

LES EV Initiatives

Three ways we're preparing for a plug-in future...

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1 LES Net Benefit Calculation – Preliminary Results

Leveraging “national averages” for energy consumption and a benefit/cost methodology typically used to evaluate demand-side management programs, LES calculated an approximate range of net-benefits per residential vehicle (10-year NPV):

	100% On-Peak Charging		100% Off-Peak Charging
EV	\$300	← →	\$1,400
PHEV	(\$200)	← →	\$700

Time of day when customers charge has a *major* impact.


2 EPRI Study – Drivers and Barriers for Customer Adoption


LES is participating in a survey, coordinated by the Electric Power Research Institute (EPRI), to identify customer awareness and preferences around electric vehicles. Targeted completion is late 2018.


Primary deliverables will include:


- Key drivers and barriers to electric vehicle adoption, helping to inform utility program design.
- Model to help predict the adoption of electric vehicles within the utility's service territory.


3 LES Electric Vehicle Study (Nov 2018 – Nov 2020)

 **1** LES customer with an EV or PHEV applies via FleetCarma-hosted website.


 **2** LES and FleetCarma review applicants; targeting ~~50~~ ~ 90 that cover a wide range of vehicle types.

 **3** Once approved, FleetCarma ships hardware device directly to participant.

 **4** Participant plugs in device and FleetCarma receives cellular signal to ensure operations.

 **5** LES downloads anonymized data each month, including:

- » Charging session duration, energy use and location.
- » Trip duration, energy use, and distance.

 **6** Participant receives:

- » \$25 upon data collection.
- » \$25 upon returning device following 2-year study.
- » Easy access to personal charging/trip data via web.

Piecing Together the EV Puzzle, From the Ground Up...

Net Benefit Calculation

*helps determine **how** a single EV/PHEV impacts LES' system.*

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EPRI Drivers and Barriers for Customer Adoption Study

*helps determine **why** and **when** impacts might accrue.*

Piecing Together the EV Puzzle, From the Ground Up...

LES Electric Vehicle Study
*collects charging data from within the LES service territory, helping refine **how** and **when** those impacts might be felt.*

Net Benefit Calculation
*helps determine **how** a single EV/PHEV impacts LES' system.*

EPRI Drivers and Barriers for Customer Adoption Study
*helps determine **why** and **when** impacts might accrue.*

*Together, these pieces should help answer the larger question...
What should LES be doing to prepare?*