Opower helps utilities connect with customers on an individual level. We use behavioral science to present approachable insights that improve the customer experience and lead to action.

Based on monthly usage, a lot of customers look the same. But, Opower artificial intelligence detects that behind the meter they are using energy very differently.

Opower Disaggregation
AI combined with behavioral science to deliver outcomes

It works! Pairing a smart thermostat promotion with how much that customer spends on heating and cooling increased purchases by 61%.
How our disaggregation works
(if you are not a data scientist*)

1. Data
We use 15-minute, 30-minute, or 60-minute interval data, unlike most methods of non-intrusive load monitoring (NILM) that require more granular data (which may not be widely available).

2. Presence Discovery
We use a neural network to predict whether a customer has a large appliance or an electric vehicle. This helps us to better target next best actions.

3. Detection
We predict when a customer is using an appliance or an EV (down to 15-minute intervals). This allows us to give specific insights for reducing peak usage.

4. Disaggregation
We predict how much energy a large appliance or EV is using. This enables us to tell customers how much of their bill comes from each end use.

5. Scale
We operationalize and scale our models to provide accurate results for millions of customers in different geographies and climates without manual retraining.

6. Outcomes
We apply behavioral science to design and test different insights and segmented experiences – from bill breakdowns to appliance promotions – to see which drive outcomes.

Fun facts:
- We use deep learning, a technique at the forefront of machine learning.
- We hold two patents for disaggregation with three more pending.
- Our models are more accurate than all published studies of NILM.

*If you are a data scientist, check out our technical white paper on Accuracy of Appliance and EV Presence Discovery, Detection, and Disaggregation.