

Missouri's Rural Energy Opportunities and Challenges

Craig Redmon

Director

Missouri Department of Natural
Resources – Division of Energy

NASEO Annual Meeting

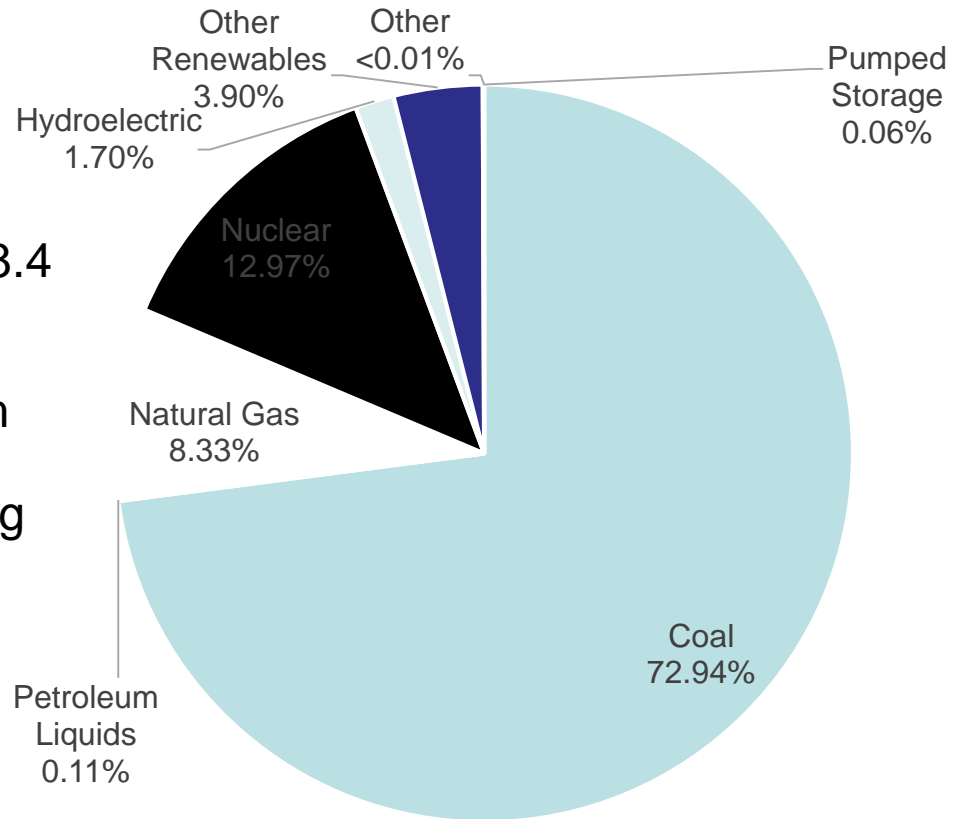
September 16, 2019

About Craig and DE

- Became director in April; rural and legislative background
- DE transferred to MO Dept. of Natural Resources
- Concentration on affordable, reliable, made-in-MO resources to help lower our carbon footprint in a common-sense, feasible way

MO Energy and Rural Areas

- 97.4% of land area is rural
- 30.6% of population lives in rural areas
- Agriculture contributes about \$88.4 billion to state economy
- Little coal, oil, or natural gas produced – mostly imported from out-of-state
- Have other rich resources gaining ground (e.g., wind and solar)
- “All of the above” state for electricity generation resources



2018 Generation
(Source: EIA)

Ethanol and Biodiesel in MO

- Ethanol
 - Significant portion of state corn crop used
 - 276.0 million gal/yr nameplate capacity (13th in nation)
 - Widely available at gas stations
- Biodiesel
 - 8-10 plants; about 252 million gal/yr annual production capacity (3rd in nation)
 - 19 distributors
 - 15 retailers with B20+ blends

Biogas

- Smithfield and Roeslein Alternative Energy
 - Albany, MO farm sending biogas to pipeline since 2016
 - RNG partnership under “Monarch Energy”
 - Aim for all finishing farms to be able to produce RNG (1.3 million dekatherms/year)
- Gess International
 - 500 billion Btu biogas project in Chariton County
 - Developing 550 billion Btu of biogas plants in

Other MO Bioenergy

- Wood Energy Tax Credit
- Co-firing potential

Opportunities and Challenges

- Ethanol market troubled
- Biodiesel has not caught on, but good option
- Interest in expanding biogas production
- Potential for use of bioenergy with CHP
 - Significant progress in supporting CHP in MO
 - Martin energy
- Rural solar applications