ENERGY FIJI LIMITED

Tender Specification

GEOTECHNICAL INVESTIGATION FOR ENERGY FIJI LIMITED'S QELELOA SOLAR FARM.

TENDER NO: MR 11/2026

Quality Assurance Statement	
Energy Fiji limited Private Mail Bag Suva, Fiji Tel: 679 331 333	Project Manager: Krishneel Prasad
	Prepared by: Ashwin Lal & Shavneel Deo
	Reviewed by: Krishneel Prasad
	Approved for issue by: Krishneel Prasad

Revision Schedule					
Rev. No	Date	Description	Prepared By	Reviewed By	Approved By
1	25.01.2026	Initial Draft	Ashwin Lal & Shavneel Deo	Krishneel Prasad	Krishneel Prasad
2					
3					
4					

Definitions

RFP	Request for Proposals
TOR	Terms of reference for the works
Tenderer	The company or consortia that is providing a submission in response to this RFP document
EFL	Energy Fiji Limited, 2 Marlow Street, Suva, Fiji
Works	The Project, Assignment
PV	Photo Voltaic
CBA	Cost Benefit Analysis
BESS	Battery Energy Storage system

1. Background

1.1. Energy Fiji Limited (EFL)

Energy Fiji Limited, previously the Fiji Electricity Authority, was established, incorporated and constituted under the provisions of the Electricity Act of 1966 and began operating from 1 August of that year. The powers, functions and duties of EFL under the Electricity Act are for the basic purpose of providing and maintaining an efficient and cost-effective power supply to the Fijian people in a safe and secure manner that meets high benchmarks in quality.

Fiji Electricity Authority (FEA) was corporatized into Energy Fiji Limited (EFL) on 16 April 2018, a public company limited by shares, and was registered under the Companies Act. EFL has also been appointed as the successor entity of FEA. One of the key objectives of the corporatization of FEA is to provide an opportunity for Fijians to share in the economic benefits of FEA and list the newly corporatized entity on the South Pacific Stock Exchange, which will promote the development of Fiji's capital market. In March 2017, a new Electricity Act 2017 was passed by Parliament; however, the new Electricity Act 2017 was gazetted on 1st October 2019 and came into effect from that day.

The primary goal of EFL's authority, responsibilities, and powers under the Electricity Act is to offer and sustain a safe, secure, high-quality power supply that is both economical and efficient for the Fijian people. The necessity for EFL to uphold its goal of obtaining 90% of its energy requirements from renewable sources has been further underscored by the steadily rising demand for power and the rising cost of fuel.

Electricity generation, transmission, and distribution in Viti Levu, Vanua Levu, Ovalau, and Tavueni, Fiji, are principally handled by EFL. Over twenty (20) power plants, forty (40) substations, and switching stations are owned by it on the islands of Viti Levu, Ovalau, Taveuni, Vanua Levu. A network of 147 km of 132 km transmission lines, 535 km of 33 km lines, and more than 10,500 km of 11 km and 415 km distribution lines are owned, run, and maintained by EFL.

Fiji relies on a diverse range of energy sources such as hydro, diesel, wood and petroleum products to meet its energy requirements. The country has set an ambitious target in its 20-year National Development Plan, which aims to generate all power from renewable sources by 2030. To achieve this objective, Fiji will need an additional 120 MW of renewable energy. Energy Fiji Limited (EFL) serves as the primary provider of grid-based power to approximately 90 percent of the population residing on the main islands of Viti Levu, Vanua Levu, and Ovalau. EFL has set a goal of being 90 percent powered by renewable energy by 2030, and it aims to reach 99 percent by 2035. Having a dependable and high-quality supply of electricity is crucial for driving economic growth. Lack of access to electricity not only diminishes the quality of life but also deprives people from essential services like healthcare, agriculture, education etc.

In Fiji, the percentage of the population with access to electricity was 93.79% until 2014, but it increased to 100% in 2020. In 2021, the total on-grid power generation was 937 GWh and hydro power is currently the leading source of electricity generation in Fiji, contributing 58.47% of the total generated electricity. Fiji has established five significant hydro power generating plants to meet the country's electricity requirements. Fiji has set a goal of achieving 100% renewable energy power generation, which is expected to result in a reduction of 0.5 MtCO2 by 2030. Below are the details of category wise installed capacity of power in Fiji. As per NDC target submitted to UNFCCC, Fiji expressed to reach close to 100% renewable energy power generation (grid connected) by 2030, thus reducing an expected 20% of energy sector CO2

emissions. Fiji has also enacted climate change Act, 2021 to meet its sustainable development objectives, long-term climate ambition, net-zero emissions target, and thereby protecting Fiji's environment. The solar energy accounts for approximately 9.7MW of the total RE installed capacity. Fiji has also partnered with GGGI for feasibility study of solar PV project in Taveuni Island and Ovalau Island. Fiji is actively engaged in various solar-related initiatives throughout the country with the aim of mitigating carbon emissions. A number of upcoming solar projects are specifically targeted at meeting the country's future energy requirements

2.0 Objective

To conduct a comprehensive geotechnical site investigation to characterize subsurface conditions for the safe, economical, and compliant design and construction of a grid-connected solar farm. The investigation will provide design parameters for:

- **Foundation Design:** For solar panel mounting structures (pile-driven, ground-screw, or concrete pad foundations).
- **Civil Works Design:** For access roads, drainage systems, cable trenches, and substation/BESS pad foundations.
- **Slope Stability Assessment:** For site grading, cut/fill slopes, and overall site stability.
- **Earthworks Specifications:** For cut/fill requirements, compaction criteria, and suitability of on-site materials.
- **Seismic Design Classification:** In accordance with AS/NZS 1170.5.
- **Construction Methodology Recommendations:** Identifying potential geotechnical risks (e.g., high water table, soft soils, rock excavation).

3.0 Geotechnical Design Criteria

3.1 Purpose of Geotechnical Study

- To assess and confirm ground conditions for all structures and foundations.
- To inform the foundation design for:
    - BESS containers and equipment
    - Switchgear buildings
    - Office buildings
    - Fencing, access roads, and drainage systems

3.2 Key Design Standards Referenced

- AS 1726-2017 – Geotechnical site investigations
- AS 2159-2009 – Piling design and installation (if deep foundations are required)
- AS 2870-2011 – Residential slabs and footings (for soil classification principles)
- AS 3798-2007 – Guidelines on earthworks for commercial and residential developments

3.3 Site-Specific Considerations

- Location: Sub-Coastal Site approximately 10km away from sea, Qeleloa Nadi – high salinity, humid tropical climate.
- Seismic Level: 7 on the open-ended Richter scale (per Fijian conditions).
- Structure Importance: Level 4
- Wind Loading: Region D (cyclonic wind region as per AS/NZS 1170.2).

- Soil Conditions: Must account for:
  - High rainfall (≈2663mm/year)
  - Potential for flooding and storm surges
  - Reactive clays and soil movement
  - Corrosive soil due to salinity

3.4 Foundation Design Requirements

- BESS Foundations: Reinforced concrete plinths/pads designed for:
  - Dynamic loads during operation
  - Wind and seismic overturning moments
  - Minimum height: 30cm above prepared ground level
- Embankment & Compaction: At least 1m of embankment with compaction to prevent flooding/seismic movement.
- Drainage: Permanent open drains with ≥1% slope around structures.

3.5 Integration with Structural Design

- Geotechnical data must align with:
  - AS/NZS 1170 – Structural design actions
  - AS 3600:2018 / NZS 3101:2006 – Concrete structures
  - Cyclone and seismic design requirements
- Foundations must resist:
  - Wind loads up to 85m/s (Region D)
  - Seismic forces per AS/NZS 1170.4

3.6 Environmental & Construction Controls

- Erosion and sediment control during earthworks.
- Prevention of runoff into waterways.
- Vegetation clearing limited to necessary areas (min. 10–30m from permanent works).

4.0 Scope of Services

The Consultant shall provide all labour, materials, equipment, and expertise to complete the following phases:

4.1 Desk Study and Site Reconnaissance

- Review available information: Topographic maps, geological maps, aerial photographs, regional soil reports, and historical climate data (focus on cyclonic rainfall).
- Research seismic hazard data for the site per AS/NZS 1170.5.
- Conduct a visual site walkover to identify surface features, evidence of instability, drainage patterns, vegetation, surface soils, and accessibility.
- Develop a preliminary Geotechnical Investigation Plan based on the desk study and reconnaissance.

4.2 Subsurface Investigation

- Investigation Locations: Establish a grid-based investigation pattern across the site, with spacing appropriate to the expected variability (typically 50m - 100m centres). Additional testing to be concentrated in areas of critical infrastructure (substation, BESS pads, proposed cut/fill zones).

- Field Testing and Sampling:
    - Machine Excavated Trial Pits (AS 1726): A minimum of 5 trial pits to depths of 2.0m - 4.0m for visual classification, bulk disturbed sampling, and in-situ density/strength assessment.
    - Dynamic Cone Penetrometer (DCP) Tests (AS/NZS 1289.6.2.2 or similar): To provide rapid profiling of near-surface soil strength/stiffness for access road and shallow foundation design.
    - Hand Auger Borings: In areas inaccessible to machinery.
    - Standard Penetration Test (SPT) Borings (AS 1289.6.3.1): A minimum of 1 borehole per acre to depths of 5m - 8m (or to competent bearing stratum). Continuous SPT sampling in cohesionless soils; open drive samples in cohesive soils. Groundwater levels to be monitored.
    - Field Vane Shear Tests (if soft clays encountered): To assess undrained shear strength.
    - In-situ Density Testing (Sand Replacement Method, AS 1289.5.3.1): To assess compaction of existing fills or natural soils.

4.3 Laboratory Testing

Testing to be performed on representative samples in a IANZ/ NATA-accredited or internationally recognised laboratory, in accordance with the referenced Australian/New Zealand Standards:

- Soil Classification: Atterberg Limits (AS 1289.3.1.1, 3.2.1, 3.3.1/3.2), Particle Size Distribution (AS 1289.3.6.1), Linear Shrinkage, Soil Description (AS 1726).
- Strength & Compaction: Moisture Content (AS 1289.2.1.1), Dry Density, California Bearing Ratio (CBR) (AS 1289.6.1.1) for road subgrade, Direct Shear or Triaxial Shear tests for critical slopes/foundations.
- Corrosivity Assessment: pH, Electrical Resistivity, Sulfate and Chloride Content (AS 1289.4.1.1, 4.3.1, 4.4.1) for design of concrete foundations and steel piles/screws.
- Chemical Tests: For potential soil contamination if site history indicates.

4.4 Analysis and Reporting

The final Geotechnical Interpretive Report shall include, but not be limited to:

- Executive Summary.
- Project description and investigation methodology.
- Site description, geology, and seismicity.
- Detailed presentation of all field and laboratory data (logs, test results, plans).
- Interpretation of subsurface stratigraphy and groundwater conditions.
- Design Parameters: Recommended bearing capacities, soil stiffness parameters (modulus of subgrade reaction), friction angles, cohesion, etc.
- Foundation Recommendations: Suitable foundation types (shallow/deep) for different structures across the site, including allowable loads and settlement estimates (AS 2159).
- Earthworks Specifications: Recommendations for cut/fill, compaction requirements (minimum % of Standard Proctor, AS 1289.5.1.1/5.2.1), treatment of unsuitable materials, and erosion control.
- Slope Stability: Assessment of natural and cut slopes, recommended safe slope angles.
- Drainage and Pavement Design: Recommendations for subgrade preparation, capping layer requirements, and drainage.
- Seismic Site Classification: In accordance with AS/NZS 1170.5 (Site Class Ce, De, etc.) and commentary on liquefaction potential.

- Construction Considerations: Identification of potential geotechnical risks (e.g., high water table during wet season, soft spots, rock excavation), and mitigation measures.
- Conclusions and limitations of the investigation.

5.0 Location of the Site

The proposed site for the ground mounted solar power plant is at Qeleloa refer to Annexure A for details.

6.0 Request for Price (RFP) Submission

The Request for Proposal for the Consultancy Service shall include the following:

6.1 A covering letter including the complete name and address of the firm(s) performing the project, the principal firm including the name and title of person principally responsible for the project.

6.2 A detailed technical proposal with standards, specifications, methodology and indicative drawings or sketches including a programme for the works/services. Comments on the Scope of Services can be included to add value to the submission.

6.3 State a lump sum fee for the entire works/services, and clearly identifying the breakdown of costs in accordance to the scope of services mentioned above.

6.4 State hourly rates of personnel resources, if EFL requests to undertake additional work related to this assignment.

6.5 Company background and evidence of similar works undertaken by the firm(s) over the last five years including project name, summary of work carried out, contact name and address of clients.

6.6 Provide summary of at least five (5) similar assignments undertaken by the firm(s)/consortium in the Asia/Pacific region.

6.7 Background of proposed sub-consultants, if any.

6.8 CV's of personnel that will be engaged in the work/services including subconsultants/contractors.

6.9 Completed Responsibility matrix as shown below.

7.0 Responsibility Matrix

The responsibility matrix shall define key personnel who will be involved directly and indirectly with the proposed solar project.

Responsibility Matrix – Please use similar template

Name	Firm	Overall Project Management	Specialty/ Skills Required						
			Designer						
John X	XYZ	X							
Mary Y	ABC		X						

NOTE:

a) Complete the first row with the Specialties required

b) Complete the first column with the names of Project Key Staff.

c) One Project Key Staff person may be responsible for more than one Specialty.

d) Place a mark in the appropriate column relative to the appropriate Project Key Staff and Specialty.

8.0 Deliverables

1. Draft Geotechnical Interpretive Report for Client review.
2. Final Geotechnical Interpretive Report (3 hard copies, 1 digital PDF), incorporating Client feedback.
3. Appendices containing all raw field data, laboratory test sheets, and borehole/trial pit logs in digital format (Excel/AutoCAD).
4. Conduct additional geotechnical investigations if deemed necessary.
5. Submit a geotechnical interpretive report prepared by a qualified professional chartered geotechnical engineer before finalizing design.
6. Ensure foundation design is based on site-specific data for:
    1. Bearing capacity
    2. Settlement control
    3. Soil-structure interaction
7. Design for durability in corrosive, saline environment (e.g., use of sulphate-resisting cement, appropriate concrete mixes).

9.0 Project Schedule

- Mobilisation: Within 5 working days of written notice to proceed.
- Field Investigation: 20 working days, subject to weather and access.
- Laboratory Testing: 15 working days from sample submission.
- Draft Report Submission: Within20 working days of completion of field work.
- Final Report Submission: Within 5 working days of receipt of Client comments.

10.0 Health, Safety & Environmental (Hse)

- The Consultant shall prepare and submit a Site-Specific Safety Plan (SSSP) and an Environmental Management Plan (EMP) for the investigation works prior to mobilisation.
- All works shall comply with Fiji's workplace health and safety regulations and ensure minimal environmental disturbance. All trial pits and boreholes shall be properly backfilled and reinstated upon completion.

11.0 Client Responsibilities

- Provide site access and necessary landowner permissions.
- Identify underground services prior to commencement of intrusive works.
- Provide relevant project layout plans and load criteria for structures.
- Designate a site representative for liaison.

12.0 Assumptions

- The site is generally accessible for light track-mounted rigs and excavators.
- Client will handover the site and ensure it is clear of any land owner issue.
- Weather conditions will permit safe field operations.

13.0 Limitations

- The investigation points are discrete locations; conditions between points are inferred.
- The report is for the specific project and site. Use for any other purpose is at the user's risk.

- The Consultant is not responsible for design, but provides geotechnical parameters for the Designer's use.

14.0 Contract Condition

FIDIC White Book 2017 international standard Client/Consultant Model Services Agreement used for professional services, including design, feasibility studies, and project management shall be used. The bidder can propose an alternate if deemed necessary.

15.0 Insurance

The consultant shall be required to provide Certificates of insurance including any Professional Indemnity Insurance cover.

16.0 Evaluation Methodology

The RFP submissions shall be checked for completeness, firms that fail to submit all information required above may not be considered for award. A 65% weighting shall be given for the firm and personnel background and performance and 35% for the lump sum price.

17.0 Costs

All costs of preparing the submission shall be borne by the tenderer.

18.0 Notification and Award

Following FEA board approval, tenderers will be advised, by letter, whether they have been successful or not. Tenderers will be able to debrief with the evaluation team should they so request, however the scoring information will not be released to any of the tenderers at any time. Notwithstanding any other provision of this document, EFL reserves the right to:

- Accept or reject any proposal.
- Seek clarification of any aspect or information provided in the RFP document and to seek further information from any party.
- Amend the closing date for submission of the RFP or any other date referred to or implied in this Request for Proposals
- In whole or in part, suspend or cancel this RFP process and/or the overall process
- Re-advertise this RFP

19.0 Site Visits

Site visit is schedule for 4th February 2026 at Nadi Substation 15:00 Hours .Bidders who may not be able to attend the scheduled site visit shall coordinate with the Supply Chain office, at their own cost. A site visit can be arranged by EFL, upon request giving 1 weeks advance notice, which shall be organized depending on bidder's requirements.

20.0 Contents of Bidding Documents

The Tenderer is expected to examine carefully the contents of this Bidding document. Failure to comply with the requirements of bid submission will be at the Tenderer's own risk. Bids which are not substantially responsive to the requirements of the bidding documents will be rejected.

21.0 Clarification of Bidding Documents

A prospective Tenderer requiring any clarification of the bidding documents may notify EFL in writing by email addressed to:

Jitendra Reddy
Manager Procurement, Inventory & Supply Chain 2 Marlow Street, Suva, FIJI.
Phone: +679 3224360
Email: Tenders@efl.com.fj

EFL will respond to any request for clarification which it receives earlier than five (5) days prior to the deadline for submission of bids.

22.0 Amendment of Bidding Document

At any time prior to the deadline for submission of bids, EFL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Tenderer, modify the bidding documents by issuing addenda.

23.0 Language of Bid

The bid, and all correspondence and documents related to the bid, exchanged between the Tenderer and the EFL shall be written in the English language.

24.0 Bid Currencies

Prices shall be quoted in their **respective country currency** and shall be inclusive of all taxes applicable for such works.

25.0 Bid Validity

Bids shall remain valid for a period of **120 days** from the date of Deadline for Submission of Bids.

26.0 Tender Submission

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: https://www.tenderlink.com/efl

EFL will not accept any hard copy submission.

For further information or clarification please contact our Supply Chain Office on phone (+679) 3224360 or (+679) 9926520 or email us on Tenders@efl.com.fj.

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act. The lowest bid will not necessarily be accepted as the successful bid.

The Tender Bids particularly the "Price" must be typed and not hand written. Any request for the extension of the closing date must be addressed to EFL in writing three (3) working days prior to the tender closing date.

Tender Submission via email or fax will not be accepted.

27.0 Deadline for Submission of Bids

Bids must be received by EFL at the address specified above no later than 18th February 2026.

EFL may, at its discretion, extend the deadline for submission of bids by issuing an addendum, in which case all rights and obligations of EFL and the Tenderers previously subject to the original deadline will thereafter be subject to the deadlines extended.

28.0 Late Bids

Any bid received by EFL after the deadline for submission of bids prescribed above will be rejected.

29.0 Modification and Withdrawal of Bids

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.

Any addendum thus issued shall be part of the bidding documents, and shall be communicated in writing or by Email to all bidders of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum by email to the Employer.

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.

No bid may be modified by the Tenderer after the deadline for submission of bids.

30.0 Rejection of One or All Bids

EFL 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 Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the grounds for the rejection.

31.0 Process to be Confidential

Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process.

Any effort by a Tenderer to influence EFL's processing of bids or award decisions may result in the rejection of the Tenderer's bid.

Lowest bid will not necessarily be accepted as successful bid.

32.0 Clarification of Bids

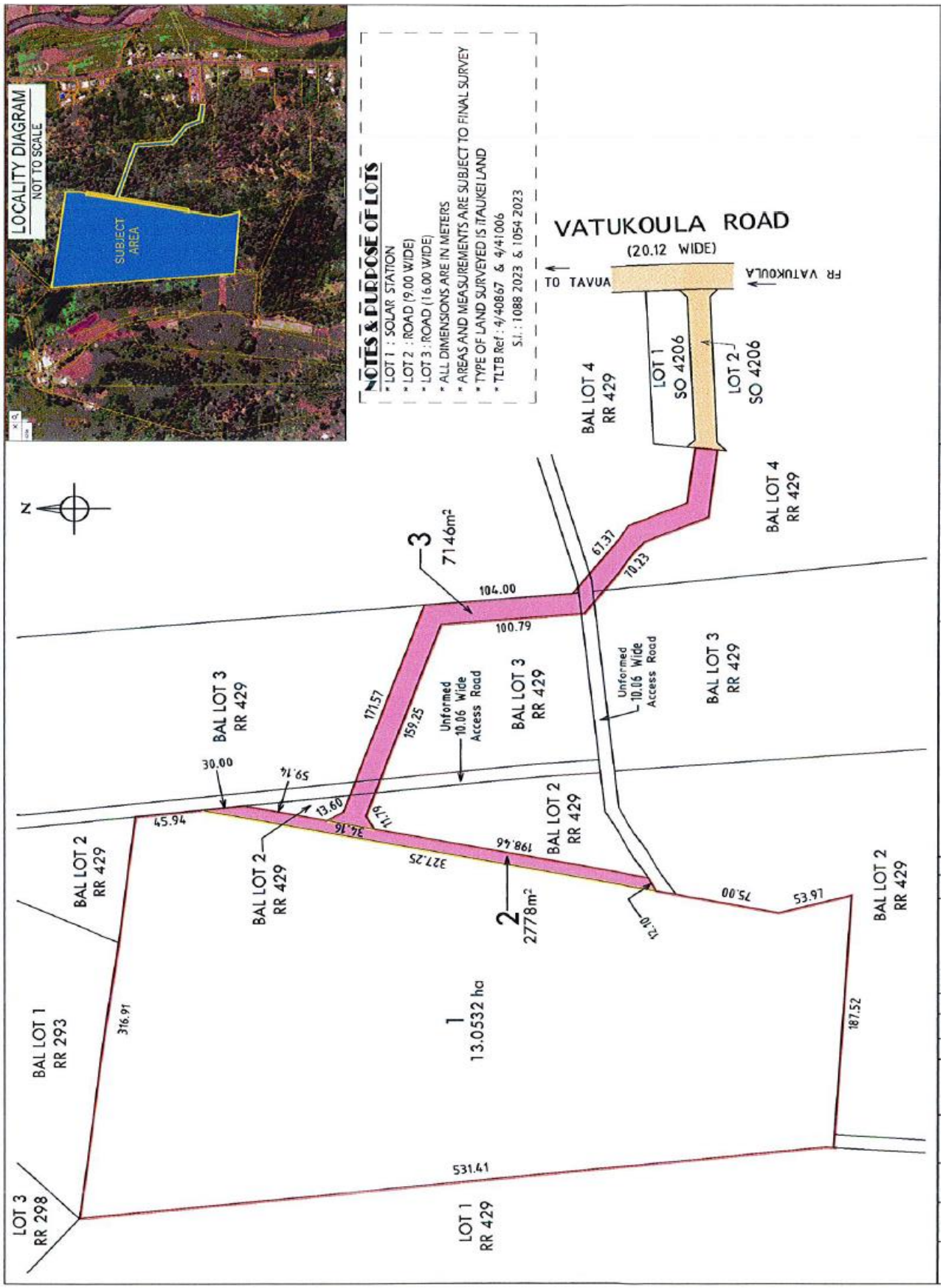
To assist in the examination, evaluation and comparison of bids, EFL may, at its discretion, ask any Tenderer for clarification of its bid. The request for clarification and the response shall be in writing, but

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 EFL in the evaluation of the bids.

33.0 Compliance with Specifications

The tender shall be based on the scope of works specified and shall be in accordance with the Technical Specification. It should be noted that unless departures from specifications are detailed, the tender would be taken as conforming to the Specification in its entirety. The Tenderer shall tender for the whole of the Works included in the Specification.

Annexure A


LOCALITY DIAGRAM
NOT TO SCALE
SUBJECT AREA
NOTES & PURPOSE OF LOTS
* LOT 1 : SOLAR STATION
* LOT 2 : ROAD (9.00 WIDE)
* LOT 3 : ROAD (16.00 WIDE)
* ALL DIMENSIONS ARE IN METERS
* AREAS AND MEASUREMENTS ARE SUBJECT TO FINAL SURVEY
* TYPE OF LAND SURVEYED IS iTAUKEI LAND
* TLTB Ref : 4/40867 & 4/41006
S.I. : 1088 2023 & 1054 2023
VATUKOULA ROAD
(20.12 WIDE)
TO TAVUA
FR VATUKOULA
BAL LOT 4 RR 429
LOT 1 SO 4206
LOT 2 SO 4206
3
7146m²
104.00
100.79
67.37
70.23
171.57
159.25
Unformed 10.06 Wide Access Road
BAL LOT 3 RR 429
30.00
59.14
13.60
45.94
34.16
11.49
327.25
198.66
2
2778m²
BAL LOT 2 RR 429
12.70
75.00
53.97
1
13.0532 ha
316.91
187.52
531.41
BAL LOT 1 RR 293
LOT 3 RR 298
LOT 1 RR 429
N

TENDER CHECKLIST

The Bidders must ensure that the details and documentation mention below must be submitted as part of their tender Bid

Tender Number _____

Tender Name _____

1. Full Company / Business Name: _____

   (Attach copy of Registration Certificate)

2. Director/Owner(s): _____
3. Postal Address: _____
4. Phone Contact: _____
5. Fax Number: _____
6. Email address: _____
7. Office Location: _____
8. TIN Number: _____

   (Attach copy of the VAT/TIN Registration Certificate - Local Bidders Only (Mandatory)

9. FNPF Employer Registration Number: _____ **(For Local Bidders only) (Mandatory)**
10. **Provide a copy of Valid FNPF Compliance Certificate (Mandatory- Local Bidders only)**
11. **Provide a copy of Valid FRCS (Tax) Compliance Certificate (Mandatory Local Bidders only)**
12. **Provide a copy of Valid FNU Compliance Certificate (Mandatory Local Bidders only)**
13. Contact Person: _____

I declare that all the above information is correct.
Name: _____
Position: _____
Sign: _____
Date: _____

Tender submission

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: https://www.tenderlink.com/efl

EFL will not accept any hard copy submission to be dropped in the tender box at EFL Head Office in Suva.

This tender closes at 4.00pm (1600hrs) on Wednesday 18th February, 2026.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360 or (+679) 99926520** or email us on tenders@efl.com.fj

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act. Bidders are to clearly state the percentage of VAT that is applicable to the bid prices.

The lowest bid will not necessarily be accepted as the successful bid.

The Tender Bids particularly the "Price" must be typed and not hand written.

Any request for the extension of the closing date must be addressed to EFL in writing three (3) working days prior to the tender closing date.

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