

HESSEQUA MUNICIPALITY

HES-TECH 04/2627

THE SUPPLY, DELIVERY AND INSTALLATION OF RENEWABLE ENERGY INFRASTRUCTURE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE YEARS

PART C2.1: PRICING INSTRUCTIONS

C2.1 PRICING INSTRUCTIONS

C2.1.1 GENERAL

Tenderers shall complete all Pricing Schedules forming part of this Contract in full and shall submit all rates and prices in accordance with the requirements of this Part C2.

The Employer-issued Microsoft Excel pricing workbook forms part of the Tender documents and shall be completed and returned in its original Microsoft Excel format together with the Tender submission.

The Tenderer shall complete only:

- a) the designated Tenderer information fields on the Cover worksheet; and
- b) all designated bidder-input cells contained in Pricing Schedules A to D.

The Tenderer shall not alter any item code, description, unit of measurement, formula, prescribed assumption, worksheet name, protected cell or calculation contained in the pricing workbook.

The reference-system, Rates Library, LCOE Model and Price Summary worksheets are automatically calculated from the rates entered in Pricing Schedules A to D and shall not be amended by the Tenderer.

C2.1.2 CURRENCY AND VALUE ADDED TAX

All rates and prices shall be expressed in South African Rand (ZAR).

Unless otherwise stated, all Tendered Rates and Prices shall exclude Value Added Tax.

Value Added Tax shall be added at the applicable statutory rate when payment is calculated.

C2.1.3 ITEMS INCLUDED IN THE TENDERED RATES

The Tendered Rates and Prices shall include full compensation for everything necessary to execute and complete the applicable work, including, but not limited to:

- a) labour, supervision and management;
- b) materials, equipment and consumables;

- c) plant, tools and temporary works, except where separately scheduled and instructed;
- d) transport, delivery, off-loading, handling and storage;
- e) installation, configuration and integration;
- f) testing, commissioning and performance verification;
- g) quality assurance and quality control;
- h) drawings, calculations, reports and technical documentation;
- i) Certificates of Compliance and statutory documentation;
- j) training, handover documentation and operating manuals;
- k) manufacturer warranties and workmanship warranties;
- l) overheads, profit and risk;
- m) compliance with applicable legislation, regulations, standards and municipal requirements; and
- n) all incidental work reasonably necessary to provide a complete, safe and operational installation.

No additional payment shall be made for any activity, obligation or incidental work reasonably deemed to be included in the applicable Tendered Rate or Price.

C2.1.4 PRICING SCHEDULES

The Pricing Schedules comprise:

- a) Pricing Schedule A – Size-Banded Services, Labour and Separately Instructed Plant;
- b) Pricing Schedule B – Equipment and Major Components;
- c) Pricing Schedule C – Installation, Civil, Electrical and Balance-of-System Items; and
- d) Pricing Schedule D – Maintenance Services and Mark-ups.

The Tenderer shall enter a rate in every designated yellow pricing cell contained in Pricing Schedules A to D.

The inclusion of an item in the Pricing Schedules shall not constitute a guarantee that the item will be ordered during the Contract period.

C2.1.5 SIZE-BANDED SERVICES

Where services are divided into Small, Medium and Large system categories, the applicable category shall be determined by the installed inverter capacity of the relevant system:

- a) Small System – up to and including 16 kW;

b) Medium System – above 16 kW and up to and including 50 kW; and

c) Large System – above 50 kW and up to and including 200 kW.

Only the service rate applicable to the relevant system-size category shall be used for a particular service under a Work Order.

More than one size-band rate shall not be claimed for the same service performed under the same Work Order.

C2.1.6 ESTIMATED AND REFERENCE QUANTITIES

Any estimated or reference quantities contained in the Pricing Schedules or pricing workbook are provided solely for tender evaluation purposes.

Such quantities shall not be construed as a guarantee of the number, nature, quantity, frequency or value of Work Orders that may be issued during the Contract period.

Payment under individual Work Orders shall be based on the actual quantities instructed, supplied, installed, measured and accepted by the Employer.

C2.1.7 APPLICATION OF TENDERED RATES

The accepted Tendered Rates shall become the Contract Rates and shall apply to Work Orders issued under this Contract, subject to the requirements of the applicable Work Order and the provisions of the Contract.

The Tendered Rates shall apply to work undertaken at municipal facilities throughout the Hessequa Municipal area unless otherwise expressly stated in the applicable Work Order.

The Contractor shall not be entitled to additional payment arising solely from the location of a Work Order within the Hessequa Municipal area, except where a separately scheduled or approved item applies.

C2.1.8 SEPARATELY INSTRUCTED PLANT

Rates for separately scheduled plant shall only be payable where:

- a) the use of the plant has been expressly instructed or approved by the Employer;
- b) the plant is necessary for execution of the applicable Work Order; and
- c) the cost of the plant is not already included in another scheduled rate.

Normal vehicles, tools, test equipment, minor plant and equipment ordinarily required to execute the Works shall be deemed included in the applicable Tendered Rates.

C2.1.9 NON-SCHEDULED ITEMS

Where equipment, materials, plant or specialist services required for a Work Order are not included in the Pricing Schedules, such items shall only be procured after prior written approval by the Employer.

Approved non-scheduled items shall be valued at verified actual cost together with the applicable tendered mark-up contained in Pricing Schedule D.

The Contractor shall submit quotations, invoices and any other supporting information required by the Employer to verify the actual cost.

The Employer reserves the right to obtain alternative quotations or procure any non-scheduled item separately.

Statutory, application, registration, OEM licence or third-party charges that are not included in a scheduled rate shall only be payable where expressly identified and approved by the Employer in the applicable Work Order.

C2.1.10 FIXED RATES AND PRICE ADJUSTMENT

Unless otherwise provided for in Part C2.4 or the Contract Data, the Tendered Rates and Prices shall remain fixed for the applicable period.

Any adjustment of rates or prices shall only be made in accordance with the provisions of Part C2.4 and the applicable Conditions of Contract.

C2.1.11 BLANK OR INCOMPLETE RATES

Where no rate or price has been entered for an item, the Employer may deem that the cost of the item has been included elsewhere in the Tendered Rates and Prices.

Notwithstanding the above, failure to complete all designated bidder-input cells in Pricing Schedules A to D may result in the Tender being declared incomplete or non-responsive.

The Tenderer shall ensure that the submitted pricing workbook is complete, internally consistent and free from errors.

C2.1.12 TENDER EVALUATION

The rates entered in Pricing Schedules A to D shall be used by the Employer-issued pricing workbook to calculate the costs and Levelised Cost of Energy values of the prescribed reference systems.

The calculated composite Levelised Cost of Energy shall be used as the evaluated price in accordance with Part C2.3 and the Tender Data.

The Tenderer shall not alter the reference-system quantities, evaluation weightings, assumptions, calculations or formulae contained in the pricing workbook.

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PART C2.2: SCHEDULE OF RATES AND PRICING SCHEDULES

C2.2 SCHEDULE OF RATES AND PRICING SCHEDULES

C2.2.1 GENERAL

The Schedule of Rates and Pricing Schedules contained in this Part shall be completed by the Tenderer and shall form the basis for the pricing of all Work Orders issued under the Contract.

The Pricing Schedules shall be read together with the Employer-issued Microsoft Excel pricing workbook.

The Tenderer shall complete every applicable item contained in Pricing Schedules A to D.

The rates submitted by the successful Tenderer shall become the Contract Rates and shall remain applicable for the duration of the Contract, subject to the provisions of the Contract Data and Conditions of Contract.

The inclusion of an item in the Pricing Schedules shall not be construed as a guarantee that the item will be required or that any specific quantity of work will be instructed during the Contract period.

Payment for Work Orders shall be based on the actual quantities instructed, measured and accepted by the Employer.

C2.2.2 PRICING SCHEDULE A

Pricing Schedule A shall be completed in full by the Tenderer.

The rates entered in this Schedule shall apply to professional services, labour and separately instructed plant associated with the execution of Work Orders under the Contract.

The applicable Schedule A is provided below:

SCHEDULE A – SIZE-BANDED SERVICES, LABOUR AND SEPARATELY INSTRUCTED PLANT				
Item	Category	Description / Pricing Basis	Unit	Tendered Rate
A01S	Assessment	Site investigation and load assessment – Small system (≤ 16 kW)	Site	
A01M	Assessment	Site investigation and load assessment – Medium system (>16 – 50 kW)	Site	
A01L	Assessment	Site investigation and load assessment – Large system (>50 – 200 kW)	Site	

A02S	Assessment	Feasibility study and concept design – Small system (≤ 16 kW)	Site	
A02M	Assessment	Feasibility study and concept design – Medium system (>16 – 50 kW)	Site	
A02L	Assessment	Feasibility study and concept design – Large system (>50 – 200 kW)	Site	
A03S	Engineering	Detailed system design and calculations – Small system (≤ 16 kW)	System	
A03M	Engineering	Detailed system design and calculations – Medium system (>16 – 50 kW)	System	
A03L	Engineering	Detailed system design and calculations – Large system (>50 – 200 kW)	System	
A04S	Engineering	Structural roof assessment – Small rooftop system (≤ 16 kW)	Site	
A04M	Engineering	Structural roof assessment – Medium rooftop system (>16 – 50 kW)	Site	
A04L	Engineering	Structural roof assessment – Large rooftop system (>50 – 200 kW)	Site	
A05M	Engineering	Geotechnical assessment – Medium ground-mounted system (>16 – 50 kW)	Site	
A05L	Engineering	Geotechnical assessment – Large ground-mounted system (>50 – 200 kW)	Site	
A06S	Documentation	SLD, layouts, cable schedules and protection settings – Small system (≤ 16 kW)	System	
A06M	Documentation	SLD, layouts, cable schedules and protection settings – Medium system (>16 – 50 kW)	System	
A06L	Documentation	SLD, layouts, cable schedules and protection settings – Large system (>50 – 200 kW)	System	
A07S	Compliance	SSEG/grid-connection application support – Small system (≤ 16 kW)	Application	
A07M	Compliance	SSEG/grid-connection application support – Medium system (>16 – 50 kW)	Application	
A07L	Compliance	SSEG/grid-connection application support – Large system (>50 – 200 kW)	Application	
A08	Management	Project management	Hour	
A09	Management	Site supervision	Day	
A10S	Preliminaries	Mobilisation, establishment and H&S file – Small Work Order (≤ 16 kW)	Work Order	
A10M	Preliminaries	Mobilisation, establishment and H&S file – Medium Work Order (>16 – 50 kW)	Work Order	
A10L	Preliminaries	Mobilisation, establishment and H&S file – Large Work Order (>50 – 200 kW)	Work Order	
A11S	Commissioning	Testing, commissioning and performance report – Small system (≤ 16 kW)	System	
A11M	Commissioning	Testing, commissioning and performance report – Medium system (>16 – 50 kW)	System	

A11L	Commissioning	Testing, commissioning and performance report – Large system (>50–200 kW)	System	
A12S	Compliance	Electrical CoC and close-out documentation – Small system (≤ 16 kW)	System	
A12M	Compliance	Electrical CoC and close-out documentation – Medium system (>16–50 kW)	System	
A12L	Compliance	Electrical CoC and close-out documentation – Large system (>50–200 kW)	System	
A13	Training	Employer personnel training	Session	
A14S	Handover	O&M manuals, warranties and as-built documents – Small system (≤ 16 kW)	System	
A14M	Handover	O&M manuals, warranties and as-built documents – Medium system (>16–50 kW)	System	
A14L	Handover	O&M manuals, warranties and as-built documents – Large system (>50–200 kW)	System	
A15	Testing	Extended performance testing when instructed	Day	
A16S	Reinstatement	Making good and site reinstatement – Small Work Order (≤ 16 kW)	Work Order	
A16M	Reinstatement	Making good and site reinstatement – Medium Work Order (>16–50 kW)	Work Order	
A16L	Reinstatement	Making good and site reinstatement – Large Work Order (>50–200 kW)	Work Order	
B01	Labour	Professional electrical engineer / Pr Eng	Hour	
B02	Labour	Engineering technologist / technician	Hour	
B03	Labour	Project manager	Hour	
B04	Labour	Construction/site supervisor	Hour	
B05	Labour	Registered installation electrician / master installation electrician	Hour	
B06	Labour	Qualified electrician	Hour	
B07	Labour	Assistant electrician	Hour	
B08	Labour	Solar PV installer	Hour	
B09	Labour	Commissioning technician	Hour	
B10	Labour	BESS/OEM specialist technician	Hour	
B11	Labour	EMS/monitoring/communications technician	Hour	
B12	Labour	Civil artisan / builder	Hour	
B13	Labour	Rigger / lifting supervisor	Hour	
B14	Labour	General labourer	Hour	
B15	Labour	After-hours technical labour premium	Hour	
C03	Separately Instructed Plant	Crane truck including operator	Day	

C04	Separately Instructed Plant	Mobile crane including operator	Hour	
C05	Separately Instructed Plant	Cherry picker / boom lift	Day	
C06	Separately Instructed Plant	Scissor lift	Day	
C07	Separately Instructed Plant	Scaffolding supply, erection and hire	m ² /week	
C08	Separately Instructed Plant	TLB including operator	Day	
C09	Separately Instructed Plant	Excavator including operator	Day	

C2.2.3 **PRICING SCHEDULE B**

Pricing Schedule B shall be completed in full by the Tenderer.

The rates entered in this Schedule shall apply to the supply of equipment and major renewable energy components required for Work Orders issued under the Contract.

The applicable Schedule B is provided below:

SCHEDULE B – FIXED EQUIPMENT AND MAJOR COMPONENTS				
Item	Category	Description / Pricing Basis	Unit	Tendered Rate
D01	PV Modules	N-type or equivalent high-performance PV modules, supply only	Wp	
D02	PV DC	PV optimiser compatible with the proposed system	Each	
D03	PV DC	Approved PV connector pair	Pair	
D04	PV DC	DC string fuse and holder	Each	
D05	PV DC	Type II DC surge protection device	Each	
D06	PV DC	Lockable DC isolator	Each	
D07	PV DC	PV combiner box complete	Each	
D08	Inverter	Single-phase hybrid inverter system, complete	kW AC	

D09	Inverter	Three-phase hybrid inverter system, complete	kW AC	
D10	BESS	Low-voltage LiFePO ₄ BESS, complete	kWh usable	
D11	BESS	High-voltage/commercial LiFePO ₄ BESS, complete	kWh usable	
D12	Monitoring	Three-phase revenue-grade smart meter	Each	
D13	Monitoring	Current transformer set	Set	
D14	Monitoring	Energy management system/controller	Each	
D15	Monitoring	Data logger/communications gateway	Each	
D16	Monitoring	Industrial router and communication accessories	Each	
D17	Switchgear	AC distribution and protection equipment	kW AC	
D18	Switchgear	DC distribution and protection equipment	kWp DC	
D19	Switchgear	BESS isolation and protection equipment	kWh usable	
D20	Switchgear	Automatic transfer/changeover equipment	kW AC	
D21	Safety	BESS fire detection/suppression equipment package	System	
D22	Safety	Emergency stop and shutdown interface package	System	

C2.2.4 PRICING SCHEDULE C

Pricing Schedule C shall be completed in full by the Tenderer.

The rates entered in this Schedule shall apply to installation activities, civil works, electrical works and balance-of-system items required for the execution of Work Orders.

The applicable Schedule C is provided below:

SCHEDULE C – INSTALLATION, CIVIL, ELECTRICAL AND BALANCE OF SYSTEM

Item	Category	Description / Pricing Basis	Unit	Tendered Rate
E01	Mounting	Rooftop PV mounting system complete	kWp	
E02	Mounting	Ground-mounted fixed-tilt structure incl. standard reinforced concrete foundations	kWp	
E03	Installation	PV module mechanical installation and stringing	Wp	
E04	Installation	Hybrid inverter installation, configuration and integration	kW AC	
E05	Installation	BESS installation, configuration and integration	kWh usable	
E06	DC Reticulation	PV cable 6 mm ² single conductor supplied and installed	m	
E07	DC Reticulation	PV cable 10 mm ² single conductor supplied and installed	m	
E08	DC Reticulation	Battery DC cable up to 70 mm ² single conductor supplied and installed	m	
E09	AC Reticulation	4-core copper LV cable up to 16 mm ² supplied and installed	m	
E10	AC Reticulation	4-core copper LV cable >16 to 35 mm ² supplied and installed	m	
E11	AC Reticulation	4-core copper LV cable >35 to 70 mm ² supplied and installed	m	
E12	AC Reticulation	4-core copper LV cable >70 to 120 mm ² supplied and installed	m	
E13	Containment	Cable tray/ladder up to 150 mm supplied and installed	m	
E14	Containment	Cable tray/ladder >150 to 300 mm supplied and installed	m	
E15	Civil	Trenching in normal soil incl. backfill and warning tape	m	
E16	Civil	Trenching in hard material/rock	m	
E17	Civil	110 mm underground duct/sleeve supplied and installed	m	
E18	Civil	Concrete plinth/foundation	m ³	
E19	Civil	Security fencing	m	
E20	Civil	Lockable access gate	Each	
E21	BOS	Earthing and equipotential bonding	kWp	
E22	BOS	Lightning protection system	System	
E23	BOS	Monitoring and web-platform installation/configuration	System	
E24	BOS	Municipal network/IT integration	System	
E25	BOS	Permanent labels, warnings and operating signage	System	

E26	Existing Systems	Decommission and remove existing inverter	Each	
E27	Existing Systems	Remove and recover existing PV modules	Wp	
E28	Existing Systems	Relocate and reinstall existing PV modules	Wp	
E29	Existing Systems	Integrate new inverter/BESS with existing infrastructure	System	
E30	Existing Systems	Test and record existing PV string performance	String	
E31	Compliance	SSEG metering/export-control interface modifications	System	
E32	Safety	Install and commission BESS fire detection/suppression package	System	
E33	Environmental	Install BESS ventilation/HVAC package	System	
E34	Reference Route	Complete PV array-to-inverter DC route for 80–120 kWp system	Route m	
E35	Reference Route	Complete inverter-to-MDB AC route for 80–120 kW system	Route m	
E36	Reference Route	Complete BESS-to-inverter route for 150–250 kWh system	Route m	

C2.2.5 PRICING SCHEDULE D

Pricing Schedule D shall be completed in full by the Tenderer.

The rates entered in this Schedule shall apply to preventative maintenance, corrective maintenance and approved non-scheduled procurement mark-ups where applicable.

The applicable Schedule D is provided below:

SCHEDULE D – MAINTENANCE AND VERIFIED-COST MARK-UPS				
Item	Category	Description / Pricing Basis	Unit	Tendered Rate
F01	Monitoring	Remote monitoring platform and communications subscription	System/month	
F02	Preventative	Annual preventative maintenance – rooftop PV	kWp/year	
F03	Preventative	Annual preventative maintenance – ground-mounted PV	kWp/year	
F04	Preventative	Annual preventative maintenance – BESS	kWh/year	
F05	Preventative	Annual preventative maintenance – hybrid inverter	kW/year	

F06	Cleaning	PV module cleaning	kWp/visit	
F07	Testing	Thermographic inspection and report	System/visit	
F08	Testing	PV string I-V curve test and record	String	
F09	Testing	BESS capacity/performance test	System	
F10	Corrective	Corrective-maintenance call-out normal hours	Call-out	
F11	Corrective	Emergency/after-hours call-out	Call-out	
F12	Software	Approved firmware/software update and configuration backup	System	
F13	Reporting	Annual maintenance and performance report	System/year	
F14	Replacement	Inverter replacement labour and recommissioning	kW AC	
F15	Replacement	BESS replacement labour and recommissioning	kWh usable	
G01	Mark-up	Non-scheduled equipment or material – verified cost plus mark-up	% on verified cost	
G02	Mark-up	Third-party plant hire – verified cost plus mark-up	% on verified cost	
G03	Mark-up	Specialist subcontractor – verified cost plus mark-up	% on verified cost	
G04	Mark-up	Exceptional freight or courier – verified cost plus mark-up	% on verified cost	