

# What is it we're preparing for?

## *The electric vehicles coming to Ameren*

- **Chevrolet Volt**
  - Three Ameren vehicles in total – two in MO, one in IL arrived in June & September
  - Extended Range Electric Vehicle (EREV)
    - 16 kWhr Lithium-ion battery
    - 25-50 mile “electric only” range before gas engine kicks in
    - Gas engine drives a generator to keep battery charged at ~20% to support electric drive train
    - Braking and coasting assist in battery charging
  - Full charge at 120V in 7-8 hours or at 240V in 3-4 hours
    - 12 kWhrs required to get 40 miles back
    - Cost is \$1 (compared to \$5 to “gas up”)
  - MSRP of \$39,900 (\$7,500 tax credit applies)
    - In area dealerships in October/November



# What is it we're preparing for?

## *The electric vehicles coming to Ameren*

- **Nissan LEAF**

- Vehicle acquisition plans for MO and IL
- Delivery delayed until March 2012 – six Japanese plants damaged in earthquake
- Battery Electric Vehicle (BEV)
  - 24 kWhr Lithium-ion battery
  - 80-mile average “all-electric” range, no gas engine backup
  - Braking and coasting assist with battery charging
- Full charge at 120V in 16-18 hours or at 208/240V in 8-9 hours
  - 28 kWhrs required to get 80 miles back
  - Fueling cost ratio still 1:5 compared to gas
- Lists at \$33,000 (\$7,500 tax credit applies)
  - In area dealerships in Spring 2012



# What is it we're preparing for?

*The electric vehicles coming to Ameren*

- ***Ford Focus EV***
  - Battery Electric Vehicle (BEV)
    - 23 kWhr Lithium-ion battery
    - 80-mile average “all-electric” range, no gas engine backup
    - MSRP will be “competitive” with LEAF
- ***Mitsubishi “i”***
  - Battery Electric Vehicle (BEV)
    - 16 kWhr Lithium-ion battery
    - 60-mile average “all-electric” range, no gas engine backup
    - Economy end of EV market – MSRP will be under \$30,000
    - Ameren test drove during March 2011
- ***Dozens of other models over next three years***



# What else is Ameren doing?

*Other activities supporting EV technology and the customer*



## Charging Times and Costs

Miles Driven Daily	Charging Times			Daily Charging Cost <sup>2</sup>	Equivalent Gasoline Costs <sup>3</sup>		
	Level 1 (120V)	Level 2 (240V)	Level 3 (480V)		\$3 per gallon	\$4 per gallon	\$5 per gallon
20	4-5 hours	1-2 hours	10 minutes	\$0.50	\$2.00	\$2.65	\$3.35
30	6-8 hours	2-3 hours	15 minutes	\$0.75	\$3.00	\$4.00	\$5.00
40	8-10 hours	4-5 hours	20 minutes	\$1.00	\$4.00	\$5.35	\$6.65
50 <sup>1</sup>	10-13 hours	5-6 hours	25 minutes	\$1.25	\$5.00	\$6.65	\$8.35
75 <sup>1</sup>	15-19 hours	7-8 hours	30 minutes	\$1.90	\$7.50	\$10.00	\$12.50

<sup>1</sup> Data only applies to an electric vehicle that can provide this many "electric only" miles.

<sup>2</sup> Based on Ameren's blended residential rate of 8¢ per kilowatt-hour.

<sup>3</sup> Based on a conventional vehicle rated at 30 MPG.

