



City Power Johannesburg

40 Heronmere Road
Reuven
Johannesburg

PO Box 38766
Booyens
2016

Tel +27(0) 11 490 7000
Fax +27(0) 11 490 7590

www.citypower.co.za

CITY POWER JOHANNESBURG

Bidders are hereby invited for the following RFQ,
further details are available from CITY POWER,
Tender Advice Centre, 40 Heronmere Rd, Reuven, Booyens
Telephone 011 490-7000, Fax 011 490-7765/011 870-3688
CITY POWER JOHANNESBURG (SOC) LTD

ADVERTISEMENT

REQUEST FOR QUOTATION:	PECU NEMA TYPE 1800VA FAIL ON (6279)
REQUEST FOR QUOTATION:	
RFQ CLOSING DATE:	18 November 2021
RFQ CLOSING TIME:	11h00
VENUE:	City Power – Tender Advice Centre
CONTACT PERSON:	Masego Moiloa

**RFQ DOCUMENTS WILL BE AVAILABLE ON SITE AND ON THE WEBSITE
AS FROM 11 NOVEMBER 2021**

40 HERONMERE ROAD REUVEN, BOOYSENS

SUBMISSIONS: QUOTATION BOX, TENDER ADVICE CENTRE

Please note:-
That we also advertise on our Website:
Website Address: www.citypower.co.za Available Bid's and RFQ'S

Non-Executive Directors: L Maseko (Chairperson of the Board), N Batyi, P Kedama, N Kgope, T Marah, L Mathabathe, K Mthembu, B Ramokhele, M Seopela, K Setzin, P Thobejane, B Twala
Executive Directors: M Ntsokolo (Chief Executive Officer), N Xolo (Chief Financial Officer) Company Secretary: M Smith
Registration number: 2000/030051/30 - VAT number: 4710191182



Request for Quotations

Contact Person: Masego Moiloa
Tel: (011) 490-7209
Email:mmoiloa@citypower.co.za

Company:
Attention:
Tel:
Fax:
Email:

You are hereby invited to submit a quotation for the items listed below. Please provide a written quotation to the above named contact person on or before the closing date indicated below. Only quotations which contain the information listed below will be accepted. Prices should be shown inclusive of VAT and fixed and firm. Delivery will be direct to the relevant City Power store.

	Material/Service Description	Estimated Quantities	Price Each	Total Excl. VAT
6279	PECU 1800VA FAIL ON 230 V AS PER SPECIFICATION CP_TSSPEC_012	1800		
NB: COMPLETE ATTACHED SPECIFICATION CP_TSSPEC_012				
Note: Ticks, Cross [✓, X], Asterisk [*], Word [Noted or Comply] or TBA ["To Be Advice"] will not be accepted.				
vat @15%				
TOTAL Incl. VAT				

Closing date and time for submission of quotation: 18/11/2021 @ 11h00

NB:
Specification must be fully COMPLETED, 100% COMPLIANT and ATTACHED to the submission: Failure will result in quote reviewed as NON-RESPONSIVE and will not be evaluated any further.

Specification: CP_TSSPEC_012 Stock Item No. 6279	Fully Compliant to Specification Fully Completed and signed
---	--

EVALUATION CRITERIA

MINIMUM THRESHOLD OF 80% ON TECHNICAL MUST BE ACHIEVED FAILING WHICH, THE BID WILL NOT BE EVALUATED FURTHER

	Evaluation Criteria	Scoring	Weighting
	FIRST STAGE EVALUATION - 80% THRESHOLD MUST BE ACHIEVED		100
1.	Fully compliant, completed and signed technical schedule	Fully compliant, completed and signed technical schedule = 10 POINTS Partially completed =0 POINT	30
2.	Submit a complete type test report	Complete type test report= 10 POINTS Partial type test report = 0 POINT	50
3.	Provide a valid ISO 9001 certificate from the manufacturer	ISO 9001 certificate = 10 POINTS No ISO certificate = 0 POINT	20
TOTAL		100	
	SECOND STAGE EVALUATION		
1.	Price	80	
2.	BBBEE Level	20	

Vendors must supply written quotations that reflect the following information on the quotation:

- Quotation Validity Period:_____
- Delivery period_____
- Company Name:_____
- Company Registration Number:_____
- VAT Registration Number_____
- Physical Address:_____
- Contact Person:_____
- Telephone Number:_____
- Fax Number/Email Address:_____
- Company Income Tax Number (i.e. SARS No):_____
- **Original Tax Clearance Certificate Attached** or consent for City Power to ascertain from SARS whether your status is in order:
- Signed disclaimer (Attached to this RFQ):_____

PREFERENCE POINT SYSTEM WILL BE USED FOR VALUE BETWEEN R30K AND R200K

Evaluation is based on Price only

Points awarded for Price and RDP goals (80/20)

PRICE	80
B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-complaint Contributor	0

CALCULATION

1. THE 80/20 PREFERENCE POINT SYSTEMS

A maximum of 80 points is allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

- P_s = Points scored for price of bid under consideration
 P_t = Rand value of bid under consideration
 P_{\min} = Rand value of lowest acceptable bid

2. Points awarded for historically disadvantaged individuals

A maximum of 20 points is allocated for price on the following basis:

$$NEP = NOP \times \frac{EP}{100}$$

Where

NEP = Points awarded for equity ownership by an HDI, and values for 10, 5 and 5 will be calculated

NOP = The maximum number of points awarded for equity ownership by an HDI in that specific category

EP = The percentage of equity ownership by an HDI within the enterprise or business, determined in accordance with the definition of HDI's.

Disclaimer: Supplier (_____) hereby warrants that he/she/it has:

(Name of supplier)

1. Read, fully understood and hereby accept City Power's standard quotation Terms & Conditions as published on the official City Power website;
2. Submitted a true and accurate declaration of interests reflecting that the supplier has no immediate family relations and that none of its shareholders, directors, managers or stakeholders are in the employ of City Power or the state currently and that no such relatives, shareholders, directors, managers or stakeholders have been so employed in the previous 12 months;
3. Undertakes to complete a fresh declaration of interests should these circumstances

have changed as at date of this quotation. (This declaration is obtainable from the City Power's website/ Commodity Managers and the abovementioned contact person).

Name, Date & Signature of Supplier (Person responsible for the Quote)	Name: Signature:	Date
---	---------------------------------------	-------------

PLEASE SUPPLY THE FOLLOWING DOCUMENTS TO ENABLE US TO EVALUATE YOUR SUBMISSION:

- 1. VALID TAX CLEARANCE CERTIFICATE**
- 2. VALID BBEE CERTIFICATE**
- 3. SIGNED DECLARATION OF INTEREST FORM (MBD4), (MBD 8) AND (MBD9)**
- 4. CSD SUPPLIER NUMBER AND SUPPLIER UNIQUE NUMBER**
- 5. MUNICIPAL RATES AND TAXES (NOT IN ARREARS FOR MORE THAN 90 DAYS)**

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state*.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.

3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name:

3.2 Identity Number:

3.3 Company Registration Number:

3.4 Tax Reference Number:

3.5 VAT Registration Number:

3.6 Are you presently in the service of the state* **YES / NO**

3.6.1 If so, furnish particulars.

.....

.....

*MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

3.7 Have you been in the service of the state for the past twelve months? **YES / NO**

3.7.1 If so, furnish particulars.

.....
.....

3.8 Do you, have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.8.1 If so, furnish particulars.

.....
.....

3.9 Are you, aware of any relationship (family, friend, other) between a bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.9.1 If so, furnish particulars

.....
.....

3.10 Are any of the company's directors, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.10.1 If so, furnish particulars.

.....
.....

3.11 Are any spouse, child or parent of the company's directors, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.11.1 If so, furnish particulars.

.....

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	<p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?</p> <p>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		

4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	Do you owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)
CERTIFY THAT THE INFORMATION FURNISHED ON THIS
DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

MBD 9

CERTIFICATE OF INDEPENDENT PROPOSAL DETERMINATION

I, the undersigned, in submitting the accompanying proposal:

(Proposal Number and Description)

in response to the invitation for the proposal made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: _____ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying proposal has been authorized by the bidder to determine the terms of, and to sign, the proposal, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying proposal, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) have been requested to submit a bid in response to this proposal invitation;
 - (b) could potentially submit a proposal in response to this proposal invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying proposal independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a proposal;
 - (e) the submission of a proposal which does not meet the specifications and conditions of the proposal; or
 - (f) bidding with the intention not to win the proposal.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this proposal invitation relates.
9. The terms of the accompanying proposal have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to proposal and contracts, proposal that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder



**TITLE SPECIFICATION FOR
PHOTOELECTRIC CONTROL UNITS
(PECUs)**

REFERENCE CP_TSSPEC_012
DATE: JUNE 2017
REVISION DATE:

REV 4
OF 16

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FOREWORD

Recommendations for corrections, additions or deletions should be addressed to the:

Technology Services Manager
City Power Johannesburg (SOC) Ltd
P O Box 38766
Booyens
2016

Introduction

A photoelectric control unit (PECU), also known as a photocell or daylight switch, is a device that responds to variations in the amount of available light to switch a streetlight or circuit on and off. The reliability of these devices has a direct impact on levels of customer satisfaction as well as the quality of supply.

1. Scope

This specification covers City Power's requirements for photoelectric control units (PECUs)(also known as daylight switches) for the lighting installations designed to switch a reactive load not exceeding 1 800 VA at 230 V and 50 Hz in accordance with SANS1777.

2. Normative references

The following documents contain provisions that, through reference in the text, constitute requirements of this specification. At the time of publication, the editions indicated were valid. All standards and specifications are subject to revision, and parties to agreements based on this specification are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

SANS 1777, *Photoelectric Control Units for lighting (PECUs)*

SANS 60529/IEC 60529 (SABS IEC 60529), *Degrees of protection provided by enclosures (IP Code)*.

SANS 60598-1/IEC 60598-1, *Luminaires-Part1: General requirements and tests*.

3. Definitions and abbreviations

The following definitions and abbreviations shall apply to this specification:

- 3.1 **Detector:** Part of a two-part PECU that contains the photoelectric sensor
- 3.2 **Lead wires:** 3 separate wires lead from a one-part PECU and are intended for direct connection to the power supply and the load.
- 3.3 **NEMA base:** (see **Socket**) A receptacle, generally of a design first published by the National Electrical Manufacturers Association (NEMA) of the USA, and as illustrated in SANS 1777.
- 3.4 **One-part PECU:** A photoelectric control unit in which the photoelectric sensor and the load-switching device are housed in the same enclosure.
- 3.5 **Photoelectric control unit (PECU):** Device that comprises a photoelectric sensor that responds to variations in illuminance combined with a means of switching an electric load
- 3.6 **Socket (NEMA base):** A receptacle into which a one-part PECU can be inserted.
- 3.7 **Switching differential:** The ratio of the measured switch-ON level to the measured switch-OFF level.
- 3.8 **Switch-OFF level:** That illuminance at the photoelectric control unit that will cause it to change from the "ON" to the "OFF" mode under standard test conditions.
- 3.9 **Switch-ON level:** That illuminance at the photoelectric control unit that will cause it to change from the "OFF" to the "ON" mode under standard test conditions.
- 3.10 **Two-part PECU:** PECU in which the photoelectric and the load switching are housed in separate enclosures.

- 3.11 **Tracking:** Progressive formation of conducting paths on the surface of a solid insulating material, due to the combined effects of electric stress and electrolytic contamination on this surface.
- 3.12 **Load switching device:** mechanical device capable of making, carrying and breaking of currents under normal circuit conditions.
- 3.13 **Switching unit:** part of a two PECU that contains the load switching device.

4. Requirements

4.1 General

- 4.1.1 A PECU shall be designed as a NEMA plug-in unit or as a fixed unit for direct connection, as required. It shall consist of one or two parts and shall be intended for indoor or outdoor installation, as required, and for operation at ambient temperatures from -15 °C to +65 °C.
- 4.1.2 The photoelectric sensor of a PECU shall be omnidirectional and designed to be mounted facing upwards in such a way that no particular orientation is required.
- 4.1.3 The cover and gaskets of the photoelectric sensor shall be ultraviolet stabilized, and they shall be designed to resist normal climatic conditions such as moisture, heat, cold and compression.

4.2 Mechanical performance

- 4.2.1 The cover of the photoelectric sensor of a PECU shall be of a conical or spherical shape to minimise the accumulation of dust or dirt, and to discourage the perching of birds.
- 4.2.2 A PECU shall be designed to plug into a NEMA base, or it shall be fitted with lead wires of conductor size 1,5 mm² and of length at least 300 mm, and with a 20 mm screw entry suitable for being fixed into a 20 mm diameter mounting hole, as required.
- 4.2.3 PECUs shall be of adequate mechanical strength and so constructed as to withstand the stresses imposed during installation and normal use, including handling and vibration as per clause 4.2.4 of SANS 1777.
- 4.2.4 The degrees of protection provided for parts of a PECU as determined in accordance with SANS 60529, shall be at least IP 65 in accordance with SANS 60529. In addition, neoprene sealing gasket shall be provided as part of the PECU to form a weatherproof seal between the PECU and its NEMA base.
- 4.2.5 All materials used in the manufacture of the PECU shall be ultra-violet stabilized, and shall not deteriorate as a result of solar radiation, heat, moisture, cold or compression. In addition, damage due to solar radiation should not cause the photometric performance of the PECU to deteriorate beyond the specified limits within a period of at least 10 years.

4.3 Electrical performance

- 4.3.1 A PECU shall be capable of operating with an r.m.s. 50 Hz a.c. supply voltage of 230 V ± 10 %. The construction of a PECU shall be such that double insulation is provided.
- 4.3.2 When a d.c. voltage not exceeding 500 V is applied for 1 min between the parts of a PECU as specified in column 1 of table 1, the insulation resistance of the PECU, including the plug and the NEMA base, shall be as specified in column 2 of table 1.
- 4.3.3 When the dielectric strength of a PECU, including the plug and the NEMA base, is tested in accordance with clause 5.9 of SANS 1777, no breakdown or flashover shall occur.

- 4.3.4 A PECU shall be fitted with a suitable surge suppressor that shall enable the PECU to withstand an induced lightning surge as specified in clause 5.7 of SANS 1777.
- 4.3.5 Contacts of the plug and of the NEMA base shall be so designed as to ensure sufficient contact pressure without causing any overheating or deterioration of the material or decline in functioning.
- 4.3.6 Terminals shall allow for the connection of conductors of nominal cross-sectional area 1, 5 mm².
- 4.3.7 The insulation system shall be of at least class E (120 °C), in accordance with IEC 60085.
- 4.3.8 The PECU shall be designed to fail at the "on" position of the switch.
- 4.3.9 When components are assembled in the most unfavourable positions, creepage distances and clearances shall still be in accordance with the requirements of section 11 of SANS 60598-1.

Table 1 – Insulation resistance and test voltage of PECUs

1	2	3	4
Points of application of test voltages	Minimum insulation resistance	Test voltage	Notes
	MΩ	V	
a) Between live parts and accessible metal	4	2U + 3 500	All live parts shall be connected together.
b) Between live metal parts at different polarities	2	2U + 1 000	–
c) Between live parts that can achieve different polarities when switched. Test shall be made immediately after the contacts have been opened	2	2U + 1 000	Contacts shall be opened, closed and checked by using a filament lamp.
d) Between live parts and non-earthed accessible metal or metal foil over non-metal surfaces	4	2U + 3 500	All live parts shall be connected together.

NOTE U is the rated voltage of the PECU, in volts.

- 4.3.10 The PECU shall be capable of performing at least 8 000 switching operations. A single operation is defined as the transfer of the moving contacts from one operating position to another, or, in the case of electronic switching, a change from one state to another. Test reports on the switching cycles, provided by an independent authority, will suffice.
- 4.3.11 The construction of the PECU shall provide double-insulation.
- 4.3.12 The PECU shall be fitted with an integral surge suppression device (e.g. MOV) in order that it may withstand an induced lightning strike or other mains-borne disturbance.

4.4 Photometric performance

- 4.4.1 When a PECU is tested;
 - a) the switch-on level shall be 60 lux ± 12 lux, unless otherwise required;
 - b) the switch-off level shall be not greater than 1,5 times the switch-on level, unless otherwise required; and
 - c) Switching operations shall be delayed by at least 15 s to prevent spurious operation caused by events such as lightning flashes and headlights of passing cars.

- 4.4.2 When a PECU is tested in accordance with clause 5.5 of SANS 1777 both before and after 1 000 switching operations, the switch-on and switch-off levels at 90 % and 110 % of the rated voltage shall be within 5 % of the switch-on and switch-off levels at the rated voltage.
- 4.4.3 The NEMA base shall comply in all respects with dimensions and designs as per Figure 1, 2, and 3 of SANS 1777.

4.5 Type Testing

- 4.5.1 The PECUs and NEMA bases shall meet or exceed the requirements of the type tests specified in SANS 1777 and this specification.
- 4.5.2 Copies of test reports, detailing the test procedures and test results on the items offered, shall be submitted in order for the items to be considered. The test reports shall be from a recognised test authority acceptable to City Power.
- 4.5.3 Sample tests, which shall include all the type tests specified in SANS 1777 and this specification, shall be carried out on 3 (three) PECUs and sockets randomly selected by City Power. These tests shall be made before the first delivery is made and again approximately halfway through the duration of the contract.
- 4.5.4 The PECU shall withstand, without excessive wear or harmful effect, the mechanical, electrical and thermal stresses occurring in normal use. During the test all enclosures shall be in place and the specimens shall operate correctly. PECUs shall be subjected to the following test: The PECU is loaded with the specified load and at 110% of the rated voltage. The PECU is then subjected to 8 000 switching operations (4 000 ON, 4 000 OFF) with an OFF-time less than 30 seconds and an ON-time of between 15 and 200 seconds.
- 4.5.5 The endurance test circuit shall be similar to that described in SANS 1777. However, the PECU under test shall be placed in series with a load of 2 x 400 W HPS luminaries with all associated equipment (ballast, capacitor and lamp). The test circuit should provide a reactive load of at least 1 800 VA. The ballasts shall be suitable for use with the lamps. The capacitors shall have individual capacitances of 40 µF or 45 µF.
- 4.5.6 In addition to the requirements of SANS 1777, it is required that the photometric performance of the PECU be within the tolerances specified i.e. ±10%. In addition, the calibrated switch-ON and switch-OFF levels shall differ from the specified levels by no more than 10% both before and after environmental testing, at a colour temperature of 3 500 K.

4.6 Guarantee

Suppliers shall guarantee each PECU for a minimum period of 10 years from date of manufacture, during which time any faulty units shall be replaced free of charge. Suppliers shall be responsible for collecting failed PECUs from, and delivering free replacements to City Power, at any one of its depots. PECUs bearing a date of manufacture exceeding four (4) months prior to the date of delivery shall not be accepted.

4.7 Packing and marking

- 4.7.1 Each PECU shall be individually packed in cartons to prevent damage or deterioration during transport, handling and storage. In addition, each base shall be individually packed (in cartons or packets) and fully assembled together with its associated screws, gaskets and sealing cap.
- 4.7.2 Each PECU shall be clearly and indelibly marked in accordance with SANS 1777. In addition to the requirements of SANS 1777, each PECU and socket shall be marked with the month and

year of manufacture. It is not necessary for the PECU or base to have the facility to mark the date of installation.

- 4.7.3 In addition to the requirements of 4.7.2 each PECU shall be indelibly marked with the firefly logo of City Power Johannesburg as well as the letters "CPJ" so that there can be no doubt about ownership of the PECU. The marking shall be easily visible whilst the PECU is in service. At the sole discretion of the General Manager: Infrastructure Planning, the marking shall be identical to that described above, except that the logo and letters may be replaced with the words "City Power".

4.8 Documentation

Full technical information and descriptive literature relating to the items offered shall be submitted in order that the items can be fully evaluated. This shall include;

- (1) materials used in the manufacture of the items;
- (2) the method of manufacture;
- (3) Test reports in English;
- (4) details of quality assurance procedures;
- (5) drawings; and
- (6) details of tests carried out, etc.

5. QUALITY MANAGEMENT

A quality management plan shall be set up in order to assure the proper quality management of the PECUs and NEMA bases during design, development, production, installation and servicing phases. Guidance on the requirements for a quality management plan may be found in the SANS ISO 9000 and SANS ISO 9001. The details shall be subject to agreement between City Power and supplier.

6. ENVIRONMENTAL MANAGEMENT

An environmental management plan shall be set up in order to assure the proper environmental management of the PECUs and NEMA bases throughout their entire life cycle (i.e. during design, development, production, installation, operation and maintenance, decommissioning and disposal phases). Guidance on the requirements for an environmental management system may be found in SANS ISO 14001 standards. The details shall be subject to agreement between City Power and supplier. This is to ensure that the asset created conforms to environmental standards and City Power SHEQ Policy.

Annex A - Revision information

DATE	REV. NO.	NOTES
Sept 2002	0	First Issue
Feb 2008	1	Include NEMA Category B PECU designed to fail in the OFF position Updated operating voltage to 240V Include NEMA Category B PECU designed to fail in the OFF position
October 2012	2	Updated operating voltage to 240V Include Category A & B Micro Type PECU; 20mm Updating committee members Removal of Fail-OFF PECUs Inclusion of clause 5 : Quality Management Inclusion of clause 6 : Environmental Management General editing
October 2012	3	General Editing
June 2017	4	<p>Removal 4.5.1 In addition the PECUs shall be tested and approved by eThekweni Municipality testing facility before it can be accepted by City Power. An approved letter with both logos of City Power and eThekweni municipalities shall be produced on Tender..... (reason: not SANAS approved)</p> <p>Removal 4.5.2 It is required by City Power that the supplier send samples to eThekweni Municipality Testing Facility for type test and approved letter. (reason: not SANAS approved)</p>

Annex B

**Technical schedules A and B for
Photoelectric control units (NEMA plug-in type)**

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_012	Description	Schedule A	Schedule B
1		Name of manufacture	XXXXX	
2		Date of manufacture	XXXXX	
3		Place of manufacture	XXXXX	
4		Manufacturer's identification reference	XXXXX	
5	1	Specification to which PECU complies	SANS 1777	
6	4.1.1	Rated operating ambient temperatures °C	-15 to +65	
7	4.1.3	Ultraviolet stabilised Yes/No	Yes	
8	4.2.4	PECU's Degree of protection	IP65 (Minimum)	
9	4.3.1	Rated operating voltage V	230±10%	
10	4.3.5	Rated switching load (reactive) VA	1800	
11	4.3.8	Is PECU designed for Fail On? Yes/No	Yes	
12	4.3.9	Switch-On level at rated voltage Lux	60±10%	
13		Power consumption in "ON" state W	<1,0	
14	4.1.3	Switch-ON level at rated voltage Lux	60±10%	
15	4.3.10	Number of switching operations that PECU has been tested to:	8000 (Minimum)	
16	4.3.11	Does PECU have Double Insulation? Yes/No	Yes	
17	4.4	Does PECU comply with clause 4.4? Yes/No	Yes	
18	4.5	Does PECU comply with clause 4.5? Yes/No	Yes	
19	4.6	Guarantee Years	10	
20	4.7	Does PECU comply with per clause 4.7? Yes/No	Yes	
21	4.8	Does the supplier submitted all documents as per clause 4.8 Yes/No	Yes	
22	5	Quality Management? (ISO 9001 or Quality Programme) Yes/No	Yes	
23	6	Environmental Management? (ISO 14001) Yes/No	Yes	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

**Technical schedules A and B
for**

Photoelectric control units (Miniature or Micro type)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_012	Description	Schedule A	Schedule B
1		Name of manufacture	XXXXX	
2		Date of manufacture	XXXXX	
3		Place of manufacture	XXXXX	
4		Manufacturer's identification reference	XXXXX	
5	1	Specification to which PECU complies	SANS 1777	
6	4.1.1	Rated operating ambient temperatures °C	-15 to +65	
7	4.1.3	Ultraviolet stabilised Yes/No	Yes	
8	4.2.4	PECU's Degree of protection	IP65 (Minimum)	
9	4.3.1	Rated operating voltage V	230±10%	
10	4.3.5	Rated switching load (reactive) VA	1800	
11	4.3.8	Is PECU designed for Fail On? Yes/No	Yes	
12	4.3.9	Switch-On level at rated voltage Lux	60±10%	
13		Power consumption in "ON" state W	<1,0	
14	4.1.3	Switch-ON level at rated voltage Lux	60±10%	
15	4.3.10	Number of switching operations that PECU has been tested to:	8000 (Minimum)	
16	4.3.11	Does PECU have Double Insulation? Yes/No	Yes	
17	4.4	Does PECU comply with clause 4.4? Yes/No	Yes	
18	4.5	Does PECU comply with clause 4.5? Yes/No	Yes	
19	4.6	Guarantee Months	42	
20	4.7	Does PECU comply with per clause 4.7? Yes/No	Yes	
21	4.8	Does the supplier submitted all documents as per clause 4.8 Yes/No	Yes	
22	5	Quality Management? (ISO 9001 or Quality Programme) Yes/No	Yes	
23	6	Environmental Management? (ISO 14001) Yes/No	Yes	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

**Technical schedules A and B
for
NEMA bases**

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Name of manufacture	XXXXX	
2		Date of manufacture	XXXXX	
3		Place of manufacture	XXXXX	
4		Manufacturer's identification reference	XXXXX	
5	1	Specification to which socket complies	SANS 1777	
6	4.1.1	Rated operating ambient temperatures °C	-15 to +65	
7	4.1.3	Ultraviolet stabilised Yes/No	Yes	
8	4.3.1	Rated operating voltage V	230±10%	
9	4.4.3	Does NEMA base comply with 4.4.3? Yes/No	Yes	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Annex C–PECU tender requirements

Specification number: CP_TSSPEC_012

Material Group: PECU

Item	SAP number	SAP Short Description	SAP Long Description
1	6279	PECU NEMA TYPE 1800VA FAIL ON	PECU 1800VA FAIL ON 230 V. ITEM SPECIFICATIONCP_TSSPEC_012.
2	6280	PECU NEMA BASE	PECU 1800VA 230 V. ITEM SPECIFICATION CP_TSSPEC_012
3	6295	PECU MICRO TYPE 1800VA FAIL ON	PECU MICRO 1800VA FAIL ON 230 V. ITEM SPECIFICATIONCP_TSSPEC_012