



Request for Quotation (RFQ) for the supply and installation of a Mechanical Load Tester to the CSIR

Date of issue:	Tuesday, 08 August 2017
Closing Date and Time:	Friday, 25 August 2017 at 16h30
RFQ Number:	9057/25/08/2017
Submission and Contact details:	For submission of quotations or any other enquiries: Email: tender@csir.co.za (Please use RFQ No. as subject reference)

1 INVITATION FOR QUOTATION

Quotations are hereby invited for the supply and installation of a Mechanical Load Tester to the CSIR.

2 QUOTATION REQUIREMENTS

Recommended Specifications but not limited to:

Item #	Requirement
1	The mechanical load tester (MLT) shall meet the requirements for testing a single PV module according to the IEC 61215-2 2016-03 standard section Module Qualification Test (MQT) 16 for static load and IEC TS 62782 2016-03 standard section for dynamic load.
2	The MLT should be large enough to test a PV module that is 2.0 meter x 1.0 meter.
3	In static mode, the MLT should be able to apply 10,000 Pa downward pressure on a 2.0 meter x 1.0 meter module and 5,000 Pa upward pressure on a 2 meter x 1 meter module. Load uniformity +/- 10%.
4	In static mode, the MLT should be capable of applying a target load between 1000 Pa and 10, 000 Pa downward and between 1000 P and 5,000 upward at any specified value at 200 Pa intervals.
5	In static mode, the MLT should be able to accept changes in the target pressure without having to re-start the test
6	In dynamic mode, the MLT should be able to cycle up and down at a minimum 1000 Pa (+/- 100 Pa) in 3 to 7 cycles per minute

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This is not a Purchase Order.

7	The MLT should be built with 18 pneumatic cylinders arranged in a 6 x 3 matrix
8	The MLT shall include four suction cups attached to each cylinder for a total of 72 suction cups
9	The suction cup spacing should be adjustable so that the maximum distance from centre-to-centre of each suction cup in both the x- and y- direction should be less than 200 mm to meet the IEC 62782 requirements.
10	The diameter of the suction cups shall be between 90 – 120 mm to allow for > 15% coverage of a 2m x 1m module and sufficient suction force.
11	The MLT should include built in force sensors to allow for real time monitoring of the applied force
12	Feedback control should be included to maintain the pressure at +/- 200 Pascal of target during static and dynamic loading
13	The MLT shall enable the module to deflect freely during the load application within the constraints of the manufacturers prescribed method of mounting.
14	The MLT shall provide for means to easily mount hardware/rails from various racking manufacturers to simulate a variety of mounting configurations.
15	The MLT shall provide the flexibility to allow 50 cm of height adjustment to accommodate modules of different thickness and mounting systems of different thickness, such as a standard “two rail/4 clamp/bolt” mount as well as a “centre clamp/torque tube” for a one axis-tracker mounting configuration.
16	The MLT shall include one distance sensor to allow for measurement of deflection. The sensor should be mounted in such a way that only module deflection is measured, and not any movement of the test platform. It should also be moveable so that it can be positioned over the centre of any module dimension under test.
17	The MLT shall include software and user interface that enables setup of the hardware, loading of saved recipes, custom recipe development, data recording, viewing in real-time, and data exporting.
18	The software should allow inputs for calibration factors separately for upward and downward loads. The calibration factors should link to the control system for accurate application of target loads.
19	The vendor shall include a compressor sized appropriately for dynamic mechanical load at 3 – 7 cycles / minute, per the IEC 62782. The compressor shall provide the proper quality of air deemed necessary by the vendor to ensure proper functioning of the MLT.
20	The MLT shall be built to operate in warehouse type environment with temperatures ranging from 5 C to 40 C.
21	No angle loading required

3 EVALUATION CRITERIA

- 3.1 Selection of suppliers will be based on the 80/20 preference point system.
- 3.2 Indicate valid B-BBEE status on quotation. No B-BBEE status will equal zero points.
- 3.3 Indicate CSD number (National Treasury Central Supplier Database) on quotation. If not registered yet on CSD, use www.csd.gov.za to register.
- 3.4 No order will be issued or no contract will be signed without a valid CSD number.

4 PRICING QUOTATION

- 4.1 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.
- 4.2 Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable, etc.
- 4.3 Payment will be according to the CSIR Payment Terms and Conditions.

5 OTHER TERMS AND CONDITIONS

- 5.1 The supplier shall under no circumstances offer, promise or make any gift, payment, loan, reward, inducement, benefit or other advantage, which may be construed as being made to solicit any favour, to any CSIR employee or its representatives. Such an act shall constitute a material breach of the Agreement and the CSIR shall be entitled to terminate the Agreement forthwith, without prejudice to any of its rights.
- 5.2 A validity period of 90 days will apply to all quotations except where indicated differently on the quote.

6 No goods and/or services should be delivered to the CSIR without an official CSIR Purchase order. CSIR purchase order number must be quoted on the invoice. Invoices without CSIR purchase order numbers will be returned to supplier.

7 Note: This is not a Purchase Order.