การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

REGISTRATION FORM

INVITATION TO BID NO. TILS-L-01

FOR SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES 500 kV SURAT THANI 2 - THUNG SONG, 230 kV KRABI - THUNG SONG AND 230 kV THUNG SONG (500/230 kV) - THUNG SONG (230/115 kV)

TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN LOWER SOUTHERN REGION TO ENHANCE SYSTEM SECURITY

AVAILABLE DURATION FOR PURCHASING March 18, 2019 TO April 30, 2019

PRICE USD 480.- OR THB 15,000.-

COMPLETE DATA IS REQUIRED FOR THE BIDDER'S OWN BENEFITS

(โปรดกรอกรายละเอียดให้ครบถ้วนเพื่อประโยชน์ของบริษัท)

Step 1 : Fill out this Registration Form in English (Typing is preferred)					
Step 2: Submit this form for payment at Receivable	e Cashier Section (1 st Floor, TOR 100 Bldg.,	Counter 4-8) Tel no. 02 436 5512			
Step 3: Bring the payment receipt and the copy of	filled-out Registration Form to receive the b	idding documents at International			
Procurement Department - Transmission Segment (Roo	m No. 1202/2, 12 th Floor, Building Tor. 101	l) Tel no. 02 436 0241-42			
FOR PURCHASER		TAX ID:			
NO. RECEIPT NO.:	DATE:	PURCHASER (ผู้ซื้อ):			
BIDDER'S NAME					
(บริษัทผู้ซื้อเอกสาร)					
ADDRESS					
(ที่อยู่)		COUNTRY:			
ATTN. (ผู้รับผิดชอบ):	FAX NO.:	TEL.:			
E-mail:					
LOCAL REPRESENTATIVE					
(ตัวแทนในประเทศ)					
ADDRESS					
(ที่อยู่)		TAX ID:			
ATTN. (ผู้รับผิดชอบ):	FAX NO.:	TEL.:			
ATTN. (M30MM 080).					
E-mail:	1.23.1.6.1				
E-mail :		MF TAX ID:			
E-mail : FOR PROCUREMENT OFFICER	CHANGE OF BIDDER'S NA	ME TAX ID:			
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME		ME TAX ID:			
E-mail : FOR PROCUREMENT OFFICER		ME TAX ID:			
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ชื่อเอกสารเปลี่ยนเป็น) ADDRESS		ME TAX ID:			
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ชื่อเอกสารเปลี่ยนเป็น)	CHANGE OF BIDDER'S NA	ME TAX ID:			
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ชื้อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่)	CHANGE OF BIDDER'S NA COUNTRY:				
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ):	CHANGE OF BIDDER'S NA COUNTRY:				
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ชื่อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail :	CHANGE OF BIDDER'S NA COUNTRY:				
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail : LOCAL REPRESENTATIVE	CHANGE OF BIDDER'S NA COUNTRY:				
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ชื่อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail : LOCAL REPRESENTATIVE (ตัวแทนในประเทศ)	CHANGE OF BIDDER'S NA COUNTRY:				
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail : LOCAL REPRESENTATIVE (ตัวแทนในประเทศ) ADDRESS	CHANGE OF BIDDER'S NA COUNTRY: FAX NO.:				
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ชื่อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail : LOCAL REPRESENTATIVE (ตัวแทนในประเทศ) ADDRESS (ที่อยู่)	CHANGE OF BIDDER'S NA COUNTRY: FAX NO.: TAX ID:	TEL.:			
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ชื่อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail : ATTN. (ผู้รับผิดชอบ): E-mail :	COUNTRY: FAX NO.: TAX ID: FAX NO.:	TEL.:			
E-mail : FOR PROCUREMENT OFFICER NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ): E-mail : LOCAL REPRESENTATIVE (ตัวแทนในประเทศ) ADDRESS (ที่อยู่) ATTN. (ผู้รับผิดชอบ):	COUNTRY: FAX NO.: TAX ID: FAX NO.:	TEL.:			



INVITATION TO BID NO. TILS-L-01

SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES
500 kV SURAT THANI 2 - THUNG SONG, 230 kV KRABI - THUNG SONG AND
230 kV THUNG SONG (500/230 kV) - THUNG SONG (230/115 kV)
TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN LOWER SOUTHERN REGION
TO ENHANCE SYSTEM SECURITY
(TWO-ENVELOPE)

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

Place of Construction

- : From Surat Thani 2 Substation to Thung Song Substation (approx. 135 kilometers)
- From Krabi Substation to Thung Song Substation (approx. 0.8 kilometers)
- From Thung Song Substation (500/230 kV) to Thung Song Substation (230/115 kV) (approx. 0.5 kilometers)

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

THB 1,750,000,000.- (excluding cost of the Dismantled Equipment to be purchased by Bidder)

Eligibility of Bidders

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

Availability of Bidding Documents

Bidding Documents in CD-ROM will be available for examination of Bidder's Qualifications and purchase during 8:00 hrs. to 15:00 hrs., Bangkok Standard Time, as from March 18, 2019 to April 30, 2019 at USD 480.- or THB 15,000.- per copy, non-refundable, at the following address:

International Procurement Department - Transmission Segment (Room No. 1202/2, 12th Floor, Building Tor. 101)
Procurement and Inventory Management Division
Electricity Generating Authority of Thailand
Bangkruai, Nonthaburi 11130, Thailand
Telephone no. 66 2436 0242
E-mail: procurement.tse@egat.co.th

For more details and downloading Registration Form for purchasing Bidding Documents on website : http://www4.egat.co.th/fprocurement/biddingeng/

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

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

Delivery of Bids

Price and Technical Proposals shall be submitted at Room No. 1202/1, 12th Floor, Building Tor. 101 during 9:30 hrs. to 10:00 hrs., Bangkok Standard Time, May 29, 2019 and will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

March 11, 2019

Vilande Osotpavapusit

(Mrs. Nilanate Osotpavapusit)

Chief, International Procurement Department
Transmission Segment



ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เรื่อง ประกวดราคาจ้าง เลขที่ TILS-L-01 (ประกวดราคา 2 ซอง)

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะจัดหาและจ้างก่อสร้างสายส่งไฟฟ้าแรงสูงขนาด 500 kV สุราษฎร์ธานี 2 - ทุ่งสง 230 kV กระบี่ - ทุ่งสง และ 230 kV ทุ่งสง (500/230 kV) - ทุ่งสง (230/115 kV) สำหรับโครงการปรับปรุง ระบบส่งไฟฟ้าบริเวณภาคใต้ตอนล่าง เพื่อเสริมความมั่นคงระบบไฟฟ้า โดยทำสัญญาแบบปรับราคาได้ (ค่า k) โดยใช้งบประมาณ กฟผ.

<u>สถานที่ก่อสร้าง</u> :

- จากสถานีไฟฟ้าแรงสูงสุราษฎร์ธานี 2 ถึง สถานีไฟฟ้าแรงสูงทุ่งสง (ระยะทางประมาณ 135 กิโลเมตร)
- จากสถานีไฟฟ้าแรงสูงกระบี่ ถึง สถานีไฟฟ้าแรงสูงทุ่งสง (ระยะทางประมาณ 0.8 กิโลเมตร)
- จากสถานีไฟฟ้าแรงสูงทุ่งสง (500/230 kV) ถึง สถานีไฟฟ้าแรงสูงทุ่งสง (230/115 kV)
 - (ระยะทางประมาณ 0.5 กิโลเมตร)

ราคากลาง (รวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ) :

1,750,000,000.- บาท (ไม่รวมราคาอุปกรณ์รื้อถอนที่กำหนดให้ผู้เสนอราคารับซื้อจาก กฟผ.)

<u>คุณสมบัติของผู้เสนอราคา</u>

- 1. ต้องเป็นนิติบุคคลผู้มีอาชีพรับจ้างตามประกวดราคาจ้างดังกล่าว และต้องไม่เป็นผู้ทิ้งงานซึ่งสำนักนายกรัฐมนตรีได้แจ้งเวียนชื่อไว้ หรือ ต้องไม่เป็นผู้ที่ กฟผ. ห้ามติดต่อหรือห้ามเข้าเสนอราคา หรือต้องไม่เป็นผู้ที่ได้รับผลของการสั่งให้นิติบุคคลหรือบุคคลอื่นเป็นผู้ทิ้งงาน ตามคำสั่ง กฟผ.
- 2. ต้องไม่เป็นผู้มีผลประโยชน์ร่วมกันกับผู้เสนอราคารายอื่น ณ วันประกาศประกวดราคาครั้งนี้เป็นต้นไป หรือต้องไม่เป็นผู้กระทำการ อันเป็นการขัดขวางการแข่งขันราคาอย่างเป็นธรรมในการดำเนินการประกวดราคาครั้งนี้
- 3. ต้องไม่เป็นที่ปรึกษาของ กฟผ. หรือมีส่วนร่วมในบริษัทที่ปรึกษาของ กฟผ. ในงานนี้ หรือต้องไม่มีผู้ปฏิบัติงาน กฟผ. เข้าไปมีส่วนร่วม ในกิจการของผู้เสนอราคา ไม่ว่าจะในฐานะผู้ถือหุ้นที่มีสิทธิควบคุมการจัดการ กรรมการ ผู้อำนวยการ ผู้จัดการ พนักงาน ลูกจ้าง ตัวแทน หรือที่ปรึกษา ยกเว้น ในกรณีที่ผู้ปฏิบัติงานได้รับคำสั่งอย่างเป็นทางการจาก กฟผ. ให้ไปปฏิบัติงานหรือเข้าร่วมในกิจการของผู้เสนอราคา
- 4. ต้องไม่เป็นผู้ได้รับเอกสิทธิ์หรือความคุ้มกัน ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และ ความคุ้มกันเช่นว่านั้น
- 5. ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้า (Joint Venture or Consortium) จะต้องดำเนินการทุกขั้นตอนของการ ประกวดราคา ในนามของกิจการร่วมค้าตั้งแต่การเสนอราคาจนสิ้นสุดข้อผูกพันกับ กฟผ.

การขายเอกสารประกวดราคา

ผู้สนใจติดต่อขอทราบรายละเอียด เพื่อตรวจสอบคุณสมบัติของผู้เสนอราคา และขอซื้อเอกสารประกวดราคา ในราคา ชุดละ 15,000.- บาท ได้ที่ แผนกจัดจ้างต่างประเทศสายงานระบบส่ง (ห้อง 1202/2 ชั้น 12 อาคาร ท.101) กองจัดซื้อจัดจ้าง ต่างประเทศสายงานระบบส่ง ฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชิงสะพานพระราม 7 จังหวัดนนทบุรี ในวันทำการระหว่างเวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 18 มีนาคม 2562 ถึงวันที่ 30 เมษายน 2562 หรือสอบถามทางโทรศัพท์ หมายเลข 0 2436 0242 หรืออีเมล์ procurement.tse@egat.co.th ทั้งนี้ สามารถ download แบบฟอร์มลงทะเบียนผู้ซื้อเอกสาร ประกวดราคาได้ที่เว็บไซต์ http://www4.egat.co.th/fprocurement/biddingeng/

NAUN TOSTARON

การยื่นชองประกวดราคา

กำหนดยื่นชองข้อเสนอด้านเทคนิคพร้อมชองราคา ในวันที่ 29 พฤษภาคม 2562 เวลา 9:30 น. ถึง 10:00 น. และ เปิดชองประกวดราคาเวลา 10:00 น. ณ ห้อง 1202/1 ชั้น 12 อาคาร ท.101 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชิงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศ ณ วันที่ 11 มีนาคม 2562

Anun Toonsogh

(นางนิลเนตร โอสถภวภูษิต) หัวหน้ากองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง) ในการจัดซื้อจัดจ้างที่มิใช่งานก่อสร้าง

1. **ชื่อโครงการ** ประกวดราคา เลขที่ TILS-L-01

งานจัดหาและจ้างก่อสร้างสายส่ง 500 kV สุราษฎร์ธานี 2 – ทุ่งสง 230 kV กระบี่ – ทุ่งสง และ 230 kV ทุ่งสง (500/230 kV) – ทุ่งสง (230/115 kV)

โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคใต้ตอนล่าง เพื่อเสริมความมั่นคงระบบไฟฟ้า /หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

2. วงเงินงบประมาณที่ได้รับจัดสรร

โครงการปรับปรุงระบบส่งไฟฟ้าบริเวณภาคใต้ตอนล่าง เพื่อเสริมความมั่นคงระบบไฟฟ้า งบประมาณ 35,400 ล้านบาท

- 3. วันที่กำหนดราคากลาง 8 กุมภาพันธ์ 2562 (วันที่ รวส. อนุมัติ) ราคารวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ เป็นเงิน 1,750,000,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ
- 4. **แหล่งที่มาของราคากลาง** หลักเกณฑ์การกำหนดราคากลางงานจัดซื้อจัดจ้างสายงานพัฒนาระบบส่ง
- 5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง

5.1 นายพิทักษ์ ปิ่นอนงค์

กวสส-ส.

5.2 นายสมปอง

บวรธีระกิจชัย

หปส-ส. กวสส-ส.

5.3 นางสิรินยา

ตันสัจจา

วศ.7 หปส-ส. กวสส-ส.

หมายเหตุ ค่าใช้จ่ายอื่นๆ ได้แก่ ค่าใช้จ่ายที่ กฟผ. ต้องจ่ายตามวิธีการพิจารณาเปรียบเทียบราคาที่กำหนดไว้ ในเอกสารประกวดราคา เช่น อากรขาเข้า เป็นต้น

0~

นางสาววัลลภา ชีวธนากรณ์กุล หจตส-ห. 11 มี.ค. 2567

DETAILS OF THE MEDIUM COST FOR BID NO. TILS-L-01

SCHEDULE 1: 500 kV Surat Thani 2 - Thung Song Transmission Line (135 km)

Description	Total
	(Baht)
1A : PRELIMINARY WORK	11,946,196.80
1B : TOWER FOUNDATIONS	245,500,121.95
1C : TOWERS	946,361,237.67
1D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	242,640,904.80
1E : CONDUCTOR AND OVERHEAD GROUND WIRE	61,583,314.80
1F : LINE ACCESSORIES	31,273,842.00
1G : GROUNDING MATERIALS	8,465,697.84
1H : OPTICAL FIBER AND LINE ACCESSORIES	23,181,950.22
1N: TEST OF EQUIPMENT	3,956,260.00
10 : SUPPLY OF SERVICE OF VEHICLES	7,545,850.00
1P : SUPPLY OF SPARE EQUIPMENT	1,671,271.40
Total for Schedule 1	1,584,126,647.48
Adjusted Price (Import Duty & Tax + VAT)	110,888,865.32
Total Price Schedule 1	1,695,015,512.80

SCHEDULE 2: 230 kV Krabi - Thung Song Transmission Line (0.80 km)

Description	Total
	(Baht)
2A : PRELIMINARY WORK	66,800.00
2B : TOWER FOUNDATIONS	18,581,600.00
2C : TOWERS	28,113,000.00
2D : INSULATOR STRING AND OVERHEAD GROUND WIRE ASSEMBLIES	3,941,060.00
2E : CONDUCTOR AND OVERHEAD GROUND WIRE	371,000.00
2F : LINE ACCESSORIES	283,000.00
2G : GROUNDING MATERIALS	52,920.00
2H : OPTICAL FIBER AND LINE ACCESSORIES	311,693.20
2I : DISMANTLING WORK	194,800.00
2J : TEMPORARY DETOUR LINES	2,980,103.00
2Q : DISMANTLING OF TEMPORARY DETOUR LINE	117,600.00
Total for Schedule 2	55,013,576.20
Adjusted Price (Import Duty & Tax + VAT)	3,850,950.33
Total Price Schedule 2	58,864,526.53

SCHEDULE 3: 230 kV Thung Song (500/230 kV) - Thung Song (230/115 kV) Transmission Line (0.50 km)

Description	Total
ANO 20 ANO 2	(Baht)
3E : CONDUCTOR AND OVERHEAD GROUND WIRE	791,250.00
Total for Schedule 3	791,250.00
Adjusted Price (Import Duty & Tax + VAT)	55,387.50
Total Price Schedule 3	846,637.50



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Summary Price (Schedule 1, 2 and 3)		 	1,639,931,473.68
Adjusted Price (Import Duty & Tax + VA	AT)		114,795,203.16
Total Price (Schedule 1, 2 and 3)	The second of th		1,754,726,676.84

MEDIUM COST OF BID NO. TILS-L-01	1,750,000,000.00
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Important Information

for

Invitation to Bid No. TILS-L-01

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 F-10. Payment:

The exchange rate used for payment of foreign currency to the local Contractor, in case the local Contractor requires total or part of foreign currency or currencies to be paid directly to him, has been changed from the buying rate on the bid opening date to be *the selling rate* on *the payment date*.

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

ELECTRICITY GENERATING AUTHORITY OF THAILAND

Nonthaburi Tlx No. 72348 EGAT TH Thailand Facsimile No. : 66 2433 6317

INVITATION TO BID NO. TILS-L-01

SUPPLY AND CONSTRUCTION OF TRANSMISSION LINES 500 kV SURAT THANI 2 - THUNG SONG, 230 kV KRABI - THUNG SONG, AND 230 kV THUNG SONG (500/230 kV) - THUNG SONG (230/115 kV)

TRANSMISSION SYSTEM IMPROVEMENT PROJECT IN LOWER SOUTHERN REGION TO ENHANCE SYSTEM SECURITY

Invitation

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for Supply and Construction of Transmission Lines 500 kV Surat Thani 2 – Thung Song, 230 kV Krabi – Thung Song, and 230 kV Thung Song (500/230 kV) – Thung Song (230/115 kV) under Transmission System Improvement Project in Lower Southern Region to Enhance System Security in accordance with the Terms and Conditions, Technical Specifications and Drawings described in these Bidding Documents.

Work Description

The scope of Work under this Invitation is composed of three (3) Schedules as described below:

Schedule 1: <u>Supply and Construction of 500 kV Surat Thani 2 – Thung Song Transmission Line</u>

The transmission line to be supplied and constructed under this Schedule is 500 kV, 50 Hz, 3 phase, quad-bundled conductor per phase, double circuit on self-supporting lattice steel towers extending from Surat Thani 2 Substation to Thung Song Substation in the southern region of Thailand, having a distance of approximately 135 kilometers on the new right-of-way with 30 meters in width on each side of the center line of the transmission line.

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

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Schedule 2: <u>Supply and Construction of 230 kV Krabi - Thung Song</u> Transmission Line

The transmission line to be supplied and constructed under this Schedule is 230 kV, 50 Hz, 3 phase, single conductor per phase, double circuit on self-supporting lattice steel towers and on lower circuit of four circuit self-supporting lattice steel towers extending from existing tower to 230/115 kV Thung Song Substation (Re-Route at Thung Song Substation) in the southern region of Thailand, having a distance of approximately 0.8 kilometer on the new right-of-way with 25 meters in width on each side of the center line of the transmission line.

The scope of Work under this Schedule also includes supply and construction of the temporary detour line. This line is 230 kV, 50 Hz, 3 phase, single conductor per phase, single circuit, having a distance of approximately 0.5 kilometer. It shall be noted that the construction of the temporary detour line shall be performed as indicated in the Specifications No. TL-05 (Rev.1): Construction of Temporary Detour Line. Moreover, since the stringing of the 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.

The dismantling Work of the existing 230 kV Krabi – Thung Song Transmission Line which is double circuit strung with 1272 MCM ACSR/GA conductor, having a distance of approximately 0.8 kilometer as well as of the 230 kV temporary detour line mentioned above is also required to be performed under this Schedule.

All dismantling Work shall be conducted in accordance with the requirements in Specifications No. TL-07 (Rev.3): <u>Dismantling Work</u>. All dismantled Equipment to be purchased by the Contractor has been listed in the Price Schedule and Attachment No. 2: <u>List of Equipment to be Dismantled by the Contractor</u>. The price offered for the purchase of such dismantled Equipment shall include value added tax. Conditions regarding the purchase of the dismantled Equipment are stipulated in Attachment No. 3: <u>Requirements for Dismantling Work and Conditions of Sale of Dismantled Equipment</u>.

Schedule 3 : <u>Supply and Construction of 230 kV Thung Song (500/230 kV) – Thung Song (230/115 kV) Transmission Line</u>

The Work to be performed under this Schedule is stringing of 230 kV Thung Song (500/230 kV) – Thung Song (230/115 kV) Transmission Line which is 50 Hz, 3 phase, quad-bundled conductor per phase, double circuit on upper circuit of four circuit self-supporting lattice steel towers extending from 500/230 kV Thung Song Substation to 230/115 kV Thung Song Substation, having a distance of approximately 0.5 kilometer.

The conductor to be employed under Schedule 2 and 3 will be 1272 MCM ACSR/GA. 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 except for the temporary detour line mentioned in Schedule 2 which only composite overhead

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ground wire with 36-core optical fiber will be employed. The conductor will be supplied by EGAT whereas both types of overhead ground wires shall be supplied by the Contractor.

All types of steel towers and foundations have already been designed by EGAT. Furthermore, detailed fabrication / erection drawings, stub & setting dimensions and details & bar bending schedules for all tower types will be provided to the Contractor by EGAT.

However, the Contractor shall also note that the detailed fabrication / erection drawings for some tower leg extensions as well as stub & setting dimensions for some tower types may not be available. In such case, the Contractor shall perform and provide these drawings for EGAT's approval.

Detailed fabrication/ erection drawings of steel towers provided by EGAT will be furnished to the Contractor after Award of the Contract. The Contractor shall carefully scrutinize EGAT's furnished detailed fabrication/ erection drawings, make minor modifications as necessary and submit all revised drawings to EGAT for review and approval. 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.

Reproducible drawings and CD-ROM of EGAT's furnished detailed fabrication / erection drawings of steel towers will not be required. The approved drawings, reproducible drawings and CD-ROM of these steel towers required to be submitted for this Contract shall therefore be bill of material. However, in case the Contractor makes modifications to EGAT's furnished detailed fabrication / erection drawings of steel towers or prepares drawings of which leg extensions and/or stub & setting dimensions are not available, such drawings shall be submitted for EGAT's approval and therefore reproducible drawings and CD-ROM of these drawings shall be required.

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.

Eligibility of Bidders: General Requirements

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

a. The Bidder shall be a partnership, firm or company, either alone or in joint venture or in consortium.

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- 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 Office of the Prime Minister 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 shall be a purchaser of the bidding documents from EGAT. For a joint venture or consortium, only one (1) member of the joint venture or consortium is required to purchase the bidding documents.

In the case where the Bidder is not the purchaser of the bidding documents, the purchaser shall notify EGAT of the name of the Bidder in writing prior to the bid opening.

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. <u>Information to be Submitted with Bid</u> 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.

Eligibility of Bidders: Technical Requirements

- I. All Bidders shall meet the following requirements; failure to so comply shall constitute sufficient ground for rejection.
 - a. Himself, or either firm of the joint venture/consortium, having a record of experience in executing at least one (1) turnkey contract as contractor (not as subcontractor) in overseas country (not his own country) or with EGAT on a multi but not less than four-bundled conductor transmission line of 400 kV or higher; having a circuit distance of not less than thirty (30) kilometers.

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

- 1) For foreign firm not having experiences in executing turnkey contract(s) in overseas or with EGAT as mentioned above, his experiences in executing at least five (5) turnkey contracts as contractor (not as subcontractor) in his own country on a multi but not less than four-bundled conductor transmission line of 400 kV or higher, with the circuit distance of the transmission line for each contract being not less than thirty (30) kilometers is eligible in case that he proposes his bid as a joint venture with a local (Thai) firm who has an experience in executing at least two (2) turnkey contracts as contractor (not as subcontractor) with EGAT on supply and construction of transmission line at a voltage level of 230 kV or higher, having a circuit distance of the transmission line for each contract not less than thirty (30) kilometers and one of which shall be a two-bundled conductor transmission line.
- 2) For local firm or the joint venture/consortium of local firms, himself or either firm of the joint venture/consortium having an experience in executing at least one (1) turnkey contract as contractor (not as subcontractor) with EGAT on a four-bundled conductor transmission line at a voltage level of 230 kV or higher is eligible to the requirement under this Item.

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

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

The record of such construction experience as well as a successful operation as required above shall be of the Work executed by the

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Bidder no longer than fifteen (15) years before the date specified for opening of this Bid.

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

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

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

However, reference records of either the parent or affiliated companies of the Bidder or of either firm of the joint venture/consortium shall not be acceptable. If the Bidder is a new company formed by acquisition of or merger with other companies or business units before submitting the Bid, the experience records of any of such previous companies or business units that meet the requirements set forth herein are acceptable as the experience records of the Bidder.

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

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- 4) Insulator for conductor manufacturer having a record of three (3) consecutive years of successful operation/use of at least 100,000 units of insulator ANSI Class 52-8 or similar and at least 20,000 units of insulator ANSI Class 52-11 or similar in transmission line(s) operated in the transmission network electric utility in overseas country (not his own country) at a voltage level of 400 kV or higher during the last ten years
- 5) Spacer dampers for conductor manufacturer having a record of five (5) consecutive years of successful operation/use of the same or similar type as those required under this Invitation and used in multi but not less than four-bundled conductor transmission lines operated at a voltage level of 400 kV or higher having accumulated circuit distance of not less than 200 kilometers
- 6) Composite overhead ground wire with optical fiber (OPGW) manufacturer having a record of at least three (3) consecutive years of successful operation/use of the same or similar type as those required under this Invitation in the transmission line having accumulated distance of not less than 20 kilometers
- 7) For proposed conductor, according to the Industrial Product Standards Act B.E. 2511 which stipulates that the conductor is an industrial product that is required to conform with the Thai Industrial Standards TIS 85-2548;

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

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

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

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

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

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

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

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

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

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

c. Proposing reputable subcontractors, for the portion of the Work to be subcontracted, having adequate technical knowledge, ability and capacity and practical experience to perform such work. If any proposed subcontractor(s) is (are) not qualified in the opinion of EGAT, the Bidder is required to select other subcontractor(s) at his own cost to the satisfaction of EGAT.

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- 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.

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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

UA WITHYA 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

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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
 - Spacer dampers and rigid spacers for twin-bundled and quadbundled 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
 - Vibration dampers for conductor, overhead ground wire and OPGW
 - Spacer dampers and rigid spacers for twin-bundled and quadbundled conductor for 115 kV, 230 kV and 500 kV transmission lines)

Mosdorfer (Thailand) Co., Ltd.

94 T, Shinnawatra Building 3rd floor, Sukhumvit Soi 23 Klong Toey Nua, Wattana Bangkok 10110

Tel: 0 2706 6717 Fax: 0 2706 6716

- (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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- Vibration dampers for conductor, overhead ground wire and OPGW
- Spacer dampers and rigid spacers for twin-bundled and quadbundled 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

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

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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

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

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

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October 2018

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

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October 2018

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

: Requirements 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 the Award of the 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>	Description	Estimated Quantit	Y
1.	1272 MCM ACSR/GA conductor (500 kV) as per Schedule 1E, Item 1E1.1	3,290.40 kr	m
2.	1272 MCM ACSR/GA conductor as per Schedule 2E, Item 2E1.1	5.70 kr	m
3.	1272 MCM ACSR/GA conductor as per Schedule 2J, Item 2J10.1	2.28 kr	m
4.	1272 MCM ACSR/GA conductor as per Schedule 3E, Item 3E1.1	12.54 kr	m

<u>Note</u>:

- 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 Specification No. L-500 kV, Section B: Conductor and Specifications No. C-2 (Revision 6), Section B: Circuit Conductors.



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 and prices offered for purchasing the said Equipment.

<u>Item</u>	Description	Estimated Quantity			
Part 1:	230 kV Krabi – Thung Song Transmission Line (The dismantled Equipment as listed below shall be purchased by the Contractor)				
1.1	Tower Tower type DB2 with Leg extension +9.0 m Tower type DDE(90) with Leg extension +1.0 m	1 1	tower tower		
1.2	Hardware Assemblies Bypass string suspension insulator assemblies Single string tension insulator assemblies Double string tension insulator assemblies Double string tension inverted insulator assemblies Overhead ground wire tension assemblies	9 6 18 s 6 14	sets sets sets sets sets		
1.3	Line Accessories Vibration damper for conductor Vibration damper for overhead ground wire	12 2	sets sets		
1.4	Insulator Insulator ANSI CLASS 52-3 (15,000 lbs)	894	discs		
1.5	1272 MCM ACSR/GA Conductor	4.87	km		
1.6	3/8 " high strength galvanized steel overhead ground wire	0.8	km		
1.7	Composite overhead ground wire with 36-core optical fiber	0.8	km		
Part 2:	230 kV Krabi – Thung Song Temporary Detour (The dismantled Equipment as listed below shall be the Contractor)		у		
2.1	Tower Tower type WSA 14.0 m Tower type WSA 18.0 m Tower type WSDE 14.0 m	1 1 1	tower tower tower		



<u>Item</u>	Description	Estimated Q	<u>uantity</u>
2.2	Concrete Tower		
	Concrete structure type TSA	6	towers
	Pole extension	6	set
	Concrete structure type TSD	1	tower
	Pole extension	1	set
	Concrete structure type TSDE	1	tower
	Pole extension	1	set
2.3	Hardware Assemblies		
	Horizontal vee insulator string assemblies	6	sets
	Composite line post insulator	18	sets
	Bypass composite line post insulator	9	sets
	Single string tension insulator assemblies	18	sets
	OPGW suspension assemblies	8	sets
	OPGW tension assemblies	6	sets
2.4	Insulator		
	Composite line post insulator	33	sets
	Composite suspension insulator	24	sets
2.5	1272 MCM ACSR/GA Conductor	1.52	km
2.6	Composite overhead ground wire with 36-core	0.5	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) <u>Dismantling Work</u>.

2. Pesponsibility 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.

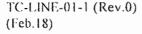
For dismantled Equipment to be purchased by the Contractor, the Contractor shall, not later than fifteen (15) Days before the day of de-energizing for the dismantling work, pay the value added tax collectible on the payment for the dismantled Equipment to be sold to the Contractor to EGAT. Upon payment 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.



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