

ELECTRICITY GENERATING AUTHORITY OF THAILAND

**Supplemental Notice No. 1**

**Invitation to Bid No. TS12-SWG-04**

**Supply of 115 kV Compact Switchgear**

**Transmission System Expansion Project No. 12**

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The attached Supplemental Notice shall be considered as part of the bidding documents No. TS12-SWG-04.

As acknowledgement of receipt that all additions, deletions and revisions contained in this Supplemental Notice are incorporated into the above bidding documents, Bidder is requested to sign and return this acknowledgement via email address : [kanchanok.p@egat.co.th](mailto:kanchanok.p@egat.co.th) within three ( 3 ) days from the date of the announcement of this Supplemental Notice on <http://www4.egat.co.th/fprocurement/biddingeng/>.

The original acknowledgement which is manually signed in ink by a person or persons duly authorized shall be included in the proposal to be submitted on the bid opening date.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

January 18, 2025

ACKNOWLEDGEMENT

This undersigned Bidder hereby certifies that the additions, deletions and revisions set forth in this Supplemental Notice to Invitation to Bid No. TS12-SWG-04 are incorporated as part of the above bidding documents and will be fully included in any bids which he may submit.

Signed \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Date \_\_\_\_\_

## ELECTRICITY GENERATING AUTHORITY OF THAILAND

SUPPLEMENTAL NOTICE NO. 1  
INVITATION TO BID NO. TS12-SWG-04  
SUPPLY OF 115 kV COMPACT SWITCHGEAR  
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

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The following supplemental information is hereby given for the above described Invitation:

1. Section C: Proposal

Replace page 1 of Delivery Schedule and Distribution List with the revised page with Rev.1 attached.

2. Section G: Ratings and Features

Replace pages G2 through G4 of Ratings and Features No. CW7748(IEC) with the revised pages with Rev.1 attached.

3. Section J: Drawings

Replace Drawing No. TE-S-1 Sheet 01/01 Rev.- with the revised page with Rev.1 attached.

Bid submitted must be in accordance with this Notice. Receipt of this Notice shall be acknowledged by the Bidder on the proposal included in the Bidding Documents in the space provided on page C3, Article C-7 Supplemental Notices.

ELECTRICITY GENERATING  
AUTHORITY OF THAILAND

.....January 18, 2025.....

**INVITATION TO BID NO. TS12-SWG-04**  
**Delivery Schedule and Distribution List**  
**Transmission System Expansion Project No.12**  
**Schedule 1 : Compact Switchgear**

Item No.	Description	Qty	Job no.	Substation	Delivery Required by EGAT (within months after confirmation of Letter of Award of Contract)
					CFR Thai Port / Ex-works
1-1	123 kV 2000 A 40 kA Compact Switchgear as per Ratings and Feature RF CW7748(IEC) and Dwg. No. TE-S-1-01/01	1	TS12-16-S223	TE	18
		1	TS12-16-S223	SPARE	18
1-2	Local Control Cubicle for CW7748(IEC) for Item No. 1-1	1	TS12-16-S223	TE	18
		1	TS12-16-S223	SPARE	18
1-3	Steel Supporting Structure for CW7748(IEC) for Item No.1-1	1	TS12-16-S223	TE	18
		1	TS12-16-S223	SPARE	18
1-4	Maintenance Closing Device for CB of Compact Switchgear RF CW7748(IEC)	1	TS12-16-S223	TE	18
1-5	Special Tools and Appliances for complete installtion and maintenance for CW7748(IEC)	1	TS12-16-S223	TE	18

Thai Port = BKK Port

**115 kV Compact Switchgear  
Specification No. 163**



**Substation Electrical  
Equipment Engineering Department**

<b>Ratings and Features</b>	<b>Designed :</b> via ECM system	<b>Validated :</b> via ECM system	<b>Revision 1</b>	<b>Page 1/2</b>
<b>RF No. CW7748(IEC)</b>	<b>Verified :</b> via ECM system	<b>Approved :</b> via ECM system	<b>Dated :</b> via ECM system	

- |    |                                                                          |                                            |                                  |
|----|--------------------------------------------------------------------------|--------------------------------------------|----------------------------------|
| a. | Type                                                                     | Outdoor, SF6 gas                           |                                  |
| b. | Enclosure                                                                | Single phase enclosure                     |                                  |
| c. | Rated voltage                                                            | 123                                        | kV                               |
| d. | Number of phases                                                         | 3                                          |                                  |
| e. | Rated frequency                                                          | 50                                         | Hz                               |
| f. | Rated Insulation level                                                   |                                            |                                  |
|    | - Rated short-duration power-frequency withstand voltage, r.m.s.         |                                            |                                  |
|    | - Phase-to-earth, across open switching device and between phases        | 230                                        | kV                               |
|    | - Across the isolating distance                                          | 265                                        | kV                               |
|    | - Rated lightning impulse withstand voltage, peak.                       |                                            |                                  |
|    | - Phase-to-earth, across open switching device and between phases        | 550                                        | kV                               |
|    | - Across the isolating distance                                          | 630                                        | kV                               |
| g. | Current rating                                                           |                                            |                                  |
|    | - Rated normal current                                                   | 2,000                                      | A                                |
|    | - Rated short-time (1 s) withstand current for main and earthing circuit | 40                                         | kA                               |
|    | - Rated peak withstand current for main and earthing circuit             | 100                                        | kA                               |
| h. | Circuit Breaker                                                          |                                            |                                  |
|    | - Type of mechanism                                                      | Spring Operating mechanism                 |                                  |
|    | - Rated Insulation level                                                 |                                            |                                  |
|    | - Rated short-duration power-frequency withstand voltage, r.m.s.         |                                            |                                  |
|    | - Phase-to-earth, across open switching device and between phases        | 230                                        | kV                               |
|    | - Rated lightning impulse withstand voltage, peak.                       |                                            |                                  |
|    | - Phase-to-earth, across open switching device and between phases        | 550                                        | kV                               |
|    | - Rated normal current                                                   | 2,000                                      | A                                |
|    | - Rated short-time (1 s) withstand current                               | 40                                         | kA                               |
|    | - Rated short circuit breaking current                                   | 40                                         | kA                               |
|    | - Rated interrupting time                                                | 3                                          | Cycles                           |
|    | - Rated short circuit making current                                     | 100                                        | kA                               |
|    | - Rated permissible tripping delay                                       | 1                                          | Sec                              |
|    | - Rated reclosing time                                                   | 20                                         | Cycles                           |
|    | - Type of tripping                                                       | Three poles                                |                                  |
|    | - Rated operating sequence                                               | O - 0.3s - CO - 3 min - CO                 |                                  |
|    | - Control circuit voltage                                                | 125                                        | V <sub>dc</sub>                  |
|    | - Max/Min control voltage                                                |                                            |                                  |
|    | - Opening coil                                                           | 137.5/87.5                                 | V <sub>dc</sub> /V <sub>dc</sub> |
|    | - Closing coil                                                           | 137.5/106.25                               | V <sub>dc</sub> /V <sub>dc</sub> |
|    | - External AC power source                                               | 400/230 V <sub>ac</sub> , 50 Hz            |                                  |
| i. | Disconnecting Switch Combined with Standard Earthing Switch              |                                            |                                  |
|    | - Type                                                                   | Triple pole, Triple throw and Single break |                                  |
|    | - Rated Insulation level                                                 |                                            |                                  |
|    | - Rated short-duration power-frequency withstand voltage, r.m.s.         |                                            |                                  |
|    | - Phase-to-earth and between phases                                      | 230                                        | kV                               |
|    | - Across the isolating distance                                          | 265                                        | kV                               |
|    | - Rated lightning impulse withstand voltage, peak.                       |                                            |                                  |
|    | - Phase-to-earth and between phases                                      | 550                                        | kV                               |
|    | - Across the isolating distance                                          | 630                                        | kV                               |

**115 kV Compact Switchgear  
Specification No. 163**



**Substation Electrical  
Equipment Engineering Department**

<b>Ratings and Features</b>	<b>Designed :</b> via ECM system	<b>Validated :</b> via ECM system	<b>Revision 1</b>	<b>Page 2/2</b>
<b>RF No. CW7748(IEC)</b>	<b>Verified :</b> via ECM system	<b>Approved :</b> via ECM system	<b>Dated :</b> via ECM system	

- Rated normal current	2,000	A
- Rated short-time (1 s) withstand current	40	kA
- Rated peak withstand current	100	kA
- Operating mechanism	Motor and emergency manual operation	
- Operating and control voltage	125	V <sub>dc</sub>

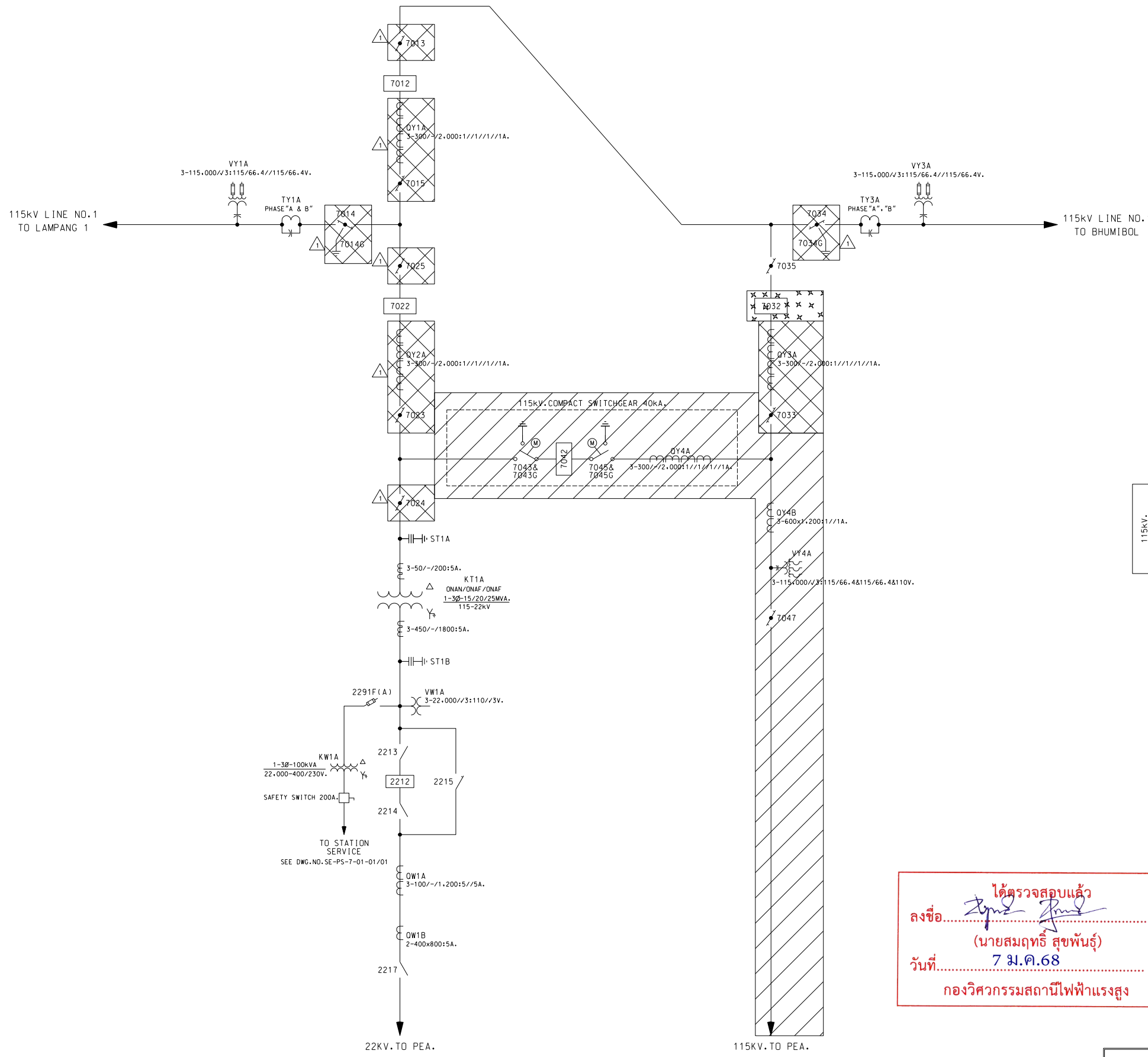
Note: The mechanism of each disconnecting switch combined with standard earthing switch shall be separated.

- j. Current Transformer as specified in Rating and Features of CT for Compact Switchgear Sheets
- k. Terminations
- Entrance Bushing (if any, see Single Line Diagram Drawing)
    - Number per feeder 3
    - Type SF<sub>6</sub> to Air
    - Rated current 2,000 A
    - Rated thermal short-time current 40 kA
    - Rated dynamic current 100 kA
    - Cantilever withstand load 4,000 N
    - Creepage distance ≥3,075 mm
    - Insulation level
      - Power-frequency withstand voltage, rms 230 kV
      - Lightning impulse withstand voltage, peak 550 kV
    - Terminal Terminal and Terminal connector suitable for 2x1272 MCM ACSR (supplied by contractor) RIV ≤ 2,500 μV or partial discharge free
  - EMC at  $1.1U_r/\sqrt{3}$
- l. Rated control circuit voltage 125 V<sub>dc</sub>
- m. Total Height at Terminal of Compact Switchgear (Preferable) 5 m

**Current Transformer**

for all CTs As specified in DWG. NO. TE-S-1 Sheet 01/01

- Quantity per phase	1	set
- No of core	4	
- Current ratio	300/400/500/800/1,100/1,200/ 1,500/1,600/2,000:1//1//1//1 A	
- Accuracy class & burden	5P20, 20	VA
- Continuous thermal current rating factor	1.0	
- Polarity	Subtractive	
- Thermal short time current rating for 1 s	40	kA
- Mechanical short time current rating, peak	100	kA



EQUIPMENT	DESIGNATION	RATING	QTY.	CONTRACT NO.	REMARK
POWER & DIST. TRANSFORMER	KT1A (With ST1A & ST1B)	115-22kV, 15/20/25MVA, 3Ø	1	7928(B1-1)	ALSTHOM
	KW1A	22.000-400/230V, 100kVA, 3Ø	1	G0812-1)	ENER GOINVEST
POWER CIRCUIT BREAKER	7022	115kV, 1,200A, 20kA	1	F002(B-1)	SPRECHER & SCHUH/7012
	2212	22kV, 1,600A, 25kA	1	-	SACE
SWITCH & FUSE	7023, 7025, 7033	115kV, 600A	3	G0816-2)	HAPAM
	2213, 2214, 2217	22kV, 1,200A, (Hook operated)	9	G0816-10)	-
	2215	22kV, 1,200A, (Gang operated)	1	G0816-9)	-
	2291F(A)	22kV, 100A	3	G0817-1)	-
	FUSE LINK 5E	-	6	G0817-2)	-
INSTRUMENT TRANSFORMER	OW1A	22kV, 100/-1,200:5//5A	3	F005(14-2)	NISSIN
	OW1B	22kV, 400x800:5A	2	F005(E)3-6)	WTW
VW1A	22.000/3:110/3V	3	-	-	-

ADDITIONAL EQUIPMENT FOR JOB NO. S9903

POWER CIRCUIT BREAKER	7012, 7032	115kV, 1,200A, 20kA	2	-	NISSIN
SWITCH & FUSE	7035	115kV, 2,000A	1	TS9-79 PART A(9-3)	COELME
	7013, 7015	115kV, 600A	2	D004(6-3)	TAKAOKA
	7024	115kV, 600A	1	D004(6-1)	TAKAOKA
	7014&7014G, 7034&7034G	115kV, 600A	2	G0816-3)	HAPAM
INSTRUMENT TRANSFORMER	VY1A WITH CARRIER	115.000/3:115/66.4//115/66.4V	2	E005(S)1(12-2)	NISSIN
	VY1A, VY3A WITH CARRIER	115.000/3:115/66.4//115/66.4V	4	H51(A6-5)	TRENCH
	OY1A, OY3A	50/-600:5//5A, 115kV, 25kA	6	D005(B-2)	BBC
	OY2A	50/-600:5//5A, 115kV	3	G0813-2)	ABB
WAVE TRAP	TY1A	115kV	2	-	-
	TY3A	115kV	2	-	-

ADDITIONAL EQUIPMENT FOR JOB NO. TS12-16-S245 (BY TSAMD)

POWER & DIST. TRANSFORMER	KT1A	115-22kV, 15/20/25MVA, 3Ø	1	G031(T)(A1-2)	TOSHIBA FROM SLB-KT2A BY TSAMD
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ADDITIONAL EQUIPMENT FOR JOB NO. TS12-16-S223 (BY EGAT)

SWITCH & FUSE	7033, 7047	115kV, 2,000A, 40kA	2	TS12-M12-02 & R152-M12-02 & R151-M12-03 (PLA3-1)	COELME (CBG STORE)
	7013, 7015, 7023, 7024, 7025	115kV, 2,000A, 40kA	5	-	-
	7014&7014G, 7034&7034G	115kV, 2,000A, 40kA	2	-	-
	OY1A, OY2A, OY3A	115kV, 300/-2,000:1//1//1/1A, 40kA	9	-	-
INSTRUMENT TRANSFORMER	OY4B	115kV, 600x1,200:1//1A, 40kA	3	-	-
	VY4A (IVT)	115.000/3:115/66.4//115/66.4&110V	3	-	-
POWER CIRCUIT BREAKER	7042	115kV, 2,000A, 40kA	1	TS12-SWG-04(X-XX)	-
	7043&7043G, 7045&7045G	115kV, 2,000A, 40kA	2	TS12-SWG-04(X-XX)	-
	OY4A	115kV, 300/-2,000:1//1//1/1A	3	TS12-SWG-04(X-XX)	-
COMPACT SWITCHGEAR	NO.1	115kV	1	TS12-SWG-04(X-XX)	-

NOTE

Power supply for station service see detail Dwg.No.SE-PS-7-01-01/01

DRAWING LIST

- Thoen Substation  
 Single Line Diagram.....Dwg.No.TE-S-1-01/01  
 General Arrangement Plan.....Dwg.No.TE-S-2-01/01  
 Bus Structure Plan.....Dwg.No.TE-S-3-01/01  
 Bus Structure Sections.....Dwg.No.TE-S-4-01/01  
 Substation Grounding System.....Dwg.No.TE-S-5-01/01  
 Control Building Equipment Lay-out.....Dwg.No.TE-S-6-01/01  
 Substation Structure Lay-out.....Dwg.No.TE-S-7-01/01

LEGEND

- Existing
- Additional for Job No.TS12-16-S223 (BY EGAT)
- Replaced for Job No.TS12-16-S223 (BY EGAT)
- Relocated for Job No.TS12-16-S223 (BY EGAT)
- Replaced for Job No.TS12-16-S223 (By EGAT)
- To be removed for Job No.TS12-16-S223 (BY EGAT)
- Future

ได้ตรวจสอบแล้ว  
 ลงชื่อ.....  
 (นายสมฤทธิ์ สุขพันธ์)  
 วันที่..... 7 มี.ค.68  
 กองวิศวกรรมสถานไฟฟ้าแรงสูง



REV. NO.	JOB NO.	JOB DESCRIPTION	DRAWN	DESIGNED	VERIFIED	VALIDATED	RECOMMENDED	CONCURRED	APPROVED	DATE
TS12-16-S223	ADDITIONAL 115KV.LINE TO PEA.	-	-	-	-	-	-	-	-	-
TS12-16-S223	ADDITIONAL 115KV.LINE TO PEA.	-	-	-	-	-	-	-	-	-

ELECTRICITY GENERATING AUTHORITY OF THAILAND										
DRAWN ..... S.SOMRIT			RECOMMENDED AND VALIDATED			DRAWING NAME				
DESIGNED ..... S.SOMRIT			CONCURRED			THOEN SUBSTATION				
VERIFIED			ASSISTANT DIRECTOR, TRANSMISSION SYSTEM ENGINEERING DIVISION			DESCRIPTION OF DETAIL DRAWING				
APPROVED			DATE			SINGLE LINE DIAGRAM				
DIRECTOR, TRANSMISSION SYSTEM ENGINEERING DIVISION			DATE			JOB NO. TS12-16-S223		REPLACING DWG. NO.		DWG. NO. TE-S-1
01 REV. 01										