



# BIDGELY EV INTELLIGENCE

UNLOCK SMART METER DATA TO UNCOVER  
EVs AND UNDERSTAND THEIR IMPACT ON YOUR GRID

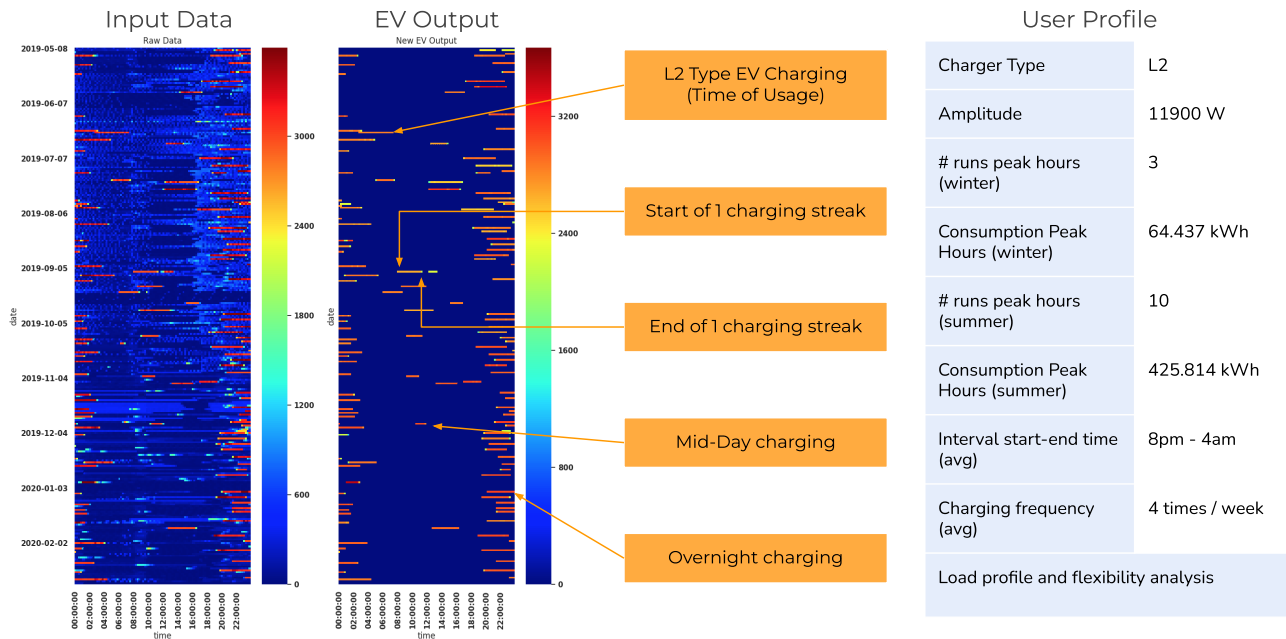
## Managing the EV Revolution Starts With Visibility

Historically, determining the location of an EV and its charging load has been difficult. DMV data lacks granularity and is often out of date. Customer-provided methods like telematics only provide a limited view of EV activity.

To solve this challenge, Bidgely uses AI and machine learning to detect EV charging signatures buried in smart meter data and extract intelligence essential to the management of EV load, including:

1. Differentiation of Level 1 and Level 2 chargers
2. Charging estimation, hour by hour for each EV customer
3. Average hourly charging patterns
4. Geographic patterns of EV charging and growth
5. Amplitude of chargers

This granular EV visibility enables utilities to not only detect EV charging but also build 8760-hour EV-charging load curves for each customer and for each grid asset to understand the real-world impact of EVs across the grid.



Bigdely EV Intelligence uses patented AI algorithms to recognize the unique signatures of EV charging sessions and then isolate them for further analysis to identify factors such as charging time, duration, amplitude, charger type and more.

## WHY BIDGELY EV INTELLIGENCE?

Electric vehicles are not easy to detect—the power draw of even an L2 charger (often 3-7 kW) can fall within the same range as HVAC (3-6 kW) or electric water heaters (3-7 kW). Other technologies confuse these conflicting appliance signatures, resulting in poor detection. It's crucial to ensure both model performance against a data set and performance in a full population scenario.

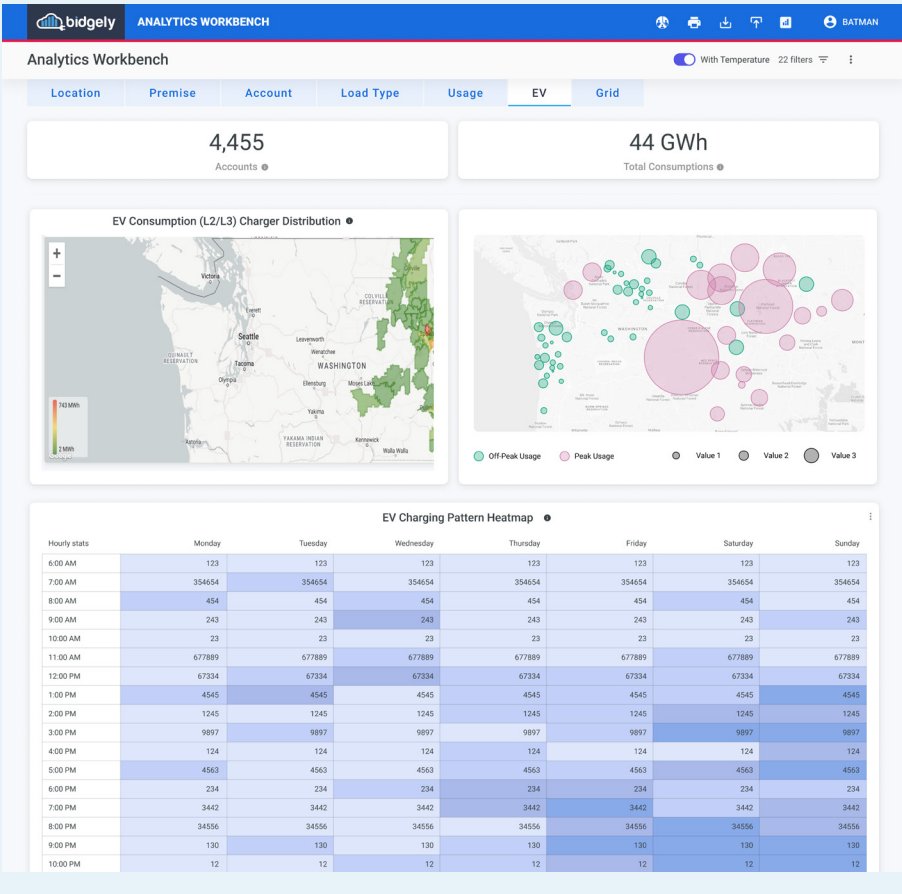
Many vendors will provide only results from a small sample set, which does not accurately reflect the success you will see in the field.

### Bigdely's true disaggregation of AMI data at 15-minute intervals delivers:

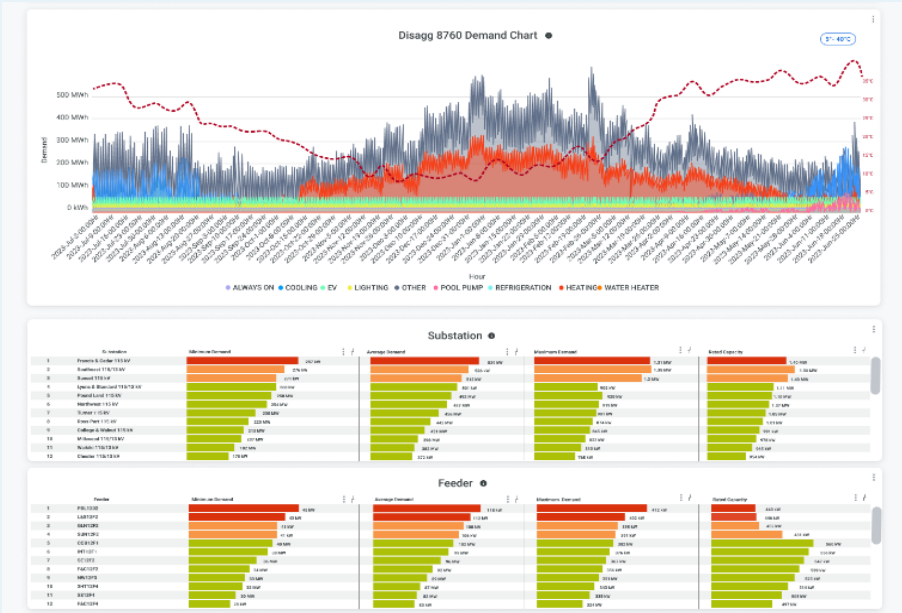
- **98(+1)%** accuracy for detection of L2 chargers
- **92(+3)%** accuracy for detection of L1 chargers
- **90(+5)% / 75(+5)%** accuracy for estimation for L2 and L1 chargers

APPLIANCE	ELECTRIC VEHICLE: L2 / L1*
MIN DATA REQUIREMENT (DAYS)	180 / 180
PRECISION	75(+5)% / 65(+3)%
RECALL	88(+2)% / 75 (+-3)%
ACCURACY	98(+1)% / 92(+3)%
FALSE POSITIVE RATE	<1% / <2%
ESTIMATION ACCURACY (100-MAPE)	90(+5)% / 75(+5)%

\*Based on residential 15-min. data sampling. Since EV and Pool Pump appliances are not commonly prevalent, having user survey data improves Precision to 95%+.



**See EVs on your Grid**  
 Because Bidgely's UtilityAI™ algorithms can spot EVs behind the meter of each household and then correlate those EVs to the relative grid assets, utilities can understand the presence, growth, geographic concentration, and load impacts of EVs in near real time.



**8760 View of EV Demand**  
 See your EV demand across all 8,760 hours of the year to spot trends, identify stress points, and guide EV program planning and engagement strategies.

**Grid Asset Impact**  
 Map EVs to grid assets to identify constraints and hot-spots, predict failure, and plan for operational changes needed.

Learn More at: [bidgely.com/solutions/EV](https://bidgely.com/solutions/EV)  
 To see our EV Intelligence in action, visit our [demo portal](#).

