

## WHITE PAPER

## Five Myths of Smart Meter Data

What smart meter data is available? A frequent question, so we pulled all the facts together, and bust some myths .

### We Need Smart Meter Data Everywhere

A frequent customer request is “My company is starting to do... X...We need smart meter data everywhere.” Whatever X is – engage the consumer, sell solar, sell thermostats – our customer is sure that smart meter data is needed. And, they are disappointed when we tell them how few utilities have smart meters with accessible data.

But don't dismay. WattzOn's experience is lots can be done with monthly utility bill data, including customer targeting, personalized customer experiences and predictive analytics. And monthly data is cheaper to obtain and manage.

The smart meter data question comes up often, so we put our experience in this white paper, and layout the facts and bust some myths.

#### What is a Smart Meter?

The defining feature of a smart meter is its two-way communication; it does not just send data, it receives data. Often the data is highly granular, sent in 15- minute or hourly form. The two-way communication of smart meters enables homes and solar systems to be coordinated by grid operators. The granular data provides useful detail on home energy use.

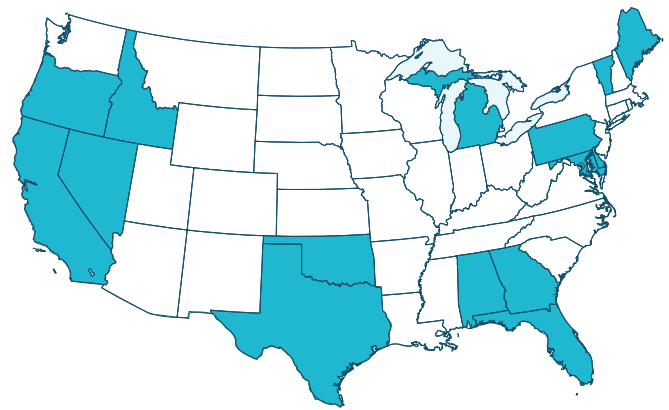


Figure 1. States with More than 50% Smart Meters, 2016  
Source: EIA Form 861 posted October, 2016.  
<https://www.eia.gov/electricity/data/eia861/>

### MYTH #1: Smart Meters Are Everywhere

The map above (Figure 1) shows that smart meter deployments are not complete. Only 15 states have a majority of smart meters, and only seven states have more than 75%. There is a long tail of states are still in the exploratory stage. This coverage is simply not adequate for those hoping to build a single national consumer experience.

Many utilities have installed meters that enable AMR (Automatic Meter Read also known as “drive-by meters”) which significantly reduces the cost of meter reading. With out a smart grid in place, there is no business case for smart meters over AMR-enabled meters.

## MYTH #2: Daily Digital Data Access is the Norm

Sadly, the situation is even a bit worse, as not all smart meter data is accessible. Figure 2 illustrates the issue. Only four states have more than 50% smart meters with daily digital access.

Table 1 lists the states in which the majority of meters (> 50%) have daily digital access. There are only ten states on the list. The bottom two states in Table 1 don't have high rates of smart meter deployments, but do have substantial daily digital access. In these states, non-smart meters are being polled everyday for usage data that is presented to the consumer.

Table 2 takes another look at daily digital access and shows the gap between smart meter deployments and daily access to data. This is a rough measure, and may understate access, however, the gaps are large, and further illustrate that it takes a smart grid (eg digital infrastructure investment) as well as smart meters to provide smart-grid services, such as interval data.

## MYTH #3: The More Data The Better

We're not here to argue with that truism. There will always be details and insights only available through granular data. But the lack of broadly available smart meter data makes it important to review how much can be gained from monthly data alone.

Our experience is that monthly data plus robust analytics is often a good match for the problem at hand. And cost-effective. To make the point, note three facts about monthly data versus smart meter data:

- Real-time data has limited value. Our customers constantly tell us that consumers, whether residential or commercial, don't care about real-time energy data. A recent survey shows that consumers don't really spend much time at all thinking about their utility bills.

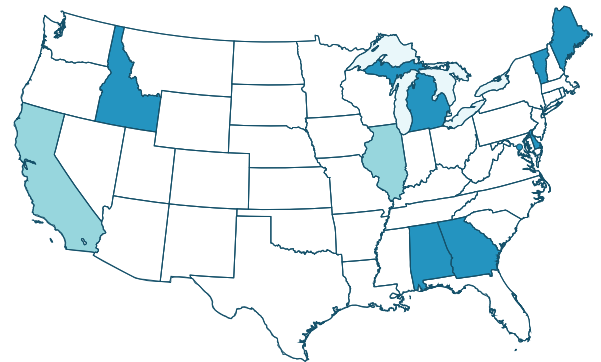


Figure 2. States with >50% Smart Meters and >50% Daily Digital Access

Rank	State	% Daily Digital Access	% Smart Meters
1	DC	96%	98%
2	VT	76%	79%
3	GA	73%	87%
4	ME	71%	91%
5	AL	66%	73%
6	ID	66%	72%
7	DE	66%	66%
8	MI	61%	65%
9	MN	54%	14%
10	NC	51%	27%

Table 1. Top 10 States with Best Daily Access to Utility Data

Rank	State	Smart Meters (A)	Daily Digital Access (B)	The Gap* (A) - (B)
1	OR	82%	21%	61%
2	AZ	74%	18%	56%
3	OR	56%	7%	48%
4	NV	85%	39%	45%
5	OK	76%	33%	43%
6	FL	58%	16%	42%
7	IL	38%	1%	37%
8	PA	57%	24%	33%
9	MD	69%	40%	29%
10	TX	72%	48%	24%

\*Smart Meters w/o Daily Digital Access

Table 2. States with the Largest Gap Between Smart Meter Deployment and Daily Data Access

- Monthly data works. A recent study found that enhanced, informative monthly bills competed well with real-time data in terms of consumer engagement and energy savings.
- Monthly data catches the key issue: how to create custom offers to consumers for energy savings products and services. Monthly data reveals so much about a resident's level and pattern of energy use, powerful customer segmentation and targeting can be performed.

### MYTH #4: Time of Use Rates Require Smart Meters

Not true. For example, Eversource, an electric utility in the New England area, offers time-varying rates, and argues that these provide the benefits of a smart meter without the additional smart meter investment, and that a well designed opt-in program can effectively reduce electricity use.

In another example, HECO, the Hawaiian electric utility, is piloting TOU rates in the residential sector without smart meters. 5 Rates on the island of Hawaii vary from 9 cents per kWh during the day (9am to 5pm) to 49 cents per kWh during the peak hours (5pm to 10pm). With such a wide variation in cost, the consumer won't forget when to save energy. No smart meter needed.

### Smart Meter Data is Big Data

It takes more than a piece of hardware, the smart meter, to make use of smart meter data. Consider the raw data flow. Smart meters transmit every 15 minutes. That's 2880 data points per month, or 2.89M data points per 100,000 meters.

Add in billing data by 15-minute intervals and the data set quadruples in size. Then add data cleaning and verification, and data handling to roll up the data to hourly, daily and monthly intervals, and multiple meters per account. Finally add a presentation layer, such as website access that lets the user experience the power of smart meter data.

In sum, a large investment in software and analytics is required to make use of smart meter data. This expenditure, not the meter hardware, is often the holdup in a smart meter deployment

Sources: <https://www.greentechmedia.com/articles/read/customers-spend-8-minutes-a-year-interacting-online-with-their-utility>;  
<http://aceee.org/files/proceedings/2012/data/papers/0193-000244.pdf>;  
<https://smartgridawareness.org/2015/09/30/smart-meters-not-necessary-to-modernize-electric-grid/>

#### ABOUT US

WattzOn provides utility bill data to the energy and credit markets. Any data, any utility. With its advanced machine learning solution, WattzOn is the industry's technology leader. Customers include market leaders in solar, smart home, commercial billing and consumer credit.