



Austin Energy's Transportation Electrification Program

Briefing for Electric Utility
Commission

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June 2018





EV Policy Leadership



COA Resolutions:

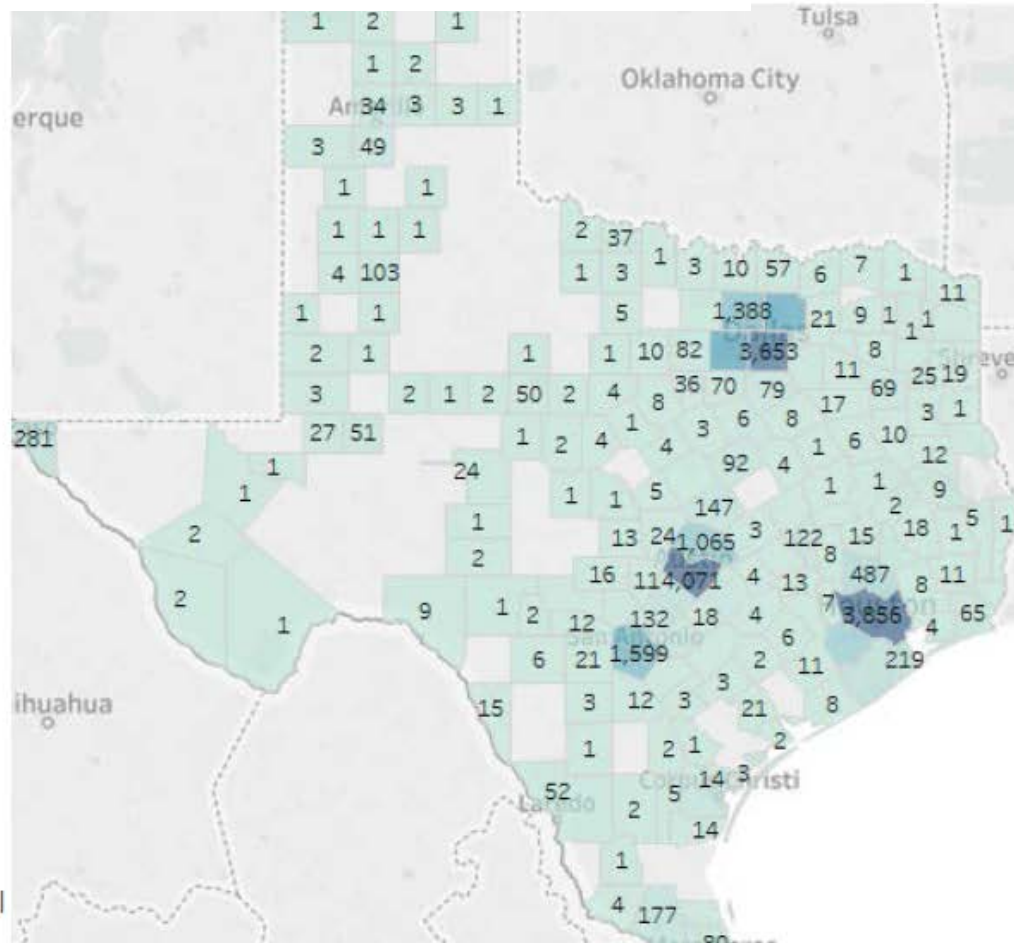
- 7 EV related amendments to the AE Resource Plan
- NetZero 2050
- City EV Fleet Adoption
- Shared, Electric & Autonomous “Next Wave Mobility” resolution -> Smart Mobility Plan

State of Texas brought back the \$2500 EV rebate



EV Adoption by Texas County

EVs Registered in Texas 2017 Q4

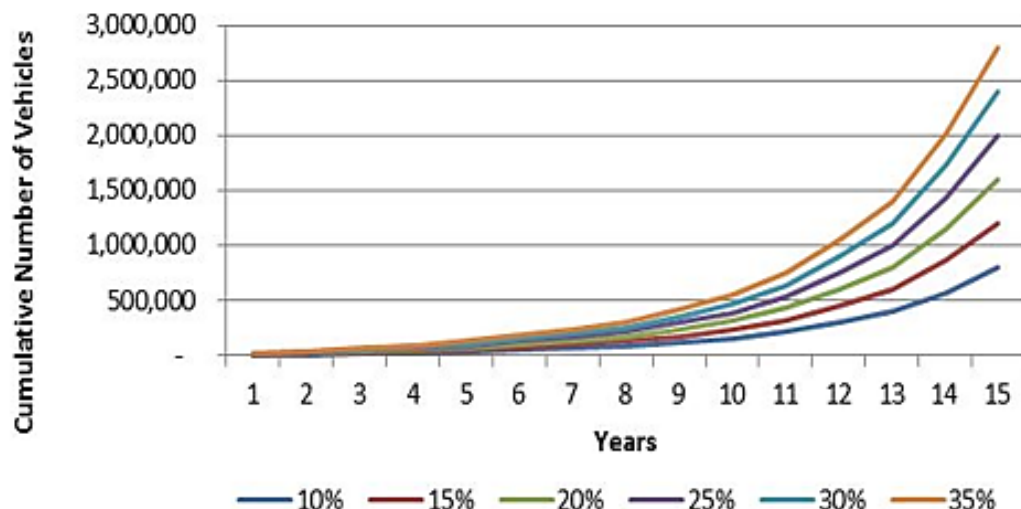


Rank	County	# EVs
1	Travis	4,071
2	Harris	3,856
3	Dallas	3,853



ERCOT EV Scenario Analysis

Penetration Rate of EVs



1,600,000 EVs by 2031
which will be 20% of the
total passenger vehicles
in Texas today?

*-Source ERCOT 2016 Long-Term System
Assessment (LTSA) Scenario Assumptions*

What could 20% mean to Austin in Yr. 2031?

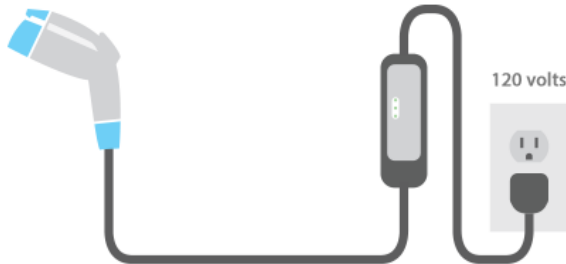
- **\$128,000,000/year** new e-fuel revenue
- 320,000 EVs
- 1,280,000 MWh of new load per year- ~10% of current load
- 19,200 MWh of energy storage capacity

*based on 12,000 miles @ 4,000kWh/yr x \$.10/kWh



Fueling an Electric Vehicle

Level 1 Charging



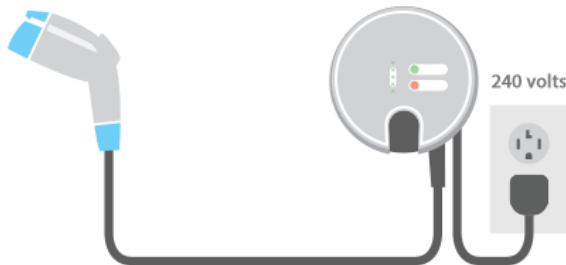
1 kW

8-12 hours

UTILITY COST

Low Cost
Leverages existing
infrastructure

Level 2 Charging



6 kW

2-4 hours

Med Cost
50% Rebate up to \$4,000
per station (2 ports)

DC Fast Charging



50-
125
kW

5-20 minutes

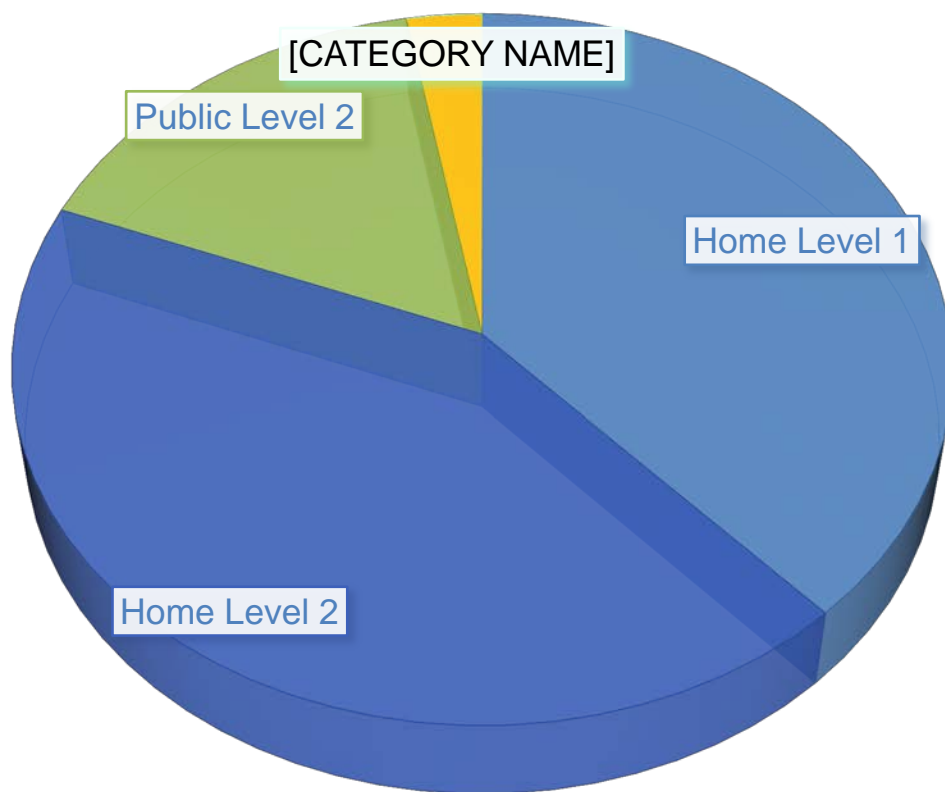
150-
300
kW

High Cost
\$150,000 per station
(1 port)



Today's EV Charging

EV CHARGING IN KWH (EST.)



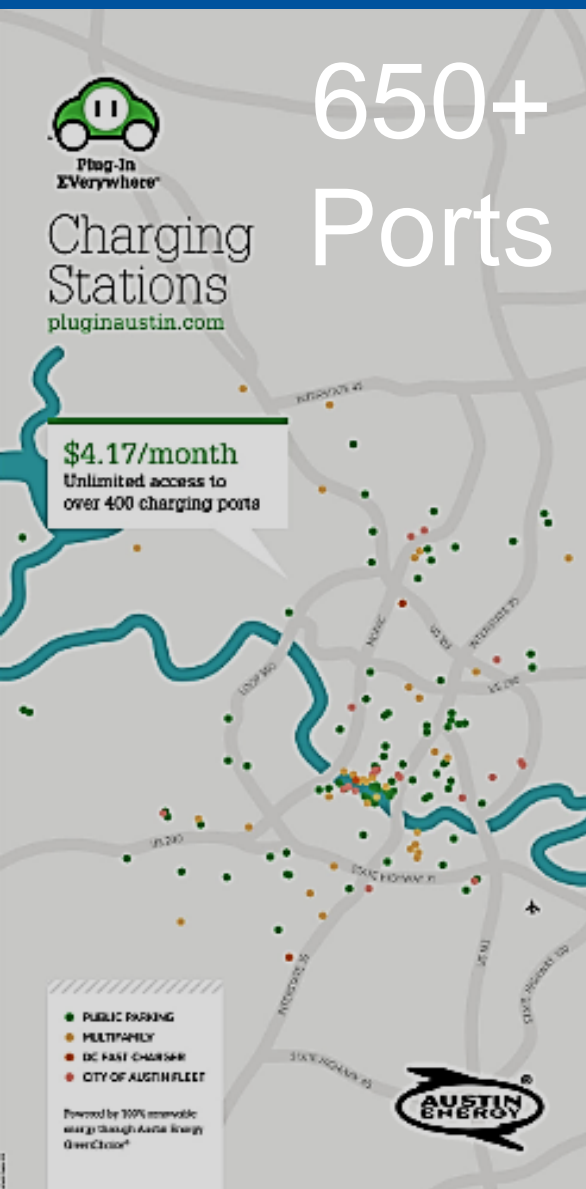
Approximately 85% of all charging is done at home, DCFast enables next gen electrification and corridor transit

Public charging encourages consumer purchase of EVs even though most customers quickly realize home charging is right for them

1 EV = \$400/year of new revenue to the utility



Public Charging





Electric Drive EcoDistrict Showcase





Low-Income Program

Grant Funding Provided By:



- EVs for Schools – provide infrastructure and curriculum for students (program collaboration with AISD)
- Working with COA Equity Action Team to cross promote ideas, programs, & outreach
- Working with non-profit multifamily (Foundation Communities, HACA) on new programs
- eBike share program, working with Austin Transportation Dept



City Fleet



- Working with City Fleet Services, Public Works, and Capital Contracting for master hardware/services agreement for City Fleet EVSE infrastructure (June RCA)
- Working with AE Fleet Management on electrification planning and process
- AE took receipt of an EV for outreach events / promotion (Chevy Bolt)



Program Updates



- EV360 TOU pilot underway
- Updated residential rebate program moving to tiered (\$1,200/\$900) based on WiFi enabled
- Moving rebates to new platform (EECP) to improve tracking, reporting, and customer experience (June 28th is residential rebate rollout date)
- Commercial rebates available, up to \$4,000/station- level 2



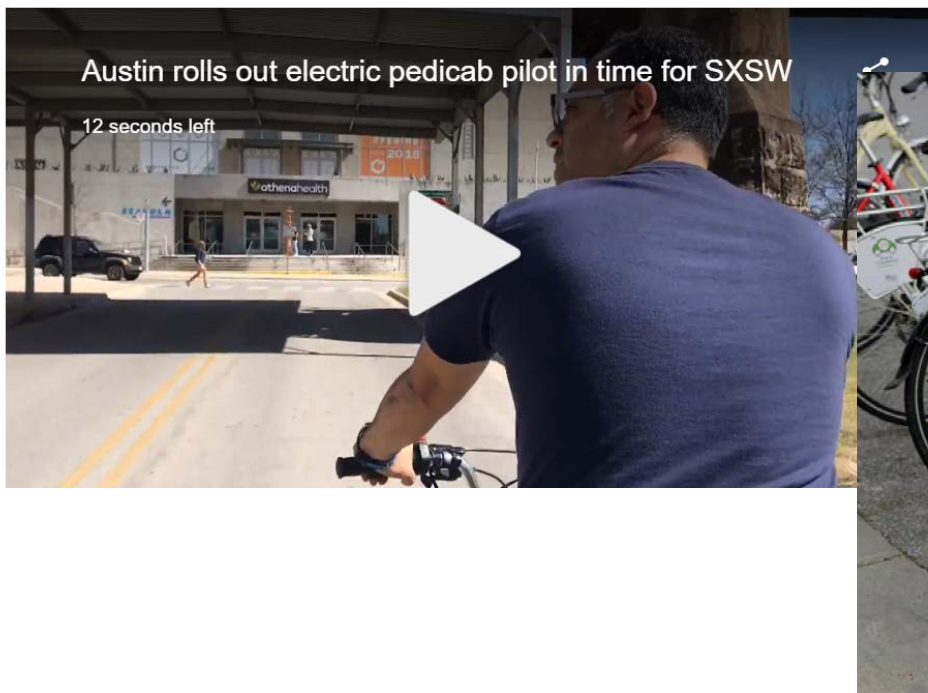
Two-Wheel Electrification

Statesman

Austin pedicabs get boost with electric motors just in time for SXSW

METRO-STATE

By Mary Huber - American-Statesman Staff



- AE rebate up to \$300 for eBike consumer and \$400 per eBike for fleet adoption
- In partnership with Austin Transportation Department, launched ePedicab pilot





DCFast Enables High Mileage Adoption

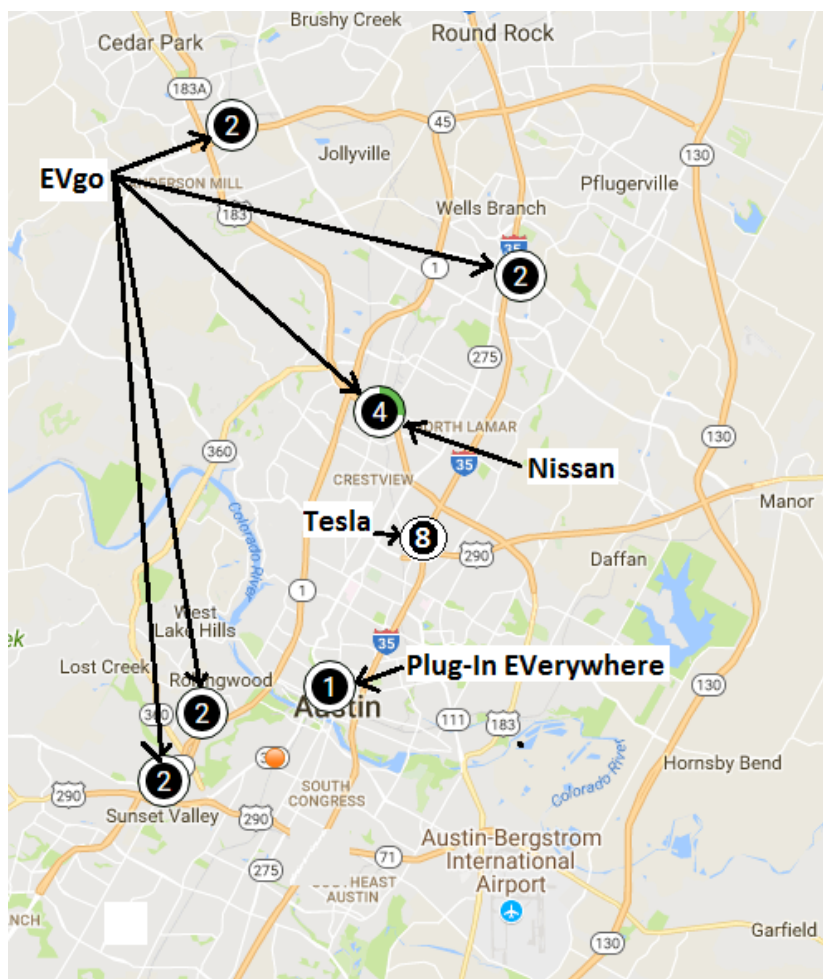
High-mileage applications REQUIRE adequate DCFast

- Autonomous Electric Mobility (300 by 2020 quickly scale to “thousands”)
- Electric CarShare, Taxi, and gig economy (Maven gig 2018, plans for expansion directly related to DCFast, Uber/Lyft announcements)
- Bus Electrification (CapMetro 20-40 buses by 2020/2021)
- Logistics (major announcements from UPS, Walmart, PepsiCo)
- Corridor travel (TERP grants AE just notified of \$1.6M, Tesla, EVgo)



DCFast Projects underway or under consideration:

- **Tesla** recently placed a 8 DCFast Hub and another hub in design. Goal is 48 in Austin
- **EVgo** interested in 8-16 stations
- **Electrify America** \$2B National Fund (part of VW Settlement)
- **TCEQ / TERP grant** AE recently notified of a \$1.6M award through 2020
- **Current AE project** underway for 8-10 stations



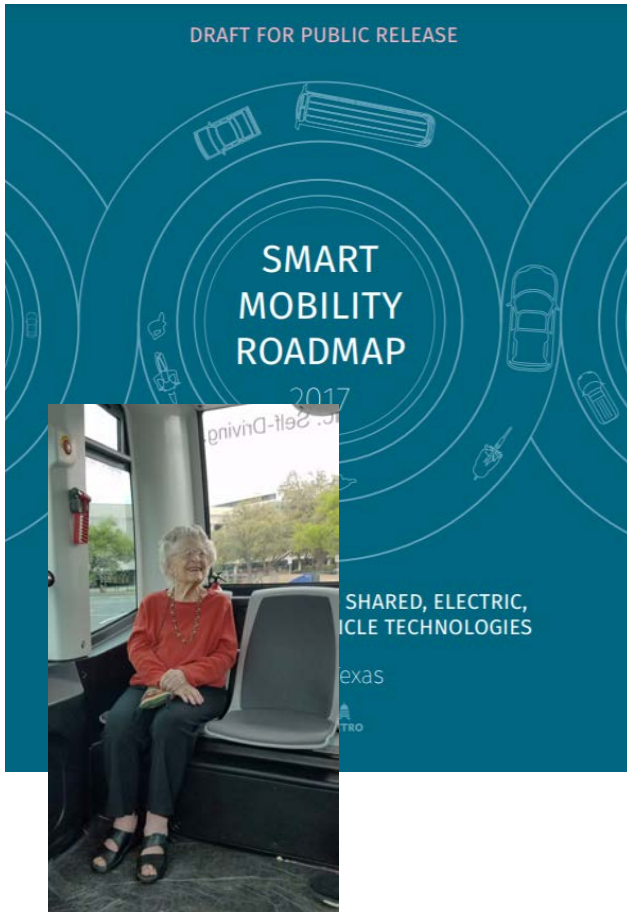


Austin's "Smart Mobility Roadmap"

Five components to the Roadmap

1. Shared-Use Mobility
2. Electric Vehicles and Infrastructure
3. Autonomous Vehicles
4. Data and Technology, and
5. Land Use and Infrastructure

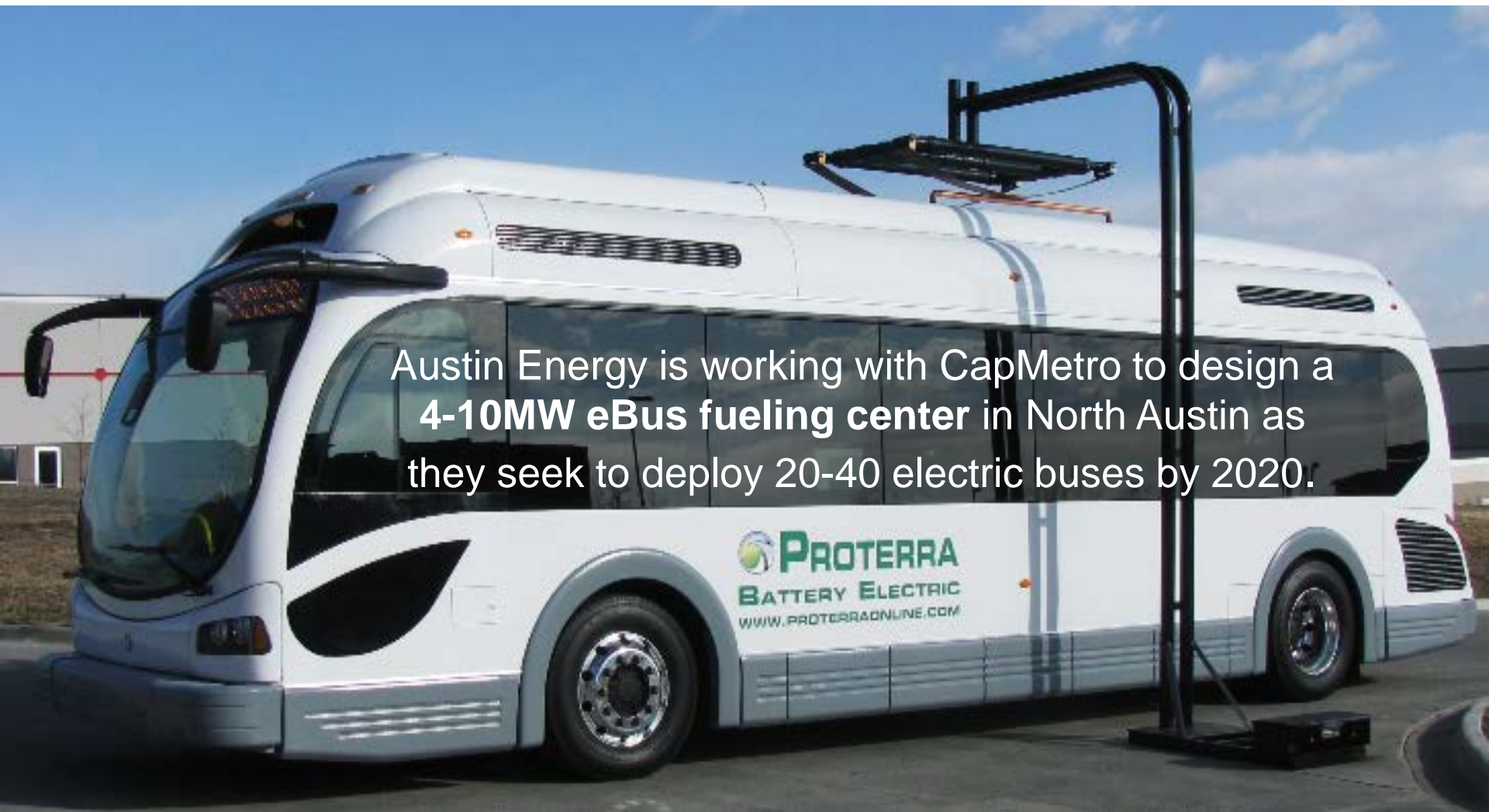
"Austin, should be to automated vehicles what Detroit was to the last century of automakers." –Mayor Steve Adler



<http://www.austintexas.gov/smartmobilityroadmap>



Public Transit

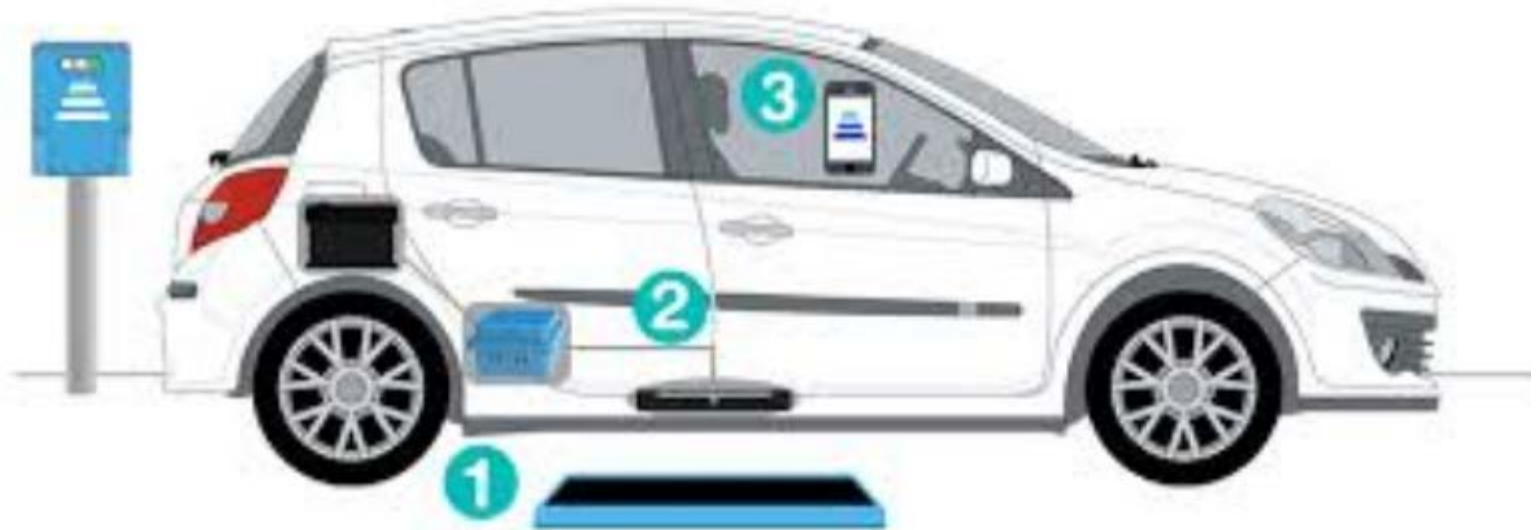


Austin Energy is working with CapMetro to design a **4-10MW eBus fueling center** in North Austin as they seek to deploy 20-40 electric buses by 2020.

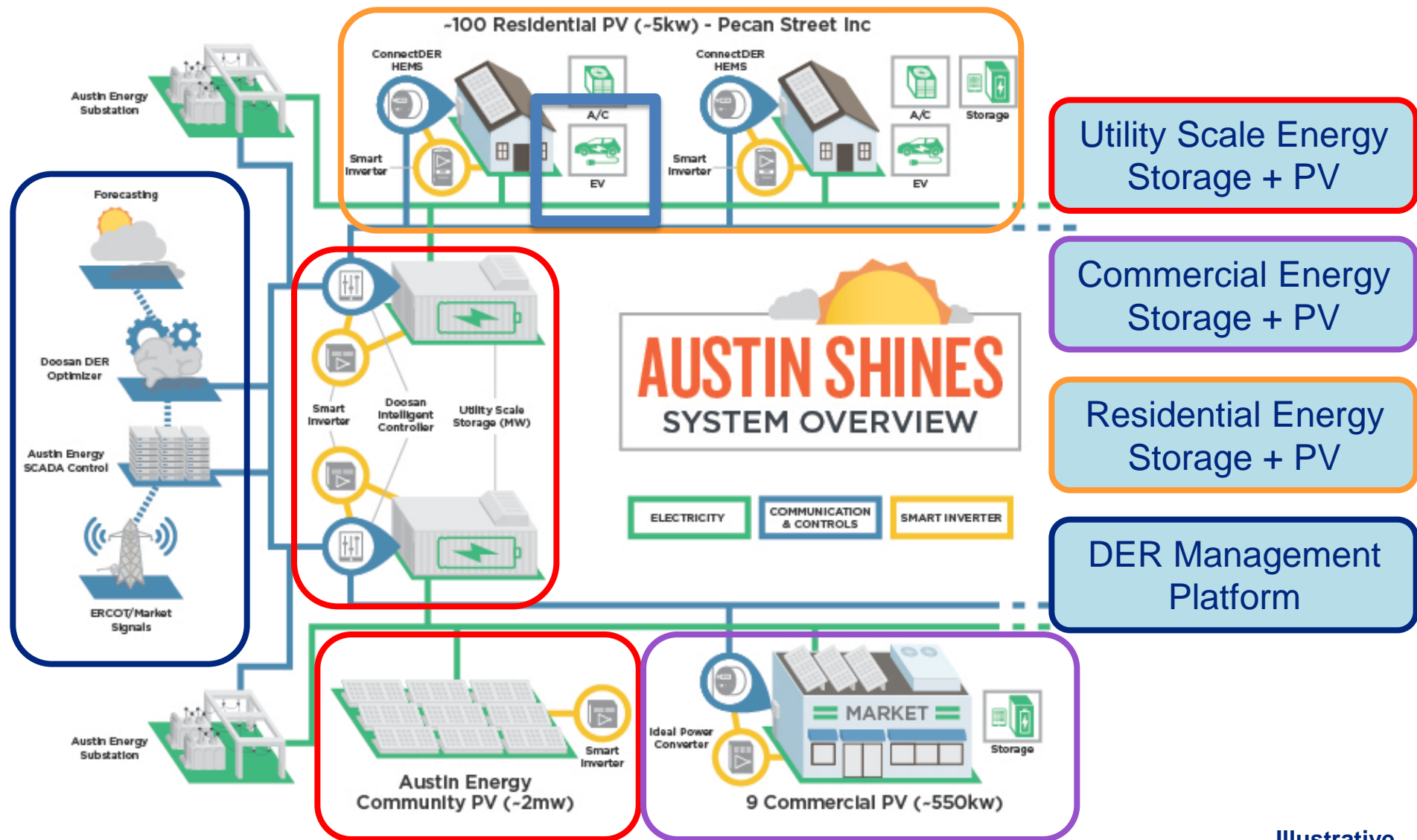


Wireless/Inductive Charging

Working with the first UL listed wireless manufacturer for Level 2 charging. Goal is a fleet vehicle pilot in FY2018



Holistic V2X Grid Integration Planning



Illustrative



Summary



Smart Electric
Power Alliance

Utility of the Year



1. Robust partnerships with other City Departments
2. Expanding program breadth/reach
3. Focus on DC Fast to enable high mileage applications
4. Changing incentives to match evolving market & industry needs
5. EV/storage research ongoing



SMARTCITIESDIVE

Utility of the Year

greentechmedia:
GRID EDGE
innovation**AWARDS**



Thank You



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