



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.

ITRON
EV Charging Monitor V1 ♥ 🔒 17m ago 🔄 🔍 ⋮

Meter ID Event Date Utility Name

2
Meter with EV charge events

19,127.50
Total KWH Charged

EV Energy Details							
Meter ID	Event Time	Event Detection Time	Event Storage Time	Event Type	Amplitude	Duration (Hour)	Energy (KWH)
1	2.16.840.1.114416.14...	2023-02-02 06:54:19	2023-02-02 06:54:19	2023-02-02 06:54:19	OFF	0	0
2	2.16.840.1.114416.14...	2023-02-03 03:38:41	2023-02-03 03:38:41	2023-02-03 03:38:41	ON	5465.0	0
3	2.16.840.1.114416.14...	2023-02-03 07:08:47	2023-02-03 07:08:47	2023-02-03 07:08:47	OFF	0	3.50
4	2.16.840.1.114416.14...	2023-03-21 23:32:10	2023-03-21 23:32:10	2023-03-21 22:53:07	ITRON_INTERNAL	0	0
5	2.16.840.1.114416.14...	2023-03-22 04:32:15	2023-03-22 04:32:15	2023-03-21 22:53:07	ITRON_INTERNAL	0	0
6	2.16.840.1.114416.14...	2023-03-29 20:31:13	2023-03-29 20:31:13	2023-03-29 19:32:25	ITRON_INTERNAL	0	0
7	2.16.840.1.114416.14...	2023-03-29 22:32:13	2023-03-29 22:32:13	2023-03-29 19:32:25	ITRON_INTERNAL	0	0
8	2.16.840.1.114416.14...	2023-04-06 16:31:06	2023-04-06 16:31:06	2023-04-06 15:42:25	ITRON_INTERNAL	0	0
9	2.16.840.1.114416.14...	2023-04-06 16:31:06	2023-04-06 16:31:06	2023-04-06 15:58:19	ITRON_INTERNAL	0	0
10	2.16.840.1.114416.14...	2023-04-06 16:31:51	2023-04-06 16:31:51	2023-04-06 15:42:25	ITRON_INTERNAL	0	0
11	2.16.840.1.114416.14...	2023-04-06 16:31:51	2023-04-06 16:31:51	2023-04-06 15:58:19	ITRON_INTERNAL	0	0
12	2.16.840.1.114416.14...	2023-04-06 20:32:30	2023-04-06 20:32:30	2023-04-06 19:42:20	ITRON_INTERNAL	0	0
13	2.16.840.1.114416.14...	2023-04-06 22:30:32	2023-04-06 22:30:32	2023-04-06 19:42:20	ITRON_INTERNAL	0	0
14	2.16.840.1.114416.14...	2023-04-14 15:22:46	2023-04-14 15:22:46	2023-04-06 15:42:25	ITRON_INTERNAL	0	0
15	2.16.840.1.114416.14...	2023-04-14 15:22:46	2023-04-14 15:22:46	2023-03-21 22:53:07	ITRON_INTERNAL	0	0
16	2.16.840.1.114416.14...	2023-04-14 15:22:46	2023-04-14 15:22:46	2023-03-16 16:02:27	ITRON_INTERNAL	0	0
17	2.16.840.1.114416.14...	2023-04-14 15:22:46	2023-04-14 15:22:46	2023-04-14 15:21:54	ITRON_INTERNAL	0	0
18	2.16.840.1.114416.14...	2023-04-14 15:22:46	2023-04-14 15:22:46	2023-04-06 15:58:19	ITRON_INTERNAL	0	0
19	2.16.840.1.114416.14...	2023-04-14 15:22:46	2023-04-14 15:22:46	2023-04-06 19:42:20	ITRON_INTERNAL	0	0
20	2.16.840.1.114416.14...	2023-04-14 15:22:46	2023-04-14 15:22:46	2023-03-29 19:32:25	ITRON_INTERNAL	0	0
21	2.16.840.1.114416.14...	2023-04-14 15:31:07	2023-04-14 15:31:07	2023-04-14 15:21:54	ITRON_INTERNAL	0	0

Test user interface showing real-time DI EV charging disaggregation.



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