

# 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) Download the Registration Form and fill out all necessary information by typing. (Complete data is required.)
- 2) 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.

- 3) Submit the fill-out Registration Form and the proof of payment from 1) to the email address of the in-charge officer and [procurement.tse@egat.co.th](mailto:procurement.tse@egat.co.th) in the CC. before 15.00 hrs. Bangkok Standard Time.
- 4) 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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# Registration Form

Invitation to Bid No. TNRP-L18A-OP

Supply and Construction for Replacement of Overhead Ground Wire with  
Composite Overhead Ground Wire with Optical Fiber (OPGW)

Telecommunication Network Renovation Project (TNRP) Phase 18

Available Duration for Purchasing : July 21, 2023 to August 21, 2023

Price of Bidding Documents : USD 100.- or Baht 3,000.-

## Instructions

- 1) 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.
- 2) Fill out this Registration Form in English by typing. (Complete data is required.)
- 3) Submit the filled-out Registration Form and the proof of payment to the in-charge officer via email [suparoek.int@egat.co.th](mailto:suparoek.int@egat.co.th) and [aradee.s@egat.co.th](mailto:aradee.s@egat.co.th) (with cc. [procurement.tse@egat.co.th](mailto:procurement.tse@egat.co.th)) before 15.00 hrs. Bangkok Standard Time.
- 4) 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, which will take approximately 3 working days.

For Purchaser		TAX ID :
No.	Receipt No. :	Date :
Bidder's Name		
Address		
		Country :
Name of Contact Person :		Tel.
		Mobile No.
Email Address :		
Local Representative		
Address		
		Tax ID :
Name of Contact Person :		Tel.
		Mobile No.
Email Address :		
For Procurement Officer		Change of Bidder's Name
Bidder's Letter No. :		TAX ID :
		Dated :
New Bidder's Name		
Address		
		Country :
Name of Contact Person :		Tel.
		Mobile No.
Email Address :		
Contact Information of In-charge Officer		
Name	Ms. Chalita Pengnoo / Ms. Aradee Srisomon	
Email address	chalita.pengnoo@egat.co.th / aradee.s@egat.co.th	
Telephone No.	66 2436 0342	
Mobile No.	6696 186 5269	



## Invitation to Bid No. TNRP-L18A-OP

### Supply and Construction for Replacement of Overhead Ground Wire with Composite Overhead Ground Wire with Optical Fiber (OPGW) Telecommunication Network Renovation Project (TNRP) Phase 18

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 :

- 500 kV Chom Bung – Ratchaburi 3 Transmission Line (approx. 26.79 kilometers)
- 230 kV Ban Pong 2 – Sai Noi Transmission Line (approx. 53.77 kilometers)
- 230 kV Ratchaburi 2 – Ratchaburi 3 Transmission Line (approx. 21.06 kilometers)
- 230 kV Bang Saphan – Prachuap Khiri Khan Transmission Line (approx. 59.12 kilometers)
- 115 kV Phetchaburi – Ratchaburi 2 Transmission Line (approx. 53.11 kilometers)
- 115 kV Cha-Am – Hua Hin Transmission Line (approx. 28.50 kilometers)
- 115 kV Hua Hin – Pran Buri Transmission Line (approx. 25.49 kilometers)
- 115 kV Prachuap Khiri Khan – Pran Buri Transmission Line (approx. 62.57 kilometers)
- 230 kV Rajjaprabha – Surat Thani Transmission Line (approx. 51.49 kilometers)
- 115 kV Phangnga – Rajjaprabha Transmission Line (approx. 79.35 kilometers)
- 115 kV Hat Yai 1 – Hat Yai 2 Transmission Line (approx. 9.70 kilometers)
- 115 kV Hat Yai 1 – Phatthalung Transmission Line (approx. 81.86 kilometers)
- 115 kV Ang Thong 2 – Lop Buri 2 Transmission Line (approx. 42.86 kilometers)
- 115 kV Chai Badan – Lop Buri 2 Transmission Line (approx. 81.64 kilometers)
- 115 kV Tak 1 – Tak 2 (Junction) Transmission Line (approx. 13.50 kilometers)
- 115 kV Mae Sot – Tak 2 (Junction) Transmission Line (approx. 79.26 kilometers)

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

THB 181,071,885.23 (excluding cost of the Dismantled Equipment to be purchased by Bidder)

#### 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.

*Chattiya C.*

**Availability of Bidding Documents**

Bidding Documents will be available for online purchase during 8:00 hrs. to 15:00 hrs., Bangkok Standard Time, as from July 21, 2023 to August 21, 2023 at USD 100.- or Baht 3,000.- per copy, non-refundable.

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

**Delivery of Bids**

Bids shall be submitted at Bidding Room, 1<sup>st</sup> Floor, Tor 082 Building during 09:30 hrs. to 10:00 hrs., Bangkok Standard Time, September 19, 2023 and will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

July 21, 2023



(Miss Chattiya Chandhanayingyong)

Chief, International Procurement Department –  
Transmission Segment





## ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เรื่อง ประกวดราคาจ้าง เลขที่ TNRP-L18A-OP

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะจัดซื้อและจ้างก่อสร้างเปลี่ยนสาย Overhead Ground Wire เป็น Composite Overhead Ground Wire with Optical Fiber (OPGW) สำหรับ โครงการปรับปรุงโครงข่ายโทรคมนาคมระยะที่ 18 โดยทำสัญญาแบบปรับราคาได้ (ค่า k) โดยใช้งบประมาณ กฟผ.

### สถานที่ก่อสร้าง :

- จากสายส่งไฟฟ้าแรงสูง 500 kV จอมบึง ถึง ราชบุรี 3 (ระยะทางประมาณ 26.79 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 230 kV บ้านโป่ง 2 ถึง ไทรน้อย (ระยะทางประมาณ 53.77 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 230 kV ราชบุรี 2 ถึง ราชบุรี 3 (ระยะทางประมาณ 21.06 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 230 kV บางสะพาน ถึง ประจวบคีรีขันธ์ (ระยะทางประมาณ 59.12 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV เพชรบุรี ถึง ราชบุรี 2 (ระยะทางประมาณ 53.11 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV ชะอำ ถึง หัวหิน (ระยะทางประมาณ 28.50 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV หัวหิน ถึง ปราณบุรี (ระยะทางประมาณ 25.49 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV ประจวบคีรีขันธ์ ถึง ปราณบุรี (ระยะทางประมาณ 62.57 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 230 kV รัชชประภา ถึง สุราษฎร์ธานี (ระยะทางประมาณ 51.49 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV พังงา ถึง รัชชประภา (ระยะทางประมาณ 79.35 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV หาดใหญ่ 1 ถึง หาดใหญ่ 2 (ระยะทางประมาณ 9.70 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV หาดใหญ่ 1 ถึง พัทลุง (ระยะทางประมาณ 81.86 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV อ่างทอง 2 ถึง ลพบุรี 2 (ระยะทางประมาณ 42.86 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV ชัยบาดาล ถึง ลพบุรี 2 (ระยะทางประมาณ 81.64 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV ตาก 1 ถึง จุดแยกตาก 2 (ระยะทางประมาณ 13.50 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 115 kV แม่สอด ถึง จุดแยกตาก 2 (ระยะทางประมาณ 79.26 กิโลเมตร)

### ราคากลาง (รวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ) :

181,071,885.23 บาท (ไม่รวมราคาอุปกรณ์หรือถนนที่กำหนดให้ผู้ยื่นข้อเสนอรับซื้อจาก กฟผ.)

### 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. ต้องไม่เป็นผู้ได้รับเอกสิทธิ์หรือความคุ้มกัน ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และความคุ้มกันเช่นนั้น
5. ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม (Joint Venture or Consortium) จะต้องดำเนินการทุกขั้นตอนของการประกวดราคา ในนามของกิจการร่วมค้าหรือกิจการค้าร่วม ตั้งแต่การเสนอราคาจนถึงสิ้นสุดข้อผูกพันกับ กฟผ.

การขายเอกสารประกวดราคา

ผู้สนใจติดต่อซื้อเอกสารประกวดราคา ในราคาชุดละ 3,000.- ในวันทำการระหว่างเวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 21 กรกฎาคม 2566 ถึงวันที่ 21 สิงหาคม 2566 ทั้งนี้ สามารถดูรายละเอียดการซื้อเอกสารประกวดราคาได้ที่เว็บไซต์ <http://www4.egat.co.th/fprocurement/biddingeng/> หรือสอบถามข้อมูลเพิ่มเติมได้ทางโทรศัพท์ หมายเลข 0 2436 0342 หรืออีเมล [procurement.tse@egat.co.th](mailto:procurement.tse@egat.co.th)

การยื่นซองประกวดราคา

กำหนดยื่นซองประกวดราคา ในวันที่ 19 กันยายน 2566 เวลา 09:30 น. ถึง 10:00 น. และเปิดซองประกวดราคา เวลา 10:00 น. ณ ห้องประกวดราคา ชั้น 1 อาคารฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ ท.082 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศ ณ วันที่ 21 กรกฎาคม 2566



(นางสาวฉัตติยา จันทนยิ่งยง)

หัวหน้ากองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง (ราคาอ้างอิง)

ในการจัดซื้อจัดจ้างที่มีใ้ใช้งานก่อสร้าง

- ชื่อโครงการ ประกวตราคาเลขที่ TNRP-L18A-OP  
งานจัดซื้อและจ้างก่อสร้างเปลี่ยนสาย Overhead Ground Wire เป็น Composite Overhead Ground Wire with Optical Fiber (OPGW)  
โครงการปรับปรุงโครงข่ายโทรคมนาคมระยะที่ 18  
/หน่วยงานเจ้าของโครงการ ฝ่ายระบบสื่อสาร การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย
- วงเงินงบประมาณที่ได้รับจัดสรร  
แผนงานระยะยาว งานปรับปรุงระบบสื่อสาร กพผ. พ.ศ. 2560 – 2564 (ICS2) ส่วนงาน OPGW งบประมาณรวมภาษีมูลค่าเพิ่ม 198 ล้านบาท
- วันที่กำหนดราคากลาง 24 พฤษภาคม 2566 (วันที่ อรส. อนุมัติ)  
ราคารวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ เป็นเงิน 181,071,885.23 บาท ราคา/หน่วย ตามเอกสารแนบ
- แหล่งที่มาของราคากลาง หลักเกณฑ์การคำนวณราคากลางเพื่อจัดซื้อจัดจ้างอุปกรณ์สื่อสาร
- รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง

5.1. นางสาวเอกอุฬาร เทวารุทธ	กอส-ส., อรส.
5.2. นางสุวันดี รอดสำอังก์	หอส-ส., กอส-ส., อรส.
5.3. นางสาวจุฑาวรรณ แซ่เล่า	วศ.7, หอส-ส., กอส-ส., อรส.

หมายเหตุ ค่าใช้จ่ายอื่นๆ ได้แก่ ค่าใช้จ่ายที่ กพผ. ต้องจ่ายตามวิธีการพิจารณาเปรียบเทียบราคาที่กำหนดไว้ในเอกสารประกวดราคา เช่น อากรขาเข้า เป็นต้น

Oran

นางสาวอัสยา ช่างวิทยากร

หจตส-ท.

21 ก.ค. 2566

## Detail of the medium price for Bid no. TNRP-L18A-OP



นางสาวอัสยา ช่างวิทยาการ  
หจตส-ท.  
21 ก.ค. 2566



นายพรัตน์ จงกองเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

Detail of the medium price for Bid No. TNRP-L18A-OP

Schedule 1	Description	Total (Baht)
1I	DISMANTLING WORK	925,512.00
1O	SUPPLY OF SERVICE OF VEHICLES	1,308,976.00
1P	SUPPLY OF SPARE EQUIPMENT	2,651,051.74
1Q	500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE	6,670,658.30
1R	230 KV BAN PONG 2 - SAI NOI TRANSMISSION LINE	10,745,775.05
1S	230 KV RATCHABURI 2 - RATCHABURI 3 TRANSMISSION LINE	4,539,419.10
1T	230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN TRANSMISSION LINE	11,847,088.19
1U	115 KV PHETCHABURI - RATCHABURI 2 TRANSMISSION LINE	10,544,430.56
1W	115 KV CHA-AM - HUA HIN TRANSMISSION LINE	5,922,685.91
1X	115 KV HUA HIN - PRAN BURI TRANSMISSION LINE	5,236,939.45
1Y	115 KV PRACHUAP KHIRI KHAN - PRAN BURI TRANSMISSION LINE	12,112,587.86
<b>Total Price For Schedule 1</b>		<b>72,505,124.16</b>
1Z	DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR	-470,688.96

Schedule 2	Description	Total (Baht)
2I	DISMANTLING WORK	1,308,976.00
2O	SUPPLY OF SERVICE OF VEHICLES	1,745,386.75
2P	SUPPLY OF SPARE EQUIPMENT	10,592,385.54
2Q	230 KV RAJJAPRABHA - SURAT THANI TRANSMISSION LINE	15,814,813.37
2R	115 KV PHANGNGA - RAJJAPRABHA TRANSMISSION LINE	2,013,986.25
2S	115 KV HAT YAI 1 - HAT YAI 2 TRANSMISSION LINE	15,999,356.68
2T	115 KV HAT YAI 1 - PHATTHALUNG TRANSMISSION LINE	618,464.00
<b>Total Price For Schedule 2</b>		<b>48,093,368.58</b>
2Z	DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR	-314,533.12

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Schedule 3	Description	Total (Baht)
3I	DISMANTLING WORK	1,308,976.00
3O	SUPPLY OF SERVICE OF VEHICLES	1,069,261.37
3P	SUPPLY OF SPARE EQUIPMENT	8,548,224.43
3Q	115 KV ANG THONG 2 - LOP BURI 2 TRANSMISSION LINE	15,911,836.57
3R	115 KV CHAI BADAN - LOP BURI 2 TRANSMISSION LINE	336,081.00
<b>Total Price For Schedule 3</b>		<b>27,174,379.37</b>
3Z	DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR	-177,458.88

Schedule 4	Description	Total (Baht)
4I	DISMANTLING WORK	1,308,976.00
4O	SUPPLY OF SERVICE OF VEHICLES	1,452,450.55
4P	SUPPLY OF SPARE EQUIPMENT	2,781,229.67
4R	115 KV TAK 1 - TAK 2 (JUNCTION) TRANSMISSION LINE	15,647,976.62
4S	115 KV MAE SOT - TAK 2 (JUNCTION) TRANSMISSION LINE	262,556.00
<b>Total Price For Schedule 4</b>		<b>21,453,188.84</b>
4Z	DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR	-133,528.48

<b>Summary Price (Schedule 1,2,3 and 4)</b>		<b>169,226,060.96</b>
VAT		11,845,824.27
<b>Total Price (Schedule 1,2,3 and 4)</b>		<b>181,071,885.23</b>
Total DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR		-1,096,209.44

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## Medium Price Schedule no. 1



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PRICE SCHEDULE FOR  
SUPPLY AND CONSTRUCTION FOR REPLACEMENT OF OVERHEAD GROUND WIRE WITH  
COMPOSITE OVERHEAD GROUND WIRE WITH OPTICAL FIBER (OPGW)

FOR

SCHEDULE 1 : 500 KV CHOM BUNG - RATCHABURI 3

230 KV BAN PONG 2 - SAI NOI

230 KV RATCHABURI 2 - RATCHABURI 3

230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN

115 KV PHETCHABURI - RATCHABURI 2

115 KV CHA-AM - HUA HIN

115 KV HUA HIN - PRAN BURI

115 KV PRACHUAP KHIRI KHAN - PRAN BURI

SCHEDULE 2 : 230 KV RAJJAPRABHA - SURAT THANI

115 KV PHANGNGA - RAJJAPRABHA

115 KV HAT YAI 1 - HAT YAI 2

115 KV HAT YAI 1 - PHATTHALUNG

SCHEDULE 3 : 115 KV ANG THONG 2 - LOP BURI 2

115 KV CHAI BADAN - LOP BURI 2

SCHEDULE 4 : 115 KV TAK 1 - TAK 2 (JUNCTION)

115 KV MAE SOT - TAK 2 (JUNCTION)

UNDER

TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

*อรุณ*  
นางสาวอัสยา ช่างวิทยากร  
หจตส-ห.  
21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

*พรรัตน์*



## TOTAL PRICE FOR SCHEDULE NO. 1

500 KV CBG - RB3, 230 KV BP2 - SNO, 230 KV RB2 - RB3, 230 KV BSP - PKK, 115 KV PB - RB2, 115 KV CA - HH, 115 KV HH - PRB, 115 KV PKK - PRB

## TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

Description	Supply of Equipment		Foreign Currency	Foreign Currency	Local Transportation	Local Transportation, Construction and Installation (excluding VAT) Baht	Purchase Price Offered for Dismantled Equipment (excluding VAT) Baht
	Foreign Supply	Local Supply					
	CIF Thai Port	Ex-works Price (excluding VAT) Baht					
	Amount	Amount					
1I : DISMANTLING WORK						925,512.00	
1O : SUPPLY OF SERVICE OF VEHICLES						1,308,976.00	
1P : SUPPLY OF SPARE EQUIPMENT	1,532,756.74	1,092,414.00			25,881.00		
1Q : 500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE	2,561,204.03	1,773,211.47				2,336,242.80	
1R : 230 KV BAN PONG 2 - SAI NOI TRANSMISSION LINE	5,115,236.41	1,979,975.94				3,650,562.70	
1S : 230 KV RATCHABURI 2 - RATCHABURI 3 TRANSMISSION LINE	1,999,756.43	915,480.72				1,624,181.96	
1T : 230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN TRANSMISSION LINE	5,613,751.19	2,184,735.44				4,048,601.56	
1U : 115 KV PHETCHABURI - RATCHABURI 2 TRANSMISSION LINE	5,043,070.46	1,925,532.82				3,575,827.28	
1W : 115 KV CHA-AM - HUA HIN TRANSMISSION LINE	2,706,223.09	1,136,077.00				2,080,385.83	
1X : 115 KV HUA HIN - PRAN BURI TRANSMISSION LINE	2,409,013.32	942,722.25				1,885,203.88	
1Y : 115 KV PRACHUAP KHIRI KHAN - PRAN BURI TRANSMISSION LINE	5,951,791.69	2,007,798.53				4,152,997.65	
<b>TOTAL PRICES</b>	<b>32,932,803.35</b>	<b>13,957,948.17</b>			<b>25,881.00</b>	<b>25,588,491.65</b>	
1Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR							- 470,688.96

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11 : DISMANTLING WORK

**IMPORTANT :**

1. Dismantling of the existing transmission line shall generally conform to Specification No. TL-07 (Rev.3) : Dismantling Work.
2. Dismantled Equipment as shown in Attachment No.2 shall be purchased by the Contractor at the prices offered in 1Z.

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
111	Dismantling work of the existing overhead ground wire of 500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE (approx. 26.83 km in transmission line distance)	lump sum	lump sum	2,800.00	75,124.00
112	Dismantling work of the existing overhead ground wire of 230 KV BAN PONG 2 - SAI NOI TRANSMISSION LINE (approx. 53.87 km in transmission line distance)	lump sum	lump sum	2,800.00	150,836.00
113	Dismantling work of the existing overhead ground wire of 230 KV RATCHABURI 2 - RATCHABURI 3 TRANSMISSION LINE (approx. 21.06 km in transmission line distance)	lump sum	lump sum	2,800.00	58,968.00
114	Dismantling work of the existing overhead ground wire of 230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN TRANSMISSION LINE (approx. 59.12 km in transmission line distance)	lump sum	lump sum	2,800.00	165,536.00
115	Dismantling work of the existing overhead ground wire of 115 KV PHETCHABURI - RATCHABURI 2 TRANSMISSION LINE (approx. 53.11 km in transmission line distance)	lump sum	lump sum	2,800.00	148,708.00
116	Dismantling work of the existing overhead ground wire of 115 KV CHA-AM - HUA HIN TRANSMISSION LINE (approx. 28.50 km in transmission line distance)	lump sum	lump sum	2,800.00	79,800.00
117	Dismantling work of the existing overhead ground wire of 115 KV HUA HIN - PRAN BURI TRANSMISSION LINE (approx. 25.37 km in transmission line distance)	lump sum	lump sum	2,800.00	71,036.00
118	Dismantling work of the existing overhead ground wire of 115 KV PRACHUAP KHIRI KHAN - PRAN BURI TRANSMISSION LINE (approx. 62.68 km in transmission line distance)	lump sum	lump sum	2,800.00	175,504.00
<b>TOTAL PRICE FOR SCHEDULE 11</b>				<b>Baht</b>	<b>925,512.00</b>

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10 : SUPPLY OF SERVICE OF VEHICLES

IMPORTANT :

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
101	Facilities and service of four-wheel-driven, four doors vehicles, at least one ton capacity, 2000 cc. nominal, gasoline engine or 2500 cc. Nominal diesel engine, equipped with air-condition. The vehicles shall be in good condition, which shall be approved by EGAT. In case used Vehicles are proposed, the used period shall not exceed two years. (refer to Article G-6. Housing and Other Facilities.) for 500 KV CHOM BUNG - RATCHABURI 3, 230 KV BAN PONG 2 - SAI NOI, 230 KV RATCHABURI 2 - RATCHABURI 3, 230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN, 115 KV PHETCHABURI - RATCHABURI 2, 115 KV CHA-AM - HUA HIN, 115 KV HUA HIN - PRAN BURI and 115 KV PRACHUAP KHIRI KHAN - PRAN BURI Transmission Line	16	car-month	81,811.00	1,308,976.00
TOTAL PRICE FOR SCHEDULE 10				Baht	1,308,976.00

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1P : SUPPLY OF SPARE EQUIPMENT

IMPORTANT :

1. Spare Equipment shall be delivered and stored at **Chom Bung Substation** in Ratchaburi Province by the Contractor.
2. The Contractor shall perform the test on the Equipment for Item No. 1P1 at EGAT's Store to guarantee that there are no damages during the transportation.

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation (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	Unit Price	Amount				
1P1	Composite overhead ground wire with 36 core optical fibers (11.4 mm. OPGW) 4,000 meter/reel	4	reel		383,189.18	1,532,756.74			Included in item 1P12	Included in item 1P12		
1P2	2-way joint box with accessories for two OPGW cables	36	set				14,616.00	526,176.00	Included in item 1P12	Included in item 1P12		
1P3	Tension assembly (grounded) with accessories	36	set				1,820.00	65,520.00	Included in item 1P12	Included in item 1P12		
1P4	Suspension assembly (grounded) with accessories	18	set				2,654.00	47,772.00	Included in item 1P12	Included in item 1P12		
1P5	Fiber frame termination cabinet with cable tray	4	set				12,745.00	50,980.00	Included in item 1P12	Included in item 1P12		
1P6	36 pigtails (1.5 meter)	4	set				4,576.00	18,304.00	Included in item 1P12	Included in item 1P12		
1P7	1-wire cleat (grounded)	50	set				794.00	39,700.00	Included in item 1P12	Included in item 1P12		
1P8	2-wire cleat (grounded)	270	set				825.00	222,750.00	Included in item 1P12	Included in item 1P12		
1P9	6-wire cleat (grounded)	72	set				1,464.00	105,408.00	Included in item 1P12	Included in item 1P12		
1P10	Parallel groove clamp	36	set				254.00	9,144.00	Included in item 1P12	Included in item 1P12		
1P11	Grounding clamp	36	set				185.00	6,660.00	Included in item 1P12	Included in item 1P12		
1P12	Local transportation for item 1P1 to 1P11	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	25,881.00	25,881.00		
TOTAL PRICE FOR SCHEDULE 1P					Baht	1,532,756.74	Baht	1,092,414.00	Baht	25,881.00		

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Schedule 1Q : 500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. Contractor shall be responsible for providing sufficient amount of 36 core non-metallic optical fiber cable, with reference to EGAT's specification, in order to connect joint boxes on the tower. In addition, the outer jacket of the cable shall be made of black HDPE/PE with colour strip(s).

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1Q1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
1Q1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	2,561,204.03	2,561,204.03			Included in Item 1Q1.2	Included in Item 1Q1.2
1Q1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Chom Bung substation to Ratchaburi 3 substation	26.83	km	XXXXX	XXXXX	XXXXX	XXXXX	1,790,129.80	1,790,129.80
<b>1Q2</b>	<b>Non-metallic optical fiber cable (OFC) at Chom Bung substation</b>								
1Q2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Chom Bung control building	550.00	meter			140.00	77,000.00	Included in Item 1Q2.4	Included in Item 1Q2.4
1Q2.2	Rigid steel conduit from take-off structure to cable trench for item 1Q2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1Q2.4	Included in Item 1Q2.4
1Q2.3	EFLEX and/or HDPE conduit for item 1Q2.1 in cable trench	lump sum	lump sum			102.00	56,100.00	Included in Item 1Q2.4	Included in Item 1Q2.4
1Q2.4	Laying of optical fiber cable with accessories for item 1Q2.1, 1Q2.2, 1Q2.3	550.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	215,600.00
1Q2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1Q2.6	Fiber frame termination cabinet with cable tray (Chom Bung control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1Q2.7	36 pigtails (1.5 meter) (Chom Bung control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

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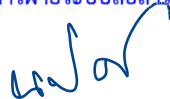
**Schedule 1Q : 500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE**

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. Contractor shall be responsible for providing sufficient amount of 36 core non-metallic optical fiber cable, with reference to EGAT's specification, in order to connect joint boxes on the tower. In addition, the outer jacket of the cable shall be made of black HDPE/PE with colour strip(s).

Item.	Description	Estimated Qty.	Unit	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>1Q3</b>	<b>Non-metallic optical fiber cable (OFC) at Ratchaburi 3 substation</b>								
1Q3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet Ratchaburi 3 control building	650.00	meter			140.00	91,000.00	Included in Item 1Q3.4	Included in Item 1Q3.4
1Q3.2	Rigid steel conduit from take-off structure to cable trench for item 1Q3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1Q3.4	Included in Item 1Q3.4
1Q3.3	EFLEX and/or HDPE conduit for item 1Q3.1 in cable trench	lump sum	lump sum			102.00	66,300.00	Included in Item 1Q3.4	Included in Item 1Q3.4
1Q3.4	Laying of optical fiber cable with accessories for item 1Q3.1, 1Q3.2, 1Q3.3	650.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	254,800.00
1Q3.5	19" closed rack cabinet (Ratchaburi 3 control building - 1)	1	set			25,385.00	25,385.00	7,743.00	7,743.00
1Q3.6	Fiber frame termination cabinet with cable tray (Ratchaburi 3 control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1Q3.7	36 pigtails (1.5 meter) (Ratchaburi 3 control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>1Q4</b>	<b>Warning sign required as shown on Drawing No.TP150.1</b>	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
<b>1Q5</b>	<b>Joint boxes for optical fiber cable</b>								
1Q5.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q5.2	2-way joint box with insulator and accessories for two OPGW cables	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q5.3	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable on the tower located between Chom Bung and Ratchaburi 3 substation (36 core non-metallic optical fiber cable included)	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q5.4	2-way joint box with accessories for OPGW cable and 36 core non-metallic optical fiber cable on the tower located about 2 km apart from each substation (36 core non-metallic optical fiber cable included)	2	set			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q5.5	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2

  
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**Schedule 1Q : 500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE**

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. Contractor shall be responsible for providing sufficient amount of 36 core non-metallic optical fiber cable, with reference to EGAT's specification, in order to connect joint boxes on the tower. In addition, the outer jacket of the cable shall be made of black HDPE/PE with colour strip(s).

Item.	Description	Estimated Qty.	Unit	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>1Q6</b>	<b>Splicing work</b>								
1Q6.1	Connecting two OPGW cables for item 1Q5.1 and 1Q5.2	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Q1.2	Included in 1Q1.2
1Q6.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1Q5.3	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Q1.2	Included in 1Q1.2
1Q6.3	Connecting OPGW cable and non-metallic optical fiber cable for item 1Q5.4 on the tower located about 2 km apart from each substation	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Q1.2	Included in 1Q1.2
1Q6.4	Connecting OPGW cable and non-metallic optical fiber cable for item 1Q5.5 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Q1.2	Included in 1Q1.2
1Q6.5	Connecting OFC and pigtails for item 1Q2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Q1.2	Included in 1Q1.2
1Q6.6	Connecting OFC and pigtails for item 1Q3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Q1.2	Included in 1Q1.2
<b>1Q7</b>	<b>Hardware assembly for OPGW</b>								
1Q7.1	OPGW suspension (Insulated) assembly 21 with armor rods (excluding insulator and vibration damper)	lump sum	lump sum			1,408,816.47	1,408,816.47	Included in 1Q1.2	Included in 1Q1.2
1Q7.2	OPGW suspension (Grounded) assembly 22 with armor rods (excluding vibration damper)	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q7.3	OPGW tension (Insulated) assembly 23 with armor rods and arcing horns (excluding insulator and vibration damper)	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q7.4	OPGW tension (Grounded) assembly 24 with armor rods (excluding vibration damper)	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q7.5	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2

  
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**Schedule 1Q : 500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE**

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. Contractor shall be responsible for providing sufficient amount of 36 core non-metallic optical fiber cable, with reference to EGAT's specification, in order to connect joint boxes on the tower. In addition, the outer jacket of the cable shall be made of black HDPE/PE with colour strip(s).

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1Q8</b>	<b>Line accessories</b>								
1Q8.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.2	Parallel groove clamps	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.3	Grounding clamps	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.7	1-wire cleat with insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.8	2-wire cleat with insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.9	6-wire cleat with insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.10	Jumper cleat for OPGW on tension-type tower	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.11	Jumper cleat with insulator for OPGW on tension-type tower	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
1Q8.12	Porcelain or glass insulator ANSI CLASS 52-8 (36,000 lbs) with corrosion proof type pin	lump sum	lump sum	Supply by EGAT	Supply by EGAT			Included in 1Q1.2	Included in 1Q1.2
1Q8.13	Insulator strain type ANSI CLASS 54-2	lump sum	lump sum	Included in 1Q1.1	Included in 1Q1.1			Included in 1Q1.2	Included in 1Q1.2
1Q8.14	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1Q7.1	Included in 1Q7.1	Included in 1Q1.2	Included in 1Q1.2
<b>1Q9</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Q1.2	Included in 1Q1.2
<b>TOTAL PRICE FOR SCHEDULE 1Q</b>				<b>Baht</b>	<b>2,561,204.03</b>	<b>Baht</b>	<b>1,773,211.47</b>	<b>Baht</b>	<b>2,336,242.80</b>

  
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Schedule 1R : 230 KV BAN PONG 2 - SAI NOI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1R1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
1R1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	5,115,236.41	5,115,236.41			Included in in Item 1R1.2	Included in in Item 1R1.2
1R1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Ban Pong 2 substation to Sai Noi substation	53.87	km	XXXXX	XXXXX	XXXXX	XXXXX	3,359,249.70	3,359,249.70
<b>1R2</b>	<b>Non-metallic optical fiber cable (OFC) at Ban Pong 2 Substation</b>								
1R2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Ban Pong 2 control building	350.00	meter			140.00	49,000.00	Included in Item 1R2.4	Included in Item 1R2.4
1R2.2	Rigid steel conduit from take-off structure to cable trench for item 1R2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1R2.4	Included in Item 1R2.4
1R2.3	EFLEX and/or HDPE conduit for item 1R2.1 in cable trench	lump sum	lump sum			102.00	35,700.00	Included in Item 1R2.4	Included in Item 1R2.4
1R2.4	Laying of optical fiber cable with accessories for item 1R2.1, 1R2.2, 1R2.3	350.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	137,200.00
1R2.5	19" closed rack cabinet (Ban Pong 2 control building - 1)	1	set			25,385.00	25,385.00	7,743.00	7,743.00
1R2.6	Fiber frame termination cabinet with cable tray (Ban Pong 2 control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1R2.7	36 pigtails (1.5 meter) (Ban Pong 2 control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>1R3</b>	<b>Non-metallic optical fiber cable (OFC) at Sai Noi Substation</b>								
1R3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Sai Noi control building	200.00	meter			140.00	28,000.00	Included in Item 1R3.4	Included in Item 1R3.4
1R3.2	Rigid steel conduit from take-off structure to cable trench for item 1R3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1R3.4	Included in Item 1R3.4
1R3.3	EFLEX and/or HDPE conduit for item 1R3.1 in cable trench	lump sum	lump sum			102.00	20,400.00	Included in Item 1R3.4	Included in Item 1R3.4
1R3.4	Laying of optical fiber cable with accessories for item 1R3.1, 1R3.2, 1R3.3	200.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	78,400.00
1R3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1R3.6	Fiber frame termination cabinet with cable tray (Sai Noi control building - 1)	1	set			12,745.00	4,576.00	31,130.00	31,130.00
1R3.7	36 pigtails (1.5 meter) (Sai Noi control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

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Schedule 1R : 230 KV BAN PONG 2 - SAI NOI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1R4</b>	<b>Joint boxes for optical fiber cable</b>								
1R4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
<b>1R5</b>	<b>Splicing work</b>								
1R5.1	Connecting two OPGW cables for item 1R4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1R1.2	Included in 1R1.2
1R5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1R4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1R1.2	Included in 1R1.2
1R5.3	Connecting OFC and pigtails for item 1R2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1R1.2	Included in 1R1.2
1R5.4	Connecting OFC and pigtails for item 1R3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1R1.2	Included in 1R1.2
<b>1R6</b>	<b>Hardware assembly for OPGW</b>								
1R6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			1,781,049.94	1,781,049.94	Included in 1R1.2	Included in 1R1.2
1R6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2

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Schedule 1R : 230 KV BAN PONG 2 - SAI NOI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1R7</b>	<b>Line accessories</b>								
1R7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.2	Parallel groove clamps	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.3	Grounding clamps	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 1R6.1	Included in 1R6.1	Included in 1R1.2	Included in 1R1.2
1R7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1R6.3	lump sum	lump sum	Included in 1R1.1	Included in 1R1.1			Included in 1R1.2	Included in 1R1.2
1R7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1R7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1R6.1	Included in 1R6.1	included in 1R1.2	included in 1R1.2
<b>1R8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	included in 1R1.2	included in 1R1.2
<b>TOTAL PRICE FOR SCHEDULE 1R</b>				<b>Baht</b>	<b>5,115,236.41</b>	<b>Baht</b>	<b>1,979,975.94</b>	<b>Baht</b>	<b>3,650,562.70</b>

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นางสาวอัสยา ช่างวิทยากร  
จดส.ท.  
21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร  
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Schedule 1S : 230 KV RATCHABURI 2 - RATCHABURI 3 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	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 (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1S1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>									
1S1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum		1,999,756.43	1,999,756.43			Included in Item 1S1.2	Included in Item 1S1.2
1S1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Ratchaburi 2 substation to Ratchaburi 3 substation	21.06	km		XXXXX	XXXXX	XXXXX	XXXXX	1,313,268.96	1,313,268.96
<b>1S2</b>	<b>Non-metallic optical fiber cable (OFC) at Ratchaburi 2 Substation</b>									
1S2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Ratchaburi 2 control building	200.00	meter				140.00	28,000.00	Included in Item 1S2.4	Included in Item 1S2.4
1S2.2	Rigid steel conduit from take-off structure to cable trench for item 1S2.1	lump sum	lump sum				582.00	6,984.00	Included in Item 1S2.4	Included in Item 1S2.4
1S2.3	EFLEX and/or HDPE conduit for item 1S2.1 in cable trench	lump sum	lump sum				102.00	20,400.00	Included in Item 1S2.4	Included in Item 1S2.4
1S2.4	Laying of optical fiber cable with accessories for item 1S2.1, 1S2.2, 1S2.3	200.00	meter		XXXXX	XXXXX	XXXXX	XXXXX	392.00	78,400.00
1S2.5	19" closed rack cabinet (Ratchaburi 2 control building - 1)	1	set				25,385.00	25,385.00	7,743.00	7,743.00
1S2.6	Fiber frame termination cabinet with cable tray (Ratchaburi 2 control building - 1)	1	set				12,745.00	12,745.00	31,130.00	31,130.00
1S2.7	36 pigtails (1.5 meter) (Ratchaburi 2 control building - 1)	1	set				4,576.00	4,576.00	2,855.00	2,855.00
<b>1S3</b>	<b>Non-metallic optical fiber cable (OFC) at Ratchaburi 3 Substation</b>									
1S3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Ratchaburi 3 control building	400.00	meter				140.00	56,000.00	Included in Item 1S3.4	Included in Item 1S3.4
1S3.2	Rigid steel conduit from take-off structure to cable trench for item 1S3.1	lump sum	lump sum				582.00	6,984.00	Included in Item 1S3.4	Included in Item 1S3.4
1S3.3	EFLEX and/or HDPE conduit for item 1S3.1 in cable trench	lump sum	lump sum				102.00	40,800.00	Included in Item 1S3.4	Included in Item 1S3.4
1S3.4	Laying of optical fiber cable with accessories for item 1S3.1, 1S3.2, 1S3.3	400.00	meter		XXXXX	XXXXX	XXXXX	XXXXX	392.00	156,800.00
1S3.5	19" closed rack cabinet	NA	set		XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1S3.6	Fiber frame termination cabinet with cable tray (Ratchaburi 3 control building - 1)	1	set				12,745.00	12,745.00	31,130.00	31,130.00
1S3.7	36 pigtails (1.5 meter) (Ratchaburi 3 control building - 1)	1	set				4,576.00	4,576.00	2,855.00	2,855.00

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นางสาวอัสยา ช่างวิทยากร  
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21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1S : 230 KV RATCHABURI 2 - RATCHABURI 3 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	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>1S4</b>	<b>Joint boxes for optical fiber cable</b>									
1S4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2	
1S4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2	
<b>1S5</b>	<b>Splicing work</b>									
1S5.1	Connecting two OPGW cables for item 1S4.1	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX	Included in 1S1.2	Included in 1S1.2
1S5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1S4.2 at take-off structure	2	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 1S1.2	Included in 1S1.2
1S5.3	Connecting OFC and pigtailed for item 1S2.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 1S1.2	Included in 1S1.2
1S5.4	Connecting OFC and pigtailed for item 1S3.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 1S1.2	Included in 1S1.2
<b>1S6</b>	<b>Hardware assembly for OPGW</b>									
1S6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum				696,285.72	696,285.72	Included in 1S1.2	Included in 1S1.2
1S6.2	OPGW tension assembly (Grounded)	lump sum	lump sum				Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2
1S6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set				Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2

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21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร



Schedule 1S : 230 KV RATCHABURI 2 - RATCHABURI 3 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	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 (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
<b>1S7</b>	<b>Line accessories</b>										
1S7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.2	Parallel groove clamps	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.3	Grounding clamps	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1S6.3	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
1S7.10	Insulator strain type ANSI CLASS 54-2	NA	each		XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	
1S7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1S6.1	Included in 1S6.1	Included in 1S1.2	Included in 1S1.2		
<b>1S8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX	Included in 1S1.2	Included in 1S1.2	
<b>TOTAL PRICE FOR SCHEDULE 1S</b>						<b>Baht</b>	<b>1,999,756.43</b>	<b>Baht</b>	<b>915,480.72</b>	<b>Baht</b>	<b>1,624,181.96</b>

นางสาวอัสยา ช่างวิทย์ภากร  
 หจตส-ท.  
 21 ก.ค. 2566

นายพรตน์ จงกองเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1T : 230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	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>1T1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
1T1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	5,613,751.19	5,613,751.19			Included in Item 1T1.2	Included in Item 1T1.2
1T1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Bang Saphan substation to Prachuap Khiri Khan substation	59.12	km	XXXXX	XXXXX	XXXXX	XXXXX	3,686,631.56	3,686,631.56
<b>1T2</b>	<b>Non-metallic optical fiber cable (OFC) at Bang Saphan Substation</b>								
1T2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Bang Saphan control building	300.00	meter			140.00	42,000.00	Included in Item 1T2.4	Included in Item 1T2.4
1T2.2	Rigid steel conduit from take-off structure to cable trench for item 1T2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1T2.4	Included in Item 1T2.4
1T2.3	EFLEX and/or HDPE conduit for item 1T2.1 in cable trench	lump sum	lump sum			102.00	30,600.00	Included in Item 1T2.4	Included in Item 1T2.4
1T2.4	Laying of optical fiber cable with accessories for item 1T2.1, 1T2.2, 1T2.3	300.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	117,600.00
1T2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1T2.6	Fiber frame termination cabinet with cable tray (Bang Saphan control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1T2.7	36 pigtails (1.5 meter) (Bang Saphan control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>1T3</b>	<b>Non-metallic optical fiber cable (OFC) at Prachuap Khiri Khan substation</b>								
1T3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Prachuap Khiri Khan control building	450.00	meter			140.00	63,000.00	Included in Item 1T3.4	Included in Item 1T3.4
1T3.2	Rigid steel conduit from take-off structure to cable trench for item 1T3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1T3.4	Included in Item 1T3.4
1T3.3	EFLEX and/or HDPE conduit for item 1T3.1 in cable trench	lump sum	lump sum			102.00	45,900.00	Included in Item 1T3.4	Included in Item 1T3.4
1T3.4	Laying of optical fiber cable with accessories for item 1T3.1, 1T3.2, 1T3.3	450.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	176,400.00
1T3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1T3.6	Fiber frame termination cabinet with cable tray (Prachuap Khiri Khan control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1T3.7	36 pigtails (1.5 meter) (Prachuap Khiri Khan control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

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นางสาวอัสยา ช่างวิทยากร  
หจตส.ท.  
21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1T : 230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1T4</b>	<b>Joint boxes for optical fiber cable</b>								
1T4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
<b>1T5</b>	<b>Splicing work</b>								
1T5.1	Connecting two OPGW cables for item 1T4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	included in 1T1.2	included in 1T1.2
1T5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1T4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	included in 1T1.2	included in 1T1.2
1T5.3	Connecting OFC and pigtailed for item 1T2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	included in 1T1.2	included in 1T1.2
1T5.4	Connecting OFC and pigtailed for item 1T3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	included in 1T1.2	included in 1T1.2
<b>1T6</b>	<b>Hardware assembly for OPGW</b>								
1T6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			1,954,625.44	1,954,625.44	included in 1T1.2	included in 1T1.2
1T6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2

นางสาวอัสยา ช่างวิทยากร  
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 21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร



Schedule 1T : 230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	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>1T7</b>	<b>Line accessories</b>								
1T7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.2	Parallel groove clamps	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.3	Grounding clamps	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1T6.3	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
1T7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1T7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1T6.1	Included in 1T6.1	included in 1T1.2	included in 1T1.2
<b>1T8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	included in 1T1.2	included in 1T1.2
<b>TOTAL PRICE FOR SCHEDULE 1T</b>				<b>Baht</b>	<b>5,613,751.19</b>	<b>Baht</b>	<b>2,184,735.44</b>	<b>Baht</b>	<b>4,048,601.56</b>

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นางสาวอัสยา ช่างวิทยากร  
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21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1U : 115 KV PHETCHABURI - RATCHABURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1U1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
1U1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	5,043,070.46	5,043,070.46			Included in Item 1U1.2	Included in Item 1U1.2
1U1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Phetchaburi substation to Ratchaburi 2 substation	53.11	km	XXXXX	XXXXX	XXXXX	XXXXX	3,311,857.28	3,311,857.28
<b>1U2</b>	<b>Non-metallic optical fiber cable (OFC) at Phetchaburi Substation</b>								
1U2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Phetchaburi control building	150.00	meter			140.00	21,000.00	Included in Item 1U2.4	Included in Item 1U2.4
1U2.2	Rigid steel conduit from take-off structure to cable trench for item 1U2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1U2.4	Included in Item 1U2.4
1U2.3	EFLEX and/or HDPE conduit for item 1U2.1 in cable trench	lump sum	lump sum			102.00	15,300.00	Included in Item 1U2.4	Included in Item 1U2.4
1U2.4	Laying of optical fiber cable with accessories for item 1U2.1, 1U2.2, 1U2.3	150.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	58,800.00
1U2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1U2.6	Fiber frame termination cabinet with cable tray (Phetchaburi control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1U2.7	36 pigtails (1.5 meter) (Phetchaburi control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

นางสาวอัสยา ช่างวิทยากร  
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 21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1U : 115 KV PHETCHABURI - RATCHABURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1U3</b>	<b>Non-metallic optical fiber cable (OFC) at Ratchaburi 2 substation</b>								
1U3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Ratchaburi 2 control building	350.00	meter			140.00	49,000.00	Included in Item 1U3.4	Included in Item 1U3.4
1U3.2	Rigid steel conduit from take-off structure to cable trench for item 1U3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1U3.4	Included in Item 1U3.4
1U3.3	EFLEX and/or HDPE conduit for item 1U3.1 in cable trench	lump sum	lump sum			102.00	35,700.00	Included in Item 1U3.4	Included in Item 1U3.4
1U3.4	Laying of optical fiber cable with accessories for item 1U3.1, 1U3.2, 1U3.3	350.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	137,200.00
1U3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1U3.6	Fiber frame termination cabinet with cable tray (Ratchaburi 2 control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1U3.7	36 pigtails (1.5 meter) (Ratchaburi 2 control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>1U4</b>	<b>Joint boxes for optical fiber cable</b>								
1U4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
<b>1U5</b>	<b>Splicing work</b>								
1U5.1	Connecting two OPGW cables for item 1U4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1U1.2	Included in 1U1.2
1U5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1U4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1U1.2	Included in 1U1.2
1U5.3	Connecting OFC and pigtails for item 1U2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1U1.2	Included in 1U1.2
1U5.4	Connecting OFC and pigtails for item 1U3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1U1.2	Included in 1U1.2
<b>1U6</b>	<b>Hardware assembly for OPGW</b>								
1U6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			1,755,922.82	1,755,922.82	Included in 1U1.2	Included in 1U1.2
1U6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2

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นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1U : 115 KV PHETCHABURI - RATCHABURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1U7</b>	<b>Line accessories</b>								
1U7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.2	Parallel groove clamps	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.3	Grounding clamps	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
1U7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1U6.3	lump sum	lump sum	Included in 1U1.1	Included in 1U1.1			Included in 1U1.2	Included in 1U1.2
1U7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1U7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1U6.1	Included in 1U6.1	Included in 1U1.2	Included in 1U1.2
<b>1U8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1U1.2	Included in 1U1.2
<b>TOTAL PRICE FOR SCHEDULE 1U</b>				<b>Baht</b>	<b>5,043,070.46</b>	<b>Baht</b>	<b>1,925,532.82</b>	<b>Baht</b>	<b>3,575,827.28</b>

นางสาวอัสยา ช่างวิทยากร  
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นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1W : 115 KV CHA-AM - HUA HIN TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1W1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
1W1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	2,706,223.09	2,706,223.09			Included in Item 1W1.2	Included in Item 1W1.2
1W1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Cha-am substation to Hua Hin substation	28.50	km	XXXXX	XXXXX	XXXXX	XXXXX	1,777,215.83	1,777,215.83
<b>1W2</b>	<b>Non-metallic optical fiber cable (OFC) at Cha-am Substation</b>								
1W2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Cha-am control building	200.00	meter			140.00	28,000.00	Included in Item 1W2.4	Included in Item 1W2.4
1W2.2	Rigid steel conduit from take-off structure to cable trench for item 1W2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1W2.4	Included in Item 1W2.4
1W2.3	EFLEX and/or HDPE conduit for item 1W2.1 in cable trench	lump sum	lump sum			102.00	20,400.00	Included in Item 1W2.4	Included in Item 1W2.4
1W2.4	Laying of optical fiber cable with accessories for item 1W2.1, 1W2.2, 1W2.3	200.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	78,400.00
1W2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1W2.6	Fiber frame termination cabinet with cable tray (Cha-am control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1W2.7	36 pigtails (1.5 meter) (Cha-am control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

นางสาวอสา ขำวิทยาการ  
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 21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

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Schedule 1W : 115 KV CHA-AM - HUA HIN TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. **The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.**

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1W3</b>	<b>Non-metallic optical fiber cable (OFC) at Hua Hin substation</b>								
1W3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Hua Hin control building	400.00	meter			140.00	56,000.00	Included in Item 1W3.4	Included in Item 1W3.4
1W3.2	Rigid steel conduit from take-off structure to cable trench for item 1W3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1W3.4	Included in Item 1W3.4
1W3.3	EFLEX and/or HDPE conduit for item 1W3.1 in cable trench	lump sum	lump sum			102.00	40,800.00	Included in Item 1W3.4	Included in Item 1W3.4
1W3.4	Laying of optical fiber cable with accessories for item 1W3.1, 1W3.2, 1W3.3	400.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	156,800.00
1W3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1W3.6	Fiber frame termination cabinet with cable tray (Hua Hin control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1W3.7	36 pigtails (1.5 meter) (Hua Hin control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>1W4</b>	<b>Joint boxes for optical fiber cable</b>								
1W4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
<b>1W5</b>	<b>Splicing work</b>								
1W5.1	Connecting two OPGW cables for item 1W4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1W1.2	Included in 1W1.2
1W5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1W4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1W1.2	Included in 1W1.2
1W5.3	Connecting OFC and pigtails for item 1W2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1W1.2	Included in 1W1.2
1W5.4	Connecting OFC and pigtails for item 1W3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1W1.2	Included in 1W1.2
<b>1W6</b>	<b>Hardware assembly for OPGW</b>								
1W6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			942,267.00	942,267.00	Included in 1W1.2	Included in 1W1.2
1W6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
<b>1W7</b>	<b>Line accessories</b>								
1W7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W7.2	Parallel groove clamps	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W7.3	Grounding clamps	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2

Schedule 1W : 115 KV CHA-AM - HUA HIN TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1W7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
1W7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1W6.3	lump sum	lump sum	Included in 1W1.1	Included in 1W1.1			Included in 1W1.2	Included in 1W1.2
1W7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1W7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1W6.1	Included in 1W6.1	Included in 1W1.2	Included in 1W1.2
<b>1W8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1W1.2	Included in 1W1.2
<b>TOTAL PRICE FOR SCHEDULE 1W</b>				<b>Baht</b>	<b>2,706,223.09</b>	<b>Baht</b>	<b>1,136,077.00</b>	<b>Baht</b>	<b>2,080,385.83</b>

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นางสาวอัสยา ช่างวิทยากร  
หจตส-ห.  
21 ก.ค. 2566

นายพรัดน จงกองเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 1X : 115 KV HUA HIN - PRAN BURI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1X1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
1X1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	2,409,013.32	2,409,013.32			Included in Item 1X1.2	Included in Item 1X1.2
1X1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Hua Hin substation to Pran Buri substation	25.37	km	XXXXX	XXXXX	XXXXX	XXXXX	1,582,033.88	1,582,033.88
<b>1X2</b>	<b>Non-metallic optical fiber cable (OFC) at Hua Hin Substation</b>								
1X2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Hua Hin control building	350.00	meter			140.00	49,000.00	Included in Item 1X2.4	Included in Item 1X2.4
1X2.2	Rigid steel conduit from take-off structure to cable trench for item 1X2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1X2.4	Included in Item 1X2.4
1X2.3	EFLEX and/or HDPE conduit for item 1X2.1 in cable trench	lump sum	lump sum			102.00	35,700.00	Included in Item 1X2.4	Included in Item 1X2.4
1X2.4	Laying of optical fiber cable with accessories for item 1X2.1, 1X2.2, 1X2.3	350.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	137,200.00
1X2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1X2.6	Fiber frame termination cabinet with cable tray (Hua Hin control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1X2.7	36 pigtails (1.5 meter) (Hua Hin control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

อนันต์  
นางสาวอัสยา ช่างวิทยากร  
ทจตส-ท.  
21 ก.ค. 2566

นายพรตน์ จงก่องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร



Schedule 1X : 115 KV HUA HIN - PRAN BURI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1X3</b>	<b>Non-metallic optical fiber cable (OFC) at Pran Buri substation</b>								
1X3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Pran Buri control building	250.00	meter			140.00	35,000.00	Included in Item 1X3.4	Included in Item 1X3.4
1X3.2	Rigid steel conduit from take-off structure to cable trench for item 1X3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1X3.4	Included in Item 1X3.4
1X3.3	EFLEX and/or HDPE conduit for item 1X3.1 in cable trench	lump sum	lump sum			102.00	25,500.00	Included in Item 1X3.4	Included in Item 1X3.4
1X3.4	Laying of optical fiber cable with accessories for item 1X3.1, 1X3.2, 1X3.3	250.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	98,000.00
1X3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1X3.6	Fiber frame termination cabinet with cable tray (Pran Buri control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1X3.7	36 pigtails (1.5 meter) (Pran Buri control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>1X4</b>	<b>Joint boxes for optical fiber cable</b>								
1X4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
<b>1X5</b>	<b>Splicing work</b>								
1X5.1	Connecting two OPGW cables for item 1X4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1X1.2	Included in 1X1.2
1X5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1X4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1X1.2	Included in 1X1.2
1X5.3	Connecting OFC and pigtails for item 1X2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1X1.2	Included in 1X1.2
1X5.4	Connecting OFC and pigtails for item 1X3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1X1.2	Included in 1X1.2
<b>1X6</b>	<b>Hardware assembly for OPGW</b>								
1X6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			838,782.94	748,912.25	Included in 1X1.2	Included in 1X1.2
1X6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2

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Schedule 1X : 115 KV HUA HIN - PRAN BURI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1X7</b>	<b>Line accessories</b>								
1X7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.2	Parallel groove clamps	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.3	Grounding clamps	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1X6.3	lump sum	lump sum	Included in 1X1.1	Included in 1X1.1	Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
1X7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1X7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1X6.1	Included in 1X6.1	Included in 1X1.2	Included in 1X1.2
<b>1X8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1X1.2	Included in 1X1.2
<b>TOTAL PRICE FOR SCHEDULE 1X</b>				<b>Baht</b>	<b>2,409,013.32</b>	<b>Baht</b>	<b>942,722.25</b>	<b>Baht</b>	<b>1,885,203.88</b>

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Schedule 1Y : 115 KV PRACHUAP KHIRI KHAN - PRAN BURI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1Y1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
1Y1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	5,951,791.69	5,951,791.69			Included in Item 1Y1.2	Included in Item 1Y1.2
1Y1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Prachuap Khiri Khan substation to Pran Buri substation	62.68	km	XXXXX	XXXXX	XXXXX	XXXXX	3,908,627.65	3,908,627.65
<b>1Y2</b>	<b>Non-metallic optical fiber cable (OFC) at Prachuap Khiri Khan Substation</b>								
1Y2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Prachuap Khiri Khan control building	200.00	meter			140.00	28,000.00	Included in Item 1Y2.4	Included in Item 1Y2.4
1Y2.2	Rigid steel conduit from take-off structure to cable trench for item 1Y2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1Y2.4	Included in Item 1Y2.4
1Y2.3	EFLEX and/or HDPE conduit for item 1Y2.1 in cable trench	lump sum	lump sum			102.00	20,400.00	Included in Item 1Y2.4	Included in Item 1Y2.4
1Y2.4	Laying of optical fiber cable with accessories for item 1Y2.1, 1Y2.2, 1Y2.3	200.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	78,400.00
1Y2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1Y2.6	Fiber frame termination cabinet with cable tray (Prachuap Khiri Khan control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1Y2.7	36 pigtails (1.5 meter) (Prachuap Khiri Khan control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

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Schedule 1Y : 115 KV PRACHUAP KHIRI KHAN - PRAN BURI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1Y3</b>	<b>Non-metallic optical fiber cable (OFC) at Pran Buri substation</b>								
1Y3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Pran Buri control building	250.00	meter			140.00	35,000.00	Included in Item 1Y3.4	Included in Item 1Y3.4
1Y3.2	Rigid steel conduit from take-off structure to cable trench for item 1Y3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 1Y3.4	Included in Item 1Y3.4
1Y3.3	EFLEX and/or HDPE conduit for item 1Y3.1 in cable trench	lump sum	lump sum			102.00	25,500.00	Included in Item 1Y3.4	Included in Item 1Y3.4
1Y3.4	Laying of optical fiber cable with accessories for item 1Y3.1, 1Y3.2, 1Y3.3	250.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	98,000.00
1Y3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1Y3.6	Fiber frame termination cabinet with cable tray (Pran Buri control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
1Y3.7	36 pigtails (1.5 meter) (Pran Buri control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>1Y4</b>	<b>Joint boxes for optical fiber cable</b>								
1Y4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
<b>1Y5</b>	<b>Splicing work</b>								
1Y5.1	Connecting two OPGW cables for item 1Y4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Y1.2	Included in 1Y1.2
1Y5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 1Y4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Y1.2	Included in 1Y1.2
1Y5.3	Connecting OFC and pigtails for item 1Y2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Y1.2	Included in 1Y1.2
1Y5.4	Connecting OFC and pigtails for item 1Y3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Y1.2	Included in 1Y1.2

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**Schedule 1Y : 115 KV PRACHUAP KHIRI KHAN - PRAN BURI TRANSMISSION LINE**

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.
3. The existing OPGW shall not be terminated during the stringing process as the critical services are still in operation. The contractor shall be permitted to dismantle it after the new OPGW is fully strung and tested.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>1Y6</b>	<b>Hardware assembly for OPGW</b>								
1Y6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			2,072,326.16	1,850,288.53	Included in 1Y1.2	Included in 1Y1.2
1Y6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
<b>1Y7</b>	<b>Line accessories</b>								
1Y7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.2	Parallel groove clamps	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.3	Grounding clamps	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
1Y7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1Y6.3	lump sum	lump sum	Included in 1Y1.1	Included in 1Y1.1			Included in 1Y1.2	Included in 1Y1.2
1Y7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
1Y7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 1Y6.1	Included in 1Y6.1	Included in 1Y1.2	Included in 1Y1.2
<b>1Y8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 1Y1.2	Included in 1Y1.2
<b>TOTAL PRICE FOR SCHEDULE 1Y</b>				<b>Baht</b>	<b>5,951,791.69</b>	<b>Baht</b>	<b>2,007,798.53</b>	<b>Baht</b>	<b>4,152,997.65</b>

  
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1Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR

**IMPORTANT :**

1. Dismantling of the existing transmission lines shall generally conform to Specifications No. TL-07 (Rev.3) : Dismantling Work .
2. Approximate types and quantity of dismantled Equipment to be purchased are shown in Attachment No.2 : List of Equipment to be Dismantled by the Contractor.

Item No.	Description	Estimated Qty.	Unit	Purchase Price Offered for Dismantled Equipment (including VAT) Baht	
				Unit Price	Amount
1Z1	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 500 KV CHOM BUNG - RATCHABURI 3 TRANSMISSION LINE (approx. 26.83 km in transmission line distance)	26.83	km	1,424.00	38,205.92
1Z2	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 230 KV BAN PONG 2 - SAI NOI TRANSMISSION LINE (approx. 53.87 km in transmission line distance)	53.87	km	1,424.00	76,710.88
1Z3	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 230 KV RATCHABURI 2 - RATCHABURI 3 TRANSMISSION LINE (approx. 21.06 km in transmission line distance)	21.06	km	1,424.00	29,989.44
1Z4	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN TRANSMISSION LINE (approx. 58.71 km in transmission line distance)	59.12	km	1,424.00	84,186.88

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1Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR

**IMPORTANT :**

1. Dismantling of the existing transmission lines shall generally conform to Specifications No. TL-07 (Rev.3) : Dismantling Work .
2. Approximate types and quantity of dismantled Equipment to be purchased are shown in Attachment No.2 : List of Equipment to be Dismantled by the Contractor.

Item No.	Description	Estimated Qty.	Unit	Purchase Price Offered for Dismantled Equipment (including VAT) Baht	
				Unit Price	Amount
1Z5	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV PHETCHABURI - RATCHABURI 2 TRANSMISSION LINE (approx. 53.11 km in transmission line distance)	53.11	km	1,424.00	75,628.64
1Z6	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV CHA-AM - HUA HIN TRANSMISSION LINE (approx. 28.50 km in transmission line distance)	28.5	km	1,424.00	40,584.00
1Z7	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV HUA HIN - PRAN BURI TRANSMISSION LINE (approx. 25.37 km in transmission line distance)	25.37	km	1,424.00	36,126.88
1Z8	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV PRACHUAP KHIRI KHAN - PRAN BURI TRANSMISSION LINE (approx. 62.68 km in transmission line distance)	62.68	km	1,424.00	89,256.32
<b>TOTAL PRICE FOR SCHEDULE 1Z</b>				<b>Baht</b>	<b>470,688.96</b>

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## Medium Price Schedule no. 2

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PRICE SCHEDULE FOR  
SUPPLY AND CONSTRUCTION FOR REPLACEMENT OF OVERHEAD GROUND WIRE WITH  
COMPOSITE OVERHEAD GROUND WIRE WITH OPTICAL FIBER (OPGW)


FOR

- SCHEDULE 1 : 500 KV CHOM BUNG - RATCHABURI 3  
230 KV BAN PONG 2 - SAI NOI  
230 KV RATCHABURI 2 - RATCHABURI 3  
230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN  
115 KV PHETCHABURI - RATCHABURI 2  
115 KV CHA-AM - HUA HIN  
115 KV HUA HIN - PRAN BURI  
115 KV PRACHUAP KHIRI KHAN - PRAN BURI
- SCHEDULE 2 : 230 KV RAJJAPRABHA - SURAT THANI  
115 KV PHANGNGA - RAJJAPRABHA  
115 KV HAT YAI 1 - HAT YAI 2  
115 KV HAT YAI 1 - PHATTHALUNG
- SCHEDULE 3 : 115 KV ANG THONG 2 - LOP BURI 2  
115 KV CHAI BADAN - LOP BURI 2
- SCHEDULE 4 : 115 KV TAK 1 - TAK 2 (JUNCTION)  
115 KV MAE SOT - TAK 2 (JUNCTION)

UNDER

TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

  
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TOTAL PRICE FOR SCHEDULE NO. 2  
230 KV RPB - SRT, 115 KV PN - RPB, 115 KV HY1- HY2, 115 KV HY1 - PU  
TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Foreign 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) Baht					
		Amount	Amount					
2O : SUPPLY OF SERVICE OF VEHICLES							1,308,976.00	
2P : SUPPLY OF SPARE EQUIPMENT		1,149,567.55	459,933.20			135,886.00		
2Q : 230 KV RAJJAPRABHA - SURAT THANI TRANSMISSION LINE		4,888,293.49	1,958,241.76				3,745,850.29	
2R : 115 KV PHANGNGA - RAJJAPRABHA TRANSMISSION LINE		7,534,694.80	2,812,179.70				5,467,938.87	
2S : 115 KV HAT YAI 1 - HAT YAI 2 TRANSMISSION LINE		771,036.19	476,743.44				766,206.61	
2T : 115 KV HAT YAI 1 - PHATTHALUNG TRANSMISSION LINE		7,779,679.21	2,866,279.66				5,353,397.81	
2I : DISMANTLING WORK							618,464.00	
<b>TOTAL PRICES</b>	<b>THB</b>	<b>22,123,271.24</b>	<b>8,573,377.76</b>			<b>135,886.00</b>	<b>17,260,833.58</b>	
2Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR								-314,533.12

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20 : SUPPLY OF SERVICE OF VEHICLES

IMPORTANT :

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
201	Facilities and service of four-wheel-driven, four doors vehicles, at least one ton capacity, 2000 cc. nominal, gasoline engine or 2500 cc. Nominal diesel engine, equipped with air-condition. The vehicles shall be in good condition, which shall be approved by EGAT. In case used Vehicles are proposed, the used period shall not exceed two years. (refer to Article G-6. Housing and Other Facilities.) for 230 KV RAJJAPRABHA - SURAT THANI, 115 KV PHANGNGA - RAJJAPRABHA, 115 KV HAT YAI 1 - HAT YAI 2 and 115 KV HAT YAI 1 - PHATTHALUNG Transmission Line	16	car-month	81,811.00	1,308,976.00
<b>TOTAL PRICE FOR SCHEDULE 20</b>				<b>Baht</b>	<b>1,308,976.00</b>

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2P : SUPPLY OF SPARE EQUIPMENT

IMPORTANT :

1. Spare Equipment shall be delivered and stored at *Songkhla Substation in Songkhla Province* by the Contractor.
2. The Contractor shall perform the test on the Equipment for Item No. 2P1 at EGAT's Store to guarantee that there are no damages during the transportation.

Item No.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation (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	Unit Price	Amount				
2P1	Composite overhead ground wire with 36 core optical fibers (11.4 mm. OPGW) 4,000 meter/reel	3	reel	383,189.18	1,149,567.55			Included in item 2P12	Included in item 2P12		
2P2	2-way joint box with accessories for two OPGW cables	16	set			13,050.00	208,800.00	Included in item 2P12	Included in item 2P12		
2P3	Tension assembly (grounded) with accessories	16	set			1,625.00	26,000.00	Included in item 2P12	Included in item 2P12		
2P4	Suspension assembly (grounded) with accessories	8	set			2,193.00	17,544.00	Included in item 2P12	Included in item 2P12		
2P5	Fiber frame termination cabinet with cable tray	2	set			10,171.00	20,342.00	Included in item 2P12	Included in item 2P12		
2P6	36 pigtails (1.5 meter)	2	set			4,085.60	8,171.20	Included in item 2P12	Included in item 2P12		
2P7	1-wire cleat (grounded)	60	set			709.00	42,540.00	Included in item 2P12	Included in item 2P12		
2P8	2-wire cleat (grounded)	120	set			737.00	88,440.00	Included in item 2P12	Included in item 2P12		
2P9	6-wire cleat (grounded)	32	set			1,307.00	41,824.00	Included in item 2P12	Included in item 2P12		
2P10	Parallel groove clamp	16	set			227.00	3,632.00	Included in item 2P12	Included in item 2P12		
2P11	Grounding clamp	16	set			165.00	2,640.00	Included in item 2P12	Included in item 2P12		
2P12	Local transportation for item 2P1 to 2P11	lump sum	each	XXXXX	XXXXX	XXXXX	XXXXX	135,886.00	135,886.00		
<b>TOTAL PRICE FOR SCHEDULE 2P</b>						<b>1,149,567.55</b>	<b>Baht</b>	<b>459,933.20</b>	<b>Baht</b>	<b>135,886.00</b>	

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Schedule 2Q : 230 KV RAJJAPRABHA - SURAT THANI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2Q1	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
2Q1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	4,888,293.49	4,888,293.49			Included in Item 2Q1.2	Included in Item 2Q1.2
2Q1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Rajjaprabha substation to Surat Thani substation	51.48	km	XXXXX	XXXXX	XXXXX	XXXXX	3,363,080.29	3,363,080.29
2Q2	<b>Non-metallic optical fiber cable (OFC) at Rajjaprabha substation</b>								
2Q2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Rajjaprabha control building	500.00	meter			140.00	70,000.00	Included in Item 2Q2.4	Included in Item 2Q2.4
2Q2.2	Rigid steel conduit from take-off structure to cable trench for item 2Q2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 2Q2.4	Included in Item 2Q2.4
2Q2.3	EFLEX and/or HDPE conduit for item 2Q2.1 in cable trench	lump sum	lump sum			102.00	51,000.00	Included in Item 2Q2.4	Included in Item 2Q2.4
2Q2.4	Laying of optical fiber cable with accessories for item 2Q2.1, 2Q2.2, 2Q2.3	500.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	196,000.00
2Q2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
2Q2.6	Fiber frame termination cabinet with cable tray (Rajjaprabha control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
2Q2.7	36 pigtails (1.5 meter) (Rajjaprabha control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

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Schedule 2Q : 230 KV RAJJAPRABHA - SURAT THANI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>2Q3</b>	<b>Non-metallic optical fiber cable (OFC) at Surat Thani substation</b>								
2Q3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet Surat Thani 230 kV relay building	300.00	meter			140.00	42,000.00	Included in Item 2Q3.4	Included in Item 2Q3.4
2Q3.2	Rigid steel conduit from take-off structure to cable trench for item 2Q3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 2Q3.4	Included in Item 2Q3.4
2Q3.3	EFLEX and/or HDPE conduit for item 2Q3.1 in cable trench	lump sum	lump sum			102.00	30,600.00	Included in Item 2Q3.4	Included in Item 2Q3.4
2Q3.4	Laying of optical fiber cable with accessories for item 2Q3.1, 2Q3.2, 2Q3.3	300.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	117,600.00
2Q3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
2Q3.6	Fiber frame termination cabinet with cable tray (Surat Thani 230 kV relay building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
2Q3.7	36 pigtails (1.5 meter) (Surat Thani 230 kV relay building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>2Q4</b>	<b>Joint boxes for optical fiber cable</b>								
2Q4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
<b>2Q5</b>	<b>Splicing work</b>								
2Q5.1	Connecting two OPGW cables for item 2Q4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2Q1.2	Included in 2Q1.2
2Q5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 2Q4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2Q1.2	Included in 2Q1.2
2Q5.3	Connecting OFC and pigtails for item 2Q2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2Q1.2	Included in 2Q1.2
2Q5.4	Connecting OFC and pigtails for item 2Q3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2Q1.2	Included in 2Q1.2
<b>2Q6</b>	<b>Hardware assembly for OPGW</b>								
2Q6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			1,702,031.76	1,702,031.76	Included in 2Q1.2	Included in 2Q1.2
2Q6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
<b>2Q7</b>	<b>Line accessories</b>								
2Q7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.2	Parallel groove clamps	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.3	Grounding clamps	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2

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Schedule 2Q : 230 KV RAJJAPRABHA - SURAT THANI TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2Q7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 1Q6.3	lump sum	lump sum	Included in 2Q1.1	Included in 2Q1.1			Included in 2Q1.2	Included in 2Q1.2
2Q7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
2Q7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 2Q6.1	Included in 2Q6.1	Included in 2Q1.2	Included in 2Q1.2
2Q7.12	Orange and white fiber glass sphere with armor rod for composite overhead ground wire with 36 cores optical fiber (OPGW)	4	set			3,500.00	14,000.00	300.00	1,200.00
2Q8	Field testing for optical fiber	lump sum	lump sum	XXXXXX	XXXXXX	XXXXXX	XXXXXX	Included in 2Q1.2	Included in 2Q1.2
<b>TOTAL PRICE FOR SCHEDULE 2Q</b>					<b>4,888,293.49</b>	<b>Baht</b>	<b>1,958,241.76</b>	<b>Baht</b>	<b>3,745,850.29</b>

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Schedule 2R : 115 KV PHANGNGA - RAJJAPRABHA TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>2R1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
2R1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	7,534,694.80	7,534,694.80			Included in Item 2R1.2	Included in Item 2R1.2
2R1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Phangnga substation to Rajjaprabha substation	79.35	km	XXXXX	XXXXX	XXXXX	XXXXX	5,183,768.87	5,183,768.87
<b>2R2</b>	<b>Non-metallic optical fiber cable (OFC) at Phangnga substation</b>								
2R2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Phangnga control building	250.00	meter			140.00	35,000.00	Included in Item 2R2.4	Included in Item 2R2.4
2R2.2	Rigid steel conduit from take-off structure to cable trench for item 2R2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 2R2.4	Included in Item 2R2.4
2R2.3	EFLEX and/or HDPE conduit for item 2R2.1 in cable trench	lump sum	lump sum			102.00	25,500.00	Included in Item 2R2.4	Included in Item 2R2.4
2R2.4	Laying of optical fiber cable with accessories for item 2R2.1, 2R2.2, 2R2.3	250.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	98,000.00
2R2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
2R2.6	Fiber frame termination cabinet with cable tray (Phangnga control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
2R2.7	36 pigtailed (1.5 meter) (Phangnga control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>2R3</b>	<b>Non-metallic optical fiber cable (OFC) at Rajjaprabha substation</b>								
2R3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Rajjaprabha control building	300.00	meter			140.00	42,000.00	Included in Item 2R3.4	Included in Item 2R3.4
2R3.2	Rigid steel conduit from take-off structure to cable trench for item 2R3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 2R3.4	Included in Item 2R3.4
2R3.3	EFLEX and/or HDPE conduit for item 2R3.1 in cable trench	lump sum	lump sum			102.00	30,600.00	Included in Item 2R3.4	Included in Item 2R3.4
2R3.4	Laying of optical fiber cable with accessories for item 2R3.1, 2R3.2, 2R3.3	300.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	117,600.00
2R3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
2R3.6	Fiber frame termination cabinet with cable tray (Rajjaprabha control building - 1)	1	set			12,745.00	12,745.00	31,130.00	31,130.00
2R3.7	36 pigtailed (1.5 meter) (Rajjaprabha control building - 1)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

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Schedule 2R : 115 KV PHANGNGA - RAJJAPRABHA TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>2R4</b>	<b>Joint boxes for optical fiber cable</b>								
2R4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
<b>2R5</b>	<b>Splicing work</b>								
2R5.1	Connecting two OPGW cables for item 2R4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2R1.2	Included in 2R1.2
2R5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 2R4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2R1.2	Included in 2R1.2
2R5.3	Connecting OFC and pigtails for item 2R2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2R1.2	Included in 2R1.2
2R5.4	Connecting OFC and pigtails for item 2R3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2R1.2	Included in 2R1.2
<b>2R6</b>	<b>Hardware assembly for OPGW</b>								
2R6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			2,623,469.70	2,623,469.70	Included in 2R1.2	Included in 2R1.2
2R6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2

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นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร  
[Signature]

Schedule 2R : 115 KV PHANGNGA - RAJJAPRABHA TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>2R7</b>	<b>Line accessories</b>								
2R7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.2	Parallel groove clamps	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.3	Grounding clamps	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 2R6.3	lump sum	lump sum	Included in 2R1.1	Included in 2R1.1	Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
2R7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 2R6.1	Included in 2R6.1	Included in 2R1.2	Included in 2R1.2
2R7.12	Orange and white fiber glass sphere with armor rod for composite overhead ground wire with 36 cores optical fiber (OPGW)	2	set			3,500.00	7,000.00	300.00	600.00
<b>2R8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 2R1.2	Included in 2R1.2
<b>TOTAL PRICE FOR SCHEDULE 2R</b>				<b>Baht</b>	<b>7,534,694.80</b>	<b>Baht</b>	<b>2,812,179.70</b>	<b>Baht</b>	<b>5,467,938.87</b>

อนันต์  
นางสาวอัสยา ช่างวิทยการ  
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21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 2S : 115 KV HAT YAI 1 - HAT YAI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	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 (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>2S1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>									
2S1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum		771,036.19	771,036.19			Included in Item 2S1.2	Included in Item 2S1.2
2S1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Hat Yai 1 substation to Hat Yai 2 substation	8.12	km		XXXXX	XXXXX	XXXXX	XXXXX	506,350.61	506,350.61
<b>2S2</b>	<b>Non-metallic optical fiber cable (OFC) at Hat Yai 1 Substation</b>									
2S2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Hat Yai 1 control building	200.00	meter				140.00	28,000.00	Included in Item 2S2.4	Included in Item 2S2.4
2S2.2	Rigid steel conduit from take-off structure to cable trench for item 2S2.1	lump sum	lump sum				582.00	6,984.00	Included in Item 2S2.4	Included in Item 2S2.4
2S2.3	EFLEX and/or HDPE conduit for item 2S2.1 in cable trench	lump sum	lump sum				102.00	20,400.00	Included in Item 2S2.4	Included in Item 2S2.4
2S2.4	Laying of optical fiber cable with accessories for item 2S2.1, 2S2.2, 2S2.3	200.00	meter		XXXXX	XXXXX	XXXXX	XXXXX	392.00	78,400.00
2S2.5	19" closed rack cabinet (Hat Yai 1 control building - 1)	1	set				25,385.00	25,385.00	7,743.00	7,743.00
2S2.6	Fiber frame termination cabinet with cable tray (Hat Yai 1 control building - 1)	1	set				12,745.00	12,745.00	31,130.00	31,130.00
2S2.7	36 pigtails (1.5 meter) (Hat Yai 1 control building - 1)	1	set				4,576.00	4,576.00	2,855.00	2,855.00
<b>2S3</b>	<b>Non-metallic optical fiber cable (OFC) at Hat Yai 2 Substation</b>									
2S3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Hat Yai 2 control building	250.00	meter				140.00	35,000.00	Included in Item 2S3.4	Included in Item 2S3.4
2S3.2	Rigid steel conduit from take-off structure to cable trench for item 2S3.1	lump sum	lump sum				582.00	6,984.00	Included in Item 2S3.4	Included in Item 2S3.4
2S3.3	EFLEX and/or HDPE conduit for item 2S3.1 in cable trench	lump sum	lump sum				102.00	25,500.00	Included in Item 2S3.4	Included in Item 2S3.4
2S3.4	Laying of optical fiber cable with accessories for item 2S3.1, 2S3.2, 2S3.3	250.00	meter		XXXXX	XXXXX	XXXXX	XXXXX	392.00	98,000.00
2S3.5	19" closed rack cabinet (Hat Yai 2 control building - 1)	1	set				25,385.00	25,385.00	7,743.00	7,743.00
2S3.6	Fiber frame termination cabinet with cable tray (Hat Yai 2 control building - 1)	1	set				12,745.00	12,745.00	31,130.00	31,130.00
2S3.7	36 pigtails (1.5 meter) (Hat Yai 2 control building - 1)	1	set				4,576.00	4,576.00	2,855.00	2,855.00

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นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 2S : 115 KV HAT YAI 1 - HAT YAI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	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 (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>2S4</b>	<b>Joint boxes for optical fiber cable</b>									
2S4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2	
2S4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2	
<b>2S5</b>	<b>Splicing work</b>									
2S5.1	Connecting two OPGW cables for item 2S4.1	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2S1.2	Included in 2S1.2
2S5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 2S4.2 at take-off structure	2	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2S1.2	Included in 2S1.2
2S5.3	Connecting OFC and pigtails for item 2S2.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2S1.2	Included in 2S1.2
2S5.4	Connecting OFC and pigtails for item 2S3.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2S1.2	Included in 2S1.2
<b>2S6</b>	<b>Hardware assembly for OPGW</b>									
2S6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum				268,463.44	268,463.44	Included in 2S1.2	Included in 2S1.2
2S6.2	OPGW tension assembly (Grounded)	lump sum	lump sum				Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2
2S6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set				Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2

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นายพนรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 2S : 115 KV HAT YAI 1 - HAT YAI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	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 (excluding VAT) Baht					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
<b>2S7</b>	<b>Line accessories</b>											
2S7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.2	Parallel groove clamps	lump sum	lump sum			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.3	Grounding clamps	lump sum	lump sum			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2			
2S7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 2S6.3	lump sum	lump sum			Included in 1S1.1	Included in 1S1.1	Included in 2S1.2	Included in 2S1.2			
2S7.10	Insulator strain type ANSI CLASS 54-2	NA	each			XXXXX	XXXXX	XXXXX	XXXXX			
2S7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum				Included in 2S6.1	Included in 2S6.1	Included in 2S1.2	Included in 2S1.2		
<b>2S8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum			XXXXX	XXXXX	XXXXX	XXXXX	Included in 2S1.2 Included in 2S1.2		
<b>TOTAL PRICE FOR SCHEDULE 2S</b>							<b>Baht</b>	<b>771,036.19</b>	<b>Baht</b>	<b>476,743.44</b>	<b>Baht</b>	<b>766,206.61</b>

นางสาวอสาชา ช่างวิทยากร  
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นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 2T : 115 KV HAT YAI 1 - PHATTHALUNG TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	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 (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
<b>2T1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>										
2T1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum		7,779,679.21		7,779,679.21			Included in Item 2T1.2	Included in Item 2T1.2
2T1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Hat Yai 1 substation to Phatthalung substation	81.93	km		XXXXX		XXXXX		XXXXX	5,109,027.81	5,109,027.81
<b>2T2</b>	<b>Non-metallic optical fiber cable (OFC) at Hat Yai 1 Substation</b>										
2T2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Hat Yai 1 control building	200.00	meter				140.00		28,000.00	Included in Item 2T2.4	Included in Item 2T2.4
2T2.2	Rigid steel conduit from take-off structure to cable trench for item 2T2.1	lump sum	lump sum				582.00		6,984.00	Included in Item 2T2.4	Included in Item 2T2.4
2T2.3	EFLEX and/or HDPE conduit for item 2T2.1 in cable trench	lump sum	lump sum				102.00		20,400.00	Included in Item 2T2.4	Included in Item 2T2.4
2T2.4	Laying of optical fiber cable with accessories for item 2T2.1, 2T2.2, 2T2.3	200.00	meter		XXXXX		XXXXX		XXXXX	392.00	78,400.00
2T2.5	19" closed rack cabinet	NA	set		XXXXX		XXXXX		XXXXX	XXXXX	XXXXX
2T2.6	Fiber frame termination cabinet with cable tray (Hat Yai 1 control building - 1)	1	set				12,745.00		12,745.00	31,130.00	31,130.00
2T2.7	36 pigtails (1.5 meter) (Hat Yai 1 control building - 1)	1	set				4,576.00		4,576.00	2,855.00	2,855.00
<b>2T3</b>	<b>Non-metallic optical fiber cable (OFC) at Phatthalung substation</b>										
2T3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Phatthalung control building	250.00	meter				140.00		35,000.00	Included in Item 2T3.4	Included in Item 2T3.4
2T3.2	Rigid steel conduit from take-off structure to cable trench for item 2T3.1	lump sum	lump sum				582.00		6,984.00	Included in Item 2T3.4	Included in Item 2T3.4
2T3.3	EFLEX and/or HDPE conduit for item 2T3.1 in cable trench	lump sum	lump sum				102.00		25,500.00	Included in Item 2T3.4	Included in Item 2T3.4
2T3.4	Laying of optical fiber cable with accessories for item 2T3.1, 2T3.2, 2T3.3	250.00	meter		XXXXX		XXXXX		XXXXX	392.00	98,000.00
2T3.5	19" closed rack cabinet	NA	set		XXXXX		XXXXX		XXXXX	XXXXX	XXXXX
2T3.6	Fiber frame termination cabinet with cable tray (Phatthalung control building - 1)	1	set				12,745.00		12,745.00	31,130.00	31,130.00
2T3.7	36 pigtails (1.5 meter) (Phatthalung control building - 1)	1	set				4,576.00		4,576.00	2,855.00	2,855.00

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นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

Schedule 2T : 115 KV HAT YAI 1 - PHATTHALUNG TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	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>2T4</b>	<b>Joint boxes for optical fiber cable</b>											
2T4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2			
2T4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2			
<b>2T5</b>	<b>Splicing work</b>											
2T5.1	Connecting two OPGW cables for item 2T4.1	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2T1.2	Included in 2T1.2		
2T5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 2T4.2 at take-off structure	2	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2T1.2	Included in 2T1.2		
2T5.3	Connecting OFC and pigtails for item 2T2.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2T1.2	Included in 2T1.2		
2T5.4	Connecting OFC and pigtails for item 2T3.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2T1.2	Included in 2T1.2		
<b>2T6</b>	<b>Hardware assembly for OPGW</b>											
2T6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum				2,708,769.66	2,708,769.66	Included in 2T1.2	Included in 2T1.2		
2T6.2	OPGW tension assembly (Grounded)	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
<b>2T7</b>	<b>Line accessories</b>											
2T7.1	Vibration damper assembly with accessories	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.2	Parallel groove clamps	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.3	Grounding clamps	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
2T7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 2T6.3	lump sum	lump sum		Included in 2T1.1	Included in 2T1.1			Included in 2T1.2	Included in 2T1.2		
2T7.10	Insulator strain type ANSI CLASS 54-2	NA	each		XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX		
2T7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum				included in 2T6.1	included in 2T6.1	Included in 2T1.2	Included in 2T1.2		
<b>2T8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX	Included in 2T1.2	Included in 2T1.2		
<b>TOTAL PRICE FOR SCHEDULE 2T</b>							<b>Baht</b>	<b>7,779,679.21</b>	<b>Baht</b>	<b>2,866,279.66</b>	<b>Baht</b>	<b>5,353,397.81</b>

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2I : DISMANTLING WORK

**IMPORTANT :**

1. Dismantling of the existing transmission line shall generally conform to Specification No. TL-07 (Rev.3) : Dismantling Work.
2. Dismantled Equipment as shown in Attachment No.2 shall be purchased by the Contractor at the prices offered in 2Z.

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
211	Dismantling work of the existing overhead ground wire of 230 KV RAJJAPRABHA - SURAT THANI TRANSMISSION LINE (approx. 51.48 km in transmission line distance)	lump sum	lump sum	2,800.00	144,144.00
212	Dismantling work of the existing overhead ground wire of 115 KV PHANGNGA - RAJJAPRABHA TRANSMISSION LINE (approx. 79.35 km in transmission line distance)	lump sum	lump sum	2,800.00	222,180.00
213	Dismantling work of the existing overhead ground wire of 115 KV HAT YAI 1 - HAT YAI 2 TRANSMISSION LINE (approx. 8.12 km in transmission line distance)	lump sum	lump sum	2,800.00	22,736.00
214	Dismantling work of the existing overhead ground wire of 115 KV HAT YAI 1 - PHATTHALUNG TRANSMISSION LINE (approx. 81.93 km in transmission line distance)	lump sum	lump sum	2,800.00	229,404.00
<b>TOTAL PRICE FOR SCHEDULE 2I</b>				<b>Baht</b>	<b>618,464.00</b>

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**2Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR**

**IMPORTANT :**

1. Dismantling of the existing transmission lines shall generally conform to Specifications No. TL-07 (Rev.3) : Dismantling Work .
2. Approximate types and quantity of dismantled Equipment to be purchased are shown in Attachment No.2 : List of Equipment to be Dismantled by the Contractor.

Item No.	Description	Estimated Qty.	Unit	Purchase Price Offered for Dismantled Equipment (including VAT) Baht	
				Unit Price	Amount
2Z1	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 230 KV RAJJAPRABHA - SURAT THANI TRANSMISSION LINE (approx. 51.48 km in transmission line distance)	lump sum	lump sum	1,424.00	73,307.52
2Z2	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV PHANGNGA - RAJJAPRABHA TRANSMISSION LINE (approx. 79.35 km in transmission line distance)	lump sum	lump sum	1,424.00	112,994.40
2Z3	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV HAT YAI 1 - HAT YAI 2 TRANSMISSION LINE (approx. 8.12 km in transmission line distance)	lump sum	lump sum	1,424.00	11,562.88
2Z4	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV HAT YAI 1 - PHATTHALUNG TRANSMISSION LINE (approx. 81.93 km in transmission line distance)	lump sum	lump sum	1,424.00	116,668.32
<b>TOTAL PRICE FOR SCHEDULE 2Z</b>				<b>Baht</b>	<b>314,533.12</b>

  
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## Medium Price Schedule no. 3



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PRICE SCHEDULE FOR  
SUPPLY AND CONSTRUCTION FOR REPLACEMENT OF OVERHEAD GROUND WIRE WITH  
COMPOSITE OVERHEAD GROUND WIRE WITH OPTICAL FIBER (OPGW)

FOR

SCHEDULE 1 : 500 KV CHOM BUNG - RATCHABURI 3

230 KV BAN PONG 2 - SAI NOI

230 KV RATCHABURI 2 - RATCHABURI 3

230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN

115 KV PHETCHABURI - RATCHABURI 2

115 KV CHA-AM - HUA HIN

115 KV HUA HIN - PRAN BURI

115 KV PRACHUAP KHIRI KHAN - PRAN BURI

SCHEDULE 2 : 230 KV RAJJAPRABHA - SURAT THANI

115 KV PHANGNGA - RAJJAPRABHA

115 KV HAT YAI 1 - HAT YAI 2

115 KV HAT YAI 1 - PHATTHALUNG

SCHEDULE 3 : 115 KV ANG THONG 2 - LOP BURI 2

115 KV CHAI BADAN - LOP BURI 2

SCHEDULE 4 : 115 KV TAK 1 - TAK 2 (JUNCTION)

115 KV MAE SOT - TAK 2 (JUNCTION)

UNDER  
NETWORK RENOVATION PROJECT (TNRP) PHASE 18

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TOTAL PRICE FOR SCHEDULE NO. 3  
115 KV AT2 - LB2, 115 KV CBD - LB2  
TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Foreign Currency	Local Transportation	Local Transportation, Construction and Installation (excluding VAT) Baht	Purchase Price Offered for Dismantled Equipment (excluding VAT) Baht
		Foreign Supply	Local Supply					
		CIF Thai Port	Ex-works Price (excluding VAT) Baht					
		Amount	Amount					
3O : SUPPLY OF SERVICE OF VEHICLES							1,308,976.00	
3P : SUPPLY OF SPARE EQUIPMENT		766,378.37	277,002.00			25,881.00		
3Q : 115 KV ANG THONG 2 - LOP BURI 2 TRANSMISSION LINE		4,068,830.15	1,582,661.70				2,896,732.58	
3R : 115 KV CHAI BADAN - LOP BURI 2 TRANSMISSION LINE		7,764,486.38	2,839,209.74				5,308,140.46	
3I : DISMANTLING WORK							336,081.00	
<b>TOTAL PRICES</b>	THB	<b>12,599,694.89</b>	<b>4,698,873.44</b>			<b>25,881.00</b>	<b>9,849,930.04</b>	
3Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR								-177,458.88

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30 : SUPPLY OF SERVICE OF VEHICLES

IMPORTANT :

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
301	Facilities and service of four-wheel-driven, four doors vehicles, at least one ton capacity, 2000 cc. nominal, gasoline engine or 2500 cc. Nominal diesel engine, equipped with air-condition. The vehicles shall be in good condition, which shall be approved by EGAT. In case used Vehicles are proposed, the used period shall not exceed two years. (refer to Article G-6. Housing and Other Facilities.) for 115 KV ANG THONG 2 - LOP BURI 2, 115 KV CHAI BADAN - LOP BURI 2 Transmission Line	16	car-month	81,811.00	1,308,976.00
TOTAL PRICE FOR SCHEDULE 30				Baht	1,308,976.00

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3P : SUPPLY OF SPARE EQUIPMENT

IMPORTANT :

1. Spare Equipment shall be delivered and stored at EGAT Chom Bung store in Ratchaburi Province by the Contractor.
2. The Contractor shall perform the test on the Equipment for Item No. 3P1 at EGAT's Store to guarantee that there are no damages during the transportation.

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation (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	Unit Price	Amount				
3P1	Composite overhead ground wire with 36 core optical fibers (11.4 mm. OPGW) 4,000 meter/reel	2	reel		383,189.18	766,378.37			Included in item 3P12	Included in item 3P12		
3P2	2-way joint box with accessories for two OPGW cables	8	set				14,616.00	116,928.00	Included in item 3P12	Included in item 3P12		
3P3	Tension assembly (grounded) with accessories	8	set				1,820.00	14,560.00	Included in item 3P12	Included in item 3P12		
3P4	Suspension assembly (grounded) with accessories	4	set				2,654.00	10,616.00	Included in item 3P12	Included in item 3P12		
3P5	Fiber frame termination cabinet with cable tray	2	set				12,745.00	25,490.00	Included in item 3P12	Included in item 3P12		
3P6	36 pigtails (1.5 meter)	2	set				4,576.00	9,152.00	Included in item 3P12	Included in item 3P12		
3P7	1-wire cleat (grounded)	30	set				794.00	23,820.00	Included in item 3P12	Included in item 3P12		
3P8	2-wire cleat (grounded)	60	set				825.00	49,500.00	Included in item 3P12	Included in item 3P12		
3P9	6-wire cleat (grounded)	16	set				1,464.00	23,424.00	Included in item 3P12	Included in item 3P12		
3P10	Parallel groove clamp	8	set				254.00	2,032.00	Included in item 3P12	Included in item 3P12		
3P11	Grounding clamp	8	set				185.00	1,480.00	Included in item 3P12	Included in item 3P12		
3P12	Local transportation for item 3P1 to 3P11	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	25,881.00	25,881.00		
TOTAL PRICE FOR SCHEDULE 3P						Baht	766,378.37	Baht	277,002.00	Baht	25,881.00	

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Schedule 3Q : 230 KV 115 KV ANG THONG 2 - LOP BURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	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>3Q1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>									
3Q1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum		4,068,830.15	4,068,830.15			Included in Item 3Q1.2	Included in Item 3Q1.2
3Q1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Ang Thong 2 substation to Lop Buri 2 substation	42.85	km		XXXXX	XXXXX	XXXXX	XXXXX	2,672,059.58	2,672,059.58
<b>3Q2</b>	<b>Non-metallic optical fiber cable (OFC) at Ang Thong 2 substation</b>									
3Q2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Ang Thong 2 control building	230.00	meter				140.00	32,200.00	Included in Item 3Q2.4	Included in Item 3Q2.4
3Q2.2	Rigid steel conduit from take-off structure to cable trench for item 3Q2.1	lump sum	lump sum				582.00	6,984.00	Included in Item 3Q2.4	Included in Item 3Q2.4
3Q2.3	EFLEX and/or HDPE conduit for item 3Q2.1 in cable trench	lump sum	lump sum				102.00	23,460.00	Included in Item 3Q2.4	Included in Item 3Q2.4
3Q2.4	Laying of optical fiber cable with accessories for item 3Q2.1, 3Q2.2, 3Q2.3	230.00	meter		XXXXX	XXXXX	XXXXX	XXXXX	392.00	90,160.00
3Q2.5	19" closed rack cabinet	NA	set		XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
3Q2.6	Fiber frame termination cabinet with cable tray	1	set				12,745.00	12,745.00	31,130.00	31,130.00
3Q2.7	36 pigtails (1.5 meter)	1	set				4,576.00	4,576.00	2,855.00	2,855.00
<b>3Q3</b>	<b>Non-metallic optical fiber cable (OFC) at Lop Buri 2 substation</b>									
3Q3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Lop Buri 2 control building	150.00	meter				140.00	21,000.00	Included in Item 3Q3.4	Included in Item 3Q3.4
3Q3.2	Rigid steel conduit from take-off structure to cable trench for item 3Q3.1	lump sum	lump sum				582.00	6,984.00	Included in Item 3Q3.4	Included in Item 3Q3.4
3Q3.3	EFLEX and/or HDPE conduit for item 3Q3.1 in cable trench	lump sum	lump sum				102.00	15,300.00	Included in Item 3Q3.4	Included in Item 3Q3.4
3Q3.4	Laying of optical fiber cable with accessories for item 3Q3.1, 3Q3.2, 3Q3.3	150.00	meter		XXXXX	XXXXX	XXXXX	XXXXX	392.00	58,800.00
3Q3.5	19" closed rack cabinet	1	set				25,385.00	25,385.00	7,743.00	7,743.00
3Q3.6	Fiber frame termination cabinet with cable tray	1	set				12,745.00	12,745.00	31,130.00	31,130.00
3Q3.7	36 pigtails (1.5 meter)	1	set				4,576.00	4,576.00	2,855.00	2,855.00

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Schedule 3Q : 230 KV 115 KV ANG THONG 2 - LOP BURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	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>3Q4</b>	<b>Joint boxes for optical fiber cable</b>									
3Q4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2	
3Q4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2	
<b>3Q5</b>	<b>Splicing work</b>									
3Q5.1	Connecting two OPGW cables for item 3Q4.1	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX	Included in 3Q1.2	Included in 3Q1.2
3Q5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 3Q4.2 at take-off structure	2	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 3Q1.2	Included in 3Q1.2
3Q5.3	Connecting OFC and pigtails for item 3Q2.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 3Q1.2	Included in 3Q1.2
3Q5.4	Connecting OFC and pigtails for item 3Q3.6	1	job		XXXXX	XXXXX	XXXXX	XXXXX	Included in 3Q1.2	Included in 3Q1.2
<b>3Q6</b>	<b>Hardware assembly for OPGW</b>									
3Q6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum				1,416,706.70	1,416,706.70	Included in 3Q1.2	Included in 3Q1.2
3Q6.2	OPGW tension assembly (Grounded)	lump sum	lump sum				Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2
3Q6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set				Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2

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Schedule 3Q : 230 KV 115 KV ANG THONG 2 - LOP BURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such item together with their bid proposal for consideration of EGAT.

Item.	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>3Q7</b>	<b>Line accessories</b>											
3Q7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.2	Parallel groove clamps	lump sum	lump sum			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.3	Grounding clamps	lump sum	lump sum			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 3Q6.3	lump sum	lump sum			Included in 3Q1.1	Included in 3Q1.1	Included in 3Q1.2	Included in 3Q1.2			
3Q7.10	Insulator strain type ANSI CLASS 54-2	NA	each			XXXXX	XXXXX	XXXXX	XXXXX			
3Q7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum				Included in 3Q6.1	Included in 3Q6.1	Included in 3Q1.2	Included in 3Q1.2		
<b>3Q8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum			XXXXX	XXXXX	XXXXX	XXXXX	Included in 3Q1.2 Included in 3Q1.2		
<b>TOTAL PRICE FOR SCHEDULE 3Q</b>							<b>Baht</b>	<b>4,068,830.15</b>	<b>Baht</b>	<b>1,582,661.70</b>	<b>Baht</b>	<b>2,896,732.58</b>

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Schedule 3R : 115 KV CHAI BADAN - LOP BURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>3R1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
3R1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	7,764,486.38	7,764,486.38			Included in Item 3R1.2	Included in Item 3R1.2
3R1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Chai Badan substation to Lop Buri 2 substation	81.77	km	XXXXX	XXXXX	XXXXX	XXXXX	5,099,050.46	5,099,050.46
<b>3R2</b>	<b>Non-metallic optical fiber cable (OFC) at Chai Badan substation</b>								
3R2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Chai Badan control building	160.00	meter			140.00	22,400.00	Included in Item 3R2.4	Included in Item 3R2.4
3R2.2	Rigid steel conduit from take-off structure to cable trench for item 3R2.1	lump sum	lump sum			582.00	6,984.00	Included in Item 3R2.4	Included in Item 3R2.4
3R2.3	EFLEX and/or HDPE conduit for item 3R2.1 in cable trench	lump sum	lump sum			102.00	16,320.00	Included in Item 3R2.4	Included in Item 3R2.4
3R2.4	Laying of optical fiber cable with accessories for item 3R2.1, 3R2.2, 3R2.3	160.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	62,720.00
3R2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
3R2.6	Fiber frame termination cabinet with cable tray	1	set			12,745.00	12,745.00	31,130.00	31,130.00
3R2.7	36 pigtailed (1.5 meter)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>3R3</b>	<b>Non-metallic optical fiber cable (OFC) at Lop Buri 2 substation</b>								
3R3.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Lop Buri 2 control building	200.00	meter			140.00	28,000.00	Included in Item 3R3.4	Included in Item 3R3.4
3R3.2	Rigid steel conduit from take-off structure to cable trench for item 3R3.1	lump sum	lump sum			582.00	6,984.00	Included in Item 3R3.4	Included in Item 3R3.4
3R3.3	EFLEX and/or HDPE conduit for item 3R3.1 in cable trench	lump sum	lump sum			102.00	20,400.00	Included in Item 3R3.4	Included in Item 3R3.4
3R3.4	Laying of optical fiber cable with accessories for item 3R3.1, 3R3.2, 3R3.3	200.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	78,400.00
3R3.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
3R3.6	Fiber frame termination cabinet with cable tray	1	set			12,745.00	12,745.00	31,130.00	31,130.00
3R3.7	36 pigtailed (1.5 meter)	1	set			4,576.00	4,576.00	2,855.00	2,855.00

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Schedule 3R : 115 KV CHAI BADAN - LOP BURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>3R4</b>	<b>Joint boxes for optical fiber cable</b>								
3R4.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R4.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	2	set			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
<b>3R5</b>	<b>Splicing work</b>								
3R5.1	Connecting two OPGW cables for item 3R4.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 3R1.2	Included in 3R1.2
3R5.2	Connecting OPGW cable and non-metallic optical fiber cable for item 3R4.2 at take-off structure	2	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 3R1.2	Included in 3R1.2
3R5.3	Connecting OFC and pigtails for item 3R2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 3R1.2	Included in 3R1.2
3R5.4	Connecting OFC and pigtails for item 3R3.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 3R1.2	Included in 3R1.2
<b>3R6</b>	<b>Hardware assembly for OPGW</b>								
3R6.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			2,703,479.74	2,703,479.74	Included in 3R1.2	Included in 3R1.2
3R6.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R6.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	2	set			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2

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Schedule 3R : 115 KV CHAI BADAN - LOP BURI 2 TRANSMISSION LINE

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>3R7</b>	<b>Line accessories</b>								
3R7.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.2	Parallel groove clamps	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.3	Grounding clamps	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	30	set			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	8	set			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
3R7.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 3R6.3	lump sum	lump sum	Included in 3R1.1	Included in 3R1.1			Included in 3R1.2	Included in 3R1.2
3R7.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
3R7.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 3R6.1	Included in 3R6.1	Included in 3R1.2	Included in 3R1.2
<b>3R8</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXXX	XXXXXX	XXXXXX	XXXXXX	Included in 3R1.2	Included in 3R1.2
<b>TOTAL PRICE FOR SCHEDULE 3R</b>				<b>Baht</b>	<b>7,764,486.38</b>	<b>Baht</b>	<b>2,839,209.74</b>	<b>Baht</b>	<b>5,308,140.46</b>

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3I : DISMANTLING WORK

**IMPORTANT :**

1. Dismantling of the existing transmission line shall generally conform to Specification No. TL-07 (Rev.3) : Dismantling Work.
2. Dismantled Equipment as shown in Attachment No.2 shall be purchased by the Contractor at the prices offered in 3Z.

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
311	Dismantling work of the existing overhead ground wire of 115 KV ANG THONG 2 - LOP BURI 2 TRANSMISSION LINE (approx. 42.85 km in transmission line distance)	lump sum	lump sum	2,800.00	107,125.00
312	Dismantling work of the existing overhead ground wire of 115 KV CHAI BADAN - LOP BURI 2 TRANSMISSION LINE (approx. 81.77 km in transmission line distance)	lump sum	lump sum	2,800.00	228,956.00
<b>TOTAL PRICE FOR SCHEDULE 3I</b>				<b>Baht</b>	<b>336,081.00</b>

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3Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR

**IMPORTANT :**

1. Dismantling of the existing transmission lines shall generally conform to Specifications No. TL-07 (Rev.3) : Dismantling Work .
2. Approximate types and quantity of dismantled Equipment to be purchased are shown in Attachment No.2 : List of Equipment to be Dismantled by the Contractor.

Item No.	Description	Estimated Qty.	Unit	Purchase Price Offered for Dismantled Equipment (including VAT) Baht	
				Unit Price	Amount
3Z1	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV ANG THONG 2 - LOP BURI 2 TRANSMISSION LINE (approx. 42.85 km in transmission line distance)	lump sum	lump sum	1,424.00	61,018.40
3Z2	Dismantled equipment of the existing overhead ground wire and/or existing composite overhead ground wire with optical fiber, including hardware assemblies and line accessories of 115 KV CHAI BADAN - LOP BURI 2 TRANSMISSION LINE (approx. 81.77 km in transmission line distance)	lump sum	lump sum	1,424.00	116,440.48
<b>TOTAL PRICE FOR SCHEDULE 3Z</b>				<b>Baht</b>	<b>177,458.88</b>

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## Medium Price Schedule no. 4

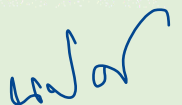


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PRICE SCHEDULE FOR  
SUPPLY AND CONSTRUCTION FOR REPLACEMENT OF OVERHEAD GROUND WIRE WITH  
COMPOSITE OVERHEAD GROUND WIRE WITH OPTICAL FIBER (OPGW)


FOR

- SCHEDULE 1 : 500 KV CHOM BUNG - RATCHABURI 3  
230 KV BAN PONG 2 - SAI NOI  
230 KV RATCHABURI 2 - RATCHABURI 3  
230 KV BANG SAPHAN - PRACHUAP KHIRI KHAN  
115 KV PHETCHABURI - RATCHABURI 2  
115 KV CHA-AM - HUA HIN  
115 KV HUA HIN - PRAN BURI  
115 KV PRACHUAP KHIRI KHAN - PRAN BURI
- SCHEDULE 2 : 230 KV RAJJAPRABHA - SURAT THANI  
115 KV PHANGNGA - RAJJAPRABHA  
115 KV HAT YAI 1 - HAT YAI 2  
115 KV HAT YAI 1 - PHATTHALUNG
- SCHEDULE 3 : 115 KV ANG THONG 2 - LOP BURI 2  
115 KV CHAI BADAN - LOP BURI 2
- SCHEDULE 4 : 115 KV TAK 1 - TAK 2 (JUNCTION)  
115 KV MAE SOT - TAK 2 (JUNCTION)

UNDER

TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

  
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TOTAL PRICE FOR SCHEDULE NO. 4  
230 kV LS - PL2, 115 kV TA - TA2(J), 115 kV MS - TA2(J)  
TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Foreign 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) Baht					
		Amount	Amount					
4O : SUPPLY OF SERVICE OF VEHICLES							1,308,976.00	
4P : SUPPLY OF SPARE EQUIPMENT		1,149,567.55	277,002.00			25,881.00		
4R : 115 kV TAK 1 - TAK 2 (JUNCTION) TRANSMISSION LINE		1,316,079.02	543,132.32				922,018.33	
4S : 115 kV MAE SOT - TAK 2 (JUNCTION) TRANSMISSION LINE		7,587,869.71	2,719,529.42				5,340,577.49	
4I : DISMANTLING WORK							262,556.00	
<b>TOTAL PRICES</b>	<b>THB</b>	<b>10,053,516.28</b>	<b>3,539,663.74</b>			<b>25,881.00</b>	<b>7,834,127.82</b>	
4Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR								-133,528.48

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40 : SUPPLY OF SERVICE OF VEHICLES

IMPORTANT :

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
401	Facilities and service of four-wheel-driven, four doors vehicles, at least one ton capacity, 2000 cc. nominal, gasoline engine or 2500 cc. Nominal diesel engine, equipped with air-condition. The vehicles shall be in good condition, which shall be approved by EGAT. In case used Vehicles are proposed, the used period shall not exceed two years. (refer to Article G-6. Housing and Other Facilities.) for 230 KV LOM SAK - PHITSANULOK 2, 115 KV TAK 1 - TAK 2 (JUNCTION), 115 KV MAE SOT - TAK 2 (JUNCTION) Transmission Line	16	car-month	81,811.00	1,308,976.00
TOTAL PRICE FOR SCHEDULE 40				Baht	1,308,976.00

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4P : SUPPLY OF SPARE EQUIPMENT

IMPORTANT :

1. Spare Equipment shall be delivered and stored at EGAT Chom Bung store in Ratchaburi Province by the Contractor.
2. The Contractor shall perform the test on the Equipment for Item No. 4P1 at EGAT's Store to guarantee that there are no damages during the transportation.

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation (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
4P1	Composite overhead ground wire with 36 core optical fibers (11.4 mm. OPGW) 4,000 meter/reel	3	reel		383,189.18	1,149,567.55			Included in item 4P12	Included in item 4P12
4P2	2-way joint box with accessories for two OPGW cables	8	set				14,616.00	116,928.00	Included in item 4P12	Included in item 4P12
4P3	Tension assembly (grounded) with accessories	8	set				1,820.00	14,560.00	Included in item 4P12	Included in item 4P12
4P4	Suspension assembly (grounded) with accessories	4	set				2,654.00	10,616.00	Included in item 4P12	Included in item 4P12
4P5	Fiber frame termination cabinet with cable tray	2	set				12,745.00	25,490.00	Included in item 4P12	Included in item 4P12
4P6	36 pigtails (1.5 meter)	2	set				4,576.00	9,152.00	Included in item 4P12	Included in item 4P12
4P7	1-wire cleat (grounded)	30	set				794.00	23,820.00	Included in item 4P12	Included in item 4P12
4P8	2-wire cleat (grounded)	60	set				825.00	49,500.00	Included in item 4P12	Included in item 4P12
4P9	6-wire cleat (grounded)	16	set				1,464.00	23,424.00	Included in item 4P12	Included in item 4P12
4P10	Parallel groove clamp	8	set				254.00	2,032.00	Included in item 4P12	Included in item 4P12
4P11	Grounding clamp	8	set				185.00	1,480.00	Included in item 4P12	Included in item 4P12
4P12	Local transportation for item 4P1 to 4P11	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	25,881.00	25,881.00
TOTAL PRICE FOR SCHEDULE 4P					Baht	1,149,567.55	Baht	277,002.00	Baht	25,881.00

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**Schedule 4R : 115 KV TAK 1 - TAK 2 (JUNCTION) TRANSMISSION LINE**

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>4R1</b>	<b>Composite overhead ground wire with 36 cores Optical fibers (OPGW) (referred section F-4.3)</b>								
4R1.1	Furnishing OPGW (Ø 11.4 mm)	lump sum	lump sum	1,316,079.02	1,316,079.02			Included in Item 4R1.2	Included in Item 4R1.2
4R1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from Tak 1 substation to Tak 2 Junction	13.86	km	XXXXX	XXXXX	XXXXX	XXXXX	905,444.69	808,433.33
<b>4R2</b>	<b>Non-metallic optical fiber cable (OFC) at Tak 1 substation</b>								
4R2.1	36 core non-metallic optical fiber cable from joint box at take-off structure to fiber frame termination cabinet at Tak 1 control building	200.00	meter			140.00	28,000.00	Included in Item 4R2.4	Included in Item 4R2.4
4R2.2	Rigid steel conduit from take-off structure to cable trench for item 4R2.1	lump sum	lump sum			582.00	5,172.00	Included in Item 4R2.4	Included in Item 4R2.4
4R2.3	EFLEX and/or HDPE conduit for item 4R2.1 in cable trench	lump sum	lump sum			102.00	20,400.00	Included in Item 4R2.4	Included in Item 4R2.4
4R2.4	Laying of optical fiber cable with accessories for item 4R2.1, 4R2.2, 4R2.3	200.00	meter	XXXXX	XXXXX	XXXXX	XXXXX	392.00	78,400.00
4R2.5	19" closed rack cabinet	NA	set	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
4R2.6	Fiber frame termination cabinet with cable tray	1	set			12,745.00	12,745.00	31,130.00	31,130.00
4R2.7	36 pigtails (1.5 meter)	1	set			4,576.00	4,576.00	2,855.00	2,855.00
<b>4R3</b>	<b>Joint boxes for optical fiber cable</b>								
4R3.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R3.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure	1	set			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
<b>4R4</b>	<b>Splicing work</b>								
4R4.1	Connecting two OPGW cables for item 4R3.1	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 4R1.2	Included in 4R1.2
4R4.2	Connecting OPGW cable and non-metallic optical fiber cable for item 4R3.2 at take-off structure	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 4R1.2	Included in 4R1.2
4R4.3	Connecting OFC and pigtails for item 4R2.6	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 4R1.2	Included in 4R1.2
4R4.4	Connecting two OPGW cables at Tak 2 Junction	1	job	XXXXX	XXXXX	XXXXX	XXXXX	Included in 4R1.2	Included in 4R1.2

  
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**Schedule 4R : 115 KV TAK 1 - TAK 2 (JUNCTION) TRANSMISSION LINE**

**IMPORTANT :**

1. All lump sum price shall be based on horizontal distance of line route as specified else-where between the take-off structure. In case of changing of such horizontal distance of line route, the lump sum prices shall be adjusted accordingly.
2. The bidder are required to propose their estimated quantities for such Item together with their bid proposal for consideration of EGAT.

Item.	Description	Estimated Qty.	Unit	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
				Foreign Supply		Local Supply		(excluding VAT) Baht	
				CIF Thai Port		Ex-works Price (excluding VAT) Baht			
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<b>4R5</b>	<b>Hardware assembly for OPGW</b>								
4R5.1	OPGW suspension assembly (Grounded)	lump sum	lump sum			458,239.32	458,239.32	Included in 4R1.2	Included in 4R1.2
4R5.2	OPGW tension assembly (Grounded)	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R5.3	OPGW tension assembly with accessories and insulator to be installed at take-off structure	1	set			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
<b>4R6</b>	<b>Line accessories</b>								
4R6.1	Vibration damper assembly with accessories	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.2	Parallel groove clamps	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.3	Grounding clamps	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.5	2-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.6	6-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	15	set			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.8	6-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	4	set			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.9	Porcelain or glass insulator ANSI CLASS 52-4 (15,000 lbs) with corrosion proof type pin to be used with item 4R6.3	lump sum	lump sum	Included in 4R1.1	Included in 4R1.1			Included in 4R1.2	Included in 4R1.2
4R6.10	Insulator strain type ANSI CLASS 54-2	NA	each	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
4R6.11	3/8" high strength galvanized steel ground wire for grounding OPGW to tower	lump sum	lump sum			Included in 4R5.1	Included in 4R5.1	Included in 4R1.2	Included in 4R1.2
4R6.12	Orange and white fiber glass sphere with armor rod for composite overhead ground wire with 36 cores optical fiber (OPGW)	4	set			3,500.00	14,000.00	300.00	1,200.00
<b>4R7</b>	<b>Field testing for optical fiber</b>	lump sum	lump sum	XXXXX	XXXXX	XXXXX	XXXXX	Included in 4R1.2	Included in 4R1.2
<b>TOTAL PRICE FOR SCHEDULE 4R</b>				<b>Baht</b>	<b>1,316,079.02</b>	<b>Baht</b>	<b>543,132.32</b>	<b>Baht</b>	<b>922,018.33</b>

นางสาวอสา ขำงวิทยาการ  
 หจตส-ท.  
 21 ก.ค. 2566

นายพรรัตน์ จงก้องเกียรติ  
 ผู้อำนวยการฝ่ายระบบสื่อสาร

**Important Information**  
**for**  
**Invitation to Bid No. TNRP-L18A-OP**

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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 E-16. Inspection and Tests**

Terms and conditions regarding inspection and tests have been revised.

**Article F-8. Drawings and Data to be Furnished by the Contractor**

Terms and conditions regarding EGAT's document management system in item d. have been added and the number of copies of the drawings and documents in Print and CD-ROM has been revised.

**Article F-12. Liquidated Damages for Late Completion and Late Delivery**

The total amount of liquidated damages shall not exceed ten (10) per cent of the total Contract Price, thereafter EGAT shall have the right, at its sole discretion, to terminate the Contract.

**Article F-17. Maintenance Guarantee and Article F-18. Maintenance Security**

In case all obligations on the part of the Contractor for the work under separated guarantee period under the Contract have been fulfilled, the Contractor is entitled to request EGAT to return the maintenance security guaranteed for such work regardless of the non-issuance of the Final Acceptance Certificate.

**Article G-3. Safety Program**

Safety terms and conditions have been revised. The Contractor shall observe and comply with the revised terms and conditions including Table 1. Safety Criteria and Conditions, Table 2. Contractor's Safety Information, and Table 3. Contractor Safety Evaluation Checklist which have been added at the end of Section G.

# DATA SHEET

for

## Invitation to Bid No. TNRP-L18A-OP

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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 B-3. Bid Security

The amount of bid security shall be USD 289,430.- or THB 9,900,000.-.

2. Article B-4. Validity of Bids

The validity of the bid shall be for two hundred and ten (210) Days from the date specified for opening of bid.

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

Evaluation and comparison of Bids shall be as specified in Article B-12. Evaluation and Comparison of Bids.

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



# ELECTRICITY GENERATING AUTHORITY OF THAILAND

Nonthaburi  
Thailand

## INVITATION TO BID NO. TNRP-L18A-OP

### SUPPLY AND CONSTRUCTION FOR REPLACEMENT OF OVERHEAD GROUND WIRE WITH COMPOSITE OVERHEAD GROUND WIRE WITH OPTICAL FIBER (OPGW)

### TELECOMMUNICATION NETWORK RENOVATION PROJECT (TNRP) PHASE 18

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

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for Supply and Construction for Replacement of Overhead Ground Wire with Composite Overhead Ground Wire with Optical Fiber (OPGW) under Telecommunication Network Renovation Project (TNRP) Phase 18 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 four (4) Schedules as described below :

Schedule 1 : Supply and Construction for Replacement of Overhead Ground Wire with Composite Overhead Ground Wire with Optical Fiber (OPGW) for the 500 kV, 230 kV and 115 kV Transmission Lines in the central region of Thailand as follows :

- 500 kV Chom Bung – Ratchaburi 3 Transmission Line, having a distance of 26.79 kilometers in length
- 230 kV Ban Pong 2 – Sai Noi Transmission Line, having a distance of 53.77 kilometers in length
- 230 kV Ratchaburi 2 – Ratchaburi 3 Transmission Line, having a distance of 21.06 kilometers in length
- 230 kV Bang Saphan – Prachuap Khiri Khan Transmission Line, having a distance of 59.12 kilometers in length
- 115 kV Phetchaburi – Ratchaburi 2 Transmission Line, having a distance of 53.11 kilometers in length
- 115 kV Cha-Am – Hua Hin Transmission Line, having a distance of 28.50 kilometers in length

- 115 kV Hua Hin – Pran Buri Transmission Line, having a distance of 25.49 kilometers in length
- 115 kV Prachuap Khiri Khan – Pran Buri Transmission Line, having a distance of 62.57 kilometers in length

Schedule 2 : Supply and Construction for Replacement of Overhead Ground Wire with Composite Overhead Ground Wire with Optical Fiber (OPGW) for the 230 kV and 115 kV Transmission Lines in the southern region of Thailand as follows :

- 230 kV Rajjaprabha – Surat Thani Transmission Line, having a distance of 51.49 kilometers in length
- 115 kV Phangnga – Rajjaprabha Transmission Line, having a distance of 79.35 kilometers in length
- 115 kV Hat Yai 1 – Hat Yai 2 Transmission Line, having a distance of 9.70 kilometers in length
- 115 kV Hat Yai 1 – Phatthalung Transmission Line, having a distance of 81.86 kilometers in length

Schedule 3 : Supply and Construction for Replacement of Overhead Ground Wire with Composite Overhead Ground Wire with Optical Fiber (OPGW) for the 115 kV Transmission Lines in the central region of Thailand as follows :

- 115 kV Ang Thong 2 – Lop Buri 2 Transmission Line, having a distance of 42.86 kilometers in length
- 115 kV Chai Badan – Lop Buri 2 Transmission Line, having a distance of 81.64 kilometers in length

Schedule 4 : Supply and Construction for Replacement of Overhead Ground Wire with Composite Overhead Ground Wire with Optical Fiber (OPGW) for the 115 kV Transmission Lines in the northern region of Thailand as follows :

- 115 kV Tak 1 – Tak 2 (Junction) Transmission Line, having a distance of 13.50 kilometers in length
- 115 kV Mae Sot – Tak 2 (Junction) Transmission Line, having a distance of 79.26 kilometers in length

For replacement of overhead ground wire with composite overhead ground wire with optical fiber (OPGW), the Contractor shall perform dismantling of the existing overhead ground wire, including its hardware and line accessories, prior to stringing of OPGW.

To allow the Contractor to perform the Work under this Contract, EGAT will de-energize a circuit of each line during day time (6:00 a.m. to 5:00 p.m.) in the period as specified in the de-energizing plan attached with Attachment No. 1: Additional Conditions for Overhead Ground Wire Replacement Work. The Contractor shall then perform the Work under the condition that one circuit conductor under the to-be-replaced overhead ground wire is de-energized and the other circuit conductor is energized. The Contractor shall therefore take all precautions to protect workmen from any danger which may occur and to prevent and be responsible for any damages during performing such work, which shall be in accordance with Specifications No. TL-06 (Rev.0) : Stringing of Conductor, Overhead Ground Wire and OPGW Parallel to Live Line.

Regarding this, the Bidders shall, for bidding, submit the detailed work procedure, which will include methods of stringing of OPGW and dismantling of existing overhead ground wires and their accessories under the conditions mentioned above, safety program for performing the Work, personnel required for performing the Work, and list of tools and Equipment to be employed with his bid for EGAT's consideration.

Furthermore, the Bidders shall note that the drawings of towers attached in these Bidding Documents are for reference only. Examination of the existing towers and modification of their overhead ground wire cross-arms for stringing of OPGW, if necessary, shall be under the responsibility of the Contractor.

It shall be noted that the dismantling Work of the existing overhead ground wires including hardware assemblies and line accessories shall be conducted in accordance with the requirements in Specifications No. TL-07 (Rev.3) : Dismantling Work. List of dismantled Equipment to be purchased by the Contractor is shown in Attachment No. 2 : List of Equipment to be Dismantled by the Contractor. Conditions regarding the purchase of the dismantled Equipment are stipulated in Attachment No. 3 : Requirements for Dismantling Work and Conditions of Sale of Dismantled Equipment.

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. The portion of design and detailing which are provided by EGAT is not under the Contractor's design responsibility.

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 bid 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 turnkey contract as contractor (not as subcontractor) in overseas country (not his own country) or with EGAT either on the replacement of overhead ground wire with composite overhead ground wire with optical fiber (OPGW) on the transmission line or on supply and construction of transmission line with composite overhead ground wire with optical fiber (OPGW). The voltage level of transmission line for the said Work shown on such record shall be as follows :

- 1) 110 kV or higher for supply and construction for replacement of overhead ground wire with composite overhead ground wire with optical fiber (OPGW) on 115 kV and 230 kV transmission line
- 2) 220 kV or higher for supply and construction for replacement of overhead ground wire with composite overhead ground wire with optical fiber (OPGW) on 500 kV transmission line

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 his subcontractor or the combination thereof, having excellent reputation and adequate technical knowledge and record(s) of experience either in the replacement of overhead ground wire with composite overhead ground wire with optical fiber (OPGW) on the transmission line or in the construction of transmission line with composite overhead ground wire with optical fiber (OPGW). The voltage level of transmission line for the said Work shown on such record shall be as described in a. 1) and a. 2). The accumulative distance of composite overhead ground wire with optical fiber (OPGW) shall be not less than 20 kilometers in length or not less than the Work specified under this Invitation.
- c. In case the scope of work under this Invitation requires stringing of composite overhead ground wire with optical fiber (OPGW) on which the other circuit conductor is under energizing condition while performing such work, himself, or either firm of the joint venture/consortium or his subcontractor or the combination thereof shall have adequate technical knowledge and practical experience in stringing of line conductors or overhead ground wire or OPGW parallel to a live line having voltage level as described in a. 1) and a. 2).

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 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:

- 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 accumulative distance of not less than 20 kilometers.

In the event that the Bidder proposes the Equipment of the manufacturer who, at the time of bidding, fails to meet 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.

**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 overhead ground wire, insulators for overhead ground wire and for OPGW, hardware assemblies and line accessories for overhead ground wire and for OPGW, 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:
  - Manufacturer for overhead ground wire, hardware assemblies and line accessories for overhead ground 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 operating/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 the 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.

The 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 and three (3) hard copies, in English, on the bid forms included for this purpose and shall be accompanied with a bid security as required under the Article pertaining to Bid Security in Section B : Instructions to Bidders. The bid security in accordance with Article B-3. Bid Security shall be submitted in a separate sealed envelope.

The envelope of the bids will be marked in capital letters in the lower left-hand corner as follows :

**INVITATION TO BID NO. TNRP-L18A-OP**

**SUPPLY AND CONSTRUCTION FOR REPLACEMENT OF  
OVERHEAD GROUND WIRE WITH COMPOSITE OVERHEAD  
GROUND WIRE WITH OPTICAL FIBER (OPGW)**

**TELECOMMUNICATION NETWORK RENOVATION  
PROJECT (TNRP) PHASE 18**

and 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.

Bids will be opened publicly at ***Bidding Room, 1<sup>st</sup> floor, Tor 082 Building*** and at the time specified above.

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

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

The Bidding Documents in CD-ROM are available for examination and can be obtained from EGAT at the hereunder address upon payment to EGAT, non-refundable, in the amount of USD...100.-...- or Baht...3,000.-...; these prices include the value added tax.

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

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**

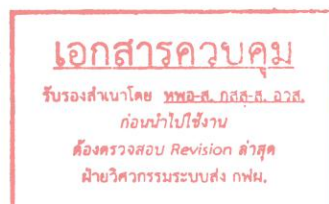
7 I-5 Road, Maptaphut Industrial Estate  
Amphur Muang  
Rayong 21150  
Tel : (66-38) 683070  
Fax : (66-38) 683065

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

247 Romklao Road  
Saensaeb  
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



03 Apr 2023

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)

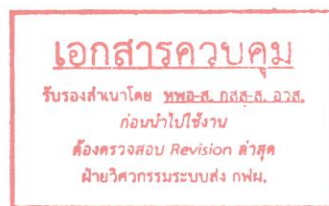
**MacLean - Dulhunty Power (Thailand) Ltd.**

3/2 Moo 7 Suwintawong Road  
Tambon Klongluangphang  
Amphur Muang Chachoengsao  
Chachoengsao 24000  
Tel : 038 845 675  
Fax : 038 845 674

- (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
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

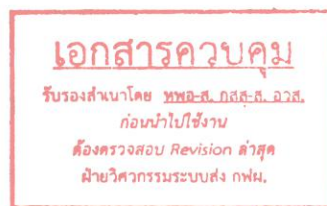
#### **Charoong Thai Wire & Cable Public Company Limited**

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



03 Apr 2023

**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

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.**

27<sup>th</sup> Floor, Two Pacific Place Building  
142 Sukhumvit Road  
Klongtoey District  
Bangkok 10110  
Tel : 0 2653 2550, 0 2463 0058 Ext. 342  
Fax : 0 2463 6364, 0 2463 6354-5



03 Apr 2023

**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

**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

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

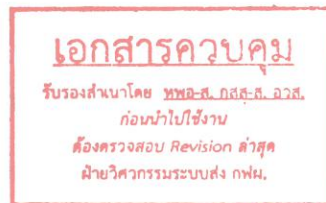
233 Moo 6, Soi Watchangrueng,  
Suksawat Road,  
Naiklongbangplakot, Phrasamutchedi,  
Samutprakarn 10290  
Tel : 0 2817 5590-3  
Fax : 0 2817 5311

**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



03 Apr 2023

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

(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.



Bid No. TNRP-L18A-OP

**เอกสารควบคุม**  
รับรองสำเนาโดย ทพอ.ส.กส.ส. อวส.  
ก่อนนำไปใช้งาน  
ต้องตรวจสอบ Revision ล่าสุด  
ฝ่ายวิศวกรรมระบบส่ง กฟผ.

03 Apr 2023

**SECTION H**  
**ATTACHMENTS**

SECTION H  
ATTACHMENTS

- Attachment No. 1 : Additional Conditions for Overhead Ground Wire Replacement Work
- Attachment No. 2 : List of Equipment to be Dismantled by the Contractor
- Attachment No. 3 : Requirements for Dismantling Work and Conditions of Sale of Dismantled Equipment



**ATTACHMENT NO. 1**  
**ADDITIONAL CONDITIONS**  
**FOR OVERHEAD GROUND WIRE REPLACEMENT WORK**

EGAT hereby specifies additional conditions and requirements to the Contractor for performing the work of replacement of existing overhead ground wires with new composite overhead ground wires with optical fiber for this Contract as follows :

1. The Contractor shall note that the dismantling of the existing overhead ground wire and stringing of new composite overhead ground wire with optical fiber, including installation of associated hardware and line accessories, shall be performed while one circuit conductor under the replacing overhead ground wire is under de-energized condition and the other circuit conductor is under energized condition. EGAT will allow de-energizing of the specified circuit of each transmission line according to the tentative de-energizing schedule hereto attached, and EGAT will de-energize the transmission lines only at day time (during 6:00 a.m. to 5:00 p.m.)

However, it is to be noted that the attached de-energizing schedule is just a tentative schedule. The effective de-energizing schedule will be discussed and agreed upon by EGAT and the successful Bidder after Award of the Contract. The Contractor shall therefore be responsible for developing detailed work plan, work procedures and safety program describing his activities and the safety and grounding methods that he proposes to implement and to follow while performing such work. The detailed work plan, work procedures and safety program will be applied to all aspects of the Contractor's work performance and shall be submitted to EGAT for review and approval before commencement of the work.

Furthermore, it is required that the Contractor follow appropriate safety and grounding procedures, such as those discussed in IEEE Standard 524-1980 and Specifications No. TL-06 : Stringing of Conductor, Overhead Ground Wire and OPGW Parallel to Live Line, during the course of dismantling and wire stringing activities. Wire stringing operations for OPGW will be conducted in accordance with Specifications attached to these Contract Documents.

2. The Contractor shall estimate quantities of joint boxes to be installed on each transmission line from structure lists furnished in these Contract Documents.

In addition, the Contractor shall be responsible for modification of cable attachment devices of overhead ground wire cross-arms of the existing towers, as necessary, for suitable suspension or termination of hardware assemblies for new composite overhead ground wire with optical fiber. The devices shall be modified to have minimum ultimate tensile strength equal to that of the new OPGW assemblies as specified in the EGAT Telecommunication Equipment Specifications. Such modification shall be submitted to EGAT for approval.

3. The drawings to be submitted for approval shall be in accordance with the list attached herewith.

**List of Approval Drawings for fiber Optic Transmission**

<b>Item No.</b>	<b>Drawing Description</b>	<b>Drawing Number</b>
1	Location diagram for joint box	DW-FOT-D02-209-Rn-01
2	Position of OPGW stringing	DW-FOT-D02-222-Rn-01
3	Installation arrangement of 2-way joint box and accessories at tower arm #3	DW-FOT-D01-221-01
4	Installation arrangement of joint box and accessories at TOS	DW-FOT-D01-211-01
5	Route of direct buried cable and installation detail	DW-FOT-D03-204-XXXX-02
6	Fiber termination box installation & detail	DW-FOT-D03-216-XXXX-01
7	Rack cabinet & fiber frame termination installation & detail	DW-FOT-D03-215-XXXX-01
8	Repeater station drawing	DW-FOT-D03-217-XXXX-03
9	Installation of optical fiber cable at repeater	DW-FOT-D03-204-XXXX-03
10	Installation drawing and method of OPGW/OFC in joint box at tower and TOS	DW-FOT-D01-233-01
11	Optical fiber connection diagram	DW-FOT-D02-213-Rn-01
12	Equipment drawing for OPGW, OFC joint box, tension & suspension clamp, cleat ground type, vibration damper jumper clamp, Heli formed reinforced rods, fiber optic Heli formed suspension unit, OPGW dead end, bow shackle, twisted bow shackle, chain link, extension link, clevis thimble termination	-
13	Hardware list for OPGW	-
14	OPGW test report	-

**Legend**

- XXXX            Station name
- N                Region number
- 1: Central region operation division
- 2: Northeastern region operation division
- 3: Southern region operation division
- 4: Northern region operation division
- 5: Metropolitan area operation division
- All: more than one region

**Project Schedule**  
 Project Name: Improvement of Communication System  
 Project Code: ICS2

Bid No	Description	Rev.	2564 (2021)												2565 (2022)												2566 (2023)												2567 (2024)												2568 (2025)												Remark
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
TMRP-L18A-OP	Supply and Construction for Replacement of Overhead Ground Wire with Composite Overhead Ground Wire with Optical Fiber (OPGW) Schedule 1 : CBG - RB3, BP2 - SND, RB2 - RB3, BSP - PKK, PB - RB2, CA - HH, IH - PRB, PKK - PRB Schedule 2 : RPB - SRT, PN - RPB, HY1 - HY2, HY1 - PU Schedule 3 : AT2 - LB2, CBD - LB2 Schedule 4 : MS - TA2(J), TA - TA2(U)	0	S																																																										K1 : Schedule 4 K2 : Schedule 3 K3 : Schedule 1 K4 : Schedule 2 (inlân SK-UT, KK1-KK3) (inlân LS - PL2) (inlân CA - PB)		

S : Start of work   B : Bid Issue   C : Bid opening   G : Letter of Intent   H : Contract sign   J : Delivery   K : Completion

De-energizing Plan for Replacement of OHGW with OPGW

Bid No. TNRP-L18A-OP

No.	Transmission Line	Distance (km)	2566 (2023)			2567 (2024)												2568 (2025)			
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	
1	Received LOI																				
2	Equipment shipment		[Shaded bar from Sep 2023 to Aug 2024]																		
3	Construction work		[Shaded bar from Apr 2024 to Feb 2025]																		
3.1	<u>Schedule 1</u>																				
3.1.1	500 kV CBG - RB3	26.83																			
3.1.2	230 kV BP2 - SNO	53.87																			
3.1.3	230 kV RB2 - RB3	21.06																			
3.1.4	230 kV BSP - PKK	59.12																			
3.1.5	115 kV PB - RB2	53.11																			
3.1.6	115 kV CA - HH	28.50																			
3.1.7	115 kV HH - PRB	25.37																			
3.1.8	115 kV PKK - PRB	62.68																			
3.2	<u>Schedule 2</u>																				
3.2.1	230 kV RPB - SRT	51.48																			
3.2.2	115 kV PN - RPB #2,3	79.35																			
3.2.3	115 kV HY1 - HY2	8.12																			
3.2.4	115 kV HY1 - PU	81.93																			
3.3	<u>Schedule 3</u>																				
3.3.1	115 kV AT2 - LB2	42.85																			
3.3.2	115 kV CBD - LB2	81.77																			
3.5	<u>Schedule 4</u>																				
3.5.1	115 kV TA - TA2(J) of 115 kV TA - TA2	13.86																			
3.5.2	115 kV MS - TA2(J) of 115 kV MS - TA2	79.91																			
X	<b>Total</b>	<b>769.81</b>																			

## ATTACHMENT NO. 2

### LIST OF EQUIPMENT TO BE DISMANTLED BY THE CONTRACTOR

The following are the Equipment to be dismantled under this Contract. Types and quantities shown are approximate and provided as primary information. The Bidder shall be deemed to have carefully examined the exact quantities for his quotation of dismantling services.

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
<b>Part 1 :</b>	<b><u>500 kV Chom Bung – Ratchaburi 3 Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
1.1	3/8 ” Extra high strength galvanized steel wire	26.79 km
1.2	Others	To be specified at site
<b>Part 2 :</b>	<b><u>230 kV Ban Pong 2 – Sai Noi Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
2.1	3/8 ” high strength galvanized steel overhead ground wire	53.77 km
2.2	Others	To be specified at site
<b>Part 3 :</b>	<b><u>230 kV Ratchaburi 2 – Ratchaburi 3 Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
3.1	3/8 ” high strength galvanized steel overhead ground wire	21.06 km
3.2	Others	To be specified at site
<b>Part 4 :</b>	<b><u>230 kV Bang Saphan – Prachuap Khiri Khan Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
4.1	3/8 ” high strength galvanized steel overhead ground wire	59.12 km
4.2	Others	To be specified at site

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
<b>Part 5 :</b>	<b><u>115 kV Phetchaburi – Ratchaburi 2 Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
5.1	3/8 ” high strength galvanized steel overhead ground wire	53.11 km
5.2	Others	To be specified at site
<b>Part 6 :</b>	<b><u>115 kV Cha-Am – Hua Hin Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
6.1	3/8 ” high strength galvanized steel overhead ground wire	28.50 km
6.2	Others	To be specified at site
<b>Part 7 :</b>	<b><u>115 kV Hua Hin – Pran Buri Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
7.1	3/8 ” high strength galvanized steel overhead ground wire	25.49 km
7.2	Others	To be specified at site
<b>Part 8 :</b>	<b><u>115 kV Prachuap Khiri Khan – Pran Buri Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
8.1	3/8 ” high strength galvanized steel overhead ground wire	62.57 km
8.2	Others	To be specified at site
<b>Part 9 :</b>	<b><u>230 kV Rajjaprabha – Surat Thani Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
9.1	3/8 ” high strength galvanized steel overhead ground wire	51.49 km
9.2	Others	To be specified at site

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
<b>Part 10 :</b>	<b><u>115 kV Phangnga – Rajjaprabha Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
10.1	3/8 " high strength galvanized steel overhead ground wire	79.35 km
10.2	Others	To be specified at site
<b>Part 11 :</b>	<b><u>115 kV Hat Yai 1 – Hat Yai 2 Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
11.1	3/8 " high strength galvanized steel overhead ground wire	9.70 km
11.2	Others	To be specified at site
<b>Part 12 :</b>	<b><u>115 kV Hat Yai 1 – Phatthalung Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
12.1	3/8 " high strength galvanized steel overhead ground wire	81.86 km
12.2	Others	To be specified at site
<b>Part 13 :</b>	<b><u>115 kV Ang Thong 2 – Lop Buri 2 Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
13.1	3/8 " high strength galvanized steel overhead ground wire	42.86 km
13.2	Others	To be specified at site
<b>Part 14 :</b>	<b><u>115 kV Chai Badan – Lop Buri 2 Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
14.1	3/8 " high strength galvanized steel overhead ground wire	81.64 km
14.2	Others	To be specified at site

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
<b>Part 15 :</b>	<b><u>115 kV Tak 1 – Tak 2 (Junction) Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
15.1	3/8 " high strength galvanized steel overhead ground wire	13.50 km
15.2	Others	To be specified at site
<b>Part 16 :</b>	<b><u>115 kV Mae Sot – Tak 2 (Junction) Transmission Line</u></b> (The dismantled Equipment as listed below shall be purchased by the Contractor)	
16.1	3/8 " high strength galvanized steel overhead ground wire	79.26 km
16.2	Others	To be specified at site



### ATTACHMENT NO. 3

#### REQUIREMENTS FOR DISMANTLING WORK AND

#### CONDITIONS OF SALE OF DISMANTLED EQUIPMENT

The requirements for Dismantling Work and Conditions of Sale of Dismantled Equipment shall apply to this Invitation to Bid.

##### **1. Scope of Dismantling Work**

The scope of dismantling work shall be as listed in the Price Schedule, which covers the provisions of dismantling and a portion of dismantled Equipment returned to EGAT and dismantling with conditions for the Contractor to purchase the dismantled Equipment, as the case may be, and shall be in accordance with Specifications No. TL-07 (Rev. 3) Dismantling Work.

##### **2. Responsibility of Contractor**

The Contractor shall be deemed to have carefully inspected and examined all of the conditions and circumstances of the Equipment as appearing in the existing transmission line to be dismantled under this Contract. EGAT will not be responsible for any defect, imperfection or fault of such Equipment.

For dismantled Equipment to be purchased by the Contractor, the Contractor shall, not later than fifteen (15) Days before the day of de-energizing for the dismantling work, pay the value added tax collectible on the payment for the dismantled Equipment to be sold to the Contractor to EGAT. Upon payment of the value added tax by the Contractor to EGAT, EGAT will issue a tax invoice to the Contractor. Ownership of the Equipment to be dismantled shall be transferred to the Contractor when the transmission line is de-energized for the dismantling work.

In the event that the Contractor shall return a portion of the dismantled Equipment to EGAT, the ownership of the dismantled Equipment is the property of EGAT, but this shall not be construed as relieving the Contractor from the sole responsibility as provided under this Contract for the care, protection, and maintenance of the Equipment. The Contractor shall be responsible for any loss or damages of the Equipment until acceptance has been made by EGAT. The submission of the dismantled Equipment to EGAT shall be performed upon completion of each dismantling portion as scheduled.

### 3. Payment

Ninety (90) per cent of the amount and the adjusted amount due, if any, for the dismantling work will be paid by EGAT to the Contractor after the date of completion of the dismantling work and in case of the returned dismantled Equipment to EGAT after the dismantled Equipment has been delivered at the site(s) specified and acceptance has been made by EGAT.

In case the scope of the Contract requires the Contractor to purchase any item of dismantled Equipment, payment for cost of dismantled Equipment shall be made by the Contractor as scheduled in the Contract Documents regardless of the actual dismantling to be incurred. In case no schedule is set forth, payment shall be made as soon as possible but not later than two (2) Months after completion of each portion of dismantling work. In case no payment is made within the aforementioned period, EGAT reserves the right to claim directly from the Contractor or from the Performance Security or the Maintenance Security, as the case may be, or deduct or set off from any and all money due to the Contractor under this Contract for the amount together with interest at the rate of Minimum Overdraft Rate (MOR) plus two (2) per cent calculated from the due date up to the date the payment is made in full.