

Automated Meter Reading

How the System Works

What is the “endpoint” and how does it work?

The endpoint is a radio that transmits the data from the meter to the data collection system. It can also receive instructions from us to get nearly instantaneous meter readings and to make firmware updates. In most cases the endpoint will be installed where the touchpad is now.

The system operates in the 900 MHz frequency band. This band is used by many household and consumer electronics such as cellphones, baby monitors, and remote garage door openers. The device transmits using less than 1 watt of power and only for a few tenths of a second per day. The power requirement is so small that it will run on a single D-cell battery for 20 years. The device meets FCC standards so that it will not interfere with other household electronics.

The devices are programmed to transmit to a nearby endpoint that is similarly configured such that a network grid, often referred to as a mesh system, is established. The data is then transferred to a nearby data collector that sends it to the computer system in our office.

How do the collectors work?

We have installed ten data collectors in various locations in Brunswick and Topsham. Each collector receives and stores the data from the endpoints it communicates with. Once a day, the stored data is transmitted by cellphone to the computer system in our office.