

# GRU100

100 YEARS of SERVICE | 1912-2012



## Electric Vehicles

Presented to the  
Regional Utilities Committee  
July 9, 2012



# Presentation Outline

- Electric vehicle sales
- EV economics
- Charging stations
- Utility incentives
- City/GRU programs
- Discussion



# Electric Vehicle Sales

- Nissan LEAF
  - 7 LEAFs sold in Gainesville since Nov 2011
  - 9,674 Nissan LEAFs sold nation-wide 2011
- Chevy Volt
  - 12 Volts sold in Gainesville since Sept 2011
  - 7,671 Chevy Volts sold nation-wide in 2011
- Mitsubishi i
  - Sold 1 since March 2012

# EV Economics

- Electric vehicle prices
  - Federal tax credit up to \$7500
  - Prices for EVs start in the range of \$35,000
- Comparative cost to operate
  - Average American uses 464 gallons of gasoline per year (DOE)
  - \$3.40/gal => \$1578 gasoline cost per year
  - Average fuel economy for passenger car 33 mpg =>
  - Nissan Leaf 3.3 MPK (miles per kWh)
  - Running cost Leaf (~\$1.30/33miles)
  - Cost conventional car (~\$3.40/33 miles)
  - EV est. yearly savings  $464 \times \$2.10 = \$974$



# Charging Stations

- Types of charging stations
  - L1 120V (most all EVs come equipped with) L
  - L2 240V (low ~3.6 kW or high ~7.2 kW)
  - L3 480V ( 50 kW)
- Payment options
  - Network connections for fee recovery
  - Gratis (e. g. Gainesville Nissan or workplace)
  - Per session cost
- Cost of charging station
  - Clean Cities initiative in Seattle installed 140 L2 stations at an average cost of \$8000.
  - DC Fast Charge cost nearly \$110,000 per site



# Incentives for Electric Vehicles

- Clean Cities advice “Incentives should be directed to point-of-sale price reduction and less on building out public infrastructure.”
- Utility Incentive programs
  - DTE Energy provides up to \$2,500 for L2 charging station and a \$40 a month per vehicle
  - Los Angeles Department of Water & Power provides up to \$2,000 for the installation of a L2 charger at a customer’s home.
  - Austin Energy rebates 50% of the cost of the purchase and installation of L2 charging station up to \$1500



# GRU/City Programs

- GRU/City alternative fuel vehicles
  - 2012 purchase of a PHEV
  - 2 Hybrid RTS buses combining electric power and diesel fuel
  - 14 Hybrid vehicles in GRU/City fleet (Prius, Civics, Escapes)
  - 6 CNG light trucks funded and a fueling station proposed at the EOC
- Consider a “time of use” rate to encourage customers to charge their electric cars at night
- Establish GRU Committee for electrical standards, metering and rebate program, and develop general safety guidelines
- Assist code officials and first responders in developing best practices



# Discussion

