#### การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

#### **REGISTRATION FORM**

INVITATION TO BID NO. TIEC-MC1-02

#### FOR SUPPLY OF MISCELLANEOUS EQUIPMENT

TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS
AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

AVAILABLE DURATION FOR PURCHASING <u>OCTOBER 1, 2019 TO NOVEMBER 26, 2019 PRICE USD 16.- OR THB 500.-</u>

## COMPLETE DATA IS REQUIRED FOR THE BIDDER'S OWN BENEFITS

(โปรดกรอกรายละเอียดให้ครบถ้วนเพื่อประโยชน์ของบริษัท)

	egistration Form in English (Typing is preferre		
	orm for payment at Receivable Cashier Section		
Step 3: Bring the pay	ment receipt and the copy of filled-out Regis	tration Form to receive the bidd	ling documents at International
Procurement Department	t - Transmission Segment (Room No. 1202/	2, 12 <sup>th</sup> Floor, Building Tor. 101	) Tel no. 02 436 0341-42
FOR PURCHASER			TAX ID:
NO. RECEIPT NO	0. :	DATE :	PURCHASER (ผู้ซื้อ):
BIDDER'S NAME			
(บริษัทผู้ซื้อเอกสาร)			
ADDRESS			
(ที่อยู่)			COUNTRY:
ATTN. (ผู้รับผิดชอบ):		FAX NO.:	TEL.:
E-mail :			
LOCAL REPRESENTATIVE			
(ตัวแทนในประเทศ)			
ADDRESS			
(ที่อยู่)			TAX ID:
ATTN. (ผู้รับผิดชอบ):		FAX NO.:	TEL.:
E-mail :			
	:FR	CHANGE OF RIDDER'S NAME	TAX ID
FOR PROCUREMENT OFFICE	CER	CHANGE OF BIDDER'S NAME	TAX ID:
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO. :	CER	CHANGE OF BIDDER'S NAME	TAX ID: DATED:
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO.: NEW BIDDER'S NAME	CER	CHANGE OF BIDDER'S NAME	
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO. :	CER	CHANGE OF BIDDER'S NAME	
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO. : NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)	CER	CHANGE OF BIDDER'S NAME  COUNTRY:	
FOR PROCUREMENT OFFIC BIDDER'S LETTER NO. : NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น) ADDRESS	CER		
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO. :  NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่)	CER	COUNTRY:	DATED :
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO. :  NEW BIDDER'S NAME (ชื่อผู้ชื่อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่)  ATTN. (ผู้รับผิดชอบ):	CER	COUNTRY:	DATED :
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO.:  NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่)  ATTN. (ผู้รับผิดชอบ): E-mail:	CER	COUNTRY:	DATED :
FOR PROCUREMENT OFFIC BIDDER'S LETTER NO.:  NEW BIDDER'S NAME (ชื่อผู้ชื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่)  ATTN. (ผู้รับผิดชอบ): E-mail:  LOCAL REPRESENTATIVE	CER	COUNTRY:	DATED :
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO.:  NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่)  ATTN. (ผู้รับผิดชอบ): E-mail:  LOCAL REPRESENTATIVE (ตัวแทนในประเทศ)  ADDRESS	CER	COUNTRY:	DATED :
FOR PROCUREMENT OFFIC BIDDER'S LETTER NO.:  NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่)  ATTN. (ผู้รับผิดชอบ): E-mail:  LOCAL REPRESENTATIVE (ตัวแทนในประเทศ)  ADDRESS (ที่อยู่)	CER	COUNTRY: FAX NO.:	DATED :
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO.:  NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่)  ATTN. (ผู้รับผิดชอบ): E-mail:  LOCAL REPRESENTATIVE (ตัวแทนในประเทศ)  ADDRESS	CER	COUNTRY: FAX NO.: TAX ID:	TEL.:
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO.:  NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail:  LOCAL REPRESENTATIVE (ตัวแทนในประเทศ)  ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail:		COUNTRY: FAX NO.:  TAX ID: FAX NO.:	TEL.:
FOR PROCUREMENT OFFICE BIDDER'S LETTER NO.:  NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)  ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail:  LOCAL REPRESENTATIVE (ตัวแทนในประเทศ)  ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail:	ROCUREMENT OFFICER	COUNTRY: FAX NO.:  TAX ID: FAX NO.:	TEL.:



#### INVITATION TO BID NO. TIEC-MC1-02

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

The Electricity Generating Authority of Thailand (EGAT) is calling for the subject Invitation to Bid to be financed by EGAT's fund.

Place of Delivery : Bangkok Port / Ex-works

Medium Cost (including Value Added Tax and other expenses) : THB 5,710,000.-

#### Eligibility of Bidders

- 1. The Bidder shall be a juristic person who manufactures or provides such materials or services and shall not be named in the List of Work Abandoners published by the Office of Prime Minister and/or in the Debarment List and/or in the List of Work Abandoners declared by EGAT.
- 2. The Bidder shall not be a Jointly Interested Bidder with other Bidders as from the date of EGAT's issuance of the Invitation, or shall not be a person who undertakes any action as an "Obstruction of Fair Price Competition" for this Invitation.
- 3. The Bidder shall not either be EGAT's consultant or involve in EGAT's consultancy company under this Invitation to Bid, or shall not have EGAT's personnel involved in his business as shareholder having voting right that can control his business, director, manager, officer, employee, agent, or consultant except those who are officially ordered by EGAT to act or participate therein.
- 4. The Bidder shall not be the person who is privileged or protected not to be taken any legal proceedings under Thai Court; Provided that such Bidder's government declares that such special privilege is waived.
- 5. The Bidder who is a joint venture or consortium shall carry out all the work under such formation from the time of bidding until the fulfillment of the Contract.

#### **Availability of Bidding Documents**

Bidding Documents in CD-ROM will be available for examination of Bidder's Qualifications and purchase during 8:00 hrs. to 15:00 hrs., Bangkok Standard Time, as from October 1, 2019 to November 26, 2019 at USD 16.- or THB 500.- per copy, non-refundable, at the following address:

International Procurement Department - Transmission Segment (Room No. 1202/2, 12<sup>th</sup> Floor, Building Tor. 101)
Procurement and Inventory Management Division
Electricity Generating Authority of Thailand
Bangkruai, Nonthaburi 11130, Thailand
Telephone no. 66 2436 0341

E-mail: procurement.tse@egat.co.th

For more details and downloading Registration Form for purchasing Bidding Documents on website:

#### http://www4.egat.co.th/fprocurement/biddingeng/

Payment can be made by a certified cheque or money order payable to EGAT or by a telegraphic transfer to EGAT's current account no. 109-6-01958-2 (swift code: KRTHTHBK), Krung Thai Bank Public Company Limited, Bangkruai Branch, Nonthaburi. All bank charges and fees incurred by the payment of bidding documents shall be under the buyer's responsibility.

Bidding Documents in CD-ROM will be either airmailed or airfreighted to the buyer at EGAT's expense upon receipt of the relevant remittance. In case the buyer requires the Bidding Documents to be sent by Express Mail Service (EMS), the charge will be at the buyer's expense.

Nilanati Osotpavapost

## Delivery of Bids

Bids shall be submitted at Room No. 1202/1, 12<sup>th</sup> Floor, Building Tor. 101 during 9:30 hrs. to 10:00 hrs., Bangkok Standard Time, December 4, 2019 and will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND
September 24, 2019

Wiland Osotpavaposis

(Mrs. Nilanate Osotpavapusit)

Chief, International Procurement Department 
Transmission Segment



## ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เรื่อง ประกวดราคาซื้อ เลขที่ TIEC-MC1-02

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะซื้อ Miscellaneous Equipment ภายใต้โครงการปรับปรุง ระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือ ภาคเหนือตอนล่าง ภาคกลาง และกรุงเทพมหานคร เพื่อเสริมความมั่นคงระบบไฟฟ้า โดยใช้ งบประมาณ กฟผ.

สถานที่ส่งมอบ

ท่าเรือกรุงเทพฯ / หน้าโรงงานผู้ผลิต

ราคากลาง(รวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ) : 5,710,000.- บาท

## คุณสมบัติของผู้เสนอราคา

- ต้องเป็นนิติบุคคลผู้ผลิตหรือเป็นผู้มีอาชีพขายพัสดุตามประกาศ และต้องไม่เป็นผู้ทิ้งงานซึ่งสำนักนายกรัฐมนตรีได้แจ้งเวียนชื่อไว้ หรือ ้ต้องไม่เป็นผู้ที่ กฟผ. ห้ามติดต่อหรือห้ามเข้าเสนอราคา หรือต้องไม่เป็นผู้ที่ได้รับผลของการสั่งให้นิติบุคคลหรือบุคคลอื่นเป็นผู้ทิ้งงาน ตามคำสั่ง กฟผ.
- ต้องไม่เป็นผู้มีผลประโยชน์ร่วมกันกับผู้เสนอราคารายอื่น ณ วันประกาศประกวดราคาครั้งนี้เป็นต้นไป หรือต้องไม่เป็นผู้กระทำการ อันเป็นการขัดขวางการแข่งขันราคาอย่างเป็นธรรมในการดำเนินการประกวดราคาครั้งนี้
- ต้องไม่เป็นที่ปรึกษาของ กฟผ. หรือมีส่วนร่วมในบริษัทที่ปรึกษาของ กฟผ. ในงานนี้ หรือต้องไม่มีผู้ปฏิบัติงาน กฟผ. เข้าไปมีส่วนร่วม ในกิจการของผู้เสนอราคา ไม่ว่าจะในฐานะผู้ถือหุ้นที่มีสิทธิควบคุมการจัดการ กรรมการ ผู้อำนวยการ ผู้จัดการ พนักงาน ลูกจ้าง ตัวแทน หรือที่ปรึกษา ยกเว้น ในกรณีที่ผู้ปฏิบัติงานได้รับคำสั่งอย่างเป็นทางการจาก กฟผ. ให้ไปปฏิบัติงานหรือเข้าร่วมในกิจการของผู้เสนอราคา
- ต้องไม่เป็นผู้ได้รับเอกสิทธิ์หรือความคุ้มกัน ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และ ความคุ้มกันเช่นว่านั้น
- ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม (Joint Venture or Consortium) จะต้องดำเนินการทุก ขั้นตอนของการประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม ตั้งแต่การเสนอราคาจนสิ้นสุดข้อผูกพันกับ กฟผ.

#### การขายเอกสารประกวดราคา

ผู้สนใจติดต่อขอทราบรายละเอียด เพื่อตรวจสอบคุณสมบัติของผู้เสนอราคา และขอชื้อเอกสารประกวดราคา ในราคาชุดละ 500.- บาท ได้ที่ แผนกจัดซื้อต่างประเทศสายงานระบบส่ง (ห้อง 1202/2 ชั้น 12 อาคาร ท.101) กองจัดซื้อจัดจ้างต่างประเทศสายงาน ระบบส่ง ฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชิงสะพานพระราม 7 จังหวัดนนทบุรี ในวันทำการระหว่าง เวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 1 ตุลาคม 2562 ถึงวันที่ 26 พฤศจิกายน 2562 หรือสอบถามทางโทรศัพท์ หมายเลข 0 2436 0341 หรืออีเมล์ procurement.tse@egat.co.th ทั้งนี้ สามารถ download แบบฟอร์มลงทะเบียนผู้ชื้อเอกสารประกวดราคาได้ที่เว็บไซต์ http://www4.egat.co.th/fprocurement/biddingeng/

## การยื่นซองประกวดราคา

กำหนดยื่นของประกวดราคา ในวันที่ 4 ธันวาคม 2562 เวลา 9:30 น. ถึง 10:00 น. และเปิดของประกวดราคาเวลา 10:00 น. ณ ห้อง 1202/1 ชั้น 12 อาคาร ท.101 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชิงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศ ณ วันที่ 24 กันยายน 2562

April 1 por or or or

(นางนิลเนตร โอสถภวภุษิต)

หัวหน้ากองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง

## ดารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง) ในการจัดชื่อจัดจ้างที่มีใช่งานก่อสร้าง

ชื่อโครงการ ประกวดราคาเลขที่ TIEC-MC1-02
 งานจัดซื้อ Miscellaneous Equipment
 โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือ ภาคเหนือตอนล่าง
 ภาคกลางและกรุงเทพมหานคร เพื่อเสริมความมั่นคงระบบไฟฟ้า

 /หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

2. วงเงินงบประมาณที่ได้รับจัดสรร

โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือ ภาคเหนือตอนล่าง ภาคกลางและกรุงเทพมหานคร เพื่อเสริมความมั่นคงระบบไฟฟ้า งบประมาณ 94,040 ล้านบาท

- วันที่กำหนดราคากลาง 11 กันยายน 2562 (วันที่ อวส. อนุมัติ)
   ราคารวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ เป็นเงิน 5,710,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ
- 4. แหล่งที่มาของราคากลาง หลักเกณฑ์การกำหนตราคากลางงานจัดชื้อจัดจ้างสายงานพัฒนาระบบส่ง
- 5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง

5.1 นายภานุวัฒน์ สิชิตผลผคุง

หอด-ส. กวอ-ส.

5.2 นางสาวณภัทร จิระภาพันธ์

วศ.5 หอต-ส. กวอ-ส.

<u>หมายเหตุ</u> ค่าใช้จ่ายอื่นๆ ได้แก่ ค่าใช้จ่ายที่ กฟผ. ต้องจ่ายตามวิธีการพิจารณาเปรียบเทียบราคาที่กำหนดไว้ ในเอกสารประกวดราคา เช่น อากรขาเข้า เป็นต้น

٦,

นางสุนิศา แย้มอยู่ หชตส**-ห. 7 (** ก.ย. **2562**  DOM.-BMR.

#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### SUMMARY OF BID PRICE

## SUPPLY OF MISCELLANEOUS EQUIPMENT

# TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

			Supply of Equipment	Supply of Equipment
			Foreign Supply	Local Supply
No.	Description	Currency	CFR Thai Port	Ex-works Price (excluding VAT) Baht
		The second	Amount	Amount
1	Schedule 1 : Switchyard Lighting Fixture			720,739.80
2	Schedule 2: Aluminum Tube		1	238,755.00
3	Schedule 3:500 kV Compression Connector and Miscellaneous Hardware	THB	665,098.50	
4	Schedule 4:500 kV Bus Fitting	ТНВ	1,356,446.60	
5	Schedule 5: 230 kV and Below Compression Connector and Miscellaneous Hardware			600,556.00
6	Schedule 6: 230 kV and Below Bus Fitting	THB	576,699.10	
7	Schedule 7: Grounding Material	THB	240,839.50	528,678.50
8	Schedule 8 : Rigid Steel Conduit			56,529.00
9	Schedule 9 : Conduit Fittings	THB	66,000.00	

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นางสุนิศา แย้มอยู่ หซตส-ห.

24 n.t. 2562

filename: TIEC-MC1-02

- Project 1-C1 -

**Rev.12** 

824.-0NM.

#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### SUMMARY OF BID PRICE

## SUPPLY OF MISCELLANEOUS EQUIPMENT

# TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

			Supply of Equipment	Supply of Equipment	
			Foreign Supply	Local Supply	
No.	Description	Currency	CFR Thai Port	Ex-works Price (excluding VAT) Baht	
			Amount	Amount	
•	BID PRICE	ТНВ	2,905,083.70	Baht 2,145,258.30	
	OTHER EXPENSE	THB	290,508.37		
,,,,,,,	VAT		223,691.44	Baht 150,168.08	
	SUMMARY OF MEDIUM COST	THB	3,419,283.51	Baht 2,295,426.38	
	SUMMARY OF MEDIUM COST	ТНВ	5,714	,709.89	
	SUMMARY OF MEDIUM COST (ROUNDED)	r		,000.00	
		นางสุนิศา	แย้มอยู่		
		a and male			

หชดส-ห.

24 n.s. 2562

Rev.12

- Project I-C2 -

STAT-BHA.

#### MEDIUM COST FOR BID NO.TIEC-MC1-02

# Schedule 1 : Switchyard Lighting Fixture SUPPLY OF MISCELLANEOUS EQUIPMENT

# TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

				Supply of Equ	The second secon	
Item No.	Description	Qty.	Unit	Ex-works Price ( excluding VAT ) Baht		
			-	Unit Price	Amount	
	Reference : Specification No. 611					
1-1	Flood lighting fixture, LED lamp, 10000 lumen, wide-beam, complete with control gear as per Specification attached	12	,	14,190.00	170,280.00	
1-2	Street lighting fixture, LED lamp, 5000 lumen, wide beam, complete with control gear as per Specification attached	18		14,787.30	266,171.40	
1-3	Tapered galvanized steel lamp post H=5000 mm.complete with 5 A 250 V plug fuse, 20 A 500 V terminal block for accepting 4 sq.mm. of incoming and outgoing cables and anchor bolts as per DWG. No. ST-LP-0-03 and SD-AB-0-01	18	T. T. Statements	15,793.80	284,288.40	
	* Equipment in item 1-2 and 1-3 will be used together as a complete set refering to article relevant to Liquidated Damages for Late Delivery of Equipment.		AND THE REAL PROPERTY OF THE PERSON OF THE P			
				Baht	720,739.80	
	Total Price for Schedule 1		~			

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schedule 2: Aluminum Tube

## SUPPLY OF MISCELLANEOUS EQUIPMENT

# TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

				Supply of Equ	ipment	
		Qty.	Unit	Local Supply  Ex-works Price ( excluding VAT )  Baht		
ltem No.	Description					
				Unit Price	Amount	
	Reference: Specification No. 605					
2-1	Aluminum tube 3.0" IPS Sch.40, 6 meters long					
		25		3,293.40	82,335.00	
2-2	Aluminum tube 5.0" IPS Sch.80, 6 meters long	20	The second secon	7 921 00	155 400 00	
***************************************	P 000.00	20		7,821.00	156,420.00	
				Beht	238,755.00	
	Total Price for Schedule 2				204130100	
	Total Price for Schedule 2		- A-			

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#### MEDIUM COST FOR BID NO.TTEC-MC1-02

#### Schedule 3: 500 kV Compression Connector and Miscellaneous Hardware

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

İ								Supply of E. Fareign S			Supply of Equipment Local Supply  Bx-works Price	
ty. Unit	Description	Систепсу	FOB Vessel	Cost of Transportation to Thai Port	CFR The	i Port	Ex-works ( excluding Baht	VAT)				
-			Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount				
	e: Connector and String Hardware for 500 kV Insulator A903 as per Specification No.605 and Dwg. No. SE-IS-9-01 sh.				Market and Addition of Control of	3						
	n alloy straight compression terminal for 1272 MCM ACSR, four holes at Lorunser Cat. No.771.059.9 or equal (Legend No.16.45A). In each compression terminal shall be furnished with the following as:  less steel bolts, auts, flat washers and believille washers											
30	nimum alloy streamlined cap for shielding hardware when bolting of flat pad	THB	995.50		995.50	29,865.00	***************************************					
	n alloy quadruple bundle suspension coupler, complete with straight ion terminals for 4x1272 MCM ACSR, bolts, nuts and washers Cat, No.1FB767-133 or equal (Legend No.17.55A)			in the second se								
35	n alloy quadruple bundle suspension coupler, complete with straight ion terminals for 4x1272 MCM ACSR, bolts, nuts and washers  Cat. No.1SN767-142 or equal (Legend No.12.95A)	THB	9,842.80		9,842.80	344,498.00	บางสถิส	~ ๆา แย้มอ				
10	pport bracket L100x80x12 mm. ,Lorunser Cat. No.4-17155 or equal	THB	7,499.80		7,499.80	74,998.00	•	ทส <b>-ห.</b>				
15	No.90,00)	THB	\$15,10		815.10	12,226.50	746	າ.ຍ. <b>256</b> 2				
10	nge, Mosdorfer Cat. No.4180.24 or equal (Legend No.90.01)	THB	1,708.30		1,708.30	17,083.00	24:	2002				
10	r yoke plate 200 mm. spacing 24 mm. hole "Lorunser Cat. 00/2222 or equal (Legend No.90.05)	ТНВ	1,708.30		1,708.30	17,083.00						
15	ye twisted Mosdorfer Cat. No.4261.12 or equal (Legend No.90.07)	Tur	767 20		762 20	11 424 50						
	evice racket type ,Lorunser Cat. No.2262.50/245-1 or equal (Legend						-					
1	ye twisted ,Mosdorfer Cat. No.4261.12 or equal (Legend No.90.07)	15	THB	THB	THB	762.30 762.30	762.30 762.30 11,434.50	762.30 762.30 11,434.50				

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schedule 3: 500 kV Compression Connector and Miscellaneous Hardware

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

#### TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

		Qty.	Unit	Currency		Supply of F			Supply of F	-
						Poreign	Supply		Local Supply	
ltem No.	Description				FOB Vessel	Cost of Transportation to Thai Port			Ex-works Price (excluding VAT) Baht	
	i i				Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
3-9	Arcing horn double ,Lorunser Cat. No.530.250/150-235 or equal (Legend No.90.11)	10		THB	2,103.20		2,103.20	21,032.00		
3-10	Ball eye twisted ,Mosdorfer Cat. No.4213.0013 or equal (Legend No.90.12)	10	40	тнв	1,029.60		1,029.60	10,296.00		
3-11	Arcing ring ,Lorunser Cat. No.3-19433/1 or equal (Legend No.90.13)	10		THB	8,769.20		8,769.20	87,692.00	to the second se	
3-12	Sacket eye ,Mosdorfer Cat. No.4220.0021 or equal (Legend No.90.14)	10		THB	1,299.10		1,299.10	12,991.00		
3-13	Flexible copper earth shunt, 1000mm. long ,Lorunser Cat. No.4664.41/1 or equal (Legend No.60.40A)	15		тнв	177.10		177.10	2.656.50		
	Total Price for Schedule 3			THB				665,098.50	Baht	

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schedule 4:500 kV Bus Fitting

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

						Supply of E			Supply of Ka	
		1				Poreign	Supply		Local S	
inm No.	Description	Qty.	Unit	Currency	FOB Vessel	Cost of Transportation to Thai Port	CFR Th	ai Port	Ext-works ( excluding Bab	(VAT)
	Westernam Charles No. COR	-		-	Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
	Reference : Specification No. 605				OPPORTUNITIES OF THE PROPERTY					
4-1	Aluminum alloy quadruple bundle connector with four holes NEMA pad, complete with straight compression terminals for 4x1272 MCM ACSR, bolts, nuts and washers ,Lorunser Cat. No.3-19019/2A or equal (Legend No.28.91A)	10 _		ТНВ	10,981.94		10.981.94	109,819.40		
4-2	Aluminum alloy quadruple bundle connector with six holes NEMA pad, complete with terminal for 4x1272 MCM ACSR, bolts, nuts and washers ,Lorunser Cat. No.3-19019/1B or equal (Legend No.28.95A). In addition, aluminum alloy streamlined cap for shielding hardware when bolting terminal to flat pad shall be provided.	35		ТНВ	10,981.94		10,981.94	384,367.90		-
4-3	Aluminum alloy quadruple bundle connector with six holes NEMA pad, complete with clamp for 4x1272 MCM ACSR (through conductor), bolts, nuts and washers ,Lorunser Cat. No.3-19019/2E or equal (Legend No.28.96A)	20		THB	9,754.91		9,754.91	195,098.20		
4	Aluminum alloy quadruple bundle connector for stud terminal, complete with terminal for 4x1272 MCM ACSR, bolts, nuts and washers ,Lorunser Cat. No.3-19019/3 or equal (Legend No.28.99A)	10		THB	13,311.45		13,311.45	133,114.50		Programa de la companya della companya della companya de la companya de la companya della compan
4-5	Aluminum alloy quadruple bundle compression clamp for 5 inch IPS Sch.80 aluminum tube, complete with straight compression terminals for 4x 1272 MCM ACSR, bolt, nuts and washer ,Lorunser Cat, No.A3-				and the	1	20022.70	20030 2 7100		นิศา แย้มอยู่ งชตส-ท.
	20041 or equal (Legend No.42.96A)	20	1	THB	16,415.85		16,415.85	328,317.00	7.	. ก.ย. <b>2562</b>
4-6	Adapter plate with 6-hole, 1TB050-154 (46.84A) ,Lorunser Cat. No.1TB050-154 or equal (Legend No.46.84A)	20_		ТНВ	1,626.95	3	1,626.95	32,539.00,		
4-7	Adapter plate with 6-hole ,SubCon Cat No. BA10348 or equal (Legend No. 46.85A)									
		30		THB	1,626.9	5	1,626.95	48,808.50		

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schedule 4:500 kV Bus Fitting

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

#### TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

	. Description	Qty.	Unit	Currency		Supply of I		Supply of Equipment  Local Supply		
Item No.					POB Vessel	Cost of Transportation to Thai Port	ansportation CFR Thai Port		Ex-work ( excludin	orks Price iding VAT ) Baht
					Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
4-8	Spacer connector for 2x1272 MCM ACSR, distance between conductor center 200 mm. ,Lorunser Cat. No. 1QA102-040 or equal (Legand No.47.15A)  Spacer connector for 4x1272 MCM ACSR (Square), distance between conductor center 200 mm. ,RIBE Cat. No. Q4K-203 or equal (Legend No.47.22A)	.15 60		ТНВ	1,593.98 1,674.54		1,593.98 1,674.54	23,909.70		
Marie Control	Total Price for Schedule 4			THE				1,356,446.60 B	aht	

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schedule 5: 230 kV and Below Compression Connector and Miscellaneous Hardware

## SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

Description  Reference: Connector and String Hardware for 230 kV Insulator Assembly A1.81 and A1.82 as per Specification No.605 and Dwg. No. SE-IS-8-05 sh. 01/02	Qty. Unit	Local Suppl Ex-works Pric ( excluding VA Baht Unit Price	ce
		Unit Price	Amount
			The second secon
Compression terminal for 1272 MCM ACSR, straight type, four holes NEMA pad without mounting bolt, PLP Cat. No.A4DD17829T or equal (Legend No.16.45)	100	511.50	51,150.00
Compression terminal for 1272 MCM ACSR, angle 15 degree type, four holes NEMA and without mounting bolt, PLP Cat. No.A4DD16931T or equal (Legend No.16.49)			
Compression tee for 1272 MCM ACSR, four holes NEMA pad ,PLP Cat. Io.A4DD16883T or equal (Legend No.17.43)	160	511.50	81,840.0
Double T connector for 1272 MCM ACSR, four holes NEMA pad ,PLP Cat.	10	_661.10	6,611.0
Compression dead end tension clamp for 1272 MCM ACSR, with non-adjustable clevis	95	1,362.90	129,475.5
	110	938.30	103,213.00
strain clamp for 3/8 inch diameter galvanized steel OHG wire ,PLP Cat. No.A3DD4/491 or equal (Legend No.12.21)	20	577.50	11,550.0
Cable clamp for 3/8 inch diameter galvanized steel OHG wire, run to flat surface ,PLP		~	2,392.5
tr	hts, nuts and cotter key ,PLP Cat. No.A4DD08740T or equal (Legend No.24.45) ain clamp for 3/8 inch diameter galvanized steel OHG wire ,PLP Cat. No.A3DD4749T equal (Legend No.12.21)	mpression dead end tension clamp for 1272 MCM ACSR, with non-adjustable clevis its, nuts and cotter key ,PLP Cat. No.A4DD08740T or equal (Legend No.24.45)  ain clamp for 3/8 inch diameter galvanized steel OHG wire ,PLP Cat. No.A3DD4749T equal (Legend No.12.21)  20  ble clamp for 3/8 inch diameter galvanized steel OHG wire, run to flat surface ,PLP	mpression dead end tension clamp for 1272 MCM ACSR, with non-adjustable clevis hts, nuts and cotter key ,PLP Cat. No.A4DD08740T or equal (Legend No.24.45)  ain clamp for 3/8 inch diameter galvanized steel OHG wire ,PLP Cat. No.A3DD4749T  equal (Legend No.12.21)  20  577.50  ble clamp for 3/8 inch diameter galvanized steel OHG wire, run to flat surface ,PLP

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

## Schedule 5: 230 kV and Below Compression Connector and Miscellaneous Hardware

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

						Supply of Ed Local Su		
Item No.	Description	Qty.	Unit			Ex-works Price ( excluding VAT )  Baht		
					Unit Pri	ce I	Âm	ount
5-8	Ball eye 16 mm., PLP Cat. No.A4DD1114T or equal (Legend No.80.06)							A CONTRACTOR OF THE CONTRACTOR
5-9	Socket clevis 16 mm., PLP Cat. No.A4DD10476T or equal (Legend No.80.11)	35				85.80		3,003.00
		30		1		246.40		7,392.00
5-10	Socket eye with 16 mm. boss ,PLP Cat. No.A4DD17835T or equal (Legend No.80.17)							
		10				255.20		2,552.00
5-11	Twisted clevis tongue 20 mm. ,PLP Cat. No.A4DD17798T or equal (Legend No.80.23)							
		55	1			237.60		13,068.00
5-12	Twisted clevis tongue 16 mm., PLP Cat. No.A4DD17730T or equal (Legend No.80.26)							
5-13	Bow shackle 16 mm., PLP Cat. No.A4DD14164T or equal (Legend No.80.31)	55				189.20		_10,406.00
		260				123.20		32,032.00
5-14	Turnbuckle clevis-eye 5/8 x 12 inch size and take up ,PLP Cat. No.A4DD17880T or		1					
	equal (Legend No.80.38)	65	1			1,326.60		86,229.00
5-15	Strain yoke plate 200 mm. spacing 18 mm. hole ,PLP Cat. No.A4DD10569T or equal (Legend No.80.41)	90						
5-16	3.5 inch sub-base 5 inch bc on top and bottom ,PLP Cat. No.A4DD17490T or equal	80		~		304.70		24,376.00
3-10	(Legend No.80.51)	20	น	ไ เ <b>ง</b> ่สุนิศา แย้ม	าอถึ	657.80	-	13,156.00
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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schedule 5: 230 kV and Below Compression Connector and Miscellaneous Hardware

## SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

		Qty.		Supply of Equipment  Local Supply  Ex-works Price ( excluding VAT )  Baht				
em No.	Description		Unit					
				Unit Price	Amount			
5-17	6.0 inch sub-base 3 inch bc on top and bottom ,PLP Cat. No.A4DD17643T or equal (Legend No.80.52)	20		509.30	10,186.00			
5-18	Plate link 19 mm. ,PLP Cat. No.A4DD17828T or equal (Legend No.80.60)	today .		-				
		55		77.00	4,235.00			
5-19	Galvanized steel bolt, M16, 75 mm. long ,EGAT Cat. No.SD-AB-0-01 or equal (Legend No.90.32)	70		22.00	1,540.00			
5-20	Galvanized steel nut for M16 bolt ,EGAT Cat. No.SD-AB-0-01 or equal (Legend	/0		22.00	1,340.00			
	No.90.36)	70		3.30	231.00			
5-21	Galvanized steel spring washer for M16 bolt ,EGAT Cat. No.SD-AB-0-01 or equal (Legend No.90.46)	70		1.10	77.00			
5-22	U-bolt 20 mm. completed with nuts and washers ,PLP Cat. No.A4DD10547T or equal (Legend No.XX.XX)	70			//.00			
	(Legend No.A.A.A)	30		194.70	5,841.00			
				Baht				
	Total Price for Schedule 5				600,556.00			
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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

## Schedule 6: 230 kV and Below Bus Fitting SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

					_	The second name of the second	apply of Equipment Poreign Supply			Supply of Equipment  Local Supply	
item No.		Qty.	Unit	Currency		Cost of Transportation to Thai Port	CFR Thai Port		Ex-works Price (excluding VAT) Baht		
					Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount	
6-1	Reference: Specification No. 605  Bus support clamp, with 5 inch be fitting for 4x1272 MCM AAC or  ACSR (Parallel), Burndy Cat. No.U4HKR16A-5-SG or equal (Legand  No.13.98)	10		ТНВ	4,989.48		4,989,48	49,894.80			
6-2	Bus support clamp, with 3 inch be fitting for 3 inch IPS aluminum tube, slip or rigid fit ,Burndy Cat. No.UHG20A-3B or equal (Legend No.15.25)										
6-3	Expansion bus support clamp, bolt type with 3 inch be fitting for 3 inch IPS Sch.80 aluminum tube, supplied with end cap ,Lorunser Cat. No. 1KA510-090 or equal (Legend No.15.35)	20		THB	1,580.78		1,580.78				
6-4	Bus support, with 5 inch be fitting for 5 inch IPS aluminum tube, alip or rigid fit ,Burndy Cat. No.WOH24A-5B or equal (Legend No.15.47)	10_		THB	2,189.55		2,189.55	21,895.50			
6-5	Terminal connector, weld type for 2x1272 MCM ACSR ,Burndy Cat. No. W2A54R-4N or equal (Legend No.28.63)	IÒ		THB	1,370.71		1,370.71	13,707.10		~	
6-6	Terminal connector 90 degree, weld type for 2x1272 MCM ACSR Burndy Cat, No.W2A54R-4N-90 or equal (Legend No.28.73)	15		THB	606.96		606.96	9,104.40	٩	นางสุนิศา แย้มถ หชตส-ห.	
6-7	Terminal connector, weld type for 1272 MCM ACSR, Burndy Cat. No.WA54R-4N or equal (Legend No.29.83)	10	·	THB	935.08	-	935.08	9,350.80		2 4 N.U. 256	
6-8	Bar tap, weld type for 3 inch IPS aluminum tube to four holes NEMA pad Burndy Cat. No.SWAB20A-4N or equal (Legend No.42.04)	50		THB	343.25		343.25	17,162.50		_	
	hare internal com table at treasure. It or adone (nothing tractional)	15		THB	381.73		381.73	5,725.95			

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#### **MEDIUM COST FOR BID NO.TIEC-MC1-02**

## Schedule 6: 230 kV and Below Bus Fitting SUPPLY OF MISCELLANEOUS EQUIPMENT

#### TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

						Supply of E Foreign				Equipment Supply
item No.	Description	Qty.	Unit Currency		FOB Vessel	Cost of Transportation to Thai Port	CFR Thai Port		Ex-works Price ( excluding VAT ) Baht	
Martine		-			Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
	Coupler, bolt type for 3 inch IPS aluminum tube ,Lorunser Cat. No.1AA100-090 or equal (Legend No.43.54)									
•	Coupler, weld type for 5 inch IPS Sch.80 aluminum tube ,Burndy Cat.	30		ТНВ	2,219.58	The second secon	2,219.58	66,587.40		
	No.WS94A-F or equal (Legend No.44.08)	10	-1	ТНВ	1,460.25	and the same of th	1,460.25	14,602_50		
6-11	Corona bell, internal type for 3 inch IPS Sch.40 aluminum tube Burndy Cat. No.LB20A or equal (Legend No.45.56)		1	na name		A PARTIE NA PART	40			
6-12	Corona bell, internal type for 5 inch IPS Sch.80 aluminum tube Burndy Cat. No.LB94A or equal (Legend No.45.59)	20		THB	1,738.98		1,738,98	34,779.60		
		15		THB	254.31		254.31	3,814.65		
6-13	Spacer connector for 2x1272 MCM ACSR, distance between conductor center 100 mm. Burndy Cat. No.S2GBP46A-10 or equal (Legend No.47.05)	10		294110	279.50		279.50	2 785 80		~
6-14	Spacer connector for 4x1272 MCM ACSR (Square), distance between conductor center 200 mm. "Burndy Cat. No.S4GBP46A-20 or equal (Legend No.47.22)	. 10_	).	THB	278.58		278.58	2,785.80	น	างสุนิศา แย้มอ ทชตส-ห.
6-15	Stainless steel hexagon head bolts, 0.5-13 inch, 3.5 inch long fully threaded and manufactures of series 18-8 material, coarse thread series class 2A tolerance ,Burndy Cat. No.50x350 HSSB or equal (Legend	90		THB	1,051.62	2	1,051.62	94,645.80		<b>2</b> 4 ก.ย. 2562
	No.90.52)	165		THB	45.26	5	45.26	7,467.90		



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## MEDIUM COST FOR BID NO.TIEC-MC1-02

## Schedule 6: 230 kV and Below Bus Fitting

## SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

					Supply of Equi Foreign Sup Cost of	and the second second	-	Local Supply  Ex-works Price (excluding VAT)  Baht		
Item No. Description	Description	Qty.	Unit	Currency	POB Vessel	Cost of Transportation to Thai Port	1			
					Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
6-16	Stainless steel hexagon head bolts, 0.5-13 inch, 3.0 inch long fully threaded and manufactures of series 18-8 material, coarse thread series class 2A tolerance ,Burndy Cat. No.50x300 HSSB or equal (Legend No.90.54)	1910		тнв	38.43	Landing	38.43	73,401.30		
6-17	Stainless steel hexagon muts manufactures of series 18-8 material finish type, course thread series class 2B fit for 0.5-13 inch bolts size Burndy Cat. No.50 HSSN or equal (Legend No.90.61)					named.				
6-18	Stainless steel flat washers manufactures of 18-8 material and of medium design 1.125 inch O.D., 0.594 inch I.D., and 0.125 inch thickness "Burndy Cat. No.50 FWSS or equal (Legend No.90.66)	1910		THB	12.77	•	12.77	11,154.40		
6-19	Stainless steel believille washers manufactures of alloy 301, 302 or 18-8 materials, 1.06 inch O.D., 0.530 inch LD., 0.095 inch thickness Burndy Cat. No.50x106 BWSS or equal (Legend No.90.76)	1910	AND ADDRESS OF THE PARTY OF THE	ТНВ	21.72	name e	21.72	41,485.20		
6-20	Aluminum joint compound in 8-oz bottles ,Burndy Cat. No.P8A or equal (Legend No.90.91)		illinerina paparata (illinininininininininininininininininin	_						
		30		THB	624.55		624.55	18,736.50		
	Total Price for Schedule 6			THB				576,699.10 E	aht	

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schedule 7: Grounding Material

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

						Supply of Equipment  Foreign Supply				pply
Item No.	. Description	Qty.	Unit	Currency	FOB Vessel	Cost of Transportation to Thai Port	of ation CFR Thai Port		Ex-works Price (excluding VAT) Baht	
					Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
	Reference: Specification No. 603			1				4		
7-1	Ground rod size 5/8 inch diameter x 10 feet						i			
		15	ř.,	THB	811.80		811.80	12,177.00		
7-2	Exothermic welding mold for connecting copper weld ground rod size 5/8 inch diameter to copper ground wire no. 4/0 AWG ,Kumwell Cat. No.CR2-C-5/84/0 or equal (Legend No.60.02)			Anna and anna anna anna anna anna anna a				Tro - "dia dal		
_		5	Ĭ.		XXXXX	XXXXX	XXXXX	XXXXX	2,478.30	12,391.5
7-3	Exothermic welding mold for connecting horizontal cable of no. 4/0 AWG run to horizontal through cable of no. 4/0 AWG copper ground wire tap "Kumwell Cat. No.CC2-C-4/04/0 or equal (Legend No.60.03)	15			xxxxx	XXXXXX	XXXXX	xxxxx	2,478.30	37,174.5
7-4	Exothermic welding mold for connecting angular cable drop of no. 4/0 AWG copper ground wire to vertical steel flat surface ,Kumwell Cat. No.CS3-Y-4/0 or equal (Legend No.60.04)		)	1						
	140.C35-1-40 of ciqual (Degenal 140.00.04)	15			XXXXX	XXXXXX	XXXXX	XXXXX	2,464.00	36,960.0
7-5	Exothermic welding mold for connecting angular cable drop of no. 4/0 AWG copper ground wire to vertical steel pipe 2-4 inch diameter ,Kumwell Cat. No.CP1-X-4/0 or equal (Legend No.60.05)	5			XXXXXX	xxxxx	XXXXX	xxxxx	2,478.30	12,391.5
7-6	Exothermic welding mold for connecting horizontal to horizontal cable cross of no. 4/0 AWG copper ground wire tap cable, cut cable in same plane, Kumwell Cat. No.CC4-C-4/04/0 or equal (Legend No.60.06)			r.	******	******	******	VVVVV	2 602 70	-
7-7	Exothermic welding mold for connecting cable of no. 4/0 AWG copper ground wire vertical through to steel flat surface ,Kumweli Cat. No.CS4-Y-4/0 or equal (Legend No.60.07)	<u>2</u>			XXXXX	XXXXX	XXXXXX	XXXXXX	2,603.70	13,018.5
	THE COT I WE ST SHEET (NOTICE LANDON AL)	10_	1		XXXXXX	XXXXX	XXXXX	XXXXXX	4,308.70	43,087.0
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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

#### Schodule 7: Grounding Material

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

#### TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

					FOB Vessel Trant to 1	Supply of E Foreign		Supply of Equipment  Local Supply  Ex-works Price (excluding VAT)  Baht		
Item No.	Description	Qty.	Unit Cur	Currency		Cost of	CFR Thai Port			
		<b>-</b>			Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
7-8	Changeable handle clamp ,Kumwell Cat. No.HCC00-XY or equal (Legend No.60.09)	and the same of th				1				
7-9	Welding powder cartridges for mold ,Kumwell Cat. No.CR2-C-5/84/0 or equal (Legend No.60.10)	5	į	-	xxxxx	XXXXX	XXXXX	XXXXX	3,480.40	17,402.0
7-10	Welding powder cartridges for mold ,Kumwell Cat. No.CC2-C-4/04/0 or equal (Legend No.60.11)	15			XXXXX	XXXXXX	XXXXX	XXXXX	180 40	2,706.0
7-11	Welding powder cartridges for mold ,Kumwell Cat. No.CS3-Y-4/0 or equal (Legend No.60.12)	535			XXXXXX	XXXXXX	XXXXX	XXXXX	221.10	118,288.5
7-12	Welding powder cartridges for mold ,Kumwell Cat. No.CP1-X-4/0 or equal (Legend No.60.13)	315	}		_xxxxx	XXXXXX	XXXXX	XXXXXX	180.40	56,826.0
7-13	Welding powder cartridges for mold ,Kumwell Cat. No.CC4-C-4/04/0 or equal (Legend No.60.14)	20	1-		XXXXX	XXXXX	XXXXX	xxxxx	180.40	3,608.0
7-14	Welding powder cartridges for mold ,Kumwell Cat. No.CS4-Y-4/0 or equal (Legend No.60.15)	200			XXXXX	XXXXX	XXXXX	XXXXX	282.70	56,540 <u>.0</u>
7-15	Tool kit complete set ,Kumwell Cat. No.KT000 or equal (Legend No.60.17)	260	)	discounted the state of the sta	XXXXX	XXXXX	XXXXX	XXXXX	332.20	86,372.0
		5			XXXXX	XXXXX	XXXXX	XXXXX	5,902.60	29,513.0

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#### MEDIUM COST FOR BID NO.TIEC-MC1-92

#### Schedule 7: Grounding Material

## SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

				1	Supply of Equip Foreign Sup				Supply of Equipment  Local Supply	
Item No.	Description	Qty.	Unit	Currency	FOB Vessel	Cost of Transportation to Thai Port	CFR Th	ai Port	Ex-works ( excluding Baht	Price VAT)
					Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
7-16	Plint igniter ,Kumwell Cat. No.KTA014 or equal (Legend No. 60.18)									
		10		1	XXXXX	300000	XXXXX	XXXXX	240.00	2,400.0
7-17	Single terminal lug one hole for 4/0 AWG copper ground wire Kunrwell Cat. No.KGXTEL-4/0 or equal (Legend No.60.19)									
		65		THB	171.60		171.60	11,154.00		
7-18	Ground connector for 4/0 AWG copper ground wire to steel flat surface ,Kurnwell Cat. No.KGXCCF-G2P 2/0-4/0 or equal (Legend No.60.20)									
		_35		THB	440.00		440.00	15,400.00	4	
7-19	Cable clamp for 4/0 AWG copper ground wire run to cable trench wall (with expansion bolt) ,Kumwell Cat. No.KGRC-A or equal (Legend No.60.22)	2025		THB	99.00		99.00	200,475.00	approximate systems	
7-20	Compression terminal for 185 sq.mm. copper ground wire, 2 hole NEMA pad "Kumwell Cat. No.KTH 400-12DN or equal (Lagend No 60.52)	-			206 au		206 20	1.622.50		
	110.00.32)	2	-	THB	326.70		326.70	1,633.50 240,839.50 Be	Lo	
	Total Price for Schedule 7			THB				240,037.30		528,678.5

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#### MEDIUM COST FOR BID NO.TIEC-MC1-02

## Schedule 8: Rigid Steel Conduit

## SUPPLY OF MISCELLANEOUS EQUIPMENT

# TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

Item No.	. Description	Qty.	Unit	Supply of Equipment  Local Supply  Ex-works Price ( excluding VAT )  Baht					
				Unit Price	Amount				
8-1 8-2	Reference: Specification No. 522  Rigid steel conduit 2.0 inch dia., 3.05 m long  Rigid steel conduit 2.5 inch dia., 3.05 m long	30 10		1,199.00 2,055.90	35,970.00 20,559.00				
	Total Price for Schedule 8			Baht	56,529.00				

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#### MEDIUM COST FOR BID NO.TIEC-MCI-02

#### Schedule 9 : Conduit Fittings

#### SUPPLY OF MISCELLANEOUS EQUIPMENT

#### TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

itam No.		Qty.				Supply of E Foreign	- 1	Supply of Equipmen  Local Supply  Ex-works Price ( excluding VAT )  Baht		
	Description		Unit	Currency	FOB Vessel	Cost of FOB Vessel Transportation to Thai Port				ai Port
	No.				Unit Price	Unit Price	Unit Price	Amount	Unit Price	Amount
9-1	Reference: Specification No. 522  Bushing for rigid steel conduit 2.0 inch dia.	55	nt distant	ТНВ	129.80		129.80	7,139.00	A ARRAMANIAN CONTRACTOR CONTRACTO	
9-2	Bushing for rigid steel conduit 2.5 inch dia.	35		ТНВ	227.70	1	227.70	7,969.50	from many	
9-3	Lock nut for rigid steel conduit 2.0 inch dia.	55		THB_	64.90		64.90	3,569.50	· · · · · · · · · · · · · · · · · · ·	
9-4	Lock nut for rigid steel conduit 2.5 inch dia.	35		THB	121.00		121.00	4,235.00		
9-5	Coupling for rigid steel conduit 2.0 inch dia.	30		THB	245.30		245.30	7,359.00	Activingeness	
9-6	Flexible rain tight conduit 2.0 inch die., 15 meter/package	10		THB	511.50		511.50	5,115.00		_
9-7	Connector for flexible rain tight conduit 2.0 inch dia.	55		THB	556.60	***	556.60	30,613.00	-	
				THE				66,000.00	Beht	
	Total Price for Schedule 9									

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## **Important Information**

### for

## **Invitation to Bid No. TIEC-MC1-02**

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The purpose of this section is to inform the Bidders to **carefully study** the details of the revised terms and conditions in the bidding documents. The following provisions have been **recently revised** as stated hereunder:

## **Article B-12.** Evaluation and Comparison of Bids

The calculated insurance premium to be used for evaluation and comparison purpose has been revised from 0.0898% to 0.0629%.

## **Article F-8. Payment:**

If the Contractor requires the payment of foreign currency portion to be paid directly to the suppliers, he has to inform EGAT which portion of the Contract Price, as stipulated in the term of payment of the Contract, to be paid accordingly.

In case the local Contractor requires foreign currency or currencies to be paid directly to him, payment of such foreign currency or currencies will be made to the local Contractor in Thai Baht by using the **selling exchange rate** published by the Bank of Thailand on the **payment date** (previously stated as buying exchange rate on the bid opening date).

The number of days which payment for the first portion of foreign supply will be made after delivery, previously specified as 45 days, has been **deleted**.

#### **Article F-9. Liquidated Damages for Late Delivery of Equipment:**

The limit of liquidated damages, previously specified that does not exceed 10%, has been **deleted**.

## **DATA SHEET**

## for

## **Invitation to Bid No. TIEC-MC1-02**

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This section consists of provisions that are specific to each procurement and supplement the information or requirements included in bidding documents.

## **Article B-3. Bid Security**

The amount of bid security shall be USD 9,280.- or THB 285,500.-.

## Article B-4. Validity of Bids

The validity of the bid shall be for one hundred and twenty (120) Days from the date specified for opening of bid.

## Article B-8. Information to be Submitted with Bid:

Item m. is not applicable

## Article B-12. Evaluation and Comparison of Bids:

The evaluation of bid prices shall be on a combination of all schedule basis.

## Article E-29. Failure to Meet Requirements and F-10. Maintenance Guarantee

### Maintenance Guarantee Period

- For all Equipment except Shunt Reactor, 200 MVA 230 kV and above Power Transformer and 500 kV System Voltage Equipment

The Contractor shall guarantee the proper functioning of Equipment for a period of one (1) Year except the following Equipment the guarantee period of which shall be as follows:

<u>Equipment</u>	Period of Guarantee (Year)
- Fault Recording System	2
- Control and Protection System	2

- For Shunt Reactor, 200 MVA 230 kV and above Power Transformer and 500 kV System Voltage Equipment

The Contractor shall guarantee the proper functioning of Equipment for a period of five (5) Years.

### Defective Equipment to be replaced with the whole new set

For GIS, Power Transformer, Power Circuit Breaker, Shunt Reactor, in case EGAT, at its sole discretion, requires the Contractor to replace any defected Equipment, the Contractor shall replace the Equipment with the whole new set as specified in <u>Failure to Meet Requirements</u> in section E and <u>Maintenance Guarantee</u> in section F.

#### Article F-9. Liquidated Damages for Late Delivery of Equipment

#### Schedule 1

The Liquidated Damages shall be at the rate of one-tenth of one (0.10) per cent of the price of each complete item of Equipment not timely delivered for each Day of delay. This sum is payable regardless of the actual loss and/or damages incurred.

#### Schedules 2 thru 9

The Liquidated Damages shall be at the rate of one-tenth of one (0.10) per cent of the price of each complete Schedule of Equipment not timely delivered for each Day of delay. This sum is payable regardless of the actual loss and/or damages incurred.

## INVITATION TO BID NO. TIEC-MC1-02 SUPPLY OF MISCELLANEOUS EQUIPMENT

## TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY

## **Invitation**

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for furnishing and delivering of Miscellaneous Equipment under Transmission System Improvement Project in Northeastern, Lower Northern, Central Regions and Bangkok Area to Enhance System Security hereinafter called Equipment in accordance with the terms, conditions and Specifications described in these Bidding Documents.

### **Eligibility of Bidders: General Requirements**

All Bidders shall meet the following requirements; failure to so comply shall constitute sufficient ground for rejection.

- a. The Bidder shall be a partnership, firm or company, either alone or in joint venture or in consortium.
- b. The Bidder shall be a purchaser of the bidding documents from EGAT. For a joint venture or consortium, only one (1) member of the joint venture or consortium is required to purchase the bidding documents.
  - In the case where the Bidder is not the purchaser of the bidding documents, the purchaser shall notify EGAT of the name of the Bidder in writing *prior to the bid opening*.
- c. The Bidder shall be well-established and maintain a permanent place of business. For a joint venture or consortium, all members of the joint venture or consortium are required to meet this qualification.
- d. The Bidder shall not be named in the List of Work Abandoners published by the Office of the Prime Minister and/or in the Debarment List and/or in the List of Work Abandoners declared by EGAT.
- e. For the Bidder who changes name before submitting the bid, his experience records in previous name shall be considered as the experience records of the Bidder.
- f. The Bidder shall not be a Jointly Interested Bidder with other Bidders as from the date of EGAT's issuance of this invitation to bid, or shall not be a person who undertakes any action as an "Obstruction of Fair Price Competition" as defined in Additional Regulation for this invitation.

- g. The Bidder shall not either be EGAT's consultant or involve in EGAT's consultancy company under this invitation, or have EGAT's personnel involved in his business as shareholder having voting right that can control his business, director, manager, officer, employee, agent or consultant except the ones who are officially ordered by EGAT to act or participate therein.
- h. The Bidder shall not be the person who is privileged or protected not to be taken any legal proceeding under Thai court; provided that such Bidder's government declares that such special privilege is waived.
- In case of a joint venture or consortium, the Bidder shall carry out all the provision of the Equipment and all Work under such formation from the time of bidding until the fulfillment of the Contract and the parties to the joint venture or the consortium shall accept joint and several liability for performing all obligations under the bid and the Contract.
- j. The Bidder shall not propose to supply the Equipment from the country under the state of war whether declared or not.
- k. The Bidder shall have adequate fund to meet financial obligations incidental to this Contract.
- 1. The Bidder shall submit documentary evidence established in accordance with Article B-8. <u>Information to be Submitted with Bid</u> to demonstrate the Bidder's sufficient eligibility to bid and qualification to perform the Contract.

## **Eligibility of Bidders: Technical Requirements**

- I. All Bidders shall meet the following requirements; failure to so comply shall constitute sufficient ground for rejection.
- a. The Bidder shall manufacture or supply the Equipment or Work as required under this invitation to bid.
  - b. If the Bidder is a new company formed by acquisition of or merger with other companies or business units before submitting the Bid, the experience records of any of such previous companies or business units that meet the requirements set forth herein are acceptable as the experience records of the Bidder.
  - c. The Bidder shall have no just or proper claims pending against the Bidder with respect to breach in the performance of contract on other similar works awarded by EGAT. If the Bidder is a new company formed by acquisition of or merger with other companies or business units, the pending claim of any of such previous companies or business units shall be considered pending claim of the Bidder.
  - d. The Bidder shall have sufficient capacity to carry out the Work.
  - e. The bidder shall propose the Equipment manufactured by the qualified manufacturers who shall fulfill the following requirements :

- 1. Being well-established and maintaining a permanent place of business.
- 2. The manufacturer shall have the experience records that meet the requirements set forth herein.

Reference records of either parent or affiliated companies shall not be considered as the records of such manufacturer.

3. If the Manufacturer is a new company formed by acquisition of or merger with other companies or business units, and any of such previous companies or business units has the experience records that meet the requirements set forth herein, such experience records are acceptable as the experience records of the new company, provided that each item of the equipment to be supplied under this bid shall be manufactured from the same source of supply as indicated in each of such relevant supply records as described in Item e.6 below. Otherwise, it shall not be acceptable and shall be sufficient grounds for rejection.

For the avoidance of doubt, it is not allowed to combine the experience records of the previous companies or business units in order to meet the experience requirements.

4. Being local manufacturer for:

Battery Charger, Switchyard Lighting Fixtures, Aluminum Tube, 230 kV and below Compression Connector and Miscellaneous Hardware, Thermite Welding Material and Rigid Steel Conduit.

- 5. Regularly manufacturing of Equipment of the type and similar ratings proposed.
- 6. Having the qualifications for the required equipment as follows:
  - 6.1 For Stationary Battery.

Having one of the following qualifications:

6.1.1 Having supply record of Equipment of the type and similar ratings proposed with successful operation/use in substations/switchyards for at least three (3) consecutive years and at least three (3) sets.

In case the above supply record of Equipment of the type and similar ratings proposed fulfilled the requirements, the manufacturer may propose a newly developed / modified type of such Equipment with successful operation/use for at least one (1) year. The detailed information of the development / modification shall be submitted with his proposal. EGAT, however, reserves the right and will make its own judgement whether or not to consider/accept the proposed developed / modified type

OR

- 6.1.2 Having a letter of acceptance for manufacturing and/or fabrication of the specific Equipment issued by EGAT within the scope specified therein. (For the local manufacturer)
- 6.2 For Suspension Insulator.

Having supply record with successful operation/use for at least three (3) consecutive years in overseas country (not his own country) and at least 10,000 units having the similar ANSI class as proposed.

6.3 For Station Post Insulator.

Having one of the following qualifications:

6.3.1 Having supply record of Equipment of the type and similar ANSI technical reference number proposed with successful operation/use for at least three (3) consecutive years in overseas country (not his own country).

OR

- 6.3.2 Having a letter of acceptance for manufacturing and/or fabrication of the specific Equipment issued by EGAT within the scope specified therein. (For the local manufacturer)
- 6.4 For Battery Charger, 33 kV and below Cable Terminations, Switchyard Lighting Fixtures, Aluminum Tube, Compression Connector and Miscellaneous Hardware, Bus Fittings, Ground Rod, Thermite Welding Material, Grounding Hardware, Rigid Steel Conduit and Conduit Fittings.

Having one of the following qualifications:

6.4.1 Having supply record of Equipment of the type and similar ratings proposed with successful operation/use for at least one (1) year.

OR

- 6.4.2 Having a letter of acceptance for manufacturing and/or fabrication of the specific Equipment issued by EGAT within the scope specified therein. (For the local manufacturer)
- 6.5 For above 33kV through 500 kV Outdoor Type Cable Termination and Cable Termination for GIS.

Having one of the following qualifications:

6.5.1 Proposing the Equipment of the type and ratings which have ever been accepted by EGAT.

OR

6.5.2 Having a supply record of Equipment of the type and ratings proposed with successful operation/use for at least three (3) consecutive years in an overseas country (not his own country)

and at least five (5) three phase sets. The ratings and features of Equipment shall be the same or similar rating as EGAT specifies.

In case that the supply record of Equipment of the type and ratings proposed fulfilled the requirement, the manufacturer may propose a newly developed or modified type of such Equipment with successful operation/use for at least one (1) year in overseas country (not his own country) and at least five (5) three phase sets. The detailed information of the development or modification shall be submitted with his proposal. EGAT, however, reserves the right and will make its own judgment whether or not to consider or accept the proposed developed or modified type.

Supply records of the higher rating Equipment shall not be accepted if the Bidder does not propose such higher rating Equipment in his bid.

- 7. Having the design test record of Equipment of the type and similar ratings proposed in order to confirm that the manufacturer has an experience of design test performance on his Equipment. The design test record shall be performed according to the test specified in EGAT's specification. In case it is specified in EGAT's specification that the proposed Equipment shall have the design test record of the same type and same rating, such design test record shall be submitted as requested by EGAT.
- 8. Proposing the manufacturer who has no just or proper claims pending against Equipment on other similar works.

In case the manufacturer is a new company formed by acquisition or merger with other companies or business units, the pending claim of any of such previous companies or business units shall be considered pending claim of the manufacturer.