



# Residential EV Programs

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# Residential EV Rate

Quick overview of BED's Residential Electric Vehicle rate

## Focus

Freddie will share the experience of BED's experience with their off-peak EV Rate and strategies underway to increase participation in the optional EV rate.

# Peak Impact of EVs

What will it cost to serve this additional load?



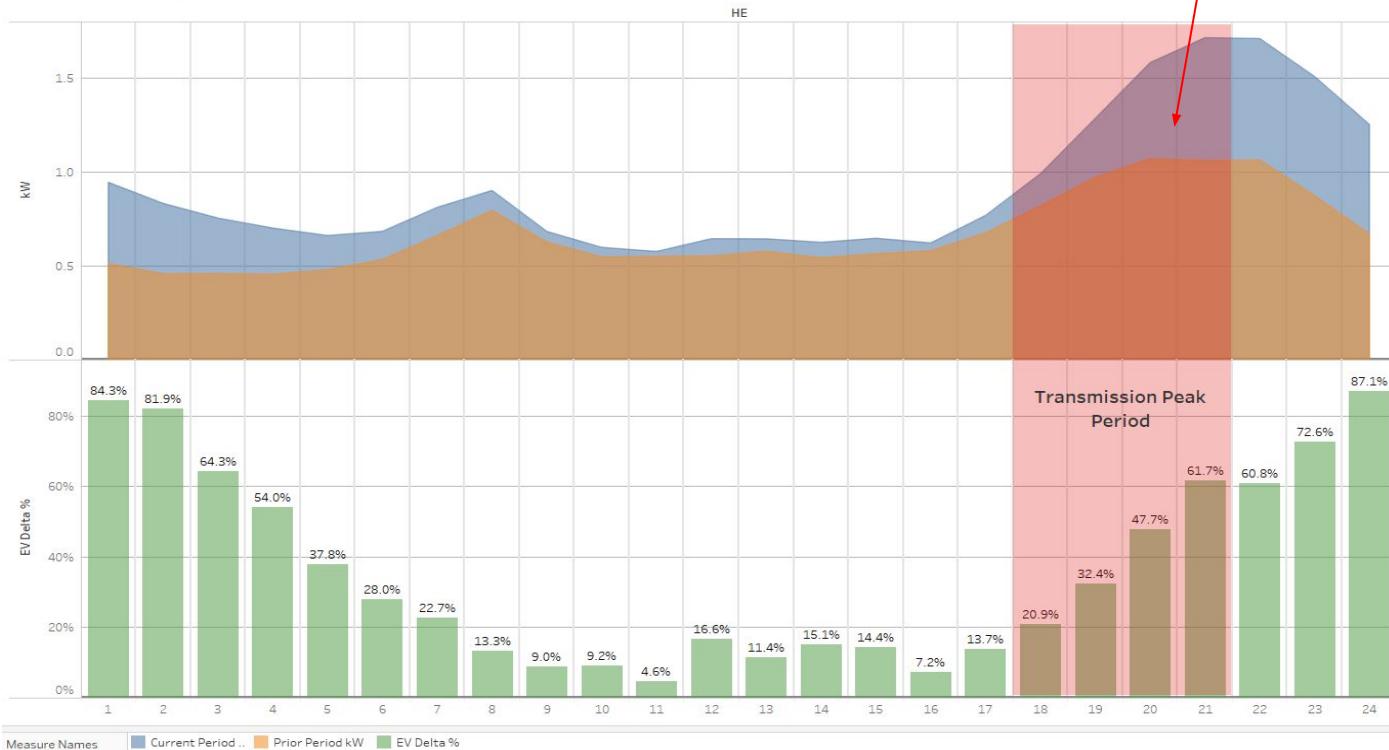
## Average Load Profile

AMI data for the homes of 18 residential EV owners compared to the previous year:

40% increase in residential customer contribution to transmission peaks

Level 2 charging will exacerbate effect

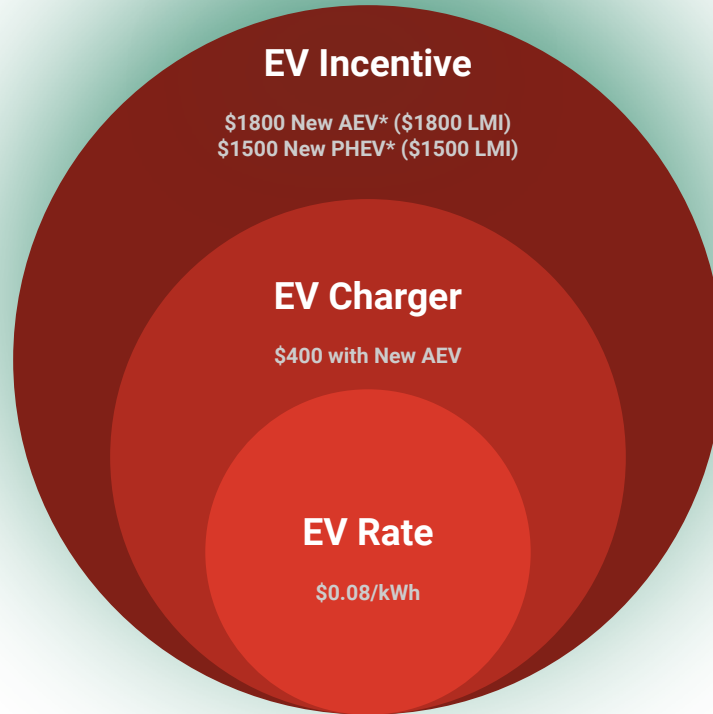
Weekday Lvl. 2 Charging





# Incentive Structure: Green Stimulus

## Electric Vehicle and Charger Incentives



\* Note: EV Incentive is for all-electric vehicles (AEV) and plug-in hybrid electric vehicles (PHEV) with MSRP under \$50k, see eligibility for these incentives



# Residential EV Rate

Quick overview of BED's Residential Electric Vehicle rate

## HOW TO GET STARTED

If you already own one of the qualifying EV Chargers you only need to complete step 2.

### 1. Purchase and install a qualifying EV charger

- [ChargePoint Home](#) | [Packetized Energy](#)

### 2. Enroll in the new Residential EV Rate

- Follow the instructions for your EV Charger model below.
  - [ChargePoint](#) | [Packetized Energy](#)
- **Important:** To receive the monthly EV charging credit, you may **only charge your vehicle between 10pm and 12 noon** (the next day). If at any time during your billing month you charge outside these times, you will not receive the 45% savings on your bill for the energy used to charge your EV.

### 3. New AEV Owners: Print and complete the EV Charger Rebate Form.

- Mail it to: Energy Services, 585 Pine St, Burlington, VT 05401 or
- E-mail it to [efficiency@burlingtonelectric.com](mailto:efficiency@burlingtonelectric.com)
- Be sure to include proof of purchase of your EV charger.
- See eligibility below



[Download EV Charger Rebate Form](#)



# Marketing Approach

## How BED is promoting the purchase of electric vehicles and the EV Rate

EQUIVALENT OF



PER GALLON

- NO OIL CHANGES
- NO SPARK PLUGS
- NO TIMING BELTS
- NO EMISSIONS!

[burlingtonelectric.com/ev](http://burlingtonelectric.com/ev)

Price based on average EV MPGe and fossil fuel MPG ratings.

Benefits

Podcast

Instructions

Rebate Form

FAQs



### CHARGE YOUR EV AT HOME AND SAVE

WAKE UP TO A FULLY-CHARGED EV EVERY MORNING WITH YOUR OWN "CLEAN CHARGING STATION" AT THE EQUIVALENT OF 60¢ PER GALLON\*

When you purchase an All-Electric Vehicle (AEV) in 2019, BED will give you \$5,000 toward the purchase of your AEV, a \$400 rebate for a qualifying EV charger and 4¢/kWh savings on the energy you need to charge your EV when you join the Residential EV Rate!

BED customers with an existing AEV or Plug-in Hybrid Vehicle (PHEV) are still eligible to join the Residential EV Rate. See below for How To Get Started.



**FASTER**

Charge your EV up to 6x faster than from your wall outlet, adding around 42 miles of range per hour.



**CONVENIENT**

Schedule your car to charge overnight and monitor progress through a few phone apps.



**LESS EXPENSIVE**

Fuel up with 100% renewable electricity at the equivalent of 60¢ per gallon.\*



**HELPFUL**

Charging between 10pm and 12 noon the next day extends the aho's electric range more evenly throughout the day.

### LISTEN TO THE PODCAST

Casey and Pauline discuss the many incentives for getting into a new electric vehicle on "Bright Ideas Burlington."

▶ 0:00 / 7:20

### HOW TO GET STARTED

If you already own one of the qualifying EV Chargers you only need to complete step 4.

- Purchase and install a qualifying EV charger**
  - ChargePoint Home | Packaged Energy
- Enroll in the new Residential EV Rate**
  - Follow the instructions for your EV Charger model below.
    - ChargePoint | Packaged Energy
    - If you only charge your vehicle between 10pm and 12 noon (the next day), you will receive a 4¢/kWh savings on your bill for the energy used to charge your EV.
- Now drive AEV Ownership. Print and complete the EV Charger Rebate Form.**
  - Mail to: Energy Services, 200 Pine St, Burlington, VT 05401-0001
  - Email it to: [eservices@burlingtonelectric.com](mailto:eservices@burlingtonelectric.com)
  - Be sure to include proof of purchase of your EV charger.
  - See eligibility below.

Download EV Charger Rebate Form



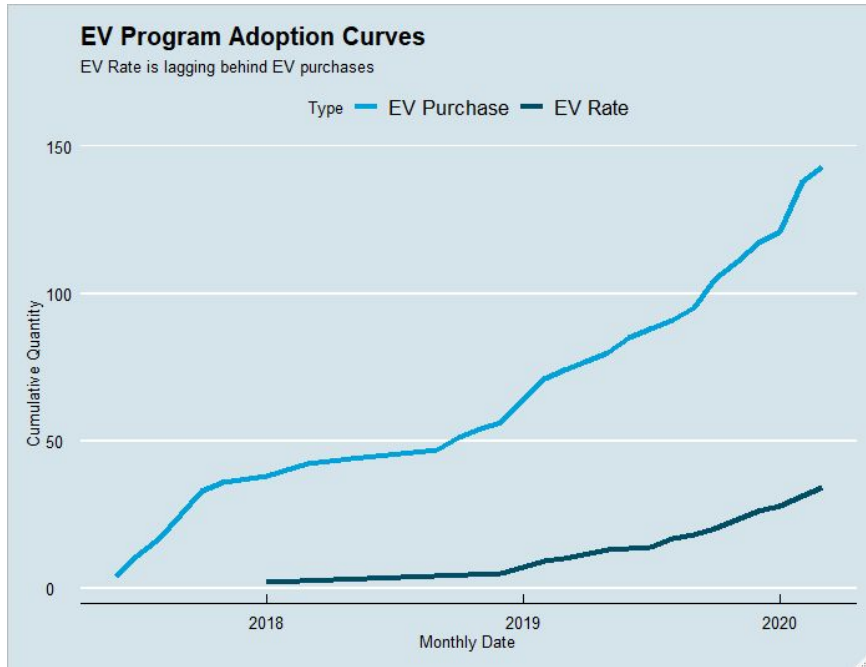
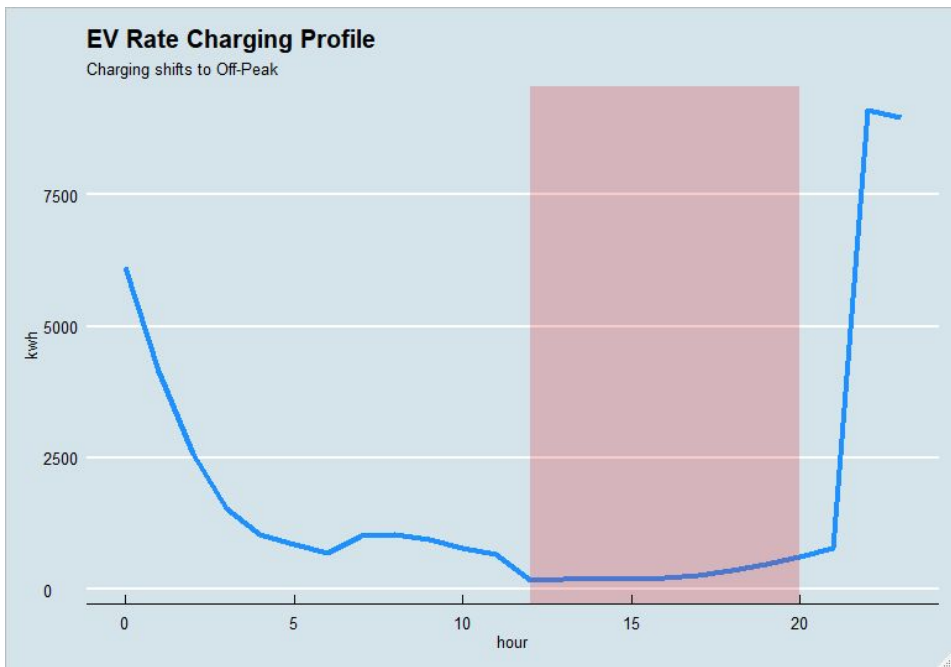
### FREQUENTLY ASKED QUESTIONS

- ▶ How much is the EV Charging Credit per kWh? How much will I save?
- ▶ Who is eligible for the Residential EV Rate?
- ▶ When should I charge my vehicle?



# Results to Date

Shifted load curve away from “typical” on-peak period, but rate adoption lags behind EV sales





# Lessons Learned

## Rate Related

- All or nothing EV Charging Credit is effective and limits downside
- Fixed TOU is sufficient at this level of EV deployment, but will want to begin implementing Flexible Load Option
  - RNS peaks are occasionally popping up in the morning during the Winter

## Hardware / Software

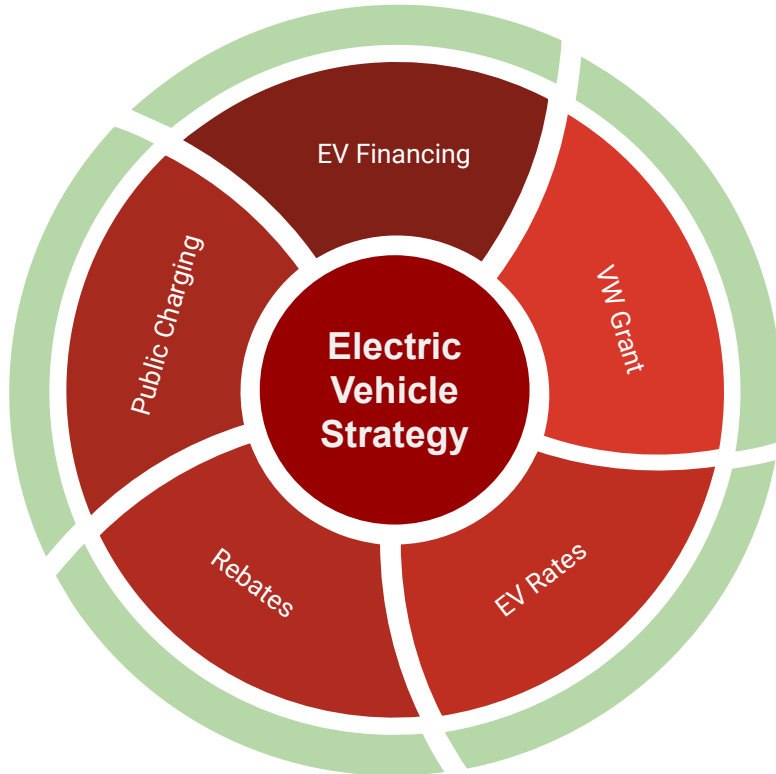
- Smart Level 1 EV Chargers are not currently commercialized
- EVSE time-of-use scheduling software is not flawless in all cases
  - Some slip-ups where chargers activate during the on-peak window without the customer knowing it

## Other Barriers

- Multifamily/Rental properties have barriers to install proper hardware / make-ready work
  - ~60% of BED's residential customers are renters
- Make-ready work costs can be significant and range widely, making them difficult to predict without getting an electrician on-site
- More users = more difficulty with coordination/curtailment (i.e. public charging)



# Electric Vehicle Strategy



## Lowering Upfront Costs:

- Rebates \$1800 AEV; \$1500 PHEV
- Special financing arrangements with local credit unions
- Special lease arrangements with local dealerships
- CarShare VT 1st EV - Main & St. Paul ("Sparky")
- Vermont State Incentive

## Reducing Ongoing Costs:

- Overnight \$0.08/kWh Residential EV Rate
- Workplace Charging Rate

## Improving Convenience:

- 13 Public Charging locations with 27 ports available
- Up to \$1,000 Workplace Charging Incentive
- Electrify America 4 public charging ports
- EVmatch - 16 EV chargers focus on Multifamily Unit Dwellings

## Education

- Drive Electric Events, Public Forums

Implemented

Proposed / Working on it