

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

REGISTRATION FORM

INVITATION TO BID NO. TS12-CR-09

FOR SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

TRANSMISSION SYSTEM EXPANSION PROJECT NO. 12

AVAILABLE DURATION FOR PURCHASING November 8, 2019 TO January 2, 2020

PRICE THB 2,000.-

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 Cashier Section (1st Floor, TOR 100 Bldg., Counter 4-8) Tel no. 02 436 5511

Step 3 : Bring the payment receipt and the copy of filled-out Registration Form to receive the bidding documents at International Procurement Department - Transmission Segment (Room No. 1202/2, 12th Floor, Building Tor. 101) Tel no. 02 436 0341-42

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.:
E-mail :			
FOR PROCUREMENT OFFICER		CHANGE OF BIDDER'S NAME	TAX ID :
BIDDER'S LETTER NO. :		DATED :	
NEW BIDDER'S NAME (ชื่อผู้ซื้อเอกสารเปลี่ยนเป็น)			
ADDRESS (ที่อยู่)		COUNTRY :	
ATTN. (ผู้รับผิดชอบ):		FAX NO.:	TEL.:
E-mail :			
LOCAL REPRESENTATIVE (ตัวแทนในประเทศ)			
ADDRESS (ที่อยู่)		TAX ID :	
ATTN. (ผู้รับผิดชอบ):		FAX NO.:	TEL.:
E-mail :			
FOR PROCUREMENT OFFICER		FOR PURCHASER	
Procurement Officer (ผู้ส่งมอบเอกสาร)		Document received by (ผู้รับมอบเอกสาร)	



INVITATION TO BID NO. TS12-CR-09

SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO. 12

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

Place of Delivery : Ex-works

Medium Cost (including Value Added Tax) : THB 56,400,000.-

Eligibility of Bidders

1. The Bidder shall be a local manufacturer or provide such locally manufactured materials and/or equipment 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 November 8, 2019 to January 2, 2020 at THB 2,000.- 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
Telephone no. 0 2436 0341

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

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

<http://www4.egat.co.th/fprocurement/biddingeng/>

Delivery of Bids

Bids shall be submitted at Room No. 1202/1, 12th Floor, Building Tor. 101 during 9:30 hrs. to 10:00 hrs., Bangkok Standard Time, January 10, 2020 and will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

November 1, 2019

Nilanate Osotpavaposit

(Mrs. Nilanate Osotpavaposit)
Chief, International Procurement Department -
Transmission Segment



ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เรื่อง ประกวดราคาซื้อ เลขที่ TS12-CR-09

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะซื้อ Control and Protection Equipment โครงการขยายระบบส่งไฟฟ้าระยะที่ 12 โดยใช้งบประมาณ กฟผ.

สถานที่ส่งมอบ : หน้าโรงงานผู้ผลิต

ราคากลาง(รวมภาษีมูลค่าเพิ่ม) : 56,400,000.- บาท

คุณสมบัติของผู้เสนอราคา

1. ต้องเป็นนิติบุคคลผู้ผลิตพัสดุ หรือผู้มีอาชีพขายพัสดุที่ผลิตในประเทศไทยตามประกาศ และต้องไม่เป็นผู้ทำงานซึ่งสำนักนายกรัฐมนตรีได้แจ้งเวียนชื่อไว้ หรือต้องไม่เป็นผู้ที่ กฟผ. ห้ามติดต่อหรือห้ามเข้าเสนอราคา หรือต้องไม่เป็นผู้ที่ได้รับผลของการสั่งให้นิติบุคคลหรือบุคคลอื่นเป็นผู้ทำงานตามคำสั่ง กฟผ.
2. ต้องไม่เป็นผู้มีผลประโยชน์ร่วมกันกับผู้เสนอราคารายอื่น ณ วันประกาศประกวดราคาครั้งนี้เป็นต้นไป หรือต้องไม่เป็นผู้กระทำการอันเป็นการขัดขวางการแข่งขันราคาอย่างเป็นธรรมในการดำเนินการประกวดราคาครั้งนี้
3. ต้องไม่เป็นที่ปรึกษาของ กฟผ. หรือมีส่วนร่วมในบริษัทที่ปรึกษาของ กฟผ. ในงานนี้ หรือต้องไม่มีผู้ปฏิบัติงาน กฟผ. เข้าไปมีส่วนร่วมในกิจการของผู้เสนอราคา ไม่ว่าจะในฐานะผู้ถือหุ้นที่มีสิทธิควบคุมการจัดการ กรรมการ ผู้อำนวยการ ผู้จัดการ พนักงาน ลูกจ้าง ตัวแทนหรือที่ปรึกษา ยกเว้น ในกรณีที่ผู้ปฏิบัติงานได้รับคำสั่งอย่างเป็นทางการจาก กฟผ. ให้ไปปฏิบัติงานหรือเข้าร่วมในกิจการของผู้เสนอราคา
4. ต้องไม่เป็นผู้ได้รับเอกสิทธิ์หรือความคุ้มกัน ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และความคุ้มกันเช่นนั้น
5. ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้าหรือกิจการร่วม (Joint Venture or Consortium) จะต้องดำเนินการทุกขั้นตอนของการประกวดราคาในนามของกิจการร่วมค้าหรือกิจการร่วม ตั้งแต่การเสนอราคาจนถึงสิ้นสุดข้อผูกพันกับ กฟผ.

การขายเอกสารประกวดราคา

ผู้สนใจติดต่อขอทราบรายละเอียด เพื่อตรวจสอบคุณสมบัติของผู้เสนอราคา และขอซื้อเอกสารประกวดราคา ในราคาชุดละ 2,000.- บาท ได้ที่แผนกจัดซื้อต่างประเทศสายงานระบบส่ง (ห้อง 1202/2 ชั้น 12 อาคาร ท.101) กองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง ฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี ในวันทำการระหว่างเวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 8 พฤศจิกายน 2562 ถึงวันที่ 2 มกราคม 2563 หรือสอบถามทางโทรศัพท์ หมายเลข 0 2436 0341 หรืออีเมล procurement.tse@egat.co.th ทั้งนี้ สามารถ download แบบฟอร์มลงทะเบียนผู้ซื้อเอกสารประกวดราคาได้ที่เว็บไซต์ <http://www4.egat.co.th/fprocurement/biddingseng/>

การยื่นซองประกวดราคา

กำหนดยื่นซองประกวดราคา ในวันที่ 10 มกราคม 2563 เวลา 9:30 น. ถึง 10:00 น. และเปิดซองประกวดราคาเวลา 10:00 น. ณ ห้อง 1202/1 ชั้น 12 อาคาร ท.101 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศ ณ วันที่ 1 พฤศจิกายน 2562

นางเนตร โสภณภุชิต

(นางเนตร โสภณภุชิต)

หัวหน้ากองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง)
ในการจัดซื้อจัดจ้างที่มีใช้งานก่อสร้าง

1. ชื่อโครงการ ประกวราคา เลขที่ TS12-CR-09
งานจัดซื้อ Control and Protection Equipment
โครงการขยายระบบส่งไฟฟ้าระยะที่ 12
/หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย
2. วงเงินงบประมาณที่ได้รับจัดสรร
โครงการขยายระบบส่งไฟฟ้าระยะที่ 12 งบประมาณ 60,000 ล้านบาท
3. วันที่กำหนดราคากลาง 10 ตุลาคม 2562 (วันที่ อวส. อนุมัติ)
ราคารวมภาษีมูลค่าเพิ่มเป็นเงิน 56,400,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ
4. แหล่งที่มาของราคากลาง
หลักเกณฑ์การกำหนดราคากลางการจัดซื้อและจัดจ้างงานก่อสร้างระบบส่งไฟฟ้าของสายงานระบบส่ง
5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง
5.1 นายจิรายุทธ์ กิตติจันทร์รัตนานา หอคอ-ส. กวป-ส.

นางสุนิศา แยมอยู่
หตส-ท.

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**MEDIUM COST FOR BID NO. TS12-CR-09
SUMMARY OF BID PRICE
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12**

No.	Description	Supply of Equipment
		Local Supply
		Ex-works Price (excluding VAT) Baht
		Amount
1	Schedule 1 : Control and Protection Equipment	52,693,611.00
BID PRICE		Baht 52,693,611.00
VAT (7%)		Baht 3,688,552.77
SUMMARY OF MEDIUM COST		Baht 56,382,163.77
SUMMARY OF MEDIUM COST (ROUNDED)		Baht 56,400,000.00

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ทชตส-ท.
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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-1	115 kV BUS PROTECTION (LOW IMPEDANCE, NO SWITCHING ZONE, 10 feeders)	Panel No.7F/7R Panel Width = 700 mm. Specification No. 1002 Dwg Nos. PKC-E-1, PKC-E-2, PKC-E-3, TP-E-9.1, TP-E- 10.1, and TP-E-11.	1	EA	1,944,197.00	1,944,197.00
1-2	115 kV LINE PROTECTION (21, 21, 79, 1-BF)	Panel No.5F/5R & 8F/8R Panel Width = 700 mm. Panel No. 8F/8R shall be supplied with the end trim with access door. Specification No. 1002 Dwg Nos. PKC-E-1, PKC-E-2, PKC-E-3, TP-E-9.1, TP-E-	2	EA	1,094,176.00	2,188,352.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-3	BREAKER FAILURE RELAY (50BF+62BF)	Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-1, PKC-E-2,	2	EA	78,347.00	156,694.00
1-4	LOCKOUT RELAY (86, 10 contacts)	Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-2	5	EA	15,889.00	79,445.00
1-5	DC UNDERVOLTAGE RELAY (27XB,27XR)	Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-2	3	EA	4,423.00	13,269.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment		
					Local Supply		
					Ex-works Price (excluding VAT) Baht		
					Unit Price	Amount	
1-6	CUT OFF SWITCH, 4 CONTACTS (50BFC0, SS, EPS, 43RCC, 284CS)	Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-2	3	EA	887.00	2,661.00	
1-7	INDICATING LAMP (R,G,IL,LG)						Red Lamp Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-2
1-8	PUSH BUTTON						Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-2
			2	EA	292.00	584.00	
			2	EA	292.00	584.00	

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-9	TEST SWITCH (TS, for relays)	Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-1	3	EA	4,499.00	13,497.00
1-10	MCB, 6A, 2 POLE FOR DC SUPPLY	Supply as loose part, for being installed in the existing: - Panel No.4R 1 EA - Panel No.6R 1 EA Specification No. 1002 Dwg Nos. PKC-E-1	3	EA	889.00	2,667.00
1-11	CURRENT TRANSDUCER (A-TDR)	1 Phase Supply as loose part, for being installed in the existing Panel No.4F. Specification No. 1002.	1	EA	8,488.00	8,488.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-12	TEST SWITCH (FOR METERING)	Supply as loose part, for being installed in the existing Panel No.4F.				
1-13	INTERPOSING PANEL TYPE IP1	Specification No. 1002. Panel Nos. IP1	2	EA	16,087.00	32,174.00
1-14	MARSHALLING PANEL FOR RTU	Specification No. 1002 Dwg Nos. PKC-E-1, PKC-E-2, PKC-E-3, Panel No. MP-RTU1	1	EA	533,263.00	533,263.00
1-15	MARSHALLING PANEL FOR TELEPROTECTION (115 kV)	Specification No. 1002 Dwg. No. TP-E-10.3 Panel Nos. MP-TELE1	1	EA	196,919.00	196,919.00
		Specification No. 1002 Dwg. Nos. PKC-E-1, PKC-E-2, PKC-E-3, TP-E-10.2, DW-TPS-D01-111-01 sh. P1-P4, Dwg. Nos. PKC-E-1, PKC-E-2, PKC-E-3, TP-E-10.2, DW-TPS-D01-111-01 sh. P1-P4,	1	EA	164,621.00	164,621.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-16	115 kV BUS PROTECTION (LOW IMPEDANCE, NO SWITCHING ZONE, 10 feeders)	Panel Nos. 1R Specification No. 1002 Dwg. Nos. THG-E-1, THG-E-2, THG-E-3, TP-E-9.1, TP-E-	1	EA	1,593,839.00	1,593,839.00
1-17	115/22 kV TRANSFORMER PROTECTION (2 RESTRAINS, 2-51, 1-BF)	Panel Nos. 3R & 4R Specification No. 1002 Dwg. Nos. THG-E-1, THG-E-2, THG-E-3, TP-E-9.1, TP-E-	2	EA	526,930.00	1,053,860.00
1-18	115 kV LINE PROTECTION (87L, 21, 79, 1-BF)	Panel Nos. 2R & 5R Specification No. 1002 Dwg. Nos. THG-E-1, THG-E-2, THG-E-3, TP-E-9.1, TP-E-10.1, and TP-E-11	2	EA	633,435.00	1,266,870.00
1-19	115 kV LINE PROTECTION (21, 67, 79, 1-BF, DTT)	Panel Nos. 6R Specification No. 1002 Dwg. Nos. THG-E-1, THG-E-2, THG-E-3, TP-E-9.1, TP-E-	1	EA	991,512.00	991,512.00

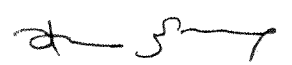
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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-20	115 kV LINE PROTECTION (21, 67, 79, 1-BF, DTT)	Panel Nos. 7R				
1-21	kWh&kVARh METER	Specification No. 1002 Dwg. Nos. THG-E-1, THG-E-2, THG-E-3, TP-E-9.1, TP-E- Supply as loose part, for being installed in the existing Meter panel.	1	EA	991,512.00	991,512.00
1-22	TEST SWITCH (FOR METERING)	Specification No. 1002. Supply as loose part, for being installed in the existing Meter panel.	2	EA	182,013.00	364,026.00
1-23	MCB, 0.5A, 3 POLE WITH AUX.	Specification No. 1002. Supply as loose part, for being installed in the existing Meter panel.	3	EA	16,087.00	48,261.00
1-24	INTERPOSING PANEL TYPE IP1	Panel Nos. IP1 Specification No. 1002 Dwg. Nos. THG-E-1, THG-E-2, THG-E-3,	5	EA	1,901.00	9,505.00
			1	EA	533,263.00	533,263.00

- Project 1-C7 -

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-25	TRANSDUCER PANEL	Panel No.TDR1 Included 1-TEMP-TDR, 1-AC-TDR, 2-DC-TDR, 4-V-TDR(3ph), 3-V-TDR(1ph), 4-A-TDR(3ph), 2-A-TDR(1ph), 2-R-TDR, 6-W&VAR-TDR,	1	EA	513,611.00	513,611.00
1-26	MARSHALLING PANEL FOR CONTROL SYSTEM	Panel No. MPC1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-27	MARSHALLING PANEL FOR RTU	Panel No. MP-RTU1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-28	MARSHALLING PANEL FOR FRS	Panel No. MP-FRS1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	188,091.00	188,091.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-29	GPS RECEIVER PANEL	Panel No. GPS Receiver (Ports of Ethernet Switch shall not be less than 32 ports) See Note No.1 Specification No. 1002 and SD-	1	EA	291,417.00	291,417.00
1-30	115 kV BUS PROTECTION (LOW IMPEDANCE, NO SWITCHING ZONE, 10 feeders)	Panel Nos. 1R Specification No. 1002 Dwg. Nos. POT-E-1, POT-E-2, POT-E-3, TP-E-9.1, TP-E-	1	EA	1,593,839.00	1,593,839.00
1-31	115 kV LINE PROTECTION (87L, 21, 79, 1-BF)	Panel Nos. 2R & 4R Specification No. 1002 Dwg. Nos. POT-E-1, POT-E-2, POT-E-3, TP-E-9.1, TP-E-10.1, and TP-E-11	2	EA	633,435.00	1,266,870.00
1-32	115/22 kV TRANSFORMER PROTECTION (2 RESTRAINS, 2-51, 1-BF)	Panel Nos. 3R & 5R Specification No. 1002 Dwg. Nos. POT-E-1, POT-E-2, POT-E-3, TP-E-9.1, TP-E-	2	EA	526,930.00	1,053,860.00



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- Project 1-C9 -

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-33	115 kV LINE PROTECTION (21, 21, 79, 1-BF, DTT)	Panel Nos. 6R Specification No. 1002 Dwg. Nos. POT-E-1, POT-E-2, POT-E-3, TP-E-9.1, TP-E-	1	EA	1,080,746.00	1,080,746.00
1-34	INTERPOSING PANEL TYPE IP1	Panel Nos. IP1 Specification No. 1002 Dwg. Nos. POT-E-1, POT-E-2, POT-E-3,	1	EA	533,263.00	533,263.00
1-35	TRANSDUCER PANEL	Panel No.TDR1 Included 1-TEMP-TDR, 1-AC- TDR, 2-DC-TDR, 3-V- TDR(3ph), 3-V-TDR(1ph), 3- A-TDR(3ph), 2-A-TDR(1ph), 2-R-TDR, 5-W&VAR-TDR,	1	EA	450,196.00	450,196.00
1-36	MARSHALLING PANEL FOR CONTROL SYSTEM	Panel No. MPC1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00



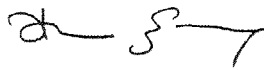
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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-37	MARSHALLING PANEL FOR RTU	Panel No. MP-RTU1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-38	MARSHALLING PANEL FOR FRS	Panel No. MP-FRS1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	188,091.00	188,091.00
1-39	GPS RECEIVER PANEL	Panel No. GPS Receiver (Ports of Ethernet Switch shall not be less than 32 ports) See Note No.1 Specification No. 1002 and SD-	1	EA	291,417.00	291,417.00
1-40	115 kV BUS PROTECTION (LOW IMPEDANCE, NO SWITCHING ZONE, 10 feeders)	Panel Nos. 1R Specification No. 1002 Dwg. Nos. STU-E-1, STU-E-2, STU-E-3, TP-E-9.1, TP-E-	1	EA	1,593,839.00	1,593,839.00
1-41	115 kV LINE PROTECTION (21, 21, 79, 1-BF) 	Panel Nos. 2R Specification No. 1002 Dwg. Nos. STU-E-1, STU-E-2, STU-E-3, TP-E-9.1, TP-E-	1	EA	742,415.00	742,415.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-42	115/22 kV TRANSFORMER PROTECTION (2 RESTRAINS, 2-51, 1-BF)	Panel Nos. 3R & 4R Specification No. 1002 Dwg. Nos. STU-E-1, STU-E-2, STU-E-3, TP-E-9.1, TP-E-	2	EA	526,930.00	1,053,860.00
1-43	115 kV LINE PROTECTION (21, 67, 79, 1-BF, DTT)	Panel Nos. 5R Specification No. 1002 Dwg. Nos. STU-E-1, STU-E-2, STU-E-3, TP-E-9.1, TP-E-	1	EA	991,512.00	991,512.00
1-44	115 kV LINE PROTECTION (87L, 21, 79, 1-BF)	Panel Nos. 6R & 7R Specification No. 1002 Dwg. Nos. STU-E-1, STU-E-2, STU-E-3, TP-E-9.1, TP-E-	2	EA	633,435.00	1,266,870.00
1-45	INTERPOSING PANEL TYPE IP1	Panel Nos. IP1 Specification No. 1002 Dwg. Nos. STU-E-1, STU-E-2, STU-E-3,	1	EA	533,263.00	533,263.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-46	TRANSDUCER PANEL	Panel No.TDR1 Included 1-TEMP-TDR, 1-AC-TDR, 2-DC-TDR, 3-V-TDR(3ph), 4-V-TDR(1ph), 3-A-TDR(3ph), 2-A-TDR(1ph), 2-R-TDR, 6-W&VAR-TDR,	1	EA	490,547.00	490,547.00
1-47	MARSHALLING PANEL FOR CONTROL SYSTEM	Panel No. MPC1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-48	MARSHALLING PANEL FOR RTU	Panel No. MP-RTU1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-49	MARSHALLING PANEL FOR FRS	Panel No. MP-FRS1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	188,091.00	188,091.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-50	MARSHALLING PANEL FOR TELEPROTECTION (115 kV)	Panel Nos. MP-TELE1 Specification No. 1002 Dwg. Nos. STU-E-1, STU-E-2, STU-E-3,, TP-E-10.2, DW-TPS-D01-111-01 sh. P1-P4, D6, D7, D0, D11 and DW TPS	1	EA	164,621.00	164,621.00
1-51	GPS RECEIVER PANEL	Panel No. GPS Receiver (Ports of Ethernet Switch shall not be less than 32 ports) See Note No.1	1	EA	291,417.00	291,417.00
1-52	115 kV BUS PROTECTION (LOW IMPEDANCE, NO SWITCHING ZONE, 10 feeders)	Specification No. 1002 and SD- Panel Nos. 1R Specification No. 1002 Dwg. Nos. SKA-E-1, SKA-E-2, SKA-E-3, TP-E-9.1, TP-E-	1	EA	1,593,839.00	1,593,839.00
1-53	115/22 kV TRANSFORMER PROTECTION (2 RESTRAINS, 2-51, 1-BF)	Panel Nos. 2R & 4R Specification No. 1002 Dwg. Nos. SKA-E-1, SKA-E-2, SKA-E-3, TP-E-9.1, TP-E-	2	EA	526,930.00	1,053,860.00

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filename : TS12-CR-09

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-54	115 kV LINE PROTECTION (87L, 21, 79, 1-BF)	Panel Nos. 3R & 5R Specification No. 1002 Dwg. Nos. SKA-E-1, SKA-E-2, SKA-E-3, TP-E-9.1, TP-E-10.1, and TP-E-11	2	EA	633,435.00	1,266,870.00
1-55	INTERPOSING PANEL TYPE IP1	Panel Nos. IP1 Specification No. 1002 Dwg. Nos. SKA-E-1, SKA-E-2, SKA-E-3,	1	EA	533,263.00	533,263.00
1-56	TRANSDUCER PANEL	Panel No. TDR1 Included 1-TEMP-TDR, 1-AC-TDR, 2-DC-TDR, 2-V-TDR(3ph), 3-V-TDR(1ph), 2-A-TDR(3ph), 2-A-TDR(1ph), 2-R-TDR, 4-W&VAR-TDR,	1	EA	386,781.00	386,781.00
1-57	MARSHALLING PANEL FOR CONTROL SYSTEM	Panel No. MPC1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-58	MARSHALLING PANEL FOR RTU	Panel No. MP-RTU1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-59	MARSHALLING PANEL FOR FRS	Panel No. MP-FRS1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	188,091.00	188,091.00
1-60	GPS RECEIVER PANEL	Panel No. GPS Receiver (Ports of Ethernet Switch shall not be less than 32 ports) See Note No.1 Specification No. 1002 and SD-	1	EA	291,417.00	291,417.00
1-61	115 kV BUS PROTECTION (LOW IMPEDANCE, NO SWITCHING ZONE, 10 feeders)	Panel Nos. 1R Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E- 2, BKN-E-3, TP-E-9.1, TP-E-	1	EA	1,593,839.00	1,593,839.00
1-62	115 kV LINE TO PEA PROTECTION (21P, 51L/51LG, 1-BF)	Panel Nos. 2R Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E- 2, BKN-E-3, TP-E-9.1, TP-E-	1	EA	651,030.00	651,030.00

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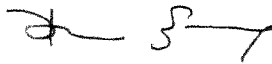
MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-63	115/22 kV TRANSFORMER PROTECTION (2 RESTRAINS, 2-51, 1-BF)	Panel Nos. 3R Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E-2, BKN-E-3, TP-E-9.1, TP-E-	1	EA	526,930.00	526,930.00
1-64	115/22 kV TRANSFORMER PROTECTION (3 RESTRAINS, 2-51, 1-BF)	Panel Nos. 4R Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E-2, BKN-E-3, TP-E-9.1, TP-E-	1	EA	610,388.00	610,388.00
1-65	115 kV LINE PROTECTION (21, 21, 79, 1-BF)	Panel Nos. 5R, 6R & 7R Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E-2, BKN-E-3, TP-E-9.1, TP-E-	3	EA	742,415.00	2,227,245.00
1-66	22/33 kV CAPACITOR CONTROL AND PROTECTION	Panel Nos. CAP1A & CAP1B Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E-2, BKN-E-3, TP-E-9.1, TP-E-	2	EA	272,449.00	544,898.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-67	22/33 kV SHUNT REACTOR CONTROL AND PROTECTION	Panel Nos. SR1A Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E-2, BKN-E-3, TP-E-9.1, TP-E-	1	EA	481,183.00	481,183.00
1-68	INTERPOSING PANEL TYPE IP1	Panel Nos. IP1 Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E-2, BKN-E-3,	1	EA	533,263.00	533,263.00
1-69	TRANSDUCER PANEL	Panel No. TDR1 Included 1-TEMP-TDR, 1-AC-TDR, 2-DC-TDR, 3-V-TDR(3ph), 4-V-TDR(1ph), 3-A-TDR(3ph), 2-A-TDR(1ph), 2-R-TDR, 6-W&VAR-TDR,	1	EA	490,547.00	490,547.00
1-70	MARSHALLING PANEL FOR CONTROL SYSTEM	Panel No. MPC1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00



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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-71	MARSHALLING PANEL FOR RTU	Panel No. MP-RTU1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-72	MARSHALLING PANEL FOR FRS	Panel No. MP-FRS1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	188,091.00	188,091.00
1-73	MARSHALLING PANEL FOR TELEPROTECTION (115 kV)	Panel Nos. MP-TELE1 Specification No. 1002 Dwg. Nos. BKN-E-1, BKN-E-2, BKN-E-3, DW-TPS-D01-111-01 sh. P1-P4, P6, P7, P9,	1	EA	164,621.00	164,621.00
1-74	GPS RECEIVER PANEL	Panel No. GPS Receiver (Ports of Ethernet Switch shall not be less than 32 ports) See Note No.1 Specification No. 1002 and SD-	1	EA	291,417.00	291,417.00

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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-75	115 kV LINE PROTECTION (21, 67, 79, 1-BF, DTT)	Panel Nos. 7R Specifiation No. 1002 Dwg. Nos. BMN-E-1, BMN-E-2, BMN-E-3, TP-E-9.1, TP-E-	1	EA	991,512.00	991,512.00
1-76	kWh&kVARh METER	Supply as loose part, for being installed in the exisiting Meter panel.	2	EA	182,013.00	364,026.00
1-77	TEST SWITCH (FOR METERING)	Specifiation No. 1002. Supply as loose part, for being installed in the exisiting Meter panel.	3	EA	16,087.00	48,261.00
1-78	MCB, 0.5A, 3 POLE WITH AUX.	Specifiation No. 1002 Supply as loose part, for being installed in the exisiting Meter panel.	5	EA	1,901.00	9,505.00
1-79	115 kV BUS PROTECTION (LOW IMPEDANCE, NO SWITCHING ZONE, 10 feeders)	Panel Nos. 1R Specifiation No. 1002 Dwg. Nos. BMN-E-1, BMN-E-2, BMN-E-3, TP-E-9.1, TP-E-	1	EA	1,593,839.00	1,593,839.00

MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-80	115/22 kV TRANSFORMER PROTECTION (2 RESTRAINS, 2-51, 1-BF)	Panel Nos. 2R & 4R Specification No. 1002 Dwg. Nos. BMN-E-1, BMN-E-2, BMN-E-3, TP-E-9.1, TP-E-	2	EA	526,930.00	1,053,860.00
1-81	115 kV LINE PROTECTION (87L, 21, 79, 1-BF)	Panel Nos. 3R & 6R Specification No. 1002 Dwg. Nos. BMN-E-1, BMN-E-2, BMN-E-3, TP-E-9.1, TP-E-	2	EA	633,435.00	1,266,870.00
1-82	115 kV LINE PROTECTION (21, 67, 79, 1-BF, DTT)	Panel Nos. 5R Specification No. 1002 Dwg. Nos. BMN-E-1, BMN-E-2, BMN-E-3, TP-E-9.1, TP-E-	1	EA	991,512.00	991,512.00
1-83	INTERPOSING PANEL TYPE IP1	Panel Nos. IP1 Specification No. 1002 Dwg. Nos. BMN-E-1, BMN-E-2, BMN-E-3,	1	EA	533,263.00	533,263.00



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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-84	TRANSDUCER PANEL	Panel No.TDR1 Included 1-TEMP-TDR, 1-AC-TDR, 2-DC-TDR, 4-V-TDR(3ph), 3-V-TDR(1ph), 4-A-TDR(3ph), 2-A-TDR(1ph), 2-R-TDR, 6-W&VAR-TDR,	1	EA	513,611.00	513,611.00
1-85	MARSHALLING PANEL FOR CONTROL SYSTEM	Panel No. MPC1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-86	MARSHALLING PANEL FOR RTU	Panel No. MP-RTU1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	196,919.00	196,919.00
1-87	MARSHALLING PANEL FOR FRS	Panel No. MP-FRS1 Specification No. 1002 Dwg. No. TP-E-10.3	1	EA	188,091.00	188,091.00



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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-88	GPS RECEIVER PANEL	Panel No. GPS Receiver (Ports of Ethernet Switch shall not be less than 32 ports) See Note No.1 Specification No. 1002 and SD-	1	EA	291,417.00	291,417.00
1-89	DISTANCE RELAY (21) FOR 115 kV without 79/25	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	180,489.00	180,489.00
1-90	LINE CURRENT DIFFERENTIAL RELAY (87L)	Supply as loose part for 115 kV Specification No. 1002 In = 5 A The link to communication of 87L shall be E1 interface and 2 sets of coaxial cables shall be	1	EA	297,592.00	297,592.00
1-91	TRANSFORMER DIFFERENTIAL RELAY (87K, 3 restraint windings)	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	130,905.00	130,905.00

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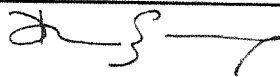
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MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-92	TRANSFORMER DIFFERENTIAL RELAY (87K, 2 restraint windings)	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	59,925.00	59,925.00
1-93	AUTO RECLOSING AND SYNCHRONISM CHECK RELAY (79+25)	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	45,192.00	45,192.00
1-94	TRANSFORMER OVERCURRENT RELAY (51T/51TG, 51L/51LG,51/51G,51S/51SG,51C/51CG)	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	56,236.00	56,236.00
1-95	OVERCURRENT GROUND BACKUP RELAY (51GB)	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	56,236.00	56,236.00
1-96	BREAKER FAILURE RELAY (50BF+62BF)	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	78,347.00	78,347.00
1-97	DIRECTIONAL OVERCURRENT RELAY (67/67N)	Supply as loose part Specification No. 1002 Dwg. Nos. BKN-E-1	1	EA	91,255.00	91,255.00

MEDIUM COST FOR BID NO. TS12-CR-09
Schedule 1 : Control and Protection Equipment
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
1-98	BUS DIFFERENTIAL RELAY (Low Impedance- No Switching Zone)	Supply as loose part Specification No. 1002				
1-99	TEST SWITCH (FOR METERING)	Dwg. Nos. BKN-E-1 Supply as loose part Specification No. 1002	1	EA	430,557.00	430,557.00
	Note: 1. GPS Receiver Panel consists of the following equipment: - 19" Rack Panel and Accessories - GPS Receiver/Antenna and Accessories - Ethernet switch - Cable and Accessories		30	EA	16,087.00	482,610.00
Total Price for Schedule 1					Baht	52,693,611.00



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DATA SHEET

for

Invitation to Bid No. TS12-CR-09

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

Provisions Regarding Foreign Supply

Equipment proposed for this invitation to bid shall be manufactured locally. Any provisions regarding foreign supply found in the bidding documents are not applicable.

Article B-3. Bid Security

The amount of bid security shall be THB 2,820,000.-.

Article B-4. Validity of Bids

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

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

Item m. is not applicable

Article B-12. Evaluation and Comparison of Bids:

The evaluation of bid prices shall be on schedule basis.

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

Maintenance Guarantee Period

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

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

<u>Equipment</u>	<u>Period of Guarantee (Year)</u>
- Fault Recording System	2
- Control and Protection System	2
- <u>For Shunt Reactor, 200 MVA 230 kV and above Power Transformer and 500 kV System Voltage Equipment</u>	

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

Defective Equipment to be replaced with the whole new set

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

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

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

INVITATION TO BID NO. TS12-CR-09

SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

Invitation

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for furnishing and delivering of Control and Protection Equipment under Transmission System Expansion Project No.12 hereinafter called Equipment in accordance with the terms, conditions and Specifications described in these Bidding Documents.

Eligibility of Bidders: General Requirements

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

- a. The Bidder shall be a partnership, firm or company, either alone or in joint venture or in consortium.
- b. The Bidder shall be a purchaser of the bidding documents from EGAT. For a joint venture or consortium, only one (1) member of the joint venture or consortium is required to purchase the bidding documents.

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

- c. The Bidder shall be well-established and maintain a permanent place of business. For a joint venture or consortium, all members of the joint venture or consortium are required to meet this qualification.
- d. The Bidder shall not be named in the List of Work Abandoners published by the Office of the Prime Minister and/or in the Debarment List and/or in the List of Work Abandoners declared by EGAT.

- e. For the Bidder who changes name before submitting the bid, his experience records in previous name shall be considered as the experience records of the Bidder.
- f. The Bidder shall not be a Jointly Interested Bidder with other Bidders as from the date of EGAT's issuance of this invitation to bid, or shall not be a person who undertakes any action as an "Obstruction of Fair Price Competition" as defined in Additional Regulation for this invitation.
- g. The Bidder shall not either be EGAT's consultant or involve in EGAT's consultancy company under this invitation, or have EGAT's personnel involved in his business as shareholder having voting right that can control his business, director, manager, officer, employee, agent or consultant except the ones who are officially ordered by EGAT to act or participate therein.
- h. The Bidder shall not be the person who is privileged or protected not to be taken any legal proceeding under Thai court; provided that such Bidder's government declares that such special privilege is waived.
- i. In case of a joint venture or consortium, the Bidder shall carry out all the provision of the Equipment and all Work under such formation from the time of bidding until the fulfillment of the Contract and the parties to the joint venture or the consortium shall accept joint and several liability for performing all obligations under the bid and the Contract.
- j. The Bidder shall not propose to supply the Equipment from the country under the state of war whether declared or not.
- k. The Bidder shall have adequate fund to meet financial obligations incidental to this Contract.
- l. The Bidder shall submit documentary evidence established in accordance with Article B-8. Information to be Submitted with Bid to demonstrate the Bidder's sufficient eligibility to bid and qualification to perform the Contract.

Eligibility of Bidders: Technical Requirements

- I. All Bidders shall meet the following requirements; failure to so comply shall constitute sufficient ground for rejection.**
 - a. The Bidder shall manufacture or supply the Equipment or Work as required under this invitation to bid.

- b. If the Bidder is a new company formed by acquisition of or merger with other companies or business units before submitting the Bid, the experience records of any of such previous companies or business units that meet the requirements set forth herein are acceptable as the experience records of the Bidder.

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

- c. The Bidder shall have 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 the Bidder is a new company formed by acquisition of or merger with other companies or business units, the pending claim of any of such previous companies or business units shall be considered as pending claim of the Bidder.

- d. The Bidder shall have sufficient capacity to carry out the Work.

- e. The Bidder shall propose the Equipment manufactured by the qualified manufacturers who shall fulfill the following requirements:

1. Being well-established and maintaining a permanent place of business.
2. Regular manufacturing of Equipment of the type and similar ratings proposed.
3. Being a local manufacturer.
4. For 500 kV Control and Protection System, having one of the following qualifications:

Having supply records of successful operation/use of at least three (3) units of each type of Protective Relay Panels of which the characteristics are similar to the ones specified herein in EGAT's 500 kV Transmission System for at least three (3) consecutive years.

OR

Having a letter of acceptance for manufacturing and/or fabrication of the specific Equipment issued by EGAT within the scope specified therein.

5. For 230 kV Control and Protection System and below, having one of the following qualifications:

Having supply records of successful operation/use of at least three (3) units of each type of Protective Relay Panels of which the characteristics are similar to the ones specified herein in EGAT's or other Electricity Authorities of Thailand's 220 kV or above Transmission System for at least three (3) consecutive years.

OR

Having a letter of acceptance for manufacturing and/or fabrication of the specific Equipment issued by EGAT within the scope specified therein.

6. 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 other 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.
7. Having no just or proper claims pending against Equipment on other similar works.

In case the manufacturer 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 as pending claim of the manufacturer.

- f. The proposed protective relays shall be the products from the manufacturers as listed in EGAT's Specifications and shall be in compliance with the details specified in EGAT's Specifications. Type/Model of the proposed main protective relays shall be as specified in EGAT ACCEPTED MAIN RELAY LIST No. 1 which is attached at the end of Section A. Invitation to Bid.

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

The proposed protective relays shall be the products from the manufacturers as listed in EGAT's Specifications and shall be in compliance with the details specified in EGAT's Specifications. Type/Model of the proposed protective relays shall be as specified in EGAT ACCEPTED MAIN RELAY LIST No. 2 which is attached at the end of Section A. Invitation to Bid.
