Charles (Boss) Kettering

My interest is in the future…. Because I’m going to spend the rest of my life there.
HEVs, PHEVs and BEVs have delivered functionality and emotional appeal to meet early customer needs.
Largest existing auto-utility collaborative effort -- formed in 2007
Over 50 utility members and the Electric Power Research Institute (EPRI)
Focus areas: Vehicle-to-Grid Technology, Aligned Messaging and Policy Priorities, New Business Opportunities (EV-to-Grid)
Role of Utilities | Customer Engagement

Charging at home...

People live in apartments, too.

At Work...

On the road...
Role of Utilities | Grid Services

CADILLAC ELR CONNECTS TO THE SMART GRID

Possible today
RENEWABLE ENERGY CHARGING

Renewable energy data
Location data
Utility Company
Renewable energy available

Available today
RemoteLink
Charging Station

Renewable Energy

Time of Use
Renewables
Aggregated Services
Demand Response
Ancillary Services
Fleet Management
API
Role of Utilities | Summary

A growing PEV market benefits everyone
• Individual benefits: fuel savings, quiet and exciting ride & handling
• Society benefits: energy security, environment (local air, climate), and grid reliability
• Utility benefits: a smart load that drives new revenue to keep rates low

Utilities need to be active participants in growing the PEV market
• This is a “learning” transition and requires hands-on experience to shape next steps
• The PEV market will not escape “niche” unless utilities (and regulators) get involved

Active role in home (including MUDs) and workplace charging
• PEVs are already very smart and will do most charging at home – as the PEV market grows, utilities will want to ensure good load balancing across the service territory (off-peak EV rates, smart charging)
• Workplace charging is key to growing PEV awareness and corporate relationships are key to utilities - a utility will want to ensure healthy corporate engagement

Active role in PEV outreach and education
• Utilities are trusted 3rd parties and operate at a local level – key for building awareness

Longer term – pilot projects
• Utilities need to explore the role of PEVs in ancillary services, V2H, V2G, and battery secondary use to address growing issues in renewables, intermittency, storage, outage