



# **Austin Energy's Transportation Electrification Program**

Briefing for Resource Management  
Commission

**Kurt Stogdill**

Manager, Green Building &  
Sustainability

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# EV Policy Leadership



## COA Resolutions:

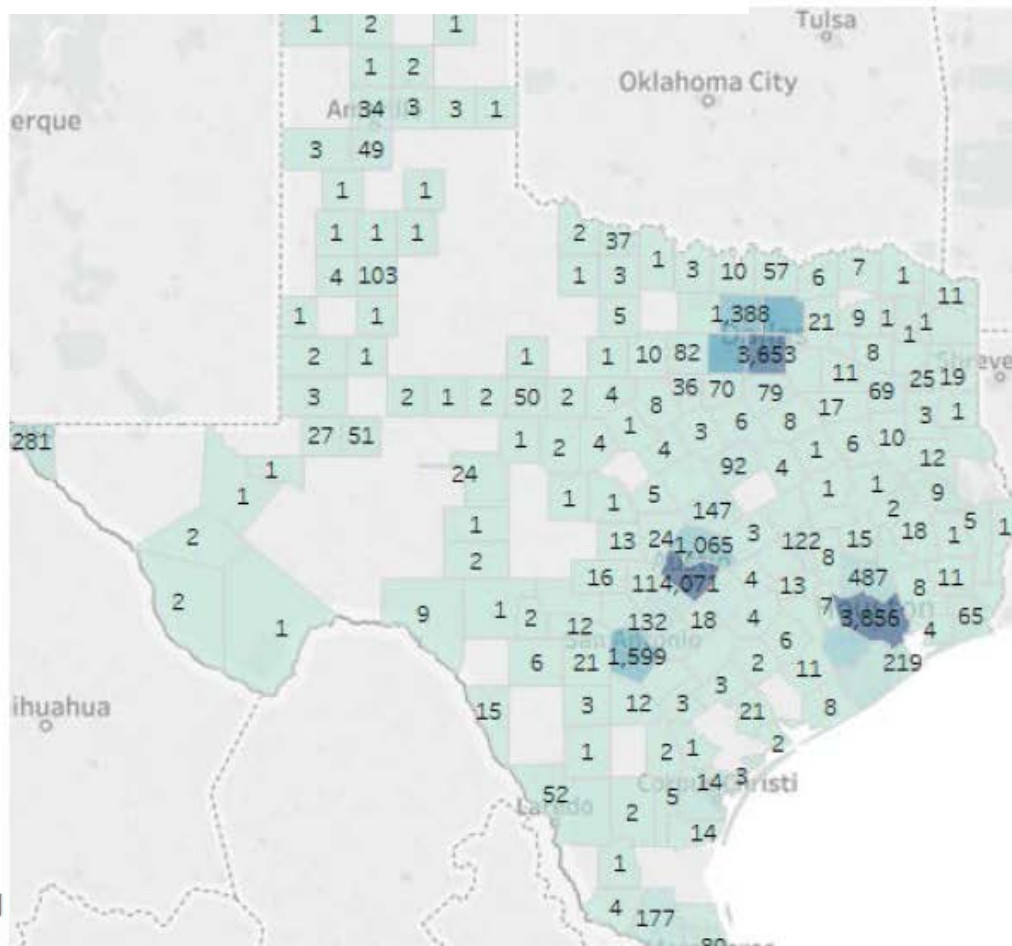
- 7 EV related amendments to the AE Resource Plan
- NetZero 2050
- City EV Fleet Adoption
- Shared, Electric & Autonomous “Next Wave Mobility” resolution -> Smart Mobility Plan

State of Texas brought back the \$2500 EV rebate



# EV Adoption by Texas County

## EVs Registered in Texas 2017 Q4

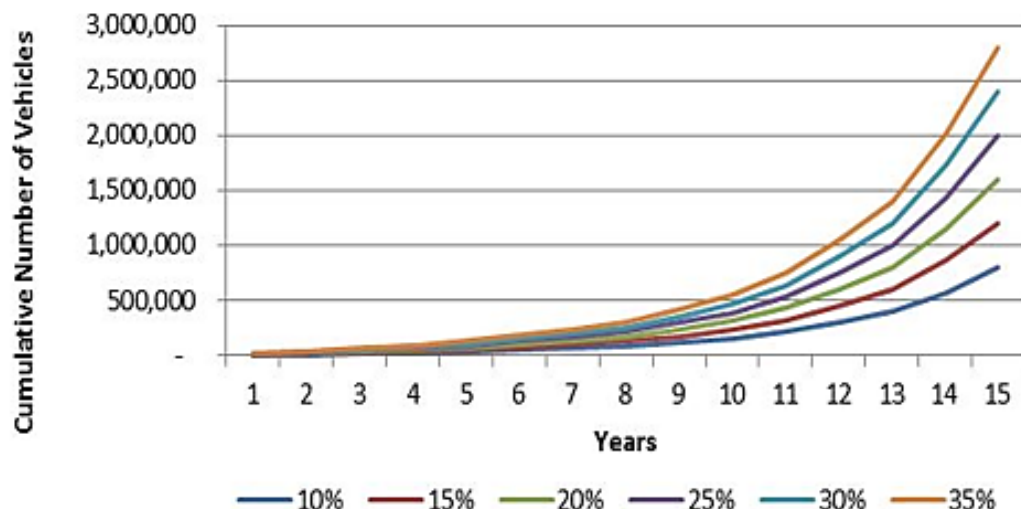


Rank	County	# EVs
1	Travis	4,071
2	Harris	3,856
3	Dallas	3,853



# 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

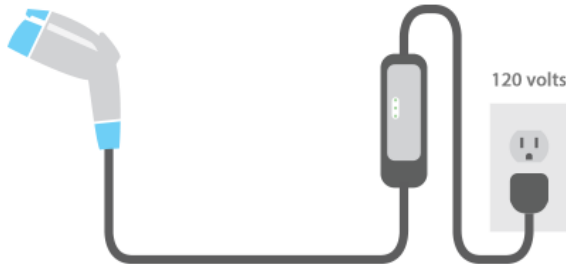
\*based on 12,000 miles @ 4,000kWh/yr x \$.10/kWh





# 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

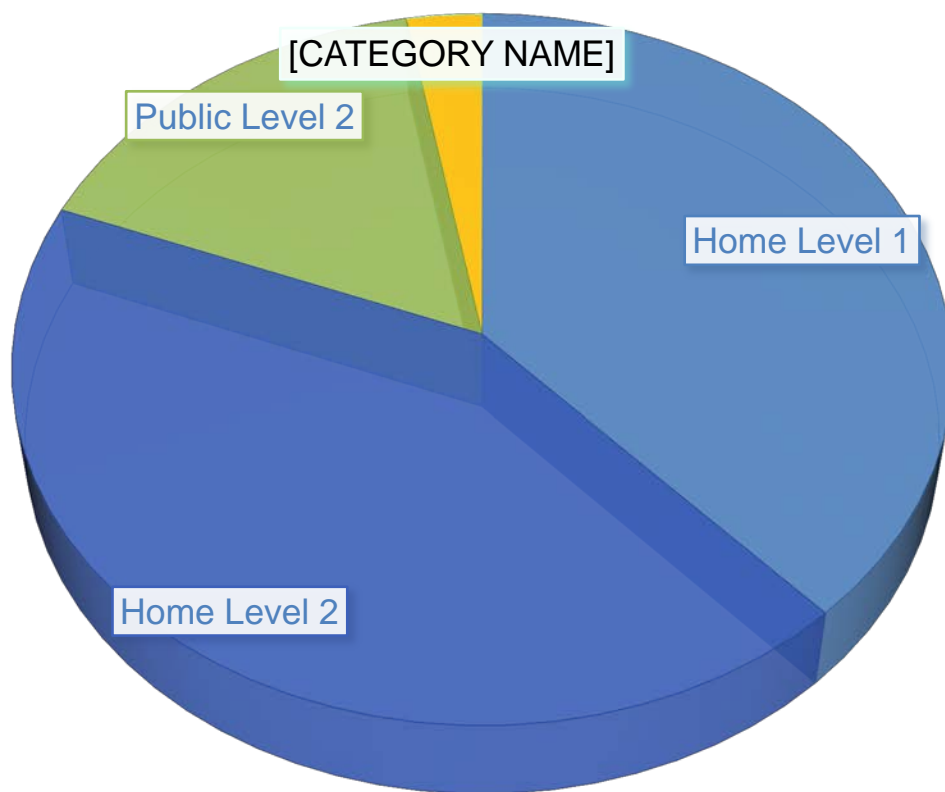
150-  
300  
kW

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



# Today's EV Charging

## EV CHARGING IN KWH (EST.)



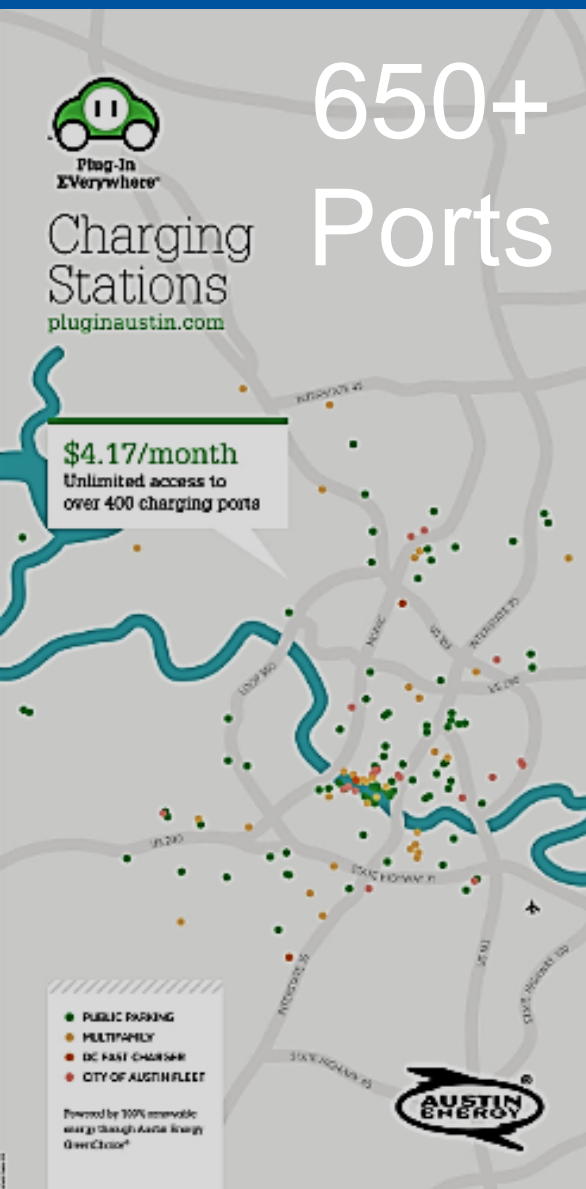
Approximately 85% of all charging is done at home, DCFast enables next gen electrification and corridor transit

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 28<sup>th</sup> is residential rebate rollout date)
- Commercial rebates available, up to \$4,000/station- level 2





# Two-Wheel Electrification

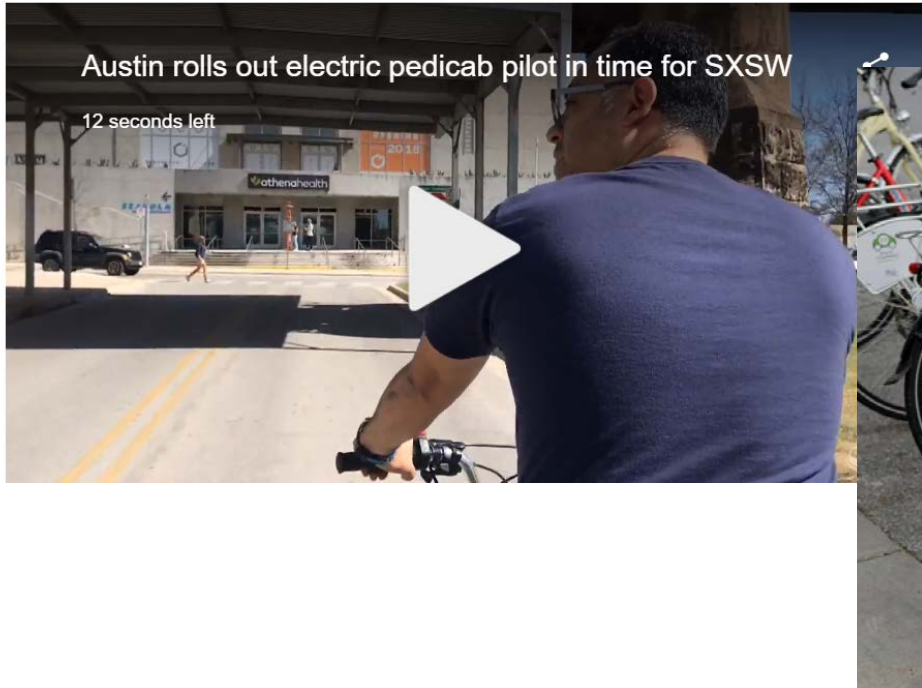
## Statesman

### 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:

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# Austin's "Smart Mobility Roadmap"



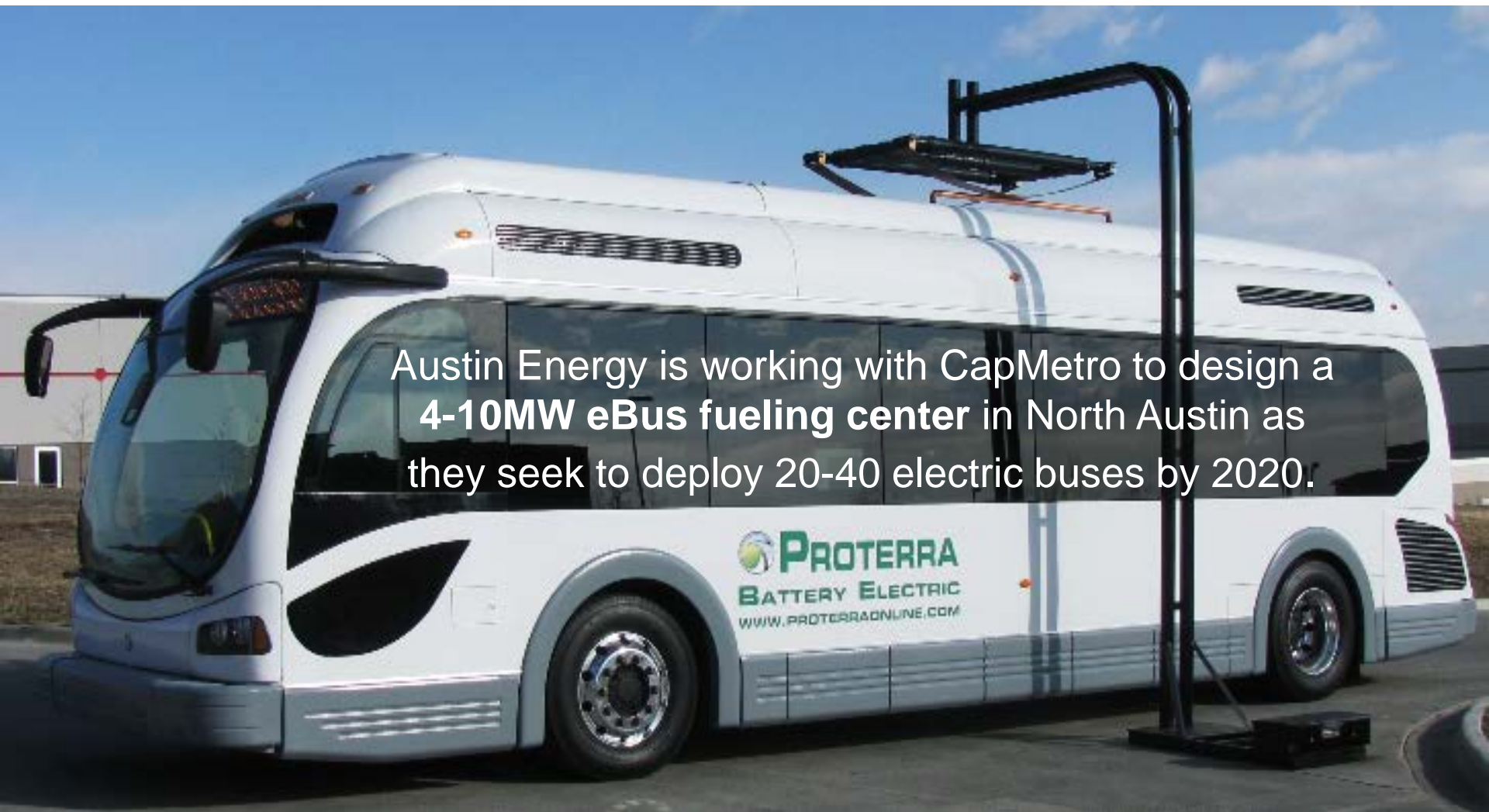
## Five components to the Roadmap

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*



# 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.



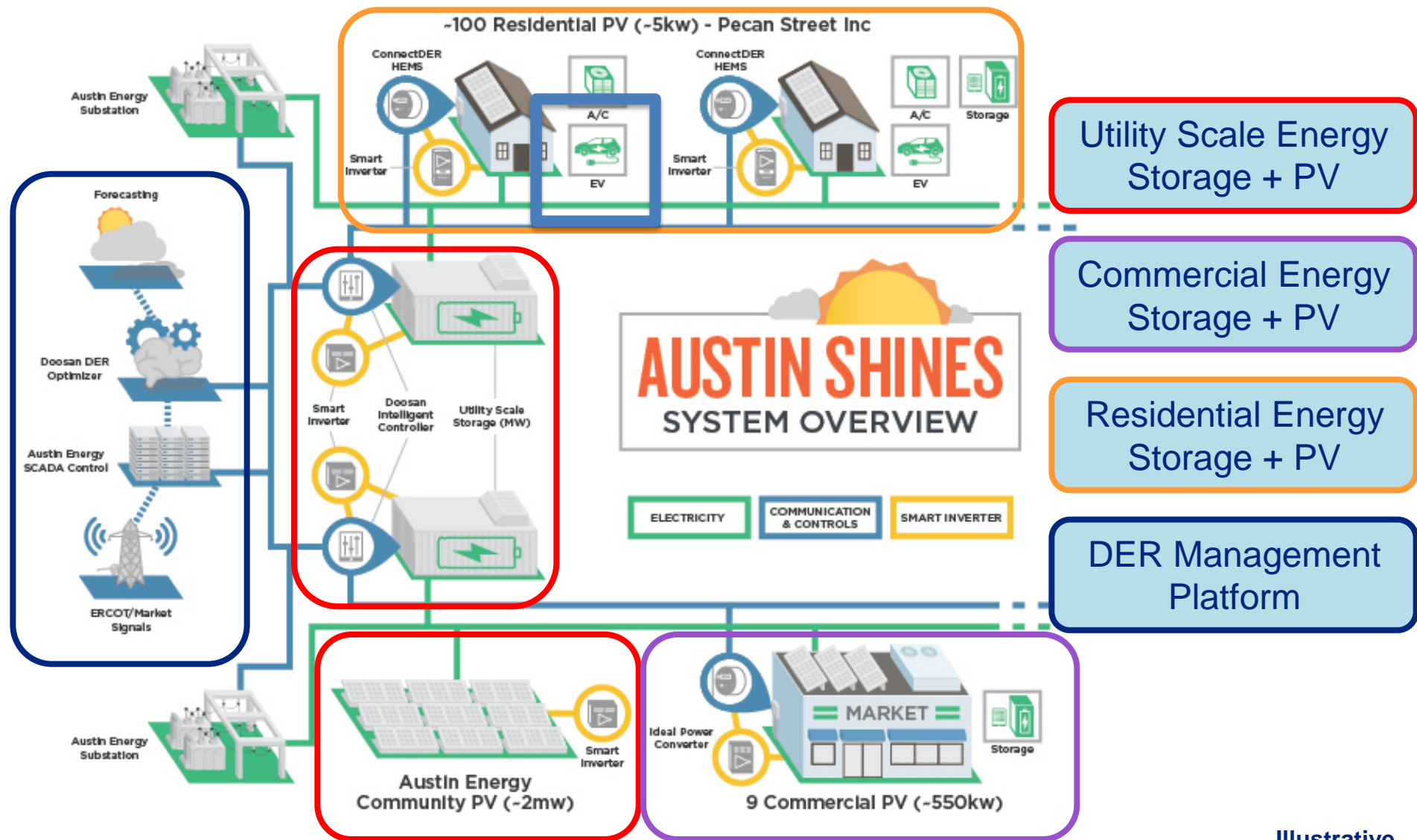
# Wireless/Inductive Charging

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



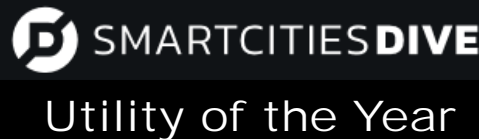
# Summary



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



<https://austinenergy.com/ae/green-power/plug-in-austin/ev-video>



# Thank You



## Kurt Stogdill

Manager, Green Building & Sustainability  
Austin Energy



[www.pluginAustin.com](http://www.pluginAustin.com)



[Kurt.Stogdill@austinenergy.com](mailto:Kurt.Stogdill@austinenergy.com)