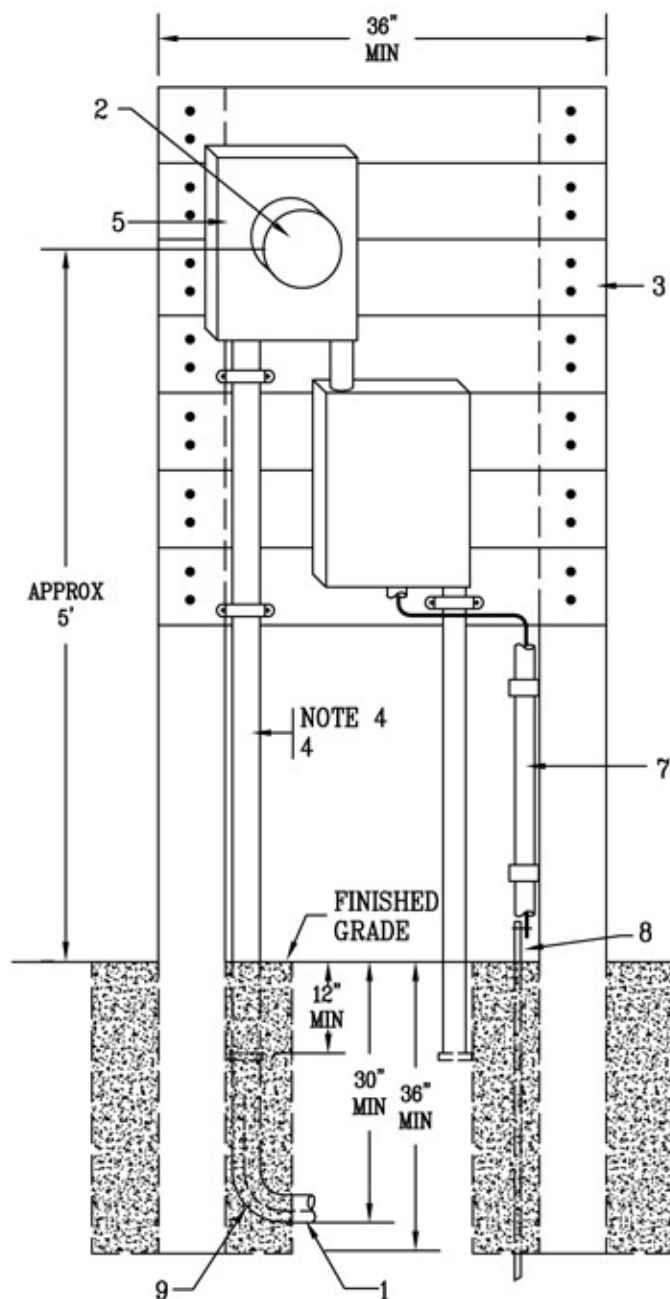


ARRANGEMENT OF WOOD POST PEDESTAL  
UNDERGROUND SERVICE LATERAL FROM OH OR UG DISTRIBUTION  
SINGLE PHASE, 3 WIRE, 120/208 OR 120/240 VOLTS

PPL FURNISHES, INSTALLS, MAINTAINS:

- 1 - SERVICE LATERAL AND MAKES CONNECTION BETWEEN SERVICE LATERAL CABLES AND LINE SIDE TERMINALS OF THE METER BASE(S).
- 2 - METER.

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 3 - MOUNTING FOR SERVICE EQUIPMENT - 2 INCH NOMINAL LUMBER SECURELY FASTENED TO SUPPORTS CONSISTING OF 2 - 6 INCH BY 6 INCH BY 10 FOOT TIMBERS SET 36 INCHES MINIMUM IN CONCRETE. ALL LUMBER TO BE COPPER AZOLE 0.41 CBA-A OR 0.21 CA-B PRESSURE TREATED WOOD. HOT DIPPED GALVANIZED FASTENERS (MEETING ASTM A 153) AND CONNECTORS (ASTM A 653 CLASS G185 SHEET) ARE REQUIRED.
- 4 - SERVICE LATERAL CONDUIT, CONNECTORS AND CLAMPS - THE MINIMUM SIZE CONDUIT IS 3 INCH THREADED GALVANIZED RIGID OR INTERMEDIATE STEEL CONDUIT WITH BUSHING, OR GRAY SCHEDULE 40 PVC CONDUIT. CONTACT PPL BEFORE INSTALLING TO DETERMINE PROPER SIZE.
- 5 - METER BASE - SEE TABLES 2 OR 11 FOR LIST OF APPROVED DEVICES.
- 6 - SERVICE DISCONNECTING EQUIPMENT - MUST MEET AMPACITY AND INSTALLATION REQUIREMENTS OF THE NATIONAL ELECTRICAL (NEC) AND ANY LOCAL MUNICIPAL CODE REQUIREMENTS.
- 7 - SERVICE GROUND - PROTECT GROUND WIRE WITH MOLDING OR USE ARMORED GROUND CABLE SIZE PER NEC ARTICLE 250 - GROUNDING.
- 8 - GROUND ROD.
- 9 - 36" RADIUS SWEEP, 90° ELBOW

NOTES:

1. TWO SINGLE METER BASES MAY BE INSTALLED BACK TO BACK ON THE SERVICE SUPPORT.
2. SERVICE DISCONNECTING EQUIPMENT MAY BE INSTALLED ON BACK OF SERVICE SUPPORT.
3. EXCAVATE, PROVIDE SELECT BACKFILL, AND BACKFILL TRENCH PER CRS-6-19-134.
4. SERVICE LATERAL CONDUIT MUST BE INSTALLED DIRECTLY INTO THE METER BASE. BENDS OR LB'S MAY BE INSTALLED IN THE CONDUIT BETWEEN THE METER BASE AND SERVICE DISCONNECTING EQUIPMENT.

\*REFERENCE CRS 6-19-134 AC

REV	DATE	APPROVED		
		Drafter	Sponsor	Review
0	7/15	RRC	MP	

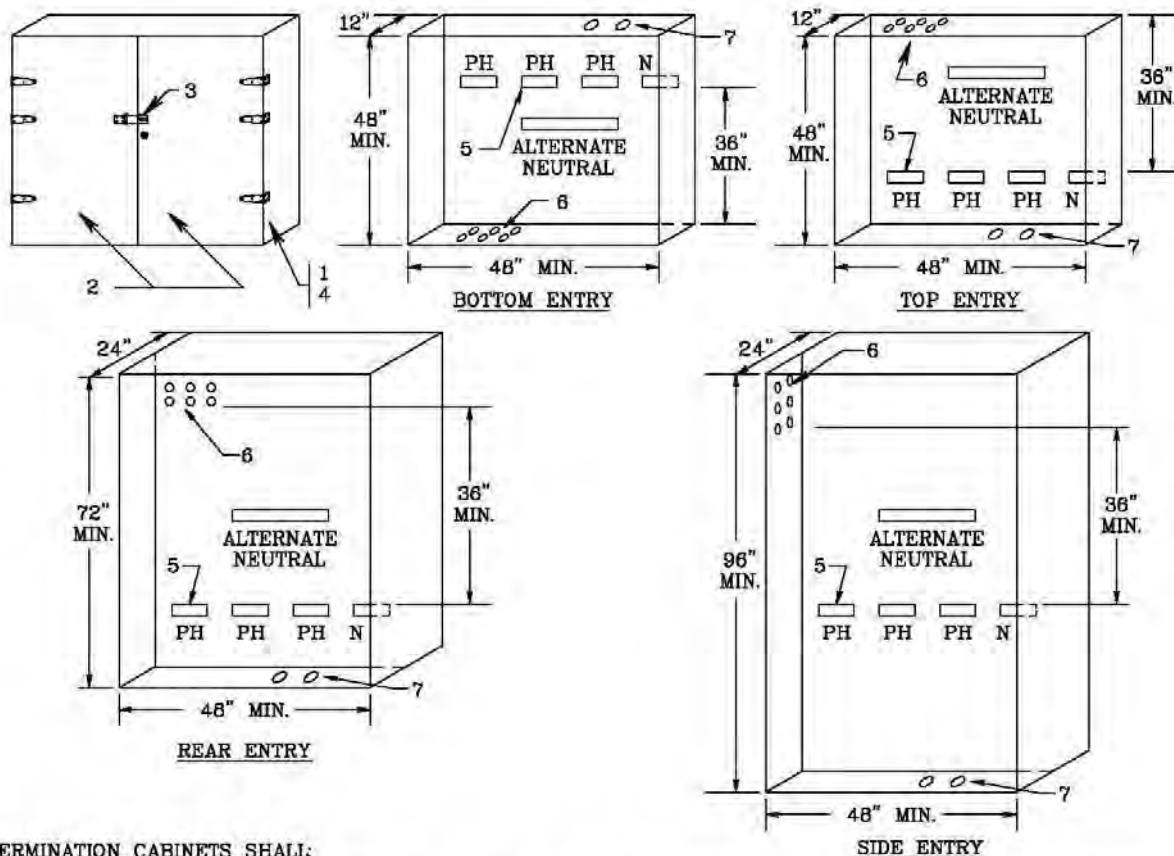
## RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS

PPL ELECTRIC UTILITIES CORPORATION

RULES: 5, 6, 27

REMSI\_S053

**Sketch #54 Termination cabinet, all service entries, single phase or three phase, 120/208 volts or 120/240 volts, with 2 to 6 sets of cable**



**TERMINATION CABINETS SHALL:**

- 1 - BE CONSTRUCTED OF GALVANNEALED STEEL OR GALVANIZED STEEL WITH GRAY ENAMEL FINISH OR COLD ROLLED STEEL WITH A UL RECOGNIZED GRAY POWDER COAT FINISH - MINIMUM #14 GAUGE STEEL.
- 2 - HAVE TWO HINGED DOORS WITH INTERNAL STIFFENERS AND WIND LOCKS. HINGES AND HINGE PINS MUST BE NON-REMOVABLE.
- 3 - HAVE A HASP WHICH WILL ACCOMMODATE AT LEAST 1/4 INCH DIAMETER LOCK. A HANDLE KEY LOCK IS NOT ALLOWED.
- 4 - BE TAMPERPROOF AND, IF INSTALLED OUTDOORS, BE WEATHER RESISTANT AND RAIN TIGHT.
- 5 - HAVE SETSCREW TYPE TERMINALS ACCEPTING UP TO 750 KCMIL CABLE. NUMBER OF TERMINALS PER PHASE AVAILABLE TO PPL SHALL EQUAL NUMBER OF SERVICE CONDUITS (INCLUDING ANY SPARES). IF COMPRESSION TYPE CABLE-TO-FLAT CONNECTORS SUPPLIED, THE LUGS FOR PPL MUST SHOW THE **BURNDY** DIE INDEX (SEE SKETCH 49). TERMINAL CLEARANCES: MINIMUM PHASE-TO-PHASE IS 2 INCHES, MINIMUM PHASE TO GROUND IS 1 INCH, MINIMUM PHASE TO CABINET IS 1.5 INCHES.
- 6 - GROUP SERVICE CONDUITS FOR PPL SERVICE CABLES. CONDUIT DIAMETERS ARE 3 OR 4 INCHES. CONDUIT TO PROTRUDE NOT MORE THAN 2 INCHES INTO THE CABINET.
- 7 - HAVE ADEQUATE CONDUITS FOR CUSTOMER'S CABLES TO DISCONNECT DEVICE.

NOTE: WIRES TO PPL TERMINALS AND WIRES TO CUSTOMER'S TERMINALS SHALL NOT INTERMINGLE. PPL CABLES AND TERMINALS MUST REMAIN ACCESSIBLE TO FACILITATE REPLACEMENT OF FAILED CABLES.

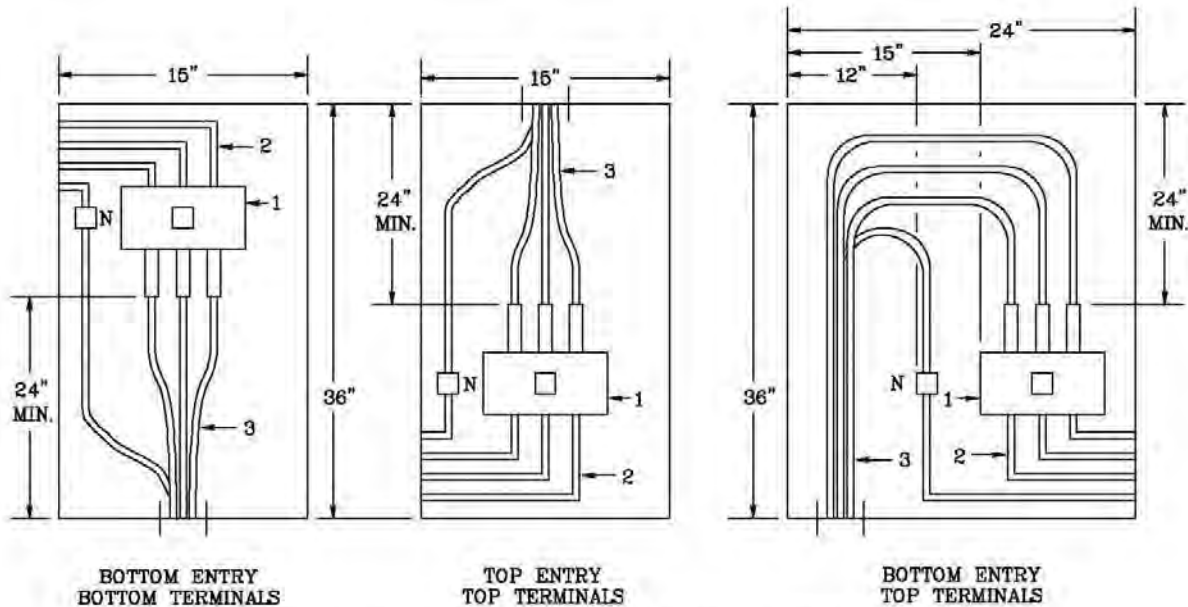
REFERENCE: CRS 6-19-100

RULES FOR ELECTRIC METER AND SERVICE  
INSTALLATIONS  
**PPL ELECTRIC UTILITIES  
CORPORATION**

**Rules:** 2, 5, 6, 12, 13, 15, 16, 21  
**Date:** 7/18/16 **Engr:** NAP

REMSI\_S054\_R1.dwg

**Sketch #54a Termination cabinet, all service entries, single phase or three phase, 120/208 volts or 120/240 volts or 277/480V, 1 cable set**



- 1 - CUSTOMER MAIN DISCONNECT OR TERMINAL BLOCK - SUITABLE FOR 750 KCMIL CABLE
- 2 - CUSTOMER BUS OR CABLES SHALL NOT INTERFERE WITH PPL CABLES & MUST MEET MINIMUM BENDING RADIUS REQUIREMENTS AS DESCRIBED IN NEC ARTICLE 300 - WIRING METHODS.
- 3 - PPL SERVICE CABLES

**NOTES:**

**A. TERMINATION CABINETS SHALL:**

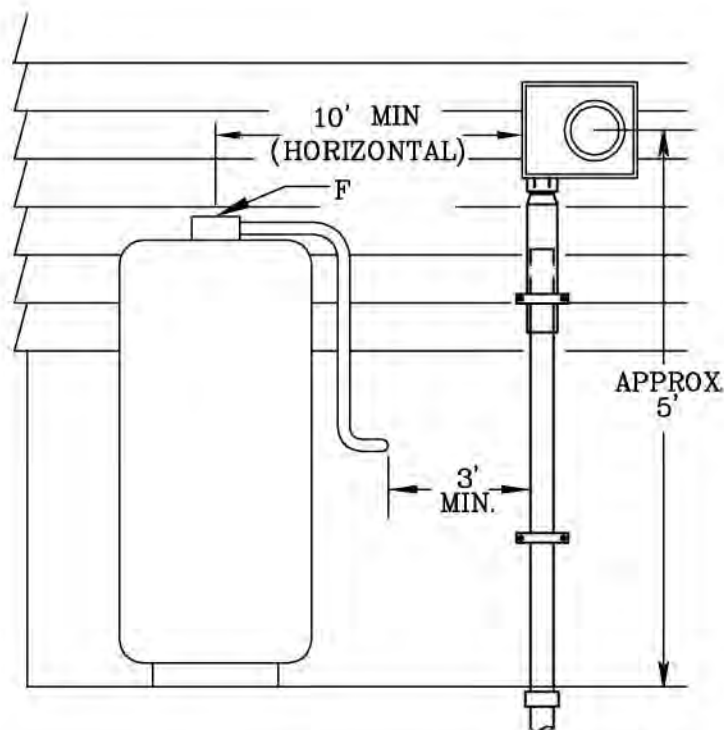
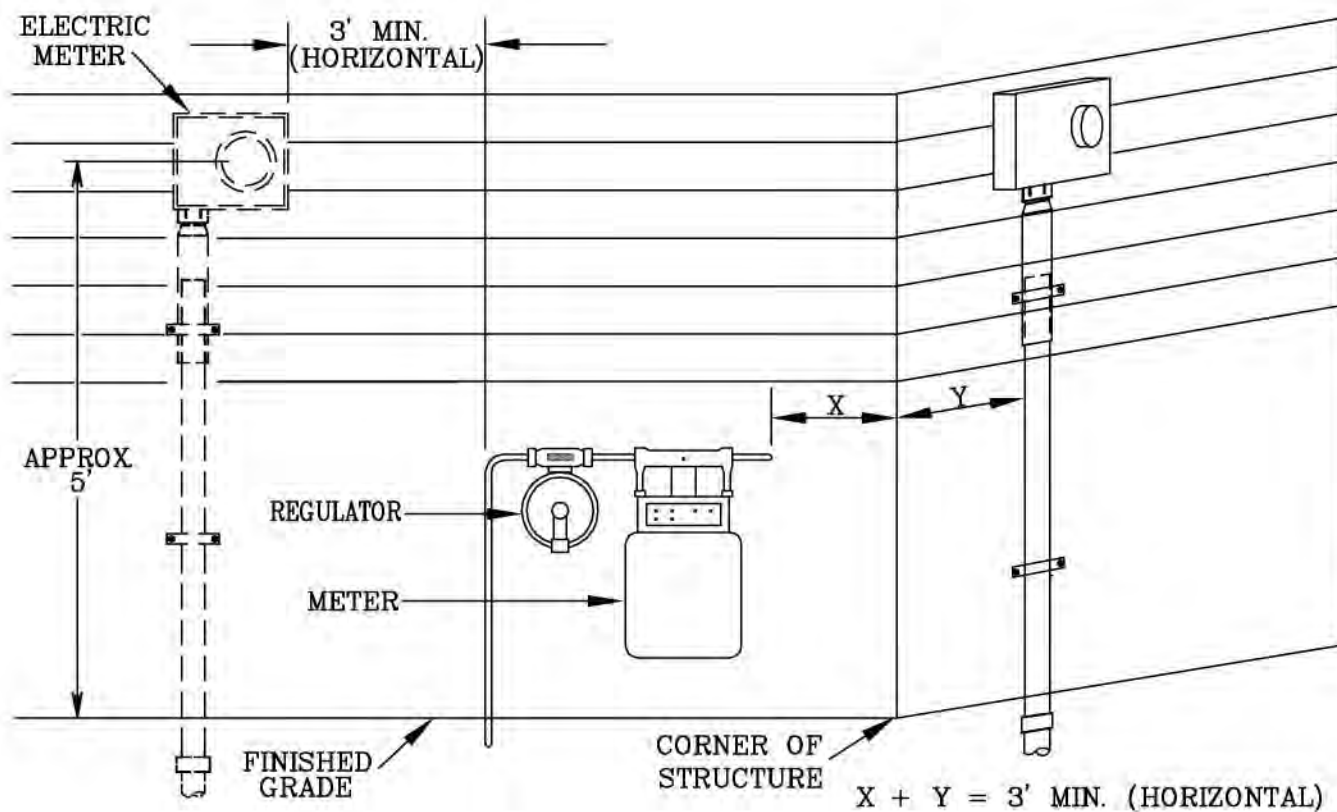
- BE CONSTRUCTED OF GALVANNEALED STEEL OR EQUIVALENT - MINIMUM #16 GAUGE STEEL.
- HAVE A HASP WHICH WILL ACCOMMODATE AT LEAST 1/4 INCH DIAMETER LOCK.
- BE WEATHER RESISTANT, RAIN-TIGHT, AND TAMPER-PROOF IF INSTALLED OUTDOORS.
- HAVE SETSCREW TYPE TERMINALS ACCEPTING UP TO 750 KCMIL CABLE. IF COMPRESSION TYPE CABLE-TO-FLAT CONNECTORS SUPPLIED, THE LUGS FOR PPL MUST SHOW THE BURNDY DIE INDEX. TERMINAL CLEARANCE: MINIMUM PHASE-TO-PHASE - 2 INCHES. MINIMUM PHASE-TO-GROUND - 1 INCH. MINIMUM PHASE-TO-CABINET - 1.5 INCHES.

- B. WIRES TO PPL TERMINALS AND WIRES TO CUSTOMER'S TERMINALS SHALL NOT INTERFERE WITH PPL CABLES & MUST MEET MINIMUM BENDING RADIUS REQUIREMENTS AS DESCRIBED IN NEC ARTICLE 300 - WIRING METHODS.
- C. STRAIGHT IN ENTRY TO TERMINALS IS PREFERRED METHOD OF SERVICE.
- D. THESE DIMENSIONS ALSO APPLY TO DISCONNECTS SUPPLIED WITH MULTI-GANG METERING MODULES.

RULES FOR ELECTRIC METER AND SERVICE  
INSTALLATIONS  
**PPL ELECTRIC UTILITIES  
CORPORATION**

**Rules:** 2, 5, 6, 12, 13, 15,  
16, 21  
**Date:** 7/18/16 **Engr:** NAP

REMSI\_S054A.dwg



REFERENCE: SKETCH 55A

REMSI\_S055P1.dwg

RULES FOR ELECTRIC METER AND SERVICE  
INSTALLATIONS

**PPL ELECTRIC UTILITIES  
CORPORATION**

**Rules: 13**

**Date:** 8/12/11 **Engr:** MDB

NOTES:

- A. SEPARATION MEASURED FROM THE SIDE OF THE ELECTRIC METER BASE TO ANY ABOVE GROUND GAS UTILITY FACILITIES INCLUDING BUT NOT LIMITED TO GAS LINE, METER, REGULATOR, ETC. SHALL BE A MINIMUM 3' HORIZONTAL.
- B. THE 3' HORIZONTAL MINIMUM FROM NOTE A IS REQUIRED REGARDLESS OF PLANE THE METER IS ON.  
EXAMPLE: IF THE ELECTRIC METER AND GAS METER ARE ON THE CORNER OF A BUILDING WITH THE GAS METER LOCATED ON THE FRONT WALL, 12" FROM THE CORNER, THE SIDE OF THE ELECTRIC METER BASE MUST BE LOCATED ON THE SIDE WALL 24" FROM THE CORNER IN ORDER TO OBTAIN THE MINIMUM 3' HORIZONTAL SEPARATION.
- C. DIMENSIONS SHOWN ARE MINIMUMS REQUIRED BY PPL EU. LOCAL FIRE CODE, GAS UTILITY, OR INSURANCE REGULATIONS COULD REQUIRE LARGER SEPARATIONS.
- D. PPL EU REQUIRES A 3' MINIMUM PHYSICAL WORKING CLEARANCE ON EITHER SIDE THE METER.
- E. PPL EU REQUIRES 50" MINIMUM CLEAR SPACE IN FRONT OF THE METER BASE. SEE RULE 13 AND SKETCH 55A (SIDE VIEW).
- F. DISCHARGE FROM RELIEF VALVE, VENT DISCHARGE, AND FILLING CONNECTION SHALL BE A MINIMUM OF 10' HORIZONTAL FROM THE SIDE OF THE ELECTRIC METER BASE.
- G. METERING — SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE OTHER METERING REQUIREMENTS AND RESPONSIBILITIES.

# Clearances Between Objects & Electric Meters

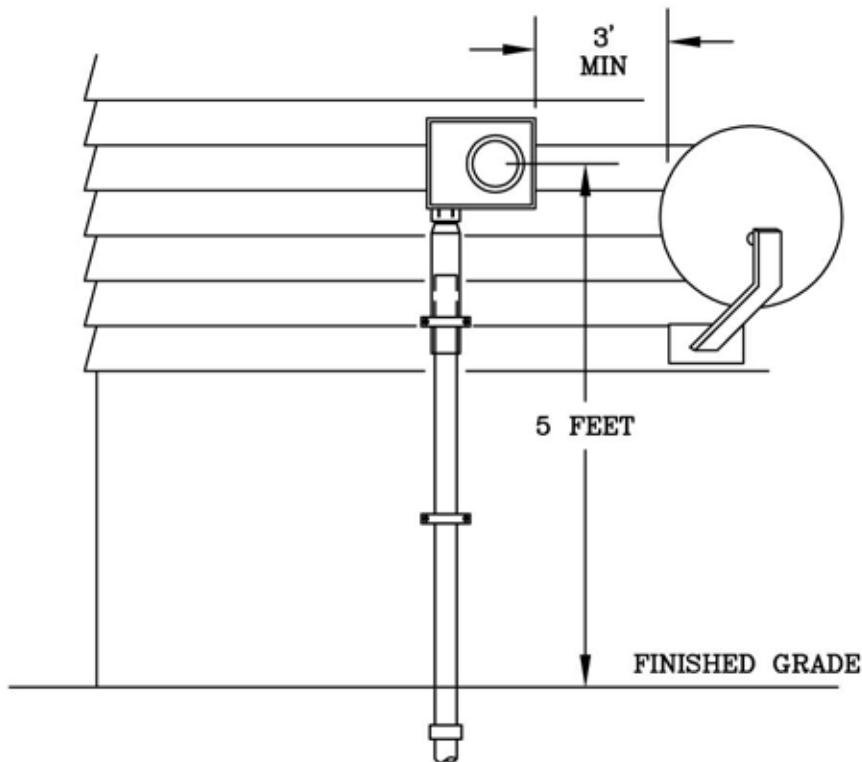
SKETCH #55A

SHEET 1 of 1

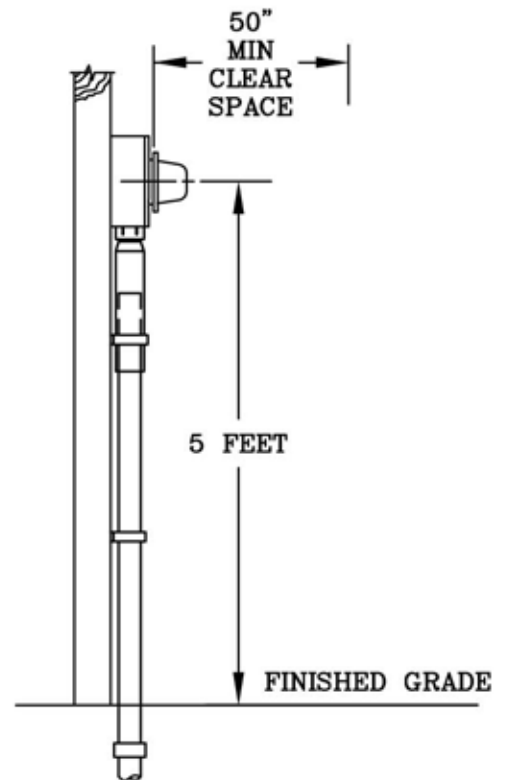
SKETCH #55A

SHEET 1 of 1

FRONT VIEW



SIDE VIEW



\*SATELLITE DISH SHOWN AS AN EXAMPLE

## NOTES:

- A. PPL EU REQUIRES A MINIMUM OF 3 FEET CLEAR SPACE IN ANY DIRECTION FROM THE METER BASE AND MAINTAIN 50 INCHES OF CLEAR SPACE IN FRONT OF METER BASE.
- B. NO ATTACHMENTS TO SERVICE ENTRANCE/CONDUIT/MAST.
- C. NO GROUNDING TO METER BASE.
- D. SEE SKETCH 7A.
- E. THIS SKETCH IS APPLICABLE FOR SATELLITE DISHES, FENCING, HEDGES, TREES, AND ANY OTHER ABSTRUCTION.
- F. SEE SKETCH 55 FOR CLEARANCES BETWEEN GAS FACILITIES.

\*REFERENCE: SKETCH 7A, SKETCH 55

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RULES FOR ELECTRIC METER AND SERVICE  
INSTALLATIONS  
**PPL ELECTRIC UTILITIES  
CORPORATION**

## **Rules:**

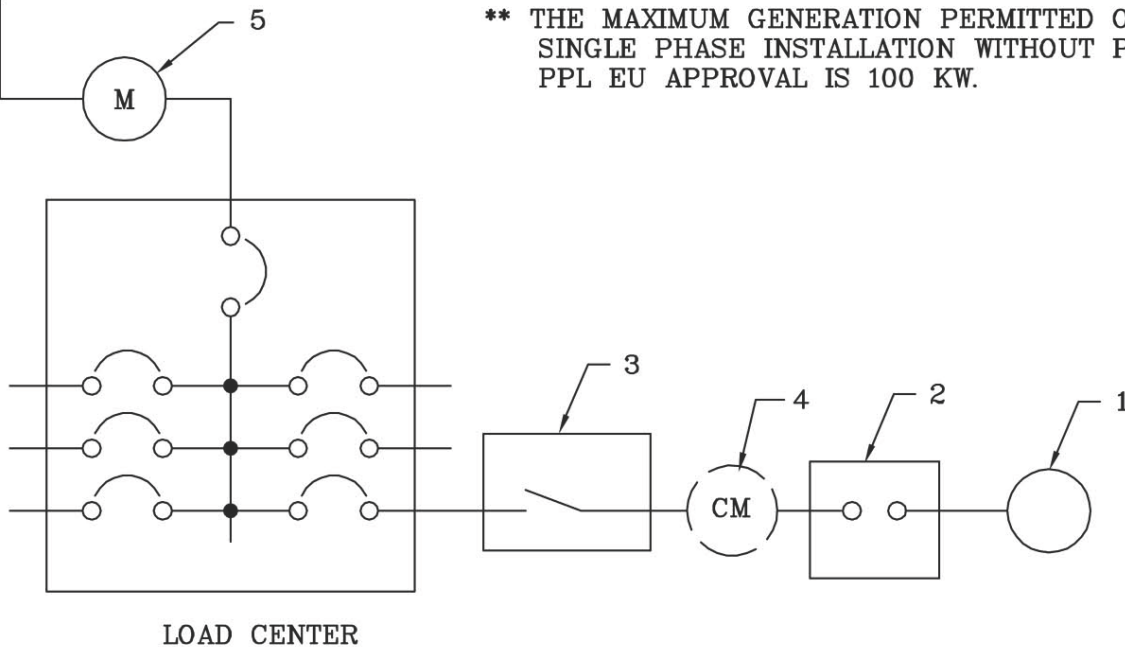
**Date:** 12/5/08 **Engr:** MDB

## Distributed Energy Resources (DER) Sketch Table

Metering Type	Voltage		Load Center Bus Bar Rating	Sketch #
Self-Contained	Less than 480 V		Up to and Including 20%	56
			Over 20%	56A
480V Self-Contained	480 V		Up to and Including 20%	57
			Over 20%	57A
CT/Secondary	Less than 600 V		Up to and Including 20%	58
			Over 20%	58A
12 kV	12 kV	Pole Mount	Up to and Including 20%	59
			Over 20%	59A
		Switchgear	All Options	59B

**Sketch #56 Inverter-based renewable generation for generator capacity up to and including 20% of the load center bus bar rating for self-contained metering (excluding 480V) installations**

PPL EU  
SERVICE  
(AT LESS THAN  
480 VOLTS)



<b>VOLTAGE:</b> 1 Phase, 3 Wire Network 120/208V*,** 1 Phase, 3 Wire 120/240V** 3 Phase, 4 Wire WYE 120/208V 3 Phase, 4 Wire Delta 120/240V	<b>SERVICE TYPE:</b> Overhead Underground
<b>AMPERAGE:</b> *400 A Maximum 600 A Maximum	<b>METER BASE LOCATION:</b> Outdoor

\*\* THE MAXIMUM GENERATION PERMITTED ON SINGLE PHASE INSTALLATION WITHOUT PRIOR PPL EU APPROVAL IS 100 KW.

REV	DATE	APPROVED			<b>RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS</b> PPL ELECTRIC UTILITIES CORPORATION
		DRAFTER	SPONSOR	REVIEW	
0	3/18/11	-	MDB	-	RULES: 12, 28
1	8/15/16	NAP	NAP	-	

REMSI\_S056



**REMSI Sketches 51-100**  
**Sketch #56**  
**6-52**

0000-000-ST-6052  
Custom ID: DCS 6-52  
Revision: 01  
Effective Date: 09/19/2016  
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**Sketch #56 Inverter-based renewable generation for generator capacity up to and including 20% of the load center bus bar rating for self-contained metering (excluding 480V) installations (cont.)**

**CUSTOMER FURNISHES, INSTALLS, MAINTAINS:**

1. DISTRIBUTED GENERATION SOURCE
2. INVERTER SHALL BE LABELED AS IEEE 1547/UL 1741 LISTED.
3. GENERATOR DISCONNECT SWITCH REQUIRED IF NOT INCLUDED IN THE INVERTER.  
GENERATOR DISCONNECT MUST BE WITHIN LINE OF SIGHT OF THE METER.
4. CUSTOMER METERING FOR GENERATION IS OPTIONAL.

**PPL EU FURNISHES, INSTALLS, MAINTAINS:**

5. METERING-SELF CONTAINED (EXCLUDES 480V)-FOREIGN ENERGY SOURCES SHALL NOT BE CONNECTED DIRECTLY TO METERING EQUIPMENT. SEE RULE 12.

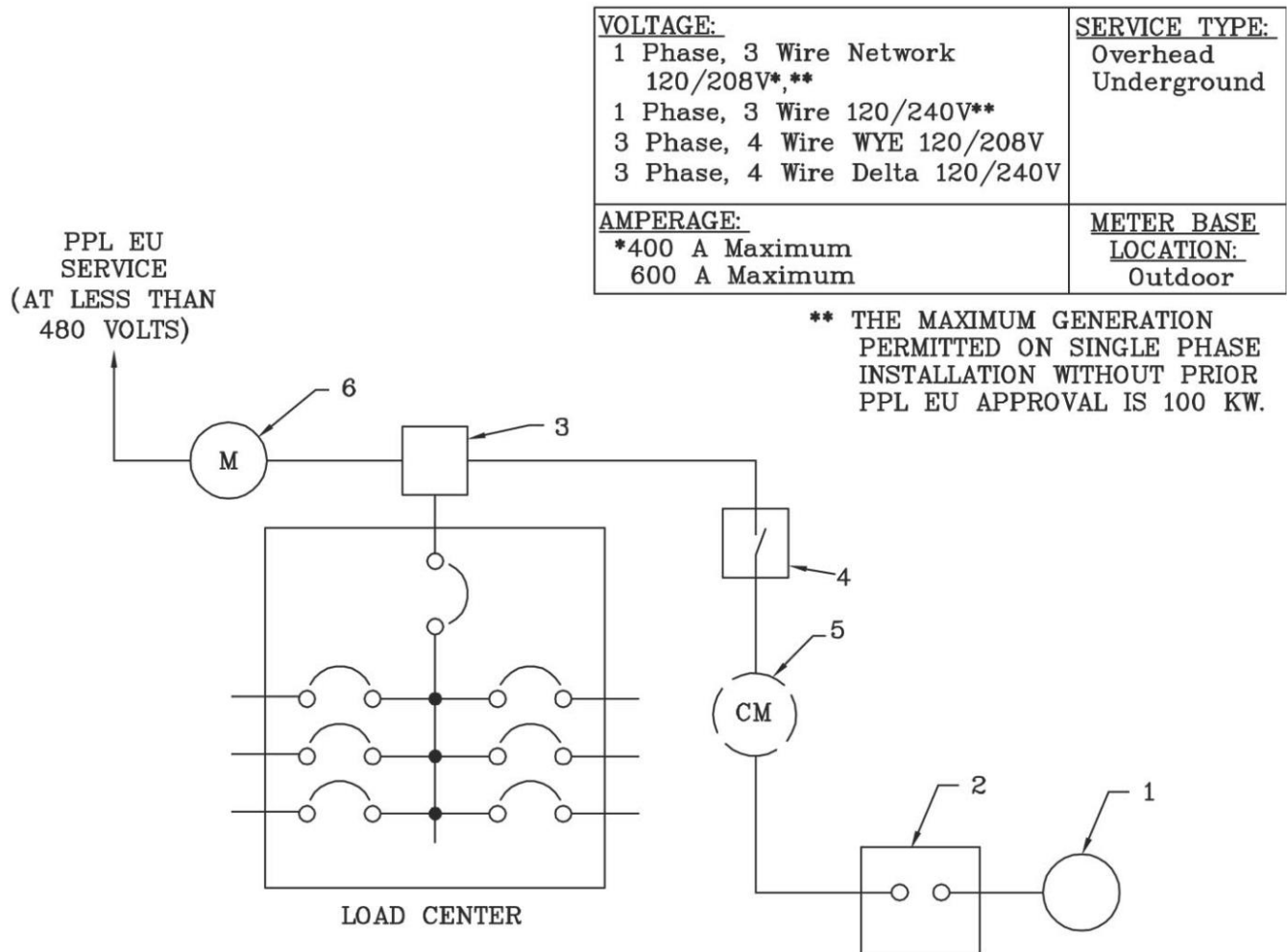
**NOTES:**

- A. SEE PPL EU CUSTOMER-OWNED GENERATION WEBSITE FOR MORE INFORMATION.
- B. APPLICATION FOR CUSTOMER-OWNED, INVERTER-BASED RENEWABLE GENERATION MUST BE COMPLETED. SEE CUSTOMER-OWNED GENERATION APPLICATIONS.
- C. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION. THE INSPECTOR IS REQUIRED TO VERIFY THE IEEE/UL LISTING OF THE INVERTER.
- D. INSTALLATION MUST ADHERE TO REQUIREMENTS OF NATIONAL ELECTRICAL CODE ARTICLE 690 AND ARTICLE 705.
- E. ALL LABELING MUST BE IN ACCORDANCE WITH NEC ARTICLE 690.
- F. IN ADDITION TO NOTE D, PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- G. IF A NEUTRAL CONNECTION EXISTS AT THE INVERTER, THE INVERTER NEUTRAL SHALL BE CONNECTED TO THE SERVICE NEUTRAL.
- H. CUSTOMER SHALL CONTACT PPL EU PRIOR TO ANY NEW INSTALLATIONS DEPICTED IN THIS SKETCH.

REV	DATE	APPROVED			<b>RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS</b>  PPL ELECTRIC UTILITIES CORPORATION
		DRAFTER	SPONSOR	REVIEW	
0	3/18/11	-	MDB	-	RULES: 12, 28
1	8/15/16	NAP	NAP	-	

REMSI\_S056

**Sketch #56a Inverter-based renewable generation for generator capacity over 20% of the load center bus bar rating for self-contained metering (excluding 480V) installations**



REV	DATE	APPROVED			RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS PPL ELECTRIC UTILITIES CORPORATION
		DRAFTER	SPONSOR	REVIEW	
0	3/18/11	-	MDB	-	RULES: 2, 12, 28
1	8/15/16	NAP	NAP	-	

REMSI\_S056a



**REMSI Sketches 51-100**  
**Sketch #56a**  
**6-52**

0000-000-ST-6052  
Custom ID: DCS 6-52  
Revision: 01  
Effective Date: 09/19/2016  
Page 15 of 58

**Sketch #56a Inverter-based renewable generation for generator capacity over 20% of the load center bus bar rating for self-contained metering (excluding 480V) installations (cont.)**

**CUSTOMER FURNISHES, INSTALLS, MAINTAINS:**

1. DISTRIBUTED GENERATION SOURCE
2. INVERTER SHALL BE LABELED AS IEEE 1547/UL 1741 LISTED.
3. SERVICE ENTRANCE RATED JUNCTION BOX SEE RULE 2.
4. SERVICE ENTRANCE RATED FUSED DISCONNECT SWITCH FOR GENERATOR. GENERATOR DISCONNECT MUST BE WITHIN LINE OF SIGHT OF THE METER.
5. CUSTOMER METERING FOR GENERATION IS OPTIONAL.

**PPL EU FURNISHES, INSTALLS, MAINTAINS:**

6. METERING-SELF CONTAINED (EXCLUDES 480V)-FOREIGN ENERGY SOURCES SHALL NOT BE CONNECTED DIRECTLY TO METERING EQUIPMENT. SEE RULE 12.

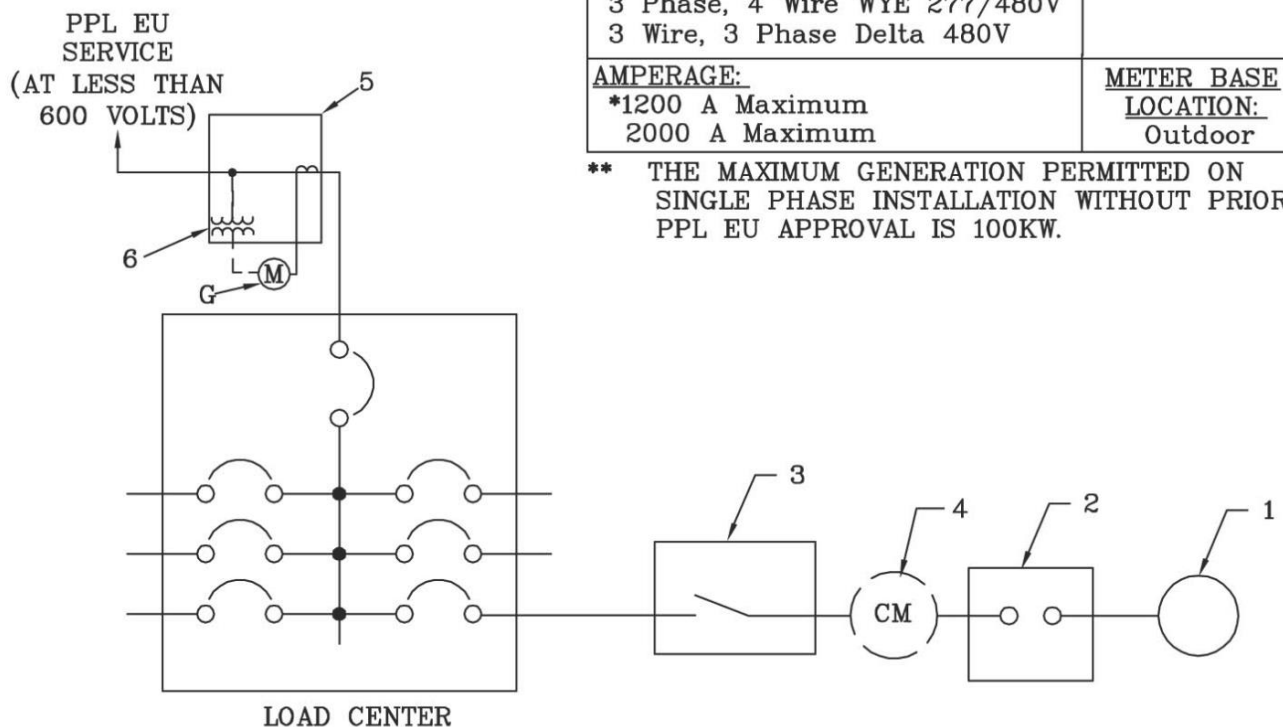
**NOTES:**

- A. SEE PPL EU CUSTOMER-OWNED GENERATION WEBSITE FOR MORE INFORMATION.
- B. APPLICATION FOR CUSTOMER-OWNED, INVERTER- BASED RENEWABLE GENERATION MUST BE COMPLETED. SEE CUSTOMER- OWNED GENERATION APPLICATIONS.
- C. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION. THE INSPECTOR IS REQUIRED TO VERIFY THE IEEE/UL LISTING OF THE INVERTER.
- D. INSTALLATION MUST ADHERE TO REQUIREMENTS OF NATIONAL ELECTRICAL CODE ARTICLE 690 AND ARTICLE 705.
- E. ALL LABELING MUST BE IN ACCORDANCE WITH NEC ARTICLE 690.
- F. IN ADDITION TO NOTE D, PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- G. IF A NEUTRAL CONNECTION EXISTS AT THE INVERTER, THE INVERTER NEUTRAL SHALL BE CONNECTED TO THE SERVICE NEUTRAL.
- H. CUSTOMER SHALL CONTACT PPL EU PRIOR TO ANY NEW INSTALLATIONS DEPICTED IN THIS SKETCH.

REV	DATE	APPROVED			<b>RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS</b>  PPL ELECTRIC UTILITIES CORPORATION
		DRAFTER	SPONSOR	REVIEW	
0	3/18/11	-	MDB	-	RULES: 2, 12, 28
1	8/15/16	NAP	NAP	-	

REMSI\_S056a

**Sketch #58 Inverter-based renewable generation for generator capacity up to and including 20% of the load center bus bar rating for CT cabinet/secondary metering installations**



<b>VOLTAGE:</b> 1 Phase, 3 Wire Network 120/208V*,** 1 Phase, 3 Wire 120/240V*,** 3 Phase, 4 Wire WYE 120/208V 3 Phase, 4 Wire Delta 120/240V 3 Phase, 4 Wire WYE 277/480V 3 Wire, 3 Phase Delta 480V	<b>SERVICE TYPE:</b> Overhead Underground
<b>AMPERAGE:</b> *1200 A Maximum 2000 A Maximum	<b>METER BASE LOCATION:</b> Outdoor

\*\* THE MAXIMUM GENERATION PERMITTED ON SINGLE PHASE INSTALLATION WITHOUT PRIOR PPL EU APPROVAL IS 100KW.

REV	DATE	APPROVED			RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS PPL ELECTRIC UTILITIES CORPORATION
		DRAFTER	SPONSOR	REVIEW	
0	3/18/11	-	MDB	-	RULES: 12, 28
1	8/15/16	NAP	NAP	-	



**REMSI Sketches 51-100**  
**Sketch #58**  
**6-52**

0000-000-ST-6052  
Custom ID: DCS 6-52  
Revision: 01  
Effective Date: 09/19/2016  
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**Sketch #58 Inverter-based renewable generation for generator capacity up to and including 20% of the load center bus bar rating for CT cabinet/secondary metering installations (cont.)**

**CUSTOMER FURNISHES, INSTALLS, MAINTAINS:**

1. DISTRIBUTED GENERATION SOURCE
2. INVERTER SHALL BE LABELED AS IEEE 1547/UL 1741 LISTED.
3. GENERATOR DISCONNECT SWITCH REQUIRED IF NOT INCLUDED IN THE INVERTER.  
GENERATOR DISCONNECT MUST BE WITHIN LINE OF SIGHT OF THE METER.
4. CUSTOMER METERING FOR GENERATION IS OPTIONAL.
5. CT CABINET. FOREIGN ENERGY SOURCES SHALL NOT BE CONNECTED DIRECTLY TO METERING EQUIPMENT. SEE RULE 12.

**PPL EU FURNISHES, MAINTAINS. CUSTOMER INSTALLS:**

6. VOLTAGE TRANSFORMERS, IF REQUIRED.

**NOTES:**

- A. SEE PPL EU CUSTOMER-OWNED GENERATION WEBSITE FOR MORE INFORMATION.
- B. APPLICATION FOR CUSTOMER-OWNED, INVERTER-BASED RENEWABLE GENERATION MUST BE COMPLETED. SEE CUSTOMER-OWNED GENERATION APPLICATIONS.
- C. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION. THE INSPECTOR IS REQUIRED TO VERIFY THE IEEE/UL LISTING OF THE INVERTER.
- D. INSTALLATION MUST ADHERE TO REQUIREMENTS OF NATIONAL ELECTRICAL CODE ARTICLE 690 AND ARTICLE 705.
- E. ALL LABELING MUST BE IN ACCORDANCE WITH NEC ARTICLE 690.
- F. IN ADDITION TO NOTE D, PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- G. METERING EQUIPMENT. SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.
- H. INSTALLATIONS REQUIRING 480V SELF-CONTAINED METERING FOLLOWING SKETCH #71 OR SKETCH #72 REQUIRES PPL EU REVIEW AND APPROVAL.
- I. IF A NEUTRAL CONNECTION EXISTS AT THE INVERTER, THE INVERTER NEUTRAL SHALL BE CONNECTED TO THE SERVICE NEUTRAL.
- J. CUSTOMER SHALL CONTACT PPL EU PRIOR TO ANY NEW INSTALLATIONS DEPICTED IN THIS SKETCH.

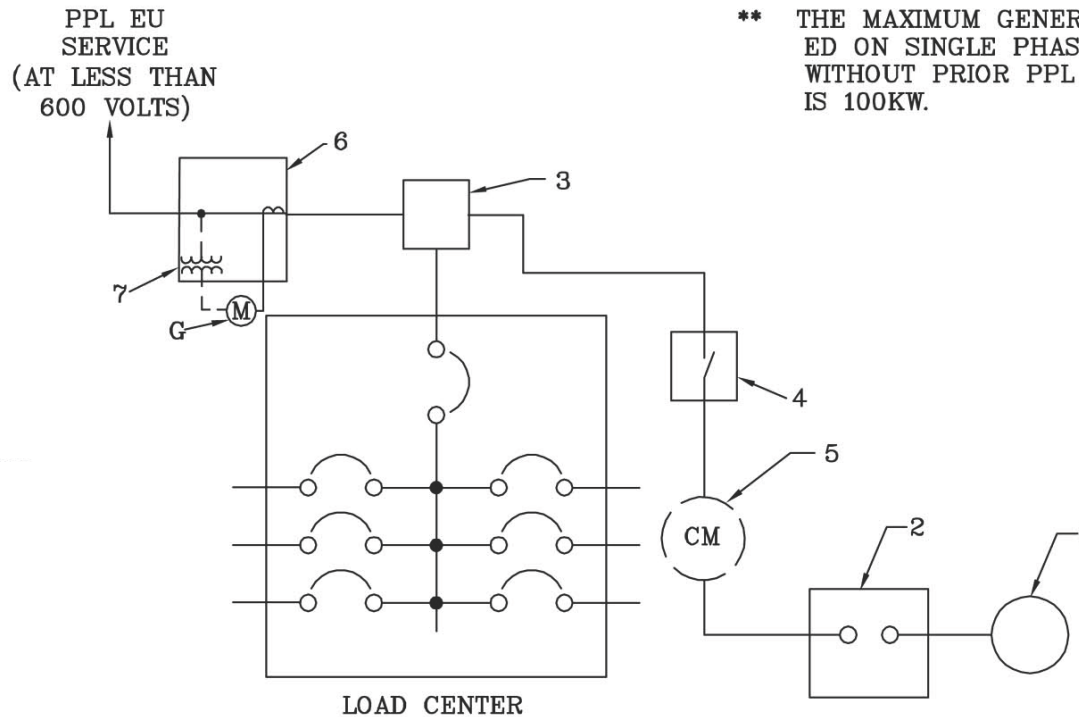
REV	DATE	APPROVED			<b>RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS</b>  PPL ELECTRIC UTILITIES CORPORATION
		DRAFTER	SPONSOR	REVIEW	
0	3/18/11	-	MDB	-	RULES: 12, 28
1	8/15/16	NAP	NAP	-	

REMSI\_S058P1.dwg

**Sketch #58a Inverter-based renewable generation for generator capacity over 20% of the load center bus bar rating for CT cabinet/secondary metering installations**

<b>VOLTAGE:</b> 1 Phase, 3 Wire Network 120/208V*,** 1 Phase, 3 Wire 120/240V*,** 3 Phase, 4 Wire WYE 120/208V 3 Phase, 4 Wire Delta 120/240V 3 Phase, 4 Wire Wye 277/480V 3 Wire, 3 Phase Delta 480V	<b>SERVICE TYPE:</b> Overhead Underground
<b>AMPERAGE:</b> *1200 A Maximum 2000 A Maximum	<b>METER BASE LOCATION:</b> Outdoor

\*\* THE MAXIMUM GENERATION PERMITTED ON SINGLE PHASE INSTALLATION WITHOUT PRIOR PPL EU APPROVAL IS 100KW.



REV	DATE	APPROVED			<b>RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS</b> PPL ELECTRIC UTILITIES CORPORATION
		DRAFTER	SPONSOR	REVIEW	
0	3/18/11	-	MDB	-	RULES: 2, 12, 28
1	8/15/16	NAP	NAP	-	



**REMSI Sketches 51-100**  
**Sketch #58a**  
**6-52**

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**Sketch #58a Inverter-based renewable generation for generator capacity over 20% of the load center bus bar rating for CT cabinet/secondary metering installations (cont.)**

**CUSTOMER FURNISHES, INSTALLS, MAINTAINS:**

1. DISTRIBUTED GENERATION SOURCE
2. INVERTER SHALL BE LABELED AS IEEE 1547/UL 1741 LISTED.
3. SERVICE ENTRANCE RATED JUNCTION BOX. SEE RULE 2.
4. SERVICE ENTRANCE RATED FUSED DISCONNECT SWITCH FOR GENERATOR. GENERATOR DISCONNECT MUST BE WITHIN LINE OF SIGHT OF THE METER.
5. CUSTOMER METERING FOR GENERATION IS OPTIONAL.
6. CT CABINET. FOREIGN ENERGY SOURCES SHALL NOT BE CONNECTED DIRECTLY TO METERING EQUIPMENT. SEE RULE 12.

**PPL EU FURNISHES, MAINTAINS. CUSTOMER INSTALLS:**

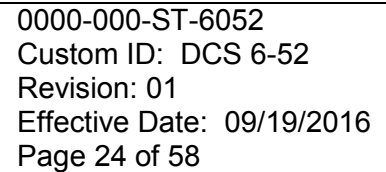
7. VOLTAGE TRANSFORMERS, IF REQUIRED.

**NOTES:**

- A. SEE PPL EU CUSTOMER-OWNED GENERATION WEBSITE FOR MORE INFORMATION.
- B. APPLICATION FOR CUSTOMER-OWNED, INVERTER-BASED RENEWABLE GENERATION MUST BE COMPLETED. SEE CUSTOMER-OWNED GENERATION APPLICATIONS.
- C. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION. THE INSPECTOR IS REQUIRED TO VERIFY THE IEEE/UL LISTING OF THE INVERTER.
- D. INSTALLATION MUST ADHERE TO REQUIREMENTS OF NATIONAL ELECTRICAL CODE ARTICLE 690 AND ARTICLE 705.
- E. ALL LABELING MUST BE IN ACCORDANCE WITH NEC ARTICLE 690.
- F. IN ADDITION TO NOTE D, PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- G. METERING EQUIPMENT. SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.
- H. IF A NEUTRAL CONNECTION EXISTS AT THE INVERTER, THE INVERTER NEUTRAL SHALL BE CONNECTED TO THE SERVICE NEUTRAL.
- I. CUSTOMER SHALL CONTACT PPL EU PRIOR TO ANY NEW INSTALLATIONS DEPICTED IN THIS SKETCH.

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**REMSI Sketches 51-100**  
**Sketch #59**  
**6-52**

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**Sketch #59 Inverter-based renewable generation for generator capacity up to and including 20% of the load center bus bar rating for 12KV metering installations (cont.)**

**CUSTOMER FURNISHES, INSTALLS, MAINTAINS:**

1. DISTRIBUTED GENERATION SOURCE
2. INVERTER SHALL BE LABELED AS IEEE 1547/UL 1741 LISTED.
3. DISCONNECT SWITCH REQUIRED IF NOT INCLUDED IN THE INVERTER. GENERATOR DISCONNECT MUST BE WITHIN LINE OF SIGHT OF THE METER.
4. CUSTOMER METERING FOR GENERATION IS OPTIONAL.

**NOTES:**

- A. SEE PPL EU CUSTOMER-OWNED GENERATION WEBSITE FOR MORE INFORMATION.
- B. APPLICATION FOR CUSTOMER-OWNED, INVERTER-BASED RENEWABLE GENERATION MUST BE COMPLETED. SEE CUSTOMER-OWNED GENERATION APPLICATIONS.
- C. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION. THE INSPECTOR IS REQUIRED TO VERIFY THE IEEE/UL LISTING OF THE INVERTER.
- D. INSTALLATION MUST ADHERE TO REQUIREMENTS OF NATIONAL ELECTRICAL CODE ARTICLE 690 AND ARTICLE 705.
- E. ALL LABELING MUST BE IN ACCORDANCE WITH NEC ARTICLE 690.
- F. IN ADDITION TO NOTE D, PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- G. SEE REMSI SKETCHES #30, SKETCH #31, SKETCH #33, & SKETCH #34.
- H. METERING EQUIPMENT. SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.
- I. IF A NEUTRAL CONNECTION EXISTS AT THE INVERTER, THE INVERTER NEUTRAL SHALL BE CONNECTED TO THE SERVICE NEUTRAL.
- J. CUSTOMER SHALL CONTACT PPL EU PRIOR TO ANY NEW INSTALLATIONS DEPICTED IN THIS SKETCH.

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**REMSI Sketches 51-100**  
**Sketch #59a**  
**6-52**

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**Sketch #59a Inverter-based renewable generation for generator capacity over 20% of the load center bus bar rating for 12kv metering installations (cont.)**

**CUSTOMER FURNISHES, INSTALLS, MAINTAINS:**

1. DISTRIBUTED GENERATION SOURCE
2. INVERTER SHALL BE LABELED AS IEEE 1547/UL 1741 LISTED.
3. SERVICE ENTRANCE RATED JUNCTION BOX. SEE RULE 2.
4. SERVICE ENTRANCE RATED FUSED DISCONNECT SWITCH FOR GENERATOR. GENERATOR DISCONNECT MUST BE WITHIN LINE OF SIGHT OF THE METER.
5. CUSTOMER METERING FOR GENERATION IS OPTIONAL.

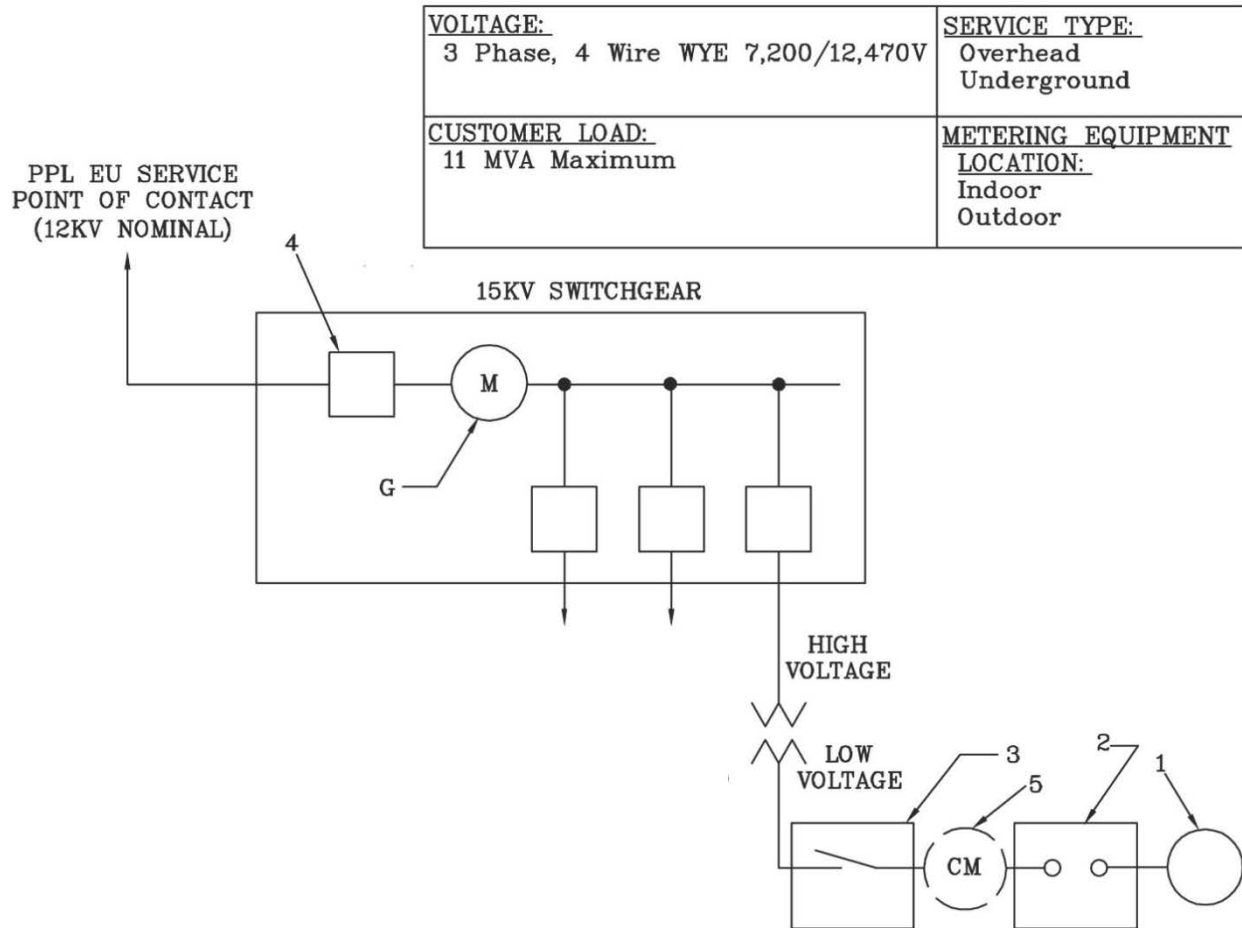
**NOTES:**

- A. SEE PPL EU CUSTOMER-OWNED GENERATION WEBSITE FOR MORE INFORMATION.
- B. APPLICATION FOR CUSTOMER-OWNED, INVERTER-BASED RENEWABLE GENERATION MUST BE COMPLETED. SEE CUSTOMER-OWNED GENERATION APPLICATIONS.
- C. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION. THE INSPECTOR IS REQUIRED TO VERIFY THE IEEE/UL LISTING OF THE INVERTER.
- D. INSTALLATION MUST ADHERE TO REQUIREMENTS OF NATIONAL ELECTRICAL CODE ARTICLE 690 AND ARTICLE 705.
- E. ALL LABELING MUST BE IN ACCORDANCE WITH NEC ARTICLE 690.
- F. IN ADDITION TO NOTE D, PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- G. SEE REMSI SKETCHES #30, SKETCH #31, SKETCH #33, & SKETCH #34.
- H. METERING EQUIPMENT. SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES. FOREIGN ENERGY SOURCES SHALL NOT BE CONNECTED DIRECTLY TO METERING EQUIPMENT. SEE RULE 12.
- I. IF A NEUTRAL CONNECTION EXISTS AT THE INVERTER, THE INVERTER NEUTRAL SHALL BE CONNECTED TO THE SERVICE NEUTRAL.
- J. CUSTOMER SHALL CONTACT PPL EU PRIOR TO ANY NEW INSTALLATIONS DEPICTED IN THIS SKETCH.

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**Sketch #59b Inverter-based renewable generation for 12kv switchgear installation**



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**Sketch #59b**  
**6-52**

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**Sketch #59b Inverter-based renewable generation for 12kv switchgear installation (cont.)**

**CUSTOMER FURNISHES, INSTALLS, MAINTAINS:**

1. DISTRIBUTED GENERATION SOURCE
2. INVERTER SHALL BE LABELED AS IEEE 1547/UL 1741 LISTED.
3. GENERATOR DISCONNECT SWITCH REQUIRED IF NOT INCLUDED IN THE INVERTER.  
GENERATOR DISCONNECT MUST BE WITHIN LINE OF SIGHT OF THE METER.
4. FAULT INTERRUPTING DEVICE CAN BE CIRCUIT BREAKER OR FUSE.
5. CUSTOMER METERING FOR GENERATION IS OPTIONAL.

**NOTES:**

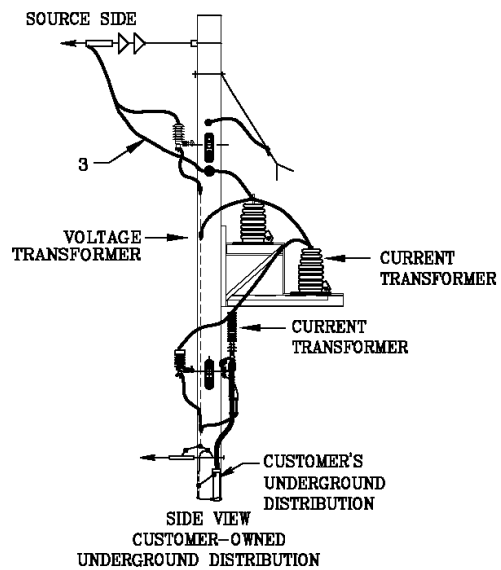
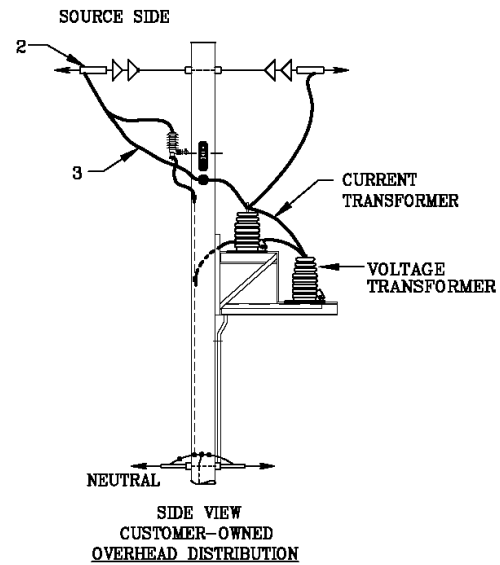
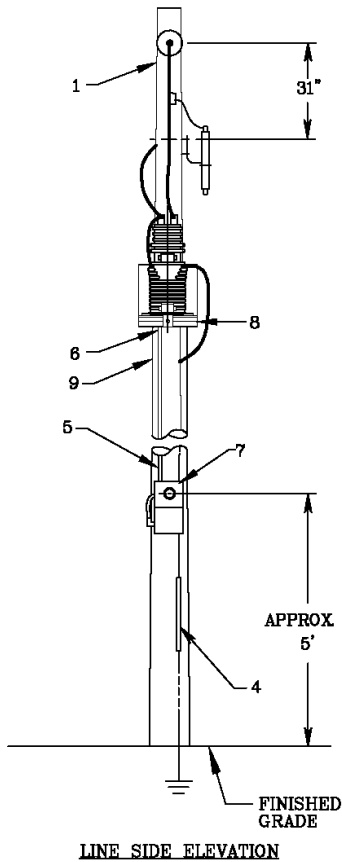
- A. SEE PPL EU CUSTOMER-OWNED GENERATION WEBSITE FOR MORE INFORMATION.
- B. APPLICATION FOR CUSTOMER-OWNED, INVERTER-BASED RENEWABLE GENERATION MUST BE COMPLETED. SEE CUSTOMER-OWNED GENERATION APPLICATIONS.
- C. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION. THE INSPECTOR IS REQUIRED TO VERIFY THE IEEE/UL LISTING OF THE INVERTER.
- D. INSTALLATION MUST ADHERE TO REQUIREMENTS OF NATIONAL ELECTRICAL CODE ARTICLE 690 AND ARTICLE 705.
- E. ALL LABELING MUST BE IN ACCORDANCE WITH NEC ARTICLE 690.
- F. IN ADDITION TO NOTE D, PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- G. METERING EQUIPMENT. SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES. FOREIGN ENERGY SOURCES SHALL NOT BE CONNECTED DIRECTLY TO METERING EQUIPMENT. SEE RULE 12.
- H. IF A NEUTRAL CONNECTION EXISTS AT THE INVERTER, THE INVERTER NEUTRAL SHALL BE CONNECTED TO THE SERVICE NEUTRAL.
- I. CUSTOMER SHALL CONTACT PPL EU PRIOR TO ANY NEW INSTALLATIONS DEPICTED IN THIS SKETCH.

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**Sketch #90 Typical arrangement of single phase outdoor metering equipment on customer-owned meter pole, 7.2kv or less**

NOT TO SCALE



\*REFERENCE CRS 6-09-200, LB12669, SKETCH #8C, SKETCH #47

RULES FOR ELECTRIC METER AND SERVICE  
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**Rules:** 7, 8, 18

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**Sketch #90 Typical arrangement of single phase outdoor metering equipment on customer-owned meter pole, 7.2kv or less (cont.)**

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

1. WOOD POLE (CLASS 4 MIN., SEE SKETCH #47), INCIDENTAL EQUIPMENT, WIRING AND GROUNDING SYSTEM, GUYING.
2. OVERHEAD LINE FROM DISCONNECT ON CUSTOMER-OWNED SERVICE POLE, SEE SKETCH #32. MAXIMUM ALLOWED TENSION PER CONDUCTOR-2000 LBS.
3. LINE AND LOAD SIDE LIGHTNING ARRESTERS.
4. SERVICE GROUND - SIZED AND PROTECTED PER NEC ARTICLE 250- GROUNDING.
5. 1-1/4 INCH MINIMUM, THREADED, GALVANIZED, RIGID OR INTERMEDIATE STEEL OR SCHEDULE 40 PVC CONDUIT AND FITTINGS BETWEEN 8 INCH BY 8 INCH BY 4 INCH WEATHER TIGHT JUNCTION BOX AND METER PANEL
6. 1 INCH FLEXIBLE CONDUIT AND FITTINGS BETWEEN TRANSFORMERS AND 8 INCH BY 8 INCH BY 4 INCH TRANSFORMERS AND 8 INCH BY 4 INCH WEATHER TIGHT JUNCTION BOX.

PPL EU FURNISHES, MAINTAINS; CUSTOMER INSTALLS:

7. METER PANEL (SEE SKETCH #8C).
8. INSTRUMENT TRANSFORMERS AND MOUNTING STEEL

PPL EU FURNISHES, INSTALLS, MAINTAINS:

9. WIRING BETWEEN INSTRUMENT TRANSFORMERS AND METER PANEL

NOTES:

1. POINT OF CONTACT (POC) IS CONTAINED IN THE PPL EU DOCUMENT "POINT OF CONTACT REQUIREMENTS FOR HIGH VOLTAGE CUSTOMER-OWNED FACILITIES 12KV SUPPLY."

\*REFERENCE CRS 6-09-200, LB12669, SKETCH #8C, SKETCH #47

RULES FOR ELECTRIC METER AND SERVICE  
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**Rules:** 7, 8, 18

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**Date:** 3/22/16 **Engr:** NAP