shall be Single Phase, 230V \pm 6% and frequency shall be 50 Hz \pm 1%. DC voltage ripple content shall not be more than 3% and efficiency of the Inverter shall not be less than 97%.

Inverter voltage and frequency shall supervise with respect to rise/fall in programmable threshold values of frequency and voltage of the system. The plant shall get disconnected/connected from the grid in case of a grid fault/after normal grid conditions have resumed.

Inverter shall be based on transformer less circuit topology and components suitable to meet the specifications. The electrical safety of the array installation is utmost importance. Array electrical configuration shall be in such a way that, the Maximum Power Point Tracking (MPPT) shall operate with maximum efficiency, between the low and high temperature of the site.

The Inverter shall have following protection features

- Appropriate self-protective and self-diagnostic feature to protect itself and the PV array from damage in the event of Inverter component failure or from parameters beyond the Inverter's safe operating range due to internal or external causes.
- Faults due to malfunctioning within the Inverter, including commutation failure, shall be cleared by the Inverter protective devices and not by the existing site utility grid service circuit breaker.
- Protection features such as DC reverse-polarity, reverse current protection, AC short circuit protection, ground fault monitoring, overvoltage, under voltage, over frequency, under frequency shall be available.
- Islanding protection shall be available. Power disconnection time shall be less than 0.5 s.
- Facility to disconnect/reconnect the Inverter automatically to the grid following the grid failure condition/ restoration of grid connection.
- Withstand a nun balanced output load to the extent 30%.
- Automatic fault conditions reset.
- Parallel operation with grid and capable of interrupting line to line fault current and line to ground fault currents.

Harmonics generated by Inverter shall not exceed a total harmonic current distortion of 3%.

Display on front panel shall have following indicators.

- Inverter power feeding to the grid.
- Daily amount of energy fed into the grid
- Monthly energy fed into the grid
- Total energy fed into the grid
- Other parameters (Input voltage, Output voltage etc.)

Display shall be visible from outside the Inverter enclosure. Operational status of the Inverter, alarms, trouble indicators and AC and DC disconnect switch positions shall also be communicated by appropriate messages or indicator lights. Inverter shall have an Emergency OFF button located at an appropriate position of the unit.

Inverter shall meet the following code and standard. CE, VDE0126-1, G83/1-1, IEEE 1547, IEC 61727, IEC62116.

The ratio of the Inverter continuous power rating and the array peak power rating shall be between 80% to 90% and any other value found suitable. This is because better overall annual yield can be obtained by allowing the Inverter to operate for longer periods closer to optimal efficiency.

Maximum Power Point Tracker (MPPT) has to be integrated with the Inverter unit to maximize energy drawn from the array. The MPPT shall be microprocessor based to minimize power losses. The MPPT shall have provision (manual setting) for constant voltage operation.

Actual amount of AC energy generated/consumed by the PV system shall have to be provided to meter. Monthly and daily total AC energy production shall be separately metered and monthly AC energy production shall be stored for period of one year.

Inverter shall be covered under the warranty period of 10 years from the date of commissioning of the system.

5.2 Cables

Cables shall conforming to BS 5467 for XLPE insulated cables and BS 6346 for PVC insulated cables. Only copper cables shall be used. All DC cable shall class II type and shall comply with the EN 50618 standard.

5.3 AC & DC Breakers

All AC & DC breakers shall be housed in a suitable switch cabinet, with minimum IP65 degree of Protection and components inside the enclosures clearly identify with appropriate permanent designations.

5.4 Surge Protection Device (SPD)

Solar system shall be included the necessary devices to protect the system from AC/DC surges. SPD shall be mounted separately to the AC and DC sides. Technical details about the SPD shall be provided with the bid.

5.5 Single Line Diagram

Single line diagram of the installation shall be provided with the bid.

5.6 Spare Parts

Essential spares for the system shall be provided free of cost by the supplier and replaced if required during the warranty period. Spares shall be made available for at least 10 years.

5.7 Training

Supplier shall provide complete on-site training and demonstration for the SLLRDC staff in regarding operation and maintenance of the system after completion of the contract.

Bidder shall provide contact details of a technical person in cause of an emergency and other technical trouble shooting.

5.8 Maintenance

The contractor shall maintain the solar on grid inverter during the first 3 years free of charge after the handing over of the projects and the contractor should sign a maintenance contract if agreement made by the SLLDC. SLLDC has an authority to decide whether maintenance agreement sign or not with the contractor.

Maintenance schedule specifying the activities to be carried out during the 3 years period should be submitted with the offer.

Two sets of user manuals complete with system details, maintenance procedures and troubleshooting shall be submitted after completion of the contract.

In cause of a system failure, contractor shall be address within with immediate effect.

5.9 Warranty

The total Solar Inverter installation should carry 5 years warranty and individual warranties shall be as stated in the following.

Item	Minimum Warranty Period
Inverter	10 years
DC Surge Protector Device	5 years
AC Surge Protector Device	5 years

Please state whether the system damage due to surge and lightning will cover from your warranty or not. If not, replacement/repair cost shall be covered from reputed insurance for 5 years period and shall be produced at the completion of the contract. Insurance fee for 5 years should be included in bid price.

6. Eligibility and Qualification

Bids shall be submitted by reputed solar installation company has a business registration in Sri Lanka for solar installation. Certificate of business registration issued by a government authority for companies / provincial register of business in the relevant field should be submitted. Bidder shall be registered in Sri Lanka Sustainable Energy Authority.

Bidder should have previous experience of at least three years in the installed and maintenance of net-metering solar systems in Sri Lanka. Bidder shall be provided total installed capacity within the country and list of the locations that the company has supplied and installed similar type of system as past experience.

Bidder shall submit documents to prove technical and financial strength to execute this type of project and attend required after sales services.

Bidder shall be submitted manufacture's authorization certificate for the provided equipment.

If bidder is unable to provide above documents will be rejected as non - responsive to the bid.

7. Other Mandatory Requirements

Successful bidder shall get necessary permission and approvals for the connection of solar Inverter from CEB on behalf of SLLRDC. Inter connection charges and all other expenses shall be included in bid price.

8. Information to be supplied with offer

The bidders shall submit the following documents and details in quantities as indicated:

- Design concept in schematic form including net metering arrangement
- Design details of the module mounting structure.
- Technical literature/catalogues for equipment supplied.
- Schematic diagram of the inverter
- Relevant type test reports and other test reports of Solar PV panel and Inverter.
- Documents to proof financial ability, past experience of similar projects for at least past 3 years.

Contractor shall submit the following documents details in quantities as indicated, at the installation:

- i. Commissioning report
- ii. Two sets of installation manual /user manual complete with system details for inverter, PV module array, working principle, trouble shooting, etc.

Supplying, Installation, Commissioning and Maintaining of 04kW Grid Tied Solar Inverter by Replacing the Damaged Inverter in Japan Friendship Road walkway at Kimbulawela

1. Inverter

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Make			
2	Model no			
3	Country of origin			
4	Country of Manufacture			
5	Inverter technology			
6	Inverter type		Transformer less circuit	
7	Proposed Inverter capacity	kW	4	
8	No of MPP Trackers		2	
9	Operating temperature range	°C	5°C – 60°C	
10	Cooling method			
11	Degree of protection		IP 65	
12	DC protection available		Yes/No	
13	AC protection available		Yes/No	
14	Lighting surge protection available		Yes/No	
15	Efficiency	%	Minimum 97%	
16	MPPT voltage range		DC volt minimum to maximum	
17	Maximum input voltage	DC V	550 V	
18	Minimum input voltage/ start-up input voltage	DC V		
19	Maximum continues output current	AC A		
20	Nominal continues output current	AC A		
21	Rated grid voltage	AC V	230V, 1ph	
22	Rated grid frequency	Hz	50Hz	
23	Maximum AC output apparent power	kVA		
24	Maximum AC output active power	kW		
25	Power factor			
26	Short circuit proof			
27	Ground fault monitoring			
28	Reverse polarity protection			
29	Total Harmonic current distortion	%	Less than 3%	
30	Display		OLED / LED	
31	Communication Interface		Wifi & GPRS	
32	Connecting delay time to the Grid	sec	180	
33	Power disconnection time in cause of grid supply failure	sec	0.5	

No	Description	Unit	SLLRDC Requirement	Bidders Offer
34	Applicable standard (Documents shall be provided to prove the compliance with standards)			
	a) Safety			
	b) EMC emission & EMC			
	c) immunity			
	d) Harmonic & Flicker			
	e) Fire protection		IEC 60947 or equivalent	
	f) Rapid system Shutdown at a fault		article 690, NEC 2014	
	g) Electrical shocks & fire		IEC 62109 or equivalent	
35	Warranty		10 Years	

2. DC Surge Protector

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Make			
2	Model no			
3	Country of Manufacture			
4	Type of design			
5	Maximum current	A		
6	Maximum energy			
7	Maximum number of surge			
8	Response time			
9	Warranty		5 Years	

3. AC Surge Protector

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Make			
2	Model no			
3	Country of Manufacture			
4	Type of design			
5	Maximum current	A		
6	Maximum energy			
7	Maximum number of surge			
8	Response time			
9	Warranty		5 Years	

4. AC Cables

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Manufacture			
2	Size			
3	Type			
4	Standard		BS 5467 for XLPE Insulated cables and BS 6346 for PVC insulated cables	

5. Isolator (AC)

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Manufacture			
2	Country of Manufacture			
3	Rating			
4	Warranty		5 Years	

6. RCCB

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Manufacture			
2	Country of Manufacture			
3	Rating			
4	Warranty		5 Years	

7. MCB (AC)

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Manufacture			
2	Country of Manufacture			
3	Rating			
4	Warranty		5 Years	

8. MCB (DC)

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Manufacture			
2	Country of Manufacture			
3	Rating			
4	Warranty		5 Years	

9. Total System

No	Description	Unit	SLLRDC Requirement	Bidders Offer
1	Warranty		5 Years	
2	Whether damages due to surge/lightning will covered by warranty	Yes/No		
3	If not has Insurance arrangement made	Yes/No		
4	Expected Annual power output	kWh		
5	Simple Payback Period			
6	Whether certificate of quality assurance conforming to ISO 9001:2000 has furnished for Solar Inverter	Yes/No		
7	Whether type test reports for Solar Inverter has furnished	Yes/No		
8	Whether single line diagram has submitted	Yes/No		

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Section - 7
BILL OF QUANTITIES

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BILL OF QUANTITIES

for

Supplying, Installation, Commissioning and Maintaining of 04 kW Grid Tied Solar Inverter by Replacing the damaged Inverter in Japan Friendship Road Walkway at Kimbulawela

Item	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
	<p>Note:</p> <ul style="list-style-type: none"> Rates shall include all necessary items for completion of works indicated in the specifications to function the system properly. The bidder shall provide the inverter which already approvals by Sri Lanka Sustainable Energy Authority (SLSEA) and CEB. Since the above contract for replace the damaged 4kW Inverter, the bidder shall verify that inverter specification match with existing 255Wp, Aleo-P18 Branded Solar panels (14Nos) installed at the above location. All other components shall be properly installed as per the CEB Guidelines. All AC & DC breakers, SPDs, RCCB, MCBs shall properly enclosed by suitable switch cabinet / Enclosure with minimum IP65 of Protection as per the given drawing. Inverter earth cable can be connected to the existing earthing system of the location. 				
1	<p>Supplying and Installation of 04 kW Grid Tied Single phase inverter including internal wiring and all necessary accessories (Capacity shall be matched with power output of solar system and solar generation details could be remotely monitored from another place.) The item rate shall be including the following works.</p> <ul style="list-style-type: none"> The necessary approvals for the proposed inverter from the SLSEA and CEB. Testing Commissioning and issuing necessary certificates to CEB. Supplying and Installation of AC and DC Surge Protection Unit including internal wiring as per the attached drawing. Supplying and Installation of 2P Cu Bus bar, Lockable AC Isolator, RCCB, AC MCBs and DC MCBs including internal wiring as per the attached drawing. Inverter shall have the facility to monitor remotely through GPRS. 	01	Item		
Total (Ex .VAT)					

Summary

Total :-

Add
18% VAT (Reg. No.) :-

GRAND TOTAL (Rs.) :-

Total amount in words: Rupees

.....

.....

Signature of contractor

Seal

Witness:

Name : 1. Signature:

NIC No : Name:.....

Tel. No. : NIC No:.....

Address : Address:

2. Signature:.....

Name :.....

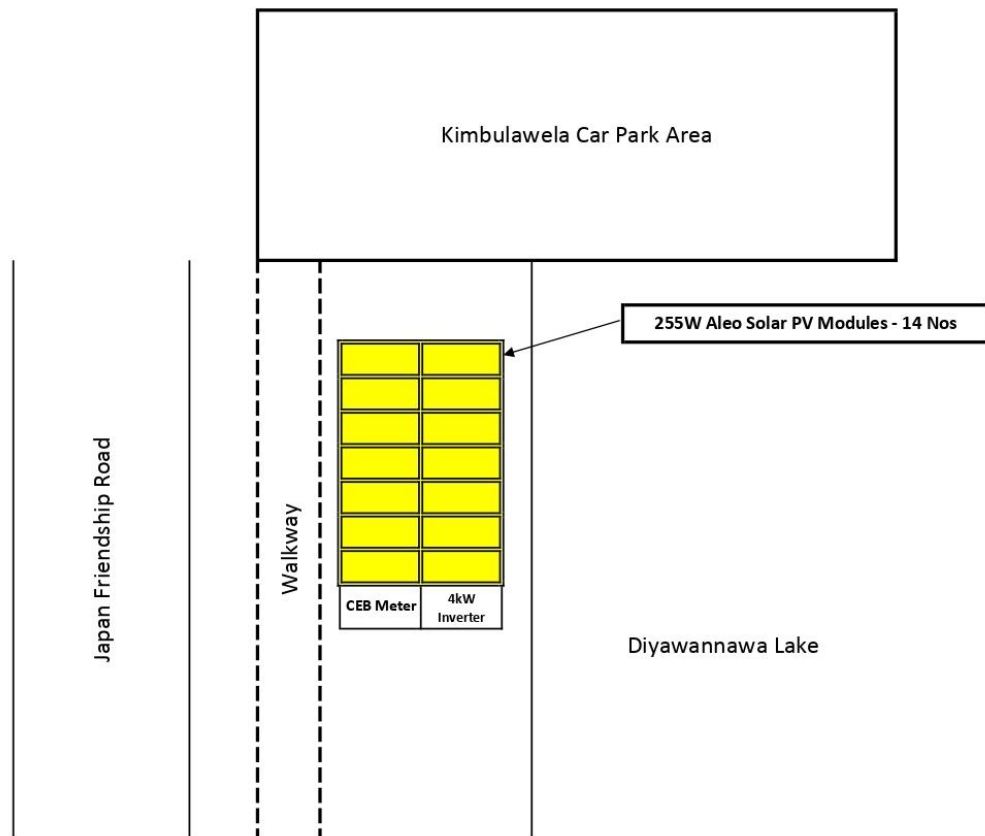
NIC No:.....

Address:.....

Section - 8
DRAWING

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**04kW Grid Tied Solar Inverter by replacing the damaged inverter in Japan
Frienship Road Walkway at Kimbulawela**



Site Location

Section – 9

STANDARD FORMS [BID]

Notes on Standard Forms:

- *Bidders shall submit the completed Form of Bid Security as appropriate in compliance with the requirements of the bidding documents.*
- *Bidders should not complete the Form of Agreement at the time of preparation of bids.*
- *The successful bidder will be required to sign the Form of Agreement, after the award of contract.*
- *Any corrections or modifications to the accepted bid resulting from arithmetic corrections, acceptable deviations, or quantity variations in accordance with the requirements of the bidding documents should be incorporated into the Agreement.*
- *The Form of Performance Security, Form of Advance Payment Security and Form of Retention Money Guarantee should not be completed by the bidders at the time of submission of bids.*
- *The successful bidder will be required to provide these securities in compliance with the requirements herein or as acceptable to the Employer.*

FORM OF BID SECURITY

[This Guarantee form shall be filled in accordance with the instructions indicated in brackets].....[Insert issuing agency's name, and address of issuing branch or office]

Beneficiary: General Manager, Sri Lanka Land Development Corporation
No. 03, Sri Jayawardenapura Mawatha, Welikada, Rajagiriya

Date:[insert (by issuing agency) date]

BID GUARANTEE NO.:[insert by issuing agency) number]We have been informed that[insert (by Issuing Agency) name of the Bidder] (hereinafter called "the Bidder") has submitted to you its bid dated [insert (by issuing agency) date] hereinafter called "the Bid") for the execution of [insert name of Contract] under Invitation for Bids No. [insert IFB number]("the IFB").

Furthermore, we understand that, according to your conditions, Bids must be supported by a Bid Guarantee.

At the request of the Bidder, we[insert name of issuing agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of[insert amount in figures][insert amount in word] upon receipt by us of your first demand in writing accompanied by a Written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions because the Bidder:

- a) Has withdrawn its Bid during the period of bid validity specified; or
- b) Does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB") of the Irb; or
- c) Having been notified of the acceptance of its Bid by the Employer/Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITS.

This Guarantee shall expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the Contract signed by the Bidder and of the Performance Security issued to you by the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) the successful bidder furnishing the performance security, otherwise it will remain in force up to(insert date)

Consequently, any demand for payment under this Guarantee must be received by us at the office on or before that date.

.....
Signature of authorized representatives (s)