

Net Metering with Appalachian Power In Virginia

A Quick Guide for Our Customers

A word about interconnecting with us:

We want to protect your home or business and the electric power grid that serves our communities. That's why we comply with all applicable laws and regulations for connecting your energy resource to our system.

If you own or lease a qualifying distributed resource that supplies energy to a building that is connected to our system, your equipment is interconnected. Interconnectivity allows your home or business to be powered by our system when there isn't enough solar or wind energy to meet your needs. In addition to back up power from us, interconnectivity allows you to export your excess energy to the grid for credit.

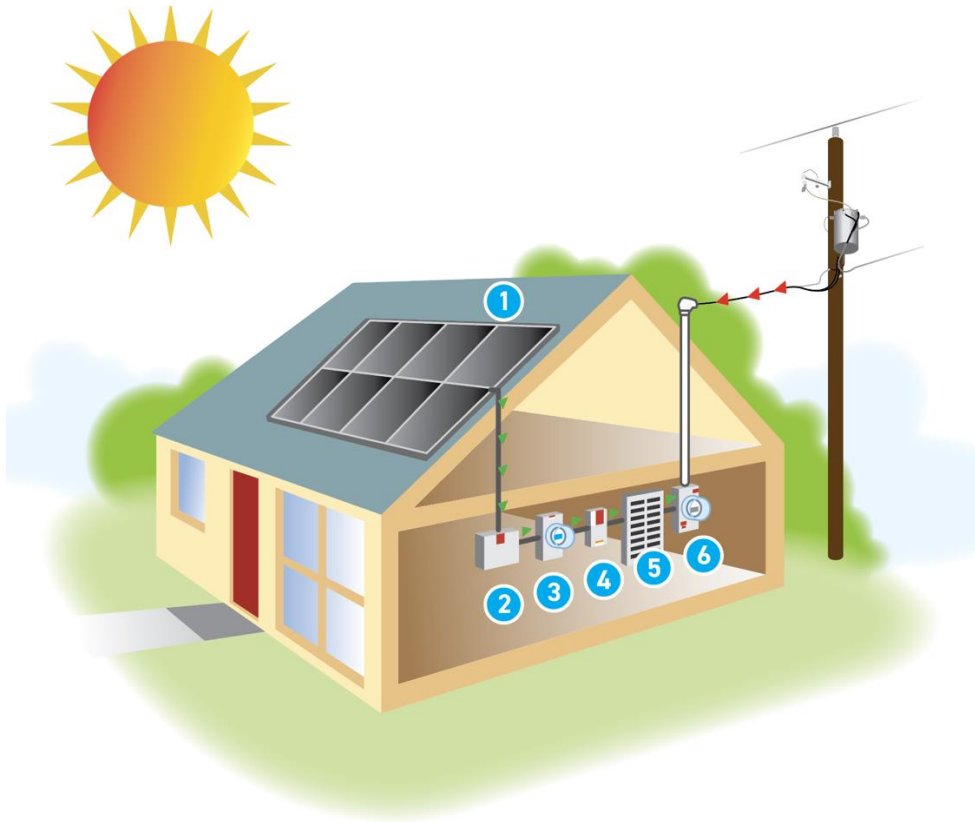
For most homeowners, the interconnection process for Net Metering takes less than 30 days. Requests for commercial buildings or for generators of over 10 KW may take up to 60 days. And in the rare instance where our equipment needs to be upgraded to accommodate your interconnection, the wait time could be longer so that we can make those upgrades.

What to expect when you apply for Net Metering:

- Submit an application to secure pre-approval into the Net Metering program before installing your generating equipment.
- If your proposed equipment meets technical and safety requirements...and you meet Virginia's requirements for Net Metering, you will receive notification that your application is pre-approved.
- Install your generating equipment as well as the required AC disconnect switch located in close proximity to our billing meter.
- Have your licensed electrician complete and sign the application. **If not installed by a licensed electrician we will need the final signed electrical inspection from the county or city.**
- Re-submit the application to us for final review.
- We will automatically schedule a site visit (or you may inquire about a virtual inspection via photos that you submit).
- We will automatically exchange your existing billing meter for one programmed to measure energy flow in both directions.
- We will notify you that you may begin operation of your generator.

How interconnection works:

- 1. Distributed Resource** — This is any source of power that is not owned by our utility. For homeowners, the most popular equipment is rooftop solar panels.
- 2. Inverter** — Most distributed resources like rooftop solar panels generate direct current (DC) power, while home appliances use alternating current (AC) power. An inverter converts DC power to usable AC power, and provides overcurrent or overvoltage protection.
- 3. Generation Meter** — This meter measures how much energy your equipment generates. This meter is sometimes called a “production meter” and it operates separately from your existing electric meter. Your contractor may install this meter but it is not required.
- 4. AC Disconnect Switch** — We use this device to safely isolate your equipment from our power supply. This must be accessible and unlocked to our crews at all times.
- 5. Breaker Box** — This is the control box that allows you to shut off power to different sections of your home (or all of your home if desired).
- 6. Utility Meter** — This meter is the typical meter installed in every home when it is powered by our utility. This meter measures how much energy your home is consuming from our utility and will be replaced with one that measure energy flow in both directions.



Frequently Asked Questions:

What is Net Metering? Net Metering was developed to encourage investment in renewable energy. It is an incentivized program available to eligible customers who operate an on-site, qualifying renewable fuel generator (such as solar panels) and wish to make some or all of their own electricity. It is not available for those that desire to make energy for sale back to their utility. Approved generators are allowed to connect to the electric grid generally via the customer's main service panel providing the customer with the ability to return any excess energy to the grid "banking" it for future use. This is particularly beneficial for solar and wind as these are intermittent power sources.

How does it work? As your generator produces electricity, that energy is first used to supply your own energy needs. If your generator's output will not cover your entire energy needs, Appalachian Power provides the remainder. Conversely, if your generator produces more electricity than you can use, the excess is measured at the meter and sent back to the grid to be used by other customers.

How will I be billed? All monthly charges will continue to be based on your standard rate schedule. However, you will only be billed for your "net" energy usage (what we delivered to your less what you put back to the grid). Any non-usage charges or minimums as stated in your standard rate schedule still apply. If you return more energy than was supplied to you in any particular billing period, the excess energy is "banked" for application towards future bills. Most customers track their own excess generation as bills currently do not display that information.

Why was my bank not applied? In any month where you have billable consumption, you will initially get a bill for that usage. Generally within 3-7 days, your account will be reviewed and re-billed to apply any "banked" energy to offset all or part of that billable usage.

How long is the "bank" available for my use? Your net metering start date is the first meter reading following meter exchange. Your account is then reviewed annually to reconcile any excess generation in accordance with Virginia regulations. Any excess generation at that time will be compared to your billed kWhs for the year plus your excess generation rolled from the previous year. Banks in excess of this total are forfeited since State regulations require you to size your generator so that it doesn't produce more energy than you can use annually.

Can I be paid instead for that excess generation? Yes, as an option, you may also request a power purchase agreement in writing prior to the beginning of any 12 month net metering period. At subsequent annual reviews, your bank will be purchased. Please be aware, however, that kWhs rolled into the next net metering period are worth our retail rate (currently about 11 cents per kWh) whereas banked kWhs are purchased at our "avoided cost" (currently \$.03542 per kWh for calendar year 2019). So sizing your system appropriately ensures you remain eligible to roll your excess generation each year and realize the maximum value for your excess energy.

What if I decide to add more solar panels? You must submit a new net metering application for the added capacity and you must secure approval in advance just as you did with your initial system.

Why does my inverter show I generated more energy than your meter does? Your inverter measures the energy that you have generated while our meter only measures what you generated, couldn't use and exported to the grid.

How do I read my Net Meter? Appalachian Power uses several different types of meters for net metering. The screens of interest to you are shown below. The codes referenced may be on the left as shown below or on the bottom.

08 – Energy you’ve purchased from APCo



07 - Energy you put back on our grid



621 or 21 – Your highest 15 minute demand for electricity during a given billing period



721 – The date the peak demand above occurred (some meters do not have this screen)



How do I read my bill? We do not track the production of a solar system. We only track the excess energy that a customer doesn’t use which gets sent back to the grid. That value can be found on page 3 of the bill under the section “Meter Read Details.” Below is a screenshot of a bill which shows those values. The “877 kWh Dlvd” is what APCo delivers to the customer. The “-497 kWh Rcvd” is what the solar system sent back to the grid. So to get the net usage we take $877 - 497 = 380$ kWh.

Meter Read Details:

Meter #781303227					
Previous	Type	Current	Type	Metered	Usage
-	-	8.459	Actual	8.459	8.459 kW
12097	Actual	12974	Actual	877	877 kWh Dlvd
5750	Actual	6247	Actual	-497	-497 kWh Rcvd
Service Period 02/28 - 03/30				Multiplier 1	
Next scheduled read date should be between Apr 28 and May 1.					
Net Usage : 380 kWh			Billable Usage: 380 kWh		