

2014 NASEO Annual Meeting

Gas and Electric Utility Options and Issues in Considering EPA's Clean Power Plan



AJAY ARORA

09.09.14

Ameren's Corporation

Saint Louis based diversified regional electric and gas utility serving 2.4 million electric and 933,000 gas customers over 64,000 square miles in Missouri and Illinois.

Electricity: generation, transmission (including regional), distribution

Natural Gas: sales, transmission & distribution

Sources: Hydro, Coal, Nuclear, Natural Gas, Wind and Landfill Methane



Investing in Missouri's Energy Future

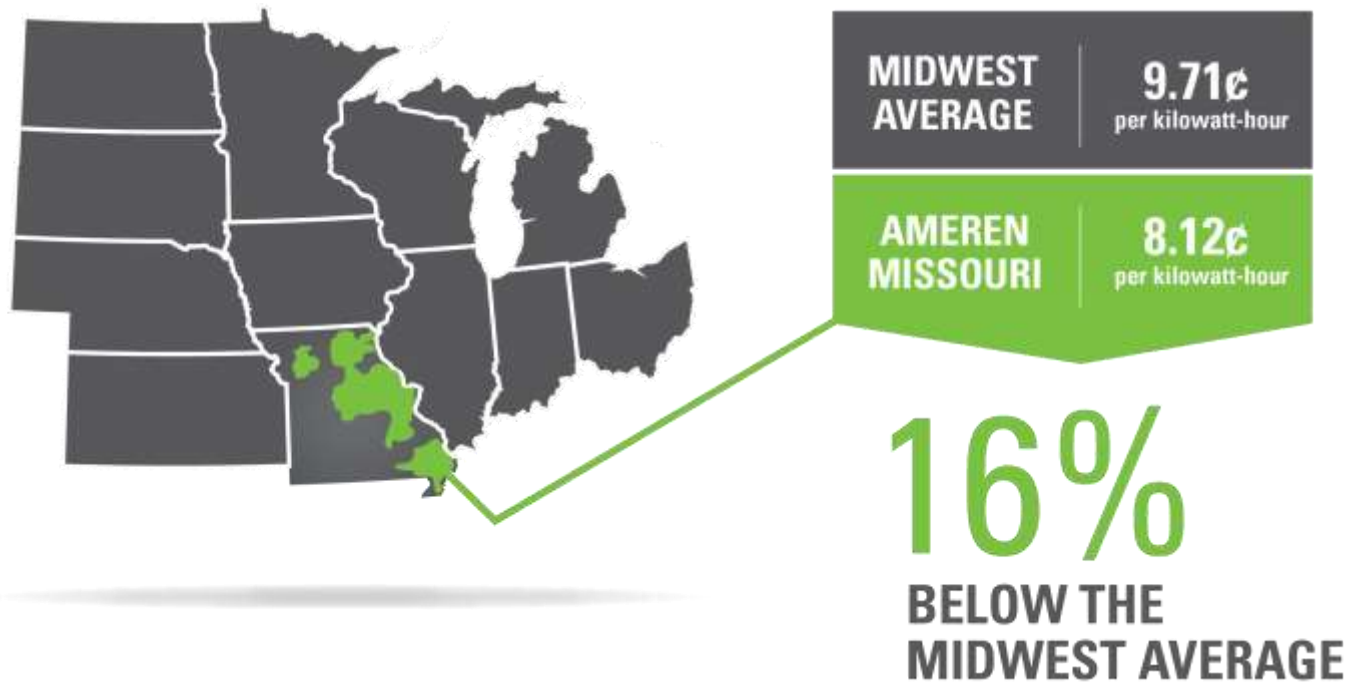
- Customer Energy Preferences
 - Reliability
 - Price
 - Transition to cleaner generation
- Aging Infrastructure
- Environmental Regulations



Investing in Missouri

Among the Lowest Rates in the Midwest

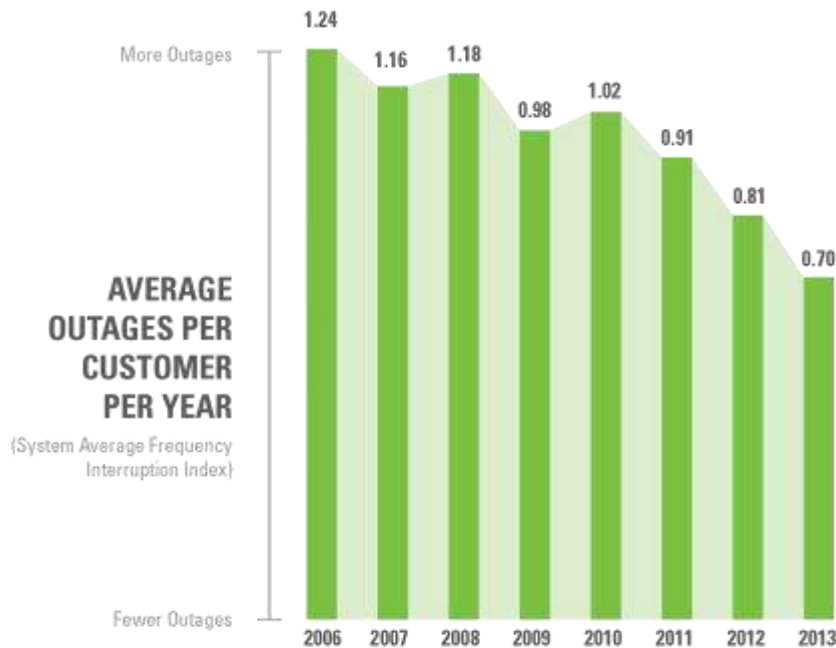
Residents and businesses want reasonably priced power, which is why Ameren Missouri carefully manages costs to keep electricity affordable.



Investing in Missouri

Top-Tier Dependability

Our customers want energy they can count on. Smart technology and grid improvements have helped Ameren Missouri improve reliability.



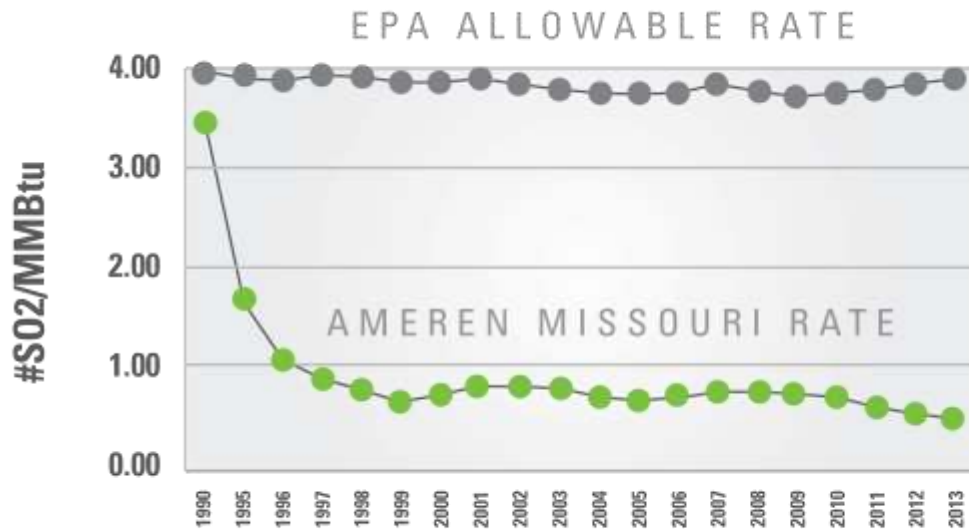
**TOP
10%
MOST DEPENDABLE
ELECTRIC SERVICE
NATIONWIDE**



Investing in Missouri

Committed to Cleaner Energy

Ameren Missouri is **aggressively cutting emissions** by improving equipment and transitioning to cleaner energy sources.



**EMISSIONS
REDUCED BY
80%**

Investing in Missouri

A Strong History of Environmental Stewardship

We are taking steps to reduce emissions as we transition responsibly to a cleaner and more diverse generating fleet.



2012: Maryland Heights Renewable Energy Center

Captures methane gas from local landfill to create clean energy. Among largest of its kind in the U.S.



Since 1913: Hydroelectricity

Recent upgrades to enhance efficiency of hydro plants. On average day of operation, Keokuk saves equivalent of 1,000 tons of coal.



2014: O'Fallon Solar Energy Center

Will be Missouri's largest investor-owned utility scale facility, featuring 19,000 panels.



Customer Energy Efficiency Programs

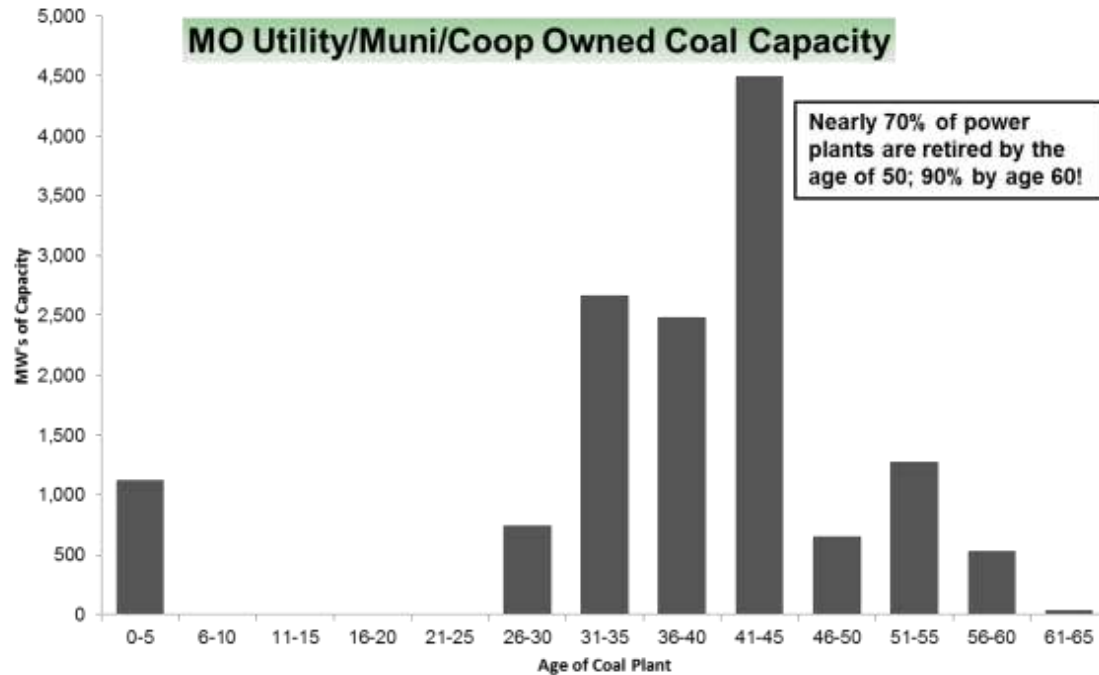
Programs for residents and businesses. Projected total combined savings of 1,791,500,000 kWh.

Ameren Illinois: June 2011-May 2014
Ameren Missouri: 2013-2015



Investing in Missouri

Aging Generation Fleet... Flat to declining load growth



Meramec Energy Center – 61 years
Sioux Energy Center – 47 years

Labadie Energy Center – 44 years
Rush Island Energy Center – 38 years



EPA has proposed a “Clean Power Plan”

Each State is required to develop a plan by the end of 2016 to comply with EPA’s “Best System of Emissions Reduction” (BSER) rate.

- EPA’s determination of BSER is made up of four “building blocks”.
 1. Improvement of power plant efficiency.
 2. Use of "environmental dispatch" vs. economic dispatch, whereby existing natural gas-fired combined cycle (NGCC) plants are utilized more and coal-fired plants less.
 3. Expanded use of low and zero-carbon generating capacity – assumed increase in Missouri renewable generation from 1.3 million MWh to 2.8 million MWh by 2029, assumed continued operation nuclear fleet.
 4. Expanded use of demand-side efficiency – assumed 1.5% increase in penetration of EE annually and a cumulative 9.92% of electricity sales in 2030.
- Aggressive interim targets starting as early as 2020



Ameren Missouri Has a Plan

To *responsibly* transition our generating fleet to a cleaner and more diverse portfolio.

Ameren Missouri is executing a plan we have been working on for years, in conjunction with our Integrated Resource Planning (IRP) process, to transition our generation fleet to a cleaner and more diverse portfolio in a responsible fashion.

This plan is focused on four key objectives:

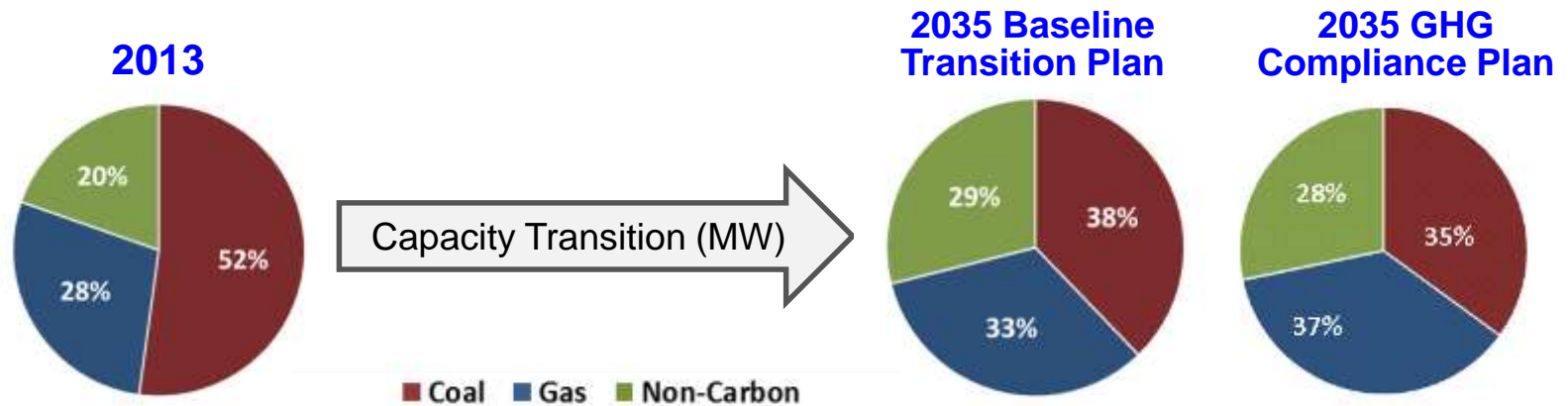
1. **Optimizing use of existing low cost coal plants** by retiring them at the end of their useful lives
2. Continuation of aggressive and very **successful energy efficiency programs**
3. **Adding renewable energy** (wind, solar, landfill gas, hydro, etc...)
4. **Adding natural gas** combined cycle generation

And Our Plan is \$4 Billion less than the EPA Plan



Ameren Transition Plan

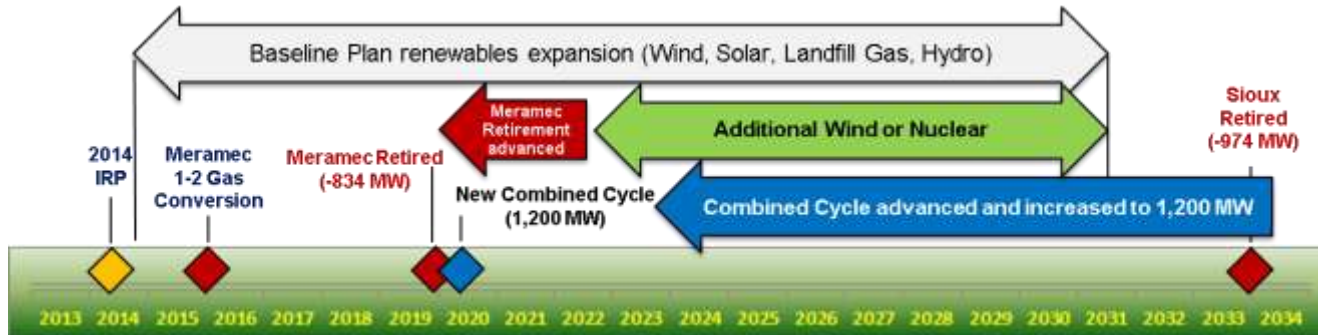
Our transition plan increases fuel diversity and reduces carbon.



- \$4 Billion Less than EPA plan
- Balanced fuel mix within 20 years
- Annual CO2 reductions equivalent to the EPA plan by 2035
- Responsible and managed transition with minimal risk, cost and reliability impacts

Ameren Transition Plan

Compared to the Transition Plan, the GHG Compliance Plan results in significantly increased costs to customers.



This \$4 billion increase in costs to our customers to comply with the GHG rule is being driven by:

- Expenditures to build more capacity than we would build under our transition plan,
- Building capacity years ahead of when it is needed to serve customers, and
- Uneconomic (and expensive) dispatch of natural gas vs. coal capacity.

On a net present value basis compliance with the proposed GHG rule would cost our customers about four times what it would cost them under our transition plan.

Compliance with proposed GHG rule, and the interim requirements in particular, would cause significant rate increases by 2020.



Recommended Changes to EPA's Proposed Plan

With a few key changes, largely associated with state authority and flexibility, we can achieve the EPA's 30% reduction goal.

- **States should be given flexibility** to implement the rule, including establishing reasonable interim milestones toward the final emission goal that is reflective of individual state conditions
- **Credits should be provided for shutting down coal plants that are not replaced.**
- **Missouri should be allowed to extend the compliance date** in order to allow for orderly retirement of coal plants and to minimize rate impacts on customers.

We will continue to work in a constructive fashion with key stakeholders, including the EPA, to develop energy policies for the benefit of all our stakeholders and the environment.