Keynote Address

Chuck Caisley, Chief Customer Officer, KCP&L

#WeTheStates
EV Charging: Clean Charge Network

Chuck Caisley
Chief Customer Officer
This City May Soon Be the Best Place to Own an Electric Car

A huge plan is in the works to juice electric vehicle adoption.

TIME.COM
Clean Charge Network (CCN)

- Launched in January of 2015
- Planned 2,2000+ Level 2 charger ports plus 20+ DC Fast Chargers
- Focus on publicly accessible, high population density / long dwell time areas, workplaces and geographic dispersion
- Establish one standard communications and payment platform
- Installed as utility infrastructure
- Currently the largest installed and operating utility-owned EV network in the US
CCN Goals

• If you build it, they will come: Eliminate range anxiety
  • Increase EV adoption rate
  • Support drivers without dedicated home charging
  • Enable long-distance travel

• Grow EV adoption
  • Educate customers
  • Drives economic and environmental benefits
  • Provides for stabilized rates for all customers

• Real data: Understand and influence grid impacts
  • Integrate with the utility grid
  • Analyze charging models/load shapes
  • Explore managed charging opportunities

• Develop customer solutions: Strategic/Beneficial Growth
KCP&L EV Adoption

Cumulative registrations by type

The PHEV and BEV wedges represent cumulative registrations, while the black dot represents the total vehicles estimated to be in operation. They will differ due to vehicles that leave the fleet due to crashes and sales of used cars into and out of a region.

Source: EPRI KCP&L Vehicle Registrations February 2019
Year Over Year Sales Growth

YOY EV Sales Growth – 2017 to 2018

CAGR 2015-2019: 70% +

- National: 38.2%
- Kansas City: 47.5%
- Baltimore: 17.3%
- Boston: 56.3%
- Denver: 50.7%
- Phoenix: 37.9%
- Las Vegas: 45.1%
- St Louis: 46.6%
Charging Sessions Per Month

![Bar chart showing charging sessions per month from 2017 to 2019.](image-url)
Impact of CCN Environmental Benefits

Here’s how EV charging has helped:

- You’ve avoided 1,414,722 kg greenhouse gas emissions
- That’s like planting 36,275 trees and letting them grow for 10 years

Source: ChargePoint Dashboard
KC Metro: #1 in the Top Thirty Metros

Charging infrastructure in 2017 as a percentage of that needed by 2025

Figure ES-1. Public and workplace charging infrastructure in place in 2017 as a percentage of infrastructure needed by 2025 by metropolitan area.
The KCP&L Corporate Jet
If Airlines Were Run Like the Electrical Grid
EV’s Are the Priceline of the Grid

Mandates & Aging Grid: \[\uparrow\] Costs

\[\downarrow\] kWh’s: Solar & EE \[\downarrow\] Electric Vehicles
Grid Optimization Opportunity

Opportunity
Workplace Charging Load Shape
Retail Charging Load Shape
Influencing Charging Pattern

Unmanaged

Managed

Source: EPRI Ph 2 Analysis
Clean Charge Network (CCN) Benefits

- Smart Electrification
- Improved Environment
- Economic Development
- Customer Programs
- Utility Cost and Infrastructure Advantages
- Proactive Policymaking