

# Notice to Bidder

## To comply with the ENGINEER ACT, B.E. 2542 FOR THE CONSTRUCTION WORK RELATED TO DESIGN OR CONSTRUCTION SUPERVISION WORK

The Contractors should be aware of the following:

1. The Contractor who is a juristic person is required to obtain a License to Practice the Controlled Engineering Profession issued by the Council of Engineers Thailand.
2. Where the Contractor is a joint venture or consortium, the Contractor shall comply with the following requirements: -
  - 1) In case of a joint venture, the joint venture is required to obtain a License to Practice the Controlled Engineering Profession issued by the Council of Engineers Thailand.
  - 2) In case of a consortium, only the member of the consortium who will be responsible for the Design or Construction Supervision Work is required to obtain a License to Practice the Controlled Engineering Profession issued by the Council of Engineers Thailand.

**NOTE** : If you have any questions, please contact COUNCIL OF ENGINEERS THAILAND.

Address : 1616/1 Ladprao, Wangthonglang, Bangkok, Thailand 10310

Telephone : 1303

Email : [coe@saraban.mail.go.th](mailto:coe@saraban.mail.go.th)

## ประชาสัมพันธ์ผู้ประกอบการเพื่อทราบ

เพื่อให้การดำเนินงานสำหรับงานจ้างก่อสร้างที่มีลักษณะงานด้านการออกแบบหรือควบคุมงานก่อสร้าง สอดคล้องกับพระราชบัญญัติวิศวกร พ.ศ. 2542 จึงขอแจ้งแนวทางในการดำเนินงาน ดังนี้

1. ผู้รับจ้างที่เป็นนิติบุคคล ต้องเป็นผู้ที่ได้รับใบอนุญาตประกอบวิชาชีพวิศวกรรมควบคุมสำหรับนิติบุคคลจากสภาวิศวกร
2. ผู้รับจ้างที่ดำเนินการในรูปแบบของ “กิจการร่วมค้า”
  - (1) กรณีที่กิจการร่วมค้าได้จดทะเบียนเป็นนิติบุคคลใหม่ กิจการร่วมค่านั้นต้องเป็นผู้ที่ได้รับใบอนุญาตประกอบวิชาชีพวิศวกรรมควบคุมสำหรับนิติบุคคลจากสภาวิศวกร
  - (2) กรณีที่กิจการร่วมค้าไม่ได้จดทะเบียนเป็นนิติบุคคลใหม่ เฉพาะนิติบุคคลที่มีหน้าที่เป็นผู้รับผิดชอบงานวิศวกรรมออกแบบหรือควบคุม ต้องเป็นผู้ที่ได้รับใบอนุญาตประกอบวิชาชีพวิศวกรรมควบคุมสำหรับนิติบุคคลจากสภาวิศวกร

หมายเหตุ หากมีข้อสงสัย โปรดติดต่อ สภาวิศวกร

ที่อยู่ : 1616/1 ถนนลาดพร้าว แขวงวังทองหลาง เขตวังทองหลาง กรุงเทพมหานคร 10310

เบอร์ติดต่อ : 1303

อีเมล : [coe@saraban.mail.go.th](mailto:coe@saraban.mail.go.th)

## **EGAT's Privacy Notice on Procurement, Inventory Management and Contract Administration**

**Electricity Generating Authority of Thailand (EGAT)** has performed the protection of the Personal Data regarding procurement, inventory management and contract administration to be in accordance with **the Personal Data Protection Act B.E. 2562** (the "2019 PDPA"), which comes into effect on June 1, 2022.

Details about EGAT's Privacy Notice on Procurement, Inventory Management and Contract Administration are available for you at [https://www.egat.co.th/privacy-notice-procurement\\_en.html](https://www.egat.co.th/privacy-notice-procurement_en.html) or the below QR Code.



## **The Redaction of Sensitive Personal Data**

EGAT has announced the Privacy Notice on Procurement, Inventory Management and Contract Administration for the collection, use or disclosure of Personal Data, excluding the Sensitive Personal Data.

Should the documents you wish to submit to EGAT contain the Sensitive Personal Data as defined in Section 26 of the 2019 PDPA, pertaining to racial, ethnic origin, political opinions, cult, religious or philosophical beliefs, sexual behavior, criminal records, health data, disability, trade union information, genetic data, biometric data, or of any data which may affect you in the same manner, you shall redact or conceal such data before submitting to EGAT.

## ประกาศความเป็นส่วนตัว (Privacy Notice) สำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญาของ กฟผ.

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) ได้ดำเนินการคุ้มครองข้อมูลส่วนบุคคลสำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญา เพื่อให้เป็นไปตามพระราชบัญญัติคุ้มครองข้อมูลส่วนบุคคลของประเทศไทย พ.ศ. 2562 (PDPA) ซึ่งมีผลบังคับใช้อย่างครบถ้วน ตั้งแต่วันที่ 1 มิถุนายน 2565 ทั้งนี้ ท่านสามารถศึกษารายละเอียดประกาศความเป็นส่วนตัว (Privacy Notice) สำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญา ได้ที่ <https://www.egat.co.th/privacy-notice-procurement.html> หรือที่ QR Code ด้านล่าง



### การขิดฆ่าข้อมูลส่วนบุคคลอ่อนไหว

กฟผ. มีประกาศความเป็นส่วนตัว (Privacy Notice) สำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญา เพื่อใช้ในการเก็บรวบรวม ใช้ หรือเปิดเผย ข้อมูลส่วนบุคคล แต่ไม่เก็บข้อมูลส่วนบุคคลอ่อนไหว หากเอกสารของท่านที่ต้องส่งมอบให้ กฟผ. มีข้อมูลส่วนบุคคลอ่อนไหวตามที่ถูกบัญญัติไว้ในมาตรา 26 ของ PDPA ดังนี้ เชื้อชาติ เผ่าพันธุ์ ความคิดเห็นทางการเมือง ความเชื่อในลัทธิ ศาสนาหรือปรัชญา พฤติกรรมทางเพศ ประวัติอาชญากรรม ข้อมูลสุขภาพ ความพิการ ข้อมูลสหภาพแรงงาน ข้อมูลพันธุกรรม ข้อมูลชีวภาพ หรือข้อมูลอื่นใด ซึ่งกระทบต่อเจ้าของข้อมูลส่วนบุคคลในทำนองเดียวกันรวมอยู่ด้วย ขอให้ท่านขิดฆ่า หรือปกปิดข้อมูลดังกล่าว ก่อนส่งมอบให้แก่ กฟผ.

## Notice to Bidder

### Subject : Online Payment for Purchase of Bidding Documents

Please be informed of the online payment for purchase of bidding documents as follows:

- 1) Fill-out the Registration Form and the proof of payment in the link provided in <https://www4.egat.co.th/fprocurement/biddingeng>

Payment shall be made by bank transfer or telegraphic transfer to EGAT's 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.

- 2) The registration will be deemed complete only upon successful processing of the payment and confirmation of funds received.
- 3) After the payment has been verified for approximately 3 working days, the in-charge officer will send the link for downloading the bidding documents together with the receipt to the purchaser's email address in the Registration Form.

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Invitation to Bid No. TIEC-L-13

(Revision 2)

Supply and Construction of Transmission Lines  
500 kV Chaiyaphum 2 - Nakhon Ratchasima 4 (from KM.68 to Nakhon Ratchasima 4)  
and 230 kV Nakhon Ratchasima 4 - Nakhon Ratchasima 3  
Transmission System Improvement Project in Northeastern, Lower Northern,  
Central Regions and Bangkok Area to Enhance System Security  
Two-Envelope

The Electricity Generating Authority of Thailand (EGAT) is calling for the subject Invitation to Bid to be financed by EGAT's fund. The escalation factor (K) for price adjustment is applied to this Bid.

Place of Construction :

- from KM. 68 of 500 kV Chaiyaphum 2 - Nakhon Ratchasima 4 Transmission Line to Nakhon Ratchasima 4 Substation (approx. 74 kilometers)
- from Nakhon Ratchasima 4 Substation to Nakhon Ratchasima 3 Substation (approx. 2.4 kilometers)

Medium Cost (including Value Added Tax and other expenses) :

Medium Cost is revised from THB 1,046,900,000.- to THB 1,114,600,000.-

Eligibility of Bidders

1. The Bidder shall be a juristic person who provides such services and shall not be named in the List of Work Abandoners published by the Permanent Secretary, Ministry of Finance, 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 are available for online purchase during 8:00 hrs. to 15:00 hrs., Bangkok Standard Time, as from July 31, 2025 to August 21, 2025 at USD 500.- or THB 15,000.- per copy, non-refundable.

Please find more details for online purchasing process at <https://www4.egat.co.th/fprocurement/biddingeng> or contact for further information at telephone no. 66 2436 0342 or [procurement.tse@egat.co.th](mailto:procurement.tse@egat.co.th).

*Kannika Dhaehalapat*

Delivery of Bids

*Technical and price proposal submission date and Technical proposal opening date is postponed from September 24, 2025 to November 3, 2025.* Technical and price proposal shall be submitted at Bidding Room, 1<sup>st</sup> Floor, Tor 137 Building at EGAT's Head Office, Nonthaburi during 09:00 hrs. to 10:00 hrs., Bangkok Standard Time, and Technical proposal will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

*October 21, 2025*

*Kannika Dhachalapat*

(Mrs. Kannika Dhachalapat)

Chief, Procurement Department – Transmission System Segment



ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย  
เรื่อง ประกวดราคาจ้าง เลขที่ TIEC-L-13  
ประกวดราคา 2 ซอง

(ฉบับแก้ไข ครั้งที่ 2)

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะจัดซื้อและจ้างก่อสร้างสายส่งไฟฟ้าแรงสูง 500 kV ชัยภูมิ 2 - นครราชสีมา 4 (จากกิโลเมตรที่ 68 ถึง สถานีไฟฟ้าแรงสูงนครราชสีมา 4) และ 230 kV นครราชสีมา 4 - นครราชสีมา 3 สำหรับโครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือ ภาคเหนือตอนล่าง ภาคกลาง และกรุงเทพมหานคร เพื่อเสริมความมั่นคงระบบไฟฟ้า โดยทำสัญญาแบบปรับราคาได้ (ค่า K) โดยใช้งบประมาณ กฟผ.

**สถานที่ก่อสร้าง** : - จากสายส่งไฟฟ้าแรงสูง 500 kV ชัยภูมิ 2 - นครราชสีมา 4 กิโลเมตรที่ 68 ถึง สถานีไฟฟ้าแรงสูงนครราชสีมา 4 (ระยะทางประมาณ 74 กิโลเมตร)  
- จากสถานีไฟฟ้าแรงสูงนครราชสีมา 4 ถึง สถานีไฟฟ้าแรงสูงนครราชสีมา 3 (ระยะทางประมาณ 2.4 กิโลเมตร)

**ราคากลาง (รวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ)** : *แก้ไขราคากลาง จาก 1,046,900,000.- บาท เป็น 1,114,600,000.- บาท*

**คุณสมบัติของผู้เสนอราคา**

1. ต้องเป็นนิติบุคคลผู้มีอาชีพรับจ้างตามประกวดราคาจ้างดังกล่าว และต้องไม่เป็นผู้ทำงานซึ่งปลัดกระทรวงการคลังได้แจ้งเวียนชื่อไว้ หรือต้องไม่เป็นผู้ที่ กฟผ. ห้ามติดต่อหรือห้ามเข้าเสนอราคา หรือต้องไม่เป็นผู้ที่ได้รับผลของการสั่งให้นิติบุคคลหรือบุคคลอื่นเป็นผู้ทำงานตามคำสั่ง กฟผ.
2. ต้องไม่เป็นผู้มีผลประโยชน์ร่วมกันกับผู้เสนอราคารายอื่น ณ วันประกาศประกวดราคาครั้งนี้เป็นต้นไป หรือต้องไม่เป็นผู้กระทำการอันเป็นการขัดขวางการแข่งขันราคาอย่างเป็นธรรมในการดำเนินการประกวดราคาครั้งนี้
3. ต้องไม่เป็นที่ปรึกษาของ กฟผ. หรือมีส่วนร่วมในบริษัทที่ปรึกษาของ กฟผ. ในงานนี้ หรือต้องไม่มีผู้ปฏิบัติงาน กฟผ. เข้าไปมีส่วนร่วมในกิจการของผู้เสนอราคา ไม่ว่าจะในฐานะผู้ถือหุ้นที่มีสิทธิควบคุมการจัดการ กรรมการ ผู้อำนวยการ ผู้จัดการ พนักงาน ลูกจ้าง ตัวแทน หรือที่ปรึกษา ยกเว้น ในกรณีที่ผู้ปฏิบัติงานได้รับคำสั่งอย่างเป็นทางการจาก กฟผ. ให้ไปปฏิบัติงานหรือเข้าร่วมในกิจการของผู้เสนอราคา
4. ต้องไม่เป็นผู้ได้รับเอกลิขสิทธิ์หรือความคุ้มครอง ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และความคุ้มครองเช่นนั้น
5. ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม (Joint Venture or Consortium) จะต้องดำเนินการทุกขั้นตอนของการประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม ตั้งแต่การเสนอราคาจนถึงสิ้นสุดข้อผูกพันกับ กฟผ.

**การขายเอกสารประกวดราคา**

ผู้สนใจติดต่อซื้อเอกสารประกวดราคา ในราคาชุดละ 15,000.- บาท ในวันทำการระหว่างเวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 31 กรกฎาคม 2568 ถึงวันที่ 21 สิงหาคม 2568 ทั้งนี้ สามารถดูรายละเอียดการซื้อเอกสารประกวดราคาได้ที่เว็บไซต์ <https://www4.egat.co.th/fprocurement/biddingeng> หรือสอบถามข้อมูลเพิ่มเติมได้ทางโทรศัพท์ หมายเลข 0 2436 3342 หรืออีเมล [procurement.tse@egat.co.th](mailto:procurement.tse@egat.co.th)

กรมไฟฟ้าฝ่ายผลิต  
การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

การยื่นซองประกวดราคา

กำหนดยื่นซองข้อเสนอด้านเทคนิคพร้อมซองราคา และเปิดซองข้อเสนอด้านเทคนิค เลื่อนจากวันที่ 24 กันยายน 2568 เป็นวันที่ 3 พฤศจิกายน 2568 เวลา 09:00 น. ถึง 10:00 น. และเปิดซองข้อเสนอด้านเทคนิค เวลา 10:00 น. ณ ห้องประกวดราคา ชั้น 1 อาคาร ท.137 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศแก้ไข ณ วันที่ 21 ตุลาคม 2568

**กมลทิศา อธิลัญญ์**

(นางกรรณิกา ธชาลัญญ์)

หัวหน้ากองจัดซื้อจัดจ้างสายงานระบบส่ง

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง)

ในการจัดซื้อจัดจ้างที่มีช่างงานก่อสร้าง

1. ชื่อโครงการ Bid No. TIEC-L-13  
การจัดซื้อและจ้างก่อสร้างสายส่ง 500 kv ชัยภูมิ 2 - นครราชสีมา 4  
(จาก กิโลเมตรที่ 68 ถึง สฟ. นครราชสีมา 4) และ 230 kv นครราชสีมา 4 - นครราชสีมา 3  
โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือ  
ภาคเหนือตอนล่าง ภาคกลาง และกรุงเทพมหานคร เพื่อเสริมความมั่นคงระบบไฟฟ้า  
/หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย
2. วงเงินงบประมาณที่ได้รับจัดสรร  
โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือ  
ภาคเหนือตอนล่าง ภาคกลาง และกรุงเทพมหานคร เพื่อเสริมความมั่นคงระบบไฟฟ้า  
งบประมาณ 94,040 ล้านบาท
3. วันที่กำหนดราคากลาง 8 ตุลาคม 2568 (วันที่ รวร. อนุมัติ)  
ราคารวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ เป็นเงิน 1,114,600,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ
4. แหล่งที่มาของราคากลาง  
หลักเกณฑ์การกำหนดราคากลางการจัดซื้อและจัดจ้างงานก่อสร้างระบบส่งไฟฟ้าของสายงานพัฒนาระบบส่ง
5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง
  - 5.1 นางกุลวดี สุขแดง นสส-วส., กวสส-ร.
  - 5.2 นางสาวสิรินยา ต้นสัจจา หปส-ร., กวสส-ร.
  - 5.3 นายทรงธรรม ประมวตรระกุล วศ. 8, หปส-ร., กวสส-ร.

หมายเหตุ ค่าใช้จ่ายอื่นๆ ได้แก่ ค่าใช้จ่ายที่ กฟผ. ต้องจ่ายตามวิธีการพิจารณาเปรียบเทียบราคาที่กำหนดไว้  
ในเอกสารประกวดราคา เช่น อกรักษาเข้า เป็นต้น

**DETAILS OF THE MEDIUM COST FOR BID NO. TIEC-L-13**

**SCHEDULE 1: 500 kV CHAIYAPHUM 2 - NAKHON RATCHASIMA 4 (FROM KM.68 TO NAKHON RATCHASIMA 4) (74 km)**

Description	Total (THB)
1A: PRELIMINARY WORK	7,437,170.00
1B: TOWER FOUNDATIONS	163,093,980.00
1C: TOWERS	631,807,565.00
1D: INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	110,169,550.00
1E: CONDUCTOR AND OVERHEAD GROUND WIRE	47,928,452.50
1F: LINE ACCESSORIES	20,409,100.00
1G: GROUNDING MATERIALS	4,430,951.00
1H: OPTICAL FIBER AND LINE ACCESSORIES	15,298,392.00
1N: TEST OF EQUIPMENT	3,526,070.00
1O: SUPPLY OF SERVICE OF VEHICLES	4,940,000.00
<b>TOTAL PRICE FOR SCHEDULE 1 (After 1st adjusted)</b>	<b>1,009,041,230.50</b>

**SCHEDULE 2: 230 kV NAKHON RATCHASIMA 4 - NAKHON RATCHASIMA 3 (2.4 km)**

Description	Total (THB)
2A: PRELIMINARY WORK	352,640.00
2B: TOWER FOUNDATIONS	7,880,400.00
2C: TOWERS	16,318,750.00
2D: INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	4,460,480.00
2E: CONDUCTOR AND OVERHEAD GROUND WIRE	1,617,545.00
2F: LINE ACCESSORIES	1,011,450.00
2G: GROUNDING MATERIALS	106,250.00
2H: OPTICAL FIBER AND LINE ACCESSORIES	825,334.40
<b>TOTAL PRICE FOR SCHEDULE 2 (After 1st adjusted)</b>	<b>32,572,849.40</b>

<b>TOTAL PRICE FOR ALL SCHEDULES (All Factors included)</b>	<b>1,041,614,079.90</b>
Adjusted Price (Import Duty & Tax + VAT)	72,912,985.59
<b>TOTAL PRICE FOR ALL SCHEDULES (All Factors included + Import Duty &amp; Tax + VAT)</b>	<b>1,114,527,065.49</b>

<b>MEDIUM COST OF BID NO. TIEC-L-13</b>	<b>1,114,600,000.00</b>
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**INVITATION TO BID NO. TIEC-L-13**  
**TOTAL PRICE FOR SCHEDULE NO. 1**  
**500 KV CHAIYAPHUM 2 - NAKHON RATCHASIMA 4 (FROM KM.68 TO NAKHON RATCHASIMA 4)**  
**Line Length 74 KM**

**SUPPLY AND CONSTRUCTION OF TRANSMISSION LINE 500 KV CHAIYAPHUM 2 - NAKHON RATCHASIMA 4 (FROM KM.68 TO NAKHON RATCHASIMA 4)**  
**TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY**

Description	Currency	Supply of Equipment		Foreign Currency	Local Currency	Local Transportation	Local Transportation, Construction and Installation	Purchase Price Offered for Dismantled Equipment
		Foreign Supply	Local Supply					
		CIF Thai Port	Ex-works Price (excluding VAT)					
		Amount	Amount					
1A : PRELIMINARY WORK							7,437,170.00	
1B : TOWER FOUNDATIONS			12,309,600.00				150,784,380.00	
1C : TOWERS			547,372,800.00				84,434,765.00	
1D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	THB	66,429,550.00	43,740,000.00					
1E : CONDUCTOR AND OVERHEAD GROUND WIRE			2,262,000.00				45,666,452.50	

  
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Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Local Currency	Local Transportation	Local Transportation, Construction and Installation	Purchase Price Offered for Dismantled Equipment
		Foreign Supply	Local Supply					
		CIF Thai Port	Ex-works Price (excluding VAT)					
		Amount	Amount					
1F : LINE ACCESSORIES			20,228,600.00				180,500.00	
1G : GROUNDING MATERIALS			3,763,880.00				667,071.00	
1H : OPTICAL FIBER AND LINE ACCESSORIES	THB	8,057,120.00	3,470,380.00				3,770,892.00	
1N : TEST OF EQUIPMENT	THB			3,526,070.00				
1O : SUPPLY OF SERVICE OF VEHICLES							4,940,000.00	
<b>TOTAL PRICE</b>	<b>THB</b>	<b>74,486,670.00</b>	<b>Baht</b>	<b>3,526,070.00</b>	<b>Baht</b>	<b>Baht</b>	<b>Baht</b>	<b>Baht</b>
			<b>633,147,260.00</b>				<b>297,881,230.50</b>	
							<b>Baht</b>	

  
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**INVITATION TO BID NO. TIEC-L-13**

**SCHEDULE NO. 1**

**1A : PRELIMINARY WORK**

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
1A1	Check survey and staking of tower location (approximately 74 km in transmission line distance)	lump sum	each	2,319,900.00	2,319,900.00
1A2	Clearing right-of-way of 30 meters in width on each side of the center line of the transmission line (approximately 74 km in transmission line distance)	lump sum	each	2,109,000.00	2,109,000.00
1A3	Sub-soil tests and preliminary measurement of ground resistance and earth resistivity at the depth and locations as directed by EGAT (to be performed at the depth and locations as directed by EGAT)				
1A3.1	Light ram sound tests with hand auger and preliminary measurement of ground resistance and earth resistivity from ground surface to 7 meters in depth	122	bore	6,555.00	799,710.00
1A3.2	Standard penetration tests and preliminary measurement of ground resistance and earth resistivity at the depth and locations as directed by EGAT (Approximately 70 bores)	700	m	2,660.00	1,862,000.00
1A4	Boundary post along boundary line of right-of-way	384	post	902.50	346,560.00

  
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Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation ( excluding VAT ) Baht	
				Unit Price	Amount
<b>Total Price for 1A</b>				<b>Baht</b>	<b>7,437,170.00</b>

  
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**1B : TOWER FOUNDATIONS**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B1	Foundation for tower type DQV3									
1B1.1	Stub angle (500-4x1272 DQV3) and pad foundation type CV	40	tower		XXXXX	XXXXX	48,200.00	1,928,000.00	403,750.00	16,150,000.00
1B1.2	Stub angle (500-4x1272 DQV3) and pad foundation type CIV	35	tower		XXXXX	XXXXX	48,200.00	1,687,000.00	516,800.00	18,088,000.00
1B1.3	Stub angle (500-4x1272 DQV3) and pad foundation type CIII	57	tower		XXXXX	XXXXX	48,200.00	2,747,400.00	737,200.00	42,020,400.00
1B1.4	Stub angle (500-4x1272 DQV3) and pad foundation type CS	5	tower		XXXXX	XXXXX	48,200.00	241,000.00	839,800.00	4,199,000.00
1B1.5	Stub angle (500-4x1272 DQV3) and pile foundation type 6-pile cluster (exclusive of cost of driven piles and their installation)	4	tower		XXXXX	XXXXX	48,200.00	192,800.00	261,250.00	1,045,000.00
1B1.6	Stub angle (500-4x1272 DQV3) and pile foundation type 9-pile cluster (exclusive of cost of driven piles and their installation)	4	tower		XXXXX	XXXXX	48,200.00	192,800.00	376,200.00	1,504,800.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B1.7	Stub angle (500-4x1272 DQV3) and pile foundation type 12-pile cluster (exclusive of cost of driven piles and their installation)	5	tower		XXXXX	XXXXX	48,200.00	241,000.00	491,150.00	2,455,750.00
1B1.8	Stub angle (500-4x1272 DQV3) and pile foundation type 16-pile cluster (exclusive of cost of driven piles and their installation)	5	tower		XXXXX	XXXXX	48,200.00	241,000.00	645,050.00	3,225,250.00
1B2	Foundation for tower type DQV9									
1B2.1	Stub angle (500-4x1272 DQV9) and pad foundation type CV	1	tower		XXXXX	XXXXX	63,600.00	63,600.00	403,750.00	403,750.00
1B2.2	Stub angle (500-4x1272 DQV9) and pad foundation type CIV	1	tower		XXXXX	XXXXX	63,600.00	63,600.00	533,900.00	533,900.00
1B2.3	Stub angle (500-4x1272 DQV9) and pad foundation type CIII	1	tower		XXXXX	XXXXX	63,600.00	63,600.00	801,800.00	801,800.00
1B2.4	Stub angle (500-4x1272 DQV9) and pad foundation type CS	1	tower		XXXXX	XXXXX	63,600.00	63,600.00	859,750.00	859,750.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation ( excluding VAT ) Baht	
					Foreign Supply		Local Supply		Ex-works Price ( excluding VAT ) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B3	Foundation for tower type DQT20									
1B3.1	Stub angle (500-4x1272 DQT20) and pad foundation type CV	1	tower		XXXXX	XXXXX	82,400.00	82,400.00	599,450.00	599,450.00
1B3.2	Stub angle (500-4x1272 DQT20) and pad foundation type CIV	1	tower		XXXXX	XXXXX	82,400.00	82,400.00	773,300.00	773,300.00
1B3.3	Stub angle (500-4x1272 DQT20) and pad foundation type CIII	1	tower		XXXXX	XXXXX	82,400.00	82,400.00	1,244,500.00	1,244,500.00
1B3.4	Stub angle (500-4x1272 DQT20) and pad foundation type CS	1	tower		XXXXX	XXXXX	82,400.00	82,400.00	1,418,350.00	1,418,350.00
1B4	Foundation for tower type DQT40									
1B4.1	Stub angle (500-4x1272 DQT40) and pad foundation type CV	4	tower		XXXXX	XXXXX	128,800.00	515,200.00	739,100.00	2,956,400.00
1B4.2	Stub angle (500-4x1272 DQT40) and pad foundation type CIV	3	tower		XXXXX	XXXXX	128,800.00	386,400.00	907,250.00	2,721,750.00
1B4.3	Stub angle (500-4x1272 DQT40) and pad foundation type CIII	6	tower		XXXXX	XXXXX	128,800.00	772,800.00	1,473,450.00	8,840,700.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B4.4	Stub angle (500-4x1272 DQT40) and pile foundation type 12-pile cluster (exclusive of cost of driven piles and their installation)	1	tower		XXXXX	XXXXX	128,800.00	128,800.00	491,150.00	491,150.00
1B4.5	Stub angle (500-4x1272 DQT40) and pile foundation type 16-pile cluster (exclusive of cost of driven piles and their installation)	1	tower		XXXXX	XXXXX	128,800.00	128,800.00	645,050.00	645,050.00
1B5	Foundation for tower type DQT60									
1B5.1	Stub angle (500-4x1272 DQT60) and pad foundation type CV	2	tower		XXXXX	XXXXX	166,200.00	332,400.00	854,050.00	1,708,100.00
1B5.2	Stub angle (500-4x1272 DQT60) and pad foundation type CIV	2	tower		XXXXX	XXXXX	166,200.00	332,400.00	1,055,450.00	2,110,900.00
1B5.3	Stub angle (500-4x1272 DQT60) and pad foundation type CIII	2	tower		XXXXX	XXXXX	166,200.00	332,400.00	1,763,200.00	3,526,400.00
1B5.4	Stub angle (500-4x1272 DQT60) and pad foundation type CS	2	tower		XXXXX	XXXXX	166,200.00	332,400.00	2,079,550.00	4,159,100.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B5.5	Stub angle (500-4x1272 DQT60) and pile foundation type 16-pile cluster (exclusive of cost of driven piles and their installation)	1	tower		XXXXX	XXXXX	166,200.00	166,200.00	645,050.00	645,050.00
1B6	Foundation for tower type DQT90									
1B6.1	Stub angle (500-4x1272 DQT90) and pad foundation type CV	1	tower		XXXXX	XXXXX	332,400.00	332,400.00	1,227,400.00	1,227,400.00
1B6.2	Stub angle (500-4x1272 DQT90) and pad foundation type CS	1	tower		XXXXX	XXXXX	332,400.00	332,400.00	3,086,550.00	3,086,550.00
1B7	Foundation for tower type DQTR									
1B7.1	Stub angle (500-4x1272 DQTR) and pad foundation type CV	1	tower		XXXXX	XXXXX	54,000.00	54,000.00	430,350.00	430,350.00
1B7.2	Stub angle (500-4x1272 DQTR) and pad foundation type CIV	1	tower		XXXXX	XXXXX	54,000.00	54,000.00	509,200.00	509,200.00
1B7.3	Stub angle (500-4x1272 DQTR) and pad foundation type CIII	1	tower		XXXXX	XXXXX	54,000.00	54,000.00	706,800.00	706,800.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B8	Concrete piles									
1B8.1	Furnishing precast prestressed concrete piles min 160 cm. effective perimeter	9760	m		XXXXX	XXXXX	XXXXX	XXXXX	1,710.00	16,689,600.00
1B8.2	Installation of precast prestressed concrete pile min 160 cm effective perimeter	8784	m		XXXXX	XXXXX	XXXXX	XXXXX	570.00	5,006,880.00
<b>Total Price for 1B</b>							<b>Baht 12,309,600.00</b>		<b>Baht 150,784,380.00</b>	

  
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1C : TOWERS

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1C1	Tower Type DQV3									
1C1.1	Basic body (500-4x1272 DQV3)	155	body		XXXXX XXXXX	1,922,700.00	298,018,500.00	296,115.00	45,897,825.00	
1C1.2	Body extension 7.5 m (500-4x1272 DQV3)	47	body		XXXXX XXXXX	514,200.00	24,167,400.00	79,230.00	3,723,810.00	
1C1.3	Leg extension 1.5 m (500-4x1272 DQV3)	4	leg		XXXXX XXXXX	25,600.00	102,400.00	3,990.00	15,960.00	
1C1.4	Leg extension 3.0 m (500-4x1272 DQV3)	4	leg		XXXXX XXXXX	34,000.00	136,000.00	5,225.00	20,900.00	
1C1.5	Leg extension 4.5 m (500-4x1272 DQV3)	12	leg		XXXXX XXXXX	44,100.00	529,200.00	6,840.00	82,080.00	
1C1.6	Leg extension 6.0 m (500-4x1272 DQV3)	56	leg		XXXXX XXXXX	56,300.00	3,152,800.00	8,740.00	489,440.00	
1C1.7	Leg extension 7.5 m (500-4x1272 DQV3)	60	leg		XXXXX XXXXX	70,800.00	4,248,000.00	10,925.00	655,500.00	
1C1.8	Leg extension 9.0 m (500-4x1272 DQV3)	156	leg		XXXXX XXXXX	84,100.00	13,119,600.00	13,015.00	2,030,340.00	
1C1.9	Leg extension 10.5 m (500-4x1272 DQV3)	328	leg		XXXXX XXXXX	96,600.00	31,684,800.00	14,915.00	4,892,120.00	
1C2	Tower Type DQV9									
1C2.1	Basic body with 0°- 3° arm (500-4x1272 DQV9(3))	3	body		XXXXX XXXXX	2,347,600.00	7,042,800.00	361,475.00	1,084,425.00	

  
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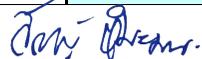
Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1C2.2	Basic body with 3°- 9° arm (500-4x1272 DQV9(9))	1	body		XXXXX XXXXX	2,385,600.00	2,385,600.00	367,365.00	367,365.00	
1C2.3	Body extension 7.5 m (500-4x1272 DQV9)	1	body		XXXXX XXXXX	601,800.00	601,800.00	92,720.00	92,720.00	
1C2.4	Body extension 15.0 m (500-4x1272 DQV9)	3	body		XXXXX XXXXX	1,038,800.00	3,116,400.00	159,980.00	479,940.00	
1C2.5	Leg extension 4.5 m (500-4x1272 DQV9)	4	leg		XXXXX XXXXX	54,000.00	216,000.00	8,360.00	33,440.00	
1C2.6	Leg extension 7.5 m (500-4x1272 DQV9)	4	leg		XXXXX XXXXX	86,500.00	346,000.00	13,395.00	53,580.00	
1C2.7	Leg extension 9.0 m (500-4x1272 DQV9)	4	leg		XXXXX XXXXX	103,000.00	412,000.00	15,865.00	63,460.00	
1C2.8	Leg extension 10.5 m (500-4x1272 DQV9)	4	leg		XXXXX XXXXX	117,200.00	468,800.00	18,050.00	72,200.00	
1C3	Tower Type DQT20									
1C3.1	Basic body (500-4x1272 DQT20)	4	body		XXXXX XXXXX	3,366,700.00	13,466,800.00	518,415.00	2,073,660.00	
1C3.2	Body extension 7.5 m. (500-4x1272 DQT20)	1	body		XXXXX XXXXX	826,000.00	826,000.00	127,205.00	127,205.00	
1C3.3	Leg extension 1.5 m (500-4x1272 DQT20)	4	leg		XXXXX XXXXX	44,400.00	177,600.00	6,840.00	27,360.00	
1C3.4	Leg extension 6.0 m (500-4x1272 DQT20)	4	leg		XXXXX XXXXX	88,500.00	354,000.00	13,680.00	54,720.00	
1C3.5	Leg extension 7.5 m (500-4x1272 DQT20)	4	leg		XXXXX XXXXX	109,100.00	436,400.00	16,815.00	67,260.00	

  
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					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1C3.6	Leg extension 10.5 m (500-4x1272 DQT20)	4	leg		XXXXX	XXXXX	155,800.00	623,200.00	24,035.00	96,140.00
1C4	Tower Type DQT40									
1C4.1	Basic body (500-4x1272 DQT40)	15	body		XXXXX	XXXXX	3,727,100.00	55,906,500.00	573,895.00	8,608,425.00
1C4.2	Body extension 7.5 m. (500-4x1272 DQT40)	3	body		XXXXX	XXXXX	897,300.00	2,691,900.00	138,225.00	414,675.00
1C4.3	Leg extension 3.0 m (500-4x1272 DQT40)	16	leg		XXXXX	XXXXX	72,000.00	1,152,000.00	11,115.00	177,840.00
1C4.4	Leg extension 4.5 m (500-4x1272 DQT40)	8	leg		XXXXX	XXXXX	85,900.00	687,200.00	13,300.00	106,400.00
1C4.5	Leg extension 6.0 m (500-4x1272 DQT40)	4	leg		XXXXX	XXXXX	105,000.00	420,000.00	16,245.00	64,980.00
1C4.6	Leg extension 7.5 m (500-4x1272 DQT40)	16	leg		XXXXX	XXXXX	127,600.00	2,041,600.00	19,665.00	314,640.00
1C4.7	Leg extension 9.0 m (500-4x1272 DQT40)	4	leg		XXXXX	XXXXX	157,200.00	628,800.00	24,225.00	96,900.00
1C4.8	Leg extension 10.5 m (500-4x1272 DQT40)	12	leg		XXXXX	XXXXX	185,900.00	2,230,800.00	28,690.00	344,280.00
1C5	Tower Type DQT60									
1C5.1	Basic body (500-4x1272 DQT60)	9	body		XXXXX	XXXXX	4,577,700.00	41,199,300.00	704,805.00	6,343,245.00
1C5.2	Body extension 7.5 m. (500-4x1272 DQT60)	3	body		XXXXX	XXXXX	1,043,500.00	3,130,500.00	160,740.00	482,220.00

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					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1C5.3	Leg extension 3.0 m (500-4x1272 DQT60)	12	leg		XXXXX	XXXXX	85,600.00	1,027,200.00	13,205.00	158,460.00
1C5.4	Leg extension 4.5 m (500-4x1272 DQT60)	4	leg		XXXXX	XXXXX	110,500.00	442,000.00	17,100.00	68,400.00
1C5.5	Leg extension 6.0 m (500-4x1272 DQT60)	8	leg		XXXXX	XXXXX	127,400.00	1,019,200.00	19,665.00	157,320.00
1C5.6	Leg extension 7.5 m (500-4x1272 DQT60)	4	leg		XXXXX	XXXXX	157,800.00	631,200.00	24,320.00	97,280.00
1C5.7	Leg extension 9.0 m (500-4x1272 DQT60)	4	leg		XXXXX	XXXXX	189,700.00	758,800.00	29,260.00	117,040.00
1C5.8	Leg extension 10.5 m (500-4x1272 DQT60)	4	leg		XXXXX	XXXXX	217,800.00	871,200.00	33,535.00	134,140.00
1C6	Tower Type DQT90									
1C6.1	Basic body (500-4x1272 DQT90) - Terminal Tower	1	body		XXXXX	XXXXX	7,054,000.00	7,054,000.00	1,086,135.00	1,086,135.00
1C6.2	Basic body (500-4x1272 DQT90) - Tension Tower	1	body		XXXXX	XXXXX	6,336,300.00	6,336,300.00	975,650.00	975,650.00
1C6.3	Body extension 7.5 m. (500-4x1272 DQT90)	1	body		XXXXX	XXXXX	1,416,100.00	1,416,100.00	218,120.00	218,120.00
1C6.4	Leg extension 3.0 m (500-4x1272 DQT90)	4	leg		XXXXX	XXXXX	118,400.00	473,600.00	18,240.00	72,960.00
1C6.5	Leg extension 4.5 m (500-4x1272 DQT90)	4	leg		XXXXX	XXXXX	151,100.00	604,400.00	23,275.00	93,100.00

  
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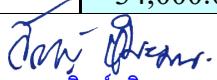
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					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1C7	Tower Type DQTR									
1C7.1	Basic body (500-4x1272 DQTR)	3	body		XXXXX XXXXX	2,889,300.00	8,667,900.00	444,885.00	1,334,655.00	
1C7.2	Body extension 7.5 m (500-4x1272 DQTR)	1	body		XXXXX XXXXX	906,600.00	906,600.00	139,650.00	139,650.00	
1C7.3	Leg extension 6.0 m (500-4x1272 DQTR)	4	leg		XXXXX XXXXX	85,600.00	342,400.00	13,205.00	52,820.00	
1C7.4	Leg extension 9.0 m (500-4x1272 DQTR)	4	leg		XXXXX XXXXX	130,000.00	520,000.00	20,045.00	80,180.00	
1C7.5	Leg extension 10.5 m (500-4x1272 DQTR)	4	leg		XXXXX XXXXX	145,300.00	581,200.00	22,420.00	89,680.00	
1C8	Tower sign									
1C8.1	Aerial patrol signs	75	piece		XXXXX XXXXX	included in installation work	included in installation work	475.00	35,625.00	
1C8.2	Phasing signs (3 pieces per set)	34	set		XXXXX XXXXX	included in installation work	included in installation work	1,425.00	48,450.00	
1C8.3	Circuit name signs	2	piece		XXXXX XXXXX	included in installation work	included in installation work	522.50	1,045.00	
1C8.4	Warning signs	20	piece		XXXXX XXXXX	included in installation work	included in installation work	475.00	9,500.00	
1C8.5	Danger signs	20	piece		XXXXX XXXXX	included in installation work	included in installation work	475.00	9,500.00	
<b>Total Price for 1C</b>							<b>Baht 547,372,800.00</b>		<b>Baht 84,434,765.00</b>	



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**1D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht			
					CIF Thai Port							
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
1D1	45°/45° V-string suspension Assembly 3D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	948	set				26,800.00	25,406,400.00	included in stringing work	included in stringing work		
1D2	35°/55° V-string suspension Assembly 5D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	3	set				35,600.00	106,800.00	included in stringing work	included in stringing work		
1D3	45°/45° V-string suspension Assembly 8D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	18	set				35,600.00	640,800.00	included in stringing work	included in stringing work		
1D4	35°/55° V-string suspension Assembly 19D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	3	set				38,000.00	114,000.00	included in stringing work	included in stringing work		
1D5	Deadend Assembly 13D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	120	set				34,000.00	4,080,000.00	included in stringing work	included in stringing work		
1D6	Deadend Assembly 13AD for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	12	set				34,000.00	408,000.00	included in stringing work	included in stringing work		

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht			
					CIF Thai Port							
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
1D7	Deadend Assembly 14D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	228	set					34,000.00	7,752,000.00	included in stringing work	included in stringing work	
1D8	Deadend Assembly 15D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	12	set					35,600.00	427,200.00	included in stringing work	included in stringing work	
1D9	Jumper support Assembly 17D for quad-bundled 1272 MCM ACSR/GA conductor (Excluding insulator)	219	set					19,600.00	4,292,400.00	included in stringing work	included in stringing work	
1D10	Shield wire suspension (Insulated) Assembly 1 for 3/8" extra high strength galvanized steel wire (Excluding vibration damper and insulator)	130	set					2,000.00	260,000.00	included in stringing work	included in stringing work	
1D11	Shield wire suspension (Grounded) Assembly 2 for 3/8" extra high strength galvanized steel wire (Excluding vibration damper and insulator)	28	set					1,500.00	42,000.00	included in stringing work	included in stringing work	
1D12	Shield wire deadend (Insulated) Assembly 11 for 3/8" extra high strength galvanized steel wire (Excluding vibration damper and insulator)	54	set					3,600.00	194,400.00	included in stringing work	included in stringing work	

  
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					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht		
					CIF Thai Port						
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
1D13	Shield wire deadend (Grounded) Assembly 12 for 3/8" extra high strength galvanized steel wire (Excluding vibration damper and insulator)	16	set					1,000.00	16,000.00	included in stringing work	included in stringing work
1D14	Porcelain or glass insulator ANSI CLASS 52-8 (36,000 lbs) with corrosion proof type pin. In case of porcelain insulator the quantity of each color shall be : a. Brown glaze 56,118 discs b. Light grey glaze 4,470 discs	60,588	disc	THB	790.00	47,864,520.00				included in stringing work	included in stringing work
1D15	Porcelain or glass insulator ANSI CLASS 52-11 (50,000 lbs) with corrosion proof type pin. In case of porcelain insulator the quantity of each color shall be : a. Brown glaze 18,000 discs b. Light grey glaze 1,440 discs	19,440	disc	THB	950.00	18,468,000.00				included in stringing work	included in stringing work
1D16	Porcelain or glass insulator ANSI CLASS 52-8 (36,000 lbs) with corrosion proof type pin (to be used with item 1D12, in case of porcelain insulator the color shall be Brown glaze)	57	disc	THB	790.00	45,030.00				included in stringing work	included in stringing work

  
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					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1D17	Insulator strain type ANSI CLASS 54-2 (to be used with item 1D10)	130	disc	THB	400.00	52,000.00			included in stringing work	included in stringing work
<b>Total Price for 1D</b>				THB	<b>66,429,550.00</b>		Baht	<b>43,740,000.00</b>		Baht

  
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**1E : CONDUCTOR AND OVERHEAD GROUND WIRE**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation ( excluding VAT ) Baht			
					Foreign Supply		Local Supply		Ex-works Price ( excluding VAT ) Baht			
					CIF Thai Port							
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
1E1	1272 MCM ACSR/GA Conductor											
1E1.1	1272 MCM ACSR/GA Conductor, furnishing conductor for item 1E1.2 and 1E1.3 (to be supplied by EGAT, see Article F-3), approximately 74 kilometers in transmission line distance		km		XXXXX	XXXXX	XXXXX	XXXXX	included in stringing work	included in stringing work		
1E1.2	Stringing of conductor by controlled tension method, double circuit, 3 phase, quad-bundled conductor per phase, measured based on horizontal distance of line route from tower No.177 type DQT60 at KM.68 (Including connecting loop of Tower No.177 at KM.68 to be 500 kV Chaiyaphum 2 - Nakhon Ratchasima 4 - Transmission Line) to deadend tower type DQT60 at Nakhon Ratchasima 4 Substation	73.9	km		XXXXX	XXXXX	XXXXX	XXXXX	551,000.00	40,718,900.00		

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1E1.3	Installation of conductor, double circuit, 3 phase, quad-bundled conductor per phase, between deadend tower type DQT60 and take-off structure at Nakhon Ratchasima 4 Substation as per Drawing No. T04-002, approx. 0.1 km in transmission line distance	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	275,500.00	275,500.00
1E2	Handling and transportation of empty returnable metal reel from the site to Bangkok and/or its vicinity, at the point designated by EGAT (See Article F-3 and F-4)	752	reel		XXXXX	XXXXX	XXXXX	XXXXX	3,800.00	2,857,600.00
1E3	3/8" nominal diameter, extra high strength galvanized steel shield wire, class A coating									
1E3.1	3/8" Extra high strength galvanized steel wire (Furnishing for item 1E3.2 and 1E3.3) based on linear length (Linear length = No. of shield wire x horizontal distance of line route + 1.5%)	75.4	km				30,000.00	2,262,000.00	included in stringing work	included in stringing work

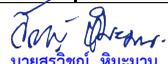
  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1E3.2	Stringing by controlled tension method, one shield wire, measured based on horizontal distance of line route from tower No.177 type DQT60 at KM.68 to deadend tower type DQT60 at Nakhon Ratchasima 4 Substation	73.9	km		XXXXX	XXXXX	XXXXX	XXXXX	24,225.00	1,790,227.50
1E3.3	Installation of three shield wires between deadend tower type DQT60 and take-off structure at Nakhon Ratchasima 4 Substation as per Drawing No. T04-002, approx. 0.1 km in transmission line distance	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	24,225.00	24,225.00
<b>Total Price for 1E</b>							<b>Baht</b>	<b>2,262,000.00</b>	<b>Baht</b>	<b>45,666,452.50</b>

  
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**1F : LINE ACCESSORIES**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation ( excluding VAT ) Baht					
					Foreign Supply		Local Supply		Ex-works Price ( excluding VAT ) Baht		Unit Price		Amount	
					CIF Thai Port									
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount				
1F1	Full tension splices for 1272 MCM ACSR/GA conductor	752	set		XXXXX	XXXXX	1,400.00	1,052,800.00	Included in stringing work	Included in stringing work				
1F2	Full tension splices for 3/8" extra high strength, galvanized steel shield wire	21	set		XXXXX	XXXXX	300.00	6,300.00	Included in stringing work	Included in stringing work				
1F3	Spacer damper for four-bundled 1272 MCM ACSR/GA conductor (for double circuit, approx. 74 km in transmission line distance)	lump sum	each		XXXXX	XXXXX	17,760,000.00	17,760,000.00	Included in stringing work	Included in stringing work				
1F4	Rigid spacer for two-bundled 1272 MCM ACSR/GA conductor	372	set		XXXXX	XXXXX	600.00	223,200.00	Included in stringing work	Included in stringing work				
1F5	Rigid spacer for four-bundled 1272 MCM ACSR/GA conductor	558	set		XXXXX	XXXXX	1,900.00	1,060,200.00	Included in stringing work	Included in stringing work				
1F6	Vibration damper for 3/8" extra high strength galvanized steel shield wire	194	set		XXXXX	XXXXX	650.00	126,100.00	Included in stringing work	Included in stringing work				
1F7	Field test of spacer damper for four-bundled as per Article F-9 b. of the Specifications No. L-500 kV	1	test		XXXXX	XXXXX	XXXXX	XXXXX	180,500.00	180,500.00				

  
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					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>Total Price for 1F</b>							<b>Baht 20,228,600.00</b>		<b>Baht 180,500.00</b>	

  
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**1G : GROUNDING MATERIALS**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1G1	Tower Grounding									
1G1.1	No.8 AWG dead soft galvanized steel wire	3072	m		XXXXX	XXXXX	50.00	153,600.00	19.00	58,368.00
1G1.2	No.2 AWG solid copper-clad steel wire	17856	m		XXXXX	XXXXX	140.00	2,499,840.00	19.00	339,264.00
1G1.3	Exothermic connector type "CS" for cable to steel surface	768	piece		XXXXX	XXXXX	140.00	107,520.00	66.50	51,072.00
1G1.4	Exothermic connector type "CR1" for parallel cable to ground rod	848	piece		XXXXX	XXXXX	270.00	228,960.00	66.50	56,392.00
1G1.5	Exothermic connector type "CR2" for perpendicular cable to ground rod	784	piece		XXXXX	XXXXX	230.00	180,320.00	66.50	52,136.00
1G1.6	Exothermic connector type "CC" for cable to cable	80	piece		XXXXX	XXXXX	160.00	12,800.00	66.50	5,320.00
1G1.7	1.6 cm. nominal diameter x 3.0 m. (5/8" diameter x 10') copper-covered steel standard ground rod	848	piece		XXXXX	XXXXX	650.00	551,200.00	114.00	96,672.00
1G1.8	1.6 cm. nominal diameter x 3.0 m. (5/8" diameter x 10') copper-covered steel sectional ground rod with coupling	20	set		XXXXX	XXXXX	870.00	17,400.00	133.00	2,660.00

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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht			
					CIF Thai Port							
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
1G2	Fence/metal object grounding (to be performed at location directed by EGAT)											
1G2.1	1.6 cm. nominal diameter x 3.0 m. (5/8" diameter x 10') galvanized steel standard ground rod	6	piece		XXXXX	XXXXX	530.00	3,180.00	123.50	741.00		
1G2.2	Galvanized double saddle steel ground rod clamp	6	set		XXXXX	XXXXX	360.00	2,160.00	57.00	342.00		
1G2.3	8 mm.(5/16") 7-strand galvanized steel ground wire	30	m		XXXXX	XXXXX	60.00	1,800.00	38.00	1,140.00		
1G2.4	Galvanized steel crimpet	10	set		XXXXX	XXXXX	30.00	300.00	28.50	285.00		
1G2.5	19 mm. diameter bronze split bolt	6	set		XXXXX	XXXXX	500.00	3,000.00	66.50	399.00		
1G2.6	9.5 mm. (3/8") galvanized steel staples	60	piece		XXXXX	XXXXX	30.00	1,800.00	38.00	2,280.00		
<b>Total Price for 1G</b>								<b>Baht 3,763,880.00</b>	<b>Baht 667,071.00</b>			

  
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**1H : OPTICAL FIBER AND LINE ACCESSORIES**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1H1	Composite overhead ground wire with 36 core optical fibers (OPGW) (referred section F-4.3)									
1H1.1	Furnishing OPGW ( 13.5 mm diameter )	lump sum	each	THB	8,057,120.00	8,057,120.00	3,470,380.00	3,470,380.00		
1H1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from KM.68 to Nakhon Ratchasima 4 (NR4) substation (Direction from Chaiyaphum 2 to Nakhon Ratchasima 4)	74	km						50,958.00	3,770,892.00
1H2	36-core optical fiber cable, with black and color strip(s) outer sheath, to be used for connecting joint boxes on the tower	lump sum	each							
1H3	Warning signs requires as shown on Drawing No.TP150.1	lump sum	each							
1H4	Joint box for optical fiber cable									
1H4.1	2-way joint box with accessories for two OPGW cables (including splicing work)	lump sum	each							
1H4.2	2-way joint box with insulator and accessories for two OPGW cables (including splicing work)	lump sum	each							

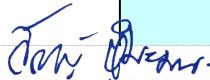
  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht		Unit Price	
					CIF Thai Port		Unit Price					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
1H4.3	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable on the tower located between KM.68 and NR4 substation (including splicing work)	lump sum	each									
1H4.4	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure (NR4 substation) (including splicing work)	1	set									
1H4.5	2-way joint box with accessories for OPGW cable and 36 core non-metallic optical fiber cable on the tower located about 2 kilometers apart from NR4 substation (including splicing work)	1	set									
1H5	Hardware assembly for OPGW											
1H5.1	OPGW suspension (Insulated) assembly 21 with armor rods (excluding insulator and vibration damper)	lump sum	each									
1H5.2	OPGW suspension (Grounded) assembly 22 with armor rods (excluding vibration damper)	lump sum	each									
1H5.3	OPGW tension (Insulated) assembly 23 with armor rods and arcing horns (excluding insulator and vibration damper)	lump sum	each									
1H5.4	OPGW tension (Grounded) assembly 24 with armor rods (excluding vibration damper)	lump sum	each									

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		( excluding VAT )	
					CIF Thai Port		Ex-works Price ( excluding VAT )		Baht	
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1H5.5	OPGW tension assembly with accessories and insulator at take-off structure at Nakhon Ratchasima 4 substation (excluding insulator and vibration damper)	1	set							
1H6	Line accessories									
1H6.1	Vibration damper assembly for OPGW with accessories	lump sum	each							
1H6.2	Parallel groove clamps	lump sum	each							
1H6.3	Grounding clamps	lump sum	each							
1H6.4	1-wire cleat without insulator and accessories for OPGW down-lead to joint box	lump sum	each							
1H6.5	2-wire cleats without insulator and accessories for OPGW down-lead to joint box	lump sum	each							
1H6.6	6-wire cleats without insulator and accessories for OPGW down-lead to joint box	lump sum	each							
1H6.7	Jumper cleat without insulator and accessories for OPGW on tension-type tower	lump sum	each							
1H6.8	1-wire cleat with insulator and accessories for OPGW down-lead to joint box	lump sum	each							

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		( excluding VAT )	
					CIF Thai Port		Ex-works Price ( excluding VAT )		Baht	
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1H6.9	2-wire cleats with insulator and accessories for OPGW down-lead to joint box	lump sum	each							
1H6.10	6-wire cleats with insulator and accessories for OPGW down-lead to joint box	lump sum	each							
1H6.11	Jumper cleat with insulator and accessories for OPGW on tension-type tower	lump sum	each							
1H6.12	1-wire cleat with insulator for OPGW down-lead to joint box (Take-off structure)	25	set							
1H6.13	6-wire cleats with insulator for OPGW down-lead to joint box (Take-off strucutre)	4	set							
1H6.14	Porcelain or glass insulator ANSI CLASS 52-8 (36,000 lbs) with corrosion proof type pin	lump sum	each							
1H6.15	Insulator strain type ANSI CLASS 54-2	lump sum	each							
1H6.16	3/8" High strength galvanized steel wire3/8" high strength galvanized steel ground wire for grounding OPGW to towers	lump sum	each							
1H7	Field testing for optical fiber	1	test		XXXXXX	XXXXXX	XXXXXX	XXXXXX		

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>Total Price for 1H</b>				<b>THB</b>	<b>8,057,120.00 Baht</b>		<b>3,470,380.00</b>		<b>Baht 3,770,892.00</b>	

  
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**1N : TEST OF EQUIPMENT**

Item No.	Description	Estimated Qty.	Unit	Currency	Foreign Currency		Local Currency ( excluding VAT ) Baht	
					Unit Price	Amount	Unit Price	Amount
					1N1	Coronas and RIV tests of complete conductor, insulator and hardware assemblies in accordance with Article D-7 a. (1) of the Specification No. L-500 kV		
1N1.1	For 45°/45° V-string suspension Assembly 3D	1	test	THB	227,510.00	227,510.00		
1N1.2	For 35°/55° V-string suspension Assembly 5D	1	test	THB	227,510.00	227,510.00		
1N1.3	For 45°/45° V-string suspension Assembly 8D	1	test	THB	227,510.00	227,510.00		
1N1.4	For 35°/55° V-string suspension Assembly 19D	1	test	THB	227,510.00	227,510.00		
1N1.5	For Conductor Deadend Assembly 13D	1	test	THB	227,510.00	227,510.00		
1N1.6	For Conductor Deadend Assembly 13AD	1	test	THB	227,510.00	227,510.00		
1N1.7	For Conductor Deadend Assembly 14D	1	test	THB	227,510.00	227,510.00		
1N1.8	For Conductor Deadend Assembly (slack span side) 15D	1	test	THB	227,510.00	227,510.00		
1N1.9	For Jumper support Assembly 17D	1	test	THB	227,510.00	227,510.00		

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Foreign Currency		Local Currency ( excluding VAT ) Baht	
					Unit Price	Amount	Unit Price	Amount
1N2	Power arc test of insulator strings in accordance with Article D-7 c. (4) of the Specification No. L-500 kV							
1N2.1	For insulator ANSI class 52-8 (36,000 lbs)	1	test	THB	473,920.00	473,920.00		
1N2.2	For insulator ANSI class 52-11 (50,000 lbs)	1	test	THB	473,920.00	473,920.00		
1N3	Thermal-mechanical performance test in accordance with Article D-7 c. (5) of the Specification No. L-500 kV							
1N3.1	For insulator ANSI class 52-8 (36,000 lbs)	1	test	THB	123,210.00	123,210.00		
1N3.1	For insulator ANSI class 52-11 (50,000 lbs)	1	test	THB	123,210.00	123,210.00		
1N4	Steep wave front impulse test in accordance with Article D-7 c. (6) of the Specification No. L-500 kV							
1N4.1	For insulator ANSI class 52-8 (36,000 lbs)	1	test	THB	142,110.00	142,110.00		
1N4.2	For insulator ANSI class 52-11 (50,000 lbs)	1	test	THB	142,110.00	142,110.00		
<b>Total Price for 1N</b>						<b>3,526,070.00</b>	<b>Baht</b>	

  
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**10 : SUPPLY OF SERVICE OF VEHICLES**

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation ( excluding VAT ) Baht	
				Unit Price	Amount
101	Services of four-wheel-driven vehicle (for Specifications and requirements of Vehicles, Refer to Article G-6. Housing and Other Facilities.)	104	car-month	47,500.00	4,940,000.00
<b>Total Price for 10</b>				<b>Baht</b>	<b>4,940,000.00</b>

  
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**INVITATION TO BID NO. TIEC-L-13**  
**TOTAL PRICE FOR SCHEDULE NO. 2**  
**230 KV NAKHON RATCHASIMA 4 - NAKHON RATCHASIMA 3**  
**Line Length 2.4 KM**

**SUPPLY AND CONSTRUCTION OF TRANSMISSION LINE 230 KV NAKHON RATCHASIMA 4 - NAKHON RATCHASIMA 3**  
**TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY**

Description	Currency	Supply of Equipment		Foreign Currency	Local Currency	Local Transportation	Local Transportation, Construction and Installation	Purchase Price Offered for Dismantled Equipment
		Foreign Supply	Local Supply					
		CIF Thai Port	Ex-works Price (excluding VAT)					
		Amount	Amount					
2A : PRELIMINARY WORK							352,640.00	
2B : TOWER FOUNDATIONS			956,800.00				6,923,600.00	
2C : TOWERS			13,986,500.00				2,332,250.00	
2D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	THB	1,898,880.00	2,561,600.00					
2E : CONDUCTOR AND OVERHEAD GROUND WIRE			87,000.00				1,530,545.00	

  
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Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Local Currency	Local Transportation	Local Transportation, Construction and Installation	Purchase Price Offered for Dismantled Equipment
		Foreign Supply	Local Supply					
		CIF Thai Port	Ex-works Price ( excluding VAT )					
		Amount	Amount					
2F : LINE ACCESSORIES			830,950.00				180,500.00	
2G : GROUNDING MATERIALS			80,600.00				25,650.00	
2H : OPTICAL FIBER AND LINE ACCESSORIES	THB	227,450.00	246,240.00				351,644.40	
<b>TOTAL PRICE</b>	<b>THB</b>	<b>2,126,330.00</b>	<b>Baht 18,749,690.00</b>		<b>Baht</b>	<b>Baht</b>	<b>Baht 11,696,829.40</b>	<b>Baht</b>
							<b>Baht</b>	

  
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**INVITATION TO BID NO. TIEC-L-13**  
**SCHEDULE NO. 2**  
**2A : PRELIMINARY WORK**

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation ( excluding VAT ) Baht	
				Unit Price	Amount
2A1	Check survey and staking of tower location (approx. 2.4 km in transmission line distance)	lump sum	each	68,400.00	68,400.00
2A2	Clearing right-of-way of 20 meters on each side of center line of the transmission line (Approx. 2.4 km in transmission line distance)	lump sum	each	57,000.00	57,000.00
2A3	Sub-soil tests and preliminary measurement of ground resistance and earth resistivity (to be performed at tower locations directed by EGAT)				
2A3.1	Standard penetration tests and preliminary measurement of ground resistance and earth resistivity at the depth and locations as directed by EGAT (Approximately 8 bores)	80	m	2,660.00	212,800.00
2A4	Boundary post along boundary line of right-of-way	16	post	902.50	14,440.00
<b>Total Price for 2A</b>				<b>Baht</b>	<b>352,640.00</b>

  
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**2B : TOWER FOUNDATIONS**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2B1	Tower Type DQA1									
2B1.1	Stub type CV (230-4x1272 DQA1)and Foundation type CV	2	tower		XXXXX	XXXXX	64,400.00	128,800.00	337,250.00	674,500.00
2B1.2	Stub type CIV (230-4x1272 DQA1)and Foundation type CIV	1	tower		XXXXX	XXXXX	66,700.00	66,700.00	418,950.00	418,950.00
2B1.3	Stub type CIII (230-4x1272 DQA1)and Foundation type CIII	1	tower		XXXXX	XXXXX	68,500.00	68,500.00	648,850.00	648,850.00
2B2	Tower Type DQC2									
2B2.1	Stub type CV (230-4x1272 DQC2)and Foundation type CV	1	tower		XXXXX	XXXXX	134,600.00	134,600.00	767,600.00	767,600.00
2B3	Tower Type DQD2									
2B3.1	Stub type CV (230-4x1272 DQD2)and Foundation type CV	1	tower		XXXXX	XXXXX	184,700.00	184,700.00	1,178,950.00	1,178,950.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2B4	Tower Type DQDE									
2B4.1	Stub type CV (230-4x1272 DQDE)and Foundation type CV	1	tower		XXXXX XXXXX	184,700.00	184,700.00	1,178,950.00	1,178,950.00	
2B4.2	Stub type CIII (230-4x1272 DQDE)and Foundation type CIII	1	tower		XXXXX XXXXX	188,800.00	188,800.00	2,055,800.00	2,055,800.00	
<b>Total Price for 2B</b>							<b>Baht</b>	<b>956,800.00</b>	<b>Baht</b>	<b>6,923,600.00</b>

  
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**2C : TOWERS**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port		Unit Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2C1	Tower Type DQA1									
2C1.1	Basic body (230-4x1272 DQA1)	4	body		XXXXX	XXXXX	997,100.00	3,988,400.00	165,395.00	661,580.00
2C1.2	Body extension 7.0 m (230-4x1272 DQA1)	2	body		XXXXX	XXXXX	237,800.00	475,600.00	39,520.00	79,040.00
2C1.3	Leg extension 4.0 m (230-4x1272 DQA1)	4	leg		XXXXX	XXXXX	24,300.00	97,200.00	4,085.00	16,340.00
2C1.4	Leg extension 6.0 m (230-4x1272 DQA1)	4	leg		XXXXX	XXXXX	33,900.00	135,600.00	5,700.00	22,800.00
2C1.5	Leg extension 7.0 m (230-4x1272 DQA1)	4	leg		XXXXX	XXXXX	40,300.00	161,200.00	6,745.00	26,980.00
2C1.6	Leg extension 9.0 m (230-4x1272 DQA1)	4	leg		XXXXX	XXXXX	53,600.00	214,400.00	8,930.00	35,720.00
2C2	Tower Type DQC2									
2C2.1	Basic body (230-4x1272 DQC2)	1	body		XXXXX	XXXXX	1,775,900.00	1,775,900.00	294,595.00	294,595.00
2C2.2	Leg extension 1.0 m (230-4x1272 DQC2)	4	leg		XXXXX	XXXXX	27,100.00	108,400.00	4,560.00	18,240.00
2C3	Tower Type DQD2									
2C3.1	Basic body (230-4x1272 DQD2)	1	body		XXXXX	XXXXX	1,976,500.00	1,976,500.00	327,845.00	327,845.00
2C3.2	Leg extension 1.0 m (230-4x1272 DQD2)	4	leg		XXXXX	XXXXX	36,600.00	146,400.00	6,080.00	24,320.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2C4	Tower Type DQDE									
2C4.1	Basic body (230-4x1272 DQDE)	2	body		XXXXX XXXXX	1,976,500.00	3,953,000.00	327,845.00	655,690.00	
2C4.2	Body extension 7.0 m (230-4x1272 DQDE)	1	body		XXXXX XXXXX	501,500.00	501,500.00	83,220.00	83,220.00	
2C4.3	Leg extension 2.0 m (230-4x1272 DQDE)	4	leg		XXXXX XXXXX	46,400.00	185,600.00	7,695.00	30,780.00	
2C4.4	Leg extension 4.0 m (230-4x1272 DQDE)	4	leg		XXXXX XXXXX	66,700.00	266,800.00	11,115.00	44,460.00	
2C5	Tower Signs									
2C5.1	Aerial patrol signs	4	piece		XXXXX XXXXX	included in installation work	included in installation work	475.00	1,900.00	
2C5.2	Phasing signs (3 pieces per set)	4	set		XXXXX XXXXX	included in installation work	included in installation work	1,425.00	5,700.00	
2C5.3	Circuit name signs	4	piece		XXXXX XXXXX	included in installation work	included in installation work	522.50	2,090.00	
2C5.4	Danger signs	2	piece		XXXXX XXXXX	included in installation work	included in installation work	475.00	950.00	
<b>Total Price for 2C</b>								<b>Baht 13,986,500.00</b>	<b>Baht 2,332,250.00</b>	

  
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**2D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht					
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht		Unit Price		Amount	
					CIF Thai Port		Ex-works Price (excluding VAT) Baht							
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount				
2D1	Single string suspension insulator assemblies with armor rods for four-bundled 1272 MCM ACSR/GA conductor, 16300 kg ultimate strength, coupling type K (without insulator and arcing horn)	6	set		XXXXX	XXXXX	19,000.00	114,000.00	included in stringing work	included in stringing work				
2D2	Double string suspension insulator assemblies with armor rods for four-bundled 1272 MCM ACSR/GA conductor, 32600 kg ultimate strength, coupling type K (without insulator and arcing horn)	18	set		XXXXX	XXXXX	25,000.00	450,000.00	included in stringing work	included in stringing work				
2D3	Bypass string suspension insulator assemblies with armor rods for four-bundled 1272 MCM ACSR/GA conductor, 16300 kg ultimate strength, coupling type K (without insulator and arcing horn)	6	set		XXXXX	XXXXX	21,000.00	126,000.00	included in stringing work	included in stringing work				
2D4	Single string tension insulator assemblies for four-bundled 1272 MCM ACSR/GA conductor, 22700 kg ultimate strength, coupling type K (without insulator and arcing horn)	18	set		XXXXX	XXXXX	28,000.00	504,000.00	included in stringing work	included in stringing work				

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht			
					CIF Thai Port							
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
2D5	Double string tension insulator assemblies for four-bundled 1272 MCM ACSR/GA conductor, 45400 kg ultimate strength, coupling type K (without insulator and arcing horn)	36	set		XXXXX	XXXXX	32,700.00	1,177,200.00	included in stringing work	included in stringing work		
2D6	Single string tension inverted insulator assemblies for four-bundled 1272 MCM ACSR/GA conductor, 22700 kg ultimate strength, coupling type K (without insulator and arcing horn)	6	set		XXXXX	XXXXX	28,000.00	168,000.00	included in stringing work	included in stringing work		
2D7	Porcelain or glass insulator ANSI CLASS 52-8 (36,000 lbs)	672	disc	THB	790.00	530,880.00			included in stringing work	included in stringing work		
2D8	Porcelain or glass insulator ANSI CLASS 52-11 (50,000 lbs)	1440	disc	THB	950.00	1,368,000.00			included in stringing work	included in stringing work		
2D9	Overhead ground wire suspension assemblies with armor rod for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	4	set		XXXXX	XXXXX	1,400.00	5,600.00	included in stringing work	included in stringing work		

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2D10	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	18	set		XXXXX	XXXXX	700.00	12,600.00	included in stringing work	included in stringing work

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2D11	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength to be employed for the installation with insulators supplied under Item 2D7 on take-off structures as per Drawing No. TP-159A	6	set		XXXXXX	XXXXXX	700.00	4,200.00	included in stringing work	included in stringing work
<b>Total Price for 2D</b>				<b>THB</b>	<b>1,898,880.00</b>		<b>Baht</b>	<b>2,561,600.00</b>		<b>Baht</b>

  
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**2E : CONDUCTOR AND OVERHEAD GROUND WIRE**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2E1	1272 MCM ACSR/GA Conductor									
2E1.1	1272 MCM ACSR/GA Conductor, furnishing conductor for Item 2E1.2 to 2E1.4 (to be supplied by EGAT, see Article F-3, approx. 2.4 km in transmission line distance)		km		XXXXX	XXXXX	XXXXX	XXXXX	included in stringing work	included in stringing work
2E1.2	Stringing of conductor by controlled tension method, double circuit, 3 phase, quad-bundled conductor per phase, measured based on horizontal distance of line route from deadend tower type DQDE at Nakhon Ratchasima 4 Substation to deadend tower type DQDE at Nakhon Ratchasima 3 Substation	2.2	km		XXXXX	XXXXX	XXXXX	XXXXX	446,500.00	982,300.00

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2E1.3	Installation of conductor, double circuit, 3 phase, quad-bundled conductor per phase, between deadend tower type DQDE and take-off structure at Nakhon Ratchasima 4 Substation as per Drawing No.T04-002, approx. 0.1 km. in transmission line distance	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	223,250.00	223,250.00
2E1.4	Installation of conductor, double circuit, 3 phase, quad-bundled conductor per phase, between deadend tower type DQDE and take-off structure at Nakhon Ratchasima 3 Substation as per Drawing No.T04-003, approx. 0.1 km. in transmission line distance	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	223,250.00	223,250.00
2E2	3/8" High strength galvanized steel wire									
2E2.1	3/8" High strength galvanized steel wire, furnishing for Item 2E2.2 to 2E2.4 based on linear length (Linear length = No. of overhead ground wire x horizontal distance of line route + 1.5%)	2.9	km				30,000.00	87,000.00	included in stringing work	included in stringing work

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2E2.2	Stringing of one overhead ground wire by controlled tension method, measured based on horizontal distance of line route from deadend tower type DQDE at Nakhon Ratchasima 4 Substation to deadend tower type DQDE at Nakhon Ratchasima 3 Substation	2.2	km		XXXXX	XXXXX	XXXXX	XXXXX	24,225.00	53,295.00
2E2.3	Installation of three overhead ground wires between deadend tower type DQDE and take-off structure at Nakhon Ratchasima 4 Substation as per Drawing No.T04-002, approx. 0.1 km. in transmission line distance	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	24,225.00	24,225.00
2E2.4	Installation of three overhead ground wires between deadend tower type DQDE and take-off structure at Nakhon Ratchasima 3 Substation as per Drawing No.T04-003, approx. 0.1 km. in transmission line distance	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	24,225.00	24,225.00
<b>Total Price for 2E</b>							<b>Baht 87,000.00</b>		<b>Baht 1,530,545.00</b>	

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**2F : LINE ACCESSORIES**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht					
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht		Unit Price		Amount	
					CIF Thai Port									
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount				
2F1	Tension sleeve for 1272 MCM ACSR/GA conductor	25	set		XXXXX	XXXXX	1,400.00	35,000.00	included in stringing work	included in stringing work				
2F2	Tension sleeve for 3/8" high strength, galvanized steel overhead ground wire	1	set		XXXXX	XXXXX	300.00	300.00	included in stringing work	included in stringing work				
2F3	Spacer damper for four-bundled 1272 MCM ACSR/GA conductor (for double circuit, approx. 2.4 km in transmission line distance)	lump sum	each		XXXXX	XXXXX	576,000.00	576,000.00	included in stringing work	included in stringing work				
2F4	Rigid type spacer for two-bundled 1272 MCM ACSR/GA conductor	48	set		XXXXX	XXXXX	600.00	28,800.00	included in stringing work	included in stringing work				
2F5	Rigid type spacer for four-bundled 1272 MCM ACSR/GA conductor	96	set		XXXXX	XXXXX	1,900.00	182,400.00	included in stringing work	included in stringing work				
2F6	Vibration damper for 3/8" high strength galvanized steel overhead ground wire	13	set		XXXXX	XXXXX	650.00	8,450.00	included in stringing work	included in stringing work				
2F7	Field test of spacer damper for four-bundled 1272 ACSR/GA conductor as per Specifications No.TL-03	1	set		XXXXX	XXXXX	XXXXX	XXXXX	180,500.00	180,500.00				

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>Total Price for 2F</b>						<b>Baht 830,950.00</b>		<b>Baht 180,500.00</b>		

  
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**2G : GROUNDING MATERIALS**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2G1	1.6 cm. nominal diameter x 3.0 m. (5/8" diameter x 10') copper-covered steel single length sectional ground rod with ground rod clamp, ground connecting wire and stub angle connector	32	set		XXXXX	XXXXX	1,200.00	38,400.00	190.00	6,080.00
2G2	1.6 cm. nominal diameter x 1.8 m. (5/8" diameter x 6') copper-covered steel single length sectional ground rod with ground rod clamp, ground connecting wire and stub angle connector	4	piece		XXXXX	XXXXX	800.00	3,200.00	190.00	760.00
2G3	Connector set (No.4 AWG annealed copper ground connecting wire 0.6 m. long with stub angle connector)	12	set		XXXXX	XXXXX	300.00	3,600.00	95.00	1,140.00
2G4	Counterpoise No.2 AWG solid copper-clad steel wire 30% conductivity	180	m		XXXXX	XXXXX	180.00	32,400.00	85.50	15,390.00
2G5	Heavy duty exothermic or compression type connector	12	set		XXXXX	XXXXX	250.00	3,000.00	190.00	2,280.00

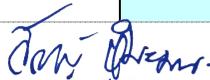
  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>Total Price for 2G</b>							<b>Baht</b>	<b>80,600.00</b>	<b>Baht</b>	<b>25,650.00</b>

  
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**2H : OPTICAL FIBER AND LINE ACCESSORIES**

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht	
					CIF Thai Port					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2H1	Composite overhead ground wire with 36 core optical fibers (OPGW)									
2H1.1	Furnishing OPGW ( 13.5 mm diameter )	lump sum	each	THB	227,450.00	227,450.00	246,240.00	246,240.00		
2H1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Nakhon Ratchasima 4 (NR4) substation to Nakhon Ratchasima 3 (NR3) substation	2.4	km						146,518.50	351,644.40
2H2	Joint box for optical fiber cable									
2H2.1	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure (NR4 substation) (including splicing work)	1	set							
2H2.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure (NR3 substation) (including splicing work)	1	set							
2H3	Hardware assembly for OPGW									
2H3.1	OPGW suspension (Grounded) assembly 22 with armor rods (excluding vibration damper)	lump sum	each							

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		( excluding VAT ) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2H3.2	OPGW tension (Grounded) assembly 24 with armor rods (excluding vibration damper)	lump sum	each							
2H3.3	OPGW tension assembly with accessories and insulator at take-off structure at Nakhon Ratchasima 4 substation (excluding insulator and vibration damper)	1	set							
2H3.4	OPGW tension assembly with accessories and insulator at take-off structure at Nakhon Ratchasima 3 substation (excluding insulator and vibration damper)	1	set							
2H4	Line accessories									
2H4.1	Vibration damper assembly for OPGW with accessories	lump sum	each							
2H4.2	Parallel groove clamps	lump sum	each							
2H4.3	Grounding clamps	lump sum	each							
2H4.4	1-wire cleat with insulator for OPGW down-lead to joint box (Take-off structure)	30	set							
2H4.5	6-wire cleats with insulator for OPGW down-lead to joint box (Take-off strucutre)	8	set							

  
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Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation		
					Foreign Supply		Local Supply		(excluding VAT)		
					CIF Thai Port		Ex-works Price (excluding VAT)		Baht		
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
2H4.6	Clevis type insulator ANSI CLASS 52-4 (292 mm minimum leakage distance and 6,800 kg minimum electromechanical failing load) to be used at take-off structure	lump sum	each								
2H4.7	3/8" High strength galvanized steel wire for grounding OPGW to towers	lump sum	each								
2H5	Field testing for optical fiber	1	test		XXXXXX	XXXXXX	XXXXXX	XXXXXX			
<b>Total Price for 2H</b>				<b>THB</b>	<b>227,450.00</b>		<b>Baht</b>	<b>246,240.00</b>		<b>Baht</b>	<b>351,644.40</b>

  
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**Important Information**  
**for**  
**Invitation to Bid No. TIEC-L-13**

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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 A-3. Eligibility of Bidders: General Requirements**

*According to the Notification of the Anti-Corruption Co-operation Committee Concerning Minimum Standards of the Policy and Directions for Anti-Corruption in Relation to Procurement Required to be put in place by the Business Operator, in accordance with Section 19 of the Public Procurement and Supplies Administration Act, B.E. 2560 (A.D. 2017), the article has been updated as per Data Sheet.*

**Article A-6. Preparation and Delivery of Bids and Article B-1. Preparation of Bids**

Details on how to prepare the proposal have been revised. Bids shall be prepared in accordance with the Instructions to Bidders contained in the Bidding Documents in one (1) original hard copy and one (1) electronic copy contained in USB flash drive.

**Article A-6. Preparation and Delivery of Bids**

Details of technical proposal opening time and place shall be specified in the Tentative Schedule.

**Article A-7. Availability of Bidding Documents**

Availability of Bidding Documents has been changed from CD-ROM to electronic files for download via link provided by EGAT.

**Channel of Documents Submission**

For channel of document submission in the hereunder Articles, facsimile and telex has been replaced with letters submitted electronically or electronic mails (E-mails).

- Article B-1. Preparation of Bids
- Article B-4. Validity of Bids
- Article D-9. Notices
- Article E-20. Documents Required for Each Shipment
- Article F-10. Payment

## **Section B : Overview of the Procurement Process**

The procurement process diagram has been updated.

### **Article B-2. Bid Prices**

For 1. Prices for Equipment, Prices for Equipment manufactured outside Thailand (imported Equipment) shall be firm CIF Thai Port basis and quoted in Thai baht, US dollar, euro, Japanese yen, renminbi (Chinese yuan), or in the Bidder's or Manufacturer's home currency only if his currency trading is prevailed at the time of bidding in any international market other than in Bidder's or Manufacturer's home country.

The following paragraph has also been added :-

“Prices for the following Equipment manufactured outside Thailand which was imported before the technical proposal opening date shall be firm ex-works and quoted in Thai baht, provided that the Bidder shall submit any document(s) evidencing the importation date of such Equipment:

- Joint box for optical fiber cable”

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

*According to the Notification of the Anti-Corruption Co-operation Committee Concerning Minimum Standards of the Policy and Directions for Anti-Corruption in Relation to Procurement Required to be put in place by the Business Operator, in accordance with Section 19 of the Public Procurement and Supplies Administration Act, B.E. 2560 (A.D. 2017), the article has been updated as per Data Sheet.*

### **Article E-19. Shipment**

The Maritime Promotion Bureau has been updated to the Maritime Promotion Division and its contact information has also been updated.

### **Article F-10. Payment**

After each payment is made, the Contractor or beneficiary shall issue and submit the receipt to EGAT as detailed in the paragraph added at the end of this article.

*According to the Notification of the Anti-Corruption Co-operation Committee Concerning Minimum Standards of the Policy and Directions for Anti-Corruption in Relation to Procurement Required to be put in place by the Business Operator, in accordance with Section 19 of the Public Procurement and Supplies Administration Act, B.E. 2560 (A.D. 2017), the article has been updated as per Data Sheet.*

# DATA SHEET

for

## Invitation to Bid No. TIEC-L-13

(Two-envelope)

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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.

1. Article A-3. Eligibility of Bidders: General Requirements

*The requirement regarding minimum standards of the policy and directions for anti-corruption added to Article A-3. Eligibility of Bidders: General Requirements item I, has been updated as follows:*

*“j. Bidders shall provide written minimum standards of the policy and directions for anti-corruption in relation to procurement together with supporting evidence pursuant to the Notification of the Anti-Corruption Co-operation Committee Concerning Minimum Standards of the Policy and Directions for Anti-Corruption in Relation to Procurement Required to be put in place by the Business Operator, in accordance with Section 19 of the Public Procurement and Supplies Administration Act, B.E. 2560 (A.D. 2017).”*

2. Article B-2. Bid Prices

The price for the dismantled Equipment is not applicable in this invitation to bid.

3. Article B-3. Bid Security

The amount of bid security shall be USD 1,575,600.- or THB 52,505,000.-.

4. Article B-4. Validity of Bids

The validity of the bid shall be for three hundred (300) Days from the date specified for opening of technical proposals.

5. Article B-8. Information to be Submitted with Bid

*The document regarding minimum standards of the policy and directions for anti-corruption added to Article B-8. Information to be Submitted with Bid, has been updated as follows:*

- y. *Bidder's minimum standards of the policy and directions for anti-corruption in relation to procurement, together with the completely filled out Anti-Corruption Compliance Checklist as provided, and supporting evidence.*

*Where the Bidder holding a certification under ISO 37001 Anti-Bribery Management Systems, certification from the Thai Private Sector Collective Action against Corruption (CAC Certified), or any certification as prescribed by the Anti-Corruption Co-operation Committee, shall be deemed to have satisfied the minimum standards of the policy and directions for anti-corruption in relation to procurement. Such certification documents may be submitted as part of the bid.*

*Such minimum standards of the policy and directions for anti-corruption in relation to procurement, or the certification, shall remain valid and effective from the bid opening date.*

6. Article B-12. Evaluation and Comparison of Bids

The evaluation of bid prices shall be on *a bid package of schedule basis*. Evaluation and comparison of Bids shall be as specified in Article B-12. Evaluation and Comparison of Bids.

7. Article F-10. Payment

*The following paragraphs shall be added as the last two paragraphs of this article:*

*“ Please note that the Contractor shall provide written minimum standards of the policy and directions for anti-corruption in relation to procurement or a certification of anti-corruption standards that are valid until the date of receipt of the final payment under the Contract.*

*In the case where EGAT finds that the validity period of the Contractor's submitted minimum standards of the policy and directions for anti-corruption in relation to procurement, or the relevant certification, will expire before the date of receipt of the final payment under the Contract, EGAT shall issue a written notification to the Contractor requiring the submission of a revised or updated, completely filled out Anti-Corruption Compliance Checklist together with supporting evidence, prior to the expiration date of the existing Anti-Corruption Compliance Checklist. ”*

**Anti-Corruption Compliance Checklist**

**(Rev.1)**

Bidders shall provide written minimum standards of the policy and directions for anti-corruption in relation to procurement (“Minimum Standards”) together with supporting evidence pursuant to the Notification of the Anti-Corruption Co-operation Committee Concerning Minimum Standards of the Policy and Directions for Anti-Corruption in Relation to Procurement Required to be put in place by the Business Operator, in accordance with Section 19 of the Public Procurement and Supplies Administration Act, B.E. 2560 (A.D. 2017). This checklist shall be submitted with Bids.

Project: (Please specify the project for which you are bidding).....

State Agency: Electricity Generating Authority of Thailand

Bidder Name: (Please specify the bidder’s name).....

Please mark  one of the following boxes  that applies to the bidders\* and complete all details in the space provided:

1. Have one of the following certificates:
- Certificate under ISO 37001 Anti-Bribery Management Systems, or
  - Certificate from the Thai Private Sector Collective Action against Corruption, or
  - Certificate as prescribed by the Anti-Corruption Co-operation Committee: (Please specify the certificate name)
- Validity period: .....(Please specify the validity period of the chosen certificate).....

Please attach an evidence of the chosen certificate.

2. Do not have a certificate as specified in item 1, but have the Minimum Standards with one of the following validity:
- Perpetual Validity, or
  - Validity period:.....(Please specify the validity period of the Minimum Standards).....

Details of the Minimum Standards and supporting evidence are as follows: (Please mark  in the “Yes” or “No” column):

Item	Yes	No	Reference Evidence (Please specify Article)
1. Bidders have any clearly defined written anti-corruption policies that is regularly updated.			
2. Bidders have any clearly defined written guidelines, methods, or measures for preventing corruption in procurement that is regularly updated, including but not limited to:			
2.1 Code of Conduct			
2.2 Internal unit or personnel explicitly responsible for the prevention of corruption			
2.3 Penalties or regulations against corruption			
2.4 Channels or systems to report any suspicious or queries related to corruption			
2.5 Anti-corruption training plan			
3. Bidders have communicated and publicized the anti-corruption policies and guidelines relation to procurement as stated in items 1 and 2.			
4. Bidders have provided training on anti-corruption to directors, executives, or employees.			
5. The anti-corruption policies and guidelines are reviewed at least every three (3) years.			

We hereby certify that the information provided above and the supporting evidence are true and correct.

Signed .....

(.....)

Name of Bidder

Stamp company seal (if any)

Date.....

\* Notes:

1. The certificate or Minimum Standards shall remain valid and effective from the technical proposal opening date until the date of receipt of the final payment under the contract.
2. If the bidders do not have a certificate, the bidders shall fulfill all items stipulated in the above table to meet the Eligibility of Bidders’ criteria for participation in this procurement.
3. In case of Consortium of two (2) or more firms, partnership or companies, this checklist of each member shall be submitted separately.
4. In the case of an unincorporated Joint Venture, each participant shall submit this checklist separately.
5. This checklist is a translation from Thai based on the Notification of the Anti-Corruption Co-operation Committee Concerning Minimum Standards of the Policy and Directions for Anti-Corruption in Relation to Procurement Required to be put in place by the Business Operator, in accordance with Section 19 of the Public Procurement and Supplies Administration Act, B.E. 2560 (A.D. 2017), dated September 25, 2024. In the event of any discrepancy, the Thai version in the notification shall prevail.

**SECTION A**  
**INVITATION TO BID**

# **ELECTRICITY GENERATING AUTHORITY OF THAILAND**

Nonthaburi  
Thailand

## **INVITATION TO BID NO. TIEC-L-13**

### **SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES 500 kV CHAIYAPHUM 2 - NAKHON RATCHASIMA 4 (FROM KM.68 TO NAKHON RATCHASIMA 4) AND 230 kV NAKHON RATCHASIMA 4 - NAKHON RATCHASIMA 3**

### **TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND BANGKOK AREA TO ENHANCE SYSTEM SECURITY (TWO-ENVELOPE)**

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#### **A-1. Invitation**

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for Supply and Construction of 500 kV Chaiyaphum 2 – Nakhon Ratchasima 4 (From KM.68 to Nakhon Ratchasima 4) and 230 kV Nakhon Ratchasima 4 – Nakhon Ratchasima 3 under Transmission System Improvement Project in Northeastern, Lower Northern, Central Regions and Bangkok Area to Enhance System Security in accordance with the Terms and Conditions, Technical Specifications and Drawings described in these Bidding Documents.

#### **A-2 Work Description**

The scope of Work under this Invitation is composed of two (2) Schedules as described below:

##### Schedule 1: Supply and Construction of 500 kV Chaiyaphum 2 – Nakhon Ratchasima 4 Transmission Line

The transmission line to be supplied and constructed under this Schedule is 500 kV, 50 Hz, 3 phase, quad-bundled conductor per phase, on double circuit on self-supporting lattice steel towers extending from KM.68 to Nakhon Ratchasima 4 Substation, having a distance of approximately 74 kilometers in length as the second section of the 500 kV Chaiyaphum 2 - Nakhon Ratchasima 4 Transmission Line in the northeastern region of Thailand with a total distance of approximately 142.7 kilometers. This transmission line will be located on the

new right-of-way with 30 meters in width on each side of the center line of the transmission.

Please note that the first section of the whole 500 kV Chaiyaphum 2 - Nakhon Ratchasima 4 Transmission Line to be constructed from Chaiyaphum 2 Substation to KM.68 will be undertaken under Invitation to Bid No. TIEC-L-06. The Contractor of this Invitation to Bid No. TIEC-L-13 shall also be responsible for the work at the connection point for both sections which is shown in the Drawing No. T05-001: Interfacing Work at KM.68.

The conductor to be employed under this Schedule will be 1272 MCM ACSR/GA supplied by EGAT. Two types of shield wires will be employed; one of which is 3/8 inches nominal diameter, extra high strength galvanized steel shield wire and the other is composite overhead ground wire with 36- core optical fiber. Both types of shield wires shall be supplied by the Contractor.

Schedule 2: Supply and Construction of 230 kV Nakhon Ratchasima 4 – Nakhon Ratchasima 3 Transmission Line

The transmission line to be supplied and constructed under this Schedule is 230 kV, 50 Hz, 3 phase, quad-bundled conductor per phase, on double circuit on self-supporting lattice steel towers extending from Nakhon Ratchasima 4 to Nakhon Ratchasima 3 Substation, having a distance of approximately 2.4 kilometers in length in the northeastern region of Thailand. This transmission line will be located on the new right-of-way with 20 meters in width on each side of the center line of the transmission.

The conductor to be employed under this Schedule will be 1272 MCM ACSR/GA supplied by EGAT. Two types of shield wires will be employed; one of which is 3/8 inches nominal diameter, high strength galvanized steel shield wire and the other is composite overhead ground wire with 36-core optical fiber. Both types of shield wires shall be supplied by the Contractor.

All the drawings including Structural design (except for Schedule 2; 230 kV tower type DQA1, DQC2, DQD2 & DQDE), the fabrication/erection drawings, stub & setting dimensions for all tower types, as well as details & bar bending schedule for all foundation types including pile foundation shall be prepared and submitted for EGAT's approval by the Contractor. It shall also be noted that the modifications and re-design for towers and foundations may be required. In such case, the Contractor shall perform and provide these drawings for EGAT's approval.

Reproducible drawings and CD-ROM of the drawings for towers, stub & setting dimensions, including details & bar bending schedule of foundations as well as

for modified and re-designed towers and foundations (if any) shall be required to be submitted to EGAT by the Contractor.

The full responsibility for adequacy and accuracy of all detailed drawings shall rest with the Contractor and he shall have no right to claim for additional compensation as a result of his misinterpretation or failure to check the drawings for compliance with the design requirements, inaccuracies, errors and omissions.

The Contractor shall also be responsible for the design of any other necessary parts for completion of the Work, including the manufacture, supply, testing, construction and installation of the various components of the transmission line.

Services required to complete the Work are shown in the Bid Price Schedules and included in these Bidding Documents.

**A-3. Eligibility of Bidders: General Requirements**

- I. 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 well-established and maintain a permanent place of business.
  - c. The Bidder shall not be, or supply the Equipment, from the country under the state of Civil War.
  - d. The Bidder shall not be named in the List of Work Abandoners published by the Permanent Secretary, Ministry of Finance and/or in the Debarment List and/or in the List of Work Abandoners declared by EGAT.
  - e. The Bidder shall not be a Jointly Interested Bidder with other Bidders as from the date of EGAT's issuance of the 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.
  - f. The Bidder shall not either be EGAT's consultant or involving 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.

- g. 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.
- h. In case of being a joint venture or a consortium, the Bidder shall carry out all the Work under such formation from the time of bidding until the fulfillment of the Contract.
- i. The Bidder must have purchased the bidding documents from EGAT. For a joint venture or a consortium, only one (1) member of the joint venture or consortium is required to purchase the bidding documents.

In case the Bidder's name is not exactly the same as the purchaser's name, the purchaser shall notify EGAT of the name of the Bidder in writing prior to the *technical proposal* opening time.

- II. All Bidders should preferably meet the following requirements; failure to so comply may constitute sufficient ground for rejection.
  - a. The Bidder shall have adequate funds to meet financial obligations incidental to this Contract.
  - b. The Bidder shall supply documentary evidence established in accordance with Article B-8. Information to be Submitted with Bid to demonstrate adequately that he is eligible to bid and is qualified to perform the Contract if his bid is accepted. Bidder should also demonstrate his capacity to perform the Work either with or without the use of subcontractor.

#### **A-4. Eligibility of Bidders: Technical Requirements**

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

- a. Himself, or either firm of the joint venture/consortium, having a record of experience in executing at least one (1) turnkey contract as contractor (not as subcontractor) in overseas country (not his own country) or with EGAT on a multi but not less than four-bundled conductor transmission line of 400 kV or higher; having a circuit distance of not less than thirty (30) kilometers.

However, the exception will be allowed for the following cases:

- 1) For foreign firm not having experiences in executing turnkey contract(s) in overseas or with EGAT as mentioned above, his

experiences in executing at least five (5) turnkey contracts as contractor (not as subcontractor) in his own country on a multi but not less than four-bundled conductor transmission line of 400 kV or higher, with the circuit distance of the transmission line for each contract being not less than thirty (30) kilometers is eligible in case that he proposes his bid as a joint venture with a local (Thai) firm who has an experience in executing at least two (2) turnkey contracts as contractor (not as subcontractor) with EGAT on supply and construction of transmission line at a voltage level of 230 kV or higher, having a circuit distance of the transmission line for each contract not less than thirty (30) kilometers and one of which shall be a two-bundled conductor transmission line.

- 2) For local firm or the joint venture/consortium of local firms, himself or either firm of the joint venture/consortium having an experience in executing at least one (1) turnkey contract as contractor (not as subcontractor) with EGAT on a four-bundled conductor transmission line at a voltage level of 230 kV or higher is eligible to the requirement under this Item.

Experience record of the Bidder or either firm of the joint venture/consortium, including experience record derived from being a firm of other joint venture or consortium in previous project(s) is acceptable. It is not allowed to combine the experience records of each firm of the joint venture/consortium in order to meet the experience requirements.

- b. Himself, or either firm of the joint venture/consortium or the combination thereof, having excellent reputation, and adequate technical knowledge and experience in construction of extra high voltage transmission lines, and involving accumulated circuit distance in excess of 200 kilometers for multi but not less than four-bundled conductor transmission line of 400 kV or higher having been successfully operated for at least one (1) consecutive year.

The record of such construction experience as well as a successful operation as required above shall be of the Work executed by the Bidder no longer than fifteen (15) years before the date specified for opening of this Bid.

However, for local firm or the joint venture/consortium of local firms further to the exception case of eligible bidders as mentioned in a.2), an experience of his or either firm of the joint venture/consortium in construction of four-bundled conductor transmission line at a voltage level of 230 kV or higher having received Provisional Acceptance from EGAT is eligible to the requirement under this Item.

- c. Himself, or either firm of the joint venture/consortium or his subcontractor or the combination thereof, having excellent reputation and adequate technical knowledge and at least three (3) years experience in the construction of transmission line having accumulative distance of overhead ground wire with optical fiber not less than 20 kilometers in length. This eligibility will not be applicable if such Equipment is not required under this Invitation.

With respect to item b. and c., experience record of the Bidder or either firm of the joint venture/consortium, including experience record derived from being a firm of other joint venture or consortium in previous project(s) is acceptable, provided that there is a letter from the project owner certifying that the Works as described in b. and c. above were performed by the Bidder or either firm of the joint venture/consortium of this project.

However, reference records of either the parent or affiliated companies of the Bidder or of either firm of the joint venture/consortium shall not be acceptable. 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.

- d. Proposing towers, conductor, insulators for conductor, hardware assemblies and line accessories for conductor, rigid spacers and spacer dampers for conductor, and composite overhead ground wire with optical fiber (OPGW) manufactured by regular manufacturers of excellent reputation having significant technical knowledge and at least three (3) years experience in the design, manufacture and testing of such Equipment, having manufacturing capacity available to perform the Work properly and expeditiously within the time specified, and having satisfactory past experience, with additional requirements as follows:
- 1) Tower manufacturer being an eligible local firm having set up a plant for fabrication of steel towers in Thailand
  - 2) Hardware assemblies and line accessories for conductor manufacturer being an eligible local firm having set up a plant in Thailand
  - 3) Rigid spacer for conductor manufacturer being an eligible local firm having set up a plant in Thailand
  - 4) Insulator for conductor manufacturer having a record of three (3) consecutive years of successful operation/use of at least 100,000

units of insulator ANSI Class 52-8 or similar and at least 20,000 units of insulator ANSI Class 52-11 or similar in transmission line(s) operated in the transmission network electric utility in overseas country (not his own country) at a voltage level of 400 kV or higher during the last ten years

- 5) Spacer dampers for conductor manufacturer having a record of five (5) consecutive years of successful operation/use of the same or similar type as those required under this Invitation and used in multi but not less than four-bundled conductor transmission lines operated at a voltage level of 400 kV or higher having accumulated circuit distance of not less than 200 kilometers
- 6) Composite overhead ground wire with optical fiber (OPGW) manufacturer having a record of at least three (3) consecutive years of successful operation/use of the same or similar type as those required under this Invitation in the transmission line having accumulated distance of not less than 20 kilometers
- 7) For proposed conductor, according to the Industrial Product Standards Act B.E. 2511 which stipulates that the conductor is an industrial product that is required to conform with the Thai Industrial Standards – TIS 85-2548;

In case of locally supplied conductor, the manufacturer of the conductor shall receive a license from the Industrial Product Standards Council, Ministry of Industry, for manufacture of the industrial product and use of a standard mark, and

In case of foreign supplied conductor, the conductor shall be imported by a person having received a license from the Industrial Product Standards Council, Ministry of Industry, for importation of the industrial product.

However, the Bidder may propose any qualified local manufacturer who does not have experience in design, manufacture and testing as well as a record of successful operation/use of his Equipment as specified above but has obtained special permission from EGAT for manufacture and/or fabrication of the specific Equipment within the scope specified in the letter of permission issued by EGAT, or propose any local manufacturer who is in the list of Eligible Local Manufacturers Accepted by EGAT as shown herein at the end of this Section.

In the event that the Bidder proposes the Equipment of the manufacturer who, at the time of bidding, fails to meet with requirements of any contract(s) with EGAT

regarding major defects or malfunctioning of such Equipment, and such failure has not yet satisfactorily been proved to and/or settled with EGAT, EGAT reserves the right to reject his Bid.

This eligibility will not be applicable for any Equipment which is not required under this Invitation.

**II. All Bidders should preferably meet the following technical requirements; failure to so comply may constitute sufficient ground for rejection.**

- a. Having sufficient capacity to carry out the Work.
- b. Proposing shield wire, insulators for shield wire and for OPGW, hardware assemblies and line accessories for shield wire and for OPGW, grounding materials, fiber optic transmission system Equipment, and other Equipment manufactured by regular manufacturers of excellent reputation having significant technical knowledge and at least three (3) years experience, in the design, manufacture and testing of such Equipment, having manufacturing capacity available to perform the Work properly and expeditiously within the time specified, and having satisfactory past experience, with additional requirements as follows:
  - Manufacturers for shield wire (zinc-coated extra high strength steel wire), hardware assemblies and line accessories for shield wire and for OPGW, and non-metallic optical fiber cable (OFC) being an eligible local firm having set up a plant in Thailand

However, the Bidder may propose any qualified local manufacturer who does not have experience in design, manufacture and testing as well as a record of successful operation/use of his Equipment as specified above but has obtained special permission from EGAT for manufacture and/or fabrication of the specific Equipment within the scope specified in the letter of permission issued by EGAT, or propose any local manufacturer who is in the list of Eligible Local Manufacturers Accepted by EGAT as shown herein at the end of this Section.

In the event that the Bidder proposes the Equipment of the manufacturer who, at the time of bidding, fails to meet with requirements of any contract(s) with EGAT regarding major defects or malfunctioning of such Equipment, and such failure has not yet satisfactorily been proved to and/or settled with EGAT, EGAT reserves the right to reject this Bid.

This eligibility will not be applicable for any Equipment which is not required under this Invitation.

- c. Proposing reputable subcontractors, for the portion of the Work to be subcontracted, having adequate technical knowledge, ability and capacity and practical experience to perform such work. If any proposed subcontractor(s) is (are) not qualified in the opinion of EGAT, the Bidder is required to select other subcontractor(s) at his own cost to the satisfaction of EGAT.
- d. Having no just or proper claims pending against him with respect to breach in the performance of Contract on other similar works awarded by EGAT. If 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.
- e. Himself or his subcontractors, at the time of submitting this proposal, not carrying excessive work or not being in a default position with respect to work with EGAT. Unsatisfactory past performance on contract awarded by EGAT may be a sufficient reason of being disqualified.

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

#### **A-5. Joint Venture or Consortium**

In the event that the successful Bidder is a joint venture or a consortium formed of two or more companies, EGAT requires that the parties to the joint venture or the consortium accept joint and several liability for all obligations under the Contract.

#### **A-6. Preparation and Delivery of Bids**

Bids shall be prepared in accordance with the Instructions to Bidders contained in the Bidding Documents in one (1) original *hard copy and one (1) electronic copy contained in USB flash drive*, in English, on the bid forms included for this purpose and shall be accompanied with a bid security as required under Article B-3. Bid Security in a separate envelope.

*For preparation of original hard copy, each page of the original hard copy shall be marked with the volume number and the page number in the lower right-hand corner, for example, Volume 1 of 10 and Page 1 of 100.*

***For preparation of electronic copy, each volume of the signed original hard copy shall be scanned into one (1) PDF file and each PDF file shall be named according to the volume number.***

***The original hard copy and the electronic copy of the proposal shall be placed in two (2) separate sealed envelopes:***

***Envelope I which shall consist of the original hard copy of technical proposal, and a USB flash drive containing the electronic files of the original technical proposal in PDF and Excel format, as required by EGAT, and***

***Envelope II which shall consist of the original hard copy of price proposal, and a USB flash drive containing the electronic files of the price proposal in PDF and Excel format, as required by EGAT.***

***In the event of any discrepancy between the original hard copy and the electronic copy, the original hard copy shall govern.***

**Envelope I**

Technical proposal will be placed in separate sealed envelope marked in capital letters in the lower left-hand corner as follows:

INVITATION TO BID NO. TIEC-L-13

SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES 500 kV  
CHAIYAPHUM 2 - NAKHON RATCHASIMA 4 (FROM KM.68 TO  
NAKHON RATCHASIMA 4) AND 230 kV NAKHON RATCHASIMA 4 -  
NAKHON RATCHASIMA 3

TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN  
NORTHEASTERN, LOWER NORTHERN, CENTRAL REGIONS AND  
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TECHNICAL PROPOSAL

The Envelope for the technical proposal shall contain the following :

- a. the completed Proposal Data Forms of the proposed proposal(s);
- b. reference documents pertaining to Bidder's qualification and experience under Article A-3. Eligibility of Bidders: General Requirements, A-4. Eligibility of Bidders: Technical Requirements, and Article B-8. Information to be submitted with Bid;
- c. delivery date guaranteed by Bidders;

- d. any minor deviations on Technical Specifications;
- e. any other technical information and drawings the Bidder deems to be adequate to explain his bid;
- f. Confirmation Form of not being a Jointly Interested Bidder with other Bidders and not being a person who undertakes any actions as an Obstruction of Fair Price Competition, and Registration/Non-registration with the Revenue Department as a VAT registrant.

If the Bidder has registered as a VAT registrant, he shall submit EGAT an evidence of VAT registration. On the contrary, if the Bidder is not registered as a VAT registrant, he shall inform EGAT whether he will register as a VAT registrant or not.

In case the Bidder is a consortium, each member of the consortium shall fill in the Confirmation Form provided for consortium Bidders.

- g. Filled-in Documentary List and documents required according to Additional Regulation.
- h. USB flash drive containing electronic files of the original technical proposal in the following formats :-***
  - PDF files of all pages of each volume of the technical proposal, and***
  - Excel files of filled-in Proposal Data.***

Strictly no prices or reference to price shall be made in the documentation contained in this Envelope. Violation of this requirement will be reason for rejection of the bid.

**Envelope II**

Price proposal will be placed in separate sealed envelope marked in capital letters in the lower left-hand corner as follows:

INVITATION TO BID NO. TIEC-L-13

SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES 500 kV  
CHAIYAPHUM 2 - NAKHON RATCHASIMA 4 (FROM KM.68 TO  
NAKHON RATCHASIMA 4) AND 230 kV NAKHON RATCHASIMA 4 -  
NAKHON RATCHASIMA 3

TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN  
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PRICE PROPOSAL

The Envelope **II** for the price proposal shall contain the following :

- a. price schedules according to Section C;
- b. ***Discount Form***
- c. ***USB flash drive containing electronic files of the price proposal in the following formats :-***
  - ***PDF files of all pages of each volume of the price proposal, and***
  - ***Excel files of filled-in Price Schedule***

The technical proposal and the price proposal shall be addressed and delivered to :

International Procurement Department - Transmission Segment  
Procurement and Inventory Management Division  
Electricity Generating Authority of Thailand  
Bangkruai, Nonthaburi 11130  
Thailand

on or before 10:00 a.m., Bangkok Standard Time, see Tentative Schedule

If the envelope(s) is not sealed, marked and addressed as required above, EGAT will assume no responsibility for the bid misplacement or premature opening.

Technical proposals will be opened publicly at the ***place and*** time specified ***in*** ***Tentative Schedule.***

Bids received after the time stipulated herein shall be rejected and returned unopened.

The technical proposals will be reviewed to determine their responsiveness to the Specifications and requirements.

The price proposals of the responsive technical proposals will be opened publicly at the place and time which will be specified at a later date, which will not be later than 150 Days after the technical proposal opening.

**A-7. Availability of Bidding Documents**

The Bidding Documents are available for examination *and online purchase at <http://www4.egat.co.th/fprocurement/biddingeng/>* and can be obtained *by downloading via links provided by EGAT* upon payment to EGAT, non-refundable, in the amount of USD 500.- or Baht 15,000.- prices include the value added tax.

Note : At the time of bidding, EGAT's Specifications and all Drawings need not be submitted, although they are considered as part of the Bidding Documents.

## **ELIGIBLE LOCAL MANUFACTURERS ACCEPTED BY EGAT**

The following local manufacturers are eligible for proposing each specific equipment for this Invitation; provided that the scope of their offerings shall be within that specified in the Certificate of Acceptance issued by EGAT.

### **1) STEEL TOWERS**

#### **Ajikawa & SCI Metal Tech Co., Ltd.**

49/1 Moo 9, Marppong  
Phantong  
Chonburi 20160  
Tel : 038 451 473-6  
Fax : 038 451 478

#### **Siam Steel Tower Co., Ltd.**

9/10 Moo 10 Tambol Koke-Yae  
Amphur Nong Khae  
Saraburi 18230, Thailand  
Tel : (662) 705-8755-63  
Fax : (662) 705-8765

#### **Thai-Scandic Steel Company Limited**

7 I-5 Road, Maptaphut Industrial Estate  
Amphur Muang  
Rayong 21150  
Tel : (66-38) 683070  
Fax : (66-38) 683065

#### **Sky Tower Public Company Limited**

247 Romkiao Road  
Saensaeab  
Minburi, Bangkok 10510  
Thailand  
Tel : 662-543-9020-8  
Fax : 662-915-2114, 915-2714, 543-9029

#### **Demco Power Company Limited**

59 Moo 1, Suanphrikthai  
Muangpathumthani  
Pathumthani 12000  
Tel : 0 2959 5811 Ext.1612  
Fax : 0 2959 5915

**เอกสารไม่ควบคุม**

รับรองสำเนาโดย นพอ.ร.กสส.ร.อวส.  
ก่อนนำไปใช้งาน  
ต้องตรวจสอบ Revision ล่าสุด  
ฝ่ายวิศวกรรมระบบส่ง กฟผ.

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*Sotraside Hinimom*

2) **HARDWARE ASSEMBLIES AND LINE ACCESSORIES FOR CONDUCTOR, OVERHEAD GROUND WIRE AND OPGW**

**Preformed Line Products (Thailand ) Ltd.**

296 Moo 4, Lardkrabang Industrial Estate  
EPZ 3 Chalongkrung Road  
Lumpratew, Lardkrabang  
Bangkok 10520  
Tel : 0 2739 4026  
Fax : 0 2326 0564

- (For 1. Hardware assemblies and line accessories (except damper) for single, twin-bundled and quad-bundled conductor for 115 kV, 230 kV and 500 kV transmission lines  
2. Hardware assemblies and line accessories (except damper) for overhead ground wire and OPGW  
3. Vibration dampers for conductor, overhead ground wire and OPGW  
4. Spacer dampers and rigid spacers for twin-bundled and quad-bundled conductor for 115 kV, 230 kV and 500 kV transmission lines)

**Dulhunty Power (Thailand) Ltd.**

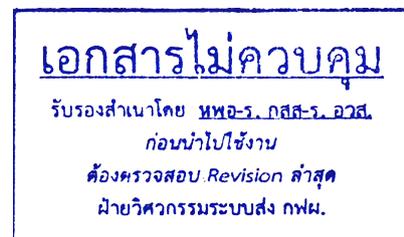
1/5 Moo 3  
Nam Daeng  
Muang Chachoengsao  
Chachoengsao 24000  
Tel : 033 590 841  
Fax : 033 590 842

- (For 1. Hardware assemblies and line accessories (except damper) for single, twin-bundled and quad-bundled conductor for 115 kV, 230 kV and 500 kV transmission lines  
2. Hardware assemblies and line accessories (except damper) for overhead ground wire and OPGW  
3. Vibration dampers for conductor, overhead ground wire and OPGW  
4. Spacer dampers and rigid spacers for twin-bundled and quad-bundled conductor for 115 kV, 230 kV and 500 kV transmission lines)

**Mosdorfer (Thailand) Co., Ltd.**

10/96 The Trendy Building, 6<sup>th</sup> floor  
Soi Sukhumvit 13 (Sangjan)  
Klong Toey Nuea, Wattana  
Bangkok 10110  
Tel : 02 182 8351  
Fax : 02 182 8350

- (For 1. Hardware assemblies and line accessories (except damper) for single, twin-bundled and quad-bundled conductor for 115 kV, 230 kV and 500 kV transmission lines  
2. Hardware assemblies and line accessories (except damper) for overhead ground wire and OPGW  
3. Vibration dampers for conductor, overhead ground wire and OPGW



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*Sorasil Himmaman*

4. Spacer dampers and rigid spacers for twin-bundled and quad-bundled conductor for 115 kV, 230 kV and 500 kV transmission lines)

It shall be noted that the spacer damper for quad-bundled conductor for 500 kV transmission line is allowed to be initially supplied to only one contract. Any further contracts shall be allowed after the said Equipment under the first contract has been certified by a certification issued by EGAT for its successful operation in EGAT's transmission line for an appropriate period of time.

3) **OVERHEAD GROUND WIRE**

**Thai Wire Products Public Company Limited**

99/2 MOO 8 ZEER STREET BUILDING 7TH FL  
Phahonyothin Road, Lamlookka  
Pathum Thani 12130  
Tel : 0 2992 6863-7  
Fax : 0 2992 6870-1

**USHA Siam Steel Industries Public Company Limited**

209/1 K-Tower-B. 22<sup>nd</sup> Floor  
Unit 3/1 Sukhumvit 21 Road (Asok)  
Bangkok 10110  
Tel : 0 2261 7361-4  
Fax : 0 2640 8227

**Charoeng Thai Wire & Cable Public Company Limited**

589/71 Central City Tower  
Floor 12A, Bangna Trad Road  
Bangna, Bangna District  
Bangkok 10260  
Tel : 0 2745 6118  
Fax : 0 2745 6131-32

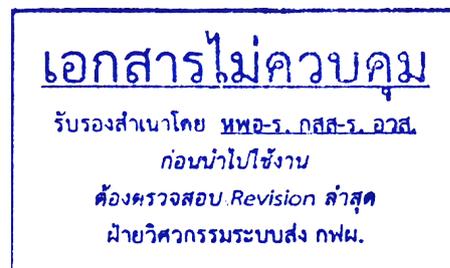
4) **GROUNDING MATERIALS**

**K.M.L. Technology Co., Ltd.**

100/3 Thasabansongkrow Road  
Ladyao, Jatujak  
Bangkok 10900  
Tel : 0 2954 3455  
Fax : 0 2591 7891

**G.K. Assembly Co., Ltd.**

110/9-10 Moo 2  
Maha Sawat, Bang Kruai District  
Nonthaburi 11130  
Tel : 0 2985 2250-3  
Fax. 0 2985 1910



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*Soravit Himmam*

5) **CONDUCTOR**

**Bangkok Cable Co., Ltd.**

187/1 Rajdamri Road  
Lumpinee, Pathumwan  
Bangkok 10330  
Tel : 0 2254 4550-6  
Fax : 0 2253 5973, 0 2253 6028, 0 2254 3859

**Charoeng Thai Wire & Cable Public Company Limited**

589/71 Central City Tower  
Floor 12A, Bangna -Trad Road  
Bangna, Bangna District  
Bangkok 10260  
Tel : 0 2745 6118  
Fax : 0 2745 6131-32

**Phelps Dodge International (Thailand) Limited**

16<sup>th</sup> Floor, Maneeya Center Building  
518/5 Ploenchit Road  
Lumpinee, Pathumwan  
Bangkok 10330  
Tel : 0 2652 0588, 0 2680 5862  
Fax : 0 2680 5896

**Thai-Yazaki Electric Wire Co., Ltd.**

21<sup>st</sup> Floor, O-NES Tower,  
6 Sukhumvit Soi 6  
Klongtoey Sub-District  
Klongtoey District  
Bangkok 10110  
Tel : 0 2653 2550  
Fax : 0 2653 2613-14

**Venine Cable Electric Wire Company Limited**

88/8-9 Moo 2 Ladbualuang-Maitra Rd.  
Ladbualuang, Ladbualuang  
Ayutthaya 13230  
Tel : 0 3528 0493  
Fax : 0 3528 0494



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*Sorasilde Hinthorn*

**Fuhrer Wire and Cable Co., Ltd.**

70 Moo 2, Bankao-Panthong Road  
Panthong  
Chonburi 20160  
Tel : 0 3845 2906-7  
Fax : 0 3845 2899  
(For manufacturing of Transmission Line Conductor up to 230 kV)

6) **NON-METALLIC OPTICAL FIBER CABLE (OFC)**

**Thai China Fiber Optics Co., Ltd.**

488 Soi Ratchadapisek 26,  
Samsennog, Huaykwang,  
Bangkok 10310  
Tel : 0 2975 9901  
Fax : 0 2975 9925

**HBC Telecom Co., Ltd.**

187/1 Rajadamri Road,  
Lumpinee, Pathumwan  
Bangkok 10330  
Tel : 0 2650 5002 To 3 Ext.111,112  
Fax : 0 2651 9261

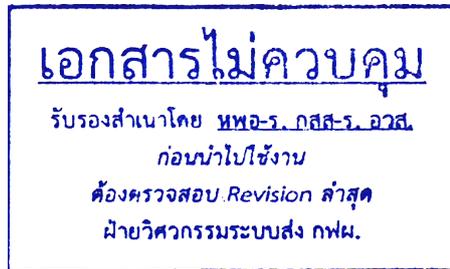
**Siam Fiber Optics Co., Ltd.**

Floor 12 A, Central City Tower  
589/71 Bangna-Trad Road, Km.3  
Bangna, Bangna,  
Bangkok 10260  
Tel : 0 2745 6118-30  
Fax : 0 2745 6575

7) **CROSS-LINKED POLYETHYLENE (XLPE) CABLE**

**Phelps Dodge International (Thailand) Limited**

16th Floor, Maneeya Center Building  
518/5 Ploenchit Road  
Lumpinee, Pathumwan  
Bangkok 10330  
Tel : 0 2652 0588, 0 2680 5862  
Fax : 0 2680 5896



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(For 230 kV Underground Transmission Line with XLPE Cable)

It shall be noted that the 230 kV XLPE Cable is allowed to be supplied to only one contract at the first stage. Any further contracts shall be allowed after the said Equipment under the first contract is certified by a certification letter issued by EGAT that it has been provided at least one (1) year successful operation in EGAT system.

*Sorasil Himmaman*

**SECTION H**  
**ATTACHMENTS**

Attachment No. 1 : List of Equipment to be Furnished by EGAT

**ATTACHMENT NO. 1**

**LIST OF EQUIPMENT TO BE FURNISHED BY EGAT**

The Equipment listed herein shall be furnished by EGAT in Bangkok and/or its vicinity, at the point to be designated by EGAT as soon as possible after confirmation of Letter of Award of Contract. Any Equipment not listed herein but required for construction for completion of the Work shall be furnished by the Contractor at his own expenses.

<b><u>Item</u></b>	<b><u>Description</u></b>	<b><u>Estimated Quantity</u></b>
1.	1272 MCM ACSR/GA Conductor as per Schedule 1E Item 1E1.1	1,804.80 km
2.	1272 MCM ACSR/GA Conductor as per Schedule 2E Item 2E1.1	60.00 km

- Note :**
1. The estimated quantity of conductor shown above is an approximate amount. The actual quantity of conductor to be furnished by EGAT will be in accordance with the actual horizontal distance of the section to be installed after checking survey and staking have been performed, Plus a Fixed extra of 1.5 percent to cover sag, terrain irregularities and wastage.
  2. The conductor furnished will have characteristics as specified in Specifications No. L-500 kV (Revision 1) Construction of 500 kV Transmission Line, April 2001.