

## DOCKETED

<b>Docket Number:</b>	08-AFC-09C
<b>Project Title:</b>	Palmdale Energy Project (Formerly Palmdale Hybrid Power Plant) - Compliance
<b>TN #:</b>	210171
<b>Document Title:</b>	Palmdale Energy LLC's Supplemental Response to California Energy Commission Staff Data Request 55 and 58
<b>Description:</b>	N/A
<b>Filer:</b>	Marie Fleming
<b>Organization:</b>	DayZen LLC
<b>Submitter Role:</b>	Applicant Representative
<b>Submission Date:</b>	2/5/2016 10:14:24 AM
<b>Docketed Date:</b>	2/5/2016

## **INTRODUCTION**

---

Attached is Palmdale Energy, LLC's supplemental responses to California Energy Commission Staff (Staff) Data Requests 55 and 58 for the Palmdale Energy Project (PEP) Petition For Amendment. For context the text of the Data Requests precedes the Data Responses.

## **TRANSMISSION SYSTEM ENGINEERING (55 and 58)**

---

### **Data Request 55**

Resubmit Figure 3-1a and Figure 3-1b.

1. Show bay arrangement of the necessary equipment which is required to interconnect the project.
2. Provide ratings of the breakers, disconnect switches, relays, buses, and etc.

### **Response to Data Request 55**

Figure 3-1a, the switchyard single line drawing, has been revised to show the ratings of breakers, disconnect switches, relays, buses, etc. Also, an arrangement drawing for the switchyard has been prepared. The arrangement drawing shows the arrangement of the breakers, disconnect switches, and take-off structures in the Project's 230 kV switchyard. The arrangement drawing is provided as Figure 3-1c, a new figure.

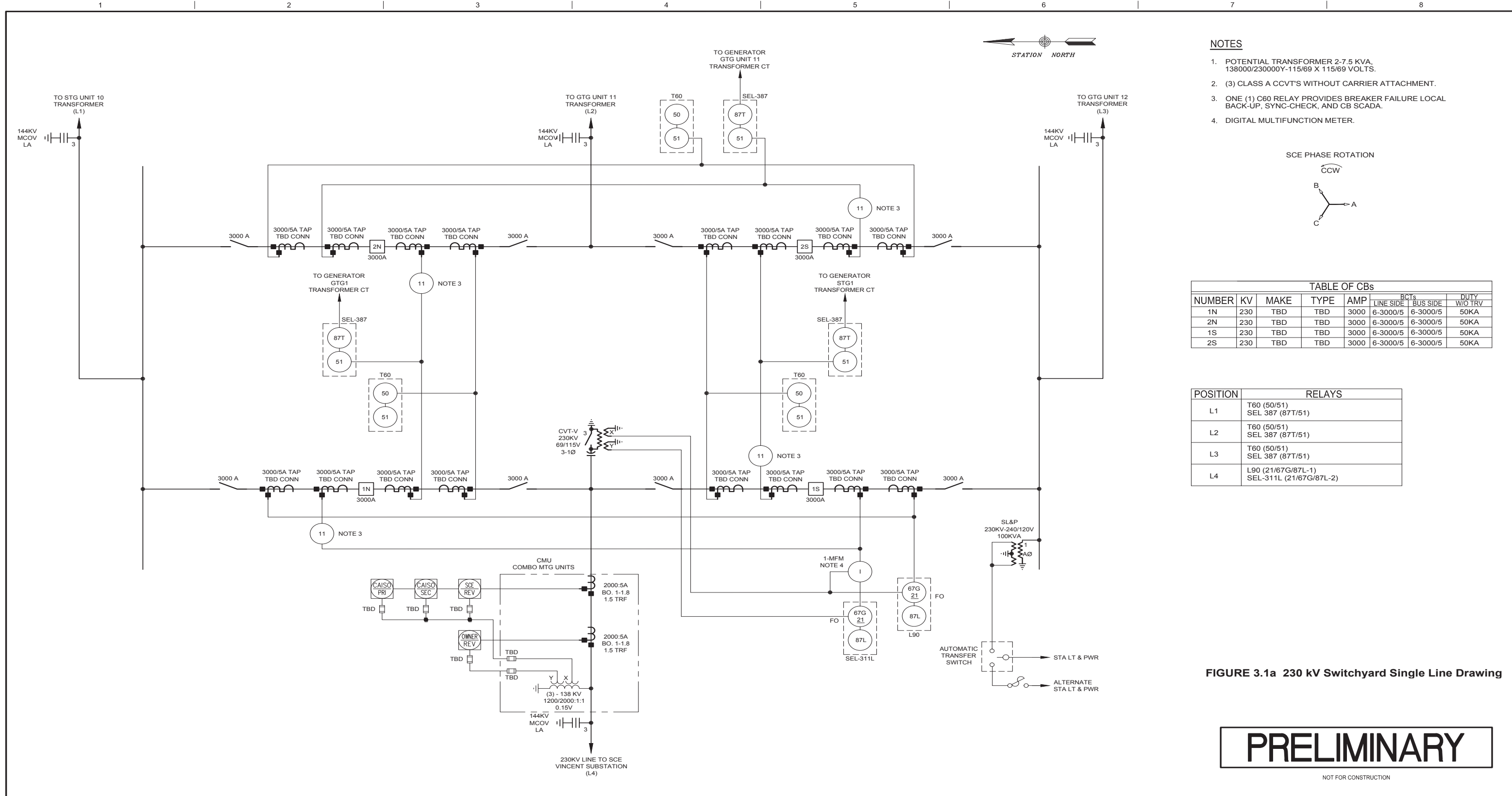
Palmdale Energy has not revised Figure 3-1b, the power block single line. Figure 3-1b already includes ratings for the generators and step-up transformers and, as a single line drawing of the power block, is not meant to depict the bay arrangement of equipment required to interconnect the project, which Palmdale interprets as meaning the switchyard arrangement

### **Data Request 58**

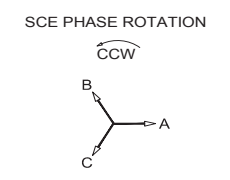
Provide generator tie-line conductor type, current carrying capacity, and conductor size.

### **Response to Data Request 58**

The generator tie-line conductor will be a horizontal double bundle 1272 kcmil ACSR with a maximum current carrying capacity or 2000 amps.



- NOTES**
- POTENTIAL TRANSFORMER 2-7.5 KVA, 138000/230000Y-115/69 X 115/69 VOLTS.
  - (3) CLASS A CCVT'S WITHOUT CARRIER ATTACHMENT.
  - ONE (1) C60 RELAY PROVIDES BREAKER FAILURE LOCAL BACK-UP, SYNC-CHECK, AND CB SCADA.
  - DIGITAL MULTIFUNCTION METER.



**TABLE OF CBs**

NUMBER	KV	MAKE	TYPE	AMP	BCTs		DUTY
					LINE SIDE	BUS SIDE	
1N	230	TBD	TBD	3000	6-3000/5	6-3000/5	50KA
2N	230	TBD	TBD	3000	6-3000/5	6-3000/5	50KA
1S	230	TBD	TBD	3000	6-3000/5	6-3000/5	50KA
2S	230	TBD	TBD	3000	6-3000/5	6-3000/5	50KA

**RELAYS**

POSITION	RELAYS
L1	T60 (50/51) SEL 387 (87T/51)
L2	T60 (50/51) SEL 387 (87T/51)
L3	T60 (50/51) SEL 387 (87T/51)
L4	L90 (21/67G/87L-1) SEL-311L (21/67G/87L-2)

**FIGURE 3.1a 230 kV Switchyard Single Line Drawing**

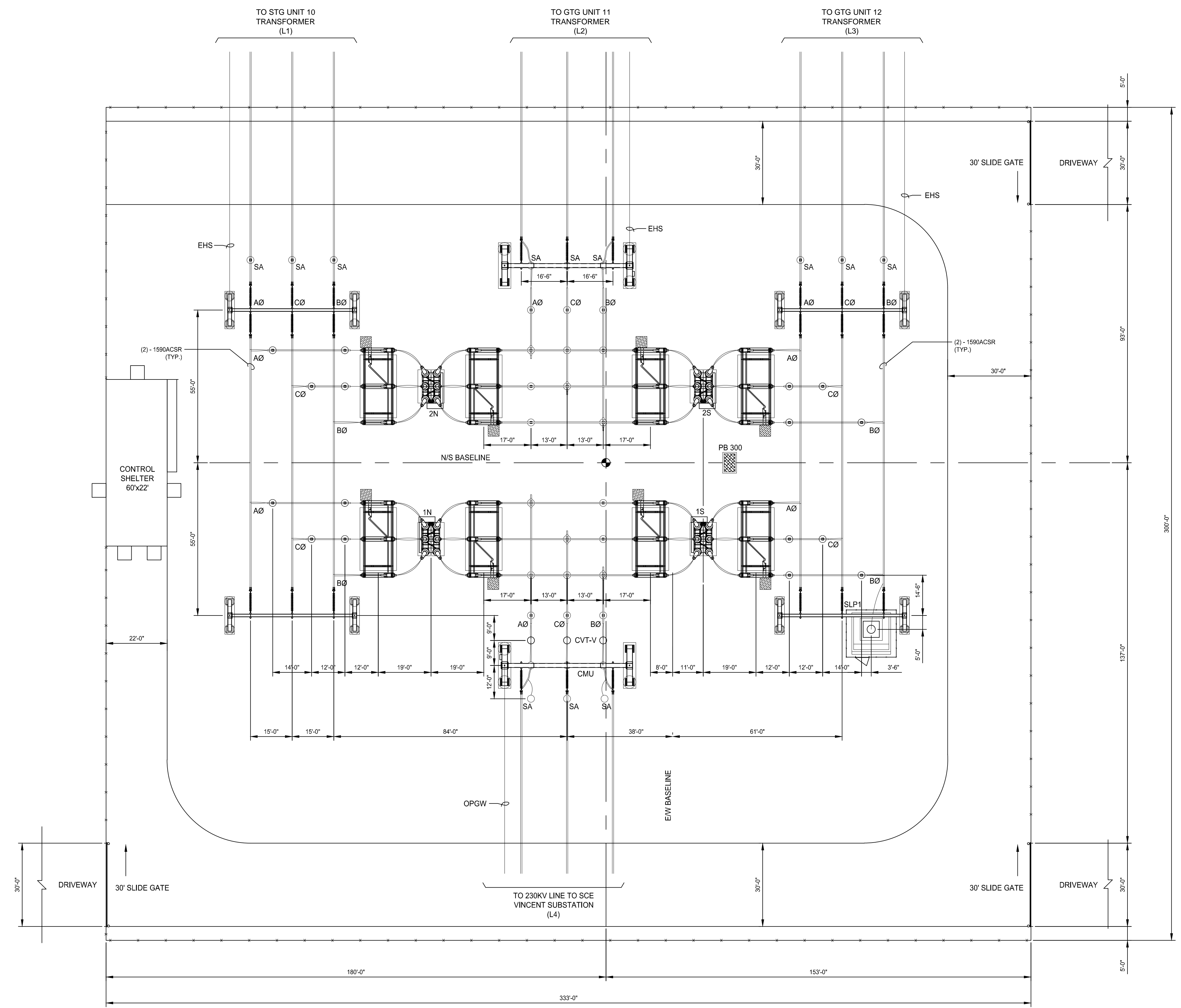
**PRELIMINARY**

NOT FOR CONSTRUCTION

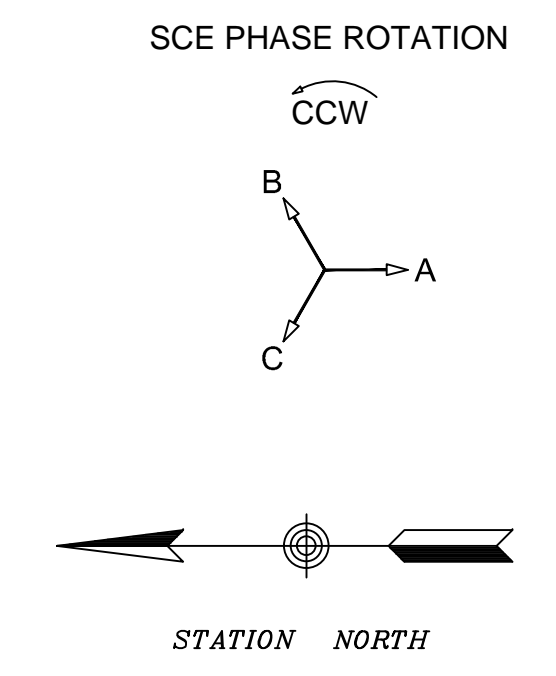
E1-1.DWG

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
2	REVISED GEN LN NAMES, ADDED CMU & METERS	01/26/16	ANJ	LA	WSH	-	
1	PRELIMINARY SWITCHING DESIGN SINGLE LN DIAGRAM	01/15/16	ANJ	WSH	WSH	-	GA1-1 SWITCHYARD PLAN

DSGN	WSH	01/15/16		PALMDALE ENERGY PALMDALE SWITCHING STATION	JOB NUMBER	140073	REV	2
DRN	ANJ	01/15/16			DRAWING NUMBER	E1-1		
CKD	WSH	01/15/16						
SCALE: NTS			ELECTRICAL SINGLE LINE DIAGRAM					
FOR 22-34 DWG ONLY								



- NOTES**
- PRE-STRAIGHTENED DAMPING CONDUCTOR SHALL BE INSTALLED WITHIN THE ENTIRE LENGTH OF HORIZONTAL RIGID BUS RUNS GREATER THAN 21' LONG. -1431 KCMIL ACSR FOR ALL 5" PIPES
  - DRILL 1/4 WEEP HOLES IN ALL BUS RISERS, BENDS AND HORIZONTAL RUNS AT LOWEST PRACTICAL POINT TO DRAIN MOISTURE ACCUMULATION. DEBUR ALL HOLES.
  - ALL BUS COUPLERS SHALL BE PLACED WITHIN 1/4 SPAN FROM A BUS SUPPORT.



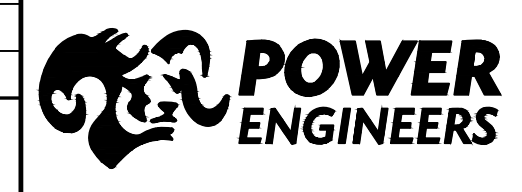
**PRELIMINARY**

NOT FOR CONSTRUCTION

THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT. TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
2	REVISED GEN. LN. NAMES, CTRL BLDG. LOCATION & ADDED CMU	01/26/16	ANJ	WSH	WSH		
1	PRELIMINARY SWITCHING STATION DESIGN LAYOUT	01/15/16	ANJ	WSH	WSH		E1-1 SINGLE LINE DIAGRAM

DSGN	WSH	01/15/16
DRN	ANJ	01/15/16
CKD	WSH	01/15/16
SCALE: 1" = 20'		
FOR 22x34 DWG ONLY		



PALMDALE ENERGY		JOB NUMBER	REV
PALMDALE SWITCHING STATION		140073	2
230KV SWITCHING STATION EQUIPMENT PLAN VIEW		DRAWING NUMBER	GA1-1

JOB NUMBER	REV
140073	2
DRAWING NUMBER	GA1-1