

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 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

Due to the outbreak of COVID-19 in Thailand, please be informed of the online payment for purchase of bidding documents as follows:

- 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, Bangkrui Branch, Nonthaburi.

All bank charges and fees incurred by the payment of bidding documents shall be under the buyer's responsibility.

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

***** Please note that this online payment process is a temporary measure due to the COVID-19 outbreak. The online payment process will be available until further notice from EGAT *****

Registration Form

Invitation to Bid No. TIPE-L-04

Supply and Construction of Transmission Lines
230 kV Bang Lamung 2 Junction - Bang Lamung 2,
230 kV Rayong 2 - Bang Lamung 2 Junction, and
Sectionalizing of 230 kV Rayong 2 - Ao Phai to Bang Lamung 2 Substation
Transmission System Improvement Project in Eastern Region to Enhance System Security
(Pre-Qualification)

Available Duration for Purchasing : February 23, 2023 - March 23, 2023

Price of Bidding Documents : USD 170.- or THB 5,000.-

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 (with cc. 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	TAX ID :
Bidder's Letter No. :		Dated :	
New Bidder's Name			
Address			
		Country :	
Name of Contact Person :		Tel.	Mobile No.
Email Address :			
Contact Information of In-charge Officer			
Name	Mr. Thana Kirdboonsong		
Email address	thana.kir@egat.co.th		
Telephone No.	66 2436 3342		
Mobile No.	668 7116 3690		



Invitation to Bid No. TIPE-L-04

Supply and Construction of Transmission Lines 230 kV Bang Lamung 2 Junction - Bang Lamung 2, 230 kV Rayong 2 - Bang Lamung 2 Junction, and Sectionalizing of 230 kV Rayong 2 - Ao Phai to Bang Lamung 2 Substation Transmission System Improvement Project in Eastern Region to Enhance System Security (Pre-Qualification)

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

Place of Construction :

- from Bang Lamung 2 Junction to Bang Lamung 2 Substation (approx. 9.2 kilometers)
- from Rayong 2 Substation to Bang Lamung 2 Junction (approx. 28.3 kilometers)
- from 230 kV Rayong 2 - Ao Phai Transmission Line to Bang Lamung 2 Substation (approx. 0.2 kilometer)

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

THB 424,200,000.- (excluding cost of the Dismantled Equipment to be purchased by Bidder)

Eligibility of Bidders

1. The Bidder and the Equipment shall be named in EGAT Accepted List as specified in the bidding documents.
2. 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.
3. 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.
4. 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.
5. 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.
6. The Bidder who is a joint venture or consortium shall carry out all the work under such formation from the time of bidding until the fulfillment of the Contract.

Availability of Bidding Documents

Bidding Documents will be available for online purchase during 8:00 hrs. to 15:00 hrs., Bangkok Standard Time, as from February 23, 2023 to March 23, 2023 at USD 170.- or THB 5,000.- per copy, non-refundable.

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

Chattiga C.

Delivery of Bids

Bids shall be submitted at Bidding Room, 1st Floor, Tor 082 Building during 9:30 hrs. to 10:00 hrs., Bangkok Standard Time, April 18, 2023 and will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

February 23, 2023

Chattiya C.

(Miss Chattiya Chandhanayingyong)
Chief, International Procurement Department -
Transmission Segment



ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย
เรื่อง ประกวดราคาจ้าง เลขที่ TIPE-L-04
(Pre-Qualification)

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะจัดหาและจ้างก่อสร้างสายส่งไฟฟ้าแรงสูง 230 KV บริเวณจุดแยกบางละมุง 2 - บางละมุง 2, 230 KV ระยะยง 2 - บริเวณจุดแยกบางละมุง 2 และจัดหาและจ้างก่อสร้างตัดสายส่งไฟฟ้าแรงสูง 230 KV ระยะยง 2 - อ่าวไม่ ลงที่ สถานีไฟฟ้าแรงสูงบางละมุง 2 สำหรับโครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือเพื่อเสริมความมั่นคงระบบไฟฟ้า โดยทำสัญญาแบบปรับราคาได้ (ค่า k) โดยใช้งบประมาณ กฟผ.

สถานที่ก่อสร้าง :

- จากจุดแยกบางละมุง 2 ถึง สถานีไฟฟ้าแรงสูงบางละมุง 2 (ระยะทางประมาณ 9.2 กิโลเมตร)
- จากสถานีไฟฟ้าแรงสูงระยะยง 2 ถึง จุดแยกบางละมุง 2 (ระยะทางประมาณ 28.3 กิโลเมตร)
- จากสายส่งไฟฟ้าแรงสูง 230 KV ระยะยง 2 - อ่าวไม่ ลงที่ สถานีไฟฟ้าแรงสูงบางละมุง 2 (ระยะทางประมาณ 0.2 กิโลเมตร)

ราคากลาง (รวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ) : 424,200,000.- บาท (ไม่รวมราคาอุปกรณ์หรือถอนที่กำหนดให้ผู้เสนอราคาปรับซื้อจาก กฟผ.)

คุณสมบัติของผู้เสนอราคา

1. ต้องเป็นผู้ประกอบการและพัสดุที่ผ่านการคัดเลือกคุณสมบัติเบื้องต้นตามบัญชีรายชื่อที่ระบุในเอกสารประกวดราคา
2. ต้องเป็นนิติบุคคลผู้มีอาชีพรับจ้างตามประกวดราคาจ้างดังกล่าว และต้องไม่เป็นผู้ทำงานซึ่งปลัดกระทรวงการคลังได้แจ้งเวียนชื่อไว้ หรือต้องไม่เป็นผู้ที่ กฟผ. ห้ามติดต่อหรือห้ามเข้าเสนอราคา หรือต้องไม่เป็นผู้ที่ได้รับผลของการสั่งให้นิติบุคคลหรือบุคคลอื่นเป็นผู้ทำงานตามคำสั่ง กฟผ.
3. ต้องไม่เป็นผู้มีผลประโยชน์ร่วมกันกับผู้เสนอราคารายอื่น ณ วันประกาศประกวดราคาครั้งนี้เป็นต้นไป หรือต้องไม่เป็นผู้กระทำการอันเป็นการขัดขวางการแข่งขันราคาอย่างเป็นธรรมในการดำเนินการประกวดราคาครั้งนี้
4. ต้องไม่เป็นที่ปรึกษาของ กฟผ. หรือมีส่วนร่วมในบริษัทที่ปรึกษาของ กฟผ. ในงานนี้ หรือต้องไม่มีผู้ปฏิบัติงาน กฟผ. เข้าไปมีส่วนร่วมในกิจการของผู้เสนอราคา ไม่ว่าจะในฐานะผู้ถือหุ้นที่มีสิทธิควบคุมการจัดการ กรรมการ ผู้อำนวยการ ผู้จัดการ พนักงาน ลูกจ้าง ตัวแทน หรือที่ปรึกษา ยกเว้น ในกรณีที่ผู้ปฏิบัติงานได้รับคำสั่งอย่างเป็นทางการจาก กฟผ. ให้ไปปฏิบัติงานหรือเข้าร่วมในกิจการของผู้เสนอราคา
5. ต้องไม่เป็นผู้ได้รับเอกสิทธิ์หรือความคุ้มกัน ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และความคุ้มกันเช่นนั้น
6. ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม (Joint Venture or Consortium) จะต้องดำเนินการทุกขั้นตอนของการประกวดราคา ในนามของกิจการร่วมค้าหรือกิจการค้าร่วม ตั้งแต่การเสนอราคาจนถึงผูกพันกับ กฟผ.

การขายเอกสารประกวดราคา

ผู้สนใจติดต่อซื้อเอกสารประกวดราคา ในราคาชุดละ 5,000.- บาท ในวันทำการระหว่างเวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 23 กุมภาพันธ์ 2566 ถึงวันที่ 23 มีนาคม 2566 ทั้งนี้ สามารถดูรายละเอียดการซื้อเอกสารประกวดราคาได้ที่เว็บไซต์ <http://www4.egat.co.th/fprocurement/biddingeng/> หรือสอบถามข้อมูลเพิ่มเติมได้ทางโทรศัพท์ หมายเลข 0 2436 0342 หรืออีเมล procurement.tse@egat.co.th

(Handwritten signature)

การยื่นของประกวดราคา

กำหนดยื่นของประกวดราคา ในวันที่ 18 เมษายน 2566 เวลา 09:30 น. ถึง 10:00 น. และเปิดซองประกวดราคาเวลา 10:00 น. ณ ห้องประกวดราคา ชั้น 1 อาคารฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ ท.082 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศ ณ วันที่ 23 กุมภาพันธ์ 2566



(นางสาวฉัตติยา จันทนยิ่งยง)

หัวหน้ากองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง)
ในการจัดซื้อจัดจ้างที่มีใช้งานก่อสร้าง

1. ชื่อโครงการ Bid No. TIPE-L-04

งานจัดหาและจ้างก่อสร้างสายส่ง 230 KV บริเวณจุดแยกบางละมุง 2 - บางละมุง 2,
230 KV ระยะอง 2 -บริเวณจุดแยกบางละมุง 2 และจัดหาและจ้างก่อสร้างตัดสายส่ง 230 KV
ระยะอง 2 - อ่าวไผ่ ลงที่ สฟ.บางละมุง 2

โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือเพื่อเสริมความมั่นคงระบบไฟฟ้า
/หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

2. วงเงินงบประมาณที่ได้รับจัดสรร

โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคตะวันออกเฉียงเหนือเพื่อเสริมความมั่นคงระบบไฟฟ้า
งบประมาณ 21,000 ล้านบาท

3. วันที่กำหนดราคากลาง 20 มกราคม 2566 (วันที่ ชสพ. อนุมัติ)

ราคารวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ เป็นเงิน 424,200,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ

4. แหล่งที่มาของราคากลาง

หลักเกณฑ์การกำหนดราคากลางการจัดซื้อและจัดจ้างงานก่อสร้างระบบส่งไฟฟ้าของสายงานระบบส่ง

5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง

- | | | |
|-------------------|---------------|---------------------|
| 5.1 นายชินนทร์ | กฤตยากรนุพงศ์ | กอสส-ส. |
| 5.2 นายสมปอง | บวรธีระกิจชัย | หปส-ส. กอสส-ส. |
| 5.3 นางสาวสิรินยา | ตันสังจา | วศ.8 หปส-ส. กอสส-ส. |

หมายเหตุ ค่าใช้จ่ายอื่นๆ ได้แก่ ค่าใช้จ่ายที่ กฟผ. ต้องจ่ายตามวิธีการพิจารณาเปรียบเทียบราคาที่กำหนดไว้
ในเอกสารประกวดราคา เช่น อากรขาเข้า เป็นต้น

นางสาวอัสยา ช่างวิทยากร

นางสาวอัสยา ช่างวิทยากร

หจตส-ท

23 ก.พ. 66

DETAILS OF THE MEDIUM COST FOR BID NO. TIPE-L-04

SCHEDULE 1 : 230 kV Bang Lamung 2 Junction - Bang Lamung 2 Transmission Line (9.2 km)

Description	Total (Baht)
1A : PRELIMINARY WORK	962,450.00
1B : TOWER FOUNDATIONS	42,399,110.00
1C : TOWERS	87,673,670.00
1D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	19,027,600.00
1E : CONDUCTOR AND OVERHEAD GROUND WIRE	7,797,790.00
1F : LINE ACCESSORIES	2,617,100.00
1G : GROUNDING MATERIALS	347,160.00
1H : OPTICAL FIBER AND LINE ACCESSORIES	3,882,588.00
1N : TEST OF EQUIPMENT	450,000.00
1O : SUPPLY OF SERVICE OF VEHICLES	3,780,000.00
Total for Schedule 1	168,937,468.00
Adjusted Price (Import Duty & Tax + VAT)	11,825,622.76
Total Price Schedule 1	180,763,090.76

SCHEDULE 2 : 230 kV Rayong 2 - Bang Lamung 2 Junction Transmission Line (28.3 km)

Description	Total (Baht)
2A : PRELIMINARY WORK	1,967,100.00
2B : TOWER FOUNDATIONS	36,841,570.00
2C : TOWERS	95,074,380.00
2D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	19,484,200.00
2E : CONDUCTOR AND OVERHEAD GROUND WIRE	13,537,720.00
2F : LINE ACCESSORIES	6,928,450.00
2G : GROUNDING MATERIALS	902,320.00
2H : OPTICAL FIBER AND LINE ACCESSORIES	5,513,394.00
2I : DISMANTLING WORK	8,820,010.00
2J : TEMPORARY DETOUR LINES	35,453,445.00
2Q : DISMANTLING OF TEMPORARY DETOUR LINE	52,080.00
Total for Schedule 2	224,574,669.00
Adjusted Price (Import Duty & Tax + VAT)	15,720,226.83
Total Price Schedule 2	240,294,895.83

SCHEDULE 3 : Sectionalizing of 230 kV Rayong 2 - Ao Phai to Bang Lamung 2 Junction (0.2 km)

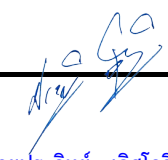
Description	Total (Baht)
3A : PRELIMINARY WORK	10,900.00
3B : TOWER FOUNDATIONS	930,600.00
3C : TOWERS	1,093,600.00
3D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	400,800.00
3E : CONDUCTOR AND OVERHEAD GROUND WIRE	293,000.00
3F : LINE ACCESSORIES	36,650.00
3G : GROUNDING MATERIALS	29,200.00
3H : OPTICAL FIBER AND LINE ACCESSORIES	86,976.00
Total for Schedule 3	2,881,726.00
Adjusted Price (Import Duty & Tax + VAT)	201,720.82
Total Price Schedule 3	3,083,446.82

Summary Price (Schedule 1 , 2 and 3)	396,393,863.00
Adjusted Price (Import Duty & Tax + VAT)	27,747,570.41
Total Price (Schedule 1 , 2 and 3)	424,141,433.41

นางสาวอัสยา ช่างวิทยากร

นางสาวอัสยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

MEDIUM COST OF BID NO. TIPE-L-04	424,200,000.00
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 นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 20 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

นางสาวอัสยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Local Currency	Local Transportation, Construction and Installation
		Foreign Supply	Local Supply			
		CIF Thai Port	Ex-works Price (excluding VAT)			
		Amount	Amount			
IA : PRELIMINARY WORK						962,450.00
IB : TOWER FOUNDATIONS			3,605,400.00			38,793,710.00
IC : TOWERS			76,837,850.00			10,835,820.00
ID : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	THB	11,297,000.00	7,730,600.00			
IE : CONDUCTOR AND OVERHEAD GROUND WIRE			11,200.00			7,786,590.00
IF : LINE ACCESSORIES			2,438,600.00			178,500.00
IG : GROUNDING MATERIALS			261,000.00			86,160.00

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Local Currency	Local Transportation, Construction and Installation
		Foreign Supply	Local Supply			
		CIF Thai Port	Ex-works Price (excluding VAT) Baht			
		Amount	Amount			
IH : OPTICAL FIBER AND LINE ACCESSORIES	THB	1,667,500.00	937,200.00			1,277,888.00
IN : TEST OF EQUIPMENT	THB			450,000.00		
IO : SUPPLY OF SERVICE OF VEHICLES						3,780,000.00
TOTAL PRICE	THB	12,964,500.00	Baht	450,000.00	Baht	Baht
			91,821,850.00			63,701,118.00

นางสาว อสยา ช่างวิทยากร

นางสาวออสยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
1A1	Check survey and staking of tower location (Approximately 9.2 kilometers in transmission line distance)	lump sum	each	289,800.00	289,800.00
1A2	Clearing right-of-way of 20 meters on each side of center line of the transmission line (Approximately 9.2 km in transmission line distance)	lump sum	each	241,500.00	241,500.00
1A3	Subsoil tests and preliminary measurement of ground resistance and earth resistivity (to be performed at tower locations directed by EGAT)				
1A3.1	Standard penetration tests and preliminary measurement of ground resistance and earth resistivity approximately 3 bores. (depth 15 m per bore)	45	m	2,940.00	132,300.00
1A3.2	Light ram sound tests with hand auger and preliminary measurement of ground resistance and earth resistivity from ground surface to 7 meters in depth	25	bore	7,250.00	181,250.00
1A4	Boundary post along boundary line of right-of-way	56	post	2,100.00	117,600.00
Total Price for 1A				Baht	962,450.00

นางสาว อาศยา ช่างวิทย์

นางสาวอาศยา ช่างวิทย์

หจตส-ท

23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B1	Foundation for Tower Type QWA1									
1B1.1	Stub type CS (230-2x1272 QWA1) and pad foundation type CS	3	tower		XXXXX XXXXX	61,900.00	185,700.00	610,050.00	1,830,150.00	
1B1.2	Stub type CIII (230-2x1272 QWA1) and pad foundation type CIII	4	tower		XXXXX XXXXX	59,000.00	236,000.00	565,950.00	2,263,800.00	
1B1.3	Stub type CIV (230-2x1272 QWA1) and pad foundation type CIV	1	tower		XXXXX XXXXX	59,000.00	59,000.00	339,150.00	339,150.00	
1B1.4	Stub type CV (230-2x1272 QWA1) and pad foundation type CV	3	tower		XXXXX XXXXX	39,100.00	117,300.00	198,450.00	595,350.00	
1B1.5	Stub for pile foundation type CLPI-D (230-2x1272 QWA1) and pile foundation type CLPI-D (4 or 5 driven piles), exclusive of cost of piles and pile driving	1	tower		XXXXX XXXXX	30,900.00	30,900.00	339,150.00	339,150.00	
1B1.6	Stub for pile foundation type CSPII-F (230-2x1272 QWA1) and pile foundation type CSPII-F (20 or 25 driven piles), exclusive of cost of piles and pile driving	1	tower		XXXXX XXXXX	35,500.00	35,500.00	611,630.00	611,630.00	
1B2	Foundation for Tower Type QWB2									
1B2.1	Stub type CS (230-2x1272 QWB2) and pad foundation type CS	1	tower		XXXXX XXXXX	120,000.00	120,000.00	1,470,000.00	1,470,000.00	
1B2.2	Stub type CIII (230-2x1272 QWB2) and pad foundation type CIII	1	tower		XXXXX XXXXX	117,000.00	117,000.00	1,197,000.00	1,197,000.00	
1B2.3	Stub type CV (230-2x1272 QWB2) and pad foundation type CV	1	tower		XXXXX XXXXX	108,000.00	108,000.00	475,650.00	475,650.00	
1B3	Foundation for Tower Type QWC2									
1B3.1	Stub type CS (230-2x1272 QWC2) and pad foundation type CS	1	tower		XXXXX XXXXX	181,000.00	181,000.00	1,942,500.00	1,942,500.00	
1B3.2	Stub type CIII (230-2x1272 QWC2) and pad foundation type CIII	1	tower		XXXXX XXXXX	174,000.00	174,000.00	1,711,500.00	1,711,500.00	

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B3.3	Stub type CV (230-2x1272 QWC2) and pad foundation type CV	1	tower		XXXXX	XXXXX	169,000.00	169,000.00	773,850.00	773,850.00
1B4	Foundation for Tower Type QWD2									
1B4.1	Stub type CS (230-2x1272 QWD2) and pad foundation type CS	1	tower		XXXXX	XXXXX	263,000.00	263,000.00	3,601,500.00	3,601,500.00
1B4.2	Stub type CIII (230-2x1272 QWD2) and pad foundation type CIII	2	tower		XXXXX	XXXXX	257,000.00	514,000.00	3,171,000.00	6,342,000.00
1B4.3	Stub type CV (230-2x1272 QWD2) and pad foundation type CV	1	tower		XXXXX	XXXXX	247,000.00	247,000.00	1,501,500.00	1,501,500.00
1B4.4	Stub for pile foundation type CLPI-G (230-2x1272 QWD2) and pile foundation type CLPI-G (12 or 16 driven piles), exclusive of cost of piles and pile driving	1	tower		XXXXX	XXXXX	169,000.00	169,000.00	893,030.00	893,030.00
1B5	Foundation for Tower Type QWDE									
1B5.1	Stub type CIII (230-2x1272 QWDE) and pad foundation type CIII	1	tower		XXXXX	XXXXX	257,000.00	257,000.00	3,171,000.00	3,171,000.00
1B5.2	Stub type CV (230-2x1272 QWDE) and pad foundation type CV	1	tower		XXXXX	XXXXX	247,000.00	247,000.00	1,501,500.00	1,501,500.00
1B6	Foundation for Tower Type QWDE(90)									
1B6.1	Stub type CIII (230-2x1272 QWDE90) and pad foundation type CIII	1	tower		XXXXX	XXXXX	258,000.00	258,000.00	3,874,500.00	3,874,500.00
1B7	Foundation for Tower Type QLWA1									
1B7.1	Stub type CIII (230-2x1272 QLWA1) and pad foundation type CIII	1	tower		XXXXX	XXXXX	117,000.00	117,000.00	1,197,000.00	1,197,000.00
1B8	Precast prestressed concrete piles									
1B8.1	Furnishing precast prestressed concrete piles min 72 cm. effective perimeter	700	m		XXXXX	XXXXX	XXXXX	XXXXX	420.00	294,000.00
1B8.2	Installation of precast prestressed concrete piles 72 cm. effective perimeter	700	m		XXXXX	XXXXX	XXXXX	XXXXX	320.00	224,000.00

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1B8.3	Furnishing precast prestressed concrete piles min 160 cm. effective perimeter	1020	m		XXXXX	XXXXXX	XXXXXX	XXXXXX	1,890.00	1,927,800.00
1B8.4	Installation of precast prestressed concrete piles 160 cm. effective perimeter	1020	m		XXXXXX	XXXXXX	XXXXXX	XXXXXX	630.00	642,600.00
1B9	Additional foundation work									
1B9.1	Additional earth excavation and backfilling including dewatering	10	cubic meter		XXXXXX	XXXXXX	XXXXXX	XXXXXX	790.00	7,900.00
1B9.2	Additional ordinary concrete work including forms	5	cubic meter		XXXXXX	XXXXXX	XXXXXX	XXXXXX	9,980.00	49,900.00
1B9.3	Additional steel reinforcement bars	0.5	ton		XXXXXX	XXXXXX	XXXXXX	XXXXXX	31,500.00	15,750.00
Total Price for 1B									Baht 3,605,400.00	Baht 38,793,710.00

นางสาว อวสา ช่างวิทย์

นางสาวอวสา ช่างวิทย์
 หจตส-ท
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation			
					Foreign Supply		Local Supply		Ex-works Price (excluding VAT) Baht		(excluding VAT) Baht	
					CIF Thai Port							
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
1C1	Tower Type QWA1											
1C1.1	Basic body (230-2x1272 QWA1)	13	body		XXXXX XXXXX	1,380,000.00	17,940,000.00	192,430.00	2,501,590.00			
1C1.2	Body extension 7.0 m (230-2x1272 QWA1)	6	body		XXXXX XXXXX	373,000.00	2,238,000.00	52,010.00	312,060.00			
1C1.3	Leg extension 4.0 m (230-2x1272 QWA1)	8	leg		XXXXX XXXXX	39,600.00	316,800.00	5,520.00	44,160.00			
1C1.4	Leg extension 5.0 m (230-2x1272 QWA1)	4	leg		XXXXX XXXXX	46,900.00	187,600.00	6,540.00	26,160.00			
1C1.5	Leg extension 7.0 m (230-2x1272 QWA1)	4	leg		XXXXX XXXXX	59,300.00	237,200.00	8,270.00	33,080.00			
1C1.6	Leg extension 9.0 m (230-2x1272 QWA1)	36	leg		XXXXX XXXXX	75,500.00	2,718,000.00	10,530.00	379,080.00			
1C2	Tower Type QWB2											
1C2.1	Basic body (230-2x1272 QWB2)	3	body		XXXXX XXXXX	1,522,000.00	4,566,000.00	212,230.00	636,690.00			
1C2.2	Body extension 7.0 m (230-2x1272 QWB2)	3	body		XXXXX XXXXX	542,000.00	1,626,000.00	75,580.00	226,740.00			
1C2.3	Leg extension 4.0 m (230-2x1272 QWB2)	4	leg		XXXXX XXXXX	52,900.00	211,600.00	7,380.00	29,520.00			
1C2.4	Leg extension 6.0 m (230-2x1272 QWB2)	4	leg		XXXXX XXXXX	77,900.00	311,600.00	10,860.00	43,440.00			
1C2.5	Leg extension 9.0 m (230-2x1272 QWB2)	4	leg		XXXXX XXXXX	104,000.00	416,000.00	14,500.00	58,000.00			
1C3	Tower Type QWC2											
1C3.1	Basic body (230-2x1272 QWC2)	3	body		XXXXX XXXXX	2,192,000.00	6,576,000.00	305,650.00	916,950.00			
1C3.2	Body extension 7.0 m (230-2x1272 QWC2)	3	body		XXXXX XXXXX	533,000.00	1,599,000.00	74,320.00	222,960.00			
1C3.3	Leg extension 4.0 m (230-2x1272 QWC2)	4	leg		XXXXX XXXXX	65,400.00	261,600.00	9,120.00	36,480.00			

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1C3.4	Leg extension 9.0 m (230-2x1272 QWC2)	8	leg		XXXXX XXXXX	124,000.00	992,000.00	17,290.00	138,320.00	
1C4	Tower Type QWD2									
1C4.1	Basic body (230-2x1272 QWD2)	5	body		XXXXX XXXXX	3,208,000.00	16,040,000.00	447,320.00	2,236,600.00	
1C4.2	Body extension 7.0 m (230-2x1272 QWD2)	3	body		XXXXX XXXXX	888,000.00	2,664,000.00	123,820.00	371,460.00	
1C4.3	Leg extension 3.0 m (230-2x1272 QWD2)	4	leg		XXXXX XXXXX	85,400.00	341,600.00	11,910.00	47,640.00	
1C4.4	Leg extension 8.0 m (230-2x1272 QWD2)	4	leg		XXXXX XXXXX	166,000.00	664,000.00	23,150.00	92,600.00	
1C4.5	Leg extension 9.0 m (230-2x1272 QWD2)	12	leg		XXXXX XXXXX	182,000.00	2,184,000.00	25,380.00	304,560.00	
1C5	Tower Type QWDE									
1C5.1	Basic body (230-2x1272 QWDE)	2	body		XXXXX XXXXX	3,208,000.00	6,416,000.00	447,320.00	894,640.00	
1C5.2	Leg extension 3.0 m (230-2x1272 QWDE)	4	leg		XXXXX XXXXX	85,400.00	341,600.00	11,910.00	47,640.00	
1C5.3	Leg extension 6.0 m (230-2x1272 QWDE)	4	leg		XXXXX XXXXX	138,000.00	552,000.00	19,240.00	76,960.00	
1C6	Tower Type QWDE(90)									
1C6.1	Basic body (230-2x1272 QWDE90)	1	body		XXXXX XXXXX	3,758,000.00	3,758,000.00	524,020.00	524,020.00	
1C6.2	Body extension 7.0 m (230-2x1272 QWDE90)	1	body		XXXXX XXXXX	696,000.00	696,000.00	97,050.00	97,050.00	
1C6.3	Leg extension 6.0 m (230-2x1272 QWDE90)	4	leg		XXXXX XXXXX	110,000.00	440,000.00	15,340.00	61,360.00	

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht		
					Foreign Supply		Local Supply				
					CIF Thai Port		Ex-works Price (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
1C7	Tower Type QLWA1										
1C7.1	Basic body (230-2x1272 QLWA1)	1	body		XXXXX	XXXXX	2,200,000.00	2,200,000.00	306,770.00	306,770.00	
1C7.2	Leg extension 6.0 m (230-2x1272 QLWA1)	4	leg		XXXXX	XXXXX	78,000.00	312,000.00	10,880.00	43,520.00	
1C8	Tower Signs										
1C8.1	Circuit name signs	4	piece		XXXXX	XXXXX	included in installation work	included in installation work	5,780.00	23,120.00	
1C8.2	Aerial patrol signs	10	piece		XXXXX	XXXXX	included in installation work	included in installation work	2,630.00	26,300.00	
1C8.3	Phasing signs	8	set		XXXXX	XXXXX	included in installation work	included in installation work	6,830.00	54,640.00	
1C8.4	Danger signs	3	piece		XXXXX	XXXXX	included in installation work	included in installation work	3,150.00	9,450.00	
1C9	Additional Tower Work										
1C9.1	Additional galvanized steel work	0.5	ton		XXXXX	XXXXX	62,500.00	31,250.00	8,720.00	4,360.00	
1C9.2	Additional paint with two coats of bituminous paint	5	sq. meter		XXXXX	XXXXX	included in installation work	included in installation work	1,580.00	7,900.00	
Total Price for 1C								Baht	76,837,850.00	Baht	10,835,820.00

นางสาวอภิสรา ช่างวิทยากร

นางสาวอภิสรา ช่างวิทยากร

ทจตส-ท


23 ก.พ. 66

นายประวิทย์ เลิศโกวิท

ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1D1	Single string suspension insulator assemblies with armor rods for two-bundled 1272 MCM ACSR/GA conductor, 16300 kg ultimate strength, coupling type K (without insulator and arcing horn)	132	set		XXXXX	XXXXXX	10,000.00	1,320,000.00	included in stringing work	included in stringing work
1D2	Double string suspension insulator assemblies with armor rods for two-bundled 1272 MCM ACSR/GA conductor, 16300 kg ultimate strength, coupling type K (without insulator and arcing horn)	36	set		XXXXX	XXXXXX	12,000.00	432,000.00	included in stringing work	included in stringing work
1D3	Bypass string suspension insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 12000 kg ultimate strength, coupling type J (without insulator and arcing horn)	45	set		XXXXX	XXXXXX	9,000.00	405,000.00	included in stringing work	included in stringing work
1D4	Single string tension insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 13000 kg ultimate strength, coupling type J (without insulator and arcing horn)	38	set		XXXXX	XXXXXX	14,000.00	532,000.00	included in stringing work	included in stringing work
1D5	Double string tension insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 26000 kg ultimate strength, coupling type K (without insulator and arcing horn)	288	set		XXXXX	XXXXXX	17,000.00	4,896,000.00	included in stringing work	included in stringing work
1D6	Single string tension inverted insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 13000 kg ultimate strength, coupling type J (without insulator and arcing horn)	10	set		XXXXX	XXXXXX	14,000.00	140,000.00	included in stringing work	included in stringing work


 นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht		
					Foreign Supply		Local Supply				
					CIF Thai Port		Ex-works Price (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
1D7	Porcelain or glass insulator ANSI CLASS 52-5 (25,000 lbs) with corrosion proof type pin	1358	disc	THB	700.00	950,600.00			included in stringing work	included in stringing work	
1D8	Porcelain or glass insulator ANSI CLASS 52-8 (36,000 lbs) with corrosion proof type pin	11496	disc	THB	900.00	10,346,400.00			included in stringing work	included in stringing work	
1D9	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	4	set		XXXXX	XXXXX	700.00	2,800.00	included in stringing work	included in stringing work	
1D10	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength to be employed for the installation with insulators supplied under Item 1D7 on take-off structures as per Drawing No. TP-159A	4	set		XXXXX	XXXXX	700.00	2,800.00	included in stringing work	included in stringing work	
Total Price for 1D				THB	11,297,000.00		Baht	7,730,600.00		Baht	

นางสาวอสิยา
นางสาวอสิยา ช่างวิทยาการ
จดส-ท
23 ก.พ. 66

เลิศโกวิท
นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

อัตรา ชั่งน้ำหนัก

อาส.-อผค.

นางสาวอสาชา ช่างวิทยากร

MEDIUM COST FOR BID NO. TIPE-L-04

FM-TL06 Rev.0 30/09/2557

จดส-ท

23 ก.พ. 66

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1E1 1E1.1	1272 MCM ACSR/GA Conductor 1272 MCM ACSR/GA Conductor, furnishing conductor for Item 1E1.2 and 1E1.3 (to be supplied by EGAT, see Article F-3, approx. 9.2 km in transmission line distance)		km		XXXXX	XXXXXX	XXXXXX	XXXXXX	included in stringing work	included in stringing work
1E1.2	Stringing of conductor by controlled tension method, four circuit, 3 phase, twin-bundled conductor per phase, measured based on horizontal distance of line route from Tower No. 28/2 type QWDE(90) at Bang Lamung 2 Junction to deadend Tower type QWDE at Bang Lamung 2 Substation	9.1	km		XXXXXX	XXXXXX	XXXXXX	XXXXXX	806,400.00	7,338,240.00
1E1.3	Installation of conductor, four circuit, 3 phase, twin-bundled conductor per phase, between the deadend tower type QWDE and take-off structure at Bang Lamung 2 Substation (approx. 0.1 km in transmission line distance)	lump sum	each		XXXXXX	XXXXXX	XXXXXX	XXXXXX	422,100.00	422,100.00
1E2 1E2.1	3/8" nominal diameter, high strength galvanized steel overhead ground wire, Class A coating 3/8" High strength galvanized steel wire, furnishing for Item 1E2.2 based on linear length (Linear length = No. of overhead ground wire x horizontal distance of line route + 1.5%)	0.4	km		XXXXXX	XXXXXX	28,000.00	11,200.00	included in stringing work	included in stringing work

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1E2.2	Installation of four overhead ground wires between deadend Tower type QWDE and take-off structure at Bang Lamung 2 Substation (approx. 0.1 km in transmission line distance)	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	26,250.00	26,250.00
Total Price for 1E								Baht	11,200.00	Baht 7,786,590.00

นางสาวอัสยา

นางสาวอัสยา ช่างวิชาการ

ทดตส-ท

23 ก.พ. 66

เลิศโกวิท

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht		
					Foreign Supply		Local Supply				
					CIF Thai Port		Ex-works Price (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
1F1	Tension sleeve for 1272 MCM ACSR/GA conductor	24	set		XXXXX	XXXXX	1,400.00	33,600.00	included in stringing work	included in stringing work	
1F2	Spacer damper for two-bundled 1272 MCM ACSR/GA conductor (for four circuit, approx. 9.2 km in transmission line distance)	lump sum	each		XXXXX	XXXXX	2,208,000.00	2,208,000.00	included in stringing work	included in stringing work	
1F3	Rigid type spacer for two-bundled 1272 MCM ACSR/GA conductor	324	set		XXXXX	XXXXX	600.00	194,400.00	included in stringing work	included in stringing work	
1F4	Vibration damper for 3/8" high strength galvanized steel overhead ground wire	4	set		XXXXX	XXXXX	650.00	2,600.00	included in stringing work	included in stringing work	
1F5	Field test of spacer damper for two-bundled 1272 MCM ACSR/GA conductor as per Specifications No.TL-03	1	test		XXXXX	XXXXX	XXXXX	XXXXX	178,500.00	178,500.00	
Total Price for 1F								Baht	2,438,600.00	Baht	178,500.00

นางสาว อธิษฐาน

นางสาวอสา ขางวิทยาการ
 หจตส-ห
 23 ก.พ. 66

นาย เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply					
					CIF Thai Port		Ex-works Price (excluding VAT) Baht					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
1G1	1.6 cm. nominal diameter x 3.0 m. (5/8" diameter x 10') copper-covered steel single length sectional ground rod with ground rod clamp, ground connecting wire and stub angle connector	112	set				1,200.00	134,400.00	210.00	23,520.00		
1G2	1.6 cm. nominal diameter x 1.8 m. (5/8" diameter x 6') copper-covered steel sectional ground rod with coupling	12	set				800.00	9,600.00	210.00	2,520.00		
1G3	Connector set (No.4 AWG annealed copper ground connecting wire 0.6 m. long with stub angle connector)	36	set				300.00	10,800.00	110.00	3,960.00		
1G4	Counterpoise No.2 AWG solid copper-clad steel wire 30% conductivity	540	m				180.00	97,200.00	90.00	48,600.00		
1G5	Heavy duty exothermic or compression type connector	36	set				250.00	9,000.00	210.00	7,560.00		
Total Price for 1G									Baht	261,000.00	Baht	86,160.00

นางสาวอานา ช่างวิทยากร

นางสาวอานา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1H1	<u>230 KV AO PHAI - BANG LAMUNG 2 TRANSMISSION LINE</u> Composite overhead ground wire with 36 core optical fibers (OPGW)									
1H1.1	13.5mm dia. Composite Overhead Ground Wire with Optical Fiber (OPGW)	lump sum	lump sum	THB	833,750.00	833,750.00	363,600.00	363,600.00	Included in Item 1H1-3	Included in Item 1H1-3
1H1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from New Str.No.28/2 (Type: QWDE(90)) at BANG LAMUNG 2 JUNCTION to BANG LAMUNG 2 substation	9.2	km		XXXXX	XXXXX	XXXXX	XXXXX	49,070.00	451,444.00
1H2	Non-metallic optical fiber cable									
1H2.1	36-core optical fiber cable from fiber frame termination cabinet at BANG LAMUNG 2 control building to joint box at Ao Phai take-off structure at BANG LAMUNG 2 substation	500	m				420.00	210,000.00	Included in Item 1H2.4	Included in Item 1H2.4
1H2.2	Rigid Steel Conduit from take-off structure to cable trench for item 1H2.1	lump sum	lump sum						Included in Item 1H2.4	Included in Item 1H2.4
1H2.3	EFLEX and/or HDPE Conduit with accessories for item 1H2.1	lump sum	lump sum						Included in Item 1H2.4	Included in Item 1H2.4
1H2.4	Laying of optical fiber cable and accessories for item 1H2.1, 1H2.2 and 1H2.3	500	m		XXXXX	XXXXX	XXXXX	XXXXX	750.00	375,000.00
1H3	Joint boxes									
1H3.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum							
1H3.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure (BANG LAMUNG 2 substation - 1)	1	set							
1H3.3	2-way joint box with accessories for two OPGW cables on New Str.No.28/2 (Type: QWDE(90)) at BANG LAMUNG 2 JUNCTION	1	set							

นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1H4	Hardware assembly for OPGW									
1H4.1	OPGW suspension assembly (grounded), excluding vibration damper	lump sum	lump sum		XXXXX	XXXXX				
1H4.2	OPGW tension assembly (grounded), excluding vibration damper	lump sum	lump sum		XXXXX	XXXXX				
1H4.3	OPGW tension assembly with accessories and insulator at take-off structure at BANG LAMUNG 2 substation, excluding insulator and vibration damper	1	set		XXXXX	XXXXX				
1H5	Indoor equipment									
1H5.1	Fiber frame termination cabinet with cable tray (BANG LAMUNG 2 control building - 1 set)	1	set							
1H5.2	36 Pigtails (1.5 meter) (BANG LAMUNG 2 control building - 1 set)	1	set							
1H6	Splicing work									
1H6.1	connecting two OPGW cables for item 1H3.1	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX		
1H6.2	connecting OPGW cable and optical fiber cable for item 1H3.2	1	job		XXXXX	XXXXX	XXXXX	XXXXX		
1H6.3	connecting two OPGW cables for item 1H3.3	1	job		XXXXX	XXXXX	XXXXX	XXXXX		
1H6.4	connecting optical fiber cable and pigtails for item 1H5.1	1	job		XXXXX	XXXXX	XXXXX	XXXXX		
1H7	Line accessories									
1H7.1	Vibration damper assembly with accessories	lump sum	lump sum		XXXXX	XXXXX				
1H7.2	Parallel groove clamps	lump sum	lump sum							
1H7.3	Grounding clamps	lump sum	lump sum							
1H7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum							
1H7.5	2-wire cleats without insulator for OPGW down-lead to joint box	lump sum	lump sum							

(Signature)
 นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1H7.6	6-wire cleats without insulator for OPGW down-lead to joint box	lump sum	lump sum							
1H7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	15	set							
1H7.8	6-wire cleats with insulator for OPGW down-lead to joint box to be used at take-off structure	4	set							
1H7.9	Porcelain or glass insulator ANSI CLASS 52-5 (25,000 lbs) with corrosion proof type pin to be used with item 1H4.3	1	set							
1H7.10	3/8" High strength galvanized steel wire ground wire for grounding OPGW to tower	lump sum	lump sum		XXXXX	XXXXX				
1H8	Field testing for optical fiber	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX		
<u>230 KV RAYONG 2 - BANG LAMUNG 2 TRANSMISSION LINE</u>										
1H9	Composite overhead ground wire with 36 core optical fibers (OPGW)									
1H9.1	13.5mm dia. Composite Overhead Ground Wire with Optical Fiber (OPGW)	lump sum	lump sum	THB	833,750.00	833,750.00	363,600.00	363,600.00		
1H9.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from New Str.No.28/2 (Type QWDE(90)) at BANG LAMUNG 2 JUNCTION to BANG LAMUNG 2 Substation	9.2	km		XXXXX	XXXXX	XXXXX	XXXXX	49,070.00	451,444.00
1H10	Joint boxes									
1H10.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum							
1H10.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure (BANG LAMUNG 2 substation - 1)	1	set							

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1H10.3	2-way joint box with accessories for two OPGW cables on New Str.No.28/2 (Type: QWDE(90)) at BANG LAMUNG 2 JUNCTION	1	set							
1H11	Hardware assembly for OPGW									
1H11.1	OPGW suspension assembly (grounded),excluding vibration damper	lump sum	lump sum		XXXXXX	XXXXXX				
1H11.2	OPGW tension assembly (grounded),excluding vibration damper	lump sum	lump sum		XXXXXX	XXXXXX				
1H11.3	OPGW tension assembly with accessories and insulator at take-off structure at BANG LAMUNG 2 substation, excluding insulator and vibration damper	1	set		XXXXXX	XXXXXX				
1H12	Splicing work									
1H12.1	connecting two OPGW cables for item 1H10.1	lump sum	lump sum		XXXXXX	XXXXXX	XXXXXX	XXXXXX		
1H12.2	connecting OPGW cable and optical fiber for item 1H10.2	1	job		XXXXXX	XXXXXX	XXXXXX	XXXXXX		
1H12.3	connecting two OPGW cables for item 1H10.3	1	job		XXXXXX	XXXXXX	XXXXXX	XXXXXX		
1H13	Line accessories									
1H13.1	Vibration damper assembly with accessories	lump sum	lump sum		XXXXXX	XXXXXX				
1H13.2	Parallel groove clamps	lump sum	lump sum							
1H13.3	Grounding clamps	lump sum	lump sum							
1H13.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum							
1H13.5	2-wire cleats without insulator for OPGW down-lead to joint box	lump sum	lump sum							
1H13.6	6-wire cleats without insulator for OPGW down-lead to joint box	lump sum	lump sum							
1H13.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	15	set							
1H13.8	6-wire cleats with insulator for OPGW down-lead to joint box to be used at take-off structure	4	set							

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht		
					Foreign Supply		Local Supply				
					CIF Thai Port		Ex-works Price (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
1H13.9	Porcelain or glass insulator ANSI CLASS 52-5 (25,000 lbs) with corrosion proof type pin to be used with item 1H4.3	1	set								
1H13.10	3/8" High strength galvanized steel wire for grounding OPGW to tower	lump sum	lump sum		XXXXXX	XXXXXX					
1H14	Field testing for optical fiber	lump sum	lump sum		XXXXXX	XXXXXX	XXXXXX	XXXXXX			
Total Price for 1H				THB	1,667,500.00		Baht	937,200.00		Baht	1,277,888.00

อรุณ ชินอินทร

นางสาวอสาชา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Foreign Currency		Local Currency (excluding VAT) Baht	
					Unit Price	Amount	Unit Price	Amount
1N1	Steep front wave impulse test on insulator ANSI Class 52-5 (25,000 lbs) with corrosion proof type pin as per Specification No. TL-01 (Rev.2)	1	test	THB	150,000.00	150,000.00		
1N2	Steep front wave impulse test on insulator ANSI Class 52-8 (36,000 lbs) with corrosion proof type pin as per Specification No. TL-01 (Rev.2)	1	test	THB	150,000.00	150,000.00		
1N3	Laboratory test of spacer damper for two-bundled 1272 MCM ACSR/GA Conductor as per Specification No. TL-03	1	test	THB	150,000.00	150,000.00		
Total Price for 1N				THB	450,000.00		Baht	

นางสาว อรุณรัตน์

นางสาวอาสยา ช่างวิทยากร
ทจตส-ท
23 ก.พ. 66

นาย ประวิทย์

นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
101	Service of four-wheel-driven vehicle (Specification of Vehicles refer to Article G-6. Housing and Other Facilities.)	72	car-month	52,500.00	3,780,000.00
Total Price for 10				Baht	3,780,000.00

นางสาวอัสยา

นางสาวอัสยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Local Currency	Local Transportation, Construction and Installation	Purchase Price Offered for Dismantled Equipment
		Foreign Supply	Local Supply				
		CIF Thai Port	Ex-works Price (excluding VAT)				
		Amount	Amount				
2A : PRELIMINARY WORK						1,967,100.00	
2B : TOWER FOUNDATIONS			3,898,100.00			32,943,470.00	
2C : TOWERS			83,294,330.00			11,780,050.00	
2D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	THB	11,799,300.00	7,684,900.00				
2E : CONDUCTOR AND OVERHEAD GROUND WIRE			817,600.00			12,720,120.00	
2F : LINE ACCESSORIES			6,749,950.00			178,500.00	
2G : GROUNDING MATERIALS			679,800.00			222,520.00	
2H : OPTICAL FIBER AND LINE ACCESSORIES	THB	2,492,190.00	1,296,860.00			1,724,344.00	
2I : DISMANTLING WORK						8,820,010.00	

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Local Currency	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				
2J : TEMPORARY DETOUR LINES	THB	8,830,500.00	14,743,980.00			11,878,965.00	
2Q : DISMANTLING WORK FOR TEMPORARY DETOUR LINES						52,080.00	
TOTAL PRICE	THB	23,121,990.00	Baht		Baht	82,287,159.00	Baht
2Z : DISMANTLED EQUIPMENT TO BE PURCHASED BY THE CONTRACTOR						Baht	-23,071,100.00

นางสาวอสา

นางสาวอสา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นายประวิทย์

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
2A1	Check survey and staking of tower location (Approximately 28.3 kilometers in transmission line distance)	lump sum	each	891,450.00	891,450.00
2A2	Subsoil tests and preliminary measurement of ground resistance and earth resistivity (to be performed at tower locations directed by EGAT)				
2A2.1	Light ram sound tests with hand auger and preliminary measurement of ground resistance and earth resistivity from ground surface to 7 meters in depth	69	bore	7,250.00	500,250.00
2A2.2	Standard penetration tests and preliminary measurement of ground resistance and earth resistivity (Approximately 6 bores.)	90	m	2,940.00	264,600.00
2A2.3	Boundary post along boundary line of right-of-way	148	post	2,100.00	310,800.00
Total Price for 2A				Baht	1,967,100.00

นางสาว อสยา ช่างวิทยากร

นางสาวออสยา ช่างวิทยากร
 หจตส-ห
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

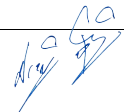
นางสาวอัสยา ขาววิทยาการ
 หจตส-ห
 23 ก.พ. 66

MEDIUM COST FOR BID NO. TIPE-L-04

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2B1	Foundation for Tower Type WA1									
2B1.1	Stub type CS (230-2x1272 WA1) and pad foundation type CS	5	tower		XXXXX	XXXXX	37,300.00	186,500.00	364,350.00	1,821,750.00
2B1.2	Stub type CIII (230-2x1272 WA1) and pad foundation type CIII	20	tower		XXXXX	XXXXX	37,300.00	746,000.00	294,000.00	5,880,000.00
2B1.3	Stub type CIV (230-2x1272 WA1) and pad foundation type CIV	6	tower		XXXXX	XXXXX	36,100.00	216,600.00	197,400.00	1,184,400.00
2B1.4	Stub type CV (230-2x1272 WA1) and pad foundation type CV	20	tower		XXXXX	XXXXX	36,100.00	722,000.00	127,050.00	2,541,000.00
2B1.5	Stub for pile foundation type CSPII-D (230-2x1272 WA1) and pile foundation type CSPII-D (12 or 16 driven piles), exclusive of cost of piles and pile driving	3	tower		XXXXX	XXXXX	22,200.00	66,600.00	161,700.00	485,100.00
2B1.6	Stub for pile foundation type CLPI-D (230-2x1272 WA1) and pile foundation type CLPI-D (4 or 5 driven piles), exclusive of cost of piles and pile driving	3	tower		XXXXX	XXXXX	18,500.00	55,500.00	277,200.00	831,600.00
2B2	Foundation for Tower Type WB2									
2B2.1	Stub type CS (230-2x1272 WB2) and pad foundation type CS	1	tower		XXXXX	XXXXX	58,800.00	58,800.00	573,300.00	573,300.00
2B2.2	Stub type CIII (230-2x1272 WB2) and pad foundation type CIII	1	tower		XXXXX	XXXXX	56,300.00	56,300.00	510,300.00	510,300.00
2B2.3	Stub type CV (230-2x1272 WB2) and pad foundation type CV	1	tower		XXXXX	XXXXX	54,500.00	54,500.00	226,800.00	226,800.00

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2B3	Foundation for Tower Type WC2									
2B3.1	Stub type CIII (230-2x1272 WC2) and pad foundation type CIII	1	tower		XXXXX	XXXXX	88,500.00	88,500.00	677,250.00	677,250.00
2B4	Foundation for Tower Type WD2									
2B4.1	Stub type CIII (230-2x1272 WD2) and pad foundation type CIII	1	tower		XXXXX	XXXXX	121,000.00	121,000.00	970,200.00	970,200.00
2B5	Foundation for Tower Type WDE									
2B5.1	Stub type CIII (230-2x1272 WDE) and pad foundation type CIII	1	tower		XXXXX	XXXXX	121,000.00	121,000.00	970,200.00	970,200.00
2B5.2	Stub type CV (230-2x1272 WDE) and pad foundation type CV	1	tower		XXXXX	XXXXX	114,000.00	114,000.00	487,200.00	487,200.00
2B6	Foundation for Tower Type LWA1									
2B6.1	Stub type CIII (230-2x1272 LWA1) and pad foundation type CIII	1	tower		XXXXX	XXXXX	43,100.00	43,100.00	430,500.00	430,500.00
2B6.2	Stub type CV (230-2x1272 LWA1) and pad foundation type CV	1	tower		XXXXX	XXXXX	41,700.00	41,700.00	183,750.00	183,750.00
2B7	Foundation for Tower Type QWA1									
2B7.1	Stub type CS (230-2x1272 QWA1) and pad foundation type CS	1	tower		XXXXX	XXXXX	61,900.00	61,900.00	610,050.00	610,050.00
2B7.2	Stub type CIII (230-2x1272 QWA1) and pad foundation type CIII	1	tower		XXXXX	XXXXX	59,000.00	59,000.00	565,950.00	565,950.00
2B7.3	Stub type CIV (230-2x1272 QWA1) and pad foundation type CIV	1	tower		XXXXX	XXXXX	59,000.00	59,000.00	339,150.00	339,150.00


 นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2B7.4	Stub type CV (230-2x1272 QWA1) and pad foundation type CV	1	tower		XXXXX	XXXXX	39,100.00	39,100.00	198,450.00	198,450.00
2B8	Foundation for Tower Type QWB2									
2B8.1	Stub type CIII (230-2x1272 QWB2) and pad foundation type CIII	1	tower		XXXXX	XXXXX	117,000.00	117,000.00	1,197,000.00	1,197,000.00
2B8.2	Stub type CV (230-2x1272 QWB2) and pad foundation type CV	1	tower		XXXXX	XXXXX	108,000.00	108,000.00	475,650.00	475,650.00
2B9	Foundation for Tower Type QWDE									
2B9.1	Stub type CIII (230-2x1272 QWDE) and pad foundation type CIII	1	tower		XXXXX	XXXXX	257,000.00	257,000.00	3,171,000.00	3,171,000.00
2B9.2	Stub type CV (230-2x1272 QWDE) and pad foundation type CV	1	tower		XXXXX	XXXXX	247,000.00	247,000.00	1,501,500.00	1,501,500.00
2B10	Foundation for Tower Type QWDE(90)									
2B10.1	Stub type CIII (230-2x1272 QWDE90) and pad foundation type CIII	1	tower		XXXXX	XXXXX	258,000.00	258,000.00	3,874,500.00	3,874,500.00
2B11	Precast prestressed concrete piles									
2B11.1	Furnishing precast prestressed concrete piles min 72 cm. effective perimeter	1344	m		XXXXX	XXXXX	XXXXX	XXXXX	420.00	564,480.00
2B11.2	Installation of precast prestressed concrete piles 72 cm. effective perimeter	1152	m		XXXXX	XXXXX	XXXXX	XXXXX	320.00	368,640.00
2B11.3	Furnishing precast prestressed concrete piles min 160 cm. effective perimeter	900	m		XXXXX	XXXXX	XXXXX	XXXXX	1,890.00	1,701,000.00
2B11.4	Installation of precast prestressed concrete piles 160 cm. effective perimeter	840	m		XXXXX	XXXXX	XXXXX	XXXXX	630.00	529,200.00

นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply					
					CIF Thai Port		Ex-works Price (excluding VAT) Baht					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
2B12	Additional foundation work											
2B12.1	Additional earth excavation and backfilling including dewatering	10	cubic meter		XXXXXX	XXXXXX	XXXXXX	XXXXXX	790.00	7,900.00		
2B12.2	Additional ordinary concrete work including forms	5	cubic meter		XXXXXX	XXXXXX	XXXXXX	XXXXXX	9,980.00	49,900.00		
2B12.3	Additional steel reinforcement bars	0.5	ton		XXXXXX	XXXXXX	XXXXXX	XXXXXX	31,500.00	15,750.00		
Total Price for 2B									Baht	3,898,100.00	Baht	32,943,470.00

นางสาว อสยา ช่างวิทย์

นางสาวอสยา ช่างวิทย์
 หจตส-ท
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
<u>230 kV Rayong 2 - Bang Lamung 2 Junction Transmission Line</u>										
2C1	Tower Type WA1									
2C1.1	Basic body (230-2x1272 WA1)	57	body		XXXXX	XXXXX	599,000.00	34,143,000.00	83,520.00	4,760,640.00
2C1.2	Body extension 7.0 m (230-2x1272 WA1)	28	body		XXXXX	XXXXX	212,000.00	5,936,000.00	29,560.00	827,680.00
2C1.3	Leg extension 1.0 m (230-2x1272 WA1)	12	leg		XXXXX	XXXXX	7,740.00	92,880.00	1,080.00	12,960.00
2C1.4	Leg extension 3.0 m (230-2x1272 WA1)	52	leg		XXXXX	XXXXX	16,800.00	873,600.00	2,340.00	121,680.00
2C1.5	Leg extension 4.0 m (230-2x1272 WA1)	36	leg		XXXXX	XXXXX	20,600.00	741,600.00	2,870.00	103,320.00
2C1.6	Leg extension 5.0 m (230-2x1272 WA1)	12	leg		XXXXX	XXXXX	25,900.00	310,800.00	3,610.00	43,320.00
2C1.7	Leg extension 6.0 m (230-2x1272 WA1)	28	leg		XXXXX	XXXXX	29,400.00	823,200.00	4,100.00	114,800.00
2C1.8	Leg extension 7.0 m (230-2x1272 WA1)	24	leg		XXXXX	XXXXX	36,400.00	873,600.00	5,080.00	121,920.00
2C1.9	Leg extension 8.0 m (230-2x1272 WA1)	24	leg		XXXXX	XXXXX	40,600.00	974,400.00	5,660.00	135,840.00
2C1.10	Leg extension 9.0 m (230-2x1272 WA1)	40	leg		XXXXX	XXXXX	45,000.00	1,800,000.00	6,270.00	250,800.00
2C2	Tower Type LWA1									
2C2.1	Basic body (230-2x1272 LWA1)	2	body		XXXXX	XXXXX	763,000.00	1,526,000.00	106,390.00	212,780.00
2C2.2	Body extension 7.0 m (230-2x1272 LWA1)	2	body		XXXXX	XXXXX	236,000.00	472,000.00	32,910.00	65,820.00
2C2.3	Leg extension 6.0 m (230-2x1272 LWA1)	4	leg		XXXXX	XXXXX	34,900.00	139,600.00	4,870.00	19,480.00
2C2.4	Leg extension 9.0 m (230-2x1272 LWA1)	4	leg		XXXXX	XXXXX	53,800.00	215,200.00	7,500.00	30,000.00
2C3	Tower Type WB2									
2C3.1	Basic body (230-2x1272 WB2)	3	body		XXXXX	XXXXX	750,000.00	2,250,000.00	104,580.00	313,740.00
2C3.2	Body extension 7.0 m (230-2x1272 WB2)	1	body		XXXXX	XXXXX	213,000.00	213,000.00	29,700.00	29,700.00
2C3.3	Leg extension 3.0 m (230-2x1272 WB2)	4	leg		XXXXX	XXXXX	19,200.00	76,800.00	2,680.00	10,720.00

นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

นางสาวออสยา ช่างวิทยากร

ทดตส-ท

23 ก.พ. 66

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2C3.4	Leg extension 8.0 m (230-2x1272 WB2)	4	leg		XXXXX	XXXXX	42,800.00	171,200.00	5,970.00	23,880.00
2C3.5	Leg extension 9.0 m (230-2x1272 WB2)	4	leg		XXXXX	XXXXX	50,400.00	201,600.00	7,030.00	28,120.00
2C4	Tower Type WC2									
2C4.1	Basic body (230-2x1272 WC2)	1	body		XXXXX	XXXXX	1,044,000.00	1,044,000.00	145,580.00	145,580.00
2C4.2	Leg extension 7.0 m (230-2x1272 WC2)	4	leg		XXXXX	XXXXX	50,200.00	200,800.00	7,000.00	28,000.00
2C5	Tower Type WD2									
2C5.1	Basic body (230-2x1272 WD2)	1	body		XXXXX	XXXXX	1,107,000.00	1,107,000.00	154,360.00	154,360.00
2C5.2	Leg extension 3.0 m (230-2x1272 WD2)	4	leg		XXXXX	XXXXX	34,300.00	137,200.00	4,780.00	19,120.00
2C6	Tower Type WDE									
2C6.1	Basic body (230-2x1272 WDE)	2	body		XXXXX	XXXXX	1,094,000.00	2,188,000.00	152,550.00	305,100.00
2C6.2	Body extension 7.0 m (230-2x1272 WDE)	2	body		XXXXX	XXXXX	367,000.00	734,000.00	51,170.00	102,340.00
2C6.3	Leg extension 3.0 m (230-2x1272 WDE)	4	leg		XXXXX	XXXXX	34,300.00	137,200.00	4,780.00	19,120.00
2C6.4	Leg extension 9.0 m (230-2x1272 WDE)	4	leg		XXXXX	XXXXX	77,700.00	310,800.00	10,830.00	43,320.00
2C7	Tower Type QWA1									
2C7.1	Basic body (230-2x1272 QWA1)	4	body		XXXXX	XXXXX	1,380,000.00	5,520,000.00	192,430.00	769,720.00
2C7.2	Body extension 7.0 m (230-2x1272 QWA1)	4	body		XXXXX	XXXXX	373,000.00	1,492,000.00	52,010.00	208,040.00
2C7.3	Leg extension 4.0 m (230-2x1272 QWA1)	12	leg		XXXXX	XXXXX	39,600.00	475,200.00	5,520.00	66,240.00
2C7.4	Leg extension 9.0 m (230-2x1272 QWA1)	4	leg		XXXXX	XXXXX	75,500.00	302,000.00	10,530.00	42,120.00

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2C8	Tower Type QWB2									
2C8.1	Basic body (230-2x1272 QWB2)	2	body		XXXXX	XXXXX	1,522,000.00	3,044,000.00	212,230.00	424,460.00
2C8.2	Body extension 7.0 m (230-2x1272 QWB2)	2	body		XXXXX	XXXXX	542,000.00	1,084,000.00	75,580.00	151,160.00
2C8.3	Leg extension 3.0 m (230-2x1272 QWB2)	4	leg		XXXXX	XXXXX	45,300.00	181,200.00	6,320.00	25,280.00
2C8.4	Leg extension 7.0 m (230-2x1272 QWB2)	4	leg		XXXXX	XXXXX	83,200.00	332,800.00	11,600.00	46,400.00
2C9	Tower Type QWDE									
2C9.1	Basic body (230-2x1272 QWDE)	2	body		XXXXX	XXXXX	3,208,000.00	6,416,000.00	447,320.00	894,640.00
2C9.2	Body extension 7.0 m (230-2x1272 QWDE)	1	body		XXXXX	XXXXX	888,000.00	888,000.00	123,820.00	123,820.00
2C9.3	Leg extension 4.0 m (230-2x1272 QWDE)	4	leg		XXXXX	XXXXX	97,100.00	388,400.00	13,540.00	54,160.00
2C9.4	Leg extension 6.0 m (230-2x1272 QWDE)	4	leg		XXXXX	XXXXX	138,000.00	552,000.00	19,240.00	76,960.00
2C10	Tower Type QWDE(90)									
2C10.1	Basic body (230-2x1272 QWDE90)	1	body		XXXXX	XXXXX	3,758,000.00	3,758,000.00	524,020.00	524,020.00
2C10.2	Body extension 7.0 m (230-2x1272 QWDE90)	1	body		XXXXX	XXXXX	696,000.00	696,000.00	97,050.00	97,050.00
2C10.3	Leg extension 6.0 m (230-2x1272 QWDE90)	4	leg		XXXXX	XXXXX	110,000.00	440,000.00	15,340.00	61,360.00

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
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					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2C11	Tower Signs									
2C11.1	Circuit name signs	4	piece		XXXXX	XXXXX	included in installation work	included in installation work	5,780.00	23,120.00
2C11.2	Aerial patrol signs	27	piece		XXXXX	XXXXX	included in installation work	included in installation work	2,630.00	71,010.00
2C11.3	Phasing signs	8	set		XXXXX	XXXXX	included in installation work	included in installation work	6,830.00	54,640.00
2C11.4	Danger signs	3	piece		XXXXX	XXXXX	included in installation work	included in installation work	3,150.00	9,450.00
2C12	Additional Tower Work									
2C12.1	Additional galvanized steel work	0.5	ton		XXXXX	XXXXX	62,500.00	31,250.00	8,720.00	4,360.00
2C12.2	Additional paint with two coats of bituminous paint	5	sq. meter		XXXXX	XXXXX			1,580.00	7,900.00
Total Price for 2C									Baht 83,294,330.00	Baht 11,780,050.00

นางสาวอัสยา ช่างวิทยากร

นางสาวอัสยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
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					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2D1	230 kV Rayong 2 - Bang Lamung 2 Junction Transmission Line Single string suspension insulator assemblies with armor rods for two-bundled 1272 MCM ACSR/GA conductor, 16300 kg ultimate strength, coupling type K (without insulator and arcing horn)	234	set		XXXXX	XXXXXX	10,000.00	2,340,000.00	included in stringing work	included in stringing work
2D2	Double string suspension insulator assemblies with armor rods for two-bundled 1272 MCM ACSR/GA conductor, 16300 kg ultimate strength, coupling type K (without insulator and arcing horn)	162	set		XXXXX	XXXXXX	12,000.00	1,944,000.00	included in stringing work	included in stringing work
2D3	Bypass string suspension insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 12000 kg ultimate strength, coupling type J (without insulator and arcing horn)	15	set		XXXXX	XXXXXX	9,000.00	135,000.00	included in stringing work	included in stringing work
2D4	Single string tension insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 13000 kg ultimate strength, coupling type J (without insulator and arcing horn)	26	set		XXXXX	XXXXXX	14,000.00	364,000.00	included in stringing work	included in stringing work
2D5	Double string tension insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 26000 kg ultimate strength, coupling type K (without insulator and arcing horn)	150	set		XXXXX	XXXXXX	17,000.00	2,550,000.00	included in stringing work	included in stringing work
2D6	Single string tension inverted insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 13000 kg ultimate strength, coupling type J (without insulator and arcing horn)	10	set		XXXXX	XXXXXX	14,000.00	140,000.00	included in stringing work	included in stringing work

นางสาวอัสยา ช่างวิทยากร

นางสาวอัสยา ช่างวิทยากร


หจตส-ห

23 ก.พ. 66

นายประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2D7	Double string tension inverted insulator assemblies for two-bundled 1272 MCM ACSR/GA conductor, 26000 kg ultimate strength, coupling type K (without insulator and arcing horn)	6	set		XXXXX	XXXXX	17,000.00	102,000.00	included in stringing work	included in stringing work
2D8	Porcelain or glass insulator ANSI CLASS 52-5 (25,000 lbs) with corrosion proof type pin	795	disc	THB	700.00	556,500.00			included in stringing work	included in stringing work
2D9	Porcelain or glass insulator ANSI CLASS 52-8 (36,000 lbs) with corrosion proof type pin	12492	disc	THB	900.00	11,242,800.00			included in stringing work	included in stringing work
2D10	Overhead ground wire suspension assemblies with armor rod for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	62	set		XXXXX	XXXXX	1,400.00	86,800.00	included in stringing work	included in stringing work
2D11	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	28	set		XXXXX	XXXXX	700.00	19,600.00	included in stringing work	included in stringing work
2D12	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength to be employed for the installation with insulators supplied under Item 2D8 on take-off structures as per Drawing No. TP-159A	5	set		XXXXX	XXXXX	700.00	3,500.00	included in stringing work	included in stringing work
				THB	11,799,300.00		Baht		Baht	
Total Price for 2D							7,684,900.00			


 นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

อาน ชินจินการ

MEDIUM COST FOR BID NO. TIPE-L-04

นางสาวอาสา ขำวิทยาการ

ทดตส-ห

23 ก.พ. 66

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2E1	230 kV Rayong 2 - Bang Lamung 2 Junction Transmission Line									
2E1.1	1272 MCM ACSR/GA Conductor, furnishing conductor for Item 2E1.2, 2E1.3 and 2E1.4 (to be supplied by EGAT, see Article F-3, approx. 28.3 km in transmission line distance)		km		XXXXX	XXXXX	XXXXX	XXXXX	included in stringing work	included in stringing work
2E1.2	Stringing of conductor by controlled tension method, four circuit, 3 phase, twin-bundled conductor per phase, measured based on horizontal distance of line route from the deadend Tower No. 0/1 type QWDE at Rayong 2 Substation to Tower No. 2/3 type QWDE at KM. 3	2.9	km		XXXXX	XXXXX	XXXXX	XXXXX	806,400.00	2,338,560.00
2E1.3	Stringing of conductor by controlled tension method, double circuit, 3 phase, twin-bundled conductor per phase, measured based on horizontal distance of line route from the lower and upper circuits on the same side of Tower No. 2/3 type QWDE at KM.3 to the lower and upper circuits on the same side of Tower No. 28/2 type QWDE(90) at Bang Lamung 2 Junction by passing the double circuit towers to be 230 kV Rayong 2 - Bang Lamung 2 Transmission Line (Including connecting loop at Tower No. 28/2 type QWDE(90) at Bang Lamung 2 Junction)	25.3	km		XXXXX	XXXXX	XXXXX	XXXXX	371,700.00	9,404,010.00
2E1.4	Installation of conductor, double circuit, 3 phase, twin-bundled conductor per phase, between the lower and upper circuits on the same side of the deadend Tower No. 0/1 type QWDE and take-off structure at Rayong 2 Substation (approx. 0.1 km in transmission line distance)	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	211,050.00	211,050.00

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2E2	3/8" nominal diameter, high strength galvanized steel overhead ground wire, Class A coating									
2E2.1	3/8" High strength galvanized steel wire, furnishing for Item 2E2.2 and 2E2.3 based on linear length (Linear length = No. of overhead ground wire x horizontal distance of line route + 1.5%)									
		29.2	km		XXXXX	XXXXX	28,000.00	817,600.00	included in stringing work	included in stringing work
2E2.2	Stringing of one overhead ground wire by controlled tension method, measured based on horizontal distance of line route from the deadend Tower No. 0/1 type QWDE at Rayong 2 Substation to Tower No. 28/2 type QWDE(90) at Bang Lamung 2 Junction									
		28.2	km		XXXXX	XXXXX	XXXXXX	XXXXXX	26,250.00	740,250.00
2E2.3	Installation of five overhead ground wires between deadend Tower No. 0/1 type QWDE and take-off structure at Rayong 2 Substation (approx. 0.1 km in transmission line distance)									
		lump sum	each		XXXXX	XXXXX	XXXXXX	XXXXXX	26,250.00	26,250.00
Total Price for 2E								817,600.00	12,720,120.00	

นางสาวอัสยา

นางสาวอัสยา ขาววิทยาการ
 หจตส-ห
 23 ก.พ. 66

นายประวิทย์

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2F1	Tension sleeve for 1272 MCM ACSR/GA conductor	216	set		XXXXX	XXXXXX	1,400.00	302,400.00	included in stringing work	included in stringing work
2F2	Tension sleeve for 3/8" high strength, galvanized steel overhead ground wire	4	set		XXXXX	XXXXXX	300.00	1,200.00	included in stringing work	included in stringing work
2F3	Spacer damper for two-bundled 1272 MCM ACSR/GA conductor (for four circuit, approx. 3 km in transmission line distance)	lump sum	each		XXXXX	XXXXXX	720,000.00	720,000.00	included in stringing work	included in stringing work
2F4	Spacer damper for two-bundled 1272 MCM ACSR/GA conductor (for double circuit, approx. 25.3 km in transmission line distance)	lump sum	each		XXXXX	XXXXXX	5,566,000.00	5,566,000.00	included in stringing work	included in stringing work
2F5	Rigid type spacer for two-bundled 1272 MCM ACSR/GA conductor	186	set		XXXXX	XXXXXX	600.00	111,600.00	included in stringing work	included in stringing work
2F6	Vibration damper for 3/8" high strength galvanized steel overhead ground wire	75	set		XXXXX	XXXXXX	650.00	48,750.00	included in stringing work	included in stringing work
2F7	Field test of spacer damper for two-bundled 1272 MCM ACSR/GA conductor as per Specifications No.TL-03	1	test		XXXXX	XXXXXX	XXXXXX	XXXXXX	178,500.00	178,500.00
Total Price for 2F							Baht	6,749,950.00	Baht	178,500.00

นางสาวอสา

นางสาวอสา ช่างวิทยากร

หจตส-ท

23 ก.พ. 66

นายประวิทย์

นายประวิทย์ เลิศโกวิทย์

ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht				
					Foreign Supply		Local Supply						
					CIF Thai Port		Ex-works Price (excluding VAT) Baht						
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount			
2G1	1.6 cm. nominal diameter x 3.0 m. (5/8" diameter x 10') copper-covered steel single length sectional ground rod with ground rod clamp, ground connecting wire and stub angle connector	296	set					1,200.00	355,200.00	210.00	62,160.00		
2G2	1.6 cm. nominal diameter x 1.8 m. (5/8" diameter x 6') copper-covered steel sectional ground rod with coupling	32	set					800.00	25,600.00	210.00	6,720.00		
2G3	Connector set (No.4 AWG annealed copper ground connecting wire 0.6 m. long with stub angle connector)	92	set					300.00	27,600.00	110.00	10,120.00		
2G4	Counterpoise No.2 AWG solid copper-clad steel wire 30% conductivity	1380	m					180.00	248,400.00	90.00	124,200.00		
2G5	Heavy duty exothermic or compression type connector	92	set					250.00	23,000.00	210.00	19,320.00		
Total Price for 2G										Baht	679,800.00	Baht	222,520.00

นางสาว อรุณรัตน์

นางสาวอรรษา ช่างวิทยากร

หจตส-ท

23 ก.พ. 66

ดร. กอ

นายประวิทย์ เลิศโกวิทย์

ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2H1	Composite overhead ground wire with 36 core optical fibers (OPGW) (referred section F-4.3)									
2H1.1	13.5mm dia. Composite Overhead Ground Wire with Optical Fiber (OPGW)furnishing OPGW	lump sum	lump sum	THB	2,492,190.00	2,492,190.00	1,086,860.00	1,086,860.00	included in stringing work	included in stringing work
2H1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from BANG LAMUNG 2 take-off structure at RAYONG 2 substation to the New Str.No.28/2 (Type: QWDE(90)) at BANG LAMUNG 2 JUNCTION	28.3	km		XXXXXX	XXXXXX	XXXXXX	XXXXXX	47,680.00	1,349,344.00
2H2	Non-metallic optical fiber cable									
2H2.1	36-core optical fiber cable from fiber frame termination cabinet at RAYONG 2 control building to joint box at BANG LAMUNG 2 take-off structure at RAYONG 2 substation	500	m				420.00	210,000.00	included in laying work	included in laying work
2H2.2	Rigid Steel Conduit from take-off structure to cable trench for item 2H2.1	lump sum	lump sum						included in laying work	included in laying work
2H2.3	EFLEX and/or HDPE Conduit with accessories for item 2H2.1	lump sum	lump sum						included in laying work	included in laying work
2H2.4	Laying of optical fiber cable and accessories for Item 2H2.1, 2H2.2 and 2H2.3	500	m		XXXXXX	XXXXXX	XXXXXX	XXXXXX	750.00	375,000.00
2H3	Joint boxes									
2H3.1	2-way joint box with accessories for two OPGW cables	lump sum	lump sum							
2H3.2	2-way joint box with insulator and accessories for OPGW cable and 36 core non-metallic optical fiber cable at take-off structure (RAYONG 2 substation - 1)	1	set							
2H4	Hardware assembly for OPGW									
2H4.1	OPGW suspension assembly (grounded), excluding vibration damper	lump sum	lump sum		XXXXXX	XXXXXX				
2H4.2	OPGW tension assembly (grounded), excluding vibration damper	lump sum	lump sum		XXXXXX	XXXXXX				

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2H4.3	OPGW tension assembly with accessories and insulator at take-off structure at RAYONG 2 substation, excluding insulator and vibration damper	1	set		XXXXX	XXXXX				
2H5	Indoor equipment									
2H5.1	Fiber frame termination cabinet with cable tray (RAYONG 2 control building - 1 set)	1	set							
2H5.2	36 Pigtails (1.5 meter) (RAYONG 2 control building - 1 set)	1	set							
2H6	Splicing work									
2H6.1	connecting two OPGW cables for item 2H3.1	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX		
2H6.2	connecting OPGW cable and optical fiber cable for item 2H3.2	1	job		XXXXX	XXXXX	XXXXX	XXXXX		
2H6.3	connecting optical fiber cable and pigtails for item 2H5.1	1	job		XXXXX	XXXXX	XXXXX	XXXXX		
2H7	Line accessories									
2H7.1	Vibration damper assembly with accessories	lump sum	lump sum		XXXXX	XXXXX				
2H7.2	Parallel groove clamps	lump sum	lump sum							
2H7.3	Grounding clamps	lump sum	lump sum							
2H7.4	1-wire cleat without insulator for OPGW down-lead to joint box	lump sum	lump sum							
2H7.5	2-wire cleats without insulator for OPGW down-lead to joint box	lump sum	lump sum							
2H7.6	6-wire cleats without insulator for OPGW down-lead to joint box	lump sum	lump sum							
2H7.7	1-wire cleat with insulator for OPGW down-lead to joint box to be used at take-off structure	15	set							
2H7.8	6-wire cleats with insulator for OPGW down-lead to joint box to be used at take-off structure	4	set							

นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht		
					Foreign Supply		Local Supply				
					CIF Thai Port		Ex-works Price (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
2H7.9	Porcelain or glass insulator ANSI CLASS 52-5 (25,000 lbs) with corrosion proof type pin to be used with item 2H4.3	1	set								
2H7.10	3/8" High strength galvanized steel wire for grounding OPGW to tower	lump sum	lump sum		XXXXX	XXXXX					
2H8	Field testing for optical fiber	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX			
Total Price for 2H											
				THB	2,492,190.00		Baht	1,296,860.00		Baht	1,724,344.00

นางสาวอัสยา ช่างวิทยากร
 หจตส-ห
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
211	Dismantling of the existing 230 kV Rayong 2 - Ao Phai Transmission Line which is double circuit, single conductor per phase from Rayong 2 Substation to Tower No. 23/2A type DDE , approx. 28.4 km in transmission line distance.	lump sum	each	7,782,500.00	7,782,500.00
212	Dismantling of the existing 230 kV Rayong 2 - Bo Win Transmission Line which is double circuit, single conductor per phase from Rayong 2 Substation to Tower No. 3/1 type DB2, approx. 3 km in transmission line distance.	lump sum	each	1,037,510.00	1,037,510.00
Total Price for 21				Baht 8,820,010.00	

นางสาวอสา

นางสาวอสา ช่างวิทยากร

หจตส-ท

23 ก.พ. 66

นายประวิทย์

นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2J1	<u>230 kV Rayong 2 - Bo win Temporary Detour Line (at Rayong 2 Substation and at KM. 3) as per drawing No.T05-003 : Details of work</u> Insulator String and Overhead Gound Wire Assemblies									
2J1.1	Single string tension insulator assemblies for 1272 MCM ACSR/GA conductor, 12000 kg ultimate strength, coupling type B (without insulator and arcing horn)	42	set		XXXXX	XXXXX	8,500.00	357,000.00	included in stringing work	included in stringing work
2J1.2	Porcelain or glass insulator ANSI CLASS 52-3 (18,000 lbs) with corrosion proof type pin	630	disc	THB	550.00	346,500.00			included in stringing work	included in stringing work
2J1.3	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	4	set		XXXXX	XXXXX	700.00	2,800.00	included in stringing work	included in stringing work
2J2	<u>Conductor and overhead ground wire</u>									
2J2.1	1272 MCM ACSR/GA Conductor, furnishing conductor for Item 2J2.2 and 2J2.3 (to be supplied by EGAT, see Article F-3, approx. 0.35 km in transmission line distance)		km		XXXXX	XXXXX	XXXXX	XXXXX	included in stringing work	included in stringing work
2J2.2	Installation of conductor, double circuit, 3 phase, single conductor per phase, between the deadend Tower No. 52/1 type DDE and take-off structure at Rayong 2 Substation, approx. 0.15 km in transmission line distance (Including connecting loop at Tower No. 52/1)									
		lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	140,700.00	140,700.00

นางสาวอัสยา ช่างวิทยากร

นางสาวอัสยา ช่างวิทยากร

จดส-ท

23 ก.พ. 66

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

อาสน์ ชีวอินทร์

อาส.-อพค.

นางสาวอสาชา ช่างวิทยากร

MEDIUM COST FOR BID NO. TIPE-L-04

FM-TL06 Rev.0 30/09/2557

จดส-ท

23 ก.พ. 66

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2J2.3	Installation of conductor, double circuit, 3 phase, single conductor per phase, between the new Tower No. 3/1 type WDE to the existing Tower No. 3/1 type DB2 at KM. 3, approx. 0.20 km in transmission line distance (Including connecting loop at Tower No. 3/1 and Tower No. 3/1)	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	140,700.00	140,700.00
2J2.4	3/8" High strength galvanized steel wire, furnishing for Item 2J2.5 and 2J2.6 based on linear length (Linear length = No. of overhead ground wire x horizontal distance of line route + 1.5%)	0.36	km		XXXXX	XXXXX	28,000.00	10,080.00	included in stringing work	included in stringing work
2J2.5	Installation of three overhead ground wires between the deadend Tower No. 52/1 type DDE and take-off structure at Rayong 2 Substation (approx. 0.15 km in transmission line distance)	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	26,250.00	26,250.00
2J2.6	Installation of one overhead ground wires between the new Tower No. 3/1 type WDE and the existing Tower No. 3/1 at KM. 3 (approx. 0.20 km in transmission line distance)	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	26,250.00	26,250.00
2J3	230 kV Rayong 2 - Bo win Temporary Detour Line (from Rayong 2 Substation to KM. 3) as per drawing No.T05-004 : Details of work Check survey and staking of tower location (Approximately 3.3 kilometers in transmission line distance)	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	103,950.00	103,950.00
2J4	Concrete Structure Type TDA-230 as per Drawing No. C11-179									
2J4.1	18 m. Prestressed concrete structure	13	structure		XXXXX	XXXXX	24,200.00	314,600.00	6,300.00	81,900.00
2J4.2	Pole extension assemblies	13	structure		XXXXX	XXXXX	6,200.00	80,600.00	950.00	12,350.00

นายประวิทย์ เลิศโกวิท
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2J4.3	Grounding assemblies	13	structure				2,500.00	32,500.00	840.00	10,920.00
2J5	Concrete Structure Type TSDE-230 as per Drawing No. C11-182									
2J5.1	18 m. Prestressed concrete structure	2	structure		XXXXX	XXXXX	24,200.00	48,400.00	6,300.00	12,600.00
2J5.2	Pole extension assemblies	2	structure		XXXXX	XXXXX	6,200.00	12,400.00	950.00	1,900.00
2J5.3	Grounding assemblies	2	structure				2,500.00	5,000.00	840.00	1,680.00
2J5.4	Guying assemblies	2	structure		XXXXX	XXXXX	24,000.00	48,000.00	1,050.00	2,100.00
2J6	Foundation for Lattice Steel Structure									
2J6.1	Foundation type CIV for lattice steel structure type WDA (14.0 m) including stub as per Drawing No. C23-1129	4	structure		XXXXX	XXXXX	21,250.00	85,000.00	132,720.00	530,880.00
2J6.2	Foundation type CIV for lattice steel structure type WDA (16.0 m) including stub as per Drawing No. C23-401	9	structure		XXXXX	XXXXX	21,250.00	191,250.00	166,850.00	1,501,650.00
2J6.3	Foundation type CIV for lattice steel structure type WDA (18.0 m) including stub as per Drawing No. C23-401	5	structure		XXXXX	XXXXX	21,250.00	106,250.00	166,850.00	834,250.00
2J6.4	Foundation type CIV for lattice steel structure type WSD (14.0 m) including stub as per Drawing No. C23-220 (Rev.1)	2	structure		XXXXX	XXXXX	67,500.00	135,000.00	341,780.00	683,560.00
2J6.5	Foundation type CIV for lattice steel structure type WSDE (10.50 m) including stub as per Drawing No. C23-220 (Rev.1)	2	structure		XXXXX	XXXXX	48,800.00	97,600.00	341,780.00	683,560.00
2J6.6	Foundation type CIV for lattice steel structure type WSDE (14.0 m) including stub as per Drawing No. C23-220 (Rev.1)	6	structure		XXXXX	XXXXX	67,500.00	405,000.00	341,780.00	2,050,680.00

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2J6.7	Foundation type CIV for lattice steel structure type WSDE (16.0 m) including stub as per Drawing No. C23-220 (Rev.1)	6	structure		XXXXX	XXXXXX	65,000.00	390,000.00	341,780.00	2,050,680.00
2J6.8	Stub type CV (230-2x1272 WDE) and pad foundation type CV for Tower Type WDE as per Drawing No. C23-743	1	tower		XXXXX	XXXXXX	114,000.00	114,000.00	487,200.00	487,200.00
2J7	Lattice Structure									
2J7.1	Tower Type WDA +14.0 m. (230-1x1272)	4	structure		XXXXX	XXXXXX	212,500.00	850,000.00	29,630.00	118,520.00
2J7.2	Tower Type WDA +16.0 m. (230-1x1272)	9	structure		XXXXX	XXXXXX	215,600.00	1,940,400.00	30,060.00	270,540.00
2J7.3	Tower Type WDA +18.0 m. (230-1x1272)	5	structure		XXXXX	XXXXXX	228,100.00	1,140,500.00	31,810.00	159,050.00
2J7.4	Tower Type WSD +14.0 m. (230-2x1272)	2	structure		XXXXX	XXXXXX	268,800.00	537,600.00	37,480.00	74,960.00
2J7.5	Tower Type WSDE +10.5 m. (230-2x1272)	2	structure		XXXXX	XXXXXX	211,600.00	423,200.00	29,510.00	59,020.00
2J7.6	Tower Type WSDE +14.0 m. (230-2x1272)	6	structure		XXXXX	XXXXXX	268,800.00	1,612,800.00	37,480.00	224,880.00
2J7.7	Tower Type WSDE +16.0 m. (230-2x1272)	6	structure		XXXXX	XXXXXX	296,900.00	1,781,400.00	41,400.00	248,400.00
2J8	Tower type WDE									
2J8.1	Basic body (230-2x1272 WDE)	1	body		XXXXX	XXXXXX	1,094,000.00	1,094,000.00	152,550.00	152,550.00
2J8.2	Leg extension 4.0 m (230-2x1272 WDE)	4	leg		XXXXX	XXXXXX	38,400.00	153,600.00	5,350.00	21,400.00
2J9	Insulator and Hardware assemblies									
2J9.1	Horizontal vee insulator string with hardware assemblies for 1272 MCM ACSR/GA conductor as per Drawing No. E11-139	108	set	THB	38,000.00	4,104,000.00	5,000.00	540,000.00	included in stringing work	included in stringing work

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2J9.2	Composite line post insulator with hardware assemblies for 1272 MCM ACSR/GA conductor as per Drawing No. E11-132 (for Suspension Structure)	78	set	THB	19,000.00	1,482,000.00	5,000.00	390,000.00	included in stringing work	included in stringing work
2J9.3	Composite line post insulator with hardware assemblies for 1272 MCM ACSR/GA conductor as per Drawing No. E11-132 (for Tension Structure, By-pass String)	102	set	THB	19,000.00	1,938,000.00	5,000.00	510,000.00	included in stringing work	included in stringing work
2J9.4	Composite suspension insulator as per Drawing No. E11-133	120	set	THB	8,000.00	960,000.00			included in stringing work	included in stringing work
2J9.5	Single string tension insulator assemblies for 1272 MCM ACSR/GA conductor, 12000 kg ultimate strength, coupling type J (without insulator and arcing horn)	120	set		XXXXX	XXXXX	8,500.00	1,020,000.00	included in stringing work	included in stringing work
2J9.6	Overhead ground wire suspension assemblies with armor rod for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	31	set		XXXXX	XXXXX	1,400.00	43,400.00	included in stringing work	included in stringing work
2J9.7	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	20	set		XXXXX	XXXXX	700.00	14,000.00	included in stringing work	included in stringing work
2J10	1272 MCM ACSR/GA conductor									
2J10.1	1272 MCM ACSR/GA Conductor, furnishing conductor for Item 2J10.2 (to be supplied by EGAT, see Article F-3, approx. 3.30 km in transmission line distance)		km		XXXXX	XXXXX	XXXXX	XXXXX	included in stringing work	included in stringing work

นางสาว อธิษฐาน

นางสาวอาสา ข่างวิทยากร

หจตส-ท

23 ก.พ. 66



นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
2J10.2	Stringing of conductor by controlled tension method, double circuit, 3 phase, single conductor per phase, measured based on horizontal distance of line route from take-off structure at Rayong 2 Substation to the existing tower No.3/1 type DB2 at KM.3 to be 230 kV Rayong 2 - Bo Win Temporary Detour Line	3.3	km		XXXXX	XXXXX	XXXXX	XXXXX	319,200.00	1,053,360.00
2J11	3/8" nominal diameter, high strength galvanized steel overhead ground wire, Class A coating									
2J11.1	3/8" High strength galvanized steel wire, furnishing overhead ground wire for Item 2J11.2 based on linear length (Linear length = No. of overhead ground wire x horizontal distance of line route + 1.5%)	6.7	km		XXXXX	XXXXX	28,000.00	187,600.00	included in stringing work	included in stringing work
2J11.2	Stringing by running line, two overhead ground wire, measured based on horizontal distance of line route from take-off structure at Rayong 2 Substation to the existing tower No.3/1 type DB2 at KM.3	3.3	km		XXXXX	XXXXX	XXXXX	XXXXX	26,250.00	86,625.00
2J12	Grounding Materials									
2J12.1	Grounding assemblies for Tower Type WDA as per Drawing No. C11-230	18	set				2,000.00	36,000.00	740.00	13,320.00
2J12.2	Grounding assemblies for Tower Type WSD as per Drawing No. C11-180	2	set				2,000.00	4,000.00	740.00	1,480.00
2J12.3	Grounding assemblies for Tower Type WSDE as per Drawing No. C11-180	14	set				2,000.00	28,000.00	740.00	10,360.00

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply					
					CIF Thai Port		Ex-works Price (excluding VAT) Baht					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
2J12.4	Grounding assemblies for Tower Type WDE as per Drawing No. C11-139B (Rev.1)	1	set				2,000.00	2,000.00	740.00	740.00		
Total Price for 2J				THB	8,830,500.00		Baht	14,743,980.00		Baht	11,878,965.00	

นางสาว อารยา ช่างวิทยากร

นางสาวอารยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
2Q1	Dismantling of 230 kV Rayong 2 - Bo Win Temporar Detour Line which is double circuit, single conductor per phase from take-off structure at Rayong 2 Substation to Tower No. 52/1 type DDE, and the new Tower No. 3/1 type WDE to the existing Tower No. 3/1 type DB2 at KM.3 , approx. 0.15 km. and 0.2 km. respectively in transmission line distance.	lump sum	each	52,080.00	52,080.00
Total Price for 2Q				Baht	52,080.00

นางสาว อสยา ช่างวิทยากร

นางสาวอสา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Purchase Price Offered for Dismantled Equipment (including VAT) Baht	
				Unit Price	Amount
2Z1	Dismantled Equipment of the existing 230 kV Rayong 2 - Ao Phai Transmission Line which is double circuit, single conductor per phase from Rayong 2 Substation to Tower No. 23/2A type DDE , approx. 28.4 km in transmission line distance.				
2Z2	Dismantled Equipment of the existing 230 kV Rayong 2 - Bo Win Transmission Line which is double circuit, single conductor per phase from Rayong 2 Substation to Tower No. 3/1 type DB2, approx. 3 km in transmission line distance.				
2Z3	Dismantled Equipment of 230 kV Rayong 2 - Bo Win Temporary Detour Line which is double circuit, single conductor per phase from take-off structure at Rayong 2 Substation to Tower No. 52/1 type DDE, and the new Tower No. 3/1 type WDE to the existing Tower No. 3/1 type DB2 at KM.3 , approx. 0.1 km. and 0.2 km. respectively in transmission line distance.				
Total Price for 2Z				Baht	23,071,100.00

นางสาว อารยา ช่างวิทยากร

นางสาวอารยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

Description	Currency	Supply of Equipment	Supply of Equipment	Foreign Currency	Local Currency	Local Transportation	Local Transportation,
		Foreign Supply	Local Supply				Construction and
		CIF Thai Port	Ex-works Price				Installation
		Amount	(excluding VAT)				(excluding VAT)
		Baht	Baht		Baht	Baht	Baht
		Amount	Amount	Amount	Amount	Amount	Amount
3A : PRELIMINARY WORK							10,900.00
3B : TOWER FOUNDATIONS			65,600.00				865,000.00
3C : TOWERS			944,200.00				149,400.00
3D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	THB	194,700.00	206,100.00				
3E : CONDUCTOR AND OVERHEAD GROUND WIRE							293,000.00
3F : LINE ACCESSORIES			36,650.00				
3G : GROUNDING MATERIALS			21,000.00				8,200.00
3H : OPTICAL FIBER AND LINE ACCESSORIES			29,100.00				57,876.00
TOTAL PRICE	THB	194,700.00	Baht 1,302,650.00		Baht	Baht	Baht 1,384,376.00

(Signature)
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 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Local Transportation, Construction and Installation (excluding VAT) Baht	
				Unit Price	Amount
3A1	Check survey and staking of tower location (Approximately 0.2 kilometers in transmission line distance)	lump sum	each	included in Item 2A1.	included in Item 2A1.
3A2	Subsoil tests by Light ram sound method (with hand auger) and preliminary measurement of ground resistance and earth resistivity from ground surface to 7 meters in depth (to be performed at tower locations directed by EGAT)	1	bore	6,900.00	6,900.00
3A3	Boundary post along boundary line of right-of-way	2	post	2,000.00	4,000.00
Total Price for 3A				Baht	10,900.00

นางสาว อาศยา ช่างวิทย์

นางสาวอาศยา ช่างวิทย์
 หจตส-ท
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
3B1	Stub type CIII (230-1x1272 DDE) and pad foundation type CIII for Tower Type DDE	1	tower		XXXXX	XXXXX	65,600.00	65,600.00	865,000.00	865,000.00
Total Price for 3B							Baht 65,600.00		Baht 865,000.00	

นางสาว อสยา ช่างวิทยากร

นางสาวอสยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht		
					Foreign Supply		Local Supply				
					CIF Thai Port		Ex-works Price (excluding VAT) Baht				
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	
3C1	Tower Type DDE										
3C1.1	Basic body (230-1x1272 DDE)	1	body		XXXXX	XXXXX	869,000.00	869,000.00	115,400.00	115,400.00	
3C1.2	Leg extension 3.0 m (230-1x1272 DDE)	4	leg		XXXXX	XXXXX	18,800.00	75,200.00	2,500.00	10,000.00	
3C2	Tower signs										
3C2.1	Circuit name signs	2	piece		XXXXX	XXXXX	included in installation work	included in installation work	5,500.00	11,000.00	
3C2.2	Phasing signs	2	set		XXXXX	XXXXX	included in installation work	included in installation work	6,500.00	13,000.00	
Total Price for 3C								Baht	944,200.00	Baht	149,400.00

นางสาว อาศยา ช่างวิทยาการ

นางสาวอาศยา ช่างวิทยาการ
 หจตส-ห
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
3D1	Bypass string suspension insulator assemblies for 1272 MCM ACSR/GA conductor, 8000 kg ultimate strength, coupling type B (without insulator and arcing horn)	6	set		XXXXX	XXXXX	6,000.00	36,000.00	included in stringing work	included in stringing work
3D2	Single string tension insulator assemblies for 1272 MCM ACSR/GA conductor, 12000 kg ultimate strength, coupling type B (without insulator and arcing horn)	9	set		XXXXX	XXXXX	8,500.00	76,500.00	included in stringing work	included in stringing work
3D3	Single string tension inverted insulator assemblies for 1272 MCM ACSR/GA conductor, 12000 kg ultimate strength, coupling type B (without insulator and arcing horn)	3	set		XXXXX	XXXXX	8,500.00	25,500.00	included in stringing work	included in stringing work
3D4	Double string tension insulator assemblies for 1272 MCM ACSR/GA conductor, 14000 kg ultimate strength, coupling type B (without insulator and arcing horn)	6	set		XXXXX	XXXXX	11,000.00	66,000.00	included in stringing work	included in stringing work
3D5	Overhead ground wire tension assemblies for 3/8" high strength, galvanized steel overhead ground wire, 5000 kg ultimate strength	3	set		XXXXX	XXXXX	700.00	2,100.00	included in stringing work	included in stringing work
3D6	Porcelain or glass insulator ANSI CLASS 52-3 (18,000 lbs) with corrosion proof type pin	354	disc	THB	550.00	194,700.00			included in stringing work	included in stringing work
Total Price for 3D				THB	194,700.00		Baht	206,100.00		Baht

นางสาวอัสยา ช่างวิทยากร
 หจตส-ห
 23 ก.พ. 66

นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation	
					Foreign Supply		Local Supply		(excluding VAT) Baht	
					CIF Thai Port		Ex-works Price			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
3E1 3E1.1	1272 MCM ACSR/GA Conductor 1272 MCM ACSR/GA Conductor, furnishing conductor for Item 3E1.2 (to be supplied by EGAT, see Article F-3, approx. 0.1 km in transmission line distance)		km		XXXXX	XXXXX	XXXXX	XXXXX	included in stringing work	included in stringing work
3E1.2	Installation of conductor, double circuit, 3 phase, single conductor per phase, from Tower No. 23/2A type DDE to Tower No. 28/2 type QWDE(90) at Bang Lamung 2 Junction, approx. 0.1 km in transmission line distance (Including connecting loop of Tower No. 23/2A and 28/2 to be 230 kV Ao Phai - Bang Lamung 2 Transmission Line)	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	134,000.00	134,000.00
3E1.3	Installation of conductor, double circuit, 3 phase, single conductor per phase, between the existing Tower No. 23/2 type DA1 and the new Tower No.23/2A type DDE at Bang Lamung 2 Junction (approx. 0.1 km in transmission line distance) including preservation of the existing conductor	lump sum	each		XXXXX	XXXXX	using existing conductor	using existing conductor	134,000.00	134,000.00
3E2 3E2.1	3/8" nominal diameter, high strength galvanized steel overhead ground wire, Class A coating 3/8" High strength galvanized steel wire, furnishing for Item 3E2.2 based on linear length (Linear length = No. of overhead ground wire x horizontal distance of line route + 1.5%)	0.2	km		XXXXX	XXXXX	using existing OHGW	using existing OHGW	included in stringing work	included in stringing work

นายประวิทย์ เลิศโกวิทย์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
3E2.2	Installation of one overhead ground wire from the existing Tower No. 23/2 type DA1 to the new Tower No. 28/2 type QWDE(90) at Bang Lamung 2 Junction, approx. 0.2 km in transmission line distance	lump sum	each		XXXXX	XXXXX	XXXXX	XXXXX	25,000.00	25,000.00
Total Price for 3E							Baht		Baht 293,000.00	

นางสาว อัสยา ช่างวิทยากร
 นางสาวอัสยา ช่างวิทยากร
 หจตส-ห
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท
 นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
3F1	Vibration damper for 1272 MCM ACSR/GA conductor	24	set		XXXXX	XXXXXX	1,500.00	36,000.00	included in stringing work	included in stringing work
3F2	Vibration damper for 3/8" high strength galvanized steel overhead ground wire	1	set		XXXXX	XXXXXX	650.00	650.00	included in stringing work	included in stringing work
Total Price for 3F							Baht	36,650.00	Baht	


นางสาว อวส. อวส.


นางสาวอวสยา ช่างวิทยากร
 หจตส-ห
 23 ก.พ. 66

นาย ประวิทย์ เลิศโกวิท

นายประวิทย์ เลิศโกวิท
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht			
					Foreign Supply		Local Supply					
					CIF Thai Port		Ex-works Price (excluding VAT) Baht					
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount		
3G1	1.6 cm. nominal diameter x 3.0 m. (5/8" diameter x 10') copper-covered steel single length sectional ground rod with ground rod clamp, ground connecting wire and stub angle connector	4	set				1,200.00	4,800.00	200.00	800.00		
3G2	1.6 cm. nominal diameter x 1.8 m. (5/8" diameter x 6') copper-covered steel sectional ground rod with coupling	4	set				800.00	3,200.00	200.00	800.00		
3G3	Connector set (No.4 AWG annealed copper ground connecting wire 0.6 m. long with stub angle connector)	4	set				300.00	1,200.00	100.00	400.00		
3G4	Counterpoise No.2 AWG solid copper-clad steel wire 30% conductivity	60	m				180.00	10,800.00	90.00	5,400.00		
3G5	Heavy duty exothermic or compression type connector	4	set				250.00	1,000.00	200.00	800.00		
Total Price for 3G									Baht	21,000.00	Baht	8,200.00


 นางสาวอาสยา ช่างวิทยากร
 หจตส-ท
 23 ก.พ. 66


 นายประวิทย์ เลิศโกวิทย์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 28 Jan 2023

MEDIUM COST FOR BID NO. TIPE-L-04

Item No.	Description	Estimated Qty.	Unit	Currency	Supply of Equipment		Supply of Equipment		Local Transportation, Construction and Installation (excluding VAT) Baht	
					Foreign Supply		Local Supply			
					CIF Thai Port		Ex-works Price (excluding VAT) Baht			
					Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
3H1	Composite overhead ground wire with 36 core optical fibers (OPGW)									
3H1.1	10.5mm dia. Composite Overhead Ground Wire with Optical Fiber (OPGW)	lump sum	lump sum		Existing OPGW	Existing OPGW	Existing OPGW	Existing OPGW	included in Item 3H1.2	included in Item 3H1.2
3H1.2	Stringing by controlled tension method, one OPGW measured based on horizontal distance of line route from the New Str.No.23/2A (Type: DDE) to the New Str.No.28/2 (Type: QWDE(90))	0.1	km		XXXXX	XXXXX	XXXXX	XXXXX	31,760.00	3,176.00
3H2	Hardware assembly for 10.5 mm diameter OPGW									
3H2.1	OPGW tension assembly (grounded), excluding vibration damper	3	set		XXXXX	XXXXX	1,390.00	4,170.00	200.00	600.00
3H3	Line accessories									
3H3.1	Vibration damper assembly with accessories	3	set		XXXXX	XXXXX	710.00	2,130.00	100.00	300.00
3H3.2	Parallel groove clamps	3	set				230.00	690.00	100.00	300.00
3H3.3	Grounding clamps	3	set				120.00	360.00	100.00	300.00
3H3.4	1-wire cleat without insulator for OPGW down-lead to joint box	25	set				650.00	16,250.00	100.00	2,500.00
3H3.5	6-wire cleats without insulator for OPGW down-lead to joint box	4	set				1,330.00	5,320.00	100.00	400.00
3H3.6	3/8" High strength galvanized steel wire for grounding OPGW to tower	6	m		XXXXX	XXXXX	30.00	180.00	50.00	300.00
3H4	Field testing for optical fiber	lump sum	lump sum		XXXXX	XXXXX	XXXXX	XXXXX	50,000.00	50,000.00
Total Price for 3H							Baht		Baht	
							29,100.00		57,876.00	

นางสาวอัสยา ช่างวิทยากร

นางสาวอัสยา ช่างวิทยากร

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นายประวิทย์ เลิศโกวิท

ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

28 Jan 2023

Important Information
for
Invitation to Bid No. TIPE-L-04

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

Article A-4. Eligibility of Bidders: Technical Requirements

The Bidder shall be named in EGAT Accepted Bidders List for Supply and Construction of Transmission Line attached at the end of Section A. Invitation to Bid.

Some of the Equipment to be proposed by the Bidder shall be only those specified in EGAT Accepted List for such Equipment as attached at the end of Section A. Invitation to Bid. The Bidder shall carefully study Article A-4. Eligibility of Bidders: Technical Requirements and make sure to propose Equipment correctly.

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. TIPE-L-04

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 673,340.- or THB 23,500,000.-.

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. TIPE-L-04

SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES 230 kV BANG LAMUNG 2 JUNCTION – BANG LAMUNG 2, 230 kV RAYONG 2 – BANG LAMUNG 2 JUNCTION, AND SECTIONALIZING OF 230 kV RAYONG 2 – AO PHAI TO BANG LAMUNG 2 SUBSTATION

TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN EASTERN REGION TO ENHANCE SYSTEM SECURITY

A-1. Invitation

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for Supply and Construction of Transmission Lines 230 kV Bang Lamung2 Junction – Bang Lamung 2, 230 kV Rayong 2 – Bang Lamung 2 Junction, and Sectionalizing of 230 kV Rayong 2 – Ao Phai to Bang Lamung 2 Substation under Transmission System Improvement Project in Eastern Region to Enhance System Security Project 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 supply and construction of 230 kV transmission lines located in the eastern region of Thailand. The Work is composed of three (3) Schedules as described below :

Schedule 1: Supply and Construction of 230 kV Bang Lamung 2 Junction – Bang Lamung 2 Transmission Line

The Work for this Schedule is supply and construction of 230 kV transmission line which is 50 Hz, 3 phase, twin-bundled conductor per phase, on four circuit self-supporting lattice steel towers extending from Bang Lamung 2 Junction to Bang Lamung 2 Substation having a distance of approximately 9.20 kilometers on the new right-of-way with 20 meters in width on each side of the center line of the transmission line.

Schedule 2: Supply and Construction of 230 kV Rayong 2 – Bang Lamung 2 Junction Transmission Line

The transmission line to be supplied and constructed under this Schedule consists of two (2) portions as follows :

Portion 1 : The Work for this portion is supply and construction of 230 kV transmission line which is 50 Hz, 3 phase, twin-bundled conductor per phase, on four circuit self-supporting lattice steel towers extending from Rayong 2 Substation to KM. 3 having a distance of approximately 3 kilometers on the existing right-of-way with 20 meters in width on each side of the center line of the transmission line.

Portion 2 : The Work for this portion is supply and construction of 230 kV transmission line which is 50 Hz, 3 phase, twin-bundled conductor per phase, on double circuit self-supporting lattice steel towers extending from KM. 3 to Bang Lamung 2 Junction having a distance of approximately 25.3 kilometers on the existing right-of-way with 20 meters in width on each side of the center line of the transmission line.

The scope of Work under this Schedule shall also include supply and construction of 230 kV Rayong 2 – Bo Win Temporary Detour Line which is 50 Hz, 3 phase, single conductor per phase, double circuit, extending from Rayong 2 Substation to KM. 3, having a distance of approximately 3.30 kilometers on the edge of the existing right-of-way with 20 meters in width on each side of the center line of the transmission line. It shall also be noted that the temporary detour line shall be constructed as indicated in the Price Schedule and the Specifications No. TL-05 (Rev.1) : Construction of Temporary Detour Line. Moreover, since some portions of the construction Work of this line shall be executed while the other circuit is being energized, the Contractor shall perform the said Work with full precaution in accordance with the requirements of the Specifications No. TL-06 (Rev.0) : Stringing of Conductor, Overhead Ground Wire and OPGW Parallel to Live Line attached to the Bidding Documents as a guideline for conducting such Work.

The dismantling Work of the existing 230 kV Rayong 2 – Ao Phai (from Rayong 2 Substation to Bang Lamung 2 Junction) and the existing 230 kV Rayong 2 – Bo Win (from Rayong 2 Substation to KM. 3) Transmission Lines which are double circuit strung with 1272 MCM ACSR/GA conductor, having a distance of approximately 28.5 and 3.0 kilometers respectively as well as the dismantling Work of the 230 kV Rayong 2 – Bo Win Temporary Detour Line at Rayong 2 and at KM. 3 shall also be performed under this Schedule.

It shall also be noted that all dismantling Work 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.

Schedule 3: Sectionalizing of 230 kV Rayong 2 – Ao Phai Transmission Line to Bang Lamung 2 Substation

The Work for this Schedule is supply and construction of 230 kV transmission line which is 50 Hz, 3 phase, single conductor per phase, on double circuit self-supporting lattice steel towers at Bang Lamung 2 Junction having a distance of approximately 0.2 kilometer on the existing right-of-way with 20 meters in width

on each side of the center line of the transmission line to sectionalize the 230 kV Rayong 2 - Ao Phai Transmission Line to Bang Lamung 2 Substation.

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

All types of steel towers and pad foundations of towers have already been designed by EGAT. However, the fabrication/erection drawings, stub & setting dimensions for all tower types, as well as details & bar bending schedule for all foundation types including pile foundation shall be prepared and submitted for EGAT's approval by the Contractor. It shall also be noted that the modifications and re-design for towers and foundations may be required. In such case, the Contractor shall perform and provide these drawings for EGAT's approval.

Reproducible drawings and CD-ROM of the drawings for towers, stub & setting dimensions, including details & bar bending schedule of foundations as well as for modified and re-designed towers and foundations (if any) shall be required to be submitted to EGAT by the Contractor.

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

The Contractor shall also be responsible for the design of any other necessary parts for completion of the Work, including the manufacture, supply, testing, construction and installation of the various components of the transmission line. 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. The Bidder shall be named in the Approved List of Bidders for Supply and Construction of Transmission Line : 115 kV or 230 kV Transmission Line for Single & Twin-bundled Conductor (Conventional Type) or 230 kV Transmission Line with Four-bundled Conductor or 500 kV Transmission Line with Four-bundled Conductor. The said Approved List is attached at the end of Section A. Invitation to Bid.
- b. Insulator for conductor manufacturer being named in the Approved List of Manufacturers for Insulator of transmission line for single & twin-bundled conductor (conventional type) having the same voltage level as the Work specified under this Invitation. The said Approved List is attached at the end of Section A. Invitation to Bid.
- c. Proposing towers, conductor, hardware assemblies and line accessories for conductor, dampers and spacer dampers for conductor, and composite overhead ground wire with optical fiber (OPGW) manufactured by regular manufacturers of excellent reputation having significant technical knowledge and at least three (3) years experience in the design, manufacture and testing of such Equipment, having manufacturing capacity available to perform the Work properly and expeditiously within the time specified, and having satisfactory past experience, with additional requirements as follows:
 - 1) Tower manufacturer being an eligible local firm having set up a plant for fabrication of steel towers in Thailand
 - 2) Hardware assemblies and line accessories for conductor manufacturer being an eligible local firm having set up a plant in Thailand
 - 3) Damper and spacer damper for conductor manufacturer being an eligible local firm having set up a plant in Thailand
 - 4) Composite overhead ground wire with optical fiber (OPGW) manufacturer having a record of at least three (3) consecutive years of successful operation/use of the same or similar type as those required under this Invitation in the transmission line having accumulated distance of not less than 20 kilometers

If the manufacturer is a new company formed by acquisition of or merger with other companies or business units, and any of such previous companies or business units has the experience records that meet the requirements set forth herein, such experience records are acceptable as the experience records of the new company, provided that each item of the Equipment to be supplied under this Bid shall be manufactured from the same source of supply as indicated in each of such relevant supply records as described in Item I.c.1) thru I.c.4) above. Otherwise, it shall not be acceptable and shall be sufficient grounds for rejection.

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

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

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

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, hardware assemblies and line accessories for overhead ground wire and for OPGW, grounding materials, fiber optic transmission system Equipment, and other Equipment manufactured by regular manufacturers of excellent reputation having significant technical knowledge and at least three (3) years experience in the design, manufacture and testing of such Equipment, having manufacturing capacity available to perform the Work properly and expeditiously within the time specified, and having satisfactory past experience, with additional requirements as follows:
 - Manufacturers for overhead ground wire (galvanized steel wire strand), 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

If the manufacturer is a new company formed by acquisition of or merger with other companies or business units, and any of such previous companies or business units has the experience records that meet the requirements set forth herein, such experience records are acceptable as the experience records of the new company, provided that each item of the Equipment to be supplied under this Bid shall be manufactured from the same source of supply as indicated in each of such relevant supply records.

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

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. TIPE-L-04

**SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES 230 kV
BANG LAMUNG 2 JUNCTION – BANG LAMUNG 2,
230 kV RAYONG 2 – BANG LAMUNG 2 JUNCTION, AND
SECTIONALIZING OF 230 kV RAYONG 2 – AO PHAI TO
BANG LAMUNG 2 SUBSTATION**

**TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN
EASTERN REGION TO ENHANCE SYSTEM SECURITY**

and shall be addressed and delivered to :

International Procurement Department - Transmission Segment
Procurement and Inventory Management Division
Electricity Generating Authority of Thailand
Bangkrui, 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, 1st 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...170.-.. or Baht...5,000.-..; these prices include the value added tax.

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

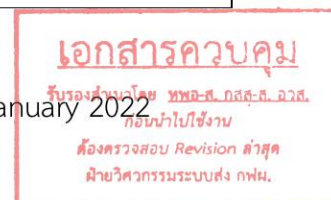
Note : At the time of bidding, EGAT's Specifications and all Drawings need not be submitted, although they are considered as part of the Bidding Documents.

EGAT Accepted Bidders List

for Supply and Construction of Transmission Line

230 kV Transmission Line for Single & Twin-bundled Conductor (Conventional Type)

No.	Bidder/Country
1	TSEC (Thailand) Co., Ltd. / Thailand
2	Teda Company Limited / Thailand
3	Sri U-Thong Limited / Thailand
4	RCR Co., Ltd. / Thailand
5	CHC Engineering Co., Ltd. / Thailand
6	DEMCO-COBRA-DEMCO POWER CONSORTIUM (Demco Public Company Limited / Thailand, Cobra Instalaciones Y Servicios, S.A. / Spain and Demco Power Company Limited / Thailand)
7	The Consortium of Sri U-Thong Limited and Perfect Engineering Service Public Company Limited (Sri U-Thong Limited / Thailand and Perfect Engineering Service Public Company Limited / Thailand)
8	Loxley - RCR Consortium (Loxley Public Company Limited / Thailand and RCR Co., Ltd. / Thailand)
9	Kalpataru Power Transmission Ltd. / India
10	The Consortium of KINDEN CORPORATION and Perfect Engineering Service Public Co., Ltd. (KINDEN CORPORATION / Japan and Perfect Engineering Service Public Co., Ltd. / Thailand)
11	KEC INTERNATIONAL LIMITED / India
12	LARSEN & TOUBRO LIMITED / India
13	The Consortium of Vorapatara Engineering Limited Part and Sirakorn Co., Ltd. (Vorapatara Engineering Limited Part / Thailand and Sirakorn Co., Ltd. / Thailand)
14	The Consortium of Kinden Corporation and Sirakorn Co., Ltd. (Kinden Corporation / Japan and Sirakorn Co., Ltd. / Thailand)
15	SEPCO1 Electric Power Construction Corporation / China
16	The Consortium of Precise System and Project Co., Ltd. and HanBaek Co., Ltd. (Precise System and Project Co., Ltd. / Thailand and HanBaek Co., Ltd. / Korea)



No.	Bidder/Country
17	SINOHYDRO CORPORATION LIMITED / China
18	DEMCO PUBLIC COMPANY LIMITED / Thailand
19	The Consortium of PWH and CHC (PWH (Thailand) Company Limited / Thailand and CHC Engineer Co., Ltd. / Thailand)
20	GTH Consortium (SINOTEC CO., LTD. / China, GUANGXI TRANSMISSION & SUBSTATION CONSTRUCTION CO., LTD. / China and Hydro Engineering Co., Ltd. / Thailand)
21	The Consortium of Uahwatanasakul Co., Ltd. and Panakitkamai Ltd., Part. and Panakittrakul Co., Ltd. (Uahwatanasakul Co., Ltd. / Thailand, Panakitkamai Ltd., Part. / Thailand and Panakittrakul Co., Ltd. / Thailand)
22	Panakitkamai Ltd., Part. / Thailand
23	JOINT VENTURE OF XD AND STC (Xian Electric Engineering Co., Ltd. / China and Sinohydro (Thailand) Co., Ltd. / Thailand)
24	JOINT VENTURE OF SINOHYDRO CORPORATION LIMITED AND SINYHYDRO (THAILAND) CO., LTD. (Sinohydro Corporation Limited / China and Sinohydro (Thailand) Co., Ltd. / Thailand)
25	North China Power Engineering Co., Ltd. of China Power Engineering Consulting Group / China
26	Henan Electric Power Transmission & Transformation Construction Co., Ltd. / China
27	Kalpataru Power Transmission Limited / India
28	HS Consortium (Hydro Engineering Co., Ltd. / Thailand and Sinotec Co., Ltd. / China)
29	Consortium of Jiangsu Zhongtian Technology Co., Ltd. (ZTT) and China National Electric Engineering Co., Ltd. (CNEEC) (Jiangsu Zhongtian Technology Co., Ltd. (ZTT) / China and China National Electric Engineering Co., Ltd. (CNEEC) / China)
30	PWH (THAILAND) CO., LTD. / Thailand
31	Fujikura Ltd. / Japan
32	SRI U-THONG & LPS CONSORTIUM (Sri U-Thong Limited / Thailand and Loxley Power Systems Co., Ltd. / Thailand)



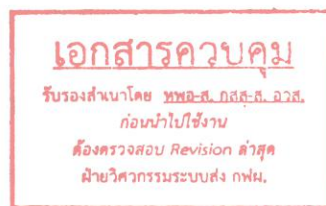

No.	Bidder/Country
33	LOXLEY POWER SYSTEMS COMPANY LIMITED / Thailand
34	LOXLEY & LPS CONSORTIUM (Loxley Public Company Limited / Thailand and Loxley Power Systems Co., Ltd. / Thailand)
35	The Consortium of Vorapatana Engineering Limited Part. and Sirakorn Public Co., Ltd. (Vorapatana Engineering Limited Part. / Thailand and Sirakorn Public Co., Ltd. / Thailand)
36	Benyapha Power Line Co., Ltd. / Thailand
37	Joint Venture of STC and BENYAPHA (Sinohydro (Thailand) Co., Ltd. / Thailand and Benyapha Powerline Co., Ltd. / Thailand)
38	DEMCO POWER CO., LTD. / Thailand
39	CONSORTIUM OF TRANSRAIL LIGHTING LIMITED AND CS POWER AND PROJECT COMPANY (TRANSRAIL LIGHTING LIMITED / INDIA AND CS POWER AND PROJECT COMPANY / THAILAND)
40	PESTECH SDN. BHD. / MALAYSIA
41	SINOHYDRO (THAILAND) CO., LTD. / THAILAND
42	THE CONSORTIUM OF SHANGHAI ELECTRIC GROUP COMPANY LIMITED & FUTURE ELECTRICAL CONTROL COMPANY LIMITED (SHANGHAI ELECTRIC GROUP COMPANY LIMITED / CHINA AND FUTURE ELECTRICAL CONTROL COMPANY LIMITED / THAILAND)
43	CAMCE – SEPEC JV / CHINA
44	JOINT VENTURE OF TBNP (TBEA CO.,LTD. / CHINA AND NAPAT POWER CO., LTD. / THAILAND)
45	XIAN ELECTRIC ENGINEERING CO., LTD. / CHINA
46	CGGC-PG Joint Venture (China Gezhouba group Company Limited / China and Pinggao Group Company Limited / China)
47	Consortium of ITE - NCPE (ItalThai Engineering Co., Ltd. / Thailand and North China Power Engineering Co., Ltd. of China Power Engineering Consulting Group / China)



No.	Bidder/Country
48	THE JOINT VENTURE OF CHINA NATIONAL HEAVY MACHINERY CORPORATION & FUTURE ELECTRICAL CONTROL COMPANY LIMITED (CHINA NATIONAL HEAVY MACHINERY CORPORATION / China and FUTURE ELECTRICAL CONTROL COMPANY LIMITED / Thailand)
49	Panakittrakul Company Limited / Thailand

Note:

- Additionally, any Bidders named in this accepted list are allowed to form a new consortium or joint venture with other Bidders in this list.
- The Bidders named in EGAT Accepted Bidders List for Supply and Construction of Transmission Line : 230 kV Transmission Line with Four-bundled Conductor or 500 kV Transmission Line with Four-bundled Conductor are also eligible.

18 Jan 2023

EGAT Accepted Bidders List
for Supply and Construction of Transmission Line
230 kV Transmission Line with Four-bundled Conductor

No.	Bidder/Country
1	TSEC (Thailand) Co., Ltd. / Thailand
2	Fujikura Ltd. / Japan
3	RCR Co., Ltd. / Thailand
4	KEC INTERNATIONAL LIMITED / India
5	LARSEN & TOUBRO LIMITED / India
6	SEPCO1 Electric Power Construction Corporation / China
7	The Consortium of Precise System and Project Co., Ltd. and HanBaek Co., Ltd. (Precise System and Project Co., Ltd. / Thailand and HanBaek Co., Ltd. / Korea)
8	SINOHYDRO CORPORATION LIMITED / China
9	Demco Public Company Limited / Thailand
10	JOINT VENTURE OF XD AND STC (Xian Electric Engineering Co., Ltd. / China and Sinohydro (Thailand) Co., Ltd. / Thailand)
11	JOINT VENTURE OF SINOHYDRO CORPORATION LIMITED AND SINOHYDRO (THAILAND) CO., LTD. (Sinohydro Corporation Limited / China and Sinohydro (Thailand) Co., Ltd. / Thailand)
12	Sri U-Thong Limited / Thailand
13	Henan Electric Power Transmission & Transformation Construction Co., Ltd. / China
14	Kalpataru Power Transmission Limited / India
15	Consortium of Jiangsu Zhongtian Technology Co., Ltd. (ZTT) and China National Electric Engineering Co., Ltd. (CNEEC) (Jiangsu Zhongtian Technology Co., Ltd. (ZTT) / China and China National Electric Engineering Co., Ltd. (CNEEC) / China)
16	CHC Engineering Co., Ltd. / Thailand
17	SRI U-THONG & LPS CONSORTIUM (Sri U-Thong Limited / Thailand and Loxley Power Systems Co., Ltd. / Thailand)
18	Benyapha Power Line Co., Ltd. / Thailand
19	Joint Venture of STC and BENYAPHA (Sinohydro (Thailand) Co., Ltd. / Thailand and Benyapha Powerline Co., Ltd. / Thailand)

เอกสารควบคุม
 ตรวจสอบโดย ทพอ.ส. กสจ.ส.จ.ว.ส.
 ก่อนนำไปใช้งาน
 ต้องตรวจสอบ Revision ล่าสุด
 ฝ่ายวิศวกรรมระบบส่ง กฟผ.

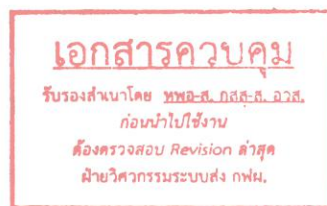
18 Jan 2023



No.	Bidder/Country
20	Consortium of RCR and Uthai S Engineering (R C R Company Limited / Thailand and Uthai S Engineering Company Limited / Thailand)
21	Sinohydro (Thailand) Co., Ltd. / Thailand
22	Teda Company Limited / Thailand
23	Joint Venture of TBNP (TBEA CO.,LTD. / China and NAPAT POWER CO., LTD. / Thailand)
24	Consortium of Transrail Lighting Limited and CS Power And Project Company (Transrail Lighting Limited / India and CS Power And Project Company / Thailand)
25	XIAN ELECTRIC ENGINEERING CO., LTD. / China
26	THE JOINT VENTURE OF CHINA NATIONAL HEAVY MACHINERY CORPORATION & FUTURE ELECTRICAL CONTROL COMPANY LIMITED (CHINA NATIONAL HEAVY MACHINERY CORPORATION / China and FUTURE ELECTRICAL CONTROL COMPANY LIMITED / Thailand)
27	LOXLEY PUBLIC COMPANY LIMITED / Thailand

Note:

- Additionally, any Bidders named in this accepted list are allowed to form a new consortium or joint venture with other Bidders in this list.
- The Bidders named in EGAT Accepted Bidders List for Supply and Construction of Transmission Line : 500 kV Transmission Line with Four-bundled Conductor are also eligible.



18 Jan 2023

EGAT Accepted Bidders List
for Supply and Construction of Transmission Line
500 kV Transmission Line with Four-bundled Conductor

No.	Bidder/Country
1	Consortium of J-Power Systems Corporation and Thai Sumiden Engineering and Construction Co., Ltd. (J-Power Systems Corporation / Japan and TSEC (Thailand) Co., Ltd. / Thailand)
2	Fujikura Ltd. / Japan
3	The Consortium of Kalpataru and CHC (Kalpataru Power Transmission Ltd. / India and CHC Engineering Co., Ltd. / Thailand)
4	DEMCO-COBRA-RCR CONSORTIUM (Demco Public Company Limited / Thailand, Cobra Instalaciones Y Servicios, S.A. / Spain and RCR Company Limited / Thailand)
5	DEMCO-COBRA Consortium (Demco Public Co., Ltd. / Thailand and Cobra Instalaciones Y Servicios, S.A. / Spain)
6	KEC INTERNATIONAL LIMITED / India
7	LARSEN & TOUBRO LIMITED / India
8	SEPCO1 Electric Power Construction Corporation / China
9	THE CONSORTIUM OF PRECISE SYSTEM AND PROJECT CO., LTD AND THAI SUMIDEN ENGINEERING AND CONSTRUCTION CO., LTD. (PRECISE SYSTEM AND PROJECT CO., LTD / Thailand and TSEC (THAILAND) CO., LTD. / Thailand)
10	Hyundai Engineering & Construction Co., Ltd. / Korea
11	RCR Co., Ltd. / Thailand
12	The Joint Venture of Hydrochina International Engineering Co., Ltd. and Benyapha Powerline Co., Ltd. and SEPCO1 Electric Power Construction Corporation (Hydrochina International Engineering Co., Ltd. / China, Benyapha Powerline Co., Ltd. / Thailand and SEPCO1 Electric Power Construction Corporation / China)
13	TPL-TEDA Consortium (TATA Projects Limited / India and TEDA Company Limited / Thailand)



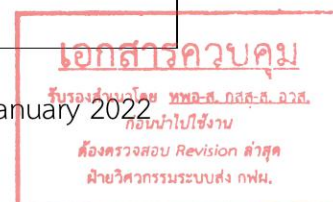
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ก่อนนำไปใช้งาน
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18 Jan 2023

No.	Bidder/Country
14	Joint Venture of SCL and Benyapha and SEPCO1 (Sinohydro (Thailand) Co., Ltd. / Thailand and Benyapha Powerline Co., Ltd. / Thailand and SEPCO1 Electric Power Construction Corporation / China)
15	The Consortium of Kalpataru Power Transmission Limited, Precise System and Project Company Limited and Thai Sumiden Engineering and Construction Company Limited (Kalpataru Power Transmission Limited / India, Precise System and Project Company Limited / Thailand and TSEC (Thailand) Co., Ltd. / Thailand)
16	Consortium of Loxley, Larsen & Toubro and Sri U-Thong (Loxley Public Company Limited / Thailand, Larsen & Toubro Limited / India and Sri U-Thong Limited / Thailand)
17	Demco - RCR CONSORTIUM (Demco Public Company Limited / Thailand and RCR Company Limited / Thailand)
18	Joint Venture of XD-HYPEC-SCL-TNP (XIAN ELECTRIC ENGINEERING CO., LTD. / China, HUBEI HONGYUAN POWER ENGINEERING CO., LTD. / China, SINOHYDRO (THAILAND) CO., LTD. / Thailand and TNP POWER THAI CO., LTD. / Thailand)
19	Consortium of Larsen & Toubro Limited and Sri U-Thong Limited (Larsen & Toubro Limited / India and Sri U-Thong Limited / Thailand)
20	CONSORTIUM OF LARSEN & TOUBRO, LPS AND SRI U-THONG (LARSEN & TOUBRO LIMITED / India and LOXLEY POWER SYSTEM CO., LTD. / Thailand and Sri U-Thong Limited / Thailand)
21	JOINT VENTURE OF STC, XD AND BENYAPHA (SINOHYDRO (THAILAND) CO., LTD. / Thailand, XIAN ELECTRIC ENGINEERING CO., LTD. / China and BENYAPHA POWERLINE CO., LTD. / Thailand)
22	TSEC (Thailand) Co., Ltd. / Thailand
23	JOINT VENTURE OF XD AND STC (Xian Electric Engineering Co., Ltd / China and Sinohydro (Thailand) Co., Ltd. / Thailand)
24	Sri U-Thong Limited / Thailand
25	Henan Electric Power Transmission & Transformation Construction Co., Ltd. / China
26	Kalpataru Power Transmission Limited / India




No.	Bidder/Country
27	HS Consortium (Hydro Engineering Co., Ltd. / Thailand and Sinotec Co., Ltd. / China)
28	SRI U-THONG & LPS CONSORTIUM (Sri U-Thong Limited / Thailand and Loxley Power Systems Co., Ltd. / Thailand)
29	Benyapha Power Line Co., Ltd. / Thailand
30	Joint Venture of STC and BENYAPHA (Sinohydro (Thailand) Co., Ltd. / Thailand and Benyapha Powerline Co., Ltd. / Thailand)
31	Demco Public Company Limited / Thailand
32	Joint Venture of STC-BENYAPHA-NEPC (Sinohydro (Thailand) Co., Ltd. / Thailand, Benyapha Powerline Co., Ltd. / Thailand and NEPC Power Construction Co., Ltd. / Thailand)
33	Consortium of Jiangsu Zhongtian Technology Co., Ltd. (ZTT), PNK Transmission Line Co., Ltd. (PNK) and China National Electric Engineering Co., Ltd. (CNEEC) (Jiangsu Zhongtian Technology Co., Ltd. (ZTT) / China and PNK Transmission Line Co., Ltd. (PNK) / Thailand and China National Electric Engineering Co., Ltd. (CNEEC) / China)
34	CONSORTIUM OF TSEC (THAILAND) CO., LTD. AND SRICHONLATHORN CO., LTD. (TSEC (THAILAND) CO., LTD. / Thailand and SRICHONLATHORN CO., LTD. / Thailand)
35	Sinohydro (Thailand) Co., Ltd. / Thailand
36	Teda Company Limited / Thailand
37	CHC ENGINEERING CO., LTD. / Thailand
38	Joint Venture of TBNP (TBEA CO.,LTD. / China and NAPAT POWER CO., LTD. / Thailand)
39	Tata Projects Limited / India
40	XIAN ELECTRIC ENGINEERING CO., LTD. / China
41	Transrail - Hanbaek Consortium (Transrail Lighting Limited / India and Hanbaek Co. Ltd., / Korea)
42	THE JOINT VENTURE OF CHINA NATIONAL HEAVY MACHINERY CORPORATION & FUTURE ELECTRICAL CONTROL COMPANY LIMITED (CHINA NATIONAL HEAVY MACHINERY CORPORATION / China and FUTURE ELECTRICAL CONTROL COMPANY LIMITED / Thailand)

No.	Bidder/Country
43	LOXLEY PUBLIC COMPANY LIMITED / Thailand

Note:

- Additionally, any Bidders named in this accepted list are allowed to form a new consortium or joint venture with other Bidders in this list.

Bid No. TIPE-L-04

เอกสารควบคุม
รับรองสำเนาโดย ทพฉ.ส.กส.ส.จ.ว.ส.
ก่อนนำไปใช้งาน
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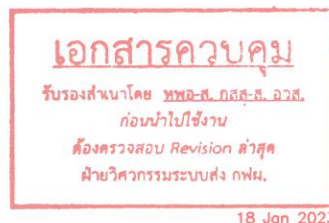
18 Jan 2023

EGAT Accepted Manufacturers List for Insulator

Standard Type

230 kV Transmission Line for Single & Twin-bundled Conductor (Conventional Type)

No.	Manufacturer/Country	ANSI CLASS	Combined M&E Strength, lbs
1	NGK Insulators , LTD. / Japan	52-3	≥ 18000
		52-5	25000
		52-8	36000
2	Sediver S.A. / Italy	52-3	≥ 18000
		52-5	25000
		52-8	36000
3.	Dalian-Lapp Insulator Co., Ltd. / China	52-3	≥ 18000
		52-5	25000
		52-8	36000
4	Sediver (Shanghai) / China	52-3	≥ 18000
		52-5	25000
		52-8	36000
5	VERESCENCE LA GRANJA, S.L. / Spain	52-3	≥ 18000
		52-5	25000
		52-8	36000
6	Dalian Insulator Group T&D Co., Ltd. / China	52-3	≥ 18000
		52-5	25000
		52-8	36000
7	Global Insulator Group (YuAIZ AO) / Russia	52-3	≥ 18000
8	Nanjing Electric Insulator Co., Ltd. / China	52-3	≥ 18000
		52-5	25000
		52-8	36000



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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

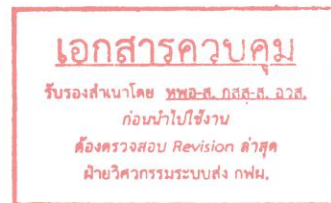
7 I-5 Road, Maptaphut Industrial Estate
Amphur Muang
Rayong 21150
Tel : (66-38) 683070
Fax : (66-38) 683065

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



22 Nov 2022

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)

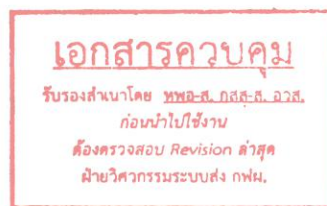
MacLean - Dulhunty Power (Thailand) Ltd.

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.

1096 The Trendy Building, 6th 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

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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. 22nd Floor
Unit 3/1 Sukhumvit 21 Road (Asok)
Bangkok 10110
Tel : 0 2261 7361-4
Fax : 0 2640 8227

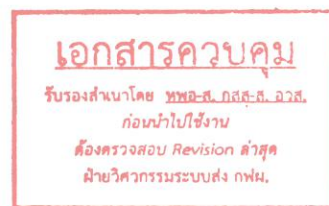
Charoong Thai Wire & Cable Public Company Limited

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



22 Nov 2022

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

Charoong Thai Wire & Cable Public Company Limited

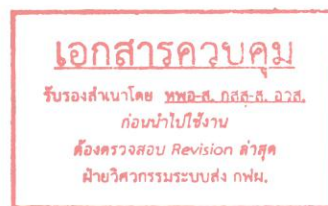
589/71 Central City Tower
Floor 12A, Bangna -Trad Road
Bangna, Bangna District
Bangkok 10260
Tel : 0 2745 6118
Fax : 0 2745 6131-32

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

Thai-Yazaki Electric Wire Co., Ltd.

27th 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



22 Nov 2022

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

เอกสารควบคุม

รับรองสำเนาโดย ทพอ.ส.กฤษ.ส.อวส.

ก่อนนำไปใช้งาน

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22 Nov 2022

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. TIPEL-004

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22 Nov 2022

SECTION H
ATTACHMENTS

SECTION H

ATTACHMENTS

- Attachment No. 1 : List of Equipment to be Furnished by EGAT
- Attachment No. 2 : List of Equipment to be Dismantled by the Contractor
- Attachment No. 3 : Requirement For Dismantling Work and Conditions of Sale of Dismantled Equipment

ATTACHMENT NO. 1

LIST OF EQUIPMENT TO BE FURNISHED BY EGAT

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

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
1.	1272 MCM ACSR/GA Conductor as per Schedule 1E Item 1E1.1	224.58 km
2.	1272 MCM ACSR/GA Conductor as per Schedule 2E Item 2E1.1	381.90 km
3.	1272 MCM ACSR/GA Conductor as per Schedule 2J Item 2J2.1	2.28 km
4.	1272 MCM ACSR/GA Conductor as per Schedule 2J Item 2J10.1	20.52 km
5.	1272 MCM ACSR/GA Conductor as per Schedule 3E Item 3E1.1	1.14 km

- Note :**
1. The estimated quantity of conductor shown above is an approximate amount. The actual quantity of conductor to be furnished by EGAT will be in accordance with the actual horizontal distance of the section to be installed after checking survey and staking have been performed, Plus a Fixed extra of 1.5 percent to cover sag, terrain irregularities and wastage.
 2. The conductor furnished will have characteristics as specified in Specifications No. C-2 (Revision 6)

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>
Part 1 :	<u>230 kV Rayong 2 - Ao Phai Transmission Line</u> (The dismantled Equipment as listed below shall be purchased by the Contractor.)	
1.1	Steel Tower	
	Tower Type DA1	
	Basic body	57 bodies
	Leg extension -3.0 m	30 legs
	Leg extension -2.0 m	8 legs
	Leg extension -1.0 m	20 legs
	Leg extension 0.0 m	43 legs
	Leg extension 1.0 m	23 legs
	Leg extension 2.0 m	22 legs
	Leg extension 3.0 m	74 legs
	Leg extension 4.0 m	3 legs
	Leg extension 5.0 m	1 leg
	<hr/>	
	Tower Type DVA1	
	Basic body	8 bodies
	Leg extension 1.0 m	32 legs
	<hr/>	
	Tower Type DB2	
	Basic body	7 bodies
	Leg extension -3.0 m	1 leg
	Leg extension -2.0 m	2 legs
	Leg extension -1.0 m	1 leg
	Leg extension 0.0 m	12 legs
	Leg extension 1.0 m	8 legs
	Leg extension 3.0 m	4 legs
	<hr/>	
	Tower Type DD2	
	Basic body	2 bodies
	Leg extension -1.0 m	4 legs
	Leg extension 3.0 m	4 legs
	<hr/>	
	Tower Type DDE	
	Basic body	1 body
	Leg extension 0.0 m	4 legs

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
1.2	Hardware Assemblies	
	Single string suspension insulator assemblies	312 sets
	Double string suspension insulator assemblies	30 sets
	V-string suspension insulator assemblies	48 sets
	Bypass string suspension insulator assemblies	9 sets
	Single string tension insulator assemblies	12 sets
	Double string tension insulator assemblies	114 sets
	Overhead ground wire suspension assemblies	65 sets
	Overhead ground wire tension assemblies	9 sets
	OPGW suspension assemblies	65 sets
	OPGW tension assemblies	13 sets
1.3	Line Accessories	
	Vibration damper for conductor	1,434 sets
	Vibration damper for overhead ground wire	75 sets
	Vibration damper for OPGW	75 sets
1.4	Insulator	
	Fog type Insulator ANSI CLASS 52-3 (18,000 lbs)	1,356 discs
	Insulator ANSI CLASS 52-3 (18,000 lbs)	9,096 discs
1.5	1272 MCM ACSR/GA Conductor	170.40 km
1.6	3/8 " high strength galvanized steel overhead ground wire	28.40 km
1.7	Composite overhead ground wire with 36-core optical fiber	28.40 km
Part 2 :	<u>230 kV Rayong 2 - Bo Win Transmission Line</u> (The dismantled Equipment as listed below shall be purchased by the Contractor.)	
2.1	Steel Tower	
	Tower Type DAV1	
	Basic body	8 bodies
	Leg extension 1.0 m	32 legs
	Tower Type DB2	
	Basic body	2 bodies
	Leg extension 1.0 m	8 legs
	Tower Type QWDE	
	Basic body	1 body
	Leg extension 5.0 m	4 legs

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
2.2	Hardware Assemblies	
	V-String suspension insulator assemblies	48 sets
	Bypass string suspension insulator assemblies	3 sets
	Double string tension insulator assemblies	36 sets
	Double inverted string tension insulator assemblies	6 sets
	Overhead ground wire suspension assemblies	8 sets
	Overhead ground wire tension assemblies	9 sets
	OPGW suspension assemblies	8 sets
	OPGW tension assemblies	7 sets
2.3	Line Accessories	
	Vibration damper for conductor	90 sets
	Vibration damper for overhead ground wire	11 sets
	Vibration damper for OPGW	11 sets
2.4	Insulator	
	Fog type Insulator ANSI CLASS 52-3 (18,000 lbs)	732 discs
	Insulator ANSI CLASS 52-3 (18,000 lbs)	2,100 discs
2.5	1272 MCM ACSR/GA Conductor	18 km
2.6	3/8 " high strength galvanized steel overhead ground wire	3 km
2.7	Composite overhead ground wire with 36-core optical fiber	3 km
Part 3 :	<u>The 230 kV Rayong 2 - Bo Win Temporary Detour Line</u> (The dismantled Equipment as listed below shall be purchased by the Contractor.)	
3.1	Hardware Assemblies	
	Single string tension insulator assemblies	42 sets
	Overhead ground wire tension assemblies	4 sets
	OPGW tension assemblies	4 sets
3.2	Insulator	
	Insulator ANSI CLASS 52-3 (18,000 lbs)	630 discs
3.3	1272 MCM ACSR/GA Conductor	2.10 km
3.4	3/8 " high strength galvanized steel overhead ground wire	0.35 km
3.5	Composite overhead ground wire with 36-core optical fiber	0.35 km

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.