



# EDGE CASE STUDY

## SIMPLY ELECTRIC

RECHARGING TIME-OF-USE  
ELECTRIC VEHICLE RATES

2024

ORACLE | Partner



WE INSTALL **CONFIDENCE**. NOT JUST SOFTWARE

# WHO IS USP?

We are a **system integrator** that provides technical support from a responsive, nimble team and has **decades** of utility experience.

Drawing on deep technical knowledge and a lifetime spent in the industry, USP sets the standard for support.



# WHAT WE OFFER



**MANAGED SERVICES**



**UPGRADES**



**CLOUD SERVICES**



**IMPLEMENTATIONS**

# WHERE WE'VE WORKED

USP has worked across the US providing Cities, Municipals, Co-Ops, and IOUs technology support, including Upgrades, Managed Support, Cloud Services and Implementations, using the Oracle Energy & Water Product Suite.

-  ELECTRIC
-  GAS
-  WATER & SEWER
-  SOLID WASTE



**CASE STUDY**

**SIMPLY ELECTRIC**

TIME-OF-USE RATES FOR ELECTRIC VEHICLES

# OUR ROADTRIP TODAY

THE FUTURE OF TRANSPORTATION IS ELECTRIC. WE'LL DISCUSS HOW UTILITIES BILL RESIDENTIAL EV CHARGERS WITH THE ADDED COMPLEXITY OF TOU RATES BY DRIVING YOU THROUGH TWO ROUTES TO EV RATES.

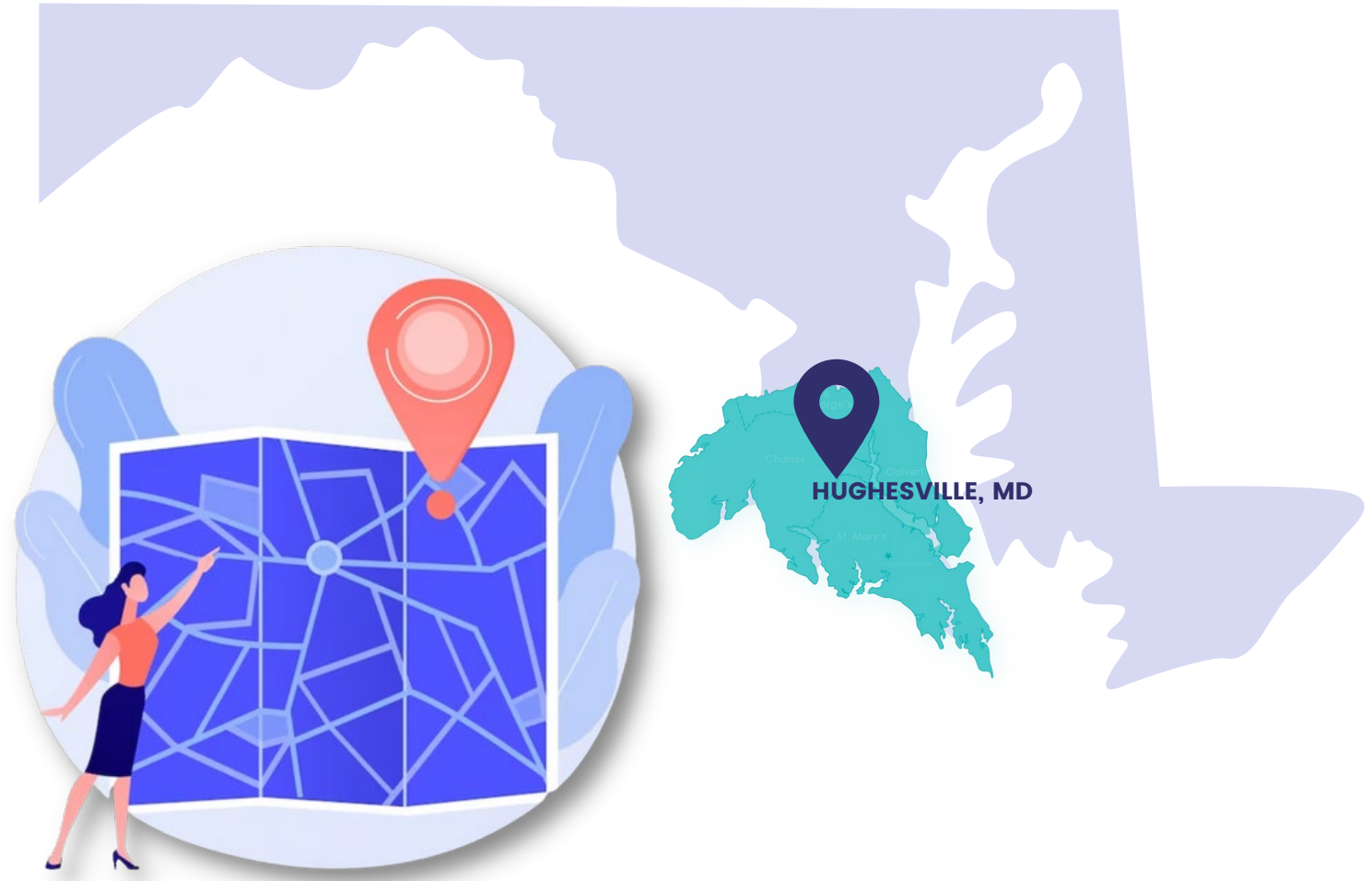


SMECO

SANTEE COOPER

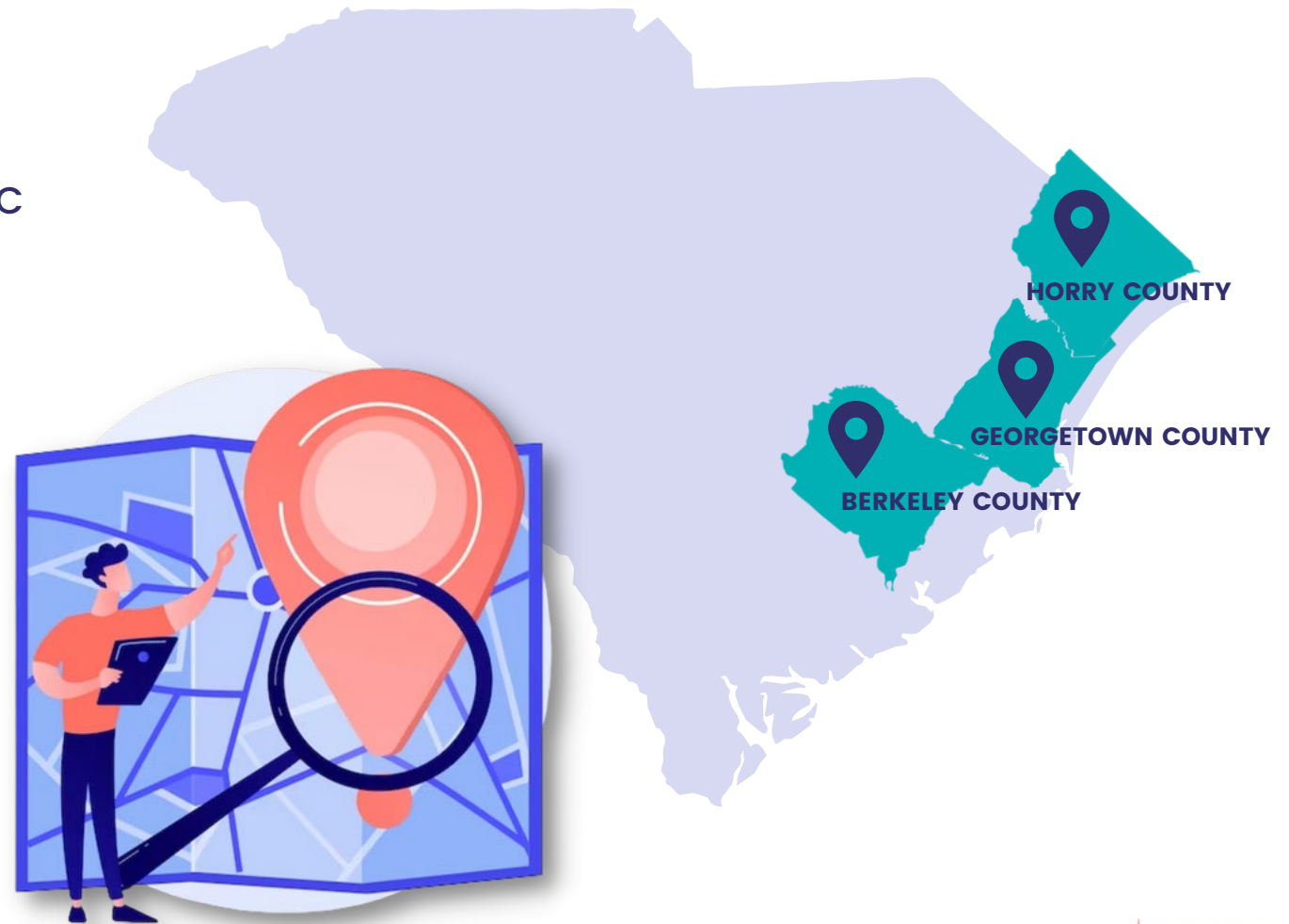
# NAVIGATING | SMECO

- ELECTRIC
- 170,000 CUSTOMERS
- 15TH LARGEST CO-OP IN USA
- CC&B V2.703
  - INTEGRATED WITH ENERGY IP



# NAVIGATING | SANTEE COOPER

- ELECTRIC
- 206,000 DIRECT SERVE CUSTOMERS
- LARGEST WHOLESALE POWER PROVIDER IN SC
- CC&B V2.6
  - INTEGRATED WITH ORACLE MSCS





# THE LANDSCAPE.



# ACCELERATING INTO THE FUTURE

EV'S DRAW ATTENTION TO THE BENEFITS OF TOU RATING AND ADOPTING ENERGY USAGE BEHAVIORS THAT REDUCE DEMAND. UTILITIES NEED TO USE THIS OPPORTUNITY TO CONTROL DEMAND ON THE GRID. TIME-OF-USE RATES HAVE NOT TRADITIONALLY SEEN HIGH ADOPTION RATES IN THE RESIDENTIAL SECTOR, AS THE SAVINGS WEREN'T SIGNIFICANT ENOUGH TO CHANGE BEHAVIOR.

- 01 EV PRODUCTION INCREASE
- 02 GOVERNMENT REBATE PROGRAM
- 03 BUILDING TO ACCOMODATE EV'S
- 04 EV'S BRING ATTENTION TO TOU

# WHY SMECO IS GEARING TOWARDS EV

SMECO HEARD FROM MEMBERS WHO OWNED EVS WOULD PREFER A TOU RATE SPECIFIC TO THE CHARGING OF THE VEHICLES RATHER THAN THEIR HOME RATE.



# PERKS

## SMECO

- 01 MEMBER CHOICES
- 02 CLIMATE SOLUTIONS ACT
- 03 CARBON FREE 2045
- 04 AVOID GREEN HOUSE GAS
- 05 ESG PLATFORM/STANCE

# WHY SANTEE COOPER IS GEARING TOWARDS EV



SANTEE COOPER HAD THE DESIRE TO BE INNOVATIVE AND TO MEET CUSTOMER EXPECTATIONS AND NEEDS.

# PERKS

## SANTEE COOPER

- 01 MORE OPTIONS
- 02 DATA COLLECTION
- 03 LOAD MANAGEMENT
- 04 AVOID INCREMENTAL CAPACITY
- 05 CHARGING BEHAVIOR

# THE EFFECTS.



# CHALLENGES TO UTILITIES

WITH ELECTRIC VEHICLE ADOPTION SET TO GROW IN THE U.S, UTILITIES HAVE TO EVOLVE THEIR PLANNING AND CHANGE THEIR CUSTOMERS' CHARGING HABITS.





# SPEED BUMPS

## SMECO

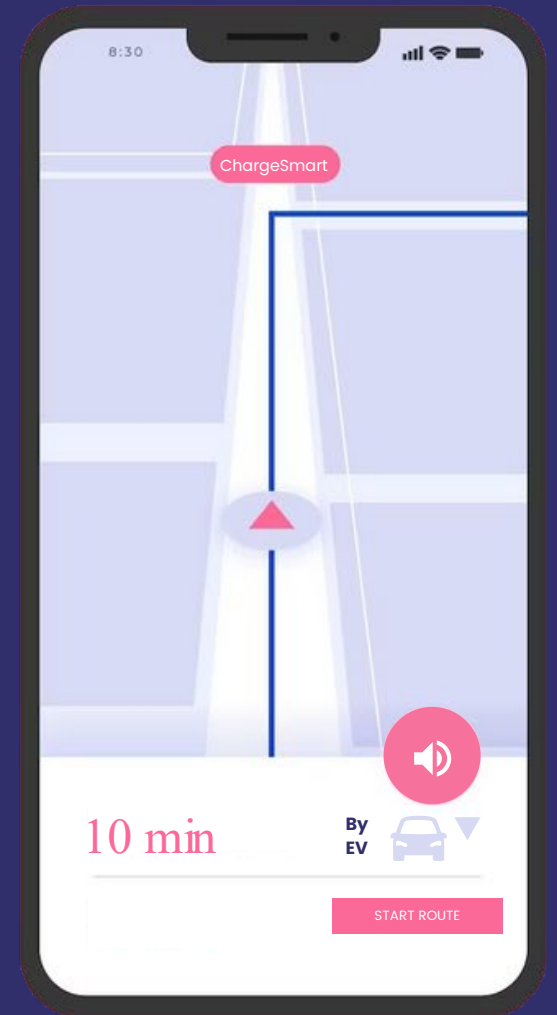
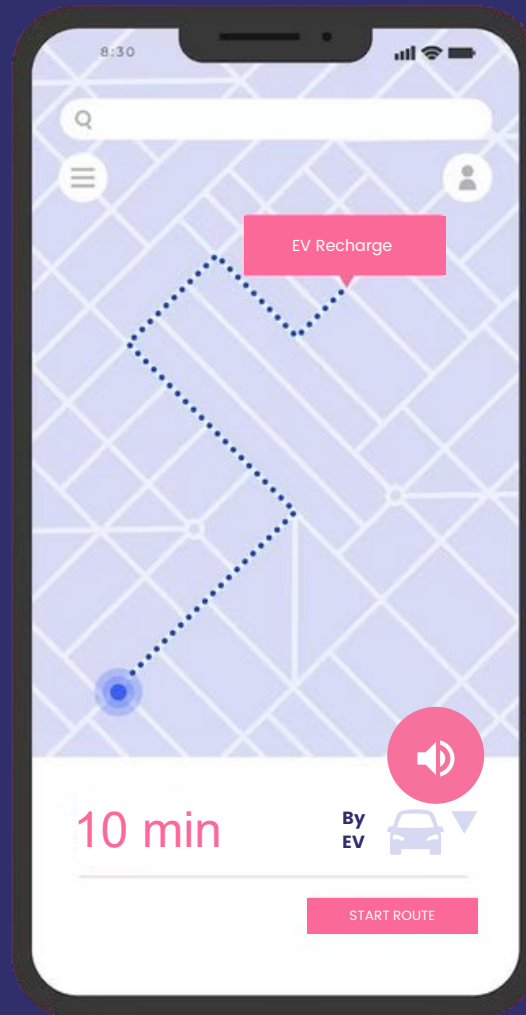
- 01 LOCATION OF ALL EV'S
- 02 ENOUGH ADEQUATE TRANSFORMERS
- 03 GRID ISSUES
- 04 POTENTIAL PEAK TIMES

# SPEED BUMPS

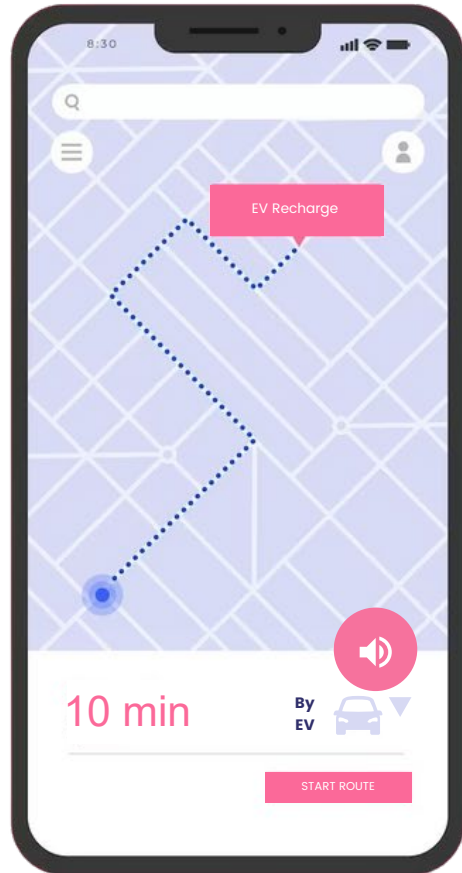
## SANTEE COOPER

- 01 REDUCTION IN FUTURE CAPACITY NEEDS
- 02 CUSTOMER HABIT CHANGE WITH CUSTOMER MANAGEMENT
- 03 DETERMINING OFF-PEAK AND SUPER OFF-PEAK HOURS
- 04 EXCESS AVAILABLE CAPACITY
- 05 LOWER MARGINAL FUEL COSTS

# TWO ROUTES.



# ROUTE 1 | EV RECHARGE



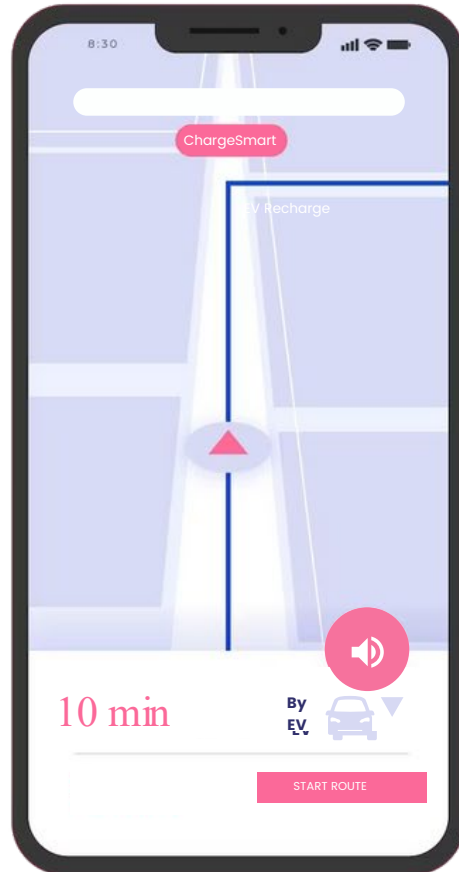
SMECO, DEDICATED TO CLEAN AIR, ANNOUNCED IN MARCH OF 2021 THE OPENING OF THEIR FIRST SMECO EV RECHARGE PUBLIC CHARGING STATION FOR ELECTRIC VEHICLES.

# HOV LANE = THIRD PARTY INVOLVEMENT

WORKING WITH A THIRD-PARTY PROVIDER, SMECO UTILIZES CC&B'S BILLABLE CHARGE FUNCTIONALITY TO 'BILL' CREDITS USING THE 'EV USAGE FILE RECORDS.'

- 01 DIDN'T HAVE IN-HOUSE EXPERTISE
- 02 CHALLENGES OF NUMEROUS ENERGY INFRASTRUCTURE TYPE
- 03 EXISTING RELATIONSHIP WITH ENERGY HUB (SMART THERMOSTAT PROGRAM)
- 04 DIDN'T WANT TO RECREATE THE WHEEL WITH CC&B - EASIER TO OUTSOURCE

# ROUTE 2 | CHARGESMART



THE NEXT STOP, CHARGESMART IMPLEMENTED BY SANTEE COOPER, FEATURES TWO NEW, EXPERIMENTAL RATES TO HELP RESIDENTIAL CUSTOMERS WHO OWN OR LEASE ELECTRIC VEHICLES AND CHARGE THEM AT HOME.

# THE NEED FOR SPEED

- 01 CUSTOMER ADOPTION OF EV'S WAS CONSTANTLY INCREASING
- 02 CURRENTLY 1,000 EV'S IN THE SERVICE TERRITORY WITH A PROJECTION OF ~12,000 BY 2030
- 03 EV DEMAND = PRESENT INFRASTRUCTURE CHALLENGES
- 04 DESIRE TO BE INNOVATIVE
- 05 BOARD DIRECTIVE



CHARGESMART'S **TWO TIME -OF-USE RATE**

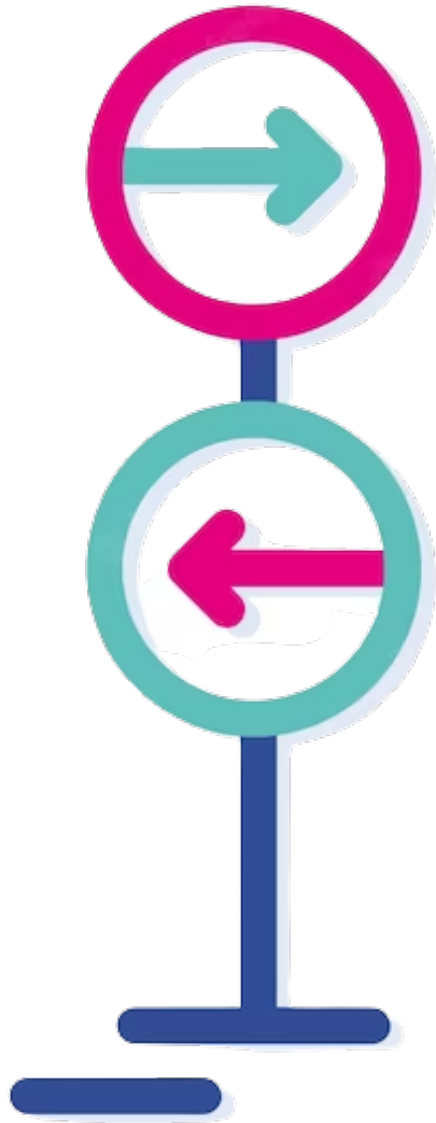
**PLANS** FEATURE DIFFERENT PRICES FOR ELECTRICITY DEPENDING ON THE TIME OF DAY THE ELECTRICITY IS BEING USED:



**REV (RESIDENTIAL ELECTRIC VEHICLE POWER RATE)**

**EVO (RESIDENTIAL ELECTRIC VEHICLE POWER ONLY RIDER)**



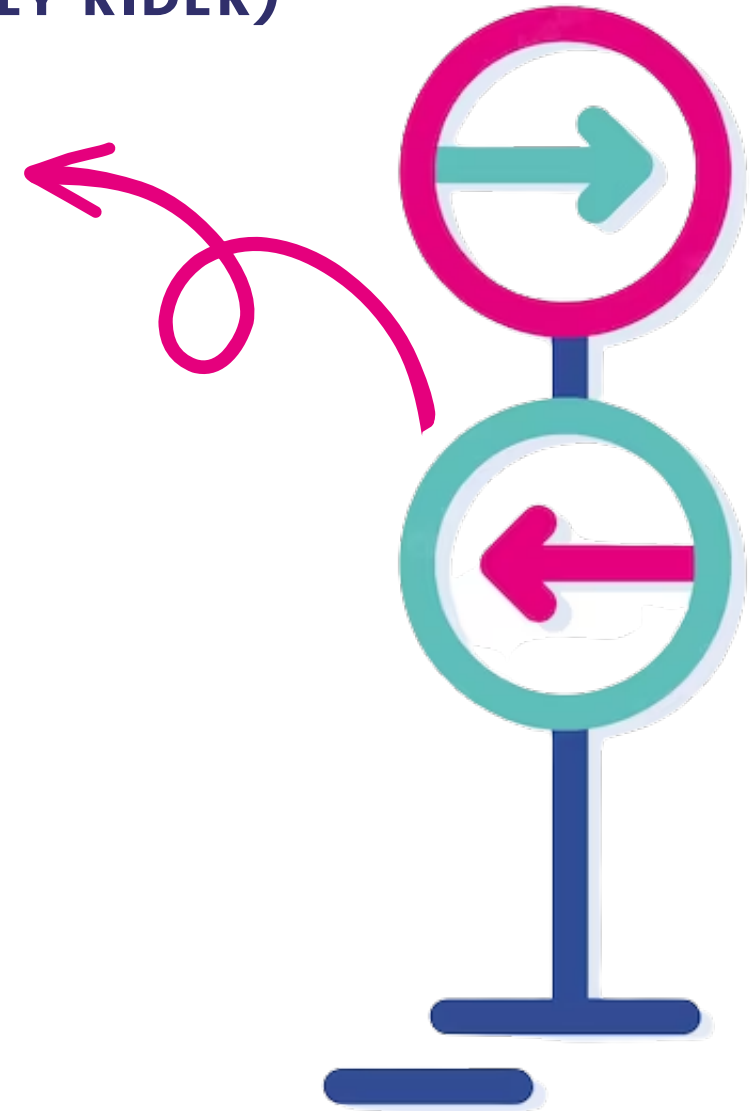


## REV (RESIDENTIAL ELECTRIC VEHICLE POWER RATE)

- 01 WHOLE HOUSE RATE = EV CHARGE + HOUSE ELECTRICITY
- 02 ON-PEAK ELECTRICITY CONSUMPTION  
= COSTS MORE THAN STANDARD RESIDENTIAL RATES
- 03 OFF-PEAK HOURS + 6 HOUR OVERNIGHT SUPER OFF-PEAK  
= PRICED LOWER THAN STANDARD RATES
- 04 CONSUMERS SAVE 70% IN EV CHARGING VS STANDARD RESIDENTIAL RATE

# EVO (RESIDENTIAL ELECTRIC VEHICLE POWER ONLY RIDER)

- 01 REQUIRES INSTALLATION OF A **SEPARATE METER**
- 02 APPLIES ONLY TO ELECTRICITY USED TO CHARGE VEHICLE
- 03 ON-PEAK ELECTRICITY CONSUMPTION  
= COSTS MORE THAN STANDARD RESIDENTIAL RATES
- 04 OFF-PEAK HOURS + **8 HOUR OVERNIGHT** SUPER OFF-  
PEAK = PRICED LOWER THAN STANDARD RATES
- 05 CONSUMERS **SAVE 58% IN EV CHARGING** VS STANDARD RESIDENTIAL RATE



# YOU HAVE ARRIVED

WHATEVER THE ROUTE OR METHOD  
USED, TIME-OF-USE RATES OFFER  
THE BEST SAVINGS FOR ELECTRIC  
VEHICLES.



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