

## POWER DISTRIBUTION 101:

# KNOW YOUR INTERVAL METERS

## 01 WHAT IS AN INTERVAL METER?

Interval meters are devices that **measure and record energy consumption**. Like standard analog meters, interval models track the **total amount of power**, measured in **kilowatt-hours (kWh)**, consumed over a set period of time. Equipped with a **battery** and **communication chip**, interval meters track consumption data as often as **every five seconds**, with minimal delay, and typically relay the information to the utility **once a day**. These devices allow utilities to **understand when energy is consumed** and plan programs and rates to **reduce congestion** on distribution power lines.

## 02 HOW DOES IT WORK?

Interval meters use two types of wireless networks:

**+ Home Area Network (HAN):** The HAN is a **short-range network** that communicates energy consumption data to different electronic devices in a building.

**+ Wide Area Network (WAN):** The WAN submits energy consumption data to a **data communications company (DCC)**, which releases this information to authorized parties—including the utility—for accurate billing.

## 03 WHY INTERVAL METERS?

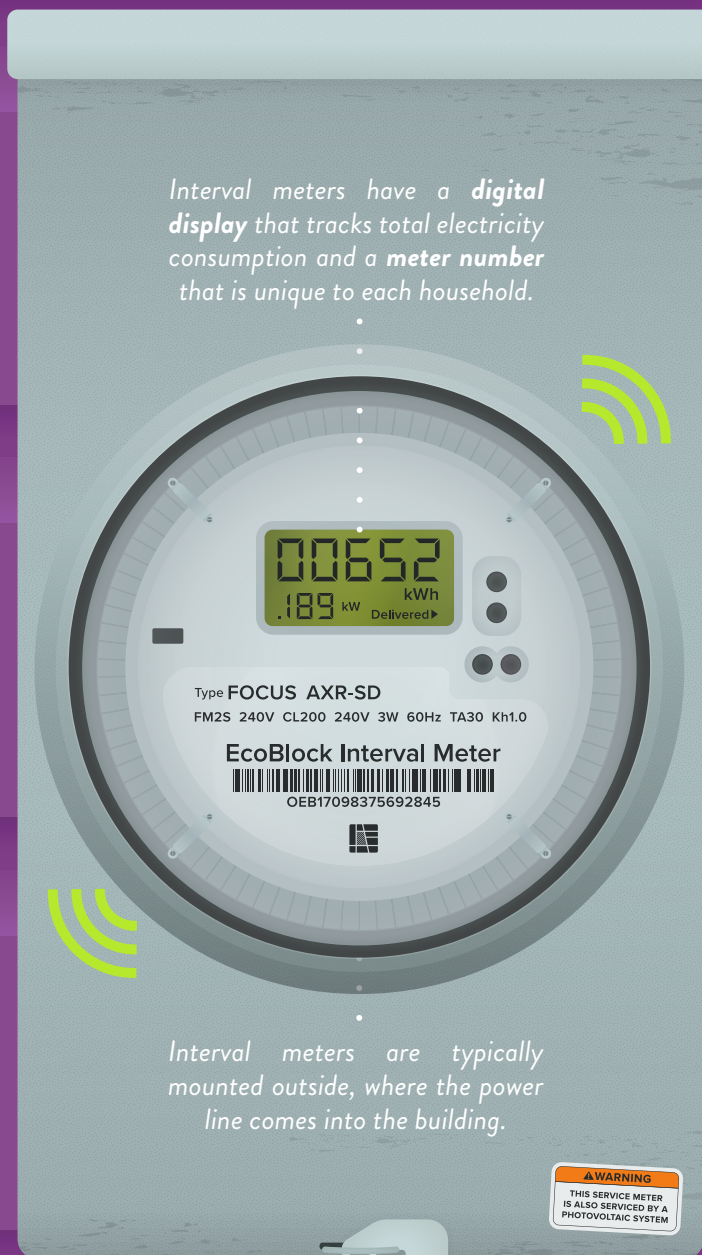
### Pros

- + Customers can **optimize consumption** based on when energy is used
- + Accurate billing based on **time-of-use (TOU) pricing**
- + **Widespread adoption** (about 11.7 million new electric meters are being installed throughout California!)
- + Reduced **utility operating & labor costs**
- + Utilities can better detect & anticipate **power outages**
- + Possible integration with **home energy management systems (HEMS)**

### Cons

- + Potential **security & privacy concerns**
- + Possible **higher delivery charges** from utilities due to high deployment costs

Interval meters have a **digital display** that tracks total electricity consumption and a **meter number** that is unique to each household.



Interval meters are typically mounted outside, where the power line comes into the building.