

Dual Meter Installation Guide

Where to Start

Contact us as soon as possible. We can make sure you qualify for the Dual Meter program and determine what rebates you may be entitled to. You always have more options before any equipment is purchased or installed. Just remember your primary heat must be electric and permanently installed and have a 40-gallon or larger electric water heater to qualify for this rate. Other considerations include meter placement and circuit planning. Once again, there are many more options if considered before construction is complete. No one likes to remove drywall to run forgotten wires.

Installation Process

Your electrician will need to call RECC at 217-438-6197 or stop by the office in Auburn, IL. RECC will then furnish the C.T. metering coil and Dual Meter socket base. We can also provide a wiring diagram of a typical installation and advise on the most efficient way to install the equipment. Just remember to notify RECC when the installation is complete and ready for inspection. Once proper wiring is verified, the dual meter will be inserted into the meter socket by a cooperative employee. After this final step, the Dual Meter will officially be installed and registering KWH's at the reduced rate.

Qualified Circuits for Metering

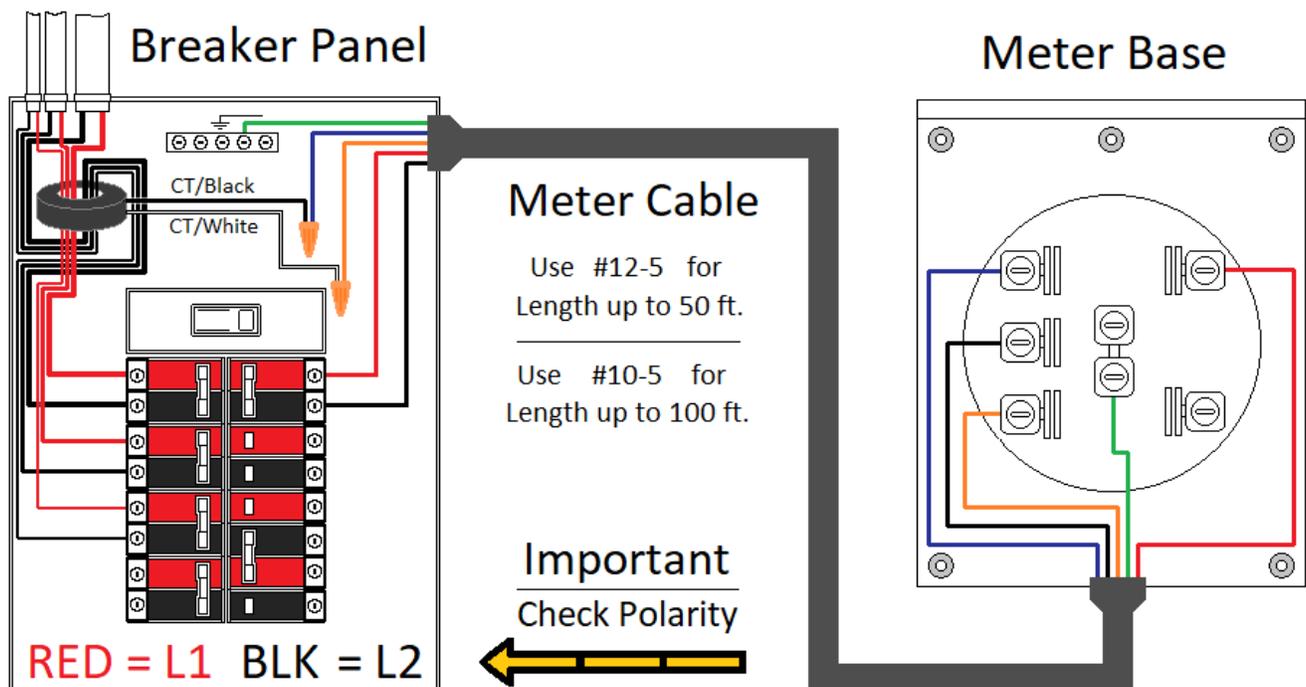
Circuits to be metered: Heating, Cooling, and Water Heating

Examples: Geothermal, heat pump, electric furnace, hard wired baseboard heaters

Circuits not to be metered: Everything not listed above, but call if a circuit is questionable

Examples: Dryers, range, water pumps, portable heaters, and plug-in air conditioner

Diagram of Dual Meter Installation



Detailed Instructions for Qualified Electrician

Installing the Current Transformer (C.T. coil)

- ✓ Identify circuits that qualify for the Dual Meter rate and label them
- ✓ Place #1 marking tape on first breaker to be metered and #1 on conductors fed from that breaker
- ✓ Place #2 tape on the second breaker to be metered and #2 on conductors fed from that breaker
- ✓ Continue with #3, #4, #5 if needed to identify and mark all eligible circuits.
- ✓ After proper labeling, remove only the numbered conductors (wires) from the breakers.
- ✓ Separate those wires into two groups, blacks in one group and red/white in the other
- ✓ Choose a location in the breaker panel to place CT coil (temp wire-nut CT wires together)
- ✓ With the CT upright, place the red/white group of wires down and through the coil
- ✓ Then take the group of black wires and run them up through the coil
- ✓ The red/white wires must go through the coil in the opposite direction of the black wires
- ✓ At this point you may need to extend the wires to have enough length to reach breaker lugs
- ✓ Before landing wires back in breakers, you must determine the proper polarity.
- ✓ The red/white wires must all land on the same buss/leg which we will call L1 for this installation.
- ✓ The black wires are now L2 and must be placed on the opposite leg of the red/white wires.
- ✓ Remember that each single space in the panel alternates between L1 and L2 going up and down
- ✓ But, each breaker space is the same polarity going from left to right.
- ✓ Polarity can also be tested with a volt meter with the breakers turned on.
- ✓ Reconnect each of the remaining wires into their appropriate breaker lug and verify polarity is correct.
- ✓ Install a 20-amp, 2-pole breaker that will be used to power the Dual Meter. LEAVE OFF

Installation of Dual Meter Socket / Base

Meter base must be installed 5'6" above final grade on the outside of house and be accessible to RECC personnel at all times. If new construction, the Dual Meter base may be placed on meter pole with master meter. This is only an option if meter pole is less than 100' from the breaker panel. The meter socket shall be mounted securely with ¾" – 1 ¼" PVC conduit covering the meter cable. Place a temporary cover over the meter opening to prevent water from entering the meter socket.

Meter Cable and Connections

The meter cable consists of 5(each) #12 conductors for lengths up to 50' or 5(each) #10 wire up to 100' in length. The cable will run between the meter socket and the main breaker panel. The five conductors should be different colors or labeled individually. Of the five wires, red and black must be used for the 240-Volts that power the Dual Meter. Two alternate colors will be used for CT connections, and the last will be a mechanical ground. Leave an extra 6" of wire in the meter base.

Meter Base Connections

Red	=	top right	(120V)
Black	=	middle left	(120V)
Blue	=	top left	(CT)
Orange	=	bottom left	(CT)
Green	=	ground lug	(Ground)

Breaker Panel Connections

Red	=	insert into L1 of 20-amp breaker	(120V)
Black	=	insert into L2 of 20-amp breaker	(120V)
Blue	=	wire nut to black wire of CT coil	(CT)
Orange	=	wire nut to white wire of CT coil	(CT)
Green	=	ground lug inside breaker box	(Ground)

Call RECC at 217-438-6197 to schedule inspection and insert Dual Meter