Ameren Missouri (orange)

- 1.2 million Electric customers
- 126,000 Natural Gas customers
- 500 communities served
- 24,000 square mile territory
- 4,000 Employees
AMEREN MISSOURI OVERVIEW

- Regulated electric generation, transmission and distribution; gas distribution
- 1.2 million electric and 127,000 gas customers
- 24,000 square miles of service territory
  - 2,900 miles of electric transmission lines
  - 33,000 miles of electric distribution lines
- 10,400 megawatts (MW) of generation
  - Low-cost 6,600 MW baseload coal-fired and nuclear fleet
  - Reduced sulfur dioxide emissions by 27% since 2006
  - Coal fleet availability is consistently near or in top 25% in the US
- Reliable energy supply
- Low customer rates

2012 Fuel Mix
- Coal - 76%
- Nuclear - 19%
- Renewables - 4%
- Natural Gas - 1%
AMEREN MISSOURI GENERATION…over 10,000 MW

Meramec
STL Co.
839 MW
1953

Sioux
St. Charles Co.
986 MW
1967

Labadie
Franklin Co.
2,407 MW
1970

Rush Island
Jefferson Co.
1,204 MW
1976

Keokuk
Iowa
137 MW
1913

CTGs
MO & IL
2,966 MW

Taum Sauk
Reynolds Co.
440 MW
1963 & 2010

Osage
Lakeside, MO
234 MW
1931

Callaway
Callaway Co.
1,200 MW
1984
CALLAWAY ENERGY CENTER

- Operating safely and reliably since Dec. 1984

- 4\textsuperscript{th} highest lifetime generation among the 104 U.S. nuclear plants through 2011

- 15\textsuperscript{th} highest lifetime generation, through 2011, among the more than 415 nuclear plants worldwide in 31 nations

- Provides 19\% of the total electricity generation for Ameren Missouri

- In 2012, generated the most electricity in any calendar year since coming online in 1984 (10.7 million megawatt-hours)
All six of Missouri’s electric utility providers formed an alliance in November 2010; it is comprised of Missouri’s investor-owned, rural electric cooperatives and municipal utilities. Small Modular Reactors have a high level of interest among this group. We also have strong support from labor, local officials, state and federal legislators.
MO Utility/Muni/Coop Owned Coal Capacity

Average age of coal power plants - 45 years
COST OF THE ENERGY OPTIONS

Levelized Cost of Energy
Cents/kWh

- Nuclear
- Wind
- Combined Cycle (Nat. Gas)
- Landfill Gas
- Simple Cycle (Nat. Gas)
- Coal w/Carbon Capture & Seq.
- Hydro
- Pumped Storage
- Biomass
- Solar

0 5 10 15 20 25 30 35
WHY AMEREN HAS FOCUSED ON MAINTAINING A SMR BASED NUCLEAR GENERATION OPTION

- Diverse fuel mix insulates the impact from price volatility of any specific fuel source

- Affordability
  - SMRs are more compatible with the needs and financial capabilities of mid-sized utilities like Ameren.
  - Incremental increase in system capacity as demand grows.
  - Most power with least amount of material and equipment.

- Nuclear generation has been a successful segment of our fuel mix
PROPOSED LOCATION OF FIVE WESTINGHOUSE SMRS ON THE 8000 ACRES CALLAWAY SITE
NexStart SMR Alliance

- Multiple seriously interested customers
- NexStart SMR Alliance will ensure that a license moves forward
WHY AMEREN CHOSE WESTINGHOUSE

- **W-SMR Design**
  - Passive safety systems are conceptually similar to AP1000 (proven design)
  - Digital I&C systems based on AP1000 design (proven design)
  - One reactor with no shared systems. (less operating risk)
  - Pump-Driven RCS flow at power
    - Large, predictable thermal margin of safety

- **Licensing**
  - Only SMR vendor to design, certify and license an ALWR.
  - Regulatory requirements understood.
  - Long established relationships with the U.S. NRC

- **Westinghouse and Ameren have long and trusted relationship**
  - Callaway Unit 1 is a Westinghouse designed plant.
  - Top performer in the US Nuclear fleet.
As we build a new generation of clean and safe nuclear plants, we are constantly looking ahead to the future of nuclear power. One of the most promising areas is small modular reactors (SMRs). If we can develop this technology in the U.S. and build these reactors with American workers, we will have a key competitive edge. . . Our choice is clear: **Develop these technologies today or import them tomorrow.**

Dr. Steven Chu  
U.S. Secretary of Energy  
Wall Street Journal, March 23, 2010
QUESTIONS?