

TENDER DOCUMENTS

FOR

PROVISION OF “ENERGY AUDIT & SIMULATION SOFTWARE”

UNDER THE PROJECT

“PUNJAB ENERGY EFFICIENCY AND CONSERVATION

PROGRAM”



MANAGING DIRECTOR,
PEECA, ENERGY DEPARTMENT, PUNJAB
OFFICE: HOUSE # 206 SHADMAN-1,
OPPOSITE REHMANIA MASJID, LAHORE.
(OFF: TEL: 042-99203522, FAX: 042-99203519)
(e.mail: md.peeca@energy.punjab.gov.pk)

OCTOBER, 2016



No. PEECA/Software/_____/ 2016
**PUNJAB ENERGY EFFICIENCY AND
CONSERVATION AGENCY (PEECA)
ENERGY DEPARTMENT
GOVERNMENT OF THE PUNJAB**

Date: /10/2016

SECTION-A

INVITATION TO BIDS

FOR PROVISION OF “ENERGY AUDIT & SIMULATION SOFTWARE”

1. Government of the Punjab has established Punjab Energy Efficiency and Conservation Agency (PEECA) in the Energy Department to carry out the “Punjab Energy Efficiency and Conservation Program”. Through this program, Government of the Punjab intends to carry out energy audits of public buildings including hospitals etc., training of Master Trainers for future Energy Audits in Punjab and Energy Management System establishment for Punjab to conserve energy to reduce burden on the National Grid.
2. For this purpose, PEECA, invites sealed tenders / bids from eligible bidders / suppliers / dealers who are registered with Income Tax & GST Departments of Government of Pakistan and have experience in the relevant field for provision of “Energy Audit & Simulation Software” (20 Nos.) as per specifications mentioned in the Tender Documents.
3. A complete set of signed copy of Tender Documents (in English Language) may be purchased by the bidders on a written request through their authorized persons upon payment of non-refundable fee of Rs. 500/- in the shape of Pay Order / Demand Draft in the name of “Managing Director, PEECA, Energy Department” during office working hours (08.00 AM to 04.00 PM) from the date of publication of this Tender Notice in National Newspapers as well as websites of Punjab PPRA & Energy Department up to one day before the closing day.
4. The bids of those bidders shall only be acceptable who shall purchase the signed copy of the Tender Documents from the Procuring Agency. The unsigned copy of

Tender Documents is also available on the websites of Energy Department (www.energy.punjab.gov.pk) and Punjab PPRA (www.ppra.punjab.gov.pk).

5. The interested bidders who fulfill all the terms & conditions of this Tender Notice & Tender Documents thereof may submit their bids (One Original & Two Copies) in sealed envelope by registered mail or in person on the address given below on or before 05.11.2016 by 02:00 P.M (PST) and it shall be opened on the same day by notified Committee at 02:30 P.M (PST) at the same venue in the presence of bidder's representatives who may choose to attend the Bid Opening meeting.
6. Procurement shall be made as per Rule 38 (1) of Punjab Procurement Rules, 2014 (Amended up to 06-01-2016) on a single stage one envelope procedure.
7. The bid shall be accompanied by;
 - i. A bid security of not less than 2 % of the estimated price
 - ii. GST Registered Certificate, Income Tax Certificate, list of clients with whom firm is already working
8. The procuring agency may reject all bids or proposals at any time prior to the acceptance of a bid or proposal. The procuring agency shall upon request communicate to any bidder, the grounds for its rejection of all bids or proposals, but shall not be required to justify those grounds.
9. For any query / clarification, if any, regarding this tender, the bidder may approach the below mentioned office during working hours.

(Muhammad Qasim Khokhar)
Managing Director,
PEECA, Energy Department, Punjab
Office: House # 206 Shadman-1, Opposite Rehmania Masjid, Lahore.
(Off: Tel: 042-99203522, Fax: 042-99203519)
(e.mail: md.peeca@energy.punjab.gov.pk)

SECTION-B

INSTRUCTIONS TO THE BIDDERS

1. PEECA, Energy Department intends to purchase the Energy Audit & Simulation Software (20 Nos.) for the purpose mentioned in this Tender Document and as per specifications given at **Annex-A** from the Registered Firms / Suppliers / Dealers with Sales Tax & Income Tax Departments on the basis of wholesales rates.
2. In case you are the Registered Firms as mentioned above, you are invited to submit your bid for the said item subject to the terms & conditions mentioned below:
 - i. The bidder shall submit a single stage one envelope bid completed, signed, stamped, sealed in conformity with the Tender Notice & Tender Documents thereof.
 - ii. Brand new, original, registered and licensed version item, as per specifications mentioned at Annex-A of this Tender Document shall be supplied by the Successful Bidder in the office of Managing Director, PEECA, Energy Department at 206 Shadman-I, Opposite Rehmania Masjid, Lahore, at no additional cost within two weeks from the date of the acceptance of Purchase Order/ signing of agreement; otherwise, the bid security shall stand forfeited and the firm shall be blacklisted.
 - iii. The sealed bid shall be accompanied by this Tender Documents duly signed at the appropriate place by the bidder, the Call Deposit Receipt / Pay Order / Demand Draft not less than 2% of the estimated price of this tender as "Bid Security" in favor of "Managing Director, PEECA, Energy Department", shall be submitted along with the sealed bid.
 - iv. Any bid not accompanied by acceptable Bid Security shall be, rejected & disqualified being non-responsive.
 - v. The validity of bid shall be for a period of 90 (ninety) days from the date of opening of the bids.
 - vi. The validity of Bid Security shall be 28 days beyond the validity of bid. (Total 118 days)
 - vii. The estimated price of this tender is PKRs. 8,000,000/- for all applicable duties & taxes.

- viii. The Bid Security shall be returned / released to the un-successful bidders upon the award of the Purchase Order / Contract to the Successful Bidder or on the expiry of the validity of Bid Security whichever is earlier.
- ix. The bids not submitted according to the terms & conditions of this Tender Documents or by the time fixed for the receipt of the bids, shall not be taken into consideration and shall be returned un-opened to the bidders.
- x. No bidder shall be allowed to alter or modify his bid after the closing time for the submission of his bid.
- xi. The procuring agency may, if necessary after the opening of the bids, seek and accept such clarifications of the bid as do not change the substance of the bid. Any request for clarification in the bid, made by the procuring agency & its response, shall invariably be in writing.
- xii. The procuring agency reserves the right not to accept the item if it is not according to the specifications or does not fulfill the conditions of the Tender Document, or is otherwise substandard or is defective / corrupted and to demand compensation, withhold payment and proceed to blacklist the firm.
- xiii. The bidder shall be required to fill the blank column to quote their bid price for item (20 Nos.) as per format given in Annex-B (Form of Bid) of this tender document.
- xiv. The rates offered shall be inclusive of all applicable duties & taxes.
- xv. Blacklisted firms are not eligible to participate in this tender.
- xvi. All applicable Taxes shall be deducted from the total bid price of the Successful Bidder as per rules & regulations.
- xvii. 100% payment of total bid price shall be made in Pak Rupees through cross cheque to the Successful Bidder / Contractor after successful delivery / supply of tendered item in the office on below mentioned address, accepted to the notified Committee. No payment shall be made against rejected / incomplete delivery of item mentioned in this Tender Documents.
- xviii. The bids of the firms / suppliers / dealers who did not purchase the signed copy of the Tender Documents from the office of the undersigned, shall not be accepted and returned unopened to the bidders.

- xix. The procuring agency reserves the right to increase or decrease the number of quantity.

(Muhammad Qasim Khokhar)
Managing Director,
PEECA, Energy Department, Punjab
Office: House # 206 Shadman-1, Opposite Rehmania Masjid, Lahore.
(Off: Tel: 042-99203522, Fax: 042-99203519)
(e.mail: md.peeca@energy.punjab.gov.pk)

As owner(s) of

M/S _____

It is certified that I / We:

- a) Are developers/manufacturers/supplier/importers or authorized dealers of the item quoted.
- b) Accept the terms & conditions as laid down in this Tender Documents and advertised Tender Notice.
- c) Shall observe all the conditions & rules / regulations framed by Government of the Punjab for the purpose and shall supply the tendered item as per specifications and the terms & conditions of this Tender Documents.
- d) Supply item as per specifications given in **Annex-A**.
- e) Purchase the signed copy of Tender Documents from the procuring agency

Signature and Stamp of the Bidder

LIST OF SUPPLIES ITEMS and Specifications

Software	Function
<p>Building Simulation</p> <p>Simulation of the thermal behavior of buildings, proof of thermal insulation in summer according to DIN 4108-2 (paragraph 8.4)</p>	<p>The software simulates the thermal behavior of a building in an hourly basis simulation. Using detailed usage profiles and site-specific climate data accurate information about the behavior of a building at any desired time are possible.</p> <ul style="list-style-type: none"> • Hourly simulation of a building’s thermal behaviour and heating demand based on building characteristics, usage profiles and local climate conditions (using the VDI 6007 methodology). • Integrated CAD package (see details below). • Presentation of temperature curves (indoor air, outdoor air, perceived temperature, etc.) • Identification of over- or under-heating hours • Generation of detailed outputs, including graphical reports and CSV tables • Effects of shading caused by neighbouring objects such as buildings, trees etc. • Quickly assign rooms to pre-defined zones or add user-defined zones • Checks compliance with summer overheating protection in accordance with the DIN 4108-2 standard for simulation <p>Integrated CAD package (HottCAD) Fully-featured CAD tool for drawing and visualisation the building.</p> <ul style="list-style-type: none"> • Comprehensive drawing tools make it easy and quick to create 3D building models. • Plans can be imported from DWG/DXF, PDF or image files. • Roof-drawing tools makes it easy to draw complex roofs. • Combined 2D/3D interface provides immediate visual confirmation of drawing progress. • Materials and constructions catalogues link to integrated U-value calculator. • Quick and easy method of assigning constructions to building elements. • Performance and usage characteristics easily applied to rooms. • Fully configurable room labels. • Dimensioned floorplans and sections can be printed or exported as DWG/DXF. <p><u>TOR Simulation Software</u></p> <p>To capture and visualize the data resulting from the upcoming audits, as well as to simulate the thermal behaviour and the energy consumption of the audited buildings, a suitable simulation software is required.</p> <p>In this software, the considered building should be able to be generated in a simple way, but nevertheless with the required level of detail. This includes the consideration of the specific construction method (insulation, window spec etc.). Furthermore, the real behaviour should be simulatable with the help of a</p>

Software	Function
	<p>subdivision in different building zones and suitable allocation of profiles of utilisation. Moreover, location-related climate data is required. From this input, the heating loads and chill loads as well as the whole energy consumption are to be calculated in a dynamical simulation with a time resolution of at least one hour for the building, taking into account the installed building services as well as all other technical installations and energy consumers.</p> <p>In addition, the possible yields from KWK-and PV installations should be able to be simulated, taking into account the interaction with the existing technical components as well as possible energy storage systems.</p> <p>The entry data as well as the simulation results should be presented in graphical as well as in tabular form. To facilitate inclusion in appropriate audit reports or data banks (for the purpose of benchmarking), the program should furthermore contain an export function.</p> <p>Technical data specifications and functions required by the software:</p> <p>The software simulates the thermal behavior of a building in an hourly basis simulation. Using detailed usage profiles and site-specific climate data accurate information about the behavior of a building at any desired time are possible. <u>Combines all below features in one software package including country specific climate data.</u></p> <ul style="list-style-type: none"> • Hourly simulation of the CHP configuration according to local climate data and power/heat demand targets. • Combines the functionality from the Building Simulation, Heat Pump, PV and CHP software tools to provide a total solution for building services engineers and HVAC specialists involved with renewable energy systems. • Integrated CAD package (see details below). • Detailed entering zone requirements based on profile libraries or own entries • Data exchange with other 3D PLUS products • Quick creation of the required CHP design and system layout. • Hourly simulation of a building's thermal behaviour and heating demand based on building characteristics, usage profiles and climate conditions (using the VDI 6007 methodology). • Conventional oil/gas/biomass boilers as a primary or secondary heating system. • Buffer storage for heat and/or electricity. • Financial calculations including return on investment taking into account grants and optimised domestic electricity usage. • Editable hourly usage profiles for set-point temperatures, domestic hot water demand and electricity consumption. • An extensive building materials and (renewable energy) equipment database • Data exchange interface with other ETU software tools for e.g. hydraulic balancing of central heating systems, pipework layout and underfloor heating systems • Hourly PV simulation based on local solar irradiation data. • Detailed analysis of roof layout, taking into account irradiation angle

Software	Function
	<p>and roof lights, as well as shading factors such as dormers and chimneys.</p> <ul style="list-style-type: none"> • Dimensioned PV layout design in 3D building model. • Virtual simulation of shading factors such as neighbouring trees, buildings etc. • Calculation of multiple roof surfaces in one project. • Virtual projection of the PV panels on digital images of the building/roof (in connection with the ETU Photo Survey Professional software) and calculation of the energy yield of the photovoltaic system in accordance with DIN V 18599-9: 2011-12. • Editable usage profiles for calculating electricity demand. • Integrated quotation module with materials schedule. • Simulation of energy storage. • Flexible reporting system. <p>Integrated CAD package</p> <ul style="list-style-type: none"> • Fully-featured CAD tool for drawing and visualisation the building. • Comprehensive drawing tools make it easy and quick to create 3D building models. • Plans can be imported from DWG/DXF, PDF or image files. • Roof-drawing tools makes it easy to draw complex roofs. • Combined 2D/3D interface provides immediate visual confirmation of drawing progress. • Materials and constructions catalogues link to integrated U-value calculator. • Quick and easy method of assigning constructions to building elements. • Performance and usage characteristics easily applied to rooms. • Fully configurable room labels. • Dimensioned floorplans and sections can be printed or exported as DWG/DXF. • Tabular input: As an alternative to drawing the building in the integrated CAD tool, the relevant building geometry information can be entered manually.

FORM OF BID

Date: _____/2016

Tender No. _____

**OFFICE OF THE
MANAGING DIRECTOR,
PEECA, ENERGY DEPARTMENT,
GOVERNMENT OF THE PUNJAB
206-SHADMAN 1, OPPOSITE REHMANIA MASJID, LAHORE.**

Gentlemen,

1. Having examined the terms & conditions to Tender Notice and Specifications of supplies item mentioned at Annex-A of the Tender Documents, the receipt of which is hereby acknowledged we, the undersigned, offer to supply and deliver all items in conformity with specifications mentioned in tender documents and conditions of Tender Notice for the sum of Rs. _____/-including all applicable taxes for tender item for all 20 Nos. (Rupees _____ in words).
2. Our bid price shall be valid for a period of 90 days from the date of opening of Bid.
3. The validity of Bid Security shall be as per Tender Documents.
4. If our Bid is accepted, we shall supply/deliver the required items mentioned in the tender documents within two weeks from the date of acceptance of Purchase Order.
5. We agree to abide by the terms & conditions of the Tender from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Until a formal Purchase Order(s) is placed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

Dated this _____ day of _____ 2016.

Signature _____ in the capacity of _____ duly
authorized to sign bids for and on behalf of

(Name of Bidder in Block Capitals)

Complete address: _____-

_____ Fax No. _____ Telephone No.

(Signature & Stamp)

WITNESS:

1) _____

2) _____
