Missouri Comprehensive State Energy Plan

Department of Economic Development
Division of Energy

NASEO Annual Meeting
September 17-20, 2017
New Orleans
Background

In June 2014, by Executive Order 14-06 Governor Nixon directed the Division of Energy to develop a comprehensive statewide energy plan and recommend policies to:

- Meet Missouri’s short-term and long-term needs for clean, reliable, affordable, and abundant energy
- Encourage efficient use of energy as a method of reducing household energy bills and increasing the profitability of Missouri businesses
- Better align goals to promote development, security, and affordability of diverse energy sources essential to the future of Missouri’s economy,
- Spur job creation and economic growth
- Provide a framework to ensure stable and predictable energy prices
- Guide the development of Missouri’s energy infrastructure while ensuring access to affordable energy resources for all Missouri citizens and businesses
Missouri’s State Energy Plan

CHAPTER 1: Missourians and the Energy Outlook
CHAPTER 2: Energy Supply
CHAPTER 3: Energy Use
CHAPTER 4: Energy Infrastructure Modernization
CHAPTER 5: Energy and the Economy
CHAPTER 6: Energy and the Environment
CHAPTER 7: Our Vision for the Future
Plan Development Process
Plan Development Process

Executive Order 14-6

June 2014

October 2014

November 2014

February 2015

Online Comment Forum

Public Outreach Meetings

Working Group Meetings

Additional Stakeholder Engagement

Plan Development

Plan Finalized

October 2015

Comprehensive State Energy Plan
Stakeholder Engagement

7 Public Meetings

600+ Attendees

55 Steering Committee Members

6 Working Groups

280 Public Comments

530 Participants
Topics Addressed by the Plan

- Fuels and Resource Extraction
- Electricity Generation
- Energy Distribution
- Energy Usage
- Energy Storage
- Energy/Water Nexus
- Energy Pricing and Rate-setting Processes
- Energy Security and Assurance
- Energy Impacts to Land, Air and Water
- Economic Development
Missouri’s Energy Profile
How Missourians Use Energy

Missouri ranked 25th per capita in energy consumption in 2012.

Missouri Energy Consumption by Source, 2012 (1,848 Trillion BTU)

- Motor Gasoline excl. Ethanol: 19.57%
- Distillate Fuel Oil: 9.35%
- Nuclear Electric Power: 6.08%
- Natural Gas: 14.01%
- Renewables (including hydroelectric and biomass): 4.38%
- Jet Fuel: 1.06%
- Other: 5.04%
- Other Petroleum: 2.52%
- Liquid Petroleum Gas: 1.47%
- Coal: 41.57%

Figure 2. Total Energy Consumption by Sector and Source in Missouri, 2012.

How Missourians Use Energy

Missouri Energy Consumption by End-Use Sector, 2012 (1,813 Trillion BTU)

- Industrial: 20.53%
- Commercial: 21.94%
- Residential: 27.10%
- Transportation: 30.44%

Figure 1. Total Energy Consumption by Sector and Source in Missouri in 2012.

Energy Resources – Current Mix

Missouri imports the vast majority of its energy resources and has limited production:

- Third from the bottom in terms of coal production.
- One of the lowest reserves in the nation of economically recoverable natural gas.
- Only marginal petroleum reserves.
- Missouri has several utility-scale solar and wind farms, as well as various hydropower facilities.
Energy Resources - Opportunities

- The state has significant potential for renewable energy growth, given that Missouri is located in the U.S. wind corridor and has good solar resources.

- In addition, forests and farmland throughout the state provide ample resources for biomass and alternative fuels.

- One of the world’s largest deposits of lead is located in southeast Missouri. Lead can be used for development of energy storage technologies and batteries.
Our Energy Future
Strategic Recommendations

The recommendations for action were developed through the analysis of Missouri’s current energy outlook, potential for the future, and input gathered from the Plan’s comprehensive, transparent, and collaborative stakeholder engagement process.

These recommendations include national best practices and reflect the views and opinions of numerous business leaders, energy innovators, and members of the public.
Efficiency of Use

Efficiently using Missouri’s available energy resources is projected to be the most cost-effective method of meeting the state’s future energy needs.

In-state planning together with lessons learned elsewhere can help Missouri to use electricity, natural gas, transportation fuels, and other resources more efficiently.
The affordability of energy rates significantly impacts the health, safety, and economic well-being of Missouri’s families. This is particularly true for vulnerable households.

In the business sector, competitive and affordable rates are critical to Missouri’s ability to grow its economy and attract new business.
Diversity and Security of Supply

Broadening and diversifying Missouri’s energy sources will make the state less reliant on imported energy, increase economic development and job creation, and provide a hedge against future price volatility.

- Propane Storage
- Net metering
- Grid Modernization
- Renewable Thermal Technologies
- Energy Assurance Working Group
- Solar Property Rights
- Cybersecurity
- Microgrid Interconnection Requirements
- Alternative Fuel Infrastructure Tax Credit
- Renewable Energy Standard
- CHP
- Wind Development
Regulatory Improvements

Modifications to our state’s energy laws may be necessary to expand opportunities, deliver enhanced benefits, and further advance our progress to meeting the goals of this Plan.

Policymaking should be flexible in order to adapt to the evolving needs of our citizens and business sector.
Innovation, Emerging Technologies, and Job Creation

By fostering a business climate of innovation and creativity, it will be possible to attract new businesses that focus on clean technologies that bring jobs to our state.
Next Steps
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• The goals established by the Executive order can be achieved through many of the recommendations identified in the plan.

• Recommendations are being considered and assessed to further understand feasibility, costs and benefits and timelines.

• Policymakers, including administration officials and legislators, can then develop priorities and action objectives.
The Plan and Executive Summary is available at: Comprehensive State Energy Plan | energy.mo.gov
For more information, contact: 573-751-2254
Questions?

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