

HES-TECH 19/2223: ENGINEERING, PROCUREMENT AND COMMISSIONING OF A 30KWP AC GRID-TIE COUPLED ROOFTOP SOLAR PV SYSTEM AT CIVIC CENTRE

C2.1.2 SPECIFIC PRICING INSTRUCTIONS

1. The purpose of the Bills of Quantity (BOQ) is to define measurable pricing data for tender evaluation and to determine payment due for Works done to date.
2. This is a re-measurable contract, with a maximum upper limit of 10% above the tendered Form of Offer.
3. The tender price must be based on the Bills of Quantities. The priced Bills of Quantities shall be submitted with the tender documents.
4. The BOQ form part of and must be read in conjunction with the Specification.
5. Part C2.2 also include the Levelised Cost of Electricity (LCOE) Calculator spreadsheet that will be used to evaluate and determine the successful tenderer.
6. Item H, TOTAL FOR PROJECT, in the BOQ summary page will be used for the "**Tendered Price for EPC Part**" (Excel Cell C6) in the LCOE calculator spreadsheet.
7. Item I (**OPERATION & MAINTENANCE & TRAINING**) of the BOQ summary page over a 24-month period will be used for the "**Tendered price for O&M for the first 2 years total**" (Excel Cell C7) in the LCOE Calculator spreadsheet.
8. The calculated Result 1 in the LCOE spreadsheet, i.e. "**Levelised Cost of Electricity (LCOE) after Tax (nominal, escalating**", (Excel Cell H6) must be included on the final Price Summary Page of the BOQ.
9. The financial evaluation shall be based purely on the calculated Levelised Cost of Electricity (LCOE).
10. The LCOE Calculator Spreadsheet lists under Result 3, (Excel Cell H23), the liquidated damages to be paid by the Contractor per percentage point of underperforming Performance Ration. This value must be inserted as Item C.1 on the BOQ's Price Summary Page.
11. The Total to be carried forward to the **Form of Offer**, shall be the following;

M

GROSS TENDER AMOUNT (VAT INCL.)
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12. State the rates and prices in Rand unless instructed otherwise in the tender data.
13. The Tenderer is responsible for the Engineering of the works and as such will be responsible to quantify certain items in the BOQ in line with his design. The Tenderer will then also include the Supply and Installation costs of the specific items. For instance, the number of Inverters is not quantified as this will be dependant one the Tenderers design. These numbers will then be used to price the Bill and if awarded, used for payments.
14. The completed Bills of Quantities shall detail the unit-rate / Lot / Sum and total amount for Supply and Install respectively for each Item. Tenderers are advised to check their item extensions and total additions since no claim for arithmetical errors will be considered.
15. No alteration, erasure or addition is to be made in the text of the Bills of Quantities. Should any erasure or addition be made it will not be recognised, but the original wording of the Bills of Quantities will be adhered to.
16. The Engineer will check the completed Bills of Quantities for arithmetical errors, omissions and discrepancies in accordance with the Standard Conditions of Tender.
17. Only major Items have been scheduled but the Tenderer shall nevertheless include for all things he considers necessary whether specified in detail or not to complete the work to specification and in a satisfactory and workmanlike manner, to provide a complete and working system. No extra price will be considered for the provision of materials which should have been allowed to provide the completed works unless detailed by the Contractor in the space provided elsewhere in the Specification.
18. Where such equipment is found not to comply with the Specification, the Contractor will be required to provide equipment which does comply, without adjustment to the price in the Bills of Quantities.
19. Where no rates are filled-in by the Tenderer, or the rate is indicated as Nil, it will be assumed that there is no charge for the particular item and that the cost thereof has been included in the other rates provided.
20. The Bills of Quantities shall not be used for ordering purposes. The Contractor shall check and measure the lengths of cables / conductors on site before ordering any of these materials.

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21. The quantities and rates included for Daywork shall not form part of the evaluation price, and Tenderers shall note that this item must be regarded as provisional and will only be payable to the Contractor if and when a written instruction to this effect has been issued. It will not be included in the Form of Offer.
22. Expenditure in connection with Provisional and Prime Cost Sums and under the Contingency Allowance (if any) shall be solely at the discretion and on the written instruction of the Engineer.
23. An Excel spreadsheet version of the Bill will be made available to Tenderers on request. The Engineer or the Employer does not take responsibility for any arithmetical or other errors that may occur due to the use of the spreadsheet. The original wording and quantities of the Bills included in the tender document will be adhered. The priced printed version of the Bill may be submitted, however, each page must be initialed by the Tenderer. The Price Summary must be completed by hand and signed in black ink.
24. The Price Summary Page must include the estimated time required by the Contractor to complete the 30kWp system in weeks from date of official purchase order until the date of practical completion. This period must be kept to a minimum and must be agreed with the Employer.

DECLARATION,

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ABOVE IS CORRECT. I ACCEPT THAT THE MUNICIPALITY
MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

AUTHORISED SIGNATURE:

NAME:

CAPACITY:

DATE:

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C2.2: BILL OF QUANTITIES

C2.2 Bill of Quantities

BILL OF QUANTITIES

ITEM	ENGINEERING, PROCUREMENT AND COMMISSIONING OF A 30KWP AC GRID-TIE COUPLED ROOFTOP SOLAR PV SYSTEM AT CIVIC CENTRE	TOTALS
A.1	PRELIMINARIES & GENERAL	
A.2	COMPLIANCE WITH OHS ACT INCL. SAFETY FILE AND SAFETY INSPECTIONS AND MEETINGS.	
B	MAJOR EQUIPMENT	
C	PV PLANT DC RETICULATION	
D	PV PLANT AC RETICULATION BETWEEN INVERTERS AND LV BUSBAR	
E	BALANCE OF PLANT	
F	EARTHING & LIGHTNING PROTECTION	
G	MISCELLANEOUS	
H	TOTAL FOR PROJECT	
I	OPERATION & MAINTENANCE & TRAINING	
J	TOTAL FOR PROJECT AFTER OMT	
K	CONTINGENCY (10% OF TOTAL)	
L	SUB-TOTAL (VAT EXCL.)	
	ADD 15% VAT (If Registered)	
M	GROSS TENDER AMOUNT (VAT INCL.)	

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Item	Description	Unit	Quantify	Unit Price	Total
A.1	PRELIMINARIES & GENERAL				
1	Site Camp, store, personnel, rental, safety, transport, project notice board, Transport cost to provide material/work.	Sum	1		
Sub-Total					
A.2	COMPLIANCE WITH OHS ACT INCL. SAFETY FILE AND SAFETY INSPECTIONS AND MEETINGS.				
1	Supply of all items of personal protective clothing/equipment & ensure use thereof for full compliance	Sum	1		
2	Supply and provision of equipment for working at heights and ensure & ensure use thereof for full compliance	Sum	1		
Sub-Total					
B	MAJOR EQUIPMENT.				
1	Photovoltaic Modules complete with connections, protection, mounting structures, etc.	Sum	1		
2	Grid tied Inverter(s) complete with DC and AC protection, mounting mechanisms, etc.	Sum	1		
Sub-Total					
C	PV PLANT DC RETICULATION				
1	DC Reticulation between modules and inverters, completed with all cabling, ducting, trays, terminations, protection, combiners boxes, fixings, etc..	Sum	1		
Sub-Total					
D	PV PLANT AC RETICULATION BETWEEN INVERTERS AND LV BUSBAR				
1	AC Reticulation between inverters and LV busbar, completed with all cabling, ducting, trays, terminations, protection, fixings, etc.	Sum	1		
2	Installation of switch disconnectors, installed in relevant panel in inverter room including busbar connections	Sum	1		
Sub-Total					
E	BALANCE OF PLANT				

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1	Central disconnecting switch or implementation of functionality as per design proposal and Hessequa Standards.	Sum	1		
Sub-Total					
F	EARTHING & LIGHTNING PROTECTION				
1	Earthing + earthing control for running the PV after grid isolation. (Incl. all earthing material and control equipment.	Sum	1		
2	Earthing of all PV modules (incl. of down conductors, earth rods and / or earth mat)	Sum	1		
3	Implementation of complete lightning protection for PV Plant	Sum	1		
Sub-Total					
G	MISCELLANEOUS				
1	Labelling for complete phase 1 installation as per Hessequa Standards and Specifications.	Sum	1		
2	As-Built drawings of complete installation	Sum	1		
3	Complete commissioning of installation grid-tied system.	Sum	1		
Sub-Total					

I	OPERATION & MAINTENANCE & TRAINING				
1	Effective day to day monitoring, operating and maintenance of plant as specified for 24 months.	Sum	1		
2	Operation and Maintenance Plan complete as specified.	Sum	1		
3	Training programme complete as specified.	Sum	1		
4	Quality assurance plan as specified.	Sum	1		
Sub-Total					

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C	<u>CALCULATED RESULTS OF LEVELISED COST OF ELECTRICITY TO BE USED FOR TENDER EVALUATION</u>		
ITEM	DESCRIPTION		R/kWh
C.1	Levelised Cost of Energy (LCOE) after-tax (nominal, escalating)	CELL H6 of LCOE Calculator Spreadsheet	
D	<u>TENDERER TO INDICATE CONSTRUCTION PERIODS</u>		
ITEM	DESCRIPTION	WEEKS CONSTRUCTION FROM ORDER PROVIDED	
D.1	Construction Period for the 30kWp System Weeks.	

Tenderers should price on the pricing schedule as indicated above.

Failure to adhere to the above, may result in your tender being declared non-responsive.

DECLARATION,

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ABOVE IS CORRECT. I ACCEPT THAT THE MUNICIPALITY MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

AUTHORISED SIGNATURE:

NAME:

CAPACITY: DATE: