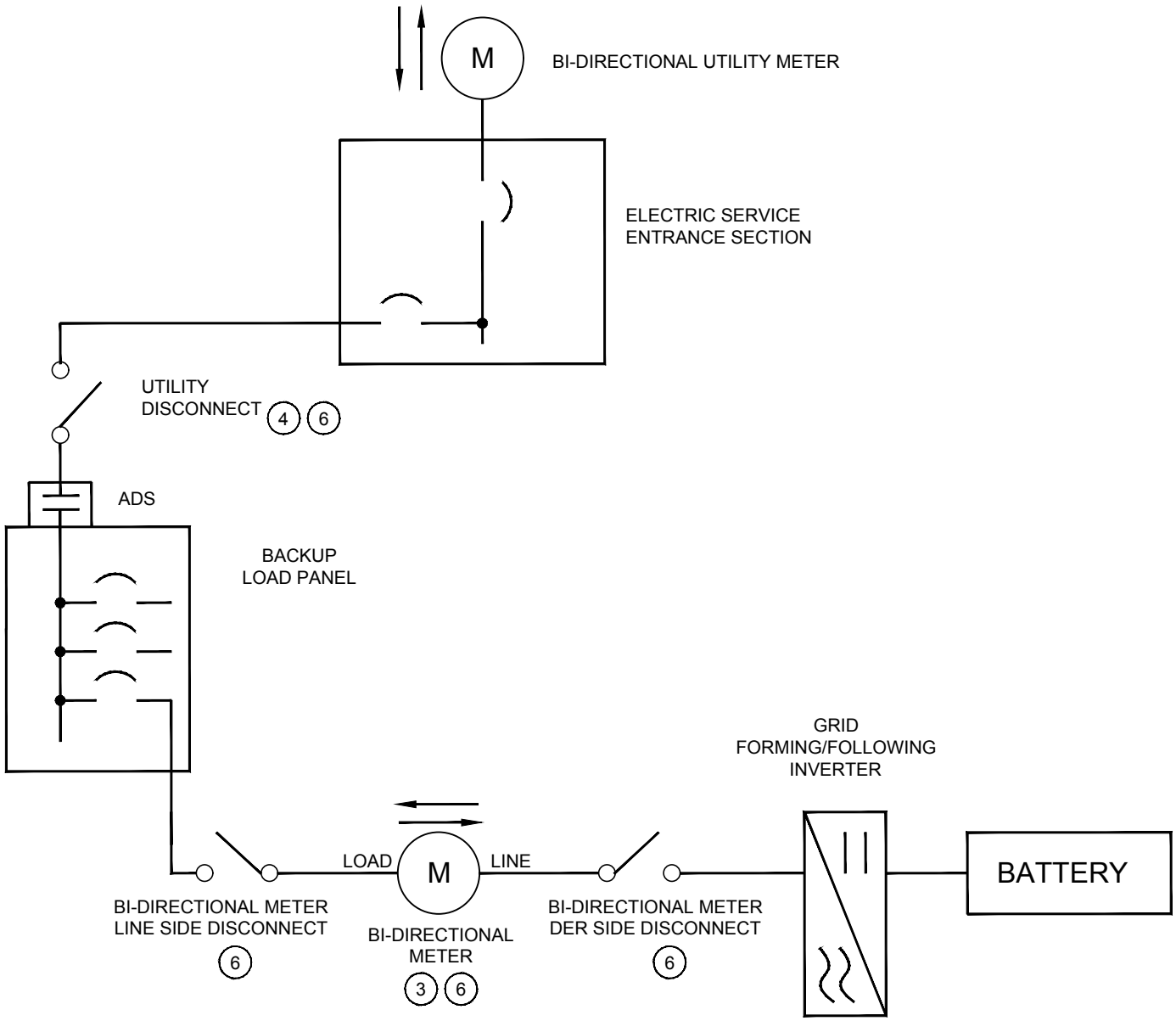
FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- PROPRIETARY INVERTER ISOLATION/CONTROL EQUIPMENT MAY VARY DEPENDING ON TECHNOLOGY (INSIDE PANEL OR SEPARATE DEVICE).
- APS DOES NOT PERMIT BACKFEEDING THE GRID WITH BATTERY ENERGY IRRESPECTIVE IF ENERGY TO CHARGE THE BATTERY ORIGINATED FROM APS.
- **FOR BACKUP POWER SYSTEMS, ISOLATION/SEPARATION FROM THE GRID IS REQUIRED DURING A GRID OUTAGE**
- **FOR SYSTEMS THAT PROVIDE LOAD SHIFTING/PEAK SHAVING (OF CUSTOMER USAGE), DER SYSTEMS ARE REQUIRED TO SHUT-DOWN DURING A GRID OUTAGE**
- **PROVISIONS FOR GENERATOR NOT DEPICTED.**
- **THESE CONCEPTUAL DIAGRAMS DEPICT APS REQUIRED ISOLATION AND METERING EQUIPMENT ONLY.**

(1) (5)



aps	ARIZONA PUBLIC SERVICE COMPANY				AC COUPLED CONFIGURATION A-1 BATTERY CHARGED FROM GRID (DER STORAGE ONLY)	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		
EM	SB		08-15-22	F		Sht. 1 of 15

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- PROPRIETARY INVERTER ISOLATION/CONTROL EQUIPMENT MAY VARY DEPENDING ON TECHNOLOGY (INSIDE PANEL OR SEPARATE DEVICE).
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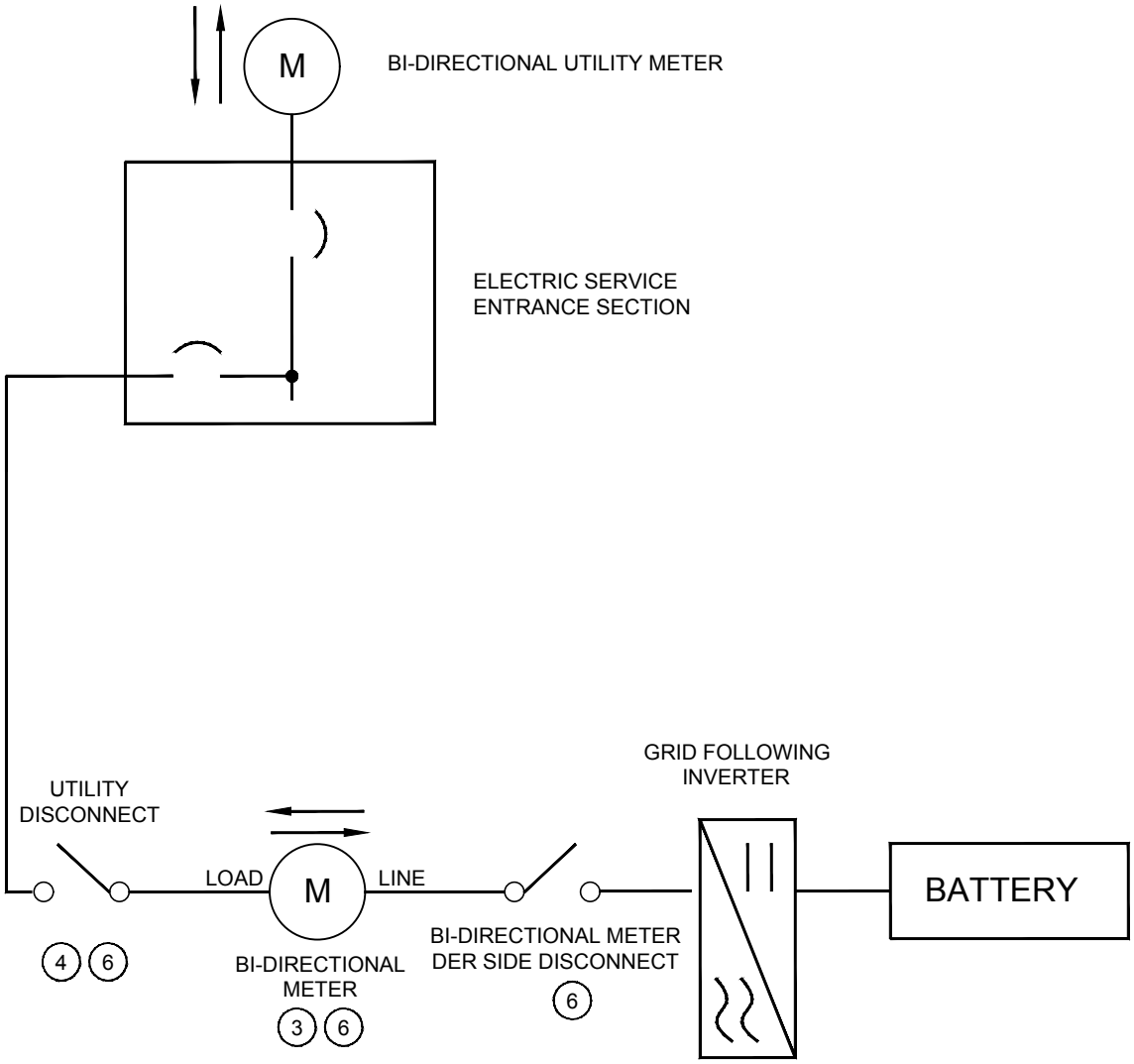
(1) (5)



CUSTOMER LOAD CURTAILMENT

aps	ARIZONA PUBLIC SERVICE COMPANY				AC COUPLED CONFIGURATION A-2 BATTERY CHARGED FROM GRID (DER STORAGE ONLY)	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		
EM	SB		08-15-22	F		Sht. 2 of 15

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

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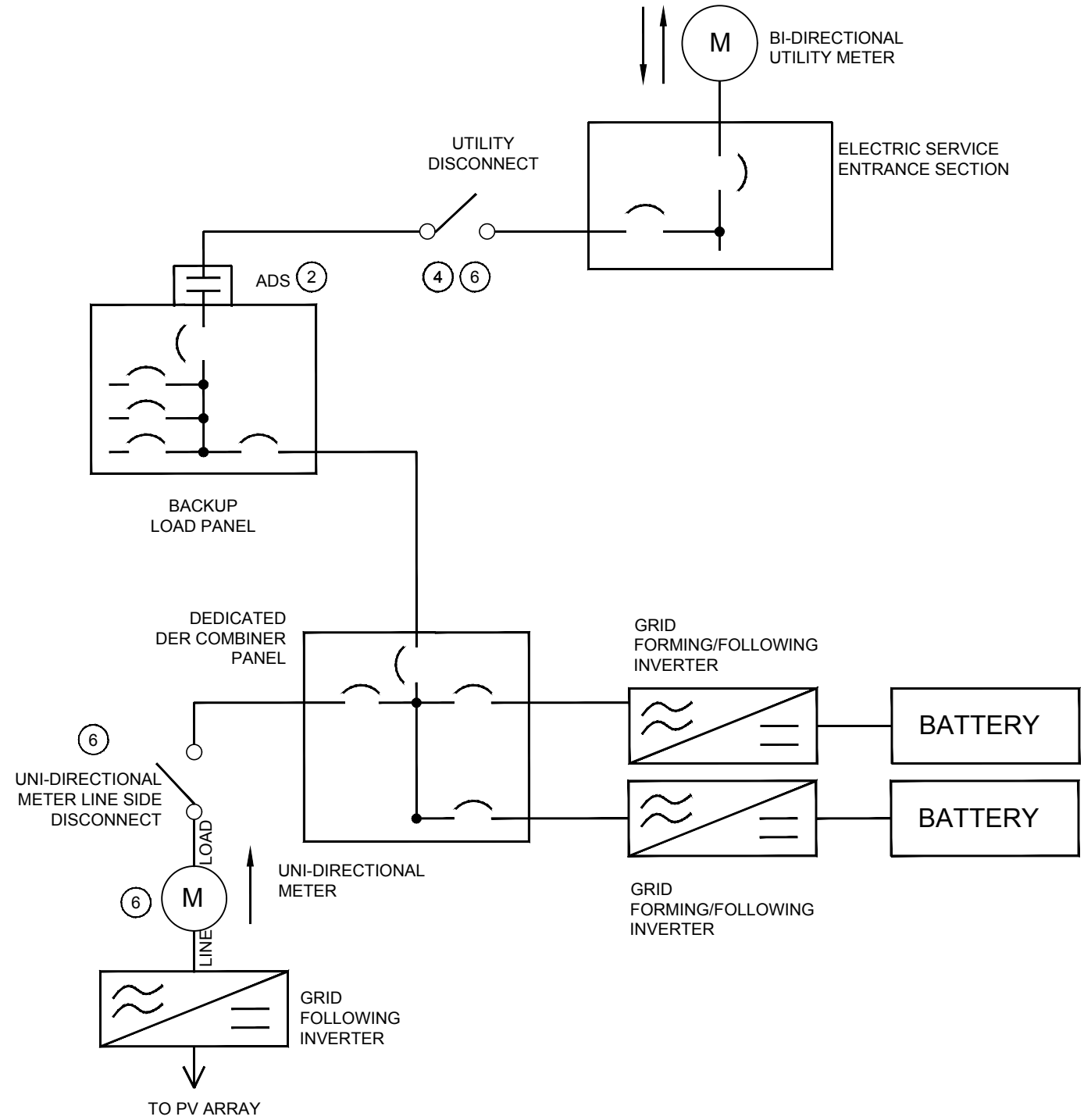
- **PROVISIONS FOR GENERATOR NOT DEPICTED.**
- **THESE CONCEPTUAL DIAGRAMS DEPICT APS REQUIRED ISOLATION AND METERING EQUIPMENT ONLY.**

(1) (5)



aps	ARIZONA PUBLIC SERVICE COMPANY				AC COUPLED CONFIGURATION B-1 BATTERY CHARGED FROM GRID OR RENEWABLE ENERGY	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 3 of 15
EM	SB		05-26-23	F		

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

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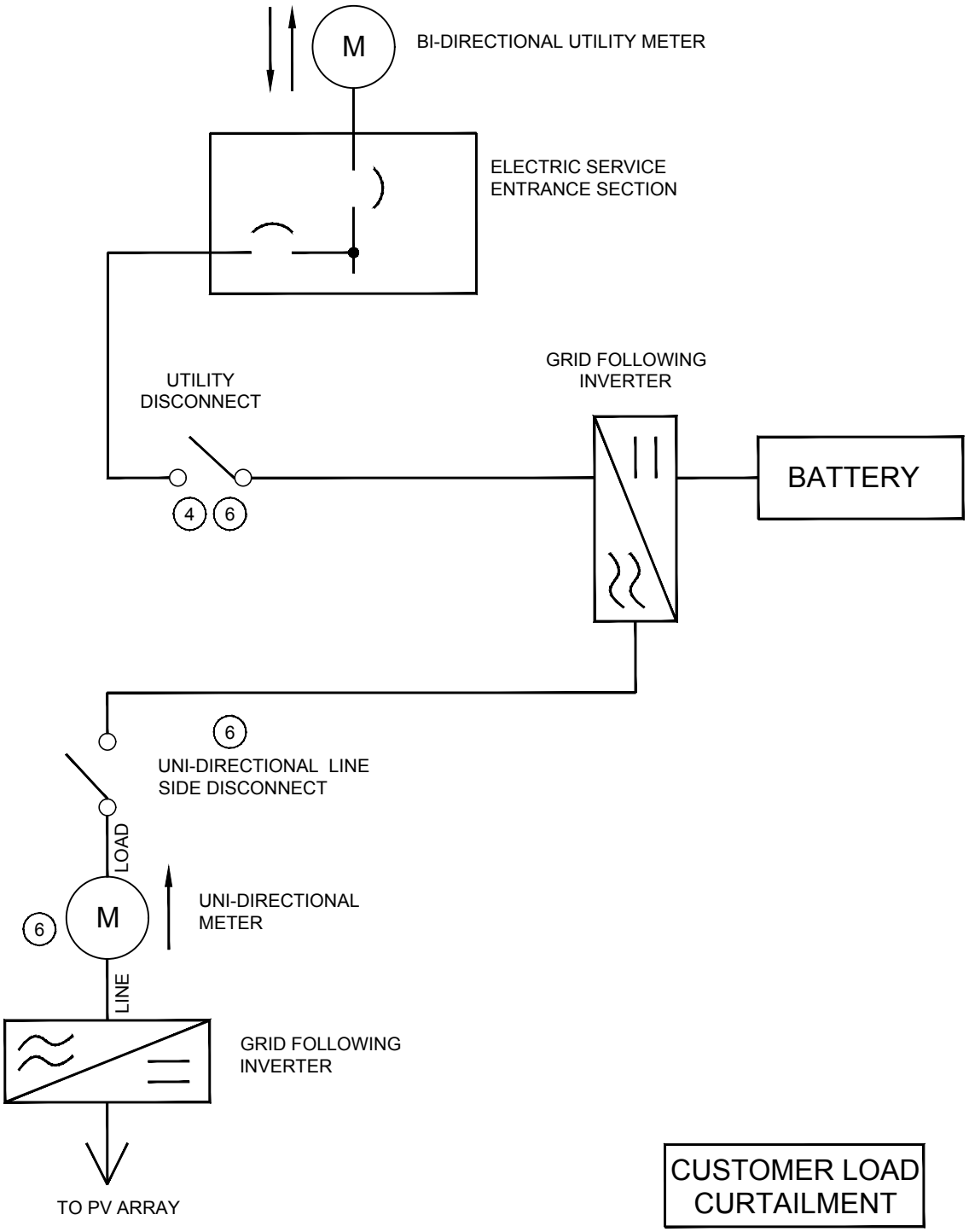
(1) (5)



aps	ARIZONA PUBLIC SERVICE COMPANY				AC COUPLED CONFIGURATION B-2 BATTERY CHARGED FROM GRID OR RENEWABLE ENERGY	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 4 of 15
EM	SB		05-26-23	F		

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- PROPRIETARY INVERTER ISOLATION/CONTROL EQUIPMENT MAY VARY DEPENDING ON TECHNOLOGY (INSIDE PANEL OR SEPARATE DEVICE).
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- **THESE CONCEPTUAL DIAGRAMS DEPICT APS REQUIRED ISOLATION AND METERING EQUIPMENT ONLY.**

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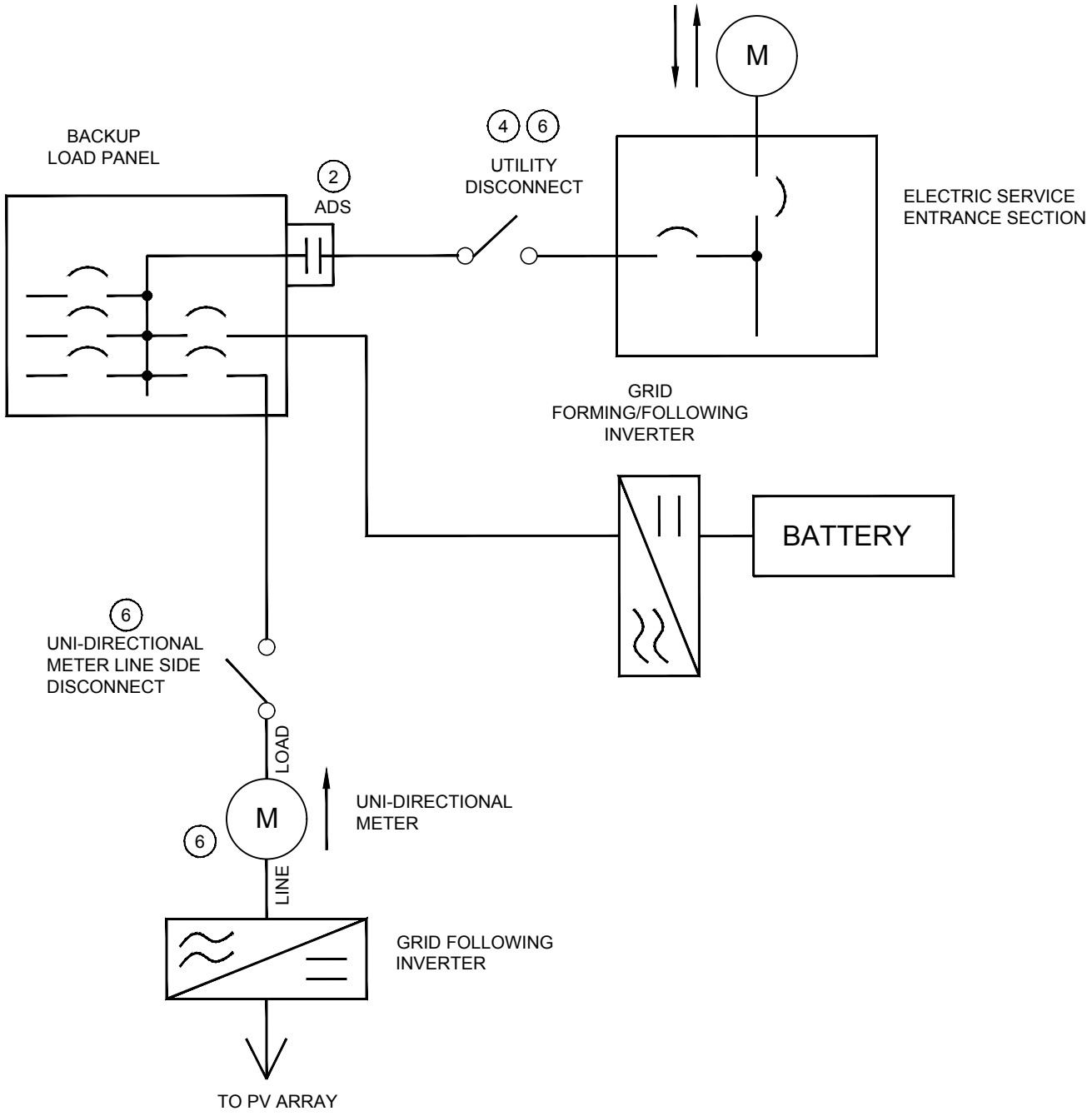

aps	ARIZONA PUBLIC SERVICE COMPANY				AC COUPLED CONFIGURATION B-3 BATTERY CHARGED FROM GRID OR RENEWABLE ENERGY	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 5 of 15
EM	SB		05-26-23	F		

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- PROPRIETARY INVERTER ISOLATION/CONTROL EQUIPMENT MAY VARY DEPENDING ON TECHNOLOGY (INSIDE PANEL OR SEPARATE DEVICE).
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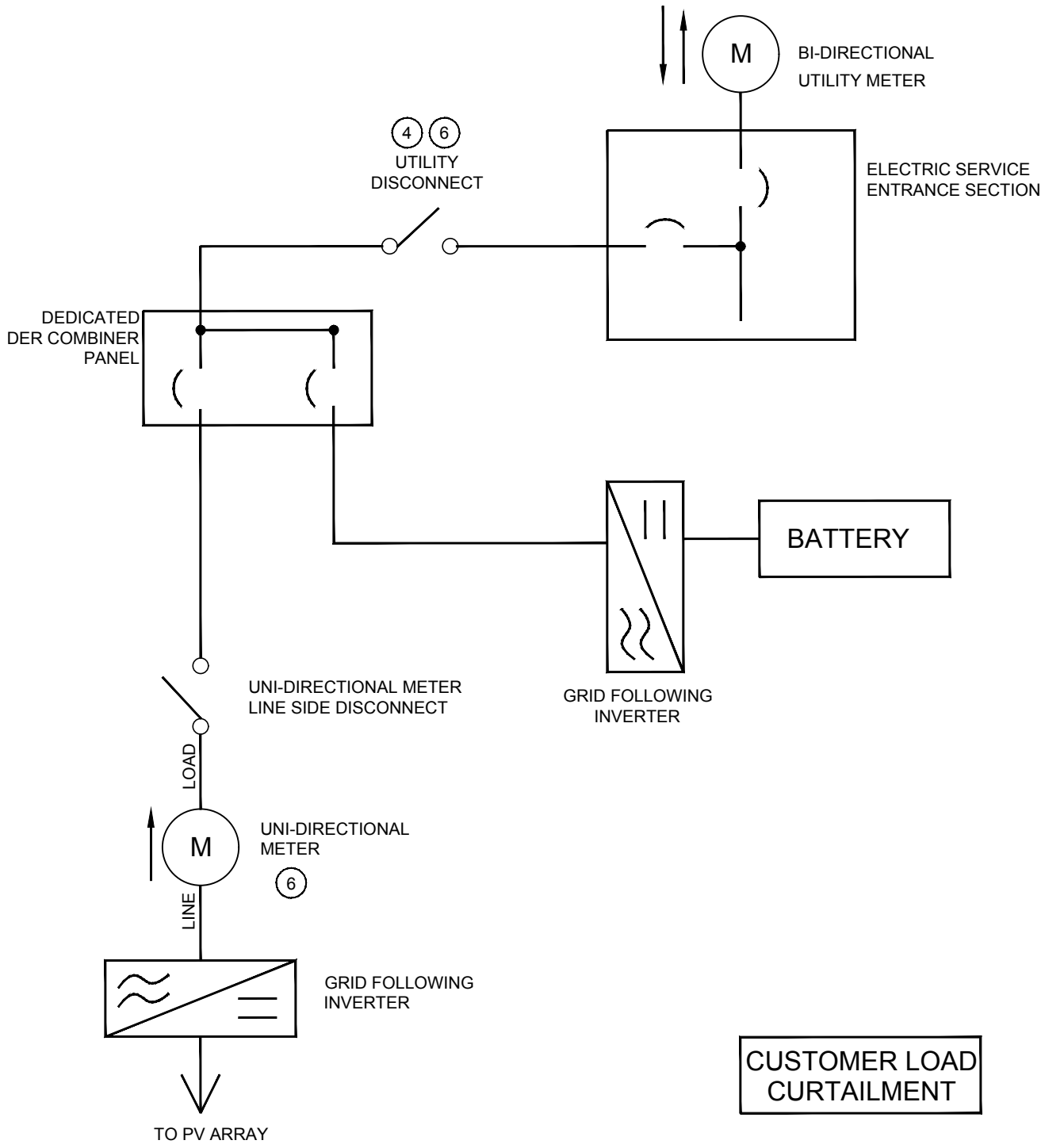
(1) (5)



aps	ARIZONA PUBLIC SERVICE COMPANY				AC COUPLED CONFIGURATION B-4 BATTERY CHARGED FROM GRID OR RENEWABLE ENERGY	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 6 of 15
EM	SB		05-26-23	F		

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- PROPRIETARY INVERTER ISOLATION/CONTROL EQUIPMENT MAY VARY DEPENDING ON TECHNOLOGY (INSIDE PANEL OR SEPARATE DEVICE).
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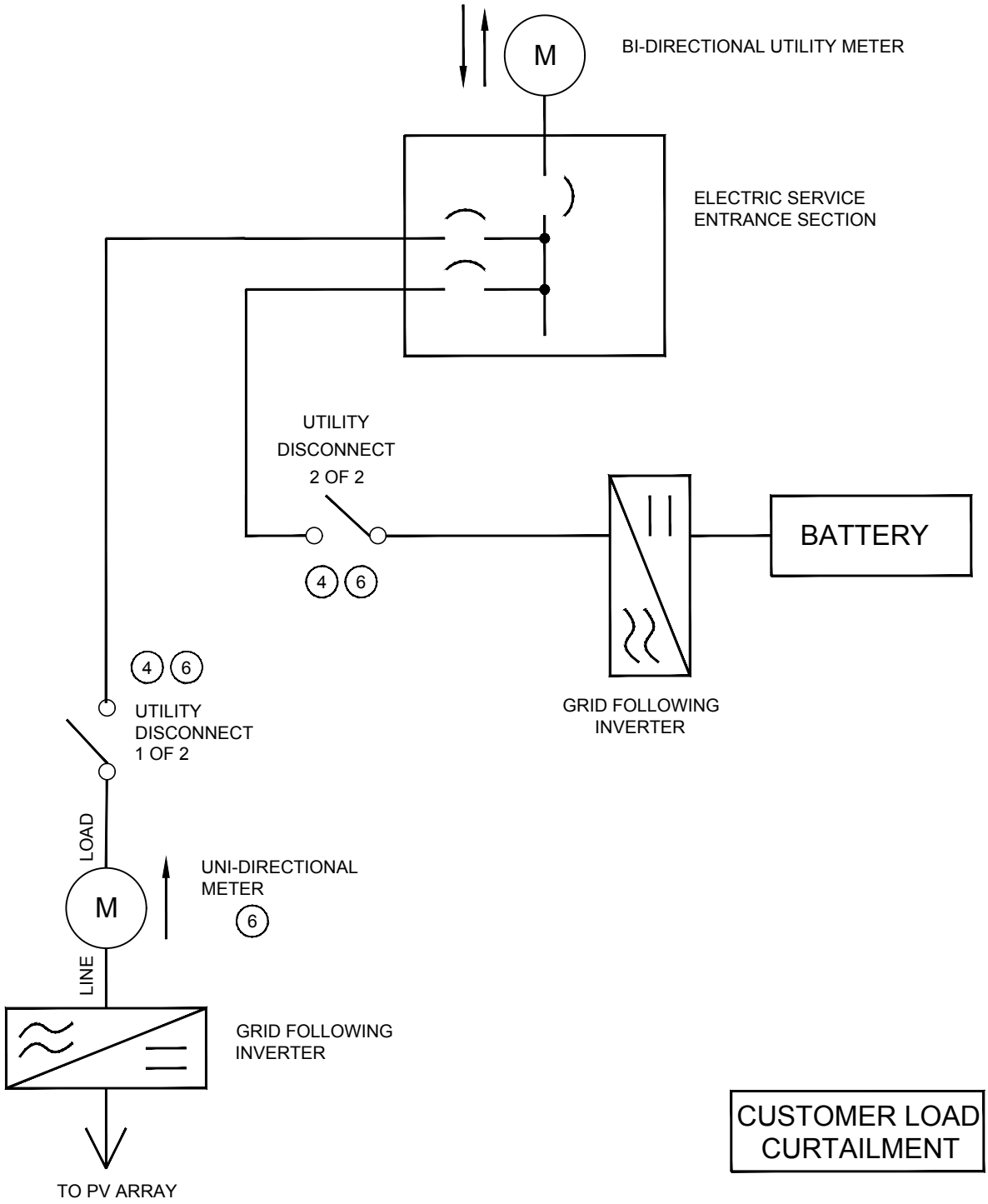
(1) (5)



aps	ARIZONA PUBLIC SERVICE COMPANY				AC COUPLED CONFIGURATION B-5 BATTERY CHARGED FROM GRID OR RENEWABLE ENERGY	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 7 of 15
EM	SB		05-26-23	F		

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- PROPRIETARY INVERTER ISOLATION/CONTROL EQUIPMENT MAY VARY DEPENDING ON TECHNOLOGY (INSIDE PANEL OR SEPARATE DEVICE).
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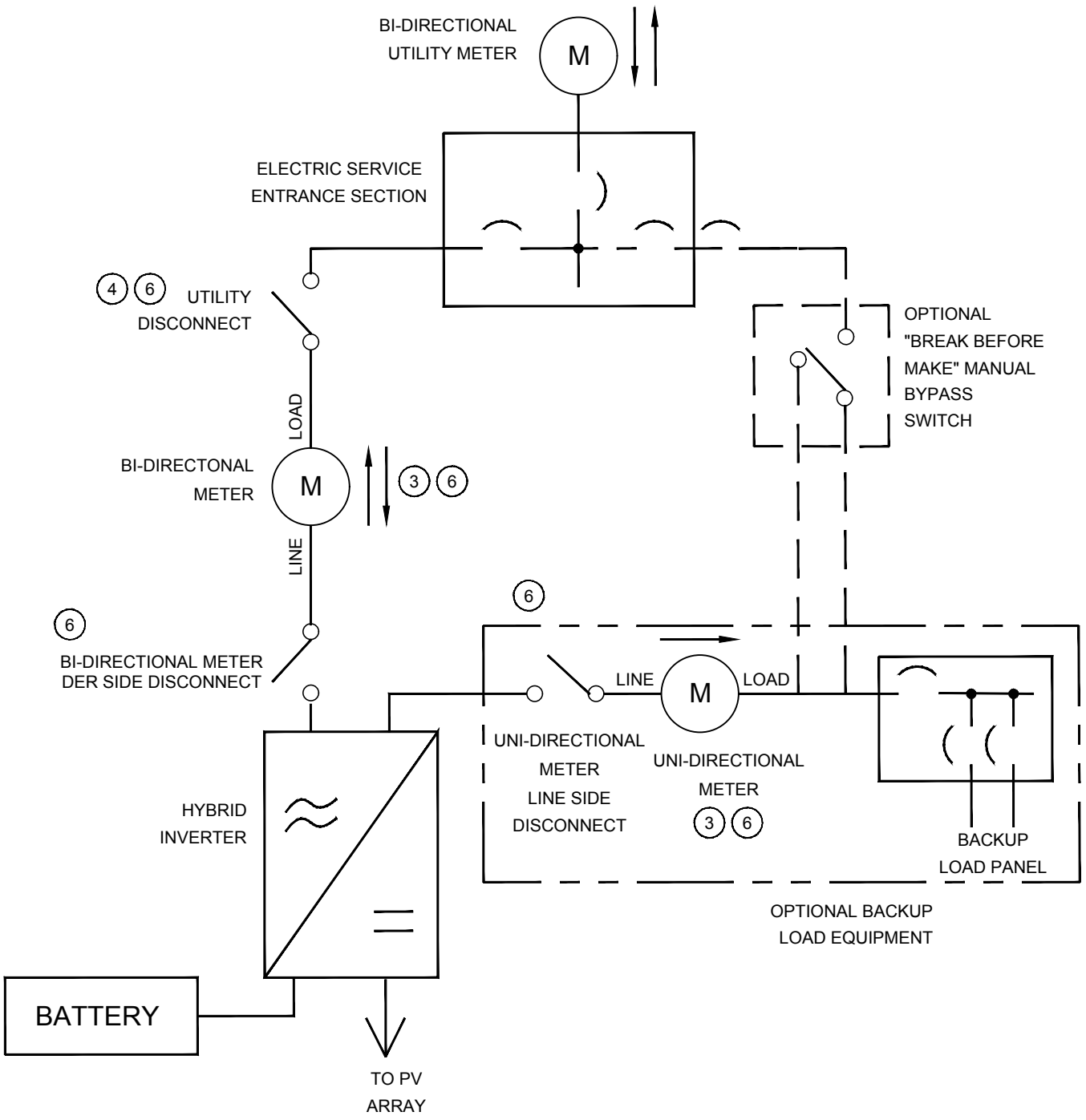
- **PROVISIONS FOR GENERATOR NOT DEPICTED.**
- **THESE CONCEPTUAL DIAGRAMS DEPICT APS REQUIRED ISOLATION AND METERING EQUIPMENT ONLY.**

(1) (5)



aps	ARIZONA PUBLIC SERVICE COMPANY				DC COUPLED HYBRID CONFIGURATION C-1 BATTERY MAY PEAK SHAVE	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 8 oF 15
EM	SB		08-15-22	F		

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

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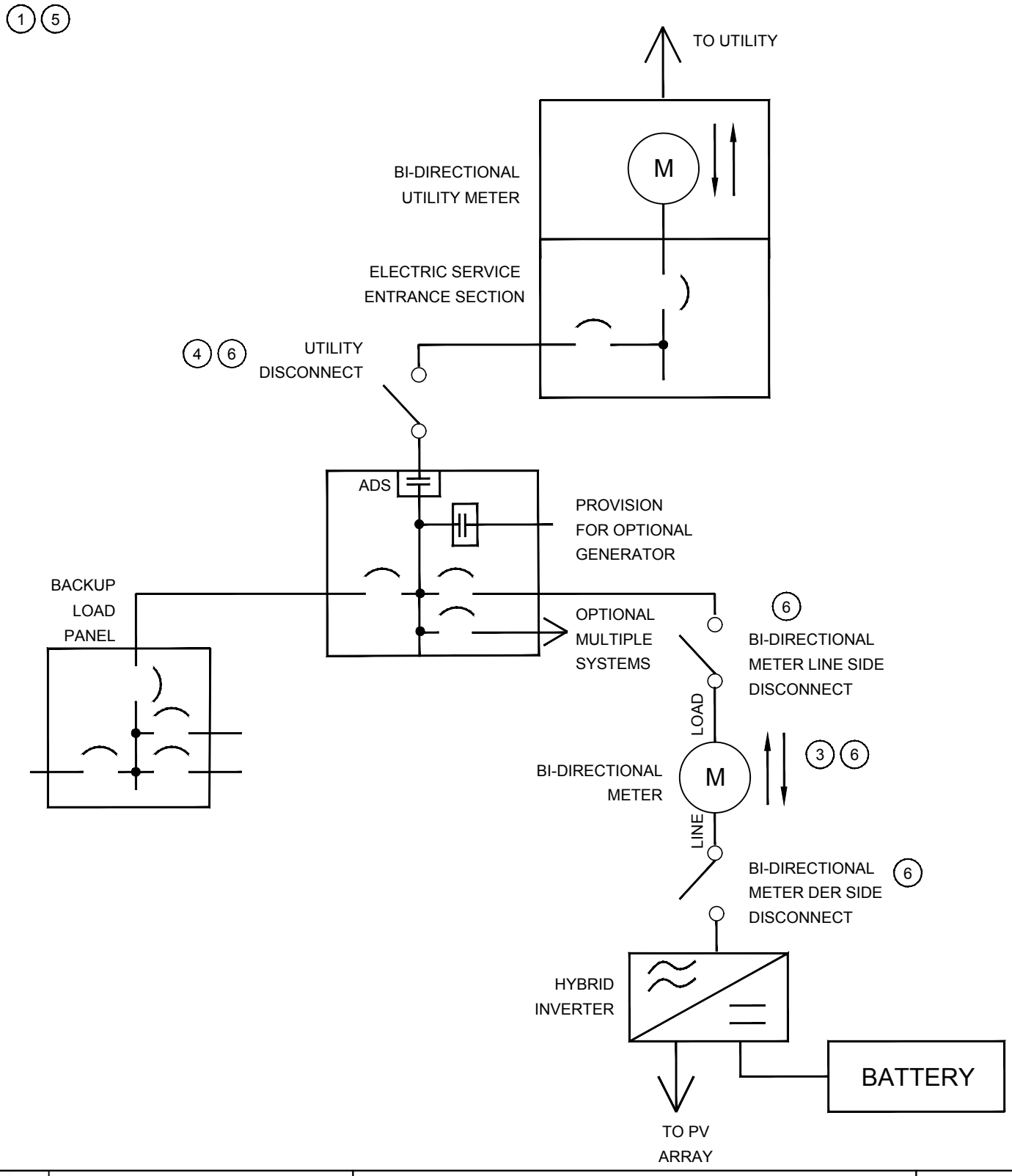
- **PROVISIONS FOR GENERATOR NOT DEPICTED.**
- **THESE CONCEPTUAL DIAGRAMS DEPICT APS REQUIRED ISOLATION AND METERING EQUIPMENT ONLY.**



aps	ARIZONA PUBLIC SERVICE COMPANY				DC COUPLED HYBRID CONFIGURATION C-2 BATTERY MAY PEAK SHAVE	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 9 of 15
EM	SB		08-15-22	F		

FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- PROPRIETARY INVERTER ISOLATION/CONTROL EQUIPMENT MAY VARY DEPENDING ON TECHNOLOGY (INSIDE PANEL OR SEPARATE DEVICE).
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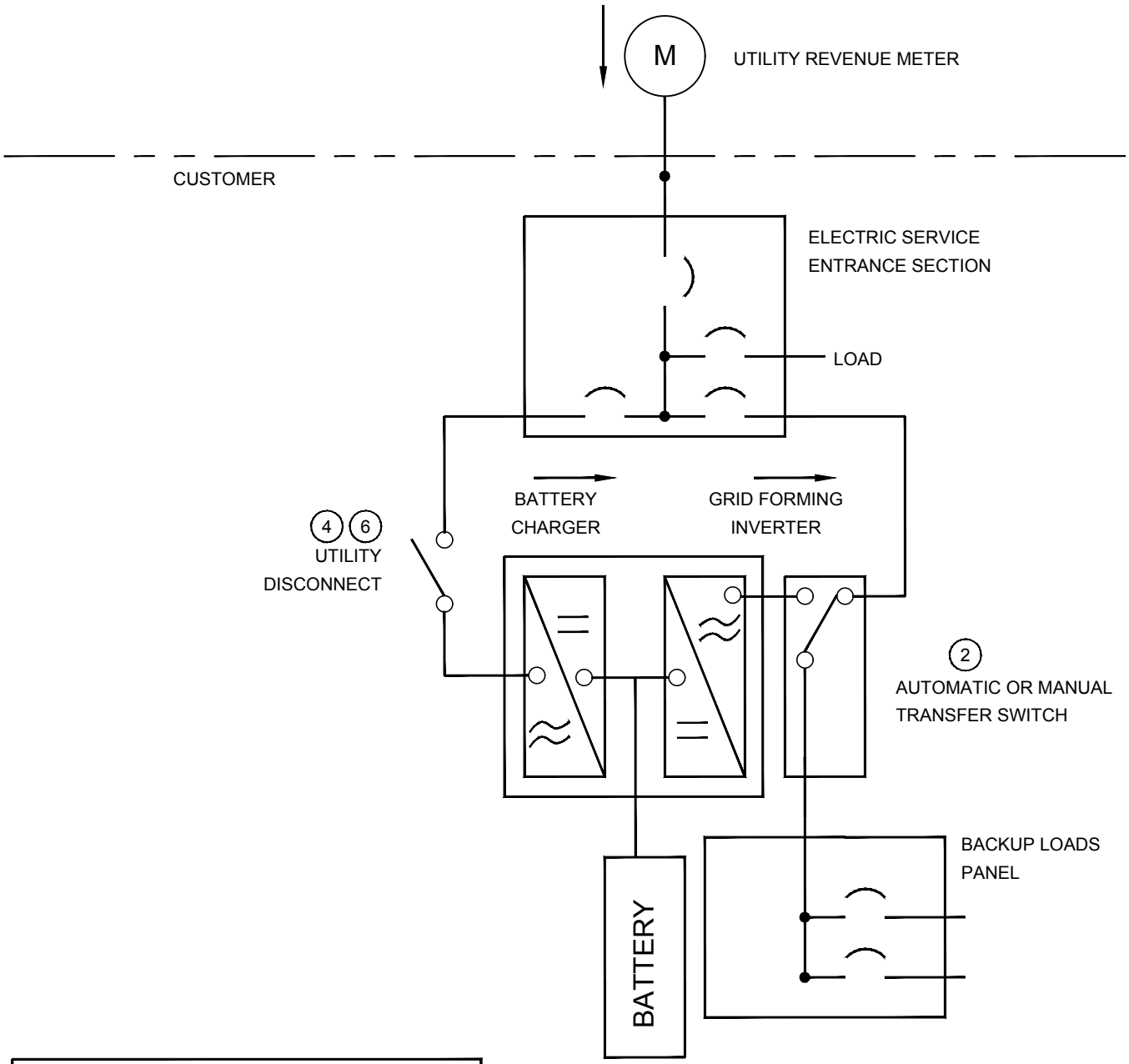
- **THESE CONCEPTUAL DIAGRAMS DEPICT APS REQUIRED ISOLATION AND METERING EQUIPMENT ONLY.**

(1) (5)



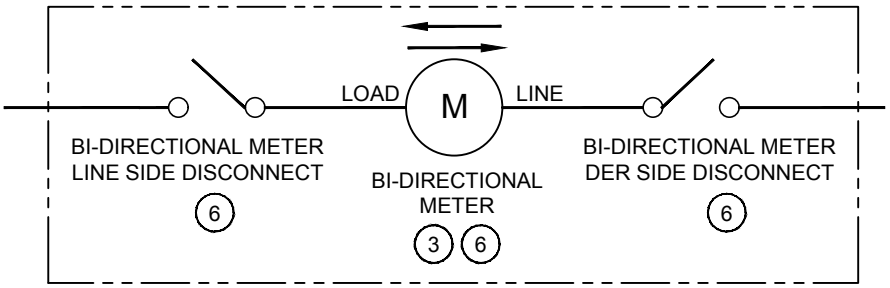
NOTE:
THE BACKUP LOAD PANEL COULD BE A SEPARATE LOAD PANEL AS SHOWN IN THIS DIAGRAM OR COULD BE THE ENTIRE MAIN PANEL. IF IT IS THE ENTIRE MAIN PANEL, THEN A SECOND UTILITY DISCONNECT SHALL BE REQUIRED.

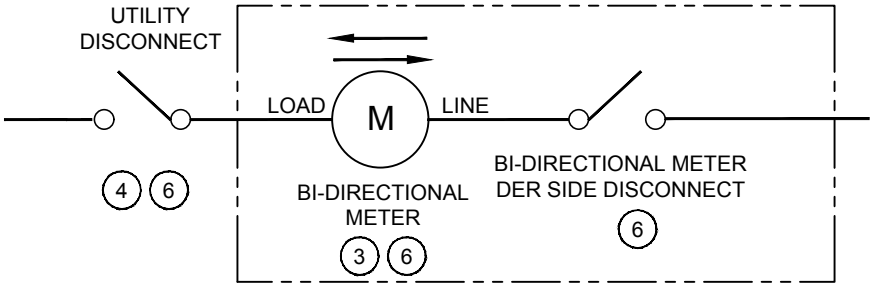
aps	ARIZONA PUBLIC SERVICE COMPANY				STANDBY BATTERY CONFIGURATION D	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 10 of 15
EM	SB		08-15-22	F		

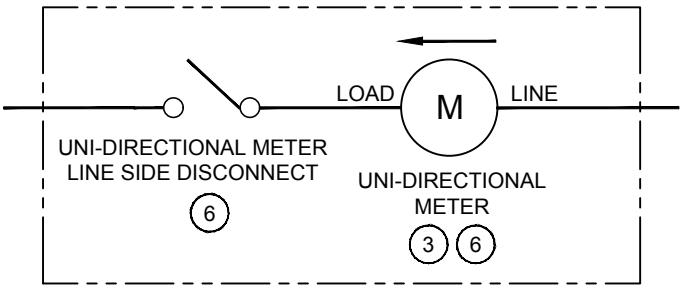
FIGURE ILLUSTRATES REPRESENTATIVE CONCEPTS & INTENT

- **THESE CONCEPTUAL DIAGRAMS DEPICT APS REQUIRED ISOLATION AND METERING EQUIPMENT ONLY.**
- **DASHED BOXED EQUIPMENT BELOW MAY OPTIONALLY BE REPLACED WITH APS APPROVED METER TESTBLOCK ENCLOSURE.**

(7) SEE OPTIONAL EQUIPMENT TESTBLOCK WIRING DIAGRAM SHEET 15







aps	ARIZONA PUBLIC SERVICE COMPANY				OPTIONAL EQUIPMENT METER TESTBLOCK	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		Sht. 11 of 15
EM	SB		08-15-22	F		

KEY NOTES

1. All Customer equipment shall be installed and maintained by the Customer in accordance with the local AHJ, NEC and APS. If no jurisdictional authority is responsible, a Letter In-Lieu of Electrical Clearance shall be required following completion of all work.

2. DER systems with storage utilized to serve a Customer back-up load panel will require an Automatic Disconnect Switch (ADS) to isolate the Customer back-up system in the event of a utility outage. The Customer is responsible for selecting and installing any devices required to affect this transfer. The ADS may be integrated into a DER storage system, inverter/battery charger or may be a separate device.

3. DER systems with storage installed in a stand-alone application shall include an associated meter socket and disconnects as shown.

4. The Utility Disconnect shall be connected between the Electric Service Entrance Section (SES) and DER system as shown. The Customer-fused disconnect required for residential or commercial DER systems with a short circuit rating greater than 10 kA shall be connected between the SES and Utility Disconnect.

5. The SES, Utility Disconnect, production meter socket(s) and meter disconnects shall be grouped together within a maximum distance of 10' with no obstructions and Readily Accessible per APS ESRM.

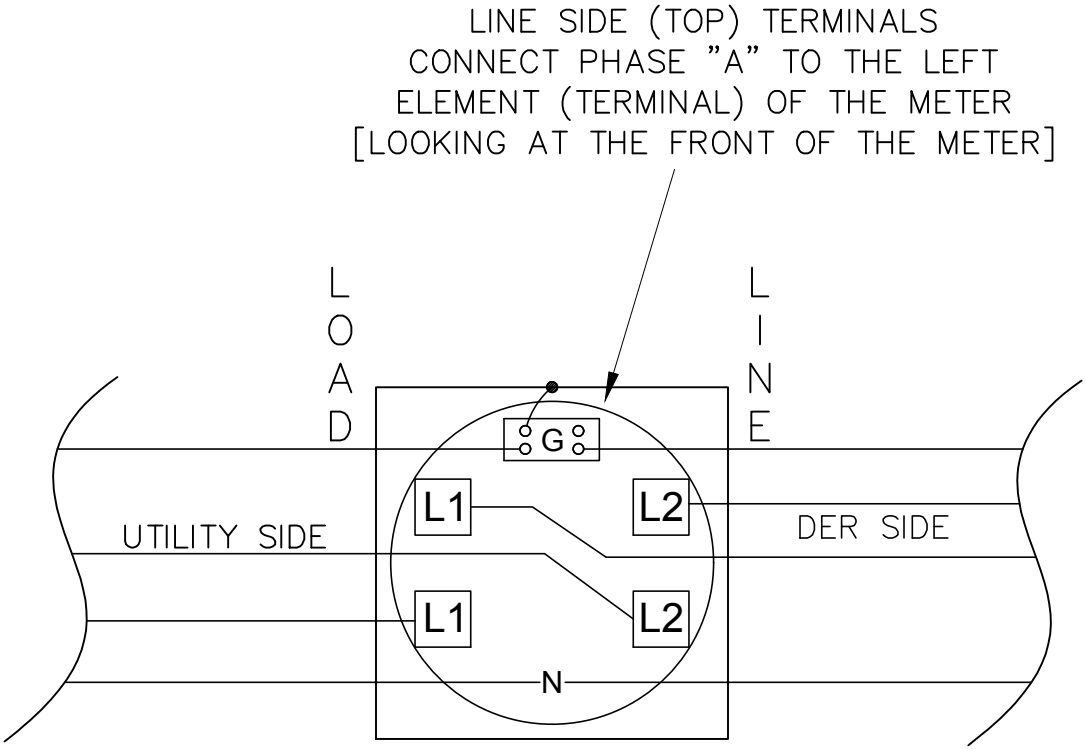
   EXCEPTION: If conditions prohibit grouping the Utility Disconnect(s), production meter socket(s) and meter disconnect(s) within 10' of the SES, the production meter socket(s) and associated Utility Disconnect and meter isolation disconnect(s) shall be grouped together at an alternate location; however, APS approval is required. The alternate location must be a Readily Accessible location per APS ESRM. The SES shall have signage indicating an interconnected generator, and express concise directions to the location of the Utility Disconnect, the production meter socket and meter isolation disconnect as applicable. The Utility Disconnect shall have signage with express concise directions to the location of the SES.

   The Utility Disconnect, production meter socket(s) and meter disconnect(s) shall be a minimum of 36" from any natural gas vent or water bib in accordance with the APS ESRM Section 301.25.

   If the SES is upgraded, a new SES may require relocation to meet present APS ESRM requirements. Consult an APS Design representative.

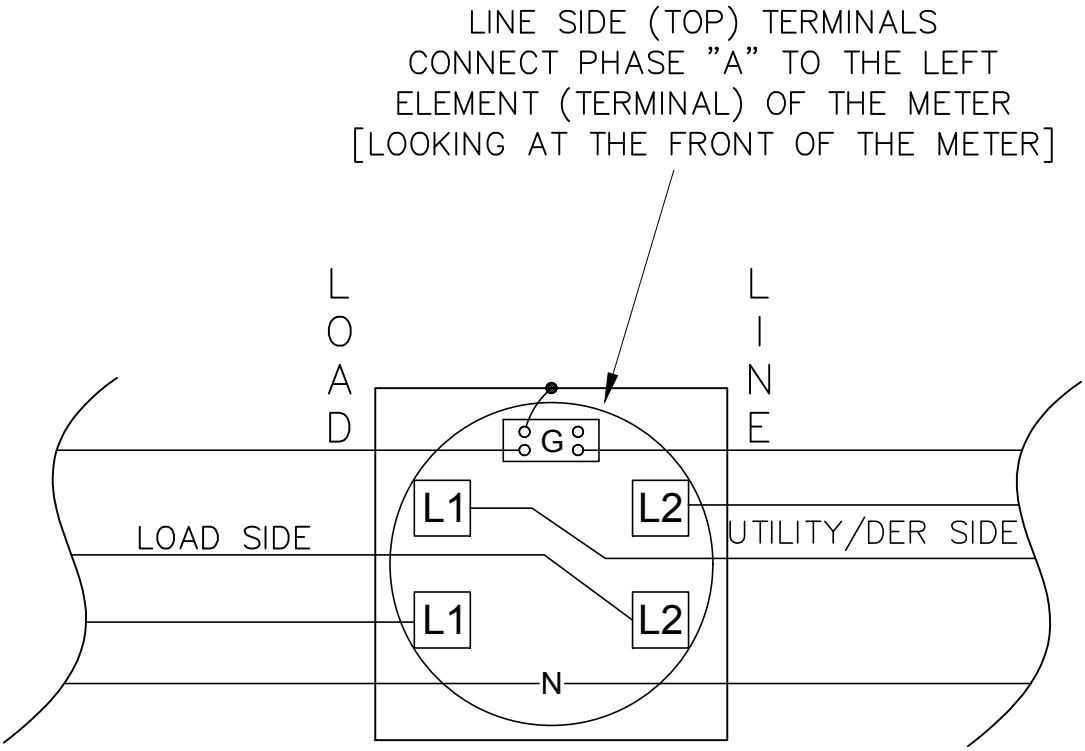
6. Label equipment as shown. Accurate labeling is crucial for APS personnel for safety and efficiency and avoids meter set fails and multiple truck rolls.

7. Individual Meter and Disconnects may be replaced with single Meter with Testblocks. See Pre-Approved Production Meter Sockets in the APS Residential Manufacture List at aps.com/esrm. Testblocks are NOT to replace Utility Disconnect. Retain all meter and disconnect labels.



BI–DIRECTIONAL METER
[SPECIFY FORM #, MAKE & MODEL #]
240V, 100A, RINGTYPE

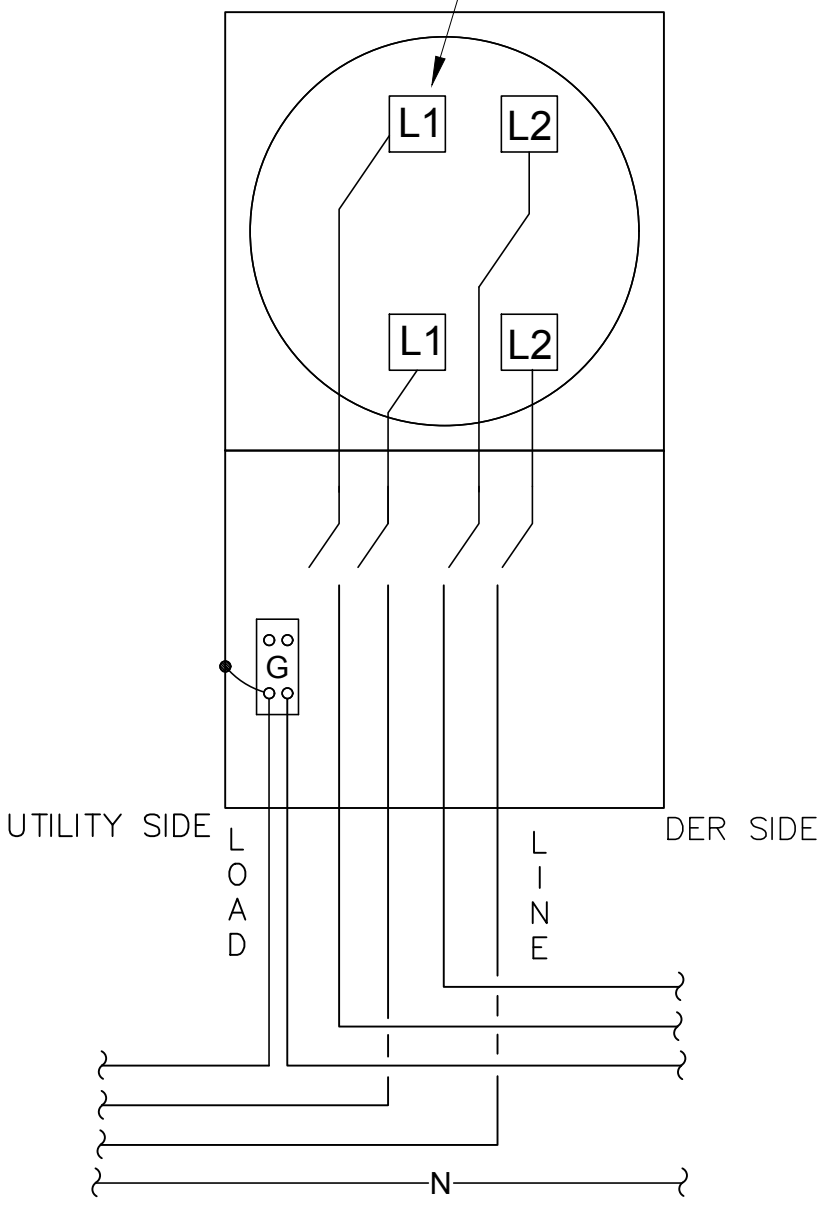
aps	ARIZONA PUBLIC SERVICE COMPANY				GENERAL FORM 2S BI-DIRECTIONAL METER WIRING DIAGRAM	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		
EM	SB		08-15-22	F		Sht.13 of 15



UNI–DIRECTIONAL METER
[SPECIFY FORM #, MAKE & MODEL #]
240V, 100A, RINGTYPE

aps	ARIZONA PUBLIC SERVICE COMPANY				GENERAL FORM 2S UNI-DIRECTIONAL METER WIRING DIAGRAM	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		
EM	SB		08-15-22	F		Sht. 14 of 15

LINE SIDE (TOP) TERMINALS
CONNECT PHASE "A" TO THE LEFT
ELEMENT (TERMINAL) OF THE METER
[LOOKING AT THE FRONT OF THE METER]



TEST BLOCK METER
[SPECIFY FORM #, MAKE & MODEL #]
240V, 100A, RINGTYPE

aps ARIZONA PUBLIC SERVICE COMPANY					GENERAL FORM 2S TEST BLOCK METER WIRING DIAGRAM	8.5" x 11"
DRAWN BY	CHECKED BY	EXAMINED BY	DATE	REVISION		
EM	SB		08-15-22	F		Sht.15 of 15