



RENEWABLE ENERGY DEVELOPMENT DIVISION

OFFICE OF THE PRIME MINISTER

GOVERNMENT OF THE COOK ISLANDS

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NOTICE NO.1

Cook Islands Renewable Energy Sector Project – CIREC 007: CK181929 Rarotonga Battery Energy Storage System Power Station (Addendum no.01)

1. BIDDER QUESTION

The BESS specifications call for the ability to provide an overload of 6000 kW for 1 second, can this be provided as 6000 kVA instead and active power at 4500 kW for 60 seconds?

EMPLOYER RESPONSE:

This is acceptable.

2. BIDDER QUESTION

Document 07. Section 4 Bidding Forms_B-Power Station BESS, Table 6.2 BESS minimum energy storage capacity, under Section 6.5 Performance stipulates figures that are different to Table 6.2 BESS minimum energy storage capacity as shown in 13. Section 6_Employer Requirements_B-Power Station BESS page 22. Can you please confirm which one applies?

EMPLOYER RESPONSE:

Document 13 (Section 6_Employer Requirements_B-Power Station BESS) is in error. Please see Employer Notice 1.

3. BIDDER QUESTION

Receiving free electronic copy of the Bidding Documents by sending email to Mr. Tangi Tereapii, does this mean that we are qualified to attend and submit the bid? Is it a must to purchase the hard copy to get the qualification to attend and submit the bid?

EMPLOYER RESPONSE:

It is not a requirement to purchase a hardcopy of the documents to submit a bid

4. BIDDER QUESTION

We received 16 documents from Mr. Tangi Tereapii, numbered from No.1 to No.18, while the No.11 and No.12 documents are missing. Can you please resend the No.11 and No.12 documents?

EMPLOYER RESPONSE:

There are no No.11 and No.12 documents in the bid

5. BIDDER QUESTION

in relation to Evaluation and Qualification Criteria:

2.3 Financial Situation

2.3.1 Historical Financial Performance

Submission of audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Employer, for the last 3 years (2016-2018) to demonstrate the current soundness of the Bidder's financial position

2017 and 2016 are duly audited, but 2018 financial statements won't be duly audited before submission deadline (according to the spanish law), we kindly request to clarify whether it would be acceptable for you to submit unaudited financial statements for 2018 taking into account that we will provide the audited document as soon as we have it.

EMPLOYER RESPONSE:

This is acceptable.

6. BIDDER QUESTION

In the tender document we noticed that the BESS to comply with AS/NZS3000, and also some other standard requirement for equipment are mentioned in the document are all in Australia standard, can we use corresponding IEC standard for equipment, for local works we can use Australia standard? Because most chinese produce are based on IEC standard.

EMPLOYER RESPONSE:

Please refer to Section 6 Employer Requirements Appendix B: Standards:

“The electricity system in Cook Islands is designed to Australian / New Zealand Standards. As such, these are used as the specified standards for the BESS. Recognising that OEM products in the international market may not be certified against Australian / New Zealand Standards, such products will not necessarily be excluded. However, bidders must demonstrate product compliance with ANSI, IEC or ISO standards providing coverage of the same requirements (in particular, including earthing, substation design for access and safety, fire detection, lightning

protection, switchgear, signage, and protection). Non OEM products and custom installations should be built to the specified standards.”

7. BIDDER QUESTION

"Section 6 Employer Requirements
Appendix B – Power Station BESS for Grid
Stability Support" 2.1 The primary purpose of the BESS is to be the sole and/or primary source of power system frequency regulation when commanded
Will ESS work in off-grid application when D.G are off? In the case, will ESS have to support PV working?

EMPLOYER RESPONSE:

The BESS must have the capacity to operate in grid forming (microgrid) mode acting as voltage and current source with diesel generators off. Bidder’s should provide an indication of the PV capacity the BESS could be expected to support, however, Employer expects to install other equipment to provide additional fault current to support the scale of expected future PV generation.

8. BIDDER QUESTION

"Section 6 Employer Requirements
Appendix B – Power Station BESS for Grid
Stability Support" "2.1 Other devices, that are yet to be procured, are intended to regulate voltage and provide fault current when diesel generators are off. The BESS is required to be able to support these functions, but must also be capable of being the sole/primary source of voltage and able to supply fault current up to its overload limits."

What's the specified required fault current provided by ESS?

EMPLOYER RESPONSE:

Bidders may treat the 1s overload capacity as the required fault current (i.e. 6 MW).

9. BIDDER QUESTION

"Section 6 Employer Requirements
Appendix B – Power Station BESS for Grid Stability Support"

2.2 b. 3000 kW charge to finish at SOCmax; How long does it required for ESS to charge to SOCmax?

EMPLOYER RESPONSE:

At 3MW charge rate, Employer expects it will take approximately (SOCmax-SOCmin)/3MW to reach SOCmax, allowing some minor variations for any limitations in discharge rate near SOC limits.

10. BIDDER QUESTION

"Section 6 Employer Requirements
Appendix B – Power Station BESS for Grid
Stability Support" 2.2 c. Over next 6 hours used in an RE smoothing role with a total discharge of 2000 kWh , finishing at SOCmax;

Is there any RE curve so we can know the required PCS capacity? And after RE smoothing, the battery total discharge is 2000kWh, right?

EMPLOYER RESPONSE:

RE curves cannot be provided since the RE in the network is rapidly increasing and any curves provided now will likely change over the life of the BESS. The BESS must be robust to such changes. For the purpose of the usage profile, we expect bidders to consider a typical solar smoothing application which would occur under partially cloudy conditions. As a guide, this may include changes in power required from the BESS over the full normal operating range within periods as short as 30 seconds.

After smoothing in the usage profile, BESS would have discharged a total of 2000kWh.

11. BIDDER QUESTION

"Section 6 Employer Requirements
Appendix B – Power Station BESS for Grid
Stability Support" 2.2 d. 3000 kW discharge to finish at 50 % SOC;

How long does it required for ESS to charge to 50% SOC? So we know the battery discharge capacity.

EMPLOYER RESPONSE:

Battery discharge capacity is specified separately in Section 6 Employer Requirements Appendix B – Power Station BESS, paragraph 6.5. Paragraph 2.2 defines a typical usage pattern.

12. BIDDER QUESTION

"Section 6 Employer Requirements
Appendix B – Power Station BESS for Grid
Stability Support" 2.2 f. 3000 kW discharge to finish at SOCmin;

How long does it required for ESS to charge to SOCmin? So we know the battery discharge capacity.

EMPLOYER RESPONSE:

Battery discharge capacity is specified separately in Section 6 Employer Requirements Appendix B – Power Station BESS, paragraph 6.5. Paragraph 2.2 defines a typical usage pattern.

13. BIDDER QUESTION

"Section 6 Employer Requirements Appendix B – Power Station BESS for Grid Stability Support" 2.2 h. Repeat each day. Daily energy discharge equals the energy across the BESS Usable Range plus 2000 kWh.

Does the total capacity equal to (SOCmax-SOCmin+ 2000kWh)?

EMPLOYER RESPONSE:

Correct.

14. BIDDER QUESTION

"Section 6 Employer Requirements Appendix B – Power Station BESS for Grid Stability Support" 2.3 The BESS shall include sufficient installation space and connectivity to allow Employer to install its own PLC within the BESS, powered by the BESS UPS

Can you specify the PLC dimension and voltage and current ?

EMPLOYER RESPONSE:

Bidders should allow for a typical PLC cabinet. Indicatively:
1200Hx800Wx300D
230V GPO (indicative max load 75W)

15. BIDDER QUESTION

"Section 6 Employer Requirements Appendix B – Power Station BESS for Grid Stability Support" 4.3 The design life of the BESS must be at least 20 years.

Battery system is always with 10 years warranty.

EMPLOYER RESPONSE:

The system design life must be 20 years. Employer expects that battery cells and other consumables may need to be replaced during this period and this is included in the evaluation.

16. BIDDER QUESTION

"Section 6 Employer Requirements

Appendix B – Power Station BESS for Grid

Stability Support" 4.3 The BESS shall be designed and installed such that all components will remain safe, operational, and maintainable for the entire design life using tendered O&M procedures.

Will battery replacement be charged in the tendered O&M or be included in the tender quotation?

EMPLOYER RESPONSE:

Battery replacement, if required due to cells reaching end of life, is part of the bid evaluation in Section 3 Evaluation and Qualification Criteria. However, Bidders should not include carrying out the battery replacement in their quotation.

17. BIDDER QUESTION

Delivery time" Could you specify the time when we need to deliver required ESS?

EMPLOYER RESPONSE:

This may be determined by the bidder to comply with Section 9, Contract Forms, Appendix 4 Time Schedule.

18. BIDDER QUESTION

Anti-corrosion requirement Could you specify the anti-corrosion requirement.?

EMPLOYER RESPONSE:

Anti-corrosion requirements are covered at various parts of the Employer Requirements. In summary, the BESS and associated equipment are required to be resistant to corrosion expected for the environmental conditions (including high humidity, salt-laden air) for the design life. Typically this will require ISO 12944 Class 4 protection.

19. BIDDER QUESTION

What's the distance between site and sea-shore?

EMPLOYER RESPONSE:

The site location is shown in drawing CIRESP-006-01_Site Location.pdf. Distance to the coast is approximately 2 km.

20. BIDDER QUESTION

Ambient temperature. Could you specify local ambient temp, lowest temp, average temp, highest temp?

EMPLOYER RESPONSE:

Please refer to Section 6 Employer's Requirements, Supplementary information

21. BIDDER QUESTION

Warranty requirement Could you specify the warranty requirement?

EMPLOYER RESPONSE:

Please refer to Section 6 Employer's Requirements, Warranties subsection.

22. BIDDER QUESTION

"1. Scope of Supply of Plant and Services" in document "09. Section 6_Employer Requirements" saying that: "The BESS shall provide and include:
..... Capacity to charge and discharge at 3 MW (with overload capacity to 6 MW)"

Normally, the PCS can work long time overloaded 110% and work short time overloaded 120%, but in the bidding documents the requirement for overload is 200% as shown above. If we have to meet the requirement of 6 MW overload capacity, we have to larger the capacity of PCS. Please confirm whether the ability to work at 6 MW for 1 second is a must?

EMPLOYER RESPONSE:

6 MW for 1 second performance is required. We anticipate that some bidders will need to oversize continuous capacity of PCS and / or batteries to meet this requirement.

ADDENDUM NO.1 EMPLOYER NOTICE 1: This will form part of the bidding documents

Table 6.2 BESS minimum energy storage capacity as shown in 13. Section 6_Employer Requirements_B-Power Station BESS page 22 is hereby corrected as follows:

Table 6-1 BESS minimum energy storage capacity

Conditions	SOC range	SOC _{max} to SOC _{min}	SOC _{max} to SOC _{min}
	Power level	Any discharge greater than 500 kW	Any discharge less than 500 kW*
	Ambient conditions	All typical site conditions	All typical site conditions
	Included loads	All BESS loads at all Connections	BESS, but excluding transformer, 'non-critical' and 'critical' loads as far as practical
BESS minimum discharge energy	Beginning of life (BOL)	3000 kWh	3000 kWh
	End EDLP (5 years) **	2400 kWh	2400 kWh
	End of 10 years**	1800 kWh	1800 kWh
	End of cell life (EOL) **	1800 kWh	1800 kWh

* Excludes small discharges where internal loads significantly alter capacity

** At specified usage profile

Where the bidder offers a higher storage capacity under its functional guarantees, these minimum storage capacities shall be adjusted upwards proportionally.



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