Reliable
Affordable
Responsible

Powering Communities and
Empowering Members to
Improve the Quality of Their Lives
Target Reduction "Glide Path"

- **Current**
- **Phase 1**
- **Phase 2**
Proposed CO$_2$ Reductions

- 23%
- 36%
- 44%
- 21%
- 37%
- 39%
- 38%
- 39%
- 18%
Blocks 1, 3 and 4:
Blocks 1, 3 and 4

• Block 1 – Coal plant efficiency: 6% is not achievable.
• Block 3 – Opportunities for renewables in Arkansas are few and of limited capacity.
• Block 4 – 1.5% energy efficiency per year is extremely aggressive and burdens rate payers with additional costs for improvements.
Block 2 – Major Cost Impact

- Redispatch from Coal to Natural Gas causes most of the economic impact of proposed rule.
Gas forecast after 2018 based on forecast from the Energy Information Administration
Block 2: Redispatch Coal to Gas

• Cost to AECC alone:
  $74 million/year in 2020 increasing to $184 million in 2030
• Likely loss of most affordable, most reliable units
• EPA made no attempt to consult with FERC about the rule’s impacts to the reliability of the electric grid.
2020 Generation Mix, Base Case

- Coal: 58.1%
- Gas: 30.2%
- Hydro: 6.5%
- Biomass and Wind: 5.1%
2020 Generation Mix
“Primary Scenario”

- Coal: 8.8%
- Gas: 73.4%
- Hydro: 11.3%
- Biomass and Wind: 6.5%
Another Impact of Redispatch

- EPA’s analysis of the rule’s impact assumes that 3,700 MW of Arkansas’ 5,500 MW of coal capacity will be retired by 2020, the effective date of the rule.
White Bluff Plant

1,237 jobs depend on it
What will the ratepayer see?
Increase in Annual Residential Cost, Effect of Clean Power Plan: “Primary Scenario”

Increase in Annual Cost to Homeowners of $150 to $250

Cost to Dispatch Gas Over Coal

Arkansas Wind

Coal Plant Retired; Replaced w/ Gas CC
“Sensitivity Case” Scenario

• The Clean Power Plan will result in a significant need for new gas combined cycle capacity to replace retired coal plants. Sensitivity Case has **capital cost of 2020 gas combined cycle plant 50% higher**. This is based upon previous experience when during the late 1990’s and early 2000’s high demand for CCGT plants caused price spikes for installed capacity.

• The Clean Power Plan will require electric utilities to rely more heavily on gas, including the dispatch of gas ahead of coal. Increased gas demand will increase price. Sensitivity Case has a **gas price increase of $1/MMBtu**.
Combined Cycle 2020 Capital Cost ($/kW)

- Base: $966
- 50% Higher: $1,446

We Are Arkansas
Historical Gas and Coal Costs for AECC Owned Plants

$/MMBtu

Gas
Coal

Historical Gas and Coal Costs for AECC Owned Plants

$/MMBtu

Jan-02 Jul-02 Jan-03 Jul-03 Jan-04 Jul-04 Jan-05 Jul-05 Jan-06 Jul-06 Jan-07 Jul-07 Jan-08 Jul-08 Jan-09 Jul-09 Jan-10 Jul-10 Jan-11 Jul-11 Jan-12 Jul-12

Gas Coal

We Are Arkansas
Base case gas forecast after 2018 based on forecast from the Energy Information Administration.
Increase in Annual Residential Cost
Potential Effect: Sensitivity Case

Potential Increase in Annual Cost to Homeowners of $280 to $450

“Primary Scenario”

Higher Gas Price

Higher Combined Cycle Cost
Figure 4.
Percentage of Children in Poverty in the Past 12 Months by State and Puerto Rico: 2010

Source: U.S. Census Bureau, 2010 American Community Survey.
Hunger in Arkansas

Choices client households reported making in the past 12 months:

- 82 percent report choosing between paying for food and paying for utilities.

Source: Hunger In Arkansas Report – Arkansas Food Bank
Conclusions & Recommendations

AECC recommends that Arkansas comment to EPA that:

- The 910 lbs CO2/MWh target set for Arkansas is excessive - and inequitable. A higher target is justified and needed to avoid unnecessary adverse impacts to Arkansas.
- The proposed “glide path” requires almost all reductions be made by 2020, too quickly, and needs to be phased in.
- Blocks 1, 3 and 4 are not achievable in all cases and may impose additional burden on consumers.
- States and RTO’s need more time to develop the mechanisms and agreements required to move away from least cost dispatching to environmental dispatching.
- Reliability of natural gas supply must be considered as well as the time necessary to permit and construct additional pipeline capacity. FERC must be involved to determine overall reliability impacts to the electric and natural gas systems.