



# Electric Vehicle Awareness

## Distributed Intelligence

The electrification of transportation poses a significant hurdle for utilities. With the global movement by governments to electrify transportation, a focus on carbon reduction and a transition away from petroleum-fueled vehicles, the demand for electricity has never been higher.

Unfortunately, the current availability of distribution, transmission and generation infrastructure is unable to support the demand created by transportation electrification. As a result, this will have an impact on your utility in the very near future. In addition, adding new infrastructure and generation to support the forecasted demand takes money and time, which is funded by consumers' rate increases and some government support.

An alternative is smart, precise management of electric load on our current infrastructure. Traditional load control programs are only partially effective and crude, providing only rudimentary management of distribution loads and distribution transformer life. Using highly targeted, intelligent load monitoring of every electric vehicle on your grid can extend the capability of the existing distribution assets and protect distribution transformer usable life.

### The Value of EV Awareness

A highly accurate, near-real-time monitoring system working around the clock helps:

- » Provide you with high fidelity insight into all electric vehicles on your distribution grid
- » Avoid unnecessary rate increase to your consumers and plan efficient and timely capital upgrades
- » Stay ahead of the coming electric vehicle loads, while improving asset utilization
- » Identify an electric vehicle that is charging behind a meter



## DELIVERING ELECTRIC VEHICLE INSIGHT

Electric Vehicle (EV) Awareness, an Itron distributed intelligence application, provides you with high-fidelity, real-time insight into all electric vehicles on your distribution grid. EV Awareness can identify an electric vehicle that is charging behind a meter, and provide charging on/off times and the EV load profile associated with that meter.

Using any load management or DERMS solution, including Itron's DER Optimizer, in conjunction with this high-fidelity insight, provides you with real-time load profile information needed to optimize, manage and control your distribution circuit loads, preventing transformer overloading and degrading usable transformer life. Aggregating electric vehicle load by phase, distribution transformer and feeder creates valuable data for

infrastructure planning, future capital projects and load forecasting. Additionally, you can use this information to create specialized tariffs and load control incentives for your customers that will help optimize EV charging loads on your distribution circuits.

Without EV Awareness, utilities are blind to the total impact of EV load on their distribution grids and medium-voltage distribution networks. With EV Awareness, you can stay ahead of anticipated electric vehicle loads while improving asset utilization, planning efficient and timely capital upgrades, and avoiding unnecessary rate increases to your consumers.

Service Point ID	Electronic Serial Number	Taxier ID	EV detected (last 30 days)	Average EVSE Energy (kWh)	Peak EVSE Load (kW)	Unique EVSE count	Most recent EVSE charging	Average # charge sessions/monthly	Date EV Detected
1700000001	1700000001	1700000001	0.66	7.65	1	Jul 17, 2024, 9:51:01 AM	1.00	Jul 17, 2024, 9:51:01 AM	
1700000002	1700000002	1700000002	3.72	7.66	1	Aug 5, 2024, 2:07:30 PM	0.14	Aug 5, 2024, 2:07:30 PM	
1700000003	1700000003	1700000003	5.35	11.96	2	Jan 9, 2025, 12:30:20 PM	0.35	Jul 10, 2024, 7:01:07 AM	
1700000004	1700000004	1700000004	13.28	11.72	1	Aug 24, 2024, 8:01:25 AM	0.80	Jul 10, 2024, 8:01:24 AM	
1700000005	1700000005	1700000005	8.28	9.43	1	Aug 27, 2024, 1:01:10 PM	0.86	Jul 10, 2024, 1:31:10 PM	
1700000006	1700000006	1700000006	0.97	10.85	2	Aug 7, 2024, 3:28:56 PM	0.78	Jul 30, 2024, 9:49:53 PM	
1700000007	1700000007	1700000007	11.11	7.86	1	Aug 27, 2024, 7:01:28 AM	1.00	Aug 28, 2024, 7:01:28 AM	
1700000008	1700000008	1700000008	0.79	9.30	1	Aug 5, 2024, 7:08:47 PM	1.00	Aug 4, 2024, 10:50:56 PM	
1700000009	1700000009	1700000009	0.90	9.91	1	Aug 19, 2024, 7:01:21 AM	0.28	Jul 26, 2024, 2:43:38 AM	
1700000010	1700000010	1700000010	4.39	11.64	2	Aug 29, 2024, 6:47:47 PM	1.31	Jul 10, 2024, 3:47:22 PM	
1700000011	1700000011	1700000011	1.79	10.95	2	Jul 26, 2024, 7:02:10 AM	0.25	Jul 15, 2024, 7:19:53 AM	
1700000012	1700000012	1700000012	15.71	8.84	1	Aug 15, 2024, 7:10:46 AM	1.00	Aug 15, 2024, 7:10:46 AM	
1700000013	1700000013	1700000013	6.77	11.75	2	Jan 9, 2025, 8:01:18 AM	0.92	Jul 10, 2024, 7:01:46 AM	
1700000014	1700000014	1700000014	5.82	9.86	2	Jan 9, 2025, 11:01:23 AM	0.27	Jul 10, 2024, 6:46:38 AM	

  

Charge Start Time	Charge End Time	Duration (hr:min)	Peak Load (kW)	Total Energy (kWh)
Jan 9, 2025, 12:30:20 PM	Jan 9, 2025, 12:37:07 PM	0:6	11.11	1.23
Jan 9, 2025, 8:01:56 AM	Jan 9, 2025, 11:25:30 AM	3:24	11.80	40.48
Jan 6, 2025, 11:48:13 AM	Jan 6, 2025, 11:57:00 AM	0:7	11.31	1.47
Jan 6, 2025, 8:42:10 AM	Jan 6, 2025, 10:47:44 AM	2:5	11.22	23.49
Jan 6, 2025, 8:01:52 AM	Jan 6, 2025, 8:55:35 AM	0:54	11.86	6.83
Dec 29, 2024, 10:27:53 AM	Dec 29, 2024, 10:34:22 AM	0:6	11.61	1.21
Dec 29, 2024, 8:01:05 AM	Dec 29, 2024, 8:27:07 AM	1:26	11.7	14.78
Dec 28, 2024, 8:58:50 PM	Dec 28, 2024, 10:25:59 PM	1:26	11.06	15.91

The summary page shows all of the EVs that have been detected by the Itron DI application, including various statistics such as the maximum power seen from an EV charger kW on the premise.

The service point detail page shows charging sessions detected at the service point along with associated details.

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