

VITI RENEWABLES PRIVATE LIMITED

TENDER DOCUMENT

**TURNKEY DEVELOPMENT OF 5MW SOLAR PV
PLANT AT QELELOA, NADI, FIJI.**

TENDER NO: VRL 02/2019

JUNE 2019

INVITATION FOR BIDS

Date: 7TH June, 2019

Tender No: VRL 02/2019

Viti Renewables Private Limited invites sealed bids from suitable bidders for the development of a 5MW Solar PV plant in Qeleloa, Nadi, Fiji on total turnkey basis (EPC Tender).

Project Background

Viti Renewables Pte Ltd (VRL) the Employer, is a joint venture company between Energy Fiji Limited's (EFL) subsidiary company Fiji Renewables Ltd and Sunergise Fiji Pte Ltd.

Viti Renewables Pte Ltd (VRL) wants to install a 5MW Solar PV power plant at Qeleloa in Nadi which will be connected to the EFL grid. The project is in line with EFL's aim of providing at least 90% of Fiji's energy requirements through renewable sources by 2025. The project is being developed through an IPP model where VRL has signed a PPA (Power Purchase Agreement) with EFL for the delivery of electrical energy through this project.

Project Aim

The Viti Renewable Pte Ltd seeks to engage a technically qualified & experienced; financially stable Contractor on EPC basis to:

- 1) further the Concept Design provided in their bid submission;
- 2) produce detailed design for the entire project;
- 3) procure Plant (Materials) and Machinery except those items supplied by the Employer;
- 4) provide installation Services including but not limited to:
 - construct, test and commission, complete Functional Guarantees delivering Operational Site Acceptance of all the Facilities;
 - training of Employer personnel;
 - all necessary Plant documentation; and
 - Warranties during the Defect Liability Period of not less than 12 months after the final commissioning.

This document specifies how the Employer wishes to achieve these outcomes. The Employer's Requirements (ER) provide the information necessary for Detailed Design, Plant procurement, Installation and commissioning of a 5 MW GRID CONNECTED ground mounted solar PV array feeding directly into the EFL's 33/11kV Sub-Station at Qeleloa, Nadi.

All bids for the contract shall be submitted on the appropriate forms provided and shall include the completed price schedule, technical schedule and schedules of experience etc. The bid shall be on the basis of a contract based on firm lump sum price.

Bidders may obtain further information from, and inspect and acquire the bidding documents, at:

Total Turnkey Development of Qeleloa 5MW Solar PV Plant
Tuvitu Delairewa
General Manager Commercial
2 Marlow Street, Suva, FIJI.
Phone: 679 3224 185
Email: TDelairewa@efl.com.fj

The deadline for submission of bids shall be **1600hrs (Fiji Time) on Wednesday 10th July, 2019.**

During evaluation of bids Viti Renewables Pte Ltd (VRL) may invite a bidder or bidders for discussions, presentations and any necessary clarification/s before deciding on the successful proposal.

There are two pre-bid site visits planned for **17th June 2019 and 3rd July 2019**. All the Interested bidders are required to meet at the **EFL Qeleloa Power station in Nadi, at 10 am. It is mandatory for a bidder to attend one pre-bid site visit. Proof of attendance is to be attached to the bid failing which the bid is liable for rejection.**

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Section 1

Instructions to Bidder

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Section 1 - Instructions to Bidders

	A.	General
1. Scope of Bid	1.1	The Viti Renewables Pte Ltd - VRL (hereinafter referred to as "the Employer"), wishes to receive bids for the EPC tender for Qeleloa 5MWp Solar PV plant in Nadi, Fiji as defined in these bidding documents (hereinafter referred to as "the Works").
2. Completion Timeline	2.1	The successful bidder will be expected to complete the Works within a maximum of twelve (12) months from the date of commencement of the Works. The commissioning date is scheduled to be 9th July 2020 .
3. Eligible Bidders	3.1	Bidders shall not be under a declaration of ineligibility for corrupt or fraudulent practices.
	3.2	This Invitation to Bid is open to bidders who have sound financial and technical background and have previous experience in handling such turnkey projects.
4. Eligible Materials, Equipment and Services	4.1	The materials, equipment, and services to be supplied under the Contract shall have their origin from reputable companies from various countries and all expenditures made under the Contract will be limited to such materials, equipment, and services. At the Employer's request, bidders may be required to provide evidence of the origin of materials, equipment, and services. A list of preferred suppliers is attached in Section 7.
	4.2	For purposes of Sub-Clause 4.1 above, "services" means the works and all project-related services including design services.
	4.3	For purposes of Sub-Clause 4.1 above, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing or substantial or major assembling of components, a commercial recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.
	4.4	The materials, equipment and services to be supplied under the Contract shall not infringe or violate any industrial property or intellectual property rights or claim of any third party.
5. Qualification of the Bidder	5.1	To be qualified for award of Contract, bidders shall: <ul style="list-style-type: none"> (a) submit a written power of attorney authorizing the signatory of the bid to commit the bidder; and (b) Specify joint venture memberships, certification and qualification as equipment manufacturer, financial capability, technical capability, supplies and installation facilities with comparable technical parameters, manufacturing and

installation capability, work in hand, future commitments
and current litigation.

- (c) Submit proposals regarding work methods, scheduling and resourcing which shall be, provided in sufficient detail to confirm the bidder's capability to complete the works in accordance with the specifications and the time for completion.

5.2 Bidders shall also submit proposals of work methods and schedule in sufficient detail to demonstrate the adequacy of the bidders' proposals to meet the Employer's Requirements and the completion time referred to in Sub-Clause 2.1 above.

6. One Bid per Bidder 6.1 Each bidder shall submit only one bid either by itself, or as a partner in a joint venture. A bidder who submits or participates in more than one bid will cause all those bids to be rejected.

7. Cost of Bidding 7.1 The bidder shall bear all costs associated with the preparation and submission of its bid and the Employer will in no case be responsible or liable for those costs.

7a Tender Security 7.2 There is no Tender Security for this Tender.

8. Site Visit 8.1 The bidder is REQUIRED to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility and cost, all information that may be necessary for preparing the bid and entering into a contract for the design-build and completion of the Works. The costs associated with visiting the Site shall be at the bidder's own risk and expense. The site visit is MANDATORY and two opportunities are made available for bidders' convenience and travel arrangements.

8.2 The bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such inspection, but only upon the express condition that the bidder, its personnel and agents, will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.

8.3 The tender pre-bid site visit as detailed in the Invitation for Bids will be deemed mandatory for a bidder to participate in the tender. Not later than (2) two days prior to the site visit, the tenderer shall inform the Employer of the persons whom will be attending the site visits on their behalf. Such persons will sign off the attendance register at site during the site visit.

8.4 In participating in the site visit, the tenderer and its personnel or agents agree to release and indemnify the Employer, including their personnel or agents, from all liability for death or personnel injury, loss of or damage to property or any other or loss, damage, costs and expenses arising as a result or in connection to the site visit.

B. Bidding Documents

- 9. Content of Bidding Documents** 9.1 The bidding documents are those stated below, and should be read in conjunction with any Addenda issued in accordance with Clause 11:

		Invitation for Bids
Section	1	Instructions to Bidders
	2	Part I - General Conditions
	3	Part II - Conditions of Particular Application
	4	Employer's Requirements
	5	Forms of Proposals and Appendices
	6	Sample Forms
	7	Schedules
	8	Drawings

- 9.2 The bidder is expected to examine carefully the contents of the Bidding documents. Failure to comply with the requirements of bid submission will be at the bidder's own risk. Pursuant to Clause 27, bids which are not substantially responsive to the requirements of the bidding documents will be rejected.

- 10. Clarification of Bidding Documents** 10.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing by email or at the Tenderlink Portal or by mail at the Employer's address indicated in the Invitation for Bids. The Employer will respond to any request for clarification which it receives earlier than 10 days prior to the deadline for submission of bids. Any clarification/s received after this deadline will be ignored.

- 11. Amendment of Bidding Documents** 11.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by issuing addenda. All such notifications will be published on Tenderlink Portal and will be transmitted to all bidders registered on the Portal. **No individual emails or mails** will be sent out in this regard which may be noted.

- 11.2 Any addendum thus issued shall be part of the bidding documents pursuant to Sub-Clause 9.1, and shall be communicated in writing or by fax to all purchasers of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum by email and fax to the Employer.

- 11.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids, in accordance with Clause 23.

C. Preparation of Bids

- 12. Language of Bid** 12.1 The bid, and all correspondence and documents related to the bid, exchanged between the bidder and the Employer shall be written in the English language.

13. Documents Comprising the Bid	13.1	The bid submitted by the bidder shall comprise a single envelope containing the technical proposal and the price proposal.
	13.2	<p>The technical proposal shall contain the following:</p> <ul style="list-style-type: none"> (i) Bid Form for Technical Proposal and Appendix to Technical Proposal; (ii) Power of Attorney; (iii) Information on Qualification; (iv) Confirmation of Eligibility; (v) Schedule of Major Items of Equipment (without prices); (vi) Schedule of Manufacturers, Place of Manufacture and Testing (vii) Schedule of Technical Particulars & Guarantees (viii) Schedule of Work Programme (ix) Schedule of Departures from Specification (x) Schedule of Bidder's Statement of Experience (xi) Schedule of Financial Information (xii) Schedule of Bio Data for Bidders' Personnel to be engaged in Project (xiii) Schedule of Bidders' Tools & Equipment (xiv) Schedule of Other Documents and Drawings to be submitted with the bid (xv) Any other materials required to be completed and submitted by bidders in accordance with these Instructions to Bidders. <p>The Financial proposal shall contain the following</p> <ul style="list-style-type: none"> (i) Bid Form for Price Proposal , Appendix to Price Proposal and Tender Security; (ii) Schedules of Prices (as per Section 7, Part I): <ul style="list-style-type: none"> I. Price Schedule of Main Items II. Alternative Offers – if any III. Recommended Tools & Spare Parts IV. Summary of Prices (iii) Any other material required to be completed and submitted by bidders in accordance with these Instructions to Bidders.
14. Bid Form and Price Schedules	14.1	The Bidder shall complete the Bid Form and the appropriate Price Schedules furnished in the bidding documents in the manner and detail indicated therein, following the requirements of Clauses 15 and 16.
15. Bid Prices	15.1	Unless specified otherwise in Employer's Requirements, Bidders shall quote for the entire facilities on a "single responsibility" basis such that the total bid price covers all the Contractor's obligations mentioned in or to be reasonably inferred from the bidding documents in respect of the design, manufacture, including procurement and subcontracting (if any), delivery, construction, installation, and completion of the facilities. This includes all requirements under the Contractor's responsibilities for testing, pre-commissioning and commissioning of the facilities and, where so required by the bidding documents, the acquisition of all permits, approvals and licenses,

liaison with EFL and other local authorities etc., operation maintenance and training services and such other items and services as may be specified in the bidding documents, all in accordance with the requirements of the Conditions of Contract.

15.2 Bidders shall give a breakdown of the prices in the manner and detail called for in the Schedules of Prices.

15.3 In the Schedules, Bidders shall give the required details and a breakdown of their prices, including all taxes, duties, levies, and charges payable in the Employer's country as of twenty eight (28) days prior to the deadline for submission of bids, as follows:

- (a) Design including all necessary drawings and documentation for the Work.
- (b) Plant and equipment to be supplied from outside the Employer's country (Schedules of Prices) shall be quoted on a DDU(Delivery Duty Unpaid) basis to Lautoka Port, Fiji. In addition, estimated ocean freight charges, insurance, installation charges, the FOB price shall also be indicated separately in foreign currency and in local currency. Installation works and Others. **After customs clearance, additional freight should be included to allow transfer from Lautoka Port to project site in Qeleloa, Nadi.** Services shall include rates or prices for all labour, contractor's equipment, materials, consumables and all matters and things of whatsoever nature, the provision of operations and maintenance manuals, training, etc. where identified In the bidding documents, as necessary for the proper execution of the Installation works and Other Services.
- (c) Recommended spare parts shall be quoted separately (Schedules of Prices: Part 2) as specified in subparagraph (b) above in accordance with the origin of the spare parts.

15.4 The term DDU shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, Paris.

15.5 Prices quoted by the bidder shall be on a fixed lump sum basis and shall not be adjusted for changes in the cost of labour, material or other matters except only for changes in legislation in accordance to Sub-Clause 13.16 of the General Conditions of Contract.

16. Bid Currencies

16.1 Prices shall be quoted in the following currencies:

- (a) the prices shall be quoted in the Fijian currency and either in the currency of the bidder's home country.
- (b) a bidder expecting to incur a portion of its expenditures in the performance of the Contract in more than one currency, and wishing to be paid accordingly, shall so indicate in its Bid; and.

	16.2	Bidders shall indicate their expected foreign currency requirements in the Appendix to Price Proposal.
	16.3	Bidders may be required by the Employer to clarify their local and foreign currency requirements, and to substantiate that the amounts included in the Schedule of Prices and shown in the Appendix to Price Proposal are reasonable and responsive to Sub-Clause 15.1 in which case a detailed breakdown of its foreign currency requirements shall be provided by the bidder.
	16.4	During the progress of the Works, the foreign currency portions of the outstanding balance of the Contract Price may be adjusted by agreement between the Employer and the Contractor to reflect any changes in foreign currency requirements for the Contract, in accordance with Clause 13.15 of the Conditions of Particular Application. Any such adjustment shall be effected by comparing the amounts quoted in the bid with the amounts already used in the Works and the Contractor's future needs for imported items.
17. Bid Validity	17.1	Bids shall remain valid for a period of 120 days after the date of opening of technical proposals specified in Sub-Clause 24.1.
	17.2	In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing. A bidder agreeing to the request will not be required or permitted to modify its bid, but will be required to extend the validity of its bid security for the period of the extension, and in compliance with Clause 18 in all respects. the Bidder shall (at its own cost) accordingly extend the validity of the Tender Security to reflect the extended Bid Validity Period
18. Alternative Proposals by Bidders	18.1	Bidders wishing to offer technical alternatives to the Employer's Requirements of the bidding documents must first price the Employer's Requirements as described in the bidding documents and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methods.
19. Format and Signing of Bid	19.1	The bidder shall prepare one original and two hard copies of the technical and financial proposals, clearly marking each one as: "ORIGINAL ", "COPY NO. 1", "COPY NO. 2 ", as appropriate. In the event of discrepancy between the original and any copy, the original shall prevail.
	19.2	The original and all copies of the bid shall be typed or written in indelible ink (in the case of copies, Photostats are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder, pursuant to Sub-Clauses 5.1 (a) or 5.2 (b), as the case may be. All pages of the bid where entries or amendments have been made shall be initialled by the person or persons signing the bid.

- 19.3 The bidder shall submit one electronic copy of the Technical and Financial proposals in addition to sub-clause 19.1, on the Tenderlink website in the relevant link. In case of differences between electronic copy and hard copy - Hard copy shall prevail.
- 19.4 The bid shall contain no alterations, omissions or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialled by the person or persons signing the bid.
- 19.5 The bidder shall furnish information as described in the Form of Bid on commission or gratuities, if any, paid or to be paid relating to this Bid, and to Contract execution if the bidder is awarded the Contract.
- D. Submission of Bids**
- 20. Sealing and Marking of Bids**
- 20.1 The bidder shall seal the original copy of the technical proposal, the original copy of the price proposal and each copy of the technical proposal and each copy of the price proposal in separate envelopes clearly marking each one as: "ORIGINAL ", "COPY NO. 1 "etc. as appropriate. An electronic copy of the bid shall be submitted via EFL's electronic tendering platform, TenderLink.
- 20.2 The bidder shall seal the original bids and each copy of the bids in an inner and an outer envelope, duly marking the envelopes as "ORIGINAL" and "COPY".
- 20.3 The inner and outer envelopes shall
- (a) be addressed to the Employer at the following address:
- Tuvitu Delairewa
General Manager Commercial
2 Marlow Street, Suva, FIJI.
Phone: 679 3224 185
Facsimile: 679 331 1882
Email: TDelairewa@efl.com.fj
- and
- (b) bear the following identification:
- Bid for: Turnkey Development of Qeleloa 5MW Solar PV Plant
 - **Bid Tender Number: VRL 02/2019**
 - DO NOT OPEN BEFORE 1600hrs 10th July 2019
- 20.4 In addition to the identification required in Sub-Clause 20.3, the inner envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "late" pursuant to Clause 22.
- 20.5 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

21. Deadline for Submission of Bids	21.1	Bids must be received by the Employer at the address specified above no later than 1600 hours (Fiji Time) Wednesday 10th July, 2019.
	21.2	The Employer may, at its discretion, extend the deadline for submission of bids by issuing an addendum in accordance with Clause 11, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadlines extended.
22. Late Bids	22.1	Any bid received by the Employer after the deadline for submission of bids prescribed in Clause 23 will be rejected and returned unopened to the bidder.
23. Modification and Withdrawal of Bids	23.1	The bidder may modify or withdraw its bid after bid submission, provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of bids.
	23.2	The bidder's modification or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause 20, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate. A withdrawal notice may also be sent by fax but must be followed by a signed confirmation copy. The tender security may be forfeited if the bidder has withdrawn its tender offer during the Tender Validity Period without justifiable cause.
	23.3	No bid may be modified by the bidder after the deadline for submission of bids, except in accordance with Sub-Clauses 23.2 and 28.2.
E. Bid Opening and Evaluation		
24. Opening of Technical Proposals	24.1	The Employer will open the bids, including modifications made pursuant to Clause 23, at the earliest suitable date and time after closing of the bids, at the following location: <i>Energy Fiji Limited 2 Marlow St, Suva Fiji</i>
	24.2	Envelopes marked "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 23 shall not be opened. Take note of the important dates of this tender event for planning purposes.

Calendar of Events – Tender Process

Subject	Target Dates
Upload to tender link	Friday, 7th June, 2019
Publication date-On Tender link & Newspaper	Saturday, 8th June, 2019
Pre bid meeting & First Site visit	Monday, 17 th June, 2019
Second Pre bid Site Visit	Wednesday 3 rd July, 2019
Closing date for clarification/request for extension	Tuesday, 9 th July, 2019
Tender close date	Wednesday, 10 th July, 2019
Tender opening by the VRL Board	Monday, 22 nd July, 2019

- 25. Process to Be Confidential**
- 25.1 Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of the bidder's bid.
- 26. Clarification of Bids and Contacting the Employer**
- 26.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at its discretion, ask any bidder for clarification of its bid. The request for clarification and the response shall be in writing or by fax, but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in, accordance with Clause 28.
- 26.2 Subject to Sub-clause 28.1, no bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the Contract is awarded. If the bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.
- 26.3 Any effort by the bidder to influence the Employer in the Employer's bid evaluation, bid comparison or Contract award decisions may result in the rejection of the bidder's bid.
- 27. Preliminary Examination of Bids and Determination of Responsiveness**
- 27.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid (i) meets the eligibility criteria; (ii) has been properly signed; (iii) is accompanied by the required securities; (iv) is substantially responsive to the requirements of the bidding documents; (v) is conforming to Clause 13; and (vi) provides any clarification and/or substantiation that the Employer may require pursuant to Clause 26.
- 27.2 A substantially responsive bid is one which conforms to all the terms, conditions and requirements of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (i) which affects in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way,

inconsistent with the bidding documents, the Employer's rights or the bidder's obligations under the Contract; or (iii) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

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| | 27.3 | If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation. |
| 28. Correction of Errors | 28.1 | Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Arithmetic errors will be rectified on the following basis. If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of the total costs shall prevail and the total bid amount will be corrected. |
| | 28.2 | The amount stated in the Form of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, its bid will be rejected. |
| 29. Conversion to Single Currency | 29.1 | The Employer will convert the amounts in various currencies in which the Bid Price is payable to the currency of the Employer's country at the selling exchange rates officially prescribed for similar transactions as established by the Reserve Bank of Fiji on the date of opening of bids. |
| 30. Evaluation and Comparison of Bid | 30.1 | The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 27. |
| | 30.2 | For plant and equipment, the comparison shall be of the DDU to Site price of plant and equipment offered. The Employer's comparison will also include the costs resulting from application of the evaluation procedures described in Sub-Clause 30.4. |
| | 30.3 | The Employer will carry out a detailed evaluation of the bids in order to determine whether the bidders confirm to meet the prequalification requirements and whether the bids are substantially responsive to the requirements set forth in the bidding documents. In order to reach such a determination, the Employer will employ the criteria listed in Section 7, Part II, Schedule 13. |
| | 30.4 | Pursuant to Sub-Clause 30.3, the following evaluation methods will be followed: |
| | (a) | Contractual and commercial deviations: The evaluation shall be based on the evaluated cost for fulfilling the Contract in compliance with all commercial, contractual and technical obligations under this bidding document. The |

Employer will make its own assessment of the cost of any deviations for the purpose of ensuring fair comparison.

- (b) **Time Schedule:** The plant and equipment covered by this bidding are required to be shipped, installed, tested and commissioned and all other associated works completed within the period specified in Sub-Clause 2.1 and the Appendix to the Bid.

Bidders submitting bids which deviate from the time schedule specified will be rejected.

- (c) The price of recommended spare parts quoted in Schedule of Prices shall not be considered for evaluation.

- (d) **Functional Guarantee of the facilities:**

- (i) Bidders shall state the functional guarantees (e.g. performance, efficiency, consumption) of the proposed facilities in response to the Employer's Requirements. Plant and equipment offered shall have a minimum (or a maximum, as the case may be) level of functional guarantees specified in the Employer's Requirements to be considered responsive. Bids offering plant and equipment with functional guarantees less (or more) than the minimum (or maximum) specified shall be rejected.

- (e) **Work, services, facilities etc., to be provided by the Employer:** Where bids include for the undertaking of work or the provision of services or facilities by the Employer in excess of the provisions allowed for in the bidding documents, the Employer shall assess the costs of such additional work, services and/or facilities during the duration of the Contract. Such costs shall be added to the bid price for evaluation.

- 30.5
 - (a) Any adjustments in price which result from the above procedures shall be added, for purposes of Comparative evaluation only, to arrive at an "Evaluated Bid Price" Bid prices quoted by Bidders shall remain unaltered.
 - (b) The Employer reserves the right to accept or reject any variation, deviation or alternative offer. Variations, deviations, and other factors which are in excess of the requirements of the bidding documents or otherwise result in the accrual of unsolicited benefits to the Employer shall not be taken into account in bid evaluation.
 - (c) The estimated effect of the price adjustment provisions of the Conditions of Particular Application, applied over the period or execution of the Contract, shall not be taken into account in bid evaluation.

		(d)	If the bid of the successful bidder is substantially below the Employer's estimate for the Contract, the Employer may require the bidder to produce detailed price analyses to demonstrate the internal consistency of those prices. After evaluation of the price analysis, the Employer may require that the amount of the performance security set forth in Clause 36 be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.
		(e)	As part of the evaluation process, the Employer shall impose a weightage of 60% Technical and 40% Commercial to rank the bidders submission accordingly.
31. Domestic Preference	31.1		No preference shall be given for domestic contractor/s or Joint venture partners.
32. Award	32.1		Subject to Clause 33, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the Best Value for Money in accordance to Clause 30, item (e), provided that such bidder has been determined to be (i) eligible in accordance with the provisions of Clause 3; and (ii) qualified in accordance with the provisions of Clause 5.
	32.2		The bidder may be required to attend meetings at the Employer's office for techno-commercial discussions prior to the signing of the Contract at no cost to the Employer.
33. Employer's Right to Accept any Bid and to Reject any or all Bids	33.1		Notwithstanding Clause 32, the Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.
34. Notification of Award	34.1		Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder by fax, confirmed by registered letter, that its bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") shall name the sum which the Employer will pay the Contractor in consideration of the execution, completion and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called "the Contract Price").
	34.2		The notification of award will constitute the formation of the Contract.
	34.3		Upon the furnishing by the successful bidder of a performance security, the Employer will promptly notify the other bidders that their bids have been unsuccessful
35. Signing of Contract Agreement	35.1		At the same time that he notifies the successful bidder that its bid has been accepted, the Employer will send the bidder the Form of

			Contract Agreement provided in the bidding documents, incorporating all agreements between the parties.
	35.2		Within 28 days of receipt of the Form of Agreement, the successful bidder shall sign the Form and return it to the Employer.
36. Performance Security	36.1		Within 28 days of receipt of the notification of award from the Employer, the successful bidder shall furnish to the Employer a performance security in an amount of 10 percent of the Contract Price in accordance with the Conditions of Contract. The form of performance security provided in Section 6 of the bidding documents shall be used.
	36.2		Failure of the successful bidder to comply with the requirements of Clauses 35 or 36 shall constitute sufficient grounds for the annulment of the award.
37. Corrupt Fraudulent Practices	or	39.1	The Employer requires that the Contractor observe the highest standard of ethics during the procurement and execution of such contracts. In Pursuance of this policy, the Employer:
		(a)	defines, for the purposes of this provision, the terms set forth below as follows:
		(i)	"corrupt practice" means behaviour on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and
		(ii)	"fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition;
		(b)	will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
	37.2		Furthermore, bidders shall be aware of the provision stated in Sub-Clause 1.16 and Sub-Clause 15.5 of the Conditions of Contract, Part II - Conditions of Particular Application.

Section 2

General Conditions of Contract

FIDIC

CONDITIONS OF CONTRACT FOR DESIGN-BUILD & TURNKEY

First Edition, 1995

A Publication of The International Federation of Consulting Engineers

Notes on the Conditions of Contract

The Conditions of Contract comprise two parts: Part I – General Conditions (Section 2 of this document), and Part II – Conditions of Particular Application (Section 3 of this document).

The International Federation of Consulting Engineers (FIDIC), has recently prepared the First Edition (1995) of Conditions of Contract for Design-Build and Turnkey Contracts. FIDIC Part I – General Conditions is included herein, complete and without any changes as Section 2 of these documents.

Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat
P.O. Box 86
1000 Lausanne 12
Switzerland
Facsimile: 41 21 653 5432
Telephone: 41 21 653 5003

Section 3

Conditions of Particular Applications

Section 3

Conditions of Particular Application

Sub-Clause 1.1 Definitions

Amend sub-para 1.1.1.3 of Sub-Clause 1.1 by adding the following words at the end:

"The word 'tender' is synonymous with bid'."

Amend sub-para 1.1.1.4 of Sub-Clause 1.1 by adding the following words at the end:

"The words 'Appendix to Tender' are synonymous with the words 'Appendix to Technical Proposal' and 'Appendix to Price Proposal'."

Add the following subparagraph to Sub-Clause 1.1:

"1.1.2.7 "VRL" means the Viti Renewables Private Limited."

Sub-Clause 1.4 Law and Language

Replace the text of Sub-Clause 1.4 and add the following:

"The Contract shall be governed by and construed in accordance with the Laws of Fiji.
The language is the English language."

Sub-Clause 1.5 Contract Agreement

Substitute the wordings in Part I with the following:

"A Contract Agreement in the form annexed, with such modifications as may be necessary to record the agreement reached shall be executed. The costs of stamp duties and similar charges imposed by the law shall be borne by the Employer."

Sub-Clause 1.6 Priority of Documents

Replace the list of documents listed under (a) to (h) and add the following:

- "(a) the Contract Agreement;
- (b) the Letter of Acceptance;
- (c) the Employer's Requirements;
- (d) the Bid;
- (e) the Conditions of Contract, Part II;
- (f) the Conditions of Contract, Part I;
- (g) the Schedules;
- (h) the Drawings;
- (i) the Correspondences During Tender Evaluation;
- (j) the Contractor's Proposal. "

Sub-Clause 1.15 Confidentiality

Additional sub-clause:

"The Contractor shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out its obligations under it. The Contractor shall not publish, permit to be published or disclose any particulars of the Contract in any trade or technical paper or elsewhere without the prior consent in writing of the Employer."

**Sub Clause 2.5
Customs and Import
Duties**

- (a) The Employer shall pay for all Fiji customs and import duties including clearing, handling charges, port dues and demurrage except only for customs and import duties in respect of tools required for installation, testing and commissioning, which shall be the responsibility of the Contractor.
- (b) Customs and import duties if any in respect of the Contractor's Equipment shall not be borne by the Employer.

**Sub-Clause 3.1
Employer
Representative's
Duties and
Authority**

Add the following clause as required:

"The Employer's Representative shall obtain the specific approval of the Employer before taking action under the following clauses of the Conditions of Contract Part I.

- (a) approving sub-contracting of any part of the Works under Sub-Clause 4.5.
- (b) certifying additional cost to the Contract Price.
- (c) granting an extension of time for completion under Sub-Clause 8.3.
- (d) suspending progress of part or all of the Works under Sub-Clause 8.8.
- (e) issuing a variation under Clause 14, except if such a variation would increase the Contract Price by no more than FJD 50,000.
- (f) issuing Taking-Over Certificate for the whole of the Works under Sub-Clause 10.1.
- (g) issuing Performance Certificate for the Works under Sub-Clause 12.9.

Notwithstanding the obligation to obtain approval as set out above, if in the opinion of the Employer's Representative, an emergency occurs affecting the safety of life or of the Works or of adjoining property, it may, without relieving the Contractor of any of its duties and responsibilities under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Employer's Representative be necessary to abate or reduce the risk. The Contractor shall forthwith comply with the instructions of the Employer's Representative despite the absence of approval of the Employer. The Employer's Representative shall determine the extra cost to the Contractor for carrying out of such instruction and obtain the Employer's approval for an addition to the Contract Price."

**Sub-Clause 4.1
General
Obligations**

Add the following sentence to precede the existing text under Sub-Clause 4.1:

"Notwithstanding any other provision to the contrary, the Contractor is required to check the design criteria and calculations (if any) included in the Employer's Requirements, to confirm their correctness, in its bid and to assume full responsibility for them."

Sub-Clause 4.2 Performance Security	<p>Replace the first paragraph of Sub-Clause 4.2 with the following:</p> <p>"The Contractor Shall provide security for its proper performance of the Contract to the Employer within 28 days after the receipt of the Letter of Acceptance. The performance security shall be in the form of a bank guarantee, issued either (a) by a bank located in the country of the Employer or a foreign bank through a correspondent bank located in the country of the Employer, or (b) directly by a foreign bank acceptable to the Employer. The performance security shall be denominated in the types and proportions of currencies in which the Contract Price is payable. When providing such security to the Employer, the Contractor shall notify the Employer's Representative of so doing."</p>
Sub-Clause 4.3 Contractor's Representative	<p>At the end of Sub-Clause 4.3 add:</p> <p>"The Contractor's Representative must be fluent (both spoken and written) in the English language."</p>
Sub-Clause 4.4 Co-ordination of the Works	<p>Modify the first sentence of Sub-Clause 4.4 to read:</p> <p>"The Contractor shall be responsible for the co-ordination and proper execution of the Works, including co-ordination with other contractors and organizations to the extent specified in the Employer's Requirements."</p>
Sub-Clause 4.9 Site Data	<p>Modify the last sentence of paragraph 1 of Sub-Clause 4.9 to read:</p> <p>"The Contractor shall be responsible for interpreting all data including data listed elsewhere in the Contract as open for inspection at EFL, Qeileloa Power Station, Nadi, Fiji".</p>
Sub-Clause 4.14 Programme	<p>Delete the third sentence of Sub-Clause 4.14 indicated below:</p> <p>"Unless otherwise stated and late finish dates".</p>
Sub-Clause 5.2 Construction Documents	<p>In the fifth line of the second paragraph of sub-clause 5.2 replace "21" with "28".</p> <p>In Sub-Clause 5.2 delete sub-paragraph (a) and substitute:</p> <p>"(a) Construction shall not commence until the Contractor receives from the Employer's Representative approval of the Construction Documents relevant to the design and construction of such parts; provided always that:</p> <ul style="list-style-type: none"> (i) if the Employer's Representative fails to give his ruling within 21 days, the Contractor shall give written notice (for the purpose of this sub-clause "Contractor's Notice") to the Employer's Representative of such failure; and (ii) if the Employer's Representative fails to give his ruling within 7 days of receipt of the Contractor's Notice, then the Contractor may proceed with the construction as though approval had been given".
Sub-Clause 5.4 Technical Standards & Regulations	<p>Add the following sentence to the end of the Sub-Clause 5.4:</p> <p>"In respect of technical specifications and standards, IEC (International Electrotechnical Commission based in 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland) standards are to be adopted in general. Any</p>

national or international standards which promise to confer equal or better quality than the standards specified will also be acceptable. In all instances a copy of the relevant standards should be forwarded to the Employer's Representative. For compliance to local electricity regulations Australian Standards will be applicable and it is mandatory to get the installation certified in accordance with directives of EFL's Chief Electrical Inspector."

**Sub-Clause 6.7
Health and Safety**

To sub-clause 6.7 add the following paragraph:

The Contractor must, at all times during the execution of the Work, comply with the Health and Safety at Work Act 1996, the Electricity Act Cap 180, the Energy Fiji Limited "Safety Manual" – Safety Rules along with their latest amendments applicable and First aid For Employees Of the Authority.

**Sub-Clause 6.8
Contractor's
Superintendence**

At the end of Sub-Clause 6.8 add:

"All the Contractors superintending staff shall have a working knowledge of the English language."

**Sub-Clause 6.11
Foreign staff
and Labour**

"The Contractor may import such staff, and labourers as are required in order to execute the Works. The Contractor must ensure that all such staff and labour are provided with the required visas and work permits. The Contractor shall be responsible for the return to the place where they were recruited or to their domicile of all persons whom the Contractor recruited and employed for the purpose of or in connection with the Contract. The Contractor shall be responsible for such persons as are to be returned until they shall have left the Site or, in the case of foreign nationals who have been recruited outside the Country, shall have left it."

**Sub-Clause 6.12
Measures against
Insect & Pest
Nuisance**

"The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the Site from insect and pest nuisance, and to reduce the dangers to health and the general nuisance occasioned by the same. The Contractor shall provide its staff and labour with suitable prophylactics for the prevention of malaria and dengue fever and take steps to prevent the formation of stagnant pools of water. The Contractor shall comply with all the regulations of the local health authorities and shall arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as instructed by such authorities."

**Sub-Clause 6.13
Epidemics**

"In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities, for the purpose of dealing and overcoming the same."

**Sub-Clause 6.14
Alcoholic
Liquors or
Drug**

"The Contractor shall not import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his Subcontractors, agents staff or labour."

**Sub-Clause 6.15
Arms and
Ammunition**

"The Contractor shall not give, barter or otherwise dispose of to any person or persons, any arms or ammunition of any kind or permit or suffer to the same as aforesaid."

Sub-Clause 6.16 Burial of the Dead	<p>The Contractor shall make all necessary arrangements for the transport, to any place as required for burial, of any of his expatriate employees or members of their families who may die in the Country.</p> <p>The Contractor shall also be responsible, to the extent required by local regulations, for making any arrangements with regard to burial of any of his local employees who may die while engaged upon the Works.</p>
Sub-Clause 6.17 Festivals and Religious Customs	<p>"The Contractor shall in all dealings with his staff and labour have due regard to all recognized festivals, days of rest and religious or other customs."</p>
Sub-Clause 7.3 Inspection	<p>To sub – clause 7.3 add the following paragraphs:</p> <p>The Employer and the Contractor shall carry out a joint walk through inspection to identify and document any defects/ deficiencies of the Works prior to commissioning, after which the Contractor shall rectify all the identified defects.</p> <p>The Employer and the Employer's Representative shall be entitled at any time during the term of this Contract to inspect any part of the Works and the Contractor shall give them full opportunity and access to conduct such inspection.</p>
Sub-Clause 7.7 Restriction on Eligibility	<p>(a) Any materials, equipment, services or design services which will be incorporated in or required for the Contract, as well as the Contractor's Equipment and other supplies, shall have their origin from reputable source countries acceptable to the Employer.</p> <p>(b) For the purpose of this clause, "services" means the works and all project-related services including design services.</p> <p>(c) For the purposes of this clause, "origin" means the place where the materials and equipment were mined, grown, produced, or manufactured, or from which the services are provided.</p> <p>(d) The origin of Goods and Services is distinct from the nationality of the Supplier."</p>
Sub-Clause 12.11 Warranty	<p>"The Employer shall be entitled to all applicable manufacturers' warranties for the Plant and equipment supplied by the Contractor. The Contractor warrants the Equipment to be free from defects in workmanship and material used in their manufacture and installation. This warranty will cover Equipment for claims for such defects and workmanship made during the Warranty Period, being 12 months from completion of defects liability period and issuing of performance certificate</p>
Sub-Clause 13.2 Advance Payment	<p>Modify the third sentence of this Sub-Clause to read:</p> <p>"The Employer's Representative shall issue an Interim Payment Certificate for the first instalment after (i) execution of the Contract Agreement by the parties hereto (ii) provision of the Performance Security in accordance with Sub-Clause 4.2 by the Contractor and (iii) provision of an unconditional bank guarantee by the Contractor in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment."</p>

**Sub-Clause 13.4
Schedule of
Payments**

To Sub-Clause 13.4 add:

The payments will be made according to the following schedule:

*** VRL will assess the proposed payment schedule by the bidder within during tender evaluation**

**Sub-Clause 13.15
Calculation of
Payments in
Foreign Currency**

Delete Clause 13.15 and add the following:

"The Contract shall be paid in the currencies stated in the Appendix to Bid and shall be in accordance with Schedule of Prices and Conditions of Payment.

The foreign and local currency portions of the balance of the Contract Price shall be amended by agreement between the Employer and the Contractor to reflect any substantial changes in the expected foreign and local currency requirements of the Contractor during the execution of the Works, provided:

- (a) the Contractor shall inform the Employer and the Employer's Representative whenever any such substantial change may occur;
- (b) the Employer's Representative may recommend a review of such expected requirements if in its judgment there is evidence of a change in the country of origin of equipment, materials, plants, or services to be provided under the Contract which should result in any substantial change of such expected requirements.
- (c) the currency exchange rate, if any foreign currency being opted, shall be the exchange rate declared by XXX Bank of Fiji on the date of Letter of Intent (LoI) issuance.

Any such amendment shall be affected by comparing the amounts quoted in the bid with the amounts already used in the Works and the Contractor's future needs for imported items."

**Sub-Clause 13.15
Calculation of
Payments in
Foreign Currency**

To sub-clause 13.15 add the following paragraph:

The local (Fijian) component of the Contract Price shall not be subjected to any currency exchange rate variation.

**Sub-Clause 13.17
Taxation**

- "(i) The prices bid by the Contractor shall include all taxes, duties and other charges imposed outside the Employer's country on the production, manufacture, sale and transport of the Contractor's equipment, Plant, materials and supplies to be used on or furnished under the Contract, and on the services performance under the Contract.

Sub-Clause 15.5

Delete the existing Sub-Clause 15.5 and substitute the following:

**Corrupt or
Fraudulent
Practices**

"If in the judgment of the Employer the Contractor has engaged in corrupt or fraudulent practices, in competing for or in executing the Contract, then the Employer may, after having given 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel the Contractor from the Site, and the provisions of Clause 15 shall apply as if such expulsion had been made under Sub-Clause 15.2."

This sub-clause is amended to read as follows:

"The Employer's risks are:

- (a) insofar as they directly affect the execution of the Works in the country where the Permanent Works are to be executed:
 - (i) war and hostilities (whether war be declared or not), invasion, act of foreign enemies in the Country;
 - (ii) rebellion, revolution, insurrection, or military or usurped power, or civil war in the Country;
 - (iii) ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or hazardous properties of any explosive nuclear assembly or nuclear component thereof in the Country;
 - (iv) pressure waves caused by aircraft or other aerial devised travelling at sonic or supersonic speeds in the Country;
 - (v) riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of its Subcontractors and arising from the conduct of the Works in the Country;
- (b) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works, except as may be provided for in the Contract;
- (c) any operation of the forces of nature (insofar as it occurs on the Site) which an experienced Contractor:
 - (i) could not have reasonably foreseen, or
 - (ii) could reasonably have foreseen, but against which he could not reasonably have taken appropriate measures to prevent loss or damage to physical property occurring."

**Sub-Clause 18.2
Insurance for
Works and
Contractor's
Equipment**

- (i) Amend the second sentence of the first and second paragraphs to read:

"This insurance shall cover loss or damage from any cause other than the Employer's risks listed in amended Sub-Clause 17.3 paras. (a)(i) to (iv) in Part II of the Conditions of Contracts".
- (ii) Amend the fourth sentence of the first paragraph to read:

"Such insurance shall cover the Employer and the Contractor from the first working day after the Commencement Date until the date of issue of the Taking-Over Certificate for the Works."

It is expected the following insurances, but not limited to, shall be activated prior to commencement of any works :-

- Workmen Compensation and/or Employers Liability Insurance
- Contractors Plant and Equipment
- Professional Indemnity Insurance
- Motor Vehicle Insurance
- Transportation (Freight) Insurance
- Foreign Worker Compensation Scheme and Health Insurance

Section 4

Employer's Requirements – Part I Scope of Works

The scope of works includes the detailed design, supply, construction and commissioning on an EPC/turn-key basis of a 5MW ground mounted PV plant and its connection to the 11kV electrical network and communications network at the adjacent EFL Qeleloa sub-station, including the following;

1. Detailed engineering design and documentation including electrical, control and communications, civil and structural requirements of the plant. This will be provided with local practising Engineers endorsement to the Owners Engineer for review and acceptance prior to procurement and construction. Long lead time equipment may be procured, with the approval of the Owners Engineer, prior to their acceptance of detailed design.
2. All civil works associated with construction and ongoing operation of the PV plant including, site levelling, access ways, security fencing, any foundations, trenching and site drainage
- 3.
4. Detailed O&M manual including as-built drawings.
5. Assist the Owners Engineers to conduct Independent Acceptance Testing and Performance Monitoring (7 days).
6. Provide training to up to 6 VRL nominated persons on plant operation and maintenance during the performance monitoring period.
7. Bidders shall submit a concept design with their bid that includes;
 - A technical write-up on the development of the project, in terms of a Project Execution Plan
 - Technical description of the proposed PV plant including control system
 - Major Component List with track records and evidence of IEC standard compliance
 - Spare Parts List
 - Equipment manufacturers data sheets and compliance certificates and warranty statements
 - PVSyst report and files for the 1st year including aux and transformer losses, assumption of 5% soiling losses and using site Meteonorm 7.2 meteo data (or equivalent such as SolarGIS) with shading analysis
 - Minimum Annual Generation in MWh shall be developed for 25 years, incorporating all the defined losses as well as total energy uncertainty assumption.
 - Electrical AC SLD
 - Electrical DC SLD
 - Plant general layout drawing with quantity of earth movement
 - Communications SLD and Architecture

Section 4

Employer's Requirements – Part II Technical Specifications

Site Information

The PV plant is to be located on the area of land adjacent the EFL Qeleloa Sub-Station as indicated in Section 8. The 11kV interconnection point is at the EFL sub-station located adjacent the SW boundary of the site.

A topographic survey has been carried out and provided in Section 8. This survey file is available to tenders in .dwg format on request. Some levelling may be required dependent on the ground array structure selected. Any levelling works are the responsibility of the contractor.

Test piling has been carried out as per the Test Piling Report in Section 8. The test results indicate the suitability of pile driven array foundations. Notwithstanding the test piling information, the contractor shall carry out own investigation to ascertain the actual ground condition around the site in order to confirm the foundation design requirement for the entire plant.

1. General Specifications

The system design and equipment for the PV plant shall be of proven technology, in accordance with best industry practice and with a strong track record in similar tropical maritime environments experience at the site. Equipment should have a design life of 25 years.

The system is to be designed and installed in accordance with the most recent version (including amendments) of the following standards and codes:

- FIJI GRID CODE FOR POWER SYSTEM USERS INCLUDING INDEPENDENT POWER PRODUCERS (IPPs) Version 2.0 (Final) 30th December 2011
- AS/NZS 3000:2007
- AS/NZS 3008:2009
- AS/NZS 5033:2014
- AS/NZS 4777.1:2016
- AS/NZS 1170.2:2011
- AS/NZS 1768:2007/ IEC 62305 : 2006. - Lightning Protection
- AS/NZS 1170.0:2002 Structural Design Actions - General Principle
- AS/NZS 1170.1:2002 Structural Design Actions - Permanent, Imposed and other actions
- AS2159-2009 Piling - Design and Installation
- AS/NZS 1170.4:2007 Earthquake Actions
- AS 2067 :2016
- AS/NZS 3000:2007
- AS/NZS 3835.1:2006
- IEEE 998 :2012

Notwithstanding, all relevant Fiji Standards (FJS) shall also be conformed to, in addition to the above codes.

- 1. FJS 1170.1: 1998
- Minimum design loads on structures - Dead and live loads and load combinations
- 2. FJS 1170.2: 1998
- Minimum design loads on structures - Wind loads
- 3. FJS 1170.4: 1998
- Minimum design loads on structures - Earthquake loads
- 4. FJS 1170.4 Supp 1: 1998
- Minimum design loads on structures (known as the SAA Loading Code) - Earthquake loads - Commentary (Supplement to AS 1170.4-1993)

- For Electrical installation works, it is assumed the bidder shall comply to latest EFL Technical Specification and Standards.

For DC System, the following IEC standards, but not limited to shall be adhered :-

- IEC 61727:2004 Photovoltaic (PV) Systems - Characteristics of the Utility Interface
- IEC TS 61836 Solar photovoltaic energy systems
- IEC 60364-7-712 - Low voltage electrical installations – Part 7-712: Requirements for special installations or locations – Solar photovoltaic (PV) power supply systems
- IEC 62116:2014 - Utility-interconnected photovoltaic inverters – Test procedure of islanding prevention measures
- BS EN 60068-2-14:2009 - Environmental testing
- IEC 61215 - Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules
- IEC 61646 – Thin-film terrestrial photovoltaic (PV) modules – Design qualification and type approval
- IEC 61730 – Photovoltaic (PV) module safety qualification
- IEC 61701 – Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
- IEC 61853-1 – Photovoltaic (PV) module performance testing and energy rating – Part 1: Irradiance and temperature performance measurements and power rating
- IEC 62109-1,2 – SAFETY OF POWER CONVERTERS FOR USE IN PHOTOVOLTAIC POWER SYSTEMS - PART 2: PARTICULAR REQUIREMENTS FOR INVERTERS
- IEC 61683 – Photovoltaic Systems - Power Conditioners - Procedure for Measuring Efficiency

2. Civil Works

1. Earthworks shall be carried out in a manner not to cause any environmental and hydrological issues.
2. Temporary drainage measures during earthworks shall be provided to ensure no untoward issues caused to the existing ELF sub-station and surrounding areas
3. Permanent drainage shall be designed complying to the estimated rainfall intensity for a return period of 25 years to ensure surface water flow can be controlled and channeled to the nearest stream or river.
4. Environmental protection during earthworks such as silt traps and silt fence, including checkdams etc, shall be provided adequately complying with the EIA requirements.
5. Drains/waterways/culverts located along the main roads or crossing any roads shall conform to the relevant AS/NZS codes and Fiji Roads Authority requirements. The PV plant shall be provided with necessary external road.
6. Oil spill containment system shall be provided for step-up transformers
7. A Control Building which shall house the PV Plant monitoring system, 11kV Switchgear with Protection system and associated DC System, LVAC System, SCADA System, Strategic Spare storage area with necessary building M&E facilities shall be provided.

3. PV Modules

1. Installed PV Array DC Capacity to be 5,000 kW
2. All modules provided are to be of identical make and model and must be from a recognised Tier 1 module manufacturer.
3. Modules must be warranted to produce at least 90% of their nominal output (at STC) after 10 years, 80% of their nominal output after 25 years, and have a defects warranty period of at least 10 years. A warranty statement for the make and model of the module proposed must be provided. The statement must define when the warranty period starts, the necessary remedial action the manufacturer will be

taken upon a successful warranty claim, who underwrites the warranty, and mechanism of lodging a warranty claim.

4. Modules must be certified to the international standard IEC 61215 (or IEC 61646 as applicable) and IEC 61730, and have been tested at a qualified testing institution (e.g. ESTI, TUV Rhineland, or equivalent). Testing certificates must be provided.
5. Module framing must be of stainless steel or anodized aluminium. Modules must have adequate seals to prevent water ingress into the active components.
6. Bypass diodes are required on each module.
7. Standard locking connectors (e.g. MC-4 or equivalent) certified to EN 50521 are to be included with the modules. Non-locking connectors (e.g. MC-3 or equivalent) are not to be used.
8. Each module must be fitted with a manufacturer's sticker on the underside, providing the following information:
 1. Manufacturer's name;
 2. Module model number;
 3. Module serial number;
 4. Rated power at STC;
 5. VOC, ISC, VMP, IMP;
 6. Date of manufacture;
 7. Country of manufacture.

4. PV Mounting Structure

1. The array mounting structure must be made of stainless steel (grade 316 or 304), aluminium, or hot-dipped galvanised steel.
2. Fasteners are to be made of stainless steel (grade 316 or 304) or galvanized steel. Bare carbon steel fasteners are not acceptable.
3. For pile-type foundations the following tests are to be conducted:
 1. Vertical pull-out tests;
 2. Lateral load tests; and
 3. Independent laboratory analysis of soil suitability and corrosion potential.
4. The array mounting structure, with panels installed, shall be design and certified by a suitably qualified engineer, to resist wind gusts of at least 90m/s at 3 sec interval (in accordance with AS/NZS 1170.2:2011 for wind zone D, Terrain category 2)
5. The design of the array mounting structure should be such that parts are pre-cut at the factory and do not need to be cut in the field. This is so that any corrosion-resistant coatings (e.g. anodization or galvanic layer) on the mounting structure's members are not compromised by being cut.
6. All sharp edges are to be removed at the factory, to prevent injury during construction, and to prevent damage to cabling. Protruding members (e.g. module rails) are to be capped to prevent injury to passing maintenance personnel.
7. PV module installation manuals are to be provided, showing that the mounting system used complies with the module manufacturer's requirements (e.g. location and spacing of mounting clamps on module frames).
8. The bottom of the lowest panel on ground-mounted arrays should be at least 750 mm from ground level, to prevent excessive vegetation maintenance. No live components of the system (e.g. circuit breakers, fuses) are to be installed below 750 mm above ground. The exception is the ground-mounted inverters (where used), which must be installed on concrete plinths on a base of compacted aggregate. The aggregate base must be at least 1.5 m x 1.5 m to prevent vegetative growth over time.
9. Spacing between rows is to ensure that self-shading from the array is minimised (less than 2.5%).
10. The array setback from the perimeter fence shall be at least 5 m, subject to local council requirement..
11. Sufficient space for vehicle access must be provided around transformer stations and RMU's. It is assumed that the internal access shall be designed at a minimum of 4 meters while the external excess shall be as per Local Council requirement.

5. Inverters

1. String inverters are preferred over central inverters for the ease of ongoing maintenance given the sites location in the Pacific and level of in-country human resources.
2. The number and rated capacity of the inverters must be such that Total PV Array DC capacity < 1.2 x Total Inverter AC output capacity. The sizing of the inverter shall consider the operable requirement on Power Factor as per EFL Grid Code.
3. Where available, the inverters are to include a display that allows operators to see how much power is being generated, grid voltage, and output current. The string level monitoring facility shall be made available.
4. Inverters must be able to be monitored and controlled locally and remotely as per the requirements set out in 4.9 Control System and SCADA.
5. The inverter is to have a 10-year warranty from the manufacturer (in addition to any contractor warranties). Standard warranties are often 5 years, so evidence of the extended warranty having been purchased will need to be provided when the inverter is ordered.
6. Inverters must be certified to AS/NZS 4777.2:2015
7. The installation of the inverter is to be in accordance with AS/NZS 5033:2014 and AS/NZS 4777.1:2016.

6. Balance of System Components

1. No cabling is to be exposed to direct sunlight, even if sheathing is marked as being UV- stabilized. All cabling that may be exposed must be routed through UV-stabilized conduit.
2. All cables under modules shall be protected from inadvertent contact with passing maintenance personnel. This may be achieved by routing the cabling on the underside of the mounting rails, or through cable tray, trunking or conduit. Care must be taken to minimise direct exposure to sunlight when cables pass between modules.
3. Heavy-duty conduit must be used for any cabling installed below a height of 750 mm. This is to prevent damage while maintaining vegetation.
4. Plastic cable ties, where used, must be protected from both direct and reflected UV radiation. Any cable ties used in UV exposed locations must be stainless steel.
5. All cable terminations are to be crimped or use a solar connector (e.g. string inverter DC input).
6. Details of how cable will be run (i.e. description and drawings) are to be provided.
7. Where flexible conduit is used, care must be taken to prevent tracking of water down cabling into the conduit. The preferred method is to have conduit entries facing downwards, as water will not be able to track upwards into the conduit. Plugging the conduit entry with silicone is not an acceptable long-term solution.
8. The communication and power cables will need to run in individual conduits that are physically separated by 300 mm for the entire cable run.
9. PV cabling at the array must be installed such that inductive loops are minimized in order to minimize voltage spikes caused by inter-cloud lightning strikes.
10. Lightning arrestors should be installed on the DC circuits, as inter-cloud lightning may cause voltage spikes on the array circuits. Lightning arrestors are to have a method of visually checking that they are still operational. The DC lightning arrestors for the string inverter may be integrated in the string inverters, per the manufacturer's specifications. Instructions for replacing the surge arrestors are to be provided.
11. Confirm whether additional lightning protection (e.g. lightning rods) is required at the array. The assessment is to be done in accordance with AS 1768.
12. The inverter is to have a separate three-phase AC isolator at its output, rated for at least the maximum current output of the inverter.
13. Outdoor isolator enclosures and junction boxes are to be rated IP65 and resistant to UV damage and UV transmission to the components inside. Isolator enclosures must also be sheltered from direct sun and rain by the array or an awning. Isolator enclosures must be of a robust material resistant to bending under pressure and designed for operation in hot environments.

14. Enclosure covers are to be capable of being easily installed and removed multiple times from the enclosure body without damage (e.g. damage caused by stripping mounting holes in the enclosure body with over tightening of the enclosure cover screws).
15. Isolator enclosures are to be fitted with a clear window, so operators can easily verify the on/off state of the isolators inside.
16. Enclosures are to be easily opened for switch access without the use of a key or other tool, as keys or tools may not be readily available in emergencies. Site access will be restricted to relevant staff.
17. All outdoor enclosure cable entries are to be done from the bottom, to prevent water ingress. Care is to be taken in preventing water entry into conduits,
18. Quality of switchgear, isolator enclosures and other balance of systems components will be considered in the design review, as poor-quality BOS components can jeopardise the long-term viability of a project.
19. Permanent labelling is required to identify all major components including circuit breakers, isolators, fuses, lightning arrestors, and inverters meeting requirements of AS 3000, AS 4777 and AS 5033.

7. HV equipment and Cabling

- 1) It is expected that two Transformer Stations will be provided for the solar plant with the PV array divided near equally between the two transformer stations.
- 2) An earthing study will be required for the design and installation of the earthing grid at the array. This study is to be submitted to VRL four weeks prior to installation of the transformer.
- 3) Where in doubt regarding equipment design, EFL's HV standards are to prevail. Lighting is required at the transformer, as is a formed access road.
- 4) Transformers are to be outdoor-pad mount with LV protection. HV protection is to be provided by the substation RMU, as fault currents on the HV line will come from the EFL feeders, not the PV system.
- 5) 11kV underground cabling is to be used for connection of the transformer stations, RMU's and the 11kV EFL substation shall comply with AS/NZS standards.

8. Metering

1. The Contractor shall install a power export meter panel at the 11kV interconnection point. The energy meter shall be procured from ELF Metering Department inclusive of configuration and installation services. The energy meter shall store data onboard and also interfaces with EFL's communications network for data export. It must be capable of logging data on a per second basis. It will record at a minimum; voltage, frequency, current, real and active power and power factor of the plant generated electricity.

9. Control System and SCADA

1. Through the use of an inverter manager / inverter controller or Power Plant Controller (PPC) the PV plant shall be able to be monitored and controlled. The PV system must be capable of receiving and executing the following commands:
 - Connecting to the network;
 - Disconnecting from the network;
 - Limiting active power to a set point;
 - The ability to control the ramp up rate of active power generation will be considered an advantage;
 - The ability to inject and consume reactive power will be considered an advantage.

2. The inverter controller shall have a user interface integrated with the EFL communication system at the Qeleloa substation, allowing remote control and remote monitoring of the PV systems using EFL's SCADA system. Remotely monitored data must also be available via the internet.
3. A SCADA system shall be integrated in the plant to view data from the plant in real time and download at a minimum 15 minute averages. Data shall be collected from;
 - Inverters (DC voltages, currents, AC voltages, currents and power factor, frequency)
 - Transformers (temperatures, levels, alarms, etc)
 - Meters (KVar, KVAh, kWh)
 - Weather Monitoring sensors
4. The plant SCADA system shall be integrated into EFL's SCADA platform and it is assumed that TCP/IP & DNP 3 & IEC 61850 & IEC 60870-5-101/104 protocol shall be complied with features of IoT & RIoT may also be included.

10. Weather Monitoring Sensors

1. Weather Monitoring sensors (and associated equipment) shall be installed at agreed locations on the site. This will include:
 - 2 x Global horizontal irradiance (Kipp and Zonen SMP10-A or similar specification)
 - 4 x Plane of Array irradiance (Kipp and Zonen SMP10-A or similar specification)
 - 2 x Ambient temperature
 - 4 x Module cell temperature
 - 2 x Wind speed
2. The Weather Monitoring sensors data must be able to be accessed via the SCADA system. The data shall be used to measure and verify the performance of the Plants. The Weather monitoring sensors is expected to have its own back-up source to ensure communication link with ELF SCADA system for a reasonable period.

11. Tools and Spares

1. The following spares shall be provided for the PV system at commissioning:
 - 1% of the total installed PV module quantity
 - 10% of the total installed string inverter quantity;
 - 5% of spare inverter fan modules;
 - 1% of total installed stainless steel module earthing shims;
 - 1% of the total installed PV module clamps;
 - 1 x DC isolator enclosure complete;
 - 5% of the total installed lightning arrestors;
 - 5% of the total installed string fuses;
 - 5% of solar connectors;
 - 1 x Inverter AC isolators;
 - 1 x Inverter AC isolator enclosure;

12. Operations and Maintenance Manuals

1. A comprehensive plant O&M manual will be provided to the Owners Engineer prior to Practical Completion and training with two hard copies and one soft copy. It shall include at a minimum;

- Project information: Names, addresses, email, phone of responsible people within VRL, Contractor, and subcontractors (where applicable)
- Safety Instructions
- Equipment information: Contact information of manufacturers and suppliers of Main Equipment including datasheets of the equipment
- Equipment description: This part shall describe the location of the equipment, the performance figures and equipment specific information such as manufacture date and flash lists for PV modules
- All Software, Manuals and Project Documentation required to operate, maintain, service, repair and restore the inverters, protection systems, switchgear, monitoring, control systems and other systems that form part of the Plant
- Operation Procedures: Appropriate manufacturer's technical literature.
- Maintenance Procedures: Appropriate manufacturers technical literature including detailed recommendations for preventative maintenance, frequency and procedures
- Detailed and thorough self-troubleshooting providing logical step-by-step procedures where possible, including dis-assembly, repair and re-assembly, cleaning and alignment
- User Guide for SCADA system, data monitoring and data downloading
- Schedule of Spares
- Applicable Certificates

All test documentation and As-Built Drawings shall be added after Practical Completion

13. Equipment Warranties

1. The following equipment manufacturers warranties will be required **as a minimum**;
 - Product Warranty on PV Modules – 12 years
 - Product Warranty on Inverters – 10 years
 - Product Warranty on Transformers – 2 years
 - Product Warranty on Module Mount System – 10 years
2. In addition to the Product Warranty on PV Modules, the PV Modules shall be provided with a performance guarantee for 25 years or greater.

14. Performance Monitoring and Acceptance Testing

Independent acceptance testing will be undertaken on the system within 7 days of Practical Completion.

Costs for Independent Acceptance Testing and Performance Monitoring shall be borne by the Employer, except where the tests are unable to be conducted due to incomplete works or Contractor unavailability. In this case, the Contractor will be liable for any additional costs (ie. travel costs and fees) borne by the Principal.

Independent Acceptance Testing shall include, but not be limited to:

- A review of all required documentation submitted;
- A visual inspection of all components to confirm:
 - General quality of electrical and civil works;
 - Compliance with relevant standards, the specification, and approved design drawings.
- I-V tracing of all PV strings;
- Earth continuity testing of all PV module frames;
- DC isolator operation under full load;
- Insulation resistance testing of all cables;
- Loss-of-communications control test;
- Infra-red imaging of relevant electrical components.

System performance is to be monitored by the Contractor and the Owners Engineer (either remotely or on-site) for 120 hours; the Performance Monitoring Period.

Over this period, individual system components must meet the following minimum performance criteria:

1. Weighted PV inverter availability > 97%;
2. Average PV inverter efficiency > 95%; and
3. $PR_{CORR_PAC} \geq PR_{DESIGN} \% \times 0.975$ (on the HV side of the transformer).

Where;

PR_{corr_PAC} : is as defined in IEC 61724 "Performance Ratio describes the ratio between the annual energy generated by the Solar Park, and the energy that the system would deliver, receiving the same solar irradiation but working ideally at STC" [%]

PR_{DESIGN} is Guaranteed Performance ratio

The PR_{DESIGN} will be the plant modelled PR calculated using PVSyst during the detailed design stage and that approved by the Owners engineer during the detailed design review.

The Contractor will be required to demonstrate that the system is capable of maintaining power quality while undergoing all control operations over the Performance Monitoring Period:

- Connecting to the network;
- Disconnecting from the network;
- Limiting active power to a set point;
- Providing ancillary services

As part of PAC milestone, the PV Plant shall :-

- 1) Successful commissioning of PV Plant
- 2) Designed installed power operating at 100% capacity
- 3) Inverter operating at 100% capacity
- 4) Monitoring system correctly and perfectly working
- 5) Security and surveillance fully operational.

The **Final Acceptance Performance Test** (FAC Test) shall be conducted after 12 months of operation and shall be carried out in accordance with this Schedule.

All Tests shall be performed in accordance with the Test Procedures approved by the Employer and in compliance to EFL Grid Code.

15. Calculation Methodology

The 12 Month Performance Ratio calculation methodology is the following

$$PR = \frac{E_{Ist}}{P_{peak} \cdot \frac{G_{meas}}{G_{STC}}}$$

PR: as defined in IEC 61724 "Performance Ratio describes the ratio between the annual energy generated by the Solar Park, and the energy that the system would deliver, receiving the same solar irradiation but working ideally at STC" [%]

E_{Ist} : Is the sum of the energy during the test period which is measured by the meter [kWh]

P_{peak} : Nominal Power of the Plant at STC [kWp]

G_{meas} : Amount of irradiance during the test period, is the number of hours (decimal) with an uninterrupted irradiance of 50 W/m². Measured with the average of all plane of array pyranometer installed at the Site [kW/m²]

G_{STC} : Irradiance output at STC, 1 kW/m² [kW/m²]

Criteria

The 12 Month Performance Test is passed if the measured 12 Month Performance Ratio exceeds the Guaranteed Performance Ratio specified below:

$$PR_{IAC} \geq PR_{DESIGN} * (1 - d)^{(n)} \times 0.975$$

Where:

d : Agreed annual degradation = X % as specified in module warranty statement

n : actual year of production

Section 5

Form of Proposals and Appendices

Form of Technical Proposal

To: Mr. Tuvitu Delairewa
General Manager Commercial
Energy Fiji Limited
2 Marlow St, Suva
Fiji

Contract No: _____

Gentlemen:

We have examined the Conditions of Contract, Employer's Requirements, Schedules, Addenda Nos _____ and the matters set out in the Appendix hereto. We have understood and checked these documents and have not found any errors in them. We accordingly offer to design, execute and complete the said Works and remedy any defects fit for purpose in conformity with these documents and the enclosed Proposal.

We further undertake, if invited to do so by you, and at our own cost, to attend a clarification meeting at a place of your choice, for the purpose of reviewing our Technical Proposal and duly noting all amendments and additions thereto, and noting omissions therefrom that you may require, and to submit a supplementary price proposal if the amendments, additions and omissions that you require would alter our price proposal as submitted with our bid.

We accept your suggestions for the appointment of the Dispute Adjudication Board, as set out in Schedule _____
*[We have completed the Schedule by adding our suggestions for the other member of this three-person Board, but these suggestions are not conditions of this Bid].**

We are, Gentlemen
Yours faithfully

Signature _____ in the capacity of _____ duly authorized to sign bids for and on behalf of

Address

* If the Bidder does not accept, this paragraph may be deleted and replaced by:

We do not accept your suggestions for the appointment of the Dispute Adjudication Board, and propose that we jointly agree upon the appointment after the Effective Date (unless previously agreed) in accordance with Sub-Clause 20.3 of the Conditions of Contract. **[OPTIONAL: Our Proposal includes our suggestions for this appointment, but these suggestions are not conditions of this Bid.]**

Appendix to Technical Proposal

[Note: with the exception of the items for which the Employer's requirements have been inserted, the following information must be completed before the Bid is submitted]

	Sub-Clause	
Employer's name and address	1.1.2.1 & 1.8*	VRL c/o Energy Fiji Limited, Private Mail Bag, Suva, Fiji
Contractor's name and address	1.1.2.2 & 1.8	_____ _____
Name and address of the Employer's Representative	1.1.2.2 & 1.8	General Manager, Special Projects, EFL, Private Mail Bag, Suva, Fiji
Time for notice to commence	8.1	28 days
Time for Completion of the Works	1.1.3.4	12 months
Electronic transmission systems	1.8	Email & Facsimile
Confidential details	1.12	Nil
Time for access to the Site	2.2	5 days after the Commencement Date
Amount of performance security	4.2*	Ten (10%) of the Contract Price and in the proportions of currencies which the Contract Price is payable
Time for submission of programme	4.14	14 days after the issue of Letter of Acceptance
Normal working hours	6.5	7.30am to 4.30pm, Monday to Friday
Liquidated damages for delay	8.6*	0.25 % of the Contract Price per day, in the proportions of currencies in which the Contract Price is payable
Limit of liquidated damages for delay	8.6*	Ten (10) % of the Contract Price
Performance liquidated damages for Yr '0'	8.6*	0.2% of Contract Price per each 0.1% of Performance Ratio reduction with respect to guaranteed performance ratio at the time of completion with such amount not exceeding 20% of Contract Price
Performance liquidated damages for Yr '1'	8.6*	0.2% of Contract Price per each 0.1% of Performance Ratio reduction with respect to

guaranteed performance ratio at the end of evaluation

Amount of insurance for design	18.1	Full value of the Contract Price
Amount of third party insurance	18.3	Contractor to Propose
Periods for submission of insurance: (a) evidence of insurance (b) relevant policies	18.5 * *	Not later than Commencement Date. Fourteen (14) days after Commencement Date.
Number of members of Dispute Adjudication Board	20.3*	Three (3)
Arbitration rules	20.6*	International Chamber of Commerce, Rules of Arbitration
Number of Arbitrators	20.6*	Three (3)
Language of arbitration	20.6*	English
Place of arbitration	20.6	Fiji

Initials of signatory of Bid _____

Form of Price Proposal

To: Mr. Tuvitu Delairewa
General Manager Commercial
Energy Fiji Limited
2 Marlow St, Suva
Fiji

Contract No: _____

Gentlemen:

We have examined the Conditions of Contract, Employer's Requirements, Schedules, Addenda Nos _____ and the matters set out in the Appendix hereto. We have understood and checked these documents and have not found any errors in them. We accordingly offer to design, execute and complete the said Works and remedy any defects, fit for purpose in conformity with these documents and the enclosed Proposal, for the fixed lump sum of (in currencies, of payment) _____ or other such sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules herewith and are made part of this bid.

We confirm our agreement with the appointment of *(name proposed in Bid Data Sheet or during the clarification meeting of the First Stage bid)* as the Adjudicator.

We agree to abide by this Bid until _____ and it shall remain binding upon us and maybe accepted at any time before that date. We acknowledge that the Appendix forms part of our Bid.

If our bid is accepted, we will provide the specified performance security, commence the Works as soon as reasonably possible after receiving the Employer's Representative's notice to commence, and complete the Works in accordance with the above-named documents within the time stated in the Appendix to Technical Proposal.

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.

We understand that you are not bound to accept the lowest or any bid you may receive.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and Address of Agent	Amount and Currency	Purpose of Commission or Gratuity
_____	_____	_____
_____	_____	_____
_____	_____	_____

(if none, state "none").

We are, Gentlemen
Yours faithfully

Signature _____ in the capacity of _____ duly authorized to sign bids for and on behalf of

Address

Date _____

Appendix to Price Proposal

[Note: with the exception of the items for which the Employer's requirements have been inserted, the following information must be completed before the Bid is submitted]

	Sub-Clause	
Employer's name and address	1.1.2.1 & 1.8*	VRL c/o Energy Fiji Limited, Suva, Fiji
Contractor's name and address	1.1.2.2 & 1.8	
Name and address of the Employer's Representative	1.1.2.2 & 1.8	General Manager, Special Projects, EFL, Private Mail Bag, Suva, Fiji
Total amount of advance payments	13.2*	Ten (10)% of the Contract Price
Number of instalments	13.2	One (1)
Start repayment of advance payment	13.2(a)	when payments are Ten (10) % of the Contract Price
Repayment amortization of advance payment	13.2(b)	25%
Percentage of retention	13.3(c)*	Five (5)%
Limit of Retention Money	13.3(c)*	Five (5)% of the Contract Price
Minimum amount of Interim Payment Certificates	13.6*	Five (5)% of the Contract Price

If Sub-Clause 13.15 applies:

Payments in Local and Foreign Currencies 1.1.5.3 & 13.15

Currency Unit	Amount Payable in such Currency
Local: _____ [name]	_____
Foreign: _____ [name]	_____
_____ [name]	_____

Initials of signatory of Bid

Section 6

Sample Forms

Form of Contract Agreement

This Agreement made this _____ day of _____ 20____ between _____ of Energy Fiji Limited (hereinafter called "the Employer") of the one part and _____ of _____ (hereinafter called "the Contractor") of the other part

Whereas the Employer desires that the Works known as Qeleloa 5MW Solar PV Plant Project should be designed and executed by the Contractor, and has accepted a Bid by the Contractor for the design, execution and completion of such Works and the remedying of any defects therein.

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
 - (a) The Letter of Acceptance dated _____
 - (b) The Employer's Requirements
 - (c) The Addenda nos. _____
 - (d) The Bid dated _____
 - (e) The Conditions of Contract (Parts I and II)
 - (f) The completed Schedules, and
 - (g) The Contractor's Proposal.
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to design, execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the design, execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
5. This Agreement shall come into effect on signing by both parties.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written in accordance with their respective laws.

Authorized signature of Contractor
SEAL
(if any)

in the presence of:

Name _____
Signature _____
Address _____

Authorized signature of Contractor
SEAL
(if any)

in the presence of:

Name _____
Signature _____
Address _____

Form of Performance Security (Bank Guarantee)

To: Energy Fiji Limited
2 Marlow St, Suva
Fiji

WHEREAS _____ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [amount of Guarantee] _____ [in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the date of issue of the Performance Certificate.

Signature and Seal of the Guarantor _____
Name of Bank _____
Address _____
Date _____

Section 7

Schedules – Part I

Schedule of Prices

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1 NOTES ON SCHEDULES

The Schedules are intended to provide the Employer with essential supplementary information in an organized format. Examples of more commonly used Schedules are given herein. Others may be devised and added in accordance with the requirements of the Instructions to Bidders.

All the Schedules are essential for bid evaluation and some in contract execution; they should all be incorporated in the Contract, and appropriate changes introduced with the approval of the Employer or its representative.

The schedules are to be completed and submitted as part of the Technical Proposal and Price Proposal in accordance with the Instructions to Bidders Clause 13, Documents Comprising the Bid.

2 SCHEDULE OF PRICES & CONDITIONS OF PAYMENT

2.1 CONTRACT PRICE

The Contract Price is comprehensive in that, in consideration of the Contractor meeting all obligations, conditions and liabilities under the Contract, including the Contractor's allowance for the cost of supply of all labour, materials, plant, supervision required to complete the Contract Works, overheads and profit, subject only such adjustment as is provided for the Contract.

2.2 BASIS OF SCHEDULES

Descriptions of various items contained in the Schedule of Prices are intended to be a complete definition of the scope of the Contract Works, for which reference shall be made to the Specification, Drawings, Basis of Payments and other Contract Documents. The items descriptions on the Schedule of Prices shall be used only for the purpose of calculating progress payments and for valuing variations.

2.3 BASIS OF PAYMENTS

The rate or cost of the items shall represent the total cost of designing (where appropriate), checking, approving, purchasing, constructing, installing, commissioning, training the Employer's staff, testing and providing as-built drawings and O&M manuals for the works unless separate items have been included for some of these activities.

2.4 PAYMENTS TERMS

1. All payments shall be due and payable by the Employer in accordance with the payments terms detailed below.
2. The payments shall be made on completion of milestones as identified and agreed by both the Employer's Representative and the Contractor.
3. The payments will be made based on the following schedule:
 - ninety percent (90%) of the total DDU to Site amount shall be paid on submission of receipt of invoice and documents. Documentation shall include as a minimum a bill of landing, a sea way bill, an airway bill, a railway consignment note, a road consignment note, insurance certificate as appropriate for the method of transportation undertaken.

- five percent (5%) of the total DDU to Site amount shall be paid upon issue of Completion Certificate.
- five percent (5%) of the total DDU to Site amount shall be paid upon completion of retention period.

4. Payments to be made under this contract fall into two categories:

- i] payments for work carried out off-shore and hence not subject to GST or VAT.
- ii] payments for work carried out within Fiji (i.e. on-shore), and hence

shall be subject to Fiji tax, legislation including the VAT Decree 1991 and its subsequent amendments.

5. Off - Shore Work

All invoices issued for off-shore work pursuant to this Contract shall be expressed in the foreign currency stated in Appendix to Bid, and will be issued using Contractor's overseas office letterhead. No GST or VAT shall be included in the invoice.

The Employer shall pay the invoice amount in foreign currency to each overseas bank account nominated by Contractor within 30 days of acceptance of the invoice.

6. On - Shore Work

All invoices issued for on-shore work pursuant to this Contract shall be expressed in Fiji Dollar currency, obtained by converting any foreign currency amounts to Fiji dollars using the corresponding foreign exchange rate prevailing on the date of the invoice. Any Value added Tax (VAT) amount component at the prevailing VAT rate shall be added to indicate the VAT inclusive price (VIP). The invoice shall be issued using Contractor's Fijian registered entity letterhead.

- 7.** The Contractor shall advise the Employer the details of its Fijian registered entity including the Tax Identification Number given by the Fiji Islands Revenue and Customs Authority (FIRCA) as soon as possible after the execution of this Agreement.
- 8.** The Employer shall not be responsible to pay invoices issued by the Contractor or its Fijian registered entity if such invoices are not in conformance with the above stated requirements.
- 9.** If the Employer disputes any portion of the amount claimed in an invoice submitted by the Contractor or by its Fijian registered entity, the Employer shall notify the Contractor in writing of the reasons for disputing the amount and the Employer shall pay that portion of the amount in the invoice that is not in dispute.
- 10.** If any payment due to the Contractor or its Fijian registered entity through a valid invoice submitted to the Employer is not received by the Contractor within 30 working days from the date of receipt by the Employer of any undisputed invoice, the Employer shall pay interest as from the due date at the Reserve Bank of Fiji Lending Rate per annum accruing daily.
- 11.** The Contractor hereby agrees that payments made by the Employer in accordance with this Agreement to the Contractor's Fijian registered entity shall be proper consideration deemed to be received by the Contractor.
- 12.** All matters relating to taxation such as income tax, withholding tax, PAYE and other tax issues shall be the responsibility of the Contractor and its Fijian registered entity. Similarly any superannuation

related issues such as FNPF liabilities (where applicable) shall be the responsibility of the Contractor and its Fijian registered entity.

3 SCHEDULES OF RATES & PRICES

3.1 NOTES ON SCHEDULES OF RATES AND PRICES

1. The Schedules are divided into s separate sections as follows:
 - 3.2 Price Schedule of Main Items
 - 3.3 Alternative Offers
 - 3.4 Recommended Tools & Spare Parts
 - 3.5 Summary of Prices
 - 3.6 Bidders Tools & Equipment
 - 3.7 Rate of Variations
2. The quantities shown in these schedules are estimates only. The bidder are expected to provide the quantity based on the proposal submitted.
3. The Schedules do not generally give a full description of the plant and equipment to be supplied and the services to be performed under each item. Bidders shall be deemed to have read the Employer's Requirements and other section of the bidding documents and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling in the rates and prices. The entered rate and prices shall be deemed to include for the full scope as aforesaid including overheads and profit.
4. Bid prices shall be quoted in the manner indicated and in the currencies specified in the Instructions to Bidders in the bidding documents.

For each item, bidder shall complete each appropriate column in the respective Schedules, giving the price breakdown as indicated in the Schedules.

Prices given in the Schedules against each item shall be for the scope covered by that item as detailed in the Employer's Requirements, Drawings or elsewhere in the bidding documents.
5. Items left blank with be deemed to have been included in other items.
6. These schedules are intended primarily to provide information for bid evaluation but not intended to be used for the evaluation of work done for the purpose of interim payment. They may however, be used as a reference for the adjustment of the Schedule of Payment should the need arise.
7. These schedules can also be used as a basis to value variations of work done under the Proposal Sum.

3.2 DRAWINGS, DESIGN AND DOCUMENTATION

F/C – Foreign Currency

FJD – Fijian Dollars

Item No.	Description	Estimated		Rate		Total Price	
		Qty	Unit	F/C	FJD	F/C	FJD
1	VRL QELELA 5MW SOLAR PV PLANT						
1.1	All WORKS						
1.1.1	Design and Liaison of Works	1	LS				
1.1.2	Drawings and Documentation required for works	1	LS				
TOTAL (Transfer to Grand Summary)							

3.3 PLANT EQUIPMENT INCLUDING MANDATORY SPARE PARTS

ITEM NO.	DESCRIPTION	QTY	DDU FIJI Foreign Currency		DDU FIJI FJD		ERECTION ON SITE FJD		TOTAL AMOUNT (Excluding Taxes & Duties)	
			Unit Rate	Amount	Unit Rate	Amount	Unit Rate	Amount	F/C	FJD
			(1)		(2)		(3)		(4=1)	(5=2+3)
	Qeleloa 5MW Solar PV Plant									
1	PLANT									
1.1	<u>Poly or Mono crystalline solar PV modules 5,000kWp</u>									
1.2	<u>Solar PV String Inverters. _____ kWac</u>									
1.3	<u>PV Panel Mounting Structure.</u>									
1.4	<u>Solar System integration and electrical interconnections</u>									
1.5	<u>415V/11kV AC Power System inclusive of Step-Up Transformer, 11kV Switchgear with Protection Equipment, Ring Main Unit, Termination Kits</u>									
1.6	<u>Solar System Control and Monitoring, SCADA and Communications</u>									
1.7	<u>Civil structures: site preparation, accessways, fencing and foundations</u>									
1.8	<u>Any other for complete installation</u>									
1.9	<u>Lightning Protection</u>									
1.10	<u>CCTV System with monitoring and recording facility</u>									
1.11	<u>AC and DC Power Cable</u>									
1.12	<u>Earthing system</u>									
1.13	<u>Weather Monitoring Sensors</u>									
2	MANDATORY SPARES									

2.1	1% of the total installed PV module quantity									
2.2	10% of the total installed string inverter quantity									
2.3	5% of spare inverter fan modules									
2.4	1% of total installed stainless steel module earthing shims									
2.5	1% of the total installed PV module clamps									
2.6	1 x DC isolator enclosure complete									
2.7	5% of the total installed lightning arrestors									
2.8	5% of the total installed string fuses									
2.9	5% of solar connectors									
2.10	1 x Inverter AC isolators									
2.11	1 x Inverter AC isolator enclosure									
	TOTAL OF EQUIPMENT SUPPLY									

3.4 CIVIL WORKS, INSTALLATION AND OTHER SERVICES

ITEM NO.	DESCRIPTION	ESTIMATE QTY	DDU FIJI Foreign Currency		DDU FIJI FJD		ERECTION ON SITE FJD		TOTAL AMOUNT (Excluding Taxes & Duties)	
			Unit Rate	Amount	Unit Rate	Amount	Unit Rate	Amount	F/C	FJD
			(1)		(2)		(3)		(4=1)	(5=2+3)
	Qeileloa 5MW Solar PV Plant									
1	Civil Works									
1.1	Complete Civil Works; including but not limited to: i) Site preparation and earthworks; ii) perimeter fencing & gates; iii) any buildings and foundations; and iv) other as required.									
1.2	Civil works for solar module foundations and support structures									
2	Installation Works									
2.1	Solar Module installation; including but not limited to: cabling, junction boxes, terminations and ancillary items to but not including inverters									
2.2	Solar Plant equipment installation; including but not limited to: PV inverters, cabling, LV Panels and ancillary items, electrical interconnection, control and monitoring systems for complete integration of the Solar Power Plant									
2.3	MV Equipment installation; including but not limited to: 415V/11kV transformer stations, auxiliary equipment, , 11kV switchgear, 11kV and LV cables and terminations, SCADA and communications, and ancillary items									
2.4	<u>Testing, Commissioning & Training</u>									
	TOTAL OF CIVIL WORKS, INSTALLATION AND OTHER SERVICES									

3.5 GRAND SUMMARY

ITEM	DESCRIPTION	TOTAL PRICE	
		F/C	FJD
1.0	Design, drawings and documentation		
2.0	Plant and equipment including mandatory spares		
3.0	Civil Works, installation and other services		
GRAND TOTAL			

3.6 RECOMMENDED TOOLS & SPARE PARTS

As per clause 1.10 of the technical specifications, the bidder is required to provide a list of spare parts as recommended by the Manufacturer. These shall be divided into two categories i.e. Mandatory and Optional. Thus the bidders are required to provide two separate tables for the two categories.

Item	Description	Qty	Unit Price		Total Price	
			F/C	FJD	F/C	FJD

3.7 SUMMARY OF PRICES

	Foreign Cost	Local Cost
1. MAIN OFFER: (a) Qeleloa 5MW Solar PV Plant (b) Recommended Spares; Tools & Equipment		
2. ALTERNATIVE OFFERS: (Briefly describe) A. B.		

TOTAL CONTRACT PRICE:

Main Offer: Foreign Currency (in words)

.....
and Local Currency (in words)

.....
*Alternative A: Foreign Currency (in words)

.....
and Local Currency (in words)

.....
*Alternative B: Foreign Currency (in words)

.....
and Local Currency (in words)

Signature of Tenderer

Witness

Note: Details to be included in Part II of this Section in the Departures from Specifications.

3.8 BIDDERS TOOLS & EQUIPMENTS

During the pre-commissioning and commissioning tests, a lot of specialised tools and equipment will be required to carry out the acceptance testing. Thus the bidders shall provide a list of such tools and equipment that they currently have. These are the tools which will be used for commissioning switchgears, transformers, cables, etc.

Item No.	Description	Model No.	Manufacturer

3.9 RATES FOR VARIATION

The Contractor shall aim to carry out the project without any variations. However, if unforeseen circumstances and event warrant any variation, the Contractor shall only proceed with a written approval from the Employer's Representative. The agreed price variation shall be documented.

The rates stated in this schedule shall be applicable to variations ordered by the Employer's Representative and not covered by the Schedule of Prices. These rates shall be deemed to include the cost of construction facilities, professional and technical services, royalties, taxes, transport of equipment, labour and other changes necessary to perform the work.

The Contractor shall not be entitled to any allowance above unit rates stated in the schedule by reason of any amount of work being required under such items during the currency of the Contract.

3.9.1 Materials

Materials required for variations or day work shall be paid for on the basis of the net quantities actually used in accordance with the Employer's Representatives.

Payment will be at the cost on site based on evidence of purchased prices after deductions of all trade and bulk discounts, transport, and any other charges applicable to the materials plus the percentage stated below to cover contractor's profit and overheads.

Materials supplied by the Contractor will be at prices to be agreed, due regard being paid to the prices for similar materials if supplied from outside sources.

3.9.2 Labour

Payment of labour shall be in accordance with the table of hourly rates below which shall include Contractor's profit, overheads, superintendence, insurance, time keeping and all clerical and office work and use of hand operated tools and all incidental chargers whatsoever. The time of technicians or leading hands working with the crews will be paid for at rates stated but the time of the supervisors and foremen shall be covered by the overhead component of the hourly rates.

Item No.	Grade of Officer/Workman	Rate/hour F/C	Rate/hour FJD

Section 7

Schedules – Part II

Schedules of Supplementary Information

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1 Major Component List

Bidders to provide details of manufacturer, model, ratings, and quantities

2 Spare Parts List

Bidders to provide details of manufacturer, model, ratings, and quantities

3 Equipment Manufacturers Data Sheets and Compliance Certificates and Warranty Statements

4 PVSyst Report and Files

Bidders to provide PVSyst report and files(soft copy) for the 1st year including aux and transformer losses, 5% soiling losses and using site Meteonorm 7.2 meteo data.

5 Electrical SLD

6 Plant General Layout

7 Monitoring, Communications and SCADA SLD

8 WORK PROGRAMME

The bidder is required to state the commencement and completion dates for the following tentative work programme based on an assumed contract signing date of 31st July 2019. The contractor is to also submit a Gantt chart for the programme outlining the activity, duration, start date, completion date, milestones, resources, etc.

	Component	Start Date	Finish Date
	Design of plant and equipment and approval by employer		
	Manufacture of plant		
	Testing at Manufactures premises (witness testing)		
	Shipping of plant and equipment		
	Installation of switchgear (may be carried out in stages)		
	Completion of wiring for controls and protection equipment		
	Inspection and pre-commissioning tests		
	Testing and commissioning		

Note that the items in the work programme are the responsibility the contractor. Certain items which have been omitted, such as removal of existing switchgear panels, and cable terminations will be carried out by the Employer. of All site tests to be carried out as per the contract are an absolute minimum. Additional tests may be required by the employer's representative.

9 DEPARTURES FROM SPECIFICATIONS

(To be completed by the Contractor)

All deviations shall be forwarded in the format given below. Any details that will lead to deductions of final Bid price shall not be inserted.

Section	Clause No.	Proposed Deviations

10 BIDDER'S STATEMENT OF EXPERIENCE

Bidder shall state hereunder a brief resume of his experience in the design, supply and erection of Utility scale Solar PV Plant – grid connected, stating the employer's name, contact person, telephone number and fax number. Failure to complete this schedule with full satisfactory details and documentary proof will render the offer liable to rejection.

Country		
System Voltage kV		
Utility / Country		
Type of Construction		
Purchaser		
Consultant		
Capacity of PV Plant		
Contract Award Date		
Contractual Completion Date		
Actual Completion Date (COD)		
Contract Value		

11 SCHEDULE OF FINANCIAL INFORMATION

The Tenderer shall state hereunder:

- (a) The full name, business address, nationality and type of organization.
- (b) The full name and business address of any Fijian agent.
- (c) The date of the Tenderer's formation.
- (d) The Tenderer's capitalization and total sales over the preceding three fiscal years.
- (e) Details of supply and erection contracts of a similar nature undertaken in the previous five years, giving details of at least three contracts stating the location, purchaser, dates of commencement and completion and value of the contract in the total foreign currency equivalent.
- (f) Details of any contracts on which the Tenderer has defaulted or on which liquidated damages have been applied in the previous five years giving location, purchaser, value of the contract, and nature of the default or penalty.
- (g) Name and address of two banks and the name and address of an independent accountant, all of whom shall be authorized to provide promptly on request any information about the financial status of the Tenderer which is required by the VRL on the understanding that such information will be kept confidential and will only be used to assess the financial ability of the Tenderer to undertake the Contract.

12 PERSONNEL

The tenderer shall provide a detailed bio-data of all the personnel that would be involved in the execution of the project - from the design stage till the completion stage.

The Tenderer shall list herein the personnel he wishes to establish in Fiji for the periods stated, to discharge his responsibilities as laid down in the Specification.

<i>Designation</i>	<i>Name of Nominee</i>	<i>Year of Birth</i>	<i>Required Experience in Similar Works (Years)</i>	<i>Actual Experience in Similar Works (Years)</i>
<u>Headquarters</u>				
Project Director			10	
Project Manager			10	
Engineering Design Staff			7	
Substation Design Engineer			7	
Other key staff (Give designation)				
<u>Site Office</u>				
Site Manager			10	
Deputy Site Manager			7	
Supervising Engineers			7	
Construction Supervisors			7	
Safety Manager			10	
Other key staff				
<u>Specialised Staff</u>				
Cable Jointer			10	
Optic Fiber Splicer			10	
Substation Testing Technician/Engineer			10	
Electrical Technicians			7	

Note : It is expected that each of the key project team shall have atleast completed 2 projects with capacity of 5MW which has attained Commercial Operation Date (COD) for more than 6 months. The experience can be from projects from previous employment. This shall clearly indicated in the CV to be attached for each key project member.

13 CONTRACTOR'S SITE PERSONNEL

Erection Staff

The contractor shall give below the status and numbers of staff required for erection of the plant and the estimated period for which they will be retained on site.

Supervisory and expatriate staff : -	
(a) Bachelor status	
(b) Married status	

<i>Position</i>	<i>Months</i>
<u>Headquarters</u>	
Project Director	
Project Manager	
Other Key Staff	
<u>Site Office</u>	
Site Manager	
Deputy Site Manager	
Supervising Engineers	
Construction Supervisors	
Other key staff	

14 SUBCONTRACTORS & CONSULTANTS

<i>Item</i>	<i>Element of Work</i>	<i>Approximate Value</i>	<i>Name and Address of Sub Contractor /Consultant</i>	<i>Statement of Similar works Executed</i>

The Bidder shall enter in this schedule a list of the sections and appropriate value of the work for which the purposes to use sub-contractors, together with the names and addresses of the proposed sub-contractors. The Bidder shall also enter a statement of similar works previously executed by the proposed sub-contractors, including description, location and value of works, year completed, and name and addresses of the Employer. Notwithstanding such information the Bidder, if awarded the contract, shall remain entirely and solely responsible for the satisfactory completion of the Works.

15 CONTRACTOR HEALTH & SAFETY PLAN

The bidder shall complete the following sub-sections to provide details in relation to the Health and Safety plans for the project.

CONTRACT DETAILS

Contractor Name: _____
 Contractor Address: _____
 Contractor Representative: _____
 Contract Description: _____
 Location of Works: _____
 Timing of Works (approximate): _____ Start Date: _____ End Date: _____

RESPONSIBILITIES

<i>Name</i>	<i>Position Held</i>	<i>Safety Responsibilities</i>	<i>Contact Number (Direct)</i>

EMERCENGY CONTACT DETAILS

<i>Contact</i>	<i>Name</i>	<i>Position</i>	<i>Contact Number (Direct)</i>
First Contact			
Second Contact			
Third Contact			
Forth Contact			

SCOPE & TASK DETAILS

<i>List Major Tasks</i>

RISK ASSESSMENT

Risk assessment is a fundamental tool in management of risk. It Involves the identification of hazards and control measures. Describe how you plan to carry out this process for this particular application contract.

SAFE WORK PROCEDURES

After completing the risk assessment, you must compile a safe system of work describing how you plan to control the hazards you have identified. Complete the following section outlining how you will ensure that all employees and subcontractors understand the Safe Work Procedures (SWP). Also attach copies of the relevant SWP.

PERSONAL PROTECTIVE EQUIPMENT

Where risk assessment identifies the need for personal protective equipment (PPE), then PPE must be made available. List down below the PPE you will require for this project.

ACCESSING SITE/TIMES OF WORK

If work is going to be carried out at EFL premises, then it is important to determine when you will be accessing the Site. You may need to sign a PASS and sign in and out. This will avoid conflicts with other activities which may be continuing on site during contract works. Describe below your site access requirements.

FENCING & SEPARATION OF WORK

In order to protect our employees as well as general members of the public, the work areas should, so far as is possible, be physically isolated with barriers like bollards, cones, tapes, netting, etc. Describe below how you will fence or separate your work.

SIGNS AND WARNINGS

Sufficient signs should be erected or placed so that adequate warning is afforded around the worksite. Describe the kinds of notices you will be putting up and places where you will be putting this.

GENERAL STORAGE & DISPOSAL OF WASTE

Describe below what waste you anticipate producing and how you plan to store and/or dispose off waste. You must take into account the nature of the waste e.g. hazardous/flammable.

FIRST AID & INJURY MANAGEMENT

A first aid program for contractors is outlined in EFL Safety Manual. Please describe below any additional first aid needs and specific Injury management process for this contract.

EMERGENCY PROCEDURES

Identify specific emergency procedures or equipment required for the contract.

INCIDENT REPORTING & INVESTIGATION

Describe how incidents will be reported and investigated during the contract.

SPECIALISED WORK OR LICENSING

List any special licences required for the contract.

TRAINING & INDUCTION REQUIREMENTS

Training and inductions for contractors are to be completed in accordance with the EFL Training requirements. List any training required for the contract works in relation to safety, for example safe procedure training and attach training certificates:

--

SAFETY MONITORING

List any ongoing inspections, hazards management or incident reporting or investigation processes to be used during the works, if relevant.

Describe below your site access requirements.

--

SUBCONTRACTOR MANAGEMENT

Complete the attached Subcontractor List detailing the subcontractors to be used and the details of the subcontractor management:

Sub Contractor Name	Sub Contractor Representative Name	Description of Work	Date of Local Induction

16 PLANT & EQUIPMENT REGISTER

Complete the following table:

Type	Registration Include: Design, Design No. Item, Item No.	Purpose (Use on Site)	Inspection Date and Frequency	Inspected by

Contractor Signature: _____

Date: _____

17 CONTRACTOR CHEMICAL REGISTER

Complete the following table:

<i>Product Name</i>	<i>Hazard</i>	<i>Controls Required</i>	<i>Location</i>	<i>Quantity</i>

1 Contractor Signature: _____

2 Date: _____

18 OTHER DOCUMENTS & DRAWINGS TO BE SUBMITTED WITH BID

As a minimum, the documents & drawings as detailed in Section 4, Part 1, Item 6 shall be submitted with the Bid. Bidders are allowed to provide additional drawings & documents to further substantiate their bid document for better Employer clarity.

19 EVALUATION OF BIDS

This section provides information to the bidder of the bid screening and evaluation criteria for the bids.

SCREENING CRITERIA

The screening criteria for the bids when opening of the technical proposals will be as stipulated in Section 1 (Instruction to Bidders), Clause 13.2 (i) – (xiv). The financial proposals for those bids will be opened which have passed the technical proposal screening criteria and meet the cut-off mark of 60% in the evaluation of the Technical Proposals.

EVALUATION CRITERIA

The following criteria with corresponding scoring and weightings which will be utilised for evaluating the bids forms the Technical Evaluation Section. Those bids which score above 60% for the Technical Evaluation will be considered for further evaluation, and their financial proposals will be opened. The Financial Evaluation has a weighting of 30% on the overall Value For Money Score (Technical is 70%).

	Criteria for Evaluation	Weighting	Score Range		
			10 - 8	7 - 4	3 - 0
1	Contractors experience in design supply and construction of PV plants in excess of 1MWp	5.00	Company has done more than 10 projects of similar nature	Company has done 5 - 10 projects of similar nature	Company has done less than 5 projects of similar nature
2	Number of years of experience of key personnel to be involved in project	5.00	More than 10 years for most of the key personnel	Less than 10 years for most of the key personnel	Less than 5 years for most of the key personnel
3	Compliance with key plant specifications including warranties, guarantees, serviceability, reliability and relevant experience	40	Meets or exceeds all plant specifications	Meets only basic required specifications but is acceptable	Does not meet basic specifications and may not be acceptable
4	Quality of proposed design and supporting data including but not limited to; site layout, power system details including SLDs and PVSyst report, SCADA and control/monitoring details including SLDs, major and minor plant and equipment supply and layout	35.0	All the design details are addressed as that would be expected in an ideal proposal.	Relevant design details are addressed in terms of design as that compared to an ideal proposal. The proposal conforms to most of the items stated in the specifications	Extent of consideration placed into design is significantly less than that expected in a reasonable proposal. Most of the items stated in specifications are not met.
5	Contractors work programme	5.00	Works programme is within time for completion and demonstrates thorough understanding of project implementation	Works programme is within time for completion and demonstrates a reasonable understanding of project implementation	Works programme may not be within time for completion and demonstrates a poor understanding of project implementation
6	HS&E and Quality Control Plans	10.0	Manufacturer has quality system in accordance with international standards and produced evidence of regular third party audits	Manufacturer appears to have a quality system in place.	Manufacturer has a record of providing reasonable quality material but provides no evidence of a quality system
	Total	100%			

2 PREFERRED SUPPLIERS OF MAJOR EQUIPMENT

	EQUIPMENT	Suppliers	Country of Origin
	PV Modules	Trina, JA Solar, Canadian Solar, Yingli	
	String Inverters	SMA, ABB, Fronius, Huawei	
	Module Array Structures	Schletter, S-Rack	
	MV Transformers	Tyree, Etel, AB	
	RMU	ABB	

Section 8

Drawings

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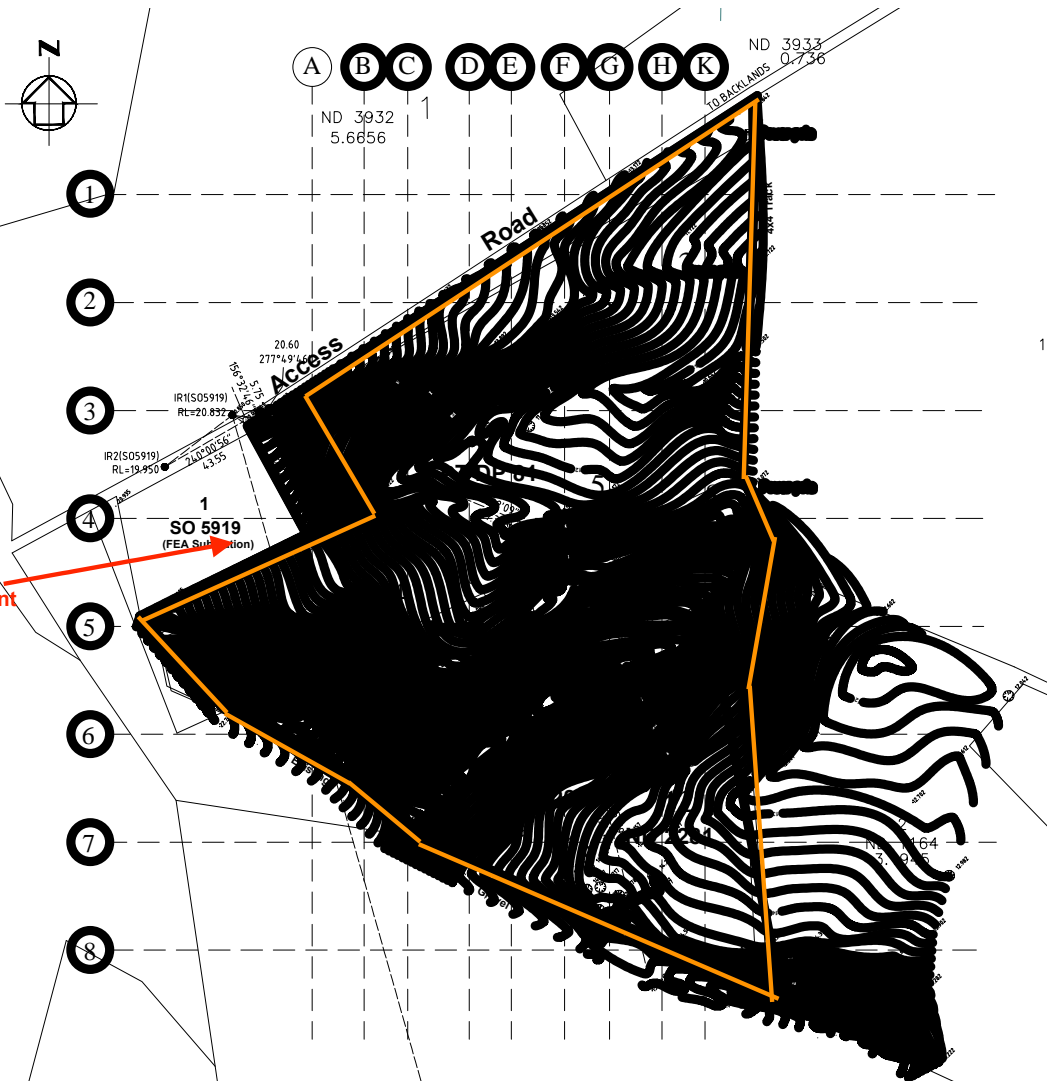
1 Site Location



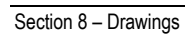
SITE MAP

**EFL Sub-Station
Interconnection Point**

Site Boundary



2. Topographic Survey



3 Test Piling Report