



## REQUEST FOR PROPOSAL (RFP)

**(From Vietnamese firms/institutes/organizations)**

NAME of service: <b>Supply, installation, testing and commissioning of an energy Monitoring and Verification system for College of Urban Works and Construction building in Yen Vien, Gia Lam, Ha Noi</b>	DATE: January 6, 2021
	REFERENCE: <b>2-210101</b>

Dear Sir / Madam:

We kindly request you to submit your Proposal for **Supply, installation, testing and commissioning of an energy Monitoring and Verification system for College of Urban Works and Construction building in Yen Vien, Gia Lam, Ha Noi.**

Please be guided by the form attached hereto as Annex 2, in preparing your Proposal.

Proposals may be submitted on or before **Wednesday, January 27, 2021 via email** to the address below:

**United Nations Development Programme  
304 Kim Ma Street, Ha Noi, Viet Nam  
Ms. Luu Ngoc Diep, Procurement Associate  
Luu.ngoc.diep@undp.org**

**Note:**

- Please send separate email (without attachment) to [procurement.vn@undp.org](mailto:procurement.vn@undp.org) notifying that you already submitted proposal and the number of emails submitted. **Notification email indicating the tender's reference number should be sent to this email address by submission deadline or right after you submit proposals.**
- UNDP will acknowledge receipt of the proposals within 2 working days from the submission deadline. In case you do not receive acknowledgement, please contact us within 3 working days after submission deadline.
- Maximum size per email: **30 MB**. Bidders can split proposals into several emails if the file size is large.

Your Proposal must be expressed in the English language, and valid for a minimum period of **90 days from the date of bid submission deadline.**

In the course of preparing your Proposal, it shall remain your responsibility to ensure that it reaches the address above on or before the deadline. Proposals that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your Proposal by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files.

Services proposed shall be reviewed and evaluated based on completeness and compliance of the Proposal and responsiveness with the requirements of the RFP and all other annexes providing details of UNDP requirements.

The Proposal that complies with all of the requirements, meets all the evaluation criteria and offers the best value for money shall be selected and awarded the contract. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price shall be re-computed by UNDP, and the unit price shall prevail, and the total price shall be corrected. If the Service Provider does not accept the final price based on UNDP's re-computation and correction of errors, its Proposal will be rejected.

No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the Proposal. At the time of Award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Contract or Purchase Order that will be issued as a result of this RFP shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a Proposal implies that the Service Provider accepts without question the General Terms and Conditions of UNDP, herein attached as Annex 3.

Please be advised that UNDP is not bound to accept any Proposal, nor award a contract or Purchase Order, nor be responsible for any costs associated with a Service Providers preparation and submission of a Proposal, regardless of the outcome or the manner of conducting the selection process.

UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a Purchase Order or Contract in a competitive procurement process. In the event that you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link:

<http://www.undp.org/content/undp/en/home/operations/procurement/business/protest-and-sanctions.html>

UNDP encourages every prospective Service Provider to prevent and avoid conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, cost estimates, and other information used in this RFP.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to preventing, identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its Service Providers to adhere to the UN Supplier Code of Conduct found in this link :

[https://www.un.org/Depts/ptd/sites/www.un.org.Depts.ptd/files/files/attachment/page/pdf/unscc/conduct\\_english.pdf](https://www.un.org/Depts/ptd/sites/www.un.org.Depts.ptd/files/files/attachment/page/pdf/unscc/conduct_english.pdf)

Thank you and we look forward to receiving your Proposal.

Sincerely yours,

*Tran Thi Hong*  
*Head of Procurement Unit*  
1/6/2021

## Description of Requirements

Context of the Requirement	Please refer to the attached Terms of Reference (TOR)
Implementing Partner of UNDP	Please refer to the attached TOR
Brief Description of the Required Services <sup>1</sup>	(TOR is attached in this Annex)
List and Description of Expected Outputs to be Delivered	Please refer to the TOR
Person to Supervise the Work/Performance of the Service Provider	Please refer to the attached TOR
Frequency of Reporting	Please refer to the attached TOR
Progress Reporting Requirements	Please refer to the attached TOR
Location of work	<input checked="" type="checkbox"/> College of Urban Works and Construction building in Yen Vien, Gia Lam, Ha Noi, Viet Nam <input type="checkbox"/> At Contractor's Location
Expected duration of work	From February 2021 – December 2021
Target start date	February 2021
Latest completion date	December 2021
Travels Expected	Please refer to the attached TOR
Special Security Requirements	<input type="checkbox"/> Security Clearance from UN prior to travelling <input type="checkbox"/> Completion of UN's Basic and Advanced Security Training <input type="checkbox"/> Comprehensive Travel Insurance <input type="checkbox"/> Others [pls. specify]
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	<input type="checkbox"/> Office space and facilities <input type="checkbox"/> Land Transportation <input type="checkbox"/> Others [pls. specify]
Implementation Schedule indicating breakdown and timing of activities/sub-activities	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required
Names and curriculum vitae of individuals who will be involved in completing the services	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required
Currency of Proposal	<input type="checkbox"/> United States Dollars <input type="checkbox"/> Euro <input checked="" type="checkbox"/> Vietnamese Dongs
Value Added Tax on Price Proposal <sup>2</sup>	<input checked="" type="checkbox"/> must be inclusive of VAT and other applicable indirect taxes <input type="checkbox"/> must be exclusive of VAT and other applicable indirect taxes

<sup>1</sup> A detailed TOR may be attached if the information listed in this Annex is not sufficient to fully describe the nature of the work and other details of the requirements.

<sup>2</sup> VAT exemption status varies from one country to another. Pls. check whatever is applicable to the UNDP CO/BU requiring the service.

Validity Period of Proposals ( <b>Counting from the date of submission deadline</b> )	<input type="checkbox"/> 60 days <input checked="" type="checkbox"/> 90 days <input type="checkbox"/> 120 days  In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.
Partial Quotes	<input checked="" type="checkbox"/> Not permitted <input type="checkbox"/> Permitted
Payment Terms <sup>3</sup>	<input checked="" type="checkbox"/> As indicated in the attached TOR <input checked="" type="checkbox"/> Condition for Payment Release: <b>Within thirty (30) days from the date of meeting the following conditions:</b> a) UNDP's written acceptance (i.e., not mere receipt) of the quality of the outputs; and b) Receipt of invoice from the Service Provider.
Person(s) to review/inspect/ approve outputs/completed services and authorize the disbursement of payment	Please refer to the attached TOR
Type of Contract to be Signed	<input type="checkbox"/> Purchase Order <input type="checkbox"/> Institutional Contract <input checked="" type="checkbox"/> Contract for Professional Services <input type="checkbox"/> Long-Term Agreement <sup>4</sup> <input type="checkbox"/> Other Type of Contract <i>[pls. specify]</i>
Criteria for Contract Award	<input type="checkbox"/> Lowest Price Quote among technically responsive offers <input checked="" type="checkbox"/> Highest Combined Score (based on the 70% technical offer and 30% price weight distribution) <input checked="" type="checkbox"/> Full acceptance of the UNDP Contract General Terms and Conditions (GTC). <b>This is a mandatory criterion and cannot be deleted regardless of the nature of services required. Non-acceptance of the GTC may be grounds for the rejection of the Proposal.</b>
Criteria for the Assessment of Proposal	Proposal shall be considered technically qualified if it achieves minimum 70% of total obtainable technical points.  <b>Weight of technical and financial point:</b> <b>Technical Proposal (70%)</b> <input checked="" type="checkbox"/> Expertise of the Firm (40%) <input checked="" type="checkbox"/> Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan (30%)

<sup>3</sup> UNDP preference is not to pay any amount in advance upon signing of contract. If the Service Provider strictly requires payment in advance, it will be limited only up to 20% of the total price quoted. For any higher percentage, or any amount advanced exceeding \$30,000, UNDP shall require the Service Provider to submit a bank guarantee or bank cheque payable to UNDP, in the same amount as the payment advanced by UNDP to the Service Provider.

<sup>4</sup> Minimum of one (1) year period and may be extended up to a maximum of three (3) years subject to satisfactory performance evaluation. This RFP may be used for LTAs if the annual purchases will not exceed \$150,000.00.

	<input checked="" type="checkbox"/> Management Structure and Qualification of Key Personnel (30%)  <b>Financial Proposal (30%)</b> To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP.  Please refer to the <a href="#">Evaluation Criteria</a> for further details.
UNDP will award the contract to:	<input checked="" type="checkbox"/> One and only one Service Provider <input type="checkbox"/> One or more Service Providers, depending on the following factors:
Contract General Terms and Conditions <sup>5</sup>	<input type="checkbox"/> General Terms and Conditions for contracts (goods and/or services) <input type="checkbox"/> General Terms and Conditions for de minimis contracts (services only, less than \$50,000)  Applicable Terms and Conditions are available at: <a href="http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html">http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html</a>
Annexes to this RFP <sup>6</sup>	<input checked="" type="checkbox"/> <a href="#">Terms of Reference</a> & <a href="#">Evaluation Criteria</a> (attached to this Annex) <input checked="" type="checkbox"/> Proposal Submission Form (Annex 2 – enclosed excel file) <input checked="" type="checkbox"/> <a href="#">Contract Template &amp; UNDP Contract General Terms and Conditions</a> (GTC) (Annex 3) <input checked="" type="checkbox"/> <a href="#">Submission checklist</a> (Annex 4)
<b>Pre-proposal meeting and Site visit</b>	Time: <b>10.30 am</b> Date: <b>Monday, January 11, 2021</b> Join Zoom Meeting: <a href="https://undp.zoom.us/j/5063619988">https://undp.zoom.us/j/5063619988</a> Meeting ID: 506 361 9988  <b>The UNDP focal point for the arrangement of the site visit is:</b> <b>Ms. Vu Thi Thu Hang</b> Tel: (+84-24) 38500138 E-mail: <a href="mailto:vu.thi.thu.hang@undp.org">vu.thi.thu.hang@undp.org</a> <b>Kindly contact the above focal point to register for the site-visit at least 3 days in advance.</b>
Contact Person for Inquiries (Written inquiries only) <sup>7</sup>	Luu Ngoc Diep (Ms.) Procurement Associate <a href="mailto:Luu.ngoc.diep@undp.org">Luu.ngoc.diep@undp.org</a> Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an

<sup>5</sup> Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.

<sup>6</sup> Where the information is available in the web, a URL for the information may simply be provided.

<sup>7</sup> This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

	extension is necessary and communicates a new deadline to the Proposers.
Other Information <i>[pls. specify]</i>	<p><b>Bidders are responsible for checking the UNDP website:</b>  <a href="https://procurement-notice.undp.org/">https://procurement-notice.undp.org/</a> for any addenda and updated deadline to this Request for Proposals. UNDP reserves the right to post addenda up to the closing date for submissions. Hence bidders are advised to check the UNDP website frequently prior to submitting their proposal.</p>

## TERMS OF REFERENCE

### For National Firm

<b>Job title</b>	Supply, installation, testing and commissioning of an energy Monitoring and Verification system for College of Urban Works and Construction building in Yen Vien, Gia Lam, Ha Noi
<b>Project:</b>	Energy Efficiency Improvement in Commercial and High-Rise Residential Buildings in Viet Nam
<b>Duration of Appointment:</b>	From February 2021 to December 2021
<b>Duty Station:</b>	Gia Lam, Hanoi
<b>Report to:</b>	National Project Manager, International and national technical advisors, UNDP

### 1) GENERAL

Ministry of Construction (MOC)/ Department of Science, Technology and Environment (DOSTE) is implementing the Project “Energy Efficiency Improvement in Commercial and High-Rise Residential Buildings in Viet Nam” funded by GEF/UNDP and co-financed by Vietnam’s agencies/institutions and enterprises.

Implemented between 2016 and 2020, the project’s goal is to reduce intensity of GHG emissions from the building sector in Viet Nam. The project objective is to improve the energy utilization performance of commercial and high-rise residential buildings in Viet Nam. Realization of this objective will be achieved through implementation of the three following components:

- 1) Improved Enforcement of Energy Efficiency Building Code;
- 2) Building Market Development Support Initiatives; and
- 3) Building EE Technology Applications and Replications.

Each component comprises a number of complementary activities that are designed to remove barriers to the stringent enforcement of the revised EEBC, and application of EE designs, materials, technologies and equipment in commercial and residential buildings. By EOP, the GEF investment will have catalyzed direct GHG emission reduction of about 37,680 tCO<sub>2</sub>e. The cumulative direct reduction in GHG emissions over the lifetime of the project is envisioned to be 236,382 tCO<sub>2</sub>e.

New admin and educational building of College of Urban works construction is one of demonstration building, which participated with EEBC project since 2017. A target of 25% energy saving in comparison with Business



as usual (BAU) is committed. During the cooperation progress, the energy experts of EECB project had analysed and recommended the project to meet QC 09-2017. Since the project has passed the design stage and is being completed constructions works, the operational parameters need to be accurately measured and verified to demonstrate the green certificate assessment, including the related energy data.

To contribute to this process, it is expected that the EECB project will follow up and record actual energy consumption of demonstration projects during their operations. The project will provide support to demonstration building projects owner by supporting supply, installation and commissioning of energy Monitoring and Verification (M&V) system for their building.

Hence the UNDP and EECB PMU are looking for qualified **local** contractor for the supply, installation, commissioning and related training of energy M&V system for the College for Urban Works and Construction educational building in Gia Lam, Hanoi.

## **2) OBJECTIVES OF ASSIGNMENT**

The selected contractor shall supply, install and commission energy M&V system (with requested functions) for College for Urban Works and Construction educational building located in Gia Lam, Hanoi.

The selected bidder shall be expected to be further engaged in performing related training for the building representatives on how to operate the system.

## **3) SCOPE OF WORK**

The general scope of work is to supply, install and commission an energy monitoring and verification system, including all necessary devices, equipment and sub materials (i.e. conducts, wiring, etc.).

In order to achieve this objective, it is expected for the bidders to undertake (at least) the following tasks:

1. Provide:
  - a. A tentative supply and installation work plan and schedule, detailing all tasks to be undertaken and a proposed approach to deliver goods (safety, environment, fire-fighting...)
  - b. An updated BoQ (if needed after site survey), technical and installation drawings including precise technical justifications if scope of work or BoQ is modified.
  - c. The list of assigned persons/organization chart to perform the work (including CVs demonstrating their experience in the field)
  - d. Testing & Commissioning, Hand over procedure and other template documents.
  - e. Training outline
  - f. Expected need for coordination with all relevant and involved parties.
2. Supply/ deliver at site all main equipment stated in the BoQ.
3. Install, connect/interface all equipment and sub materials with any existing monitoring system (BMS, etc. if applicable), test and commission the energy M&V system in coordination with building owner and UNDP consultant teams.

4. Provide instruction guidelines/ user manual/ technical specs, and as-built drawings to the building owner team on how to use the system. Provide on-site and on-the-job training during and after testing and commissioning for at least 05 technical staff of building owner and/or building management team and EECB's project consultants during handover progress.
5. Provide a final report about work performance, testing and commissioning and stating all important matters/ instructions.
6. Provide assistance for troubleshooting and necessary maintenance works during the **warranty time (12 months)**.

Remark: the scope of supply and all complementary information are referenced in Annexes: Annex 1: M&V system functions and reporting system, Annex 2: Device specifications, Annex 3: Estimated Bill of Quantity.

#### **4) DURATION OF ASSIGNMENT, DUTY STATION AND EXPECTED PLACES OF TRAVEL**

Duration and Timing: February – December 2021. The commissioning of the M&V system shall be completed by April 2021 at the latest.

Duty station: The equipment and service are to be provided for the College for Urban Works and Construction educational building in Gia Lam, Hanoi

#### **5) PRODUCTS TO BE SUBMITTED**

All reports, workplans, intermediate products shall be submitted to PMU in English and Vietnamese at the same time and be finally approved by PMU.

a) The energy M&V system shall meet all technical specifications described in Annex 1 and shall be supplied within 30 days after written notice from UNDP or PMU.

This M&V system shall:

- Enable a breakdown of the total energy consumption, on hourly, daily, monthly and yearly basis.
- Be encompassing and monitoring the energy consumption of the following elements:
  1. HVAC system for entire building through the DB panel (TDT DB panel).
  2. Pump system through the Pump DB panel (mechanical DB panel M-PUMP-01; M-PUMP-02; M-PUMP-03).
  3. HeatPump hot water system through the HeatPump DB panel (mechanical DB panel M-HPUMP-01).
  4. Elevator system through the main Elevator DB panel (TD-TM panel).
  5. Total Lighting power consumption and at every floor at floor DB panel (DB-01~DB-05).
- Have a head and Workstation to gather, analyze and enable display and printing of collected data.

Besides, the M&V system shall be comprised of a network of interoperable, stand-alone digital controllers communicating via LonMark™/LonTalk™ and/or BACnet™ and/or Modbus communication protocols to a Network Area Controller (NAC).

The M&V system shall consist of non-invasive clamp multi-meters (power meter), indicating (i.e. instruction) devices, interface equipment, other apparatus and accessories required to monitor mechanical and electrical systems. It shall also provide a way to display, store and print data reports of total and broken-down energy consumptions.

It should also be provided with a ready to use Workstation to gather, analyze and enable display and printing of collected data for the building.

b) All related materials, sub materials and labour to install; test and commission, and train about this M&V system shall be included in the offer.

c) All related reports about work progress and results of the services is provided below:

The timetable of reports/products submission is as follows.

No	Indicative timeline	Work done and product submitted to PMU
1	February 2021	An Inception report / technical report including: - Updated technical document including design/installation drawings, BOQ, Specification of equipment - Work plan and schedule (Master plan include supply, installation and detailed tasks to be undertaken) - The list of assigned persons to perform the work (including CVs demonstrating their experience in the field) - Proposal approach to deliver goods and the services in the TOR (safety, environment, firefighting...), testing and commissioning procedures and templates - Training outlines and hand-over materials Task 3.1
2	March 2021	- Acceptance of material delivery, including CO & CQ Task 3.2
3	March 2021	- Confirmation by the contractor of the completion of the installation process and provision of a tentative T&C agenda and plan. - Testing and commissioning MOM signed by all parties. - Hand-over report (including as-built drawings, and all other related technical documentation). Task 3.3
4	April 2021	- Training material and performance report including report on the training - Final report of completion projects Tasks 3.4 & 3.5
5	May 2021	- Report on completion of troubleshooting and necessary maintenance works during the warranty time. Tasks 3.6

The financial offer should be broken down and detailed following the provided structure of the bill of quantity in Annex 3.

## **6) PROVISION OF MONITORING AND PROGRESS CONTROLS**

The selected Contractor shall perform required tasks under the direct supervision of CUWC Building project representatives, the UNDP team of technical experts, and the PMU Project Manager.

The Contractor shall regularly report to the Project Management Unit (PMU)/MOC-UNDP on the work progress.

After the signing of the contract, the selected Contractor, PMU and UNDP shall agree on the mechanism and actual timeline of reporting requirements.

## **7) ADMIN SUPPORT AND REFERENCE DOCUMENTS**

Project Management Unit (PMU)/MOC-UNDP will assist the selected Contractor with administrative support related to, but not necessarily limited to:

- Coordination work with CUWC building representatives to plan and implement the work.
- Organising necessary meeting(s).

## **8) DEGREE OF EXPERTISE AND QUALIFICATIONS**

Minimum required qualifications and experience of the Contractor are as follows:

- Having an authorization for selling M&V system device by manufacturer or a certificate of partnership / collaboration or equivalent documents
- The Contractor shall demonstrate at least three-year experience in designing, supplying, installing, commissioning, and performing training for Building Management Systems (BMS) or Energy monitoring systems for the building construction sector.
- The Contractor shall demonstrate previous implementations of, at least, three contracts for the supply and installation of BMS and/or Energy monitoring systems in buildings.
- The Contractor shall be able to appoint, at least, three key technical persons that meet following requirements:
  - (i) bachelor's degree in engineering fields such as electronics, electrical, mechanical, or any such relevant engineering fields;
  - (ii) Having, at least, three-year experience in managing design, supply and installation of BMS or Energy M&V systems, BMS systems installation works and technical support to customers in Viet Nam.

## **9) PAYMENT TERM**

Payment amounts will be paid upon implementation of the work and submission of the products with satisfactory acceptance by PMU/MOC-UNDP according to the timeline as follows:

No of payment	Deliverables	Indicative timeline	Payment amount
1	Submission of Report for completed tasks under 3.1 with approval by PMU and UNDP	28 February 2021	20%
2	Submission of report on completed tasks under 3.2 with approval by PMU and UNDP	30 March 2021	30%
3	Submission of report on completed tasks under 3.3 with approval by PMU and UNDP	30 April 2021	30%
4	Submission and approval of report on completed tasks 3.4– 3.5 and bank guarantee of the accountability on operation and maintenance of the M&V system by the selected contractor with the amount equivalent to 5% of total contract value (warranty period of 12 months)	30 May 2021	20%

#### 10. CONSULTANT PRESENCE REQUIRED ON DUTY STATION/UNDP PREMISE

☒ NONE      ☐ PARTIAL      ☐ INTERMITTENT      ☐ FULL-TIME

## Annex #1: M&V system functions and reporting option

Data collection should ensure both digital or analogic energy data values collection and reporting.

Energy managers/ facility manager shall be able to work out reports to analyse total energy consumption, Chiller systems, pumps, elevators, and other stated equipment energy consumption to enable the definition of Energy Efficiency and Conservation strategies.

Total energy consumption and energy consumption breakdown data follow up should be possible for all main equipment quoted in part 5

The system should provide a clear visual display option and allow analysis of total and energy consumption breakdown for listed pieces of equipment in Part 5.

Such data recording and visualization should be possible on an instantaneous basis, and can be extracted on hourly, daily, weekly, monthly and yearly basis.

This M&V system should also allow printings of raw and processed data as well as illustrating graphs (as examples displayed below).

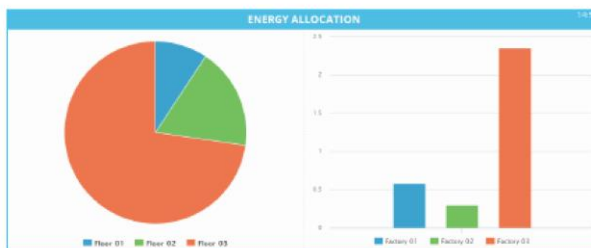
### Basic Report



Consumption/Cost Energy



Comparison by period of Consumption/Cost Energy



Energy Allocation



Trend of Energy Parameters

(Pix for reference only)

## Annex #2: Device specifications

Devices and materials must be brand new, and possess a certificate of origin, be without any defect and do not contain any toxic materials.

Device and materials are expected be provided with a 12 months warranty period minimum, in case some pieces of equipment are entitled a longer warranty period by manufacturers, specific warranty certificates should also be provided.

### 1. General specification

Major device manufacturer	The Software, DDC, IO module must be are supplied by the same manufacturer. Manufacturer from G7/EU and Origin from G7/EU preferred.
Major device manufacturer	Manufacturer must have representative office or branch in Viet Nam for guarantee, technical support and maintenance.

### 2. Devices

#### 2.1 Central devices

##### 2.1.1 Client PC

Microprocessor	Minimum Intel Core i5
RAM	Minimum 4GB
Hard Drive	Minimum 1TB SATA 7.2K RPM
Graphics	Minimum 1 GB
Operating system	Windows 10

##### 2.1.2 Network switch

Ports	8 or 24 (more if needed)
Speed	10/100/1000MB

##### 2.1.3 Software

<b>Manufacturer</b>	Manufacturer/Origin from G7/EU preferred. The Software, DDC, IO module must be supplied by the same manufacturer preferably.
<b>Web GUI</b>	Support Mobile web application.
	User interface (UI) can be accessed by any Web browsers support HTML5.
	Supports unlimited number of User interface via the Internet / intranet with a standard web browser.

	Providing access to alarm, logs, graphics and configured through standard web browsers.
	Log records for database changes, database storage, and backup, time functions, scheduling, scheduling, control, and energy management programs.
<b>Alarm application</b>	Allow user sent alarm to at least 4 objects:
	1. User interface
	2. Printer
	3. Email
<b>Report</b>	In addition to the available report templates, user can create report templates.
	Generate reports manually or automatically, defining when to export reports.
	Report can be sent via email.
<b>Scheduling</b>	Week schedule
	Holiday schedule.
<b>Security</b>	Password security includes limited time passwords, password history, strong password support, and password change mandatory for the first sign in attempt.
	Advanced Certificate Management includes tools for managing self-signed certificates and third parties. This is a critical requirement for system security.
<b>Graphics</b>	The graphics library is updated with realistic and 3-D images for HVAC equipment and general graphics.
	Allows users to define attributes of color, font, icon to meet custom requirements.
<b>Help</b>	The HTML-based help includes full online documentation.
<b>Configuration application</b>	Provides online and offline use of graphical configuration tools and Java object libraries.
	Configuration and program applications are included in BMS software.
<b>Protocol</b>	Support all BMS standard protocol Bacnet, Lon, Modbus, KNX, SNTP without different license for each protocol.

#### 2.1.4 DDC IP integrate gateway Modbus



<b>Manufacturer</b>	Manufacturer from G7/EU preferred. The Software, DDC, IO module are supplied by the same manufacturer preferably.
<b>Real-time clock</b>	Available real time clock
<b>Ethernet port</b>	Minimum 10/100 Mbps Ethernet port
<b>Web services</b>	Embedded XML Web service with customizable user interface.
<b>RS485</b>	Minimum 1 port
<b>Integrated gateway</b>	Mbus/Modbus via RS485
<b>USB port</b>	Minimum 1 usb port for local configuration and program
<b>Rs232 Port</b>	Minimum 1 rs232 port for local configuration or local LCD screen
<b>Ambient ratings</b>	-25° ... 55° C
	5 – 95% RH (non-condensing)
<b>Approvals</b>	EN, FCC, UL-916, BTL

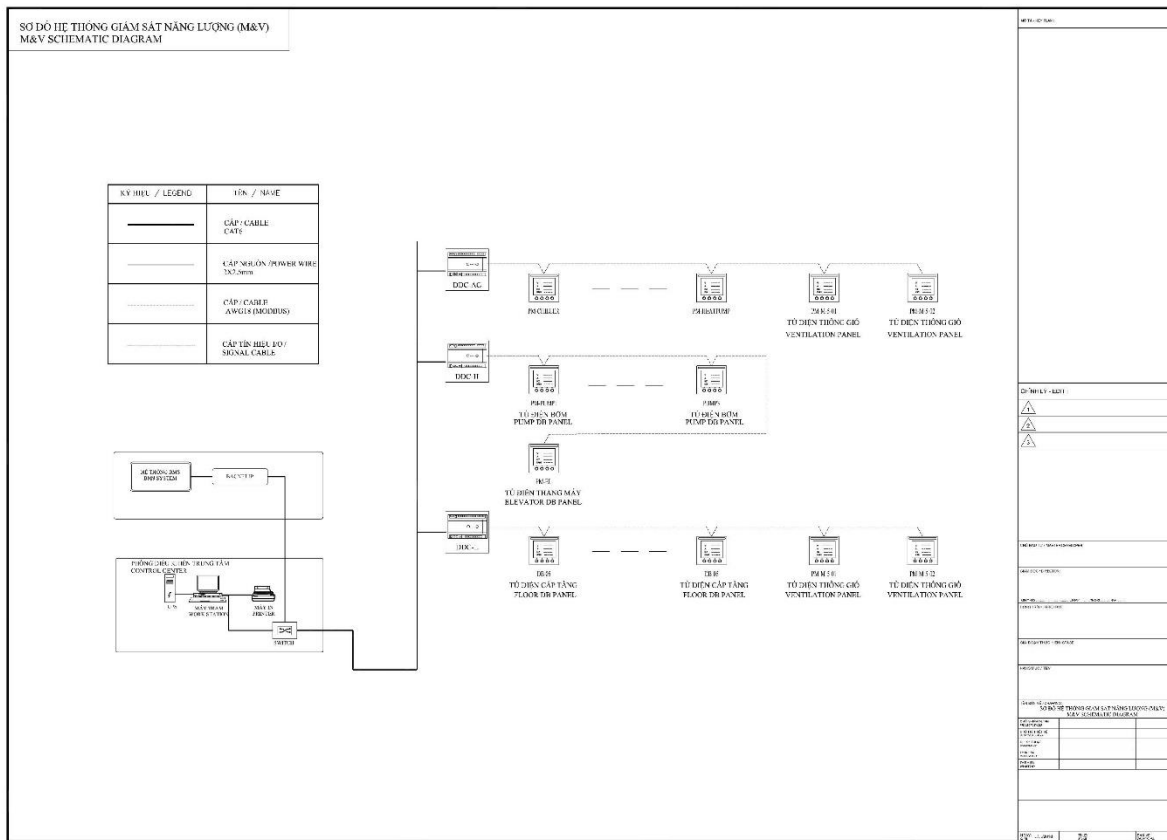
## 2.2 Field devices/ Power meter

<b>RS485</b>	Minimum 1 port
<b>Integrated communication</b>	Mbus/Modbus via RS485
<b>Monitoring data</b>	3 phase: U,I,P, power factor 1 phase: U,I,P

**Annex #3: Estimated Bill of Quantity (for reference)**

Mã hiệu	Nội dung công việc	Đơn vị	Khối lượng
Code	Scope of supply	Unit	Quantity
	<b>M&amp;V SYSTEM</b>		
<b>1.0</b>	<b>DDC Controller</b>		
<b>1.1</b>	<b>DDC-AC</b>		
	Bacnet IP DDC/ IP integrate gateway Modbus + Support ModbusRTU 32 devices	Pcs	2
	DDC panel and accessories	Pcs	1
<b>1.2</b>	<b>DDC-H</b>		
	Bacnet IP DDC/ IP integrate gateway Modbus + Support ModbusRTU 32 devices	Pcs	1
	DDC panel and accessories	Pcs	1
<b>1.3</b>	<b>DDC-L</b>		
	Bacnet IP DDC/ IP integrate gateway Modbus + Support ModbusRTU 32 devices	Pcs	1
	DDC panel and accessories	Pcs	1
<b>2.0</b>	<b>FIELD DEVICES</b>		
	Power meter (-phase (non-invasive, clamp)	Pcs	48
<b>3.0</b>	<b>OPERATOR WORKSTATION</b>		
3.1	Client PC (include license Window 10)	Pcs	1
3.2	Switch 8 or 24-port 10/100/1000MB	Pcs	1
3.3	M&V Software: - Supports unlimited number of user interface - Logs records for database and customisable reports - Protocol support BMS standard protocols such as BacNet, Lon, Modbus, KNX, SNTP	Pcs	1
3.4	License energy management software 250 point	Pcs	1
3.5	License bacnet IP 2500 point	Pcs	1
<b>4.0</b>	<b>ENGINEERING COST</b>		
	Programing, Testing and Commissioning that included	Lot	1
	- Software logic programing		
	- Colour graphic editing		
	- Database management		
	- Interfacing		
<b>5.0</b>	<b>INSTALLATION COST</b>		
5.1	Labor installation – testing and Commissioning costs	Lot	1
5.2	Sub materials cost (wires, conducts, accessories, etc)	Lot	1

## Annex #4: M&V Schematic diagram



## EVALUATION CRITERIA

### Part 1 – Minimum Eligibility and Qualification Criteria

Eligibility and Qualification will be evaluated on Pass/Fail basis, as follows:

Evaluation criteria		Pass/Fail
<b>Section 1. M&amp;V system</b>		
<b>1</b>	<b><i>General requirements</i></b>	
1.1	Possibility to measure, record and analyse digital and analogic data	
1.2	Possibility to track total energy consumption as well as the energy breakdown	
1.3	Possibility to clearly display, record and analyse total and broken-down energy consumption on instantaneous, hourly, daily, weekly, monthly and yearly basis	
1.4	Possibility to extract reports (digital and printable)	
1.5	Conformity with required BOQ	
<b>2</b>	<b><i>Specific requirements</i></b>	
<b>2.1</b>	<b>Central devices</b>	
2.1.1	Client PC: - Windows 10 software or equivalent - CPU intelcore I5 minimum - HDD 1.0TB minimum - RAM 4 GB minimum	
2.1.2	Network switch 8 or 24 ports, 10/100/1000 MB consumption on instantaneous, hourly, daily, weekly, monthly and yearly basis	
2.1.3	Software: - Support unlimited number of user interface - Logs records for database and customisable reports - Protocol support all BMS standard protocols BacNet, Lon, Modbus, KNX, SNTP	

2.1.4	DDC IP integrated gateway Modbus: - Ethernet port mini 10/100 Mbps - Embedded XML Web server - 1 port RS 485 - 1 port USB and/or 1 port Rs232	
2.1.5	Previously similar experience in working with UN/UNDP or other international organizations and non-government organizations in conducting empirical research on enterprise relevant studies	
<b>2.2</b>	<b>Sensors types and quantities</b>	
<b>Section 2. Company qualifications</b>		
2.1	Having an authorization for selling M&V system device by manufacturer or a certificate of partnership / collaboration or equivalent documents	
2.2	Accepted quality insurance system in place	
2.3	Warranty time of 12 months after complete M&V system commissioning date consumption on instantaneous, hourly, daily, weekly, monthly and yearly basis	
2.4	Commitment for troubleshooting assistance for 12 months after hand-over	

**Bid(s) passing all the requirements in Part 1 will be further evaluated.**

## **Part 2 – Technical Examination Criteria**

The evaluation of technical proposal shall be conducted using scoring method (1,000 points), as follows:

<b>Summary of Technical Proposal Evaluation Forms</b>		<b>Points Obtainable</b>
1	Bidder's qualification, capacity and experience	400
2	Proposed Methodology, Approach and Implementation Plan	300
3	Proposed Methodology, Approach and Implementation Plan	300
	<b>Total</b>	<b>1000</b>

TECHNICAL PROPOSAL EVALUATION		Max. Points
Section 1. Bidder’s qualification, capacity and experience		Points obtainable
1.1	At least 3-year experience in designing, supplying, installing and commissioning BMS or Energy Monitoring systems, together with technical training services and technical assistance to customers in Vietnam for such systems;	200
1.2	Provide evidences of at least three contracts of supplying and installing technical BMS or energy M&V systems in Buildings in Viet Nam in the past last three years, with a value between VND 500 million – VND 5 billion per contract.	150
1.3	Ability to supply equipment within 60 days upon signing of the contract.	50
Total Section 1		400

TECHNICAL PROPOSAL EVALUATION		Max. Points
Section 2. Proposed Methodology, Approach and Implementation Plan		Points obtainable
2.1	Proposal approach is appropriate and is based on results from the site visit	100
2.2	Provision of a clear, detailed and feasible workplan and schedule	100
2.3	Have tasks been clearly understood by the bidders?	100
Total Section 2		300

TECHNICAL PROPOSAL EVALUATION			Max. Points
Section 3. Management Structure and Key Personnel			Points obtainable
3.1	National Project Manager		100
	Bachelor's degree in engineering fields such as electronics, electrical or mechanical engineering	50	

	<i>Having, at least, three – year experience in managing design, supply and installation of BMS or Energy M&amp;V systems in Viet Nam</i>	50	
3.2	National Site Manager		100
	<i>Bachelor's degree in engineering fields such as electronics, electrical or mechanical engineering</i>	50	
	<i>Having, at least, three – year experience in designing, supplying and installing BMS or Energy M&amp;V systems in Viet Nam</i>	50	
3.3	National Commissioning Engineer		50
	<i>Bachelor's degree in engineering fields such as electronics, electrical or mechanical engineering</i>	25	
	<i>Having, at least, three – year experience in commissioning, troubleshooting BMS or Energy M&amp;V systems in Viet Nam</i>	25	
3.4	National Trainer		50
	<i>Bachelor's degree in construction, electronics, automation or related fields</i>	25	
	<i>Having three years experience in performing training about BMS and Energy Monitoring systems</i>	25	
<b>Total Section 3</b>			<b>300</b>

All bids passing the minimum technical score of 700 will be technically qualified for financial evaluation.  
**Submission obtaining the highest weighted points (technical points + financial points) will be selected.**

**Important Notes:**

- Evaluation will be done separately for each of the proposed key personnel (if applicable) and the total personnel score will be the average.
- Please refer to the Submission checklist (Annex 4) for documents to be submitted for the evaluation

## FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL<sup>8</sup>

*(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery<sup>9</sup>)*

[insert: Location].

[insert: Date]

To: [insert: Name and Address of UNDP focal point]

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP **in conformity with** the requirements defined in the RFP dated [specify date] , and all of its attachments, as well as **the provisions of the UNDP General Contract Terms and Conditions** :

### A. Qualifications of the Service Provider

*The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of UNDP by indicating the following :*

- a) *Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations;*
- b) *Business Licenses – Registration Papers, Tax Payment Certification, etc.*
- c) *Latest Audited Financial Statement – income statement and balance sheet to indicate Its financial stability, liquidity, credit standing, and market reputation, etc. ;*
- d) *Track Record – list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references;*
- e) *Certificates and Accreditation – including Quality Certificates, Patent Registrations, Environmental Sustainability Certificates, etc.*
- f) *Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.*

### B. Proposed Methodology for the Completion of Services

*The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.*

<sup>8</sup> This serves as a guide to the Service Provider in preparing the Proposal.

<sup>9</sup> Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes



**C. Qualifications of Key Personnel**

*If required by the RFP, the Service Provider must provide :*

- a) Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;*
- b) CVs demonstrating qualifications must be submitted if required by the RFP; and*
- c) Written confirmation from each personnel that they are available for the entire duration of the contract.*

**We confirm our full acceptance of the UNDP Contract General Terms and Conditions and agree to abide by this Proposal for 90 days from the date of proposal submission deadline.**

*[Name and Signature of the Service Provider's Authorized Person]*

*[Designation]*

*[Date]*

## Contract Templates and General Terms and Conditions

1. Please find below link to the Professional service contract template:

[http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/Contract%20Face%20Sheet%20\(Goods%20and-or%20Services\)%20UNDP%20-%20Sept%202017.pdf](http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/Contract%20Face%20Sheet%20(Goods%20and-or%20Services)%20UNDP%20-%20Sept%202017.pdf)

2. Please find below link to the General Terms and Conditions:

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**below US\$ 50,000 (Services only):**

UNDP General Terms and Conditions for Institutional (de minimis) Contracts apply

[http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/3.%20UNDP%20GTCs%20for%20de%20minimis%20Contracts%20\(Services%20only\)%20-%20Sept%202017.pdf](http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/3.%20UNDP%20GTCs%20for%20de%20minimis%20Contracts%20(Services%20only)%20-%20Sept%202017.pdf)

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**below US\$ 50,000 (Goods or Goods and Services):**

UNDP General Terms and Conditions for Contracts apply

[http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/2.%20UNDP%20GTCs%20for%20Contracts%20\(Goods%20and-or%20Services\)%20-%20Sept%202017.pdf](http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/2.%20UNDP%20GTCs%20for%20Contracts%20(Goods%20and-or%20Services)%20-%20Sept%202017.pdf)

☐

**equal to or above US\$ 50,000 (Goods and/or Services):**

UNDP General Terms and Conditions for Contract apply

[http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/2.%20UNDP%20GTCs%20for%20Contracts%20\(Goods%20and-or%20Services\)%20-%20Sept%202017.pdf](http://www.vn.undp.org/content/dam/vietnam/docs/Legalframework/2.%20UNDP%20GTCs%20for%20Contracts%20(Goods%20and-or%20Services)%20-%20Sept%202017.pdf)

## CHECKLIST OF DOCUMENTS SUBMITTED BY BIDDERS

**Note:**

- Bidders are required to review carefully this checklist before submitting proposal to ensure complete submission.
- Maximum email size: **30 MB**/email. Bidders can split proposal into several emails if the file size is large.
- Technical and Financial Proposals are to be submitted in separate emails before or by **Wednesday, January 27, 2021** (Hanoi time).
- Email and proposal should indicate clearly the reference and name of tender.

Item	Documents	To be completed by bidders		
		Doc submitted Y/N	Number of pages	Remarks
1	Fully filled Technical proposal (pls. refer to the guidelines in Annex 2) with copies/scan of appropriate supporting documents:			
	a) Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations			
	b) Business Licenses – Registration Papers, Tax Payment Certification, etc.			
	c) Track Record – list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references			
	d) Certificates and Accreditation – including Quality Certificates, Patent Registrations, Environmental Sustainability Certificates, etc. (if any)			
	e) Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.			
	f) Proposed Methodology for the Completion of Services			
	g) Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;			
	h) <b>Detailed CVs of the proposed personnel with copies of required certificates</b>			
2	<b>Duly signed Price Schedule (pls. use the enclosed excel template in Annex 2) in both signed pdf and excel formats</b>			
3	Bidder confirms its full acceptance of the UNDP Contract General Terms and Conditions and agrees to abide by this Proposal for 90 days from the date of proposal submission deadline.			

4	This duly filled, checked, certified submission checklist to be attached to the submission			
5	Send email ( <b>without attachment</b> ) to <a href="mailto:procurement.vn@undp.org">procurement.vn@undp.org</a> notifying that you already submitted proposal and the number of emails submitted. Notification email should be sent to above email address by submission deadline or right after you submit proposals.			

*[Name and Signature of the Service Provider's Authorized Person]*

*[Designation]*

*[Date]*