

Notice to Bidder

Subject : Online Payment for Purchase of Bidding Documents

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

- 1) Payment shall be made by bank transfer or telegraphic transfer to EGAT's account no. 109-6-01958-2 (swift code : KRTHTHBK), Krung Thai Bank Public Company Limited, Bangkruai Branch, Nonthaburi.

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

- 2) Download the Registration Form and fill out all necessary information by typing. (Complete data is required.)
- 3) Submit the fill-out Registration Form and the proof of payment from 1) to the email address of the in-charge officer and procurement.tse@egat.co.th in the CC. before 15.00 hrs. Bangkok Standard Time.
- 4) After the payment has been verified for approximately 3 working days, the in-charge officer will send the link for downloading the bidding documents together with the receipt to the purchaser's email address in the Registration Form.

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

Registration Form

Invitation to Bid No. THKP-CR-01 and RTS2-CR-11

Supply of Control and Protection Equipment

Long-Term Transmission System Investment Plan for Hin Kong Power Plant
Transmission System Expansion and Renovation Project Phase 2

Available Duration for Purchasing : September 21, 2021 - October 26, 2021

Price of Bidding Documents : THB 500.-

Instructions

- 1) Payment shall be made by bank transfer or telegraphic transfer to EGAT's account no. 109-6-01958-2 (swift code : KRTHTHBK), Krung Thai Bank Public Company Limited, Bangkruai Branch, Nonthaburi.
- 2) Fill out this Registration Form in English by typing. (Complete data is required.)
- 3) Submit the filled-out Registration Form and the proof of payment to the in-charge officer via email (with cc. procurement.tse@egat.co.th) before 15.00 hrs. Bangkok Standard Time.
- 4) The in-charge officer will send the link for downloading the bidding documents together with the receipt to the purchaser's email address in the Registration Form, which will take approximately 3 working days.

For Purchaser		TAX ID :
No.	Receipt No. :	Date :
Bidder's Name		
Address		
		Country :
Name of Contact Person :		Tel.
		Mobile No.
Email Address :		
Local Representative		
Address		
		Tax ID :
Name of Contact Person :		Tel.
		Mobile No.
Email Address :		
For Procurement Officer		Change of Bidder's Name
Bidder's Letter No. :		TAX ID :
		Dated :
New Bidder's Name		
Address		
		Country :
Name of Contact Person :		Tel.
		Mobile No.
Email Address :		
Contact Information of In-charge Officer		
Name	Mr. Jatuphon Poleewatana	
Email address	jatuphon.p@egat.co.th	
Telephone No.	0 2436 3341	
Mobile No.	09 2824 1942	



Invitation to Bid No. THKP-CR-01 and RTS2-CR-11
Supply of Control and Protection Equipment
Long-Term Transmission System Investment Plan for Hin Kong Power Plant
Transmission System Expansion and Renovation Project Phase 2

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 12,800,000.-

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

Availability of Bidding Documents

Bidding Documents 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 September 21, 2021 to October 26, 2021 at THB 500.- per copy, non-refundable, at the following address :

International Procurement Department - Transmission Segment
(Room No. 301, 3rd Floor, Tor 082 Building)
Procurement and Inventory Management Division
Electricity Generating Authority of Thailand
Bangkrui, Nonthaburi 11130
Telephone no. 0 2436 0341
E-mail : procurement.tse@egat.co.th

Please find more details and download Registration Form for purchasing Bidding Documents at <http://www4.egat.co.th/fprocurement/biddingeng/>.

Delivery of Bids

Bids shall be submitted at *Bidding Room, 1st Floor, Tor 082 Building* during 9:30 hrs. to 10:00 hrs., Bangkok Standard Time, November 3, 2021 and will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

September 14, 2021

Kannika Dhachalapat

(Mrs. Kannika Dhachalapat)
Chief, International Procurement Department -
Transmission Segment



ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย
เรื่อง ประกวดราคาซื้อ เลขที่ THKP-CR-01 and RTS2-CR-11

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะซื้อ Control and Protection Equipment สำหรับแผนงานปรับปรุงระบบส่งไฟฟ้าสำหรับโรงไฟฟ้าของบริษัท หินกอง เพาเวอร์ จำกัด และโครงการปรับปรุงและขยายระบบส่งไฟฟ้าที่เสื่อมสภาพตามอายุการใช้งานระยะที่ 2 โดยใช้งบประมาณ กฟผ.

สถานที่ส่งมอบ : หน้าโรงงานผู้ผลิต

ราคากลาง (รวมภาษีมูลค่าเพิ่ม) : 12,800,000.- บาท

คุณสมบัติของผู้เสนอราคา

1. ต้องเป็นนิติบุคคลผู้ผลิตพัสดุ หรือผู้มีอาชีพขายพัสดุที่ผลิตในประเทศไทยตามประกาศ และต้องไม่เป็นผู้ที่งานซึ่งปลัดกระทรวงการคลังได้แจ้งเวียนชื่อไว้ หรือต้องไม่เป็นผู้ที่ กฟผ. ห้ามติดต่อหรือห้ามเข้าเสนอราคา หรือต้องไม่เป็นผู้ที่ได้รับผลของการสั่งให้นิติบุคคลหรือบุคคลอื่นเป็นผู้ที่งานตามคำสั่ง กฟผ.
2. ต้องไม่เป็นผู้มีผลประโยชน์ร่วมกันกับผู้เสนอราคารายอื่น ณ วันประกาศประกวดราคาครั้งนี้เป็นต้นไป หรือต้องไม่เป็นผู้กระทำการอันเป็นการขัดขวางการแข่งขันราคาอย่างเป็นธรรมในการดำเนินการประกวดราคาครั้งนี้
3. ต้องไม่เป็นที่ปรึกษาของ กฟผ. หรือมีส่วนร่วมในบริษัทที่ปรึกษาของ กฟผ. ในงานนี้ หรือต้องไม่มีผู้ปฏิบัติงาน กฟผ. เข้าไปมีส่วนร่วมในกิจการของผู้เสนอราคา ไม่ว่าจะในฐานะผู้ถือหุ้นที่มีสิทธิควบคุมการจัดการ กรรมการ ผู้อำนวยการ ผู้จัดการ พนักงาน ลูกจ้าง ตัวแทน หรือที่ปรึกษา ยกเว้น ในกรณีที่ผู้ปฏิบัติงานได้รับคำสั่งอย่างเป็นทางการจาก กฟผ. ให้ไปปฏิบัติงานหรือเข้าร่วมในกิจการของผู้เสนอราคา
4. ต้องไม่เป็นผู้ได้รับเอกสิทธิ์หรือความคุ้มกัน ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และความคุ้มกันเช่นนั้น
5. ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม (Joint Venture or Consortium) จะต้องดำเนินการทุกขั้นตอนของการประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม ตั้งแต่การเสนอราคาจนถึงสิ้นสุดข้อผูกพันกับ กฟผ.

การขายเอกสารประกวดราคา

ผู้สนใจติดต่อขอทราบรายละเอียด เพื่อตรวจสอบคุณสมบัติของผู้เสนอราคา และขอซื้อเอกสารประกวดราคา ในราคาชุดละ 500.- บาท ได้ที่ แผนกจัดซื้อต่างประเทศสายงานระบบส่ง (ห้อง 301 ชั้น 3 อาคารฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ ท.082) กองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง ฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี ในวันทำการระหว่างเวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 21 กันยายน 2564 ถึงวันที่ 26 ตุลาคม 2564 หรือสอบถามทางโทรศัพท์ หมายเลข 0 2436 0341 หรืออีเมล procurement.tse@egat.co.th ทั้งนี้ สามารถ download แบบฟอร์มลงทะเบียนผู้ซื้อเอกสารประกวดราคาได้ที่เว็บไซต์ <http://www4.egat.co.th/fprocurement/biddingeng/>

การยื่นซองประกวดราคา

กำหนดยื่นซองประกวดราคา ในวันที่ 3 พฤศจิกายน 2564 เวลา 09:30 น. ถึง 10:00 น. และเปิดซองประกวดราคา เวลา 10:00 น. ณ ห้องประกวดราคา ชั้น 1 อาคารฝ่ายจัดซื้อจัดจ้างและบริหารพัสดุ ท.082 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศ ณ วันที่ 14 กันยายน 2564

กรรณิกา อธิกุลัญญ์
(นางกรรณิกา อธิกุลัญญ์)

หัวหน้ากองจัดซื้อจัดจ้างต่างประเทศสายงานระบบส่ง

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง)

ในการจัดซื้อจัดจ้างที่มีใช้งานก่อสร้าง

1. ชื่อโครงการ Bid No. THKP-CR-01 and RTS2-CR-11
งานจัดซื้อ Control and Protection Equipment
แผนงานปรับปรุงระบบส่งไฟฟ้าสำหรับโรงไฟฟ้าของบริษัท หินกอง เพาเวอร์ จำกัด
โครงการปรับปรุงและขยายระบบส่งไฟฟ้าที่เสื่อมสภาพตามอายุการใช้งานระยะที่ 2
/หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย
2. วงเงินงบประมาณที่ได้รับจัดสรร
แผนงานปรับปรุงระบบส่งไฟฟ้าสำหรับโรงไฟฟ้าของบริษัท หินกอง เพาเวอร์ จำกัด
งบประมาณ 165 ล้านบาท
โครงการปรับปรุงและขยายระบบส่งไฟฟ้าที่เสื่อมสภาพตามอายุการใช้งานระยะที่ 2
งบประมาณ 21,900 ล้านบาท
3. วันที่กำหนดราคากลาง 31 สิงหาคม 2564 (วันที่ อวส. อนุมัติ)
ราคารวมภาษีมูลค่าเพิ่มเป็นเงิน 12,800,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ
4. แหล่งที่มาของราคากลาง
หลักเกณฑ์การกำหนดราคากลางการจัดซื้อและจัดจ้างงานก่อสร้างระบบส่งไฟฟ้าของสายงานระบบส่ง
5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง
 - 5.1 นางสาวจิราภา ทรงชนศักดิ์ หคป-ส. กวป-ส.
 - 5.2 นายเอกรัตน์ เหล่าขจรเจริญกิจ วศ.7 หขคป-ส. กวป-ส.

หทัยภัทร พูนผลฤ
นางสาวหทัยภัทร พูนผลฤ.
หขคส-ท.
14 ก.ย. 2564

MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11
SUMMARY OF BID PRICE
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN FOR HIN KONG POWER PLANT
TRANSMISSION SYSTEM EXPANSION AND RENOVATION PROJECT PHASE 2

No.	Description	Supply of Equipment	
		Local Supply	
		Ex-works Price (excluding VAT) Baht Amount	
1	Long-Term Transmission System Investment Plan for Hin Kong Power Plant		9,113,254.00
2	TRANSMISSION SYSTEM EXPANSION AND RENOVATION PROJECT PHASE 2		2,856,318.00
BID PRICE		Baht	11,969,572.00
VAT		Baht	837,870.04
SUMMARY OF MEDIUM COST		Baht	12,807,442.04
SUMMARY OF MEDIUM COST (ROUNDED)		Baht	12,800,000.00

นางสาวทศภัทร พูนผลฤ
 พชคส-น.

14 ก.ย. 2564



นางสุตารัตน์ ไชยพันธุ์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

01 Sep 2021

MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11

Schedule A1 : 230 kV Control and Protection Equipment


SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN FOR HIN KONG POWER PLANT

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
A1-1	230 kV LINE PROTECTION (87L, 1ph, 79, 51S)	Panel Nos. 56R, 58R. Specification No. 1002 Dwg Nos. RB2-E-1.1, RB2-E-2.2, RB2-E-3.1, TP-E-9.1, TP-E-10.1 and TP-E-11	2	EA	552,915.00	1,105,830.00
A1-2	230 kV LINE PROTECTION (21P, 1ph, 2-BF)	Panel Nos. 57R, 59R. Specification No. 1002 Dwg Nos. RB2-E-1.1, RB2-E-2.2, RB2-E-3.1, TP-E-9.1, TP-E-10.1 and TP-E-11	2	EA	551,597.00	1,103,194.00
A1-3	WATT AND VAR TRANSDUCER (W&VAR-TDR)	Supply as loose part, to be installed in TDR Panel. Specification No. 1002 Dwg No. RB2-E-1.1	2	EA	16,493.00	32,986.00
A1-4	CURRENT TRANSDUCER (A-TDR 3 PH)	Supply as loose part, to be installed in TDR Panel. Specification No. 1002 Dwg No. RB2-E-1.1	2	EA	16,493.00	32,986.00


นางสุดารัตน์ ไชยพันธุ์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

01 Sep 2021


นางสาวหทัยภัทร พูนผลฤ
ยศส.น.
14 ก.ย. 2564


MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11

Schedule A1 : 230 kV Control and Protection Equipment


SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN FOR HIN KONG POWER PLANT

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
A1-5	VOLTAGE TRANSDUCER (V-TDR 3 PH)	Supply as loose part, to be installed in TDR Panel. Specification No. 1002 Dwg No. RB2-E-1.1	2	EA	16,493.00	32,986.00
A1-6	230 kV LINE PROTECTION (87L, 1ph, 79)	Supply as reserve part. Panel Nos. 40R, 42R Dwg No.TP-E-9.1, TP-E-10.1 and TP-E-11 Current Rating 5A **same type as item no.A1-1 (without 51S)	2	EA	489,433.00	978,866.00
A1-7	230 kV LINE PROTECTION (21P, 1ph, 2-BF)	Supply as reserve part. Panel Nos. 41R, 43R Dwg No.TP-E-9.1, TP-E-10.1 and TP-E-11 50BF-8011 and 50BF-8013 (41R) 50BF-8022 and 50BF-8023 (43R) Current Rating 5A **same type as item no.A1-2	2	EA	551,597.00	1,103,194.00


นางศุฑารัตน์ ไชยพันธุ์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

01 Sep 2021


นางสาวทศภัทร ชื่นผลสุ.
หตส-ท.
14 ก.ย. 2564


MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11

Schedule A1 : 230 kV Control and Protection Equipment

SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN FOR HIN KONG POWER PLANT

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
A1-8	LINE CURRENT DIFFERENTIAL RELAY (87L)	Supply as reserve part. 87L direct link with 2 set of patch cord (FC and N/A connector) (single mode fiber) with attenuator at least 30 m. Specification No. 1002 Current Input 5A **same type as item no.A1-1	5	EA	311,139.00	1,555,695.00
A1-9	DISTANCE RELAY (21) FOR 115 kV without 79/25	Supply as reserve part. Specification No. 1002 Current Input 5A **same type as item no.A1-2	5	EA	188,706.00	943,530.00
A1-10	TEST SWITCH (TS, for relays)	Supply as reserve part. Specification No. 1002	20	EA	4,703.00	94,060.00
A1-11	DC UNDERVOLTAGE RELAY (27XB,27XR)	Supply as reserve part. Specification No. 1002	20	EA	4,624.00	92,480.00
A1-12	LOCKOUT RELAY (86, 10 contacts)	Supply as reserve part (7NO,3NC). Specification No. 1002	20	EA	16,611.00	332,220.00


นางสุดารัตน์ ไชยพันธุ์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

01 Sep 2021


นางสาวทศภัทร หุ่นผลฤกษ์
หขคส-น.
14 ก.ย. 2564


MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11

Schedule A1 : 230 kV Control and Protection Equipment

SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN FOR HIN KONG POWER PLANT

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
A1-13	TRIPPING RELAY (94P, 94BU, 51X, 79X)	Supply as reserve part (at least 8 NO). Specification No. 1002	20	EA	22,360.00	447,200.00
A1-14	MCB, 0.5A, 3 POLE WITH AUX.	Supply as reserve part. Specification No. 1002	20	EA	1,986.00	39,720.00
A1-15	MCB, 6A, 2 POLE FOR DC SUPPLY	Supply as reserve part. Specification No. 1002	20	EA	929.00	18,580.00
A1-16	CUT OFF SWITCH, 8 CONTACTS (25CO, 79CO)	Supply as reserve part. Specification No. 1002 Dwg. No.TP-E-9.1	10	EA	1,434.00	14,340.00
A1-17	CUT OFF SWITCH, 10 CONTACTS (DTTCO, 87CO, 86ACO, 50/51SCO)	Supply as reserve part. Specification No. 1002 Dwg. No.TP-E-9.1	10	EA	1,670.00	16,700.00
A1-18	CUT OFF SWITCH, 20 CONTACTS (PTTCO, 85CO, 43CCS)	Supply as reserve part. Specification No. 1002 Dwg. No.TP-E-9.1	10	EA	2,567.00	25,670.00
A1-19	LATCHING RELAY (8 contacts,79COCX)	Supply as reserve part. Specification No. 1002	30	EA	7,950.00	238,500.00


 นางสุดารัตน์ ไซยพันธุ์
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง
 01 Sep 2021

นางสาวทศภัทร พูนผลฤๅ

พชตส-น.

14 ก.ย. 2566

MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11**Schedule A1 : 230 kV Control and Protection Equipment****SUPPLY OF CONTROL AND PROTECTION EQUIPMENT****LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN FOR HIN KONG POWER PLANT**

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
A1-20	LATCHING RELAY (4 contacts)	Supply as reserve part. Specification No. 1002	10	EA	3,860.00	38,600.00
A1-21	CURRENT TRANSDUCER (A-TDR 3 PH)	Supply as reserve part. Specification No. 1002	20	EA	16,493.00	329,860.00
A1-22	VOLTAGE TRANSDUCER (V-TDR 3 PH)	Supply as reserve part. Specification No. 1002	20	EA	16,493.00	329,860.00
A1-23	PUSH BUTTON	Supply as reserve part. Specification No. 1002	30	EA	304.00	9,120.00
A1-24	INDICATING LAMP (R,G,IL,LG)	Supply as reserve part. Specification No. 1002 (red)	30	EA	304.00	9,120.00
A1-25	TRANSFORMER OVERCURRENT RELAY (51T/51TG, 51L/51LG,51/51G,51S/51SG,51C/51CG)	Supply as spare part. Specification No. 1002 **same type as item no.A1-1	1	EA	58,795.00	58,795.00
A1-26	AUTO RECLOSING AND SYNCHRONISM CHECK RELAY (79+25)	Supply as spare part. Specification No. 1002 **same type as item no.A1-1	1	EA	47,249.00	47,249.00

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01 Sep 2021

นางสาวหทัยภัทร พูนผลกุล

พชคส-น.
14 ก.ย. 2564

MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11


Schedule A1 : 230 kV Control and Protection Equipment

SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN FOR HIN KONG POWER PLANT

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
A1-27	BREAKER FAILURE RELAY (50BF+62BF)	Supply as spare part. Specification No. 1002 **same type as item no.A1-2	1	EA	81,913.00	81,913.00
Total Price for Schedule A1					Baht	9,113,254.00

นางสาวหทัยภัทร พูนผล
 พชตส-น.
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 01 Sep 2021

MEDIUM COST FOR BID NO.THKP-CR-01 and RTS2-CR-11

Schedule B1 : 22 kV Control and Protection Equipment

SUPPLY OF CONTROL AND PROTECTION EQUIPMENT

TRANSMISSION SYSTEM EXPANSION AND RENOVATION PROJECT PHASE 2

Item No.	Description	Drawing No. / Reference No.	Qty.	Unit	Supply of Equipment	
					Local Supply	
					Ex-works Price (excluding VAT) Baht	
					Unit Price	Amount
B1-1	22/33 kV CAPACITOR CONTROL AND PROTECTION	Panel Nos. CAP1A, CAP2A, CAP3A, CAP4A, CAP5A, CAP1B, CAB2B, CAB3B & CAP4B Dwg. Nos. SU1-E-1, SU1-E-2, TP-E-9.1, TP-E-10.7 sh.3, and TP-E-11 Spec no. 1002	9	EA	303,053.00	2,727,477.00
B1-2	UNBALANCE SENSING RELAY (Voltage type-60CH,60CL)	Supply as spare part for 60CH. Specification No. 1002 **same type as item B1-1	1	EA	31,496.00	31,496.00
B1-3	UNBALANCE SENSING RELAY (Voltage type-60CH,60CL)	Supply as spare part for 60CL. Specification No. 1002 **same type as item B1-1	1	EA	31,496.00	31,496.00
B1-4	OVERVOLTAGE RELAY (59N,59C)	Supply as spare part for 59C. Specification No. 1002 **same type as item B1-1	1	EA	65,849.00	65,849.00
Total Price for Schedule B1					Baht 2,856,318.00	

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ทชตส-น.

14 ก.ย. 2564


นางศตารัตน์ ไชยพันธุ์
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง

01 Sep 2021

Important Information
for
Invitation to Bid No. THKP-CR-01 and RTS2-CR-11

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 B-12. Evaluation and Comparison of Bids

The calculated insurance premium to be used for evaluation and comparison purpose has been revised from 0.0629% to **0.0554%**.

DATA SHEET

for

Invitation to Bid No. THKP-CR-01 and RTS2-CR-11

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

Provisions not Applicable

All provisions and words related to Foreign Supply shall not apply to this Invitation to Bid.

Article B-3. Bid Security

The amount of bid security shall be THB 704,000.-.

Article B-4. Validity of Bids

The validity of the bid shall be for one hundred and fifty (150) 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 a combination of all 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

- For 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 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. THKP-CR-01 and RTS2-CR-11
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN
FOR HIN KONG POWER PLANT
TRANSMISSION SYSTEM EXPANSION AND
RENOVATION PROJECT PHASE 2

A-1. Invitation

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for furnishing and delivering of Control and Protection Equipment under Long-Term Transmission System Investment Plan for Hin Kong Power Plant and Transmission System Expansion and Renovation Project Phase 2 hereinafter called Equipment in accordance with the terms, conditions and Specifications described in these Bidding Documents.

A-2. 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 Permanent Secretary, Ministry of Finance, 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.

A-3. Eligibility of Bidders: Technical Requirements

1. 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.

A-4. Joint Venture or Consortium

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

A-5. Preparation and Delivery of Bids

Bids shall be prepared in accordance with the Instructions to Bidders contained in the Bidding Documents in one (1) original and three (3) hard copies in English, on the bid forms included for this purpose and shall be accompanied with a bid security as required under the Article pertaining to Bid Security in Section B. Instructions to Bidders. The bid security will be placed in a separate sealed envelope.

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

INVITATION TO BID NO. THKP-CR-01 and RTS2-CR-11
SUPPLY OF CONTROL AND PROTECTION EQUIPMENT
LONG-TERM TRANSMISSION SYSTEM INVESTMENT PLAN
FOR HIN KONG POWER PLANT
TRANSMISSION SYSTEM EXPANSION AND
RENOVATION PROJECT PHASE 2

and shall be addressed and delivered to :

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

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

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

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

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

A-6. Availability of Bidding Documents

The Bidding Documents in CD-ROM are available for examination and can be obtained from EGAT at the hereunder address upon payment to EGAT, non-refundable, in the amount of USD..... or Baht 500.-..... These prices include the value added tax.

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

EGAT ACCEPTED MAIN RELAY LIST No.1

Description	Manufacturer	Accepted Type	Accepted Voltage Level			Notes
			500 kV	230 kV	115&69 kV	
Current Differential Protection	ABB	RED670 (*)	✓	✓	✓	
	GE	P543 (*)	✓	✓	✓	
		L90 (*)	✓	✓	✓	
	SEL	SEL-311L (***)	✓	✓	✓	
		SEL-411L (*)	✓	✓	✓	
	Siemens	7SD52 (***)	✓	✓	✓	
	Schneider Electric	P543 (**)	✓	✓	✓	
	Ingeteam	EF-LD (*)	✓	✓	✓	
NR Electric	PCS-931 (**)	✓	✓	✓		
Distance Protection	ABB	REL670 (*)	✓	✓	✓	
	GE	P443 (***)	✓		✓	
		D30 (*)			✓	Only for three-pole tripping and line protection without carrier scheme.
		D60 (*)		✓	✓	
		ALPSDA1	✓	✓	✓	
	SEL	SEL-311C (***)			✓	Only for three-pole tripping and line protection without carrier scheme.
		SEL-421 (*)	✓	✓	✓	
		SEL-411L (*)	✓	✓	✓	
	Siemens	7SA522 (***)	✓	✓	✓	
		7SA6 series (***)	✓	✓	✓	
		7SA87 (*)	✓	✓	✓	
	Schneider Electric	P443 (**)	✓	✓	✓	
Ingeteam	EF-ZT (*)	✓	✓	✓		
NR Electric	PCS-902 (*)	✓	✓	✓		

เอกสารควบคุม
 รับรองสำเนาโดย วิศวกร อดิศักดิ์ อภิสิทธิ์
 ก่อนนำไปใช้งาน
 ต้องตรวจสอบ Revision ล่าสุด
 ฝ่ายวิศวกรรมระบบส่ง กฟผ.
 05 Aug 2021

EGAT ACCEPTED MAIN RELAY LIST No.1

Description	Manufacturer	Accepted Type	Accepted Voltage Level			Notes
			500 kV	230 kV	115&69 kV	
Distance Protection	Toshiba	GRZ200 (***)		✓	✓	
	ZIV	ZLV (***)		✓	✓	
Transformer Differential Protection	ABB	RET670 (*)	✓	✓	✓	
		RET650 (*)	✓	✓	✓	3-restraints
	GE	P64x (*)	✓	✓	✓	
		T35 (*)		✓	✓	
		T60 (*)		✓	✓	
	SEL	SEL-387		✓	✓	4-restraints
		SEL-487E (*)	✓	✓	✓	
		SEL-587			✓	2-restraints
	Siemens	SEL-787 (***)			✓	2-restraints
		Duobias (***)		✓	✓	
		7UT6 (***)	✓	✓	✓	5-restraints
	Schneider Electric	7UT82 (*)	✓	✓	✓	2-restraints
		7UT86 (*)	✓	✓	✓	3-restraints
		P645 (**)	✓	✓	✓	
	Ingeteam	EF-TD (*)	✓	✓	✓	3-restraints
	NR Electric	PCS-978 (*)	✓	✓	✓	
	Toshiba	GRT200 (***)	✓	✓	✓	
ZIV	IDV (***)	✓	✓	✓		
Mitsubishi	MRD-HA (***)			✓	3-restraints	
High Impedance Busbar Protection	ABB	REB650 (*)	✓	✓	✓	
	SEL	SEL-587Z	✓	✓	✓	
	Toshiba	GRB150	✓	✓	✓	

เอกสารควบคุม
 รับรองสำเนาโดย ทพด-ส.ออส.ส.อวส.
 ก่อนนำไปใช้งาน
 ต้องตรวจสอบ Revision ล่าสุด
 ฝ่ายวิศวกรรมระบบส่ง กฟผ.

05 Aug 2021

EGAT ACCEPTED MAIN RELAY LIST No.1

Description	Manufacturer	Accepted Type	Accepted Voltage Level			Notes
			500 kV	230 kV	115&69 kV	
Low Impedance Busbar Protection	ABB	REB670 (*)	✓	✓	✓	
		REB500	✓	✓	✓	
	GE	P746 (**)	✓	✓	✓	
		P740 (**)	✓	✓	✓	
		P747 (***)	✓	✓	✓	
		B90 (*)	✓	✓	✓	
		B30 (*)	✓	✓	✓	Only for breaker and a half, double bus double breaker or main and transfer bus arrangement.
	SEL	SEL-487B (*)	✓	✓	✓	
	Siemens	7SS52 (***)	✓	✓	✓	
		7SS60 (***)	✓	✓	✓	Only for breaker and a half, double bus double breaker or main and transfer bus arrangement.
		7SS85 (*)	✓	✓	✓	
	Schneider Electric	P746 (*)	✓	✓	✓	
		P740 (***)	✓	✓	✓	
	Toshiba	GRB100	✓	✓	✓	
	Mitsubishi	MBP-H1A (***)		✓	✓	In case of double bus single breaker arrangement, maximum 8 feeders with 1 bus coupler and 2 bus sections are allowed.

Bid No. TRKP-CR-01 and RIS2-CR-11

เอกสารควบคุม
 รับรองสำเนาโดย ทพอ.ศ.ถส.ศ.อวช.
 ก่อนนำไปใช้งาน
 ต้องตรวจสอบ Revision สำคัญ
 ฝ่ายวิศวกรรมระบบส่ง กฟผ.

05 Aug 2021



EGAT ACCEPTED MAIN RELAY LIST No.1

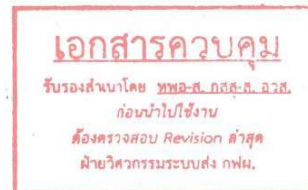
Description	Manufacturer	Accepted Type	Accepted Voltage Level			Notes
			500 kV	230 kV	115&69 kV	
Breaker Failure Protection	ABB	REQ650 (*)			✓	
	GE	P141 (***)			✓	Only for 3-phase breaker failure function.
		P14Nx (***)	✓	✓	✓	
		C60 (*)		✓	✓	
		F60 (*)		✓	✓	
		SEL-501			✓	Only for 3-phase breaker failure function.
	Siemens	7VK6 series (***)	✓	✓	✓	
		7SJ82 (*)			✓	Only for 3-phase breaker failure function.
	Schneider Electric	P821		✓	✓	Only firmware version 1.F is accepted.
	Ingeteam	EF-ZT (*)	✓	✓	✓	
	NR Electric	PCS-9611 (*)			✓	Only for 3-phase breaker failure function.
	Toshiba	GRD200 (***)	✓	✓	✓	
ZIV	IRL (***)			✓	Only for 3-phase breaker failure function.	

Remarks

- (*) Applicable to IEC 61850 for both station bus and process bus with the certification specifying that the said relay conforms to "IEC 61850 edition 2 parts 6, 7-1, 7-2, 7-3, 7-4, and 8-1" and is issued by the third party laboratory.
- (**) Applicable to IEC 61850 for both station bus and process bus (no certification).
- (***) Applicable to IEC 61850 only for station bus.

Notes

1. The procedures for being listed in EGAT ACCEPTED MAIN RELAY LIST are specified in the EGAT's Pre-Qualification (PQ) process, of which the details can be provided by Transmission System Engineering Division on request.
2. If any types of relay in the list are planned to discontinue the manufacturing, the manufacturer or the representative is responsible for informing EGAT at least 1 year before the unavailable date.
3. The relays shall be configured to comply with all EGAT's required functions.



05 Aug 2021

EGAT ACCEPTED MAIN RELAY LIST No.2

Description	Manufacturer	Accepted Type	Accepted Voltage Level				Notes
			500 kV	230 kV	115&69 kV	33&22 kV	
Directional Overcurrent Relay	ABB	REQ650 (*)	✓	✓	✓	✓	
	GE	P14Dx (***)	✓	✓	✓	✓	
		P841 (***)	✓	✓	✓	✓	
	SEL	SEL-351A (***)	✓	✓	✓	✓	
		SEL-451 (*)	✓	✓	✓	✓	
		SEL-751 (***)	✓	✓	✓	✓	
	Siemens	7SJ62 (***)	✓	✓	✓	✓	
		7SJ85 (*)	✓	✓	✓	✓	
		7SJ82 (*)	✓	✓	✓	✓	
	Schneider Electric	P141 (***)	✓	✓	✓	✓	
		P143 (***)	✓	✓	✓	✓	
	Ingeteam	EF-MD (*)	✓	✓	✓	✓	
		DA-PT (*)	✓	✓	✓	✓	
	NR Electric	PCS-9611 (*)				✓	None of line fault locator. Only use with feeder.
Toshiba	GRE140 (***)	✓	✓	✓	✓		
	GRD200 (***)	✓	✓	✓	✓		
ZIV	IRV (***)		✓	✓	✓		
Overcurrent Relay	ABB	REQ650 (*)	✓	✓	✓	✓	
	GE	P141 (***)	✓	✓	✓	✓	
		P14Dx (***)	✓	✓	✓	✓	
		P14Nx (***)	✓	✓	✓	✓	
		P841 (***)	✓	✓	✓	✓	
		F60 (*)	✓	✓	✓	✓	
		F650 (***)	✓	✓	✓	✓	
		SR350 (***)	✓	✓	✓	✓	

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EGAT ACCEPTED MAIN RELAY LIST No.2

Description	Manufacturer	Accepted Type	Accepted Voltage Level				Notes
			500 kV	230 kV	115&69 kV	33&22 kV	
Overcurrent Relay	SEL	SEL-351A (***)	✓	✓	✓	✓	
		SEL-451 (*)	✓	✓	✓	✓	
		SEL-551	✓	✓	✓	✓	
		SEL-751 (***)	✓	✓	✓	✓	
		SEL-751A (***)	✓	✓	✓	✓	
	Siemens	7SJ61 (***)	✓	✓	✓	✓	
		7SJ62 (***)	✓	✓	✓	✓	
		7SJ85 (*)	✓	✓	✓	✓	
		7SJ82 (*)	✓	✓	✓	✓	
	Schneider Electric	P120	✓	✓	✓	✓	
		P122	✓	✓	✓	✓	
		P141 (***)	✓	✓	✓	✓	
		P143 (***)	✓	✓	✓	✓	
	Ingeteam	EF-MD (*)	✓	✓	✓	✓	
		DA-PT (*)	✓	✓	✓	✓	
	NR Electric	PCS-9611 (*)			✓	✓	Only for three-pole tripping.
	Toshiba	GRE140 (***)	✓	✓	✓	✓	
GRD200 (***)		✓	✓	✓	✓		
ZIV	IRV (***)		✓	✓	✓		
	IRL (***)	✓	✓	✓	✓		
Synchronism Check Relay	ABB	REQ650 (*)	✓	✓	✓		Only product version 2.1 is accepted. <div style="border: 1px solid red; padding: 5px; width: fit-content; margin: 5px auto;"> <p style="text-align: center; color: red; font-weight: bold;">เอกสารควบคุม</p> <p style="text-align: center; color: red; font-size: small;">รับรองสำเนาโดย ทพอ.ส.กตส.ส.ฉ.วส.</p> <p style="text-align: center; color: red; font-size: x-small;">ก่อนนำไปใช้งาน</p> <p style="text-align: center; color: red; font-size: x-small;">ต้องตรวจสอบ Revision ล่าสุด</p> <p style="text-align: center; color: red; font-size: x-small;">ฝ่ายวิศวกรรมระบบส่ง กฟผ.</p> </div>
		SPAU140C	✓	✓	✓		
	GE	P841 (***)	✓	✓	✓		
		F60 (*)	✓	✓	✓		
		F650 (***)	✓	✓	✓		

EGAT ACCEPTED MAIN RELAY LIST No.2

Description	Manufacturer	Accepted Type	Accepted Voltage Level				Notes
			500 kV	230 kV	115&69 kV	33&22 kV	
Synchronism Check Relay	SEL	SEL-279H	✓	✓	✓		
		SEL-351A (***)	✓	✓	✓		
		SEL-451 (*)	✓	✓	✓		
		SEL-751 (***)	✓	✓	✓		
		SEL-751A (***)	✓	✓	✓		
	Siemens	7VK61 (***)	✓	✓	✓		
		7SJ85 (*)	✓	✓	✓		
		7SJ82 (*)	✓	✓	✓		
	Ingeteam	EF-MD (*)	✓	✓	✓		
		DA-PT (*)	✓	✓	✓		
	NR Electric	PCS-9611 (*)	✓	✓	✓		
	Toshiba	GRD200 (***)	✓		✓		
Auto Reclosing Relay	ABB	REQ650 (*)	✓	✓	✓		
	GE	P841 (***)	✓	✓	✓		
		F60 (*)			✓		Only for three-pole reclose
		F650 (***)			✓		Only for three-pole reclose
		DRS			✓		Only for three-pole reclose
	SEL	SEL-279H			✓		Only for three-pole reclose
		SEL-351A (***)			✓		Only for three-pole reclose
		SEL-451 (*)			✓		Only for three-pole reclose
		SEL-751 (***)			✓		Only for three-pole reclose
	Siemens	7VK512 (***)	✓	✓	✓		
		7VK61 (***)	✓	✓	✓		
		7SJ82 (*)			✓		Only for three-pole reclose

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EGAT ACCEPTED MAIN RELAY LIST No.2

Description	Manufacturer	Accepted Type	Accepted Voltage Level				Notes
			500 kV	230 kV	115&69 kV	33&22 kV	
Auto Reclosing Relay	Ingeteam	EF-ZT (*)	✓	✓	✓		Only for three-pole reclose
	NR Electric	PCS-9611 (*)			✓		
	Toshiba	GRD200 (***)	✓	✓	✓		
Overfluxing Relay	Ingeteam	EF-TD (*)	✓	✓	✓		
Frequency Relay	GE	P94Vx (***)	✓	✓	✓	✓	
		MIV		✓	✓		
	SEL	SEL-351A (***)	✓	✓	✓	✓	
		SEL-451 (*)	✓	✓	✓	✓	
		SEL-751 (***)	✓	✓	✓	✓	
		SEL-751A (***)	✓	✓	✓	✓	
	Siemens	7SJ85 (*)	✓	✓	✓	✓	
		7SJ82 (*)	✓	✓	✓	✓	
	Ingeteam	EF-MD (*)	✓	✓	✓	✓	
		DA-PT (*)	✓	✓	✓	✓	
	NR Electric	PCS-9611 (*)	✓	✓	✓	✓	
	ZIV	IRL (***)	✓	✓	✓	✓	
Under/Overvoltage Relay	GE	MIV		✓	✓	✓	None of VT input (open delta connection) for 59N.
		P94V (***)	✓	✓	✓	✓	
	SEL	SEL-351A (***)	✓	✓	✓	✓	
		SEL-751 (***)	✓	✓	✓	✓	
		SEL-751A (***)	✓	✓	✓	✓	
	Siemens	7SJ62 (***)	✓	✓	✓	✓	
		7SJ85 (*)	✓	✓	✓	✓	
		7SJ82 (*)	✓	✓	✓	✓	

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EGAT ACCEPTED MAIN RELAY LIST No.2

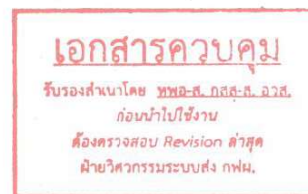
Description	Manufacturer	Accepted Type	Accepted Voltage Level				Notes
			500 kV	230 kV	115&69 kV	33&22 kV	
Under/Overvoltage Relay	Schneider Electric	P141 (***)	✓	✓	✓	✓	
		P143 (***)	✓	✓	✓	✓	
	Ingeteam	EF-MD (*)	✓	✓	✓	✓	
		DA-PT (*)	✓	✓	✓	✓	
	NR Electric	PCS-9611 (*)		✓	✓	✓	Only for C-bank protection.
	Toshiba	GRD200 (***)	✓	✓	✓	✓	
	ZIV	IRV (***)	✓	✓	✓	✓	

Remarks

- (*) Applicable to IEC 61850 for both station bus and process bus with the certification specifying that the said relay conforms to "IEC 61850 edition 2 parts 6, 7-1, 7-2, 7-3, 7-4, and 8-1" and is issued by the third party laboratory.
- (**) Applicable to IEC 61850 for both station bus and process bus (no certification).
- (***) Applicable to IEC 61850 only for station bus.

Notes

1. The procedures for being listed in EGAT ACCEPTED MAIN RELAY LIST are specified in the EGAT's Pre-Qualification (PQ) process, of which the details can be provided by Transmission System Engineering Division on request.
2. If any types of relay in the list are planned to discontinue the manufacturing, the manufacturer or the representative is responsible for informing EGAT at least 1 year before the unavailable date.
3. The relays shall be configured to comply with all EGAT's required functions.



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