REQUEST FOR QUOTATION (RFQ)
(Goods)

NAME & ADDRESS OF FIRM	DATE: January 13, 2019
	REFERENCE: UNDP-SYR-RFQ-003-18

Dear Sir / Madam:

We kindly request you to submit your quotation for provide Control & Monitoring system for 5 transformers in Rural Damascus in addition to provide a training for 6 engineers from the institution of transmission, as detailed in Annex 1 of this RFQ. When preparing your quotation, please be guided by the form attached hereto as Annex 2.

Quotations may be submitted on or before January 29, 2019 at 2.00 pm and via ☒*e-mail,* ☒*courier mail* to the address below:

United Nations Development Programme
Mezzeh ,West Villas,Gazawi street No. 8
Attn: Shouaib.Al Khuder, Procurement Assistant
E-mail: Syria.bids@undp.org

Quotations submitted by email must be limited to a maximum of 10 MB, virus-free and no more than 3 email transmissions. They must be free from any form of virus or corrupted contents, or the quotations shall be rejected.

It shall remain your responsibility to ensure that your quotation will reach the address above on or before the deadline. Quotations that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your quotation by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files.

Please take note of the following requirements and conditions pertaining to the supply of the abovementioned good/s:

Delivery Terms [INCOTERMS 2010] *(Pls. link this to price schedule)*	☒DAP
Customs clearance, if needed, shall be done by:	☒UNDP
Exact Address/es of Delivery Location/s (identify all, if multiple)	At the General Establishment for Rural Damascus Electricity (5 substations) on a Turnkey Basis
UNDP Preferred Freight Forwarder, if any	N/A
Distribution of shipping documents *(if using freight forwarder)*	N/A
Latest Expected Delivery Date and Time *(if delivery time exceeds this, quote may be rejected by UNDP)*	☒ 6 Months from the issuance of the Purchase Order (PO)
Delivery Schedule	☒Required
Packing Requirements	N/A
Mode of Transport	☒LAND
Preferred Currency of Quotation	United States Dollars However, for local supplier's payments will be in Syrian Pounds at the prevailing UN exchange rate at the date of the invoice.
Value Added Tax on Price Quotation	☒ Must be exclusive of VAT and other applicable indirect taxes.
After-sales services required	☒Warranty on Parts and Labor for minimum period of one year ☒Technical Support .
Performance security	10 % of the contract value valid for one year
Deadline for the Submission of Quotation	*Monday, January 28, 2019 and at 2.00 pm at Damascus time Zone*
Site visit	**Mandatory** site visit will be held on 20 January 2019 – at 10:00 The focal point for site visit arrangement and location is Name: Ali Kayyali Mobile : 0958880114 e-mail: ali.kayyali@undp.org .
All documentations, including catalogs, instructions and operating manuals, shall be in this language	☒ English 0r ☒ Arabic
Documents to be submitted	☒ Duly Accomplished Form as provided in Annex 2, and in accordance with the list of requirements in Annex 1;

	☒ Vendor should have at least 3 years of similar experience and should provide a list of 3 similar projects at least. ☒ Latest Business Registration Certificate; ☒ Written Self-Declaration of not being included in the UN Security Council 1267/1989 list, UN Procurement Division List or other UN Ineligibility List;
Period of Validity of Quotes starting the Submission Date	☒ 60 days In exceptional circumstances, UNDP may request the Vendor to extend the validity of the Quotation beyond what has been initially indicated in this RFQ. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Quotation.
Partial Quotes	☒ Not permitted.
Payment Terms	☒ 100% upon complete delivery of goods and services.
Liquidated Damages	☒ Will be imposed under the following conditions: Percentage of contract price per day of delay : 0.5% Max. no. of days of delay: 30 days After which UNDP may terminate the contract.
Evaluation Criteria	☒ Technical responsiveness/Full compliance to requirements and lowest price. ☒ Comprehensiveness of after-sales services ☒ Full acceptance of the PO/Contract General Terms and Conditions. ☒ Vendor should have at least 3 years of similar experience and should provide a list of 3 similar projects at least.
UNDP will award to:	☒ One and only one supplier.
Type of Contract to be Signed	☒ Contract Face Sheet (Goods and-or Services) UNDP
Contract General Terms and Conditions	☒ General Terms and Conditions for contracts (goods and/or services) Applicable Terms and Conditions are available at http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
Special conditions of Contract	☒ Cancellation of PO/Contract if the delivery/completion is delayed by 30 days.
Conditions for Release of Payment	☒ Passing Inspection. ☒ Complete Installation. ☒ Written Acceptance of Goods based on full compliance with RFQ requirements. ☒ completion and acceptance of the training

Annexes to this RFQ	☒ Specifications of the Goods Required (Annex 1) ☒ Form for Submission of Quotation (Annex 2) ☒ General Terms and Conditions / Special Conditions: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html Non-acceptance of the terms of the General Terms and Conditions (GTC) shall be grounds for disqualification from this procurement process.
Contact Person for Inquiries (Written inquiries only)	*Shouaib Al Khuder* *Procurement Associate* *Shouaib.alkhuder@undp.org* 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 extension is necessary and communicates a new deadline to the Proposers.

Goods offered shall be reviewed based on completeness and compliance of the quotation with the minimum specifications described above and any other annexes providing details of UNDP requirements.

The quotation that complies with all of the specifications, requirements and offers the lowest price, as well as all other evaluation criteria indicated, shall be selected. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price (obtained by multiplying the unit price and quantity) shall be re-computed by UNDP. The unit price shall prevail and the total price shall be corrected. If the supplier does not accept the final price based on UNDP's re-computation and correction of errors, its quotation will be rejected.

After UNDP has identified the lowest price offer, UNDP reserves the right to award the contract based only on the prices of the goods in the event that the transportation cost (freight and insurance) is found to be higher than UNDP's own estimated cost if sourced from its own freight forwarder and insurance provider.

At any time during the validity of the quotation, 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 quotation. 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 Purchase Order that will be issued as a result of this RFQ shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a quotation implies that the vendor accepts without question the General Terms and Conditions of UNDP indicated above - http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html .

UNDP is not bound to accept any quotation, nor award a contract/Purchase Order, nor be responsible for any costs associated with a Supplier's preparation and submission of a quotation, regardless of the outcome or the manner of conducting the selection process.

Please be advised that 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/protestandsanctions/

UNDP encourages every prospective Vendor to avoid and prevent 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, specifications, cost estimates, and other information used in this RFQ.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its suppliers to adhere to the UN Supplier Code of Conduct found in this link : http://www.un.org/depts/ptd/pdf/conduct_english.pdf

Thank you and we look forward to receiving your quotation.

Sincerely yours,
Hanan Al Ali
Head of Procurement Unit
January 13, 2019

Annex 1

Technical Specifications

دفتر الشروط الفنية

لتطوير وقيادة ومراقبة قسم 20 ك.ف في محطات التحويل 20/66/230 ك.ف و20/66 ك.ف

/ محطة تحويل5ريف دمشق لـــ/ في الشركة العامة لكهرباء محافظة

على اساس مفتاح باليد

تعاريف :

يقصد بالتعابير التالية:

محطات تحويل : هي محطات تحويل الكهرباء 20/66/230 ك.ف ومحطات تحويل 20/66 ك.ف

قسم 20 ك.ف : هي خلايا مخارج 20 ك.ف وخلايا وصولات 20 ك.ف

الحمايات : الحمايات الرقمية المركبة في قسم 20 ك.ف

1)-الغاية من المشروع:

تقديم و توريد وتركيب كافة التجهيزات الحاسوبية والبرمجيات الخاصة لأجهزة الحماية الكهربائية ريف دمشق لقسم الـ 20 ك.ف (وصولات +) محطات تحويل في محافظة 5 لـ ((الحمايات الرقمية) على تركيب النظام مخارج).بالاضافة لتدريب 6 مهندسين من المؤسسة العامة للنقل، وزارة الكهرباء، ووضعه في الخدمة (تدريب عملي).

برنامج قيادة ومراقبة المحطات عن بعد معد من قبل الشركة العامة لكهرباء ريف دمشق ومتوفر لدى

تيارات – توتر – التردد – حالة القاطع (**المؤسسة العامة لتوزيع الكهرباء ،** تتم قراءة بارامترات الحماية ... الخ) ونقلها إلى مكتب الإرسال في شركة كهرباء ريف دمشق باستخدام شبكات الاتصالات العاملة في سورية بما يحقق الربط ضمن شبكة اتصالات واحدة خاصة بالمؤسسة و بالشركة وبشكل امن ومستقر.

علماً بأن الحمايات المركبة والقابلة للقراءة والتحكم والتي يجب تطبيق النظام عليها هي من الانواع التالية :

نوع الحماية	الشركة المصنعة	بلد الصنع	رقم الموديل
MICOM	AREVA	الالمانية	**P122**
GE	General Electric	الاسبانية	**MIFII**
MICRO ELECTRIC	MICRO ELECTRIC	الايطالية	**IM30-AB**

2) أبعاد المشروع:

تكمن أبعاد المشروع في تحقيق ما يلي:

- تخفيض كلف التشغيل
- قيادة ومراقبة المنظومة الكهربائية.
- تطوير محطات تحويل الكهرباء
- مراقبة جميع المحطات بذات الوقت من مكتب التنسيق.
- التدخل السريع من مركز التنسيق في المؤسسة ومكاتب الإرسال في الشركة بإجراء المناورات على مخارج 20 ك.ف و الوصولات في محطات التحويل.
- دراسة توزيع الحمولة وتوازن الاطوار
- رفع كفاءة ووثوقيه الشبكة الكهربائية
- تخفيض الفاقد الفني
- ترقية الشبكة الكهربائية لمحاكات الشبكات الذكية

3):- طريقة التنفيذ

يتوجب على العارض تقديم وتركيب كافة التجهيزات و البرمجيات اللازمة لتشغيل نظام القيادة والتحكم المعد من قبل شركة كهرباء ريف دمشق على حمايات خلايا الوصول ومخارج 20 ك.ف في محطات تحويل 20/66/230 ك.ف و 20/66 ك.ف العائدة للشركة العامة لكهرباء ريف دمشق المبينة في الجداول المرفقة ووفق جداول الكميات .

4) مراحل تنفيذ المشروع:

5يتم تنفيذ المشروع بتوريد وتركيب كافة التجهيزات الحاسوبية وبرمجيات الحمايات الرقمية المطلوبة ل محطات تحويل وتجهز غرفة التحكم خلال مدة اقصاها 6 اشهر.

5) الضمان :

ضمان التجهيزات بكامل مكوناتها لمدة /1/ سنة ميلادية وذلك اعتبارا من تاريخ الاستلام المؤقت للتجهيزات الموردة من قبل العارض .

6) شروط عامة لقبول العرض:

1. على العارض الالتزام بتأمين وتركيب كافة البرمجيات (الخاصة بالحمايات الرقمية) و التجهيزات الحاسوبية اللازمة لتنفيذ المشروع وتنفيذ التوصيلات المطلوبة على خلايا قسم 20. ويجب ان تكون متوافقة مع نظام القيادة والتحكم المتوفر لدى المؤسسة العامة لتوزيع الكهرباء
2. لا يقبل اي نظام برمجي غير المطبق والمستثمر من قبل المؤسسة العامة لتوزيع الكهرباء الذي اثبت وثوقيه عمل مع مختلف تجهيزات المحطات. من خلال التجارب التي قامت بها المؤسسة العامة والشركات.

3. يمكن للعارض الاطلاع على الحمايات وأماكن تركيبها في محطات التحويل20/66/230 ك.ف و محطات تحويل 20/66 ك.ف قبل تقديم العرض والاستفسار عن أية ملاحظة وذلك بالتنسيق مع شركة كهرباء ريف دمشق.
4. ضمان سرية المعلومات والدراسات والبرمجيات المقدمة من قبل المؤسسة العامة لتوزيع الكهرباء.
5. يجب أن تكون التجهيزات و برمجيات تعريف الحمايات قابلة للتعامل مع كافة أنواع الحمايات (المذكورة سابقا) والمركبة في المحطات ومتوافقة مع نظام القيادة التحكم .
6. يفضل ان تكون برمجيات تعريف الحمايات متوافقة مع مختلف اصدارات نظام التشغيل (Windows 7 ,Windows 8.1 , 10)
7. يجب على العارض تقديم التدريب العملي اللازم خلال عملية التركيب.

7) التزامات العارض :

1. زيارة مواقع العمل على الواقع قبل تقديم العرض يقوم خلالها بالتنسيق والتعاون مع المؤسسة العامة لتوزيع الكهرباء لإنجاز المهام الآتية :
   a) الإطلاع على نظام التحكم والقيادة المعد من قبل الشركة العامة لكهرباء ريف دمشق
   b) الإطلاع على مواقع العمل المعنية باستثمار نظام التحكم والقيادة (مكتب الإرسال – محطات تحويل الكهرباء **مرفق جدول يوضح اسماء المحطات ومواقعها)**

8) البرنامج الزمني

- يلتزم العارض بتقديم برنامج زمني لتوريد وتركيب كافة التجهيزات والبرمجيات (برمجيات الحمايات الرقمية) على أن لا تزيد مدة التوريد والتركيب والوضع بالاستثمار عن 6 أشهر ويفضل اقل فترة زمنية .

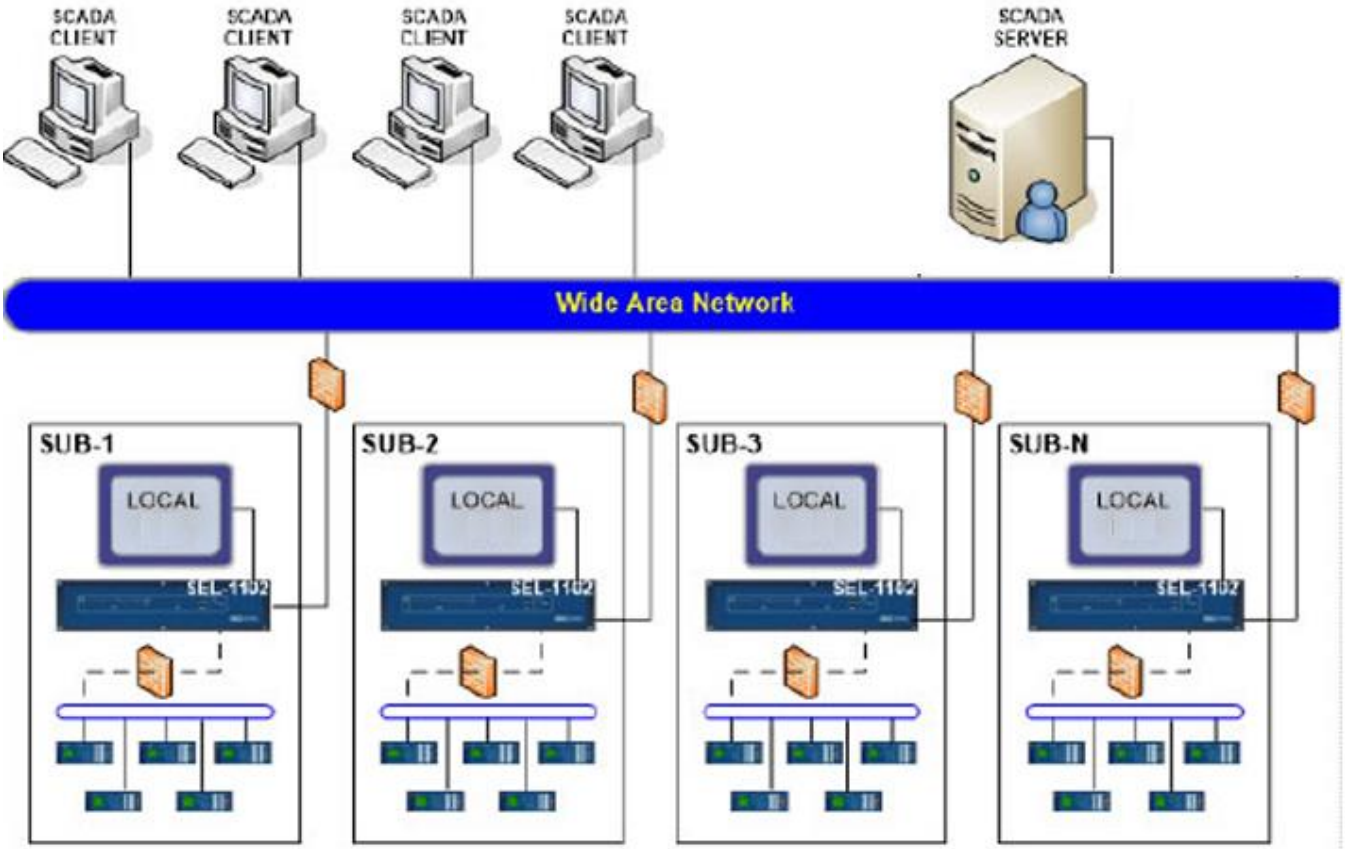
9) التزامات المؤسسة العامة لتوزيع الكهرباء :

1_ تحديد فريق عمل للأشراف على المشروع.

2_ تحديد فريق عمل للتدريب على المشروع.

3_ تكليف الشركة العامة لكهرباء ريف دمشق بإعداد المراسلات اللازمة والمتابعة مع الشركة السورية للاتصالات لتأمين الربط الشبكي مابين محطات التحويل ومكتب الإرسال.

10) مخطط توضيحي للمنظومة:



11: موصفات التجهيزات المطلوبة (

تعتبر هذه الموصفات هي الحد الادنى

PC for Substation

- Brand	
- Processor	Intel Core i7 , 3.6GHz
- Memory	8 GB
- Storage	1 TB
- Graphic	Integrated Graphics
- Optical drive	DVD/RW
- Input devices	Keyboard : Brand Mouse : Brand
- Ports	4 ports USB 3.1 and 2 x USB 2.0 1 port RJ-45 , 1 port HDMI , Audio Jack , VGA
- Power Supply	Internal Unit (240W) Voltage Required : 110 VAC to 240 VAC / 50 Hz or 60 Hz
- MONITOR	Display Type : LED Diagonal Size : 24" Native Resolution : Full HD Interfaces : HDMI , VGA Power : Voltage Required : AC 120/230 V (50/60 Hz)

PC for Data Base

- Brand	
- Processor	Intel Core i7 , 3.6GHz
- Memory	16 GB

- Storage	2 TB
- Graphic	Integrated Graphics
- Optical drive	DVD/RW
- Input devices	Keyboard : Brand Mouse : Brand
- Ports	4 ports USB 3.1 and 2 x USB 2.0 1 port RJ-45 , 1 port HDMI , Audio Jack , VGA
- Power Supply	Internal Unit (240W) Voltage Required : 110 VAC to 240 VAC / 50 Hz or 60 Hz
- MONITOR	Display Type : LED Diagonal Size : 24" Native Resolution : Full HD Interfaces : HDMI , VGA Power : Voltage Required : AC 120/230 V (50/60 Hz)

Router

- Network Standard	IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.11ac, IPv4, IPv6
- Antenna	External 5 dBi antenna x 2
- Memory	8 MB Flash , 64 MB RAM
- Operating Frequency	2.4 GHz / 5 GHz
- Firewall & Access Control	**Firewall** : SPI intrusion detection **Access control** : Guest access, Parental control, Network service filter, URL/Port filter
- VPN Support	PPTP server , Open VPN server , PPTP client , Open VPN client ,
- WAN Connection Type	Internet connection type : Automatic IP, Static IP, PPPoE(MPPE supported), PPTP, L2TP Dual Link support , Multicast Proxy support
- Ports	RJ45 for 10/100 BaseT for WAN x 1 RJ45 for 10/100 BaseT for LAN x 4
- Guest Network	2.4 GHz x 3, 5 GHz x 3
- OS Support	Windows 10 . 32bit/64bit Windows 8.1 . 32bit/64bit
- Power Supply	AC Input : 110V~240V(50~60Hz) DC Output : 12 V with max. 1 A current

Mentor

- Brand	SAMSUNG OR LG
- Panel type	QLED
- Size (inches)	55''
- Display type	Flat
- Resolution	HD / 4K Highest supported PC resolution
- Features	Smart TV
- Connection	- Wi-Fi Direct , Bluetooth , HDMI - Number of HDMI inputs : 2. - HDMI version : 2.0a . - PC Connection : HDMI .
- Sound	- Music Power (Watt) : 40 ,Hidden speakers
- Power Supply	(Volt) : AC220-240V 50 / 60Hz

Converter RS 485 TO USB

Stander	USB to RS 485
support	BUS protocol
OS Support	Windows 10 . 32bit/64bit Windows 8.1 . 32bit/64bit
Interface	RS 485 – USB

Converter RS 485 TO Ethernet

Connect mode	TCP server , UDP server TCP client , UDP client
support	DHCP , PPPoE protocol ,DNS
Auto - detect	10/100Mbps
Interface	RS 485 – RJ45

UPS-output power at least 720 Watt (Qty. 5) as per following specifications:

- **Input :**
  - voltage 220VAC .
  - Input frequency 50Hz .
  - Input phase Single phase .
  - Input socket With Fuse Input range (220V) 140-300 .
- **Cold Start :**
  - (0 to 100% load) Press the ON/OFF switch .
- **Rating output :**
  - 1200VA, Rating output (W). 720W .
- **Waveform Battery mode :**
  - (simulated sine wave),AC mode(sine wave) .
- **Power factor :**
  - 0.6 .
- **Rating voltage :**
  - 220V .

- **Output range :**
  - 220Vac-7% to +15% in battery mode .
- **Rear Output :**
  - Socket 4 x Universal - Battery backup .
- **Transfer time :**
  - TYPICAL4-8ms .
- **Communication :**
  - Interface optional RS232/RJ11 .
- **Rating frequency :**
  - 50Hz .
- **Line-mode :**
  - Synchronize with the Utility Line Mode FUSE& firmware protection Line Mode 110%±5%; .
  - Go to fault mode after 5 minutes, 120%±5%; Go to fault mode immediately.
- **Battery mode :**
  - 50 Hz±1Hz Battery Mode Software protection controlled by firmware Battery Mode 110%±5%;
  - Shutdown after 5 seconds, 120%±5%, Shutdown immediately .
- **Rating :**
  - 2 X 12V/7.5AH .
- **Backup time :**
  - Typical 20 to 30 mins (depending on load) .
- **Charge current :**
  - About 1A at normal mode .
- **Over charge protection :**
  - 29V±0.2V stop charging, 27.4+/-0.2V recharge .

مسطرة كهرباء مع حماية للصواعق وزيادة التيار (عدد 10):

Power Outlet surge/lightning protection qty. (10):

- Surge protector against surges and lightning strikes.
- **8** surge-protected Schuko outlets and heavy-duty with 2-meter power cord.

Control Panel

خزانة معدنية	1. الأبعاد 125*60*60 2. معدن متين لا يقل عن 1.5 مم 3. مغلقة مع فتحات من الأسفل مزودة برستتيوب بلاستيك للكابلات. 4. مزودة بمراوح تبريد مع حساسات حرارة وإنارة داخلية 5. مفتاح على باب الخزانة تعمل الإنارة عند فتح الباب 6. مآخذ كهربائية عدد/ 5/ . 7. باب بلور على كامل الخزانة على الواجهة الأمامية. 8. تقسم الخزانة لرفوف ثابتة ورف متحرك للوحة المفاتيح وتتسع لكافة تجهيزات







Firmware For Substation

version	3.1.0
Relays Support	GE – MICOM – MICRO ELECTRIC – PNC
- OS Support	Windows 10 . 32bit/64bit Windows 8.1 . 32bit/64bit Windows 7 . 32bit/64bit
Compatible with SCADA system of PEDE	

جدول محطات التحويل

تسلسل	اسم المحطة	العنوان	الهاتف	نوع الحمايات
1	صيدنايا	صيدنايا مقابل مداجن صيدنايا	5954302	Micom
2	اشرفية صحنايا 1	صحنايا جانب مستودعات شركة كهرباء ريف دمشق	6911782	GE
3	اشرفية صحنايا 2	صحنايا بجانب مدرسة سنا الشام – قبل جسر الكسوة	6713568	GE
4	باب شرقي	باب شرقي بجانب تجمع شركة كهرباء ريف دمشق	4720121	GE
5	جرمانا	جرمانا حي تشرين – حي التربة	5663503	GE

Model No.	Country of Origin	Manufacturer	Protection type
P122	Germany	AREVA	MICOM
MIFII	Spain	General Electric	GE
IM30-AB	Italy	MICRO ELECTRIC	MICRO ELECTRIC

المواد اللازمة لكل محطة تحويل واحدة:

Item	Quantity	Unit price	total price
PC	1		
STP Cable Network GAT6	m100		
Cable Power 2.5 mm	50 m		
Router	1		
Converter RS 485 TO USB	3		
Converter RS 485 TO Ethernet	1		
Control Panel	1		
Firmware For Substation	1		
UPS	1		
Surge protection outlet	2		
Total for one substation			
Total for 5 substations			

المواد اللازمة لغرفة التحكم:

Item	Quantity	Unit price	total price
PC	2		
STP Cable Network GAT6	100 m		
Cable Power 2.5mm	50 m		
Router	1		
55"Monitor	2		
Cher of office	2		
Table	1		
Total			

المواد اللازمة لقاعدة البيانات:

Item	Quantity	Unit price	total price
PC	1		
Total			

أجور التركيب اللازمة ل 5 محطات:

Item	Quantity	Unit price	total price
Installation fees for the substations equipment (metal panel, computer equipment, connection gate, network cables installation and connection, power supply cables installation and connection)	5		
Connection and re-programming fees for the digital protections	5		
Fees for connecting 20Kv cells and automatic breakers	5		
Fees for installing the software and operating the systems at the substations	5		
Fees for equipping the Control & Monitoring Room	1		
Total			

أجور التدريب:

Item	Quantity	Unit price	total price
Training a team from the General Company for Damascus Countryside Electricity on installing and maintaining the substations equipment	6		
Training a team from the General Company for Damascus Countryside Electricity on operating and investing the system	6		
Total			

[Enter name of authorized staff]
[Designation]
[Click here to enter a date]

Technical Tender Book

For the Development, Controlling & Monitoring of the 20Kv Section at the 230/66/20Kv and 66/20Kv Substations at the General Establishment for Damascus Countryside Electricity (5 substations) on a Turnkey Basis

Terms:

The following terms stand for:

Substation: 230/66/20Kv substations and 66/20Kv substations

20Kv Section: 20Kv outlet cells and 20Kv connector cells

Protection: the digital protection installed at the 20Kv section

1. **Purpose of the project:**

   Providing, procuring and installing all the computer equipment and special software for the electric protection devices (digital protection) at 5 substations in Rural Damascus for the 20Kv section (connections and outlets). In addition to provide the needed training for 6 engineers from the transmission institution (ministry of electricity) on the installation and commissioning of the systems equipment (practical training).

   The program of remote controlling and monitoring substations is prepared by the General Establishment Rural Damascus Electricity and is available at the General Establishment for the Distribution of Electricity. The protection parameters (current, voltage, frequency, breaker status, etc.) are read and transferred to the Damascus Countryside Electricity Company – Transmission Office – via the telecommunication companies operating in Syria to ensure secure and stable connection within one telecommunication network that belongs to the Establishment and the Company.

   The installed readable and controllable protections to be used are of the following brands:

   - MICOM made by AREVA Germany
   - GE by made by General Electric Spain
   - MICRO ELECTRIC made by MICRO ELECTRIC Italy

2. **Project Goals:**

   The project will realize the following:

   - Reducing operation costs
   - Controlling and monitoring the electric system
   - Developing the electric substations
   - Simultaneously monitoring all the substations by the coordination office

- The rapid intervention by the coordination office at the Establishment and the transmission offices at the Company by conducting maneuvers at the 20Kv outlets and connectors of the substations.
- Studying the load distribution and phase balancing
- Raising the efficiency and reliability of the electrical grid
- Reducing the technical wastage
- Upgrading the electric grid to emulate the smart grids

3. Execution method:

The contractor shall provide and install all the equipment and software required for the execution of the control and monitoring system prepared by Damascus Countryside Electricity Company for the protections of the 20Kv connectors and outlets cells at the 230/66/20Kv and 66/20Kv substations pertaining to the General Company for Damascus Countryside Electricity as the enclosed tables and quantity tables show.

4. Project Implementation Stages:

The project shall be executed by procuring and installing all the computer equipment and digital protection software required for 5 substations as well as equipping the control room within 6 months at most.

5. Warranty:

The warranty of all the equipment components shall be one calendar year as of the date of provisional receipt of the procured equipment by the bidder.

6. General Terms for Bids Approval:

a. The bidder must commit to providing and installing all software for the digital protections and computer equipment necessary for the implementation of the project and the implementation of the required connections on the cells of Section 20. It must be compatible with the control and monitoring system available at the General Establishment for Electricity Distribution.

b. No software except for the ones applied and invested by the General Establishment for Electricity Distribution, which proved their reliability with the substation different

equipment shall be accepted – through the experiences conducted by the General Establishment and companies.

c. The bidder shall check the protections and installation locations at the 230/66/20KV and 66/20KV substations before submitting the offer and inquire about any note in coordination with Damascus Countryside Electricity Company.
d. The confidentiality of information, studies and software provided by the General Establishment for Electricity Distribution must be guaranteed.
e. The equipment and protection software shall handle all the aforementioned types of protections installed at the substations and compatible with the control system.
f. The protection software should be compatible with the different operating system versions (Windows 10, Windows 8.1, Windows 7)
g. The bidder shall provide the needed practical training during the installation process.

7. The Bidder's Obligations:

A site survey by the potential shall be conducted and which shall be facilitated in cooperation with the Rural Damascus Electricity Company in order to:

a) get familiar with the monitoring and control system prepared by the General Company of Rural Damascus Electricity.

b) inspect the transformer substation sites where the implementation of the monitoring/control system components shall be conducted. The sites are mentioned at the end of the tender book.

8. Timetable

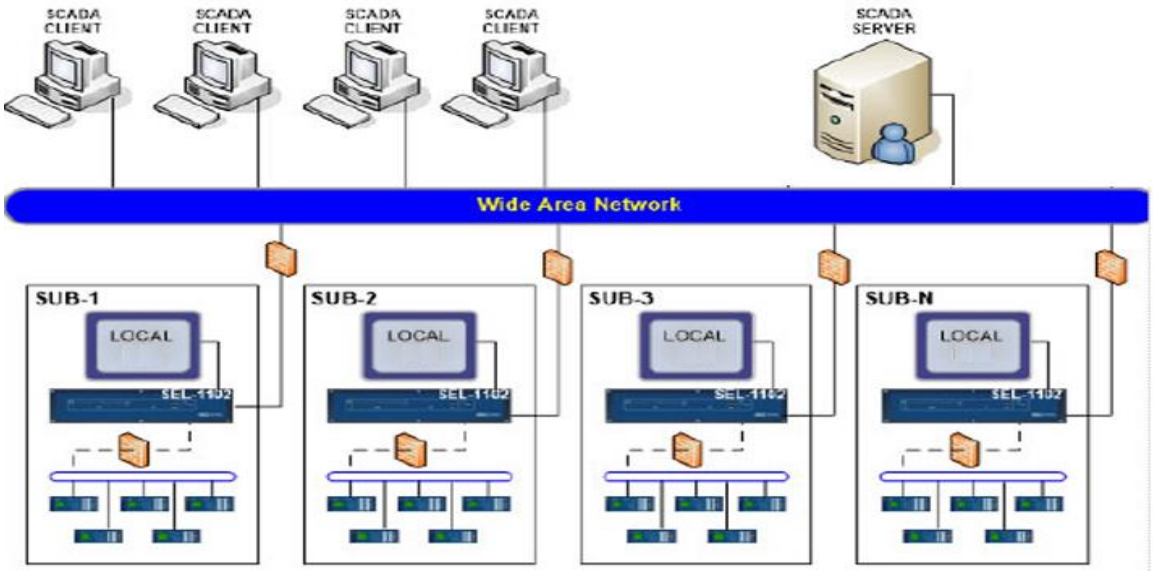
• The bidder shall be committed to providing a timetable for the supply and installation of all equipment and software (digital protection software), provided that the period of supply, installation and investment shall not exceed 4 months.

9. Obligations of the General Company for Damascus Countryside Electricity:

1. Nominating a team to supervise the project

2. Nominating a team to get trained on the project
3. Prepare the necessary correspondence and follow-up with the Syrian Telecommunications Company to secure the network between the substations and the transmission office.

10. Schematic Diagram of the System:



11. Required Equipment Specifications:

The following specifications are the minimum that can be approved:

PC for Substation

- Brand	
- Processor	Intel Core i7 , 3.6GHz
- Memory	8 GB
- Storage	1 TB
- Graphic	Integrated Graphics
- Optical drive	DVD/RW
- Input devices	Keyboard : Brand Mouse : Brand
- Ports	4 ports USB 3.1 and 2 x USB 2.0 1 port RJ-45 , 1 port HDMI , Audio Jack , VGA
- Power Supply	Internal Unit (240W) Voltage Required : 110 VAC to 240 VAC / 50 Hz or 60 Hz
- MONITOR	Display Type : LED Diagonal Size : 24"

	Native Resolution : Full HD Interfaces : HDMI , VGA Power : Voltage Required : AC 120/230 V (50/60 Hz)

PC for Data Base

- Processor	Intel Core i7 , 3.6GHz
- Memory	16 GB
- Storage	2 TB
- Graphic	Integrated Graphics
- Optical drive	DVD/RW
- Input devices	Keyboard / Mouse
- Ports	4 ports USB 3.1 and 2 x USB 2.0 1 port RJ-45 , 1 port HDMI , Audio Jack , VGA
- Power Supply	Internal Unit (240W) Voltage Required : 110 VAC to 240 VAC / 50 Hz or 60 Hz
- MONITOR	Display Type : LED Diagonal Size : 24" Native Resolution : Full HD Interfaces : HDMI , VGA Power : Voltage Required : AC 120/230 V (50/60 Hz)

Router

- Network Standard	IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.11ac, IPv4, IPv6
- Antenna	External 5 dBi antenna x 2
- Memory	8 MB Flash , 64 MB RAM
- Operating Frequency	2.4 GHz / 5 GHz
- Firewall & Access Control	**Firewall** : SPI intrusion detection **Access control** : Guest access, Parental control, Network service filter, URL/Port filter
- VPN Support	PPTP server , Open VPN server , PPTP client , Open VPN client ,
- WAN Connection Type	Internet connection type : Automatic IP, Static IP, PPPoE(MPPE supported), PPTP, L2TP Dual Link support , Multicast Proxy support
- Ports	RJ45 for 10/100 BaseT for WAN x 1 RJ45 for 10/100 BaseT for LAN x 4
- Guest Network	2.4 GHz x 3, 5 GHz x 3
- OS Support	Windows 10 . 32bit/64bit Windows 8.1 . 32bit/64bit
- Power Supply	AC Input : 110V~240V(50~60Hz) DC Output : 12 V with max. 1 A current

Monitor

- Brand	SAMSUNG OR LG or similar
- Panel type	QLED
- Size (inches)	55''
- Display type	Flat
- Resolution	HD / 4K Highest supported PC resolution
- Features	Smart TV
- Connection	- Wi-Fi Direct , Bluetooth , HDMI - Number of HDMI inputs : 2. - HDMI version : 2.0a . - PC Connection : HDMI .
- Sound	- Music Power (Watt) : 40 ,Hidden speakers
- Power Supply	(Volt) : AC220-240V 50 / 60Hz

Converter RS 485 TO USB

Stander	USB to RS 485
support	BUS protocol
OS Support	Windows 10 . 32bit/64bit Windows 8.1 . 32bit/64bit
Interface	RS 485 – USB

Converter RS 485 TO Ethernet

Connect mode	TCP server, UDP server TCP client, UDP client
support	DHCP, PPPoE protocol ,DNS
Auto - detect	10/100Mbps
Interface	RS 485 – RJ45

UPS-output power at least 720 Watt (Qty. 5) as per following specifications:

- **Input :**
  - voltage 220VAC .
  - Input frequency 50Hz .
  - Input phase Single phase .
  - Input socket With Fuse Input range (220V) 140-300 .
- **Cold Start :**
  - (0 to 100% load) Press the ON/OFF switch .
- **Rating output :**
  - 1200VA, Rating output (W). 720W .
- **Waveform Battery mode :**
  - (simulated sine wave),AC mode(sine wave) .
- **Power factor :**
  - 0.6 .

- **Rating voltage :**
  - 220V .
- **Output range :**
  - 220Vac-7% to +15% in battery mode .
- **Rear Output :**
  - Socket 4 x Universal - Battery backup .
- **Transfer time :**
  - TYPICAL4-8ms .
- **Communication :**
  - Interface optional RS232/RJ11 .
- **Rating frequency :**
  - 50Hz .
- **Line-mode :**
  - Synchronize with the Utility Line Mode FUSE& firmware protection Line Mode 110%±5%; .
  - Go to fault mode after 5 minutes, 120%±5%; Go to fault mode immediately.
- **Battery mode :**
  - 50 Hz±1Hz Battery Mode Software protection controlled by firmware Battery Mode 110%±5%;
  - Shutdown after 5 seconds, 120%±5%, Shutdown immediately .
- **Rating :**
  - 2 X 12V/7.5AH .
- **Backup time :**
  - Typical 20 to 30 mins (depending on load) .
- **Charge current :**
  - About 1A at normal mode .
- **Over charge protection :**
  - 29V±0.2V stop charging, 27.4+/-0.2V recharge .

مسطرة كهرباء مع حماية للصواعق وزيادة التيار (عدد 10):

Power Outlet surge/lightning protection qty. (10):

- Surge protector against surges and lightning strikes.
- **8** surge-protected Schuko outlets and heavy-duty with 2-meter power cord.

Control Cabinet

Metal cabinet	1. Dimensions: 125x60x60 2. Strong metal no less than 1.5mm thick 3. Closed with holes at the bottom equipped with cables plastic tubes 4. Equipped with cooling fans with heat sensors and interior lighting 5. Light switch that turns on once the door is open 6. Five electrical sockets 7. Glass door at the entire cabinet front side 8. The cabinet is divided into fixed shelves and one mobile shelf for the switchboard and can accommodate all the equipment



Firmware for Substation

version	3.1.0
Relays Support	GE – MICOM – MICRO ELECTRIC – PNC
- OS Support	Windows 10 . 32bit/64bit Windows 8.1 . 32bit/64bit Windows 7 . 32bit/64bit
Compatible with SCADA system of PEDE	

Substations Schedule

Serial	Substation	Address	Telephone	Protection type
1	Sednaya	Sednaya opposite Sednaya poultry farms	5954302	Micom
2	Ashrafiyet Sahnaya 1	Sahnaya, near the warehouses of Damascus Countryside Electricity Company	6911782	GE
3	Ashrafiyet Sahnaya 2	Sahnaya – near Sana Al-Shaam School – before Al-Kisweh Bridge	6713568	GE
4	Bab Sharqi	Bab Sharqi, near Damascus Countryside Electricity Company Compound	4720121	GE
5	Jaramana	Jaramana – Tishreen Neighborhood – Al-Turbeh Neighborhood	5663503	GE

Model No.	Country of Origin	Manufacturer	Protection type
P122	Germany	AREVA	MICOM
MIFII	Spain	General Electric	GE
IM30-AB	Italy	MICRO ELECTRIC	MICRO ELECTRIC

Itemized Prices of the Substation

Item	Quantity	Unit price	total price
PC	1		
STP Cable Network GAT6	m100		
Cable Power 2.5 mm	50 m		
Router	1		
Converter RS 485 TO USB	3		
Converter RS 485 TO Ethernet	1		
Control Panel	1		
Firmware For Substation	1		
UPS	1		
Surge Protection Outlet	2		
		Total	

Itemized of the Control Room

Item	Quantity	Unit price	total price
PC	2		
STP Cable Network GAT6	100 m		
Cable Power 2.5mm	50 m		
Router	1		
55"Monitor	2		
Cher of office	2		
Table	1		
Total			

Itemized Prices for Data Base PC

Item	Quantity	Unit price	total price
PC	1		
Total			

Installation fees for 5 substations

Item	Quantity	Unit price	total price
Installation fees for the substations equipment (metal panel, computer equipment, connection gate, network cables installation and connection, power supply cables installation and connection)	5		
Connection and re-programming fees for the digital protections	5		
Fees for connecting 20Kv cells and automatic breakers	5		
Fees for installing the software and operating the systems at the substations	5		
Fees for equipping the Control & Monitoring Room	1		
Total			

Training fees

Item	Quantity	Unit price	total price
Training a team from the General Company for Damascus Countryside Electricity on installing and maintaining the substations equipment	6		
Training a team from the General Company for Damascus Countryside Electricity on operating and investing the system	6		
Total			

Annex 2

FORM FOR SUBMITTING SUPPLIER'S QUOTATION

(This Form must be submitted only using the Supplier's Official Letterhead/Stationery)

We, the undersigned, hereby accept in full the UNDP General Terms and Conditions, and hereby offer to supply the items listed below in conformity with the specification and requirements of UNDP as per RFQ Reference No. _____:

TABLE 1 : Offer to Supply Goods Compliant with Technical Specifications and Requirements

Item	Quantity	Unit price	total price
PC	1*5 = 5		
STP Cable Network GAT6	m100 *5=500		
Cable Power 2.5 mm	50 m *5=250		
Router	1*5=5		
Converter RS 485 TO USB	3*5=15		
Converter RS 485 TO Ethernet	1*5 =5		
Control Panel	1*5=5		
Firmware For Substation	1*5=5		
UPS	5		
Surge Protection Outlet	10		
Total for one substation			
Total for 5 substations			

المواد اللازمة لغرفة التحكم:

Item	Quantity	Unit price	total price
PC	2		
STP Cable Network GAT6	100 m		
Cable Power 2.5mm	50 m		
Router	1		
55"Monitor	2		
Cher of office	2		
Table	1		
Total			

المواد اللازمة لقاعدة البيانات:

Item	Quantity	Unit price	total price
PC	1		
Total			

أجور التركيب اللازمة ل 5 محطات:

Item	Quantity	Unit price	total price
Installation fees for the substations equipment (metal panel, computer equipment, connection gate, network cables installation and connection, power supply cables installation and connection)	5		
Connection and re-programming fees for the digital protections	5		
Fees for connecting 20Kv cells and automatic breakers	5		
Fees for installing the software and operating the systems at the substations	5		
Fees for equipping the Control & Monitoring Room	1		
Total			

أجور التدريب:

Item	Quantity	Unit price	total price
Training a team from the General Company for Damascus Countryside Electricity on installing and maintaining the substations equipment	6		
Training a team from the General Company for Damascus Countryside Electricity on operating and investing the system	6		
Total			

Total Price for all items

Item No.	Description/Specification of Goods	Quantity	Latest Delivery Date	Unit Price	Total Price per Item
1	provide Control & Monitoring system for 5 transformers in Rural Damascus in addition to provide a training for 6 engineers from the institution of transmission	5			
	Total Prices of Goods				
	Add : Cost of Transportation				
	Add : Cost of Insurance				
	Add : Other Charges (pls. specify)				
	Total Final and All-Inclusive Price Quotation				

TABLE 3 : Offer to Comply with Other Conditions and Related Requirements

Other Information pertaining to our Quotation are as follows :	**Your Responses**		
	Yes, we will comply	***No, we cannot comply***	***If you cannot comply, pls. indicate counter proposal***
Delivery Lead Time			
Estimated weight/volume/dimension of the Consignment:			
Country/ies Of Origin:			
Warranty and After-Sales Requirements			
a) Training on Operations and Maintenance			
b) Minimum one (1) year warranty on both parts and labor			
Validity of Quotation			
All Provisions of the UNDP General Terms and Conditions			
Submit 10 % as performance security			

All other information that we have not provided automatically implies our full compliance with the requirements, terms and conditions of the RFQ.

[Name and Signature of the Supplier's Authorized Person]
[Designation]
[Date]