



**MR 26/2021**

**DESIGN, MANUFACTURE AND SUPPLY OF  
ONE NEUTRAL EARTHING RESISTOR COMPLETE  
WITH MOTORISED ISOLATORS FOR SUVA  
SUBSTATION**

**ENERGY FIJI LIMITED**

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## SCHEDULE A: LIST OF EXPERIENCE, PERSONNEL & FINANCIAL STATEMENTS

### Previous Experience

The Tenderer is to submit a list of Projects worked under with a similar scope, involving the design and manufacture of NER, in chronological order of year completed.

Client	Project Scope and Description	Approx. Project Value	Year Completed	Duration of NER manuf & supply

### Project Personnel

The Tenderer is to submit list of personnel who will work on this project and also provide their resumes in its bid.

Name	Designation	Duration of Employment with Company	Years of Experience

### Financial Statements

The Tenderer shall also submit past three years audited financial statements and records showing its financial ability to undertake this project.

## SCHEDULE B: PRICE AND PAYMENT SCHEDULE

The prices below are to be inclusive of shipping to Suva Substation Site in Fiji.

Currency of Tendered Price: .....

Component	Total Price
Design and Manufacture of NER, isolators and Monitoring System	
Routine Testing of NER & Witnessing by EFL Representative (2x EFL engineer cost to be included)	
Tools & Loose Equipment as per Section 7.7	
Packaging and Delivery of NER complete with isolator and monitoring system to Site, including Tools & Equipment	
Post-installation inspection, on-site training and post-commissioning audit	
Carry out detailed design for pad, provide detailed design drawings and specifications to EFL.	
<b>(Tenderer to add other items as required)</b>	
<b>Total</b>	

Total Contract Price (in Words):

.....  
 .....

### Payment Schedule

Milestone	Percentage Payment	Amount
Delivery of Neutral Earthing Resistor complete with Motorised Isolators & Tools & Equipment to designated delivery point	95%	
End of 12 months Defects Liability Period (and subject to zero uncleared defects at end of the Defects Liability Period as per Contract)	5%	
Grand Total	100%	

Authorized Signatory of Tenderer:

Signature: .....

Name: .....

## SCHEDULE C: AS 4911 ANNEX A (TO BE SUBMITTED BY TENDERER)

All Tenderers are required to complete and submit a copy of this form with their bid submissions.

Item		
1	Purchaser (Clause 1)	Energy Fiji Limited (EFL)
2	Purchaser's Address	2 Marlow Street, Suva
3	Supplier (clause 1)	Supplier to provide
4	Supplier's Address	Supplier to provide
5	Stated purpose for equipment (clause 1 definition of acceptable)	As stated in tender specifications and/or purchase order
6	Period of time for delivery (Clause 1 and Sub-clause 19.1)	Supplier to provide
7	Delivery Place (Clause 1 and Sub-clause 19.1)	EFL's Suva Substation, Suva, Fiji
8	Mode of Delivery (Sub-clause 19.1)	Supplier to provide
9	Governing Law (Clause 1(h))	Laws of Fiji
10	a) Currency (clause 1(g))	Supplier to provide
	b) Place for payments (clause 1 (g))	Supplier to provide
	c) Place of Business of bank (clause 1(d))	Supplier to provide
11	Limits of Quantities to be supplied and delivered (clause 2.2)	As stated in tender specifications and/or purchase order
12	Suppliers security	Not applicable
13	Purchaser's security	Not applicable
14	Purchaser supplied documents (sub-clause 6.2)	Tender specifications and addenda (where issued).
15	Supplier Supplied documents (sub-clause 6.3)	Supplier to provide
16	Time for Purchaser's direction about documents (sub-clause 6.3(c))	14 calendar days
17	Sub-contract work requiring approval (sub-clause 7.2)	All work.
18	Legislative Requirements, those excepted (sub-clause 10.1)	Not applicable
19	Reference date (clause 1, sub-clause 10.2(b))	Deadline for Submission of Bids, as defined in tender specifications
20	Time by which insurance cover for the Equipment is to be effected (sub-clause 13.1)	Prior to tender award.
21	Public and product liability insurance (sub-clause 13.2)	Supplier to provide
22	Qualifying cause of delay, causes for which EOTs will not be granted (page 3, subparagraph (b) (iii) of Clause 1 and sub-clause 17.2)	None.

23	Liquidated damages, rate (subclause 17.5)	0.5% per day upto 10% of the purchase order value
24	Delay Damages	As assessed by EFL
25	Date for completion of acceptance testing (subclause 18.1 and 21.1)	As stated in tender specification
26	Party responsible for unloading the <i>Equipment</i> (subclause 19.1)	EFL
27	When risk in the <i>Equipment</i> passes (subclause 20.1)	At time of acceptance by Purchaser.
28	Time at which ownership of the <i>Equipment</i> passes to the Purchaser (subclause 20.2)	At time of acceptance by Purchaser.
29	Period for <i>Purchaser's</i> notice that <i>Equipment</i> are rejected (subclause 21.1)	14 calendar days
30	Period for <i>Purchaser's</i> notice accepting or rejecting <i>Supplier's</i> proposal (subclause 21.4)	14 calendar days
31	Defects liability period (clause 22)	12 months
32	Invoice (subclause 24.1) Time for Invoice	Within 5 days of delivery
33	Period for Payment (subclause 24.1)	30 calendar days from time of acceptance by Purchaser
34	Equipment for which prepayment may be claimed (subclause 24.2)	None.
35	Interest rate on overdue payments (subclause 24.5)	Nil.
36	Arbitration (subclause 28.3) a) Person to nominate an arbitrator	President of Fiji Institute of Engineers
	b) Rules for arbitration	Laws of Fiji
37	The Supplier's liability is limited as follows (clause 29)	The contract sum as adjusted pursuant to the Contract
38	The Purchaser's liability is limited as follows (clause 29)	The contract sum as adjusted pursuant to the Contract

Authorized Signatory of Tenderer:

Signature: .....

Name: .....

Date: .....

## SCHEDULE D: SPECIFICATION REQUIREMENTS

### D.1: Supplier Details

	Item	Required
	Supplier's Name	
	Supplier's Registered Address	
	Copy of ISO 9001 Certification	
	Copy of ISO 45001 Certification	
	Copy of ISO 14001 Certification	
	Copies of insurance certificates	

### D.2: Neutral Earthing Resistor

	Item	Units	Required	Tendered
1.	Name of Manufacturer			
2.	Manufacturer's Address			
3.	Country of Manufacture of NER			
4.	Type/Model No.			
5.	Current rating	Amps	As per spec	
6.	Resistance at 20° C	Ohms		
7.	Resistance after carrying the rated current for rated time	Ohms	<10%	
8.	Temperature rise after carrying rated current for rated time	° C	<760 deg C	
9.	Maximum permissible temperature of			
	Resistor	° C		
	Insulator	° C		
10.	Enclosure	° C		
	Dimensions of Enclosure			
	Length	mm		
11.	Width	mm		
	Height (including bushing & support structure)	mm		
11.	Material of			
	Resistor			

	Supporting insulator			
	Enclosure			
12.	Type of Insulator			
13.	Rated Voltage	kV	11kV	
14.	Power frequency withstand voltage	kV		
15.	Minimum dry flash over voltage	kV		
16.	Minimum wet flash over voltage	kV		
17.	Impulse withstand voltage against casting	kV Peak		
18.	Impulse withstand voltage against ground	kV Peak		
19.	Gross Weight	kg		
20.	Copies of Type Test Reports			
21.	Copies of Routine Test Reports			
22.	Annual Failure Rate			
23.	Data to support Annual Failure Rate			
24.	Mean Time to Failure			
25.	Data to support Mean time to failure			
26.	Drawings of foundation pad are supplied (reviewed by a qualified Civil engineer)			

### D.3 Motorized Isolators

	Item	Units	Required	Tendered
1.	Name of Manufacturer			
2.	Manufacturer's Address			
3.	Country of Manufacture of isolator			
4.	Type/Model No.			
5.	Continuous Current rating	Amps	1000 Amps	
6.	Short time current rating	A/sec	21kA/3sec	
7.	Resistance for closed contact	Ohms		
8.	Nominal operating voltage	36kV		
9.	Maximum AC voltage withstand			
10.	Operating control voltage			
11.	Number of auxiliary contacts provided			
12.	Type test reports provided			
13.	Routine test reports are provided			

14.	Drawings of isolator and control circuits are provided			
15.	Installation, operating and maintenance manual is provided			

#### D.4 NER Monitoring Relay

	Item	Units	Required	Tendered
1.	Name of Manufacturer			
2.	Manufacturer's Address			
3.	Country of Manufacture of relay			
4.	Type/Model No.			
5.	Current input rating			
6.	Voltage input rating			
7.	Number of auxiliary contacts (N/O and N/C)			
8.	Operating temperature range			
9.	Dimensions of relay			
10.	Weight of relay			
11.	Programming Software			
12.	Connection cables			
13.	Type test reports			
14.	Routine test reports			
15.	Copy of instruction manual is provided			
16.	Connection diagrams are provided			
17.	Inspection, Testing and Commissioning Manual is provided			

#### D.5 Neutral CT

	Item	Units	Required	Tendered
1.	Name of Manufacturer			
2.	Manufacturer's Address			
3.	Country of Manufacture of CT			
4.	Standard to which CT is manufactured and tested		IEC 61869	
5.	CT Class			
6.	Available CT ratios			



7.	CT kneepoint at highest ratio at 75deg C			
8.	CT voltage withstand rating			
9.	CT resistance at 75 deg C			
10.	CT short circuit withstand rating			
11.	CT dimensions			
12.	Type test reports			
13.	Routine test reports			
14.	CT wiring diagrams are provided			

Authorized Signatory of Tenderer:

Signature: .....

Name: .....

Date: .....

## SCHEDULE E: PROGRAMME OF WORK

The Tenderer is required to state the commencement and completion dates for the NER in the project schedule format given below. EFL expects delivery of the NER complete with the isolators and monitoring system no later than 15<sup>th</sup> August 2021, based on a Contract agreement being put in place by 31<sup>st</sup> March 2021, and an Official Purchase Order issued by 5<sup>th</sup> April 2021.

Component or Work	Commencement Date	Completion Date
1. Receipt of Official Purchase Order		
2. Submission of Design Drawings and Design Report and Design Review		
3. Procurement of Materials		
4. Manufacture of NER, isolators and sourcing of components for monitoring system		
5. Factory Testing of NER and Isolators		
6. Packaging and Shipping		
7. Expected Delivery on Site		
8. Commencement of Defects Liability Period	No later than 15 <sup>th</sup> August 2021	
9. End of Defects Liability Period		

The Tenderer is to note that the overall duration of the project shall remain same, if there is a delay in award of tender, the completion date will be shifted by an equal number of days.

Successful bidder shall be required to submit monthly progress reports.

Authorized Signatory of Tenderer:

Signature: .....

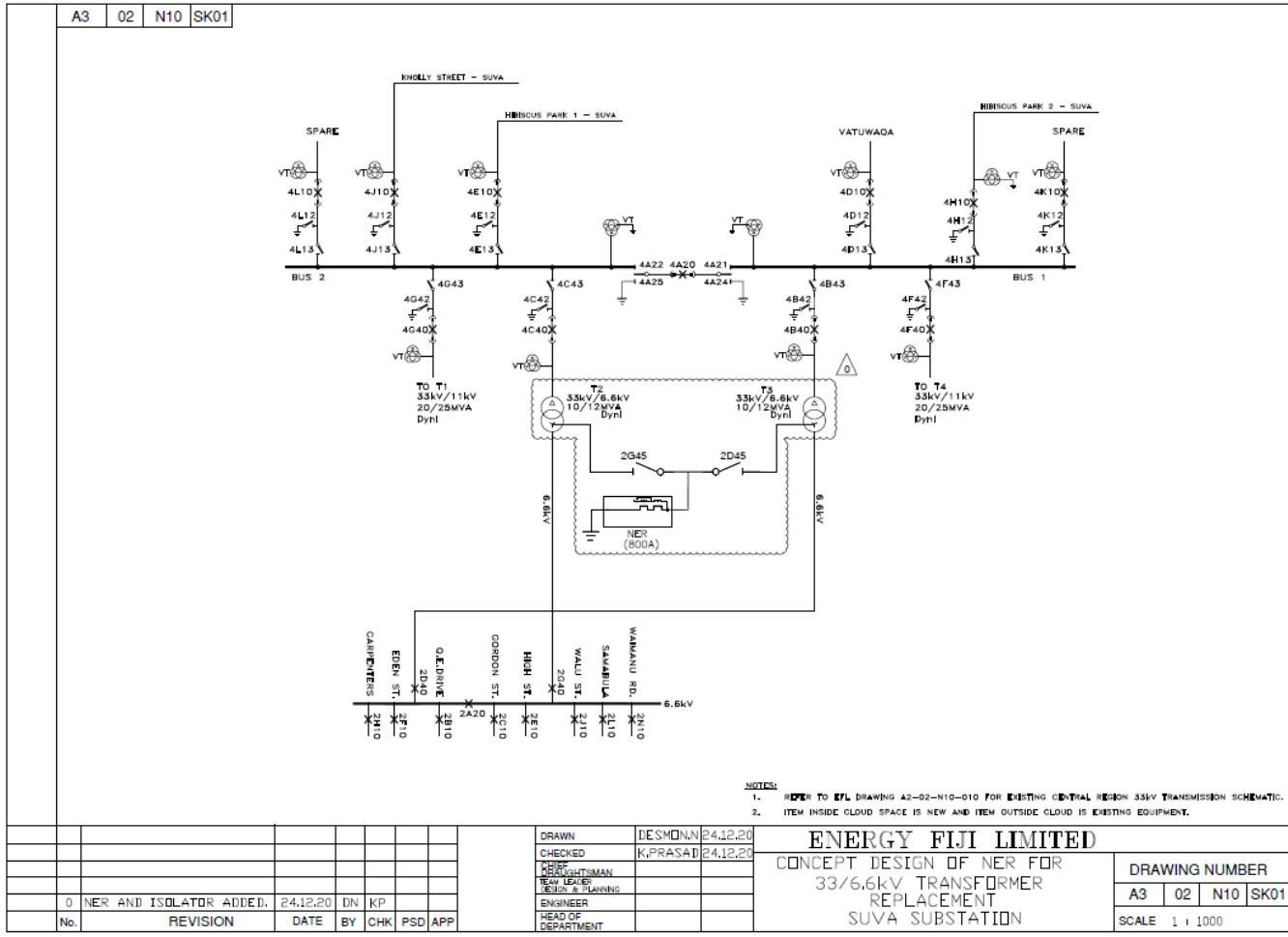
Name: .....

Date: .....

## **SCHEDULE F: OVERALL EVALUATION CRITERIA**

As per EFL tender specifications.

# SCHEDULE G: CONCEPT DESIGN DRAWING



## SCHEDULE H: DEPARTURE FROM SPECIFICATIONS

The Supplier shall nominate the Clause or relevant section of the tender specification and describe the departure. If none exists, the Bidder shall state NONE on the form below.

Tender Specification Reference <sup>i</sup>	Departure

Failing to submit a completed Departure from Specifications form shall result in a bid being declared non-responsive and EFL shall reject the Bid outright.

Authorized Signatory of Tenderer:

Signature: .....

Name: .....

Date: .....

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<sup>i</sup> Where possible, the Tender shall refer to the specific clause of the tender specification.