

ELECTRICITY GENERATING AUTHORITY OF THAILAND

Supplemental Notice No. 1

Invitation to Bid No. TS12-SWG-02

Supply of 115 kV Compact Switchgear

Transmission System Expansion Project No. 12

The attached Supplemental Notice shall be considered as part of the bidding documents No. TS12-SWG-02.

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 : pasakorn.piy@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

June 9, 2021

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-02 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-02
SUPPLY OF 115 kV COMPACT SWITCHGEAR
TRANSMISSION SYSTEM EXPANSION PROJECT NO.12

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

1. Section G : Ratings and Features

Replace pages G2 and G3 of Ratings and Features with the revised pages with (Rev.1) attached.

2. Section J : Drawings

Replace Dwg. No. NR1-S-1, Sheet 01/02 Rev.0 with the revised one 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

June 9, 2021



Ratings and Features	Designed : via ECM system	Validated : via ECM system	Revision 1	Page 1/2
RF No. CW7750(IEC)	Verified : via ECM system	Approved : via ECM system	Dated : via ECM system	

Reference Drawing No: NR-S-1

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 _{dc}
	- Max/Min control voltage		
	- Opening coil	137.5/87.5	V _{dc} /V _{dc}
	- Closing coil	137.5/106.25	V _{dc} /V _{dc}
	- External AC power source	400/230 V _{ac} , 50 Hz	
i.	Disconnecting Switch Combined with Standard Earthing Switch (Class A)		
	- 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.		

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



**Substation Electrical
Equipment Engineering Department**

Ratings and Features	Designed : via ECM system	Validated : via ECM system	Revision 1	Page 2/2
RF No. CW7750(IEC)	Verified : via ECM system	Approved : via ECM system	Dated : via ECM system	

- Phase-to-earth and between phases	550	kV
- Across the isolating distance	630	kV
- 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 _{dc}

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

j. Current Transformer

For all CTs As specified in DWG. NO. NR-S-01 Sheet 01/01

- Quantity per phase	1	set
- No of core	4	
- Current ratio	300/400/500/800/1100/1200/1500/1600/2000: 5//5//5//5 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

k. Terminations

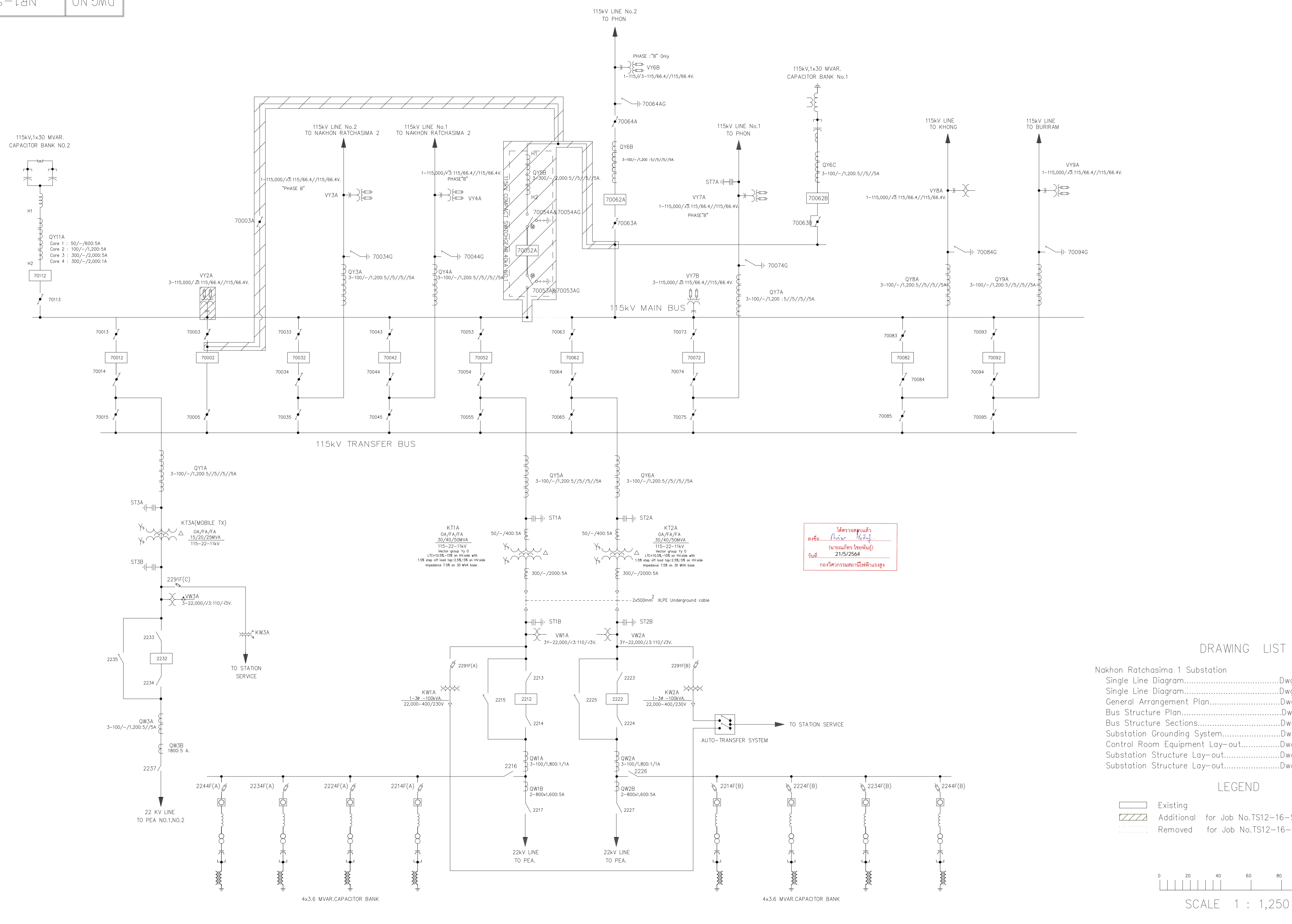
- Entrance Bushing (if any, see Single Line Diagram Drawing)		
- Number per feeder	3	
- Type	SF ₆ to Air	
- Rated current	2,000	A
- Rated thermal short-time current	40	kA
- Rated dynamic current	100	kA
- Cantilever withstand load	4,000	N
- Creepage distance	≥3,075	mm
- Insulation level		
- Power-frequency 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)	
- EMC at $1.1U_r/\sqrt{3}$	RIV ≤ 2,500 μV or partial discharge free	

l. Rated control circuit voltage

125 V_{dc}

m. Total Height at Terminal of Compact Switchgear (Preferable)

5 m



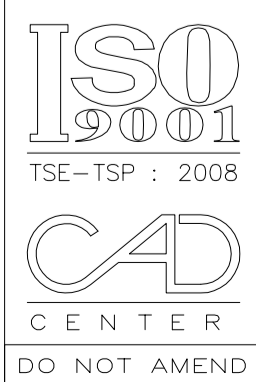
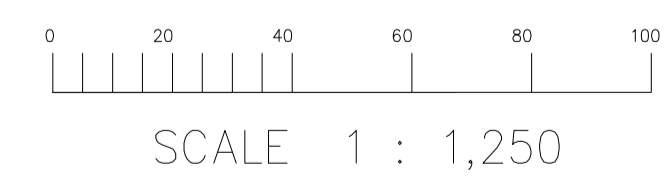
โครงการพัฒนาระบบส่งกำลังไฟฟ้า
 (สายส่งแรงดัน 115KV)
 วันที่ 21/5/2564
 กองวิศวกรรมระบบส่งกำลังไฟฟ้า

DRAWING LIST

- Nakhon Ratchasima 1 Substation
- Single Line Diagram.....Dwg.No.NR1-S-1-01/02
- Single Line Diagram.....Dwg.No.NR1-S-1-02/02
- General Arrangement Plan.....Dwg.No.NR1-S-2-01/01
- Bus Structure Plan.....Dwg.No.NR1-S-3-01/01
- Bus Structure Sections.....Dwg.No.NR1-S-4-01/01
- Substation Grounding System.....Dwg.No.NR1-S-5-01/01
- Control Room Equipment Lay-out.....Dwg.No.NR1-S-6-01/01
- Substation Structure Lay-out.....Dwg.No.NR1-S-7-01/02
- Substation Structure Lay-out.....Dwg.No.NR1-S-7-02/02

LEGEND

- Existing
- Additional for Job No.TS12-16-S172 (By EGAT)
- Removed for Job No.TS12-16-S172 (By EGAT)



ELECTRICITY GENERATING AUTHORITY OF THAILAND

DRAWN	M.SARUT	VALIDATED	CHIEF, SUBSTATION ENGINEERING DEPARTMENT	DRAWING NAME	NAKHON RATCHASIMA1 SUBSTATION						
DESIGNED		RECOMMENDED	ASSISTANT DIRECTOR, TRANSMISSION SYSTEM ENGINEERING DIVISION - 1	DESCRIPTION OF DETAIL DRAWING	SINGLE LINE DIAGRAM						
VERIFIED		CONCURRED	DIRECTOR, TRANSMISSION SYSTEM ENGINEERING DIVISION								
APPROVED				JOB NO.	TS12-16-S172	REPLACING DWG.NO.		DWG.NO.	NR1-S-1	01 REV.	0
ASSISTANT GOVERNOR - TRANSMISSION SYSTEM DEVELOPMENT				DATE							