The Oklahoma First Energy Plan: A Pragmatic Path Forward

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The Oklahoma First Concept

- Enhance all forms of Oklahoma energy production
- Create jobs and grow the economy
- Reduce dependence on foreign oil
- Make the energy system smarter and more efficient
- Protect the environment & human health
- Build new markets for Oklahoma natural gas
- Support local industry & attract new industry
- R&D: The Oklahoma Energy Initiative

Available for download at: www.governor.ok.gov
Oklahoma Primary Energy Flow By Source and Sector, 2009

Energy Inputs

- Natural Gas: 0.678 Quadrillion BTU, 41.6%
- Petroleum: 0.489 Quadrillion BTU, 30.0%
- Coal: 0.373 Quadrillion BTU, 22.9%
- Renewables: 0.089 Quadrillion BTU, 5.5%

1.630 Quadrillion BTU

Demand Sectors

- Transportation: 0.421 Quadrillion BTU, 25.8%
- Industrial: 0.368 Quadrillion BTU, 22.6%
- Residential & Commercial: 0.124 Quadrillion BTU, 7.6%
- Electric Power: 0.717 Quadrillion BTU, 44.0%

Note: Data does not include energy exports or retail electricity sales and electrical system energy losses.

Source: EIA State Energy Data System (SEDS), 2009
Renewables Provide About 5.5% Of Oklahoma Energy

- Natural Gas: 41.6%
- Petroleum: 30.0%
- Coal: 22.9%
- Renewables: 5.5%
- Biomass: 31.6%
- Wind: 29.5%
- Hydroelectric: 38.9%
- Solar/PV & Geothermal: <1%

Note: Data excludes net interstate flow of electricity

Source: EIA State Energy Data System (SEDS), 2009
U.S. Total Energy Production Estimates

Oklahoma Ranks 8th in Total Energy Production

Source: EIA Energy Production Estimates, 2009
Power Generation & Transmission: Maintaining Low Electricity Rates

“Promote energy efficiency to preclude the need for new power generation and to manage consumers’ energy bills”

Recommendations:

Promote Policies that lower consumers’ bills and not necessarily only policies that focus on lowering electricity rates

Source: EIA 2011, Average Retail Price of Electricity to Ultimate Customers, Form EIA-861
Oklahoma Exports About Two-Thirds Of Its Natural Gas To Interstate Markets!

Oklahoma Net Energy Exports

Total Production: 2.571
Total Consumption (Est.): 1.630

Natural gas accounts for more than 80% of the energy produced in Oklahoma!

Source: EIA State Energy Data System (SEDS), 2009
The Centerpiece, But Not The Only Piece

Natural Gas

- Rampable & Highly Efficient Power Generation
- Reliable, Affordable, Abundant, & Secure
- Ultra Low Emissions
- Transportation Fuel Diversity
- Distributed Generation & Combined Heat & Power
- High End Use Efficiency
- Renewables Integration

Rampable & Highly Efficient Power Generation
As Natural Gas Supply Grows, Price Remains Low & Stable

U.S. natural gas production is up more than 26% in the last 10 years
-Driven by horizontal shale and infrastructure development
-Impact has been more stable pricing

Natural Gas & Oil: CNG Leadership

“Promote Oklahoma’s flagship fuel, natural gas”

Recommendation:

Increase market opportunities for compressed natural gas (CNG) through state-led efforts to transition fleets to run on natural gas

For additional information visit: https://www.ok.gov/dcs/solicit/app/solicitationDetail.php?solID=290
Natural Gas & Oil: 
Hydraulic Fracturing Chemical Disclosure

“Maintain the ability to develop Oklahoma oil and gas resources with hydraulic fracturing”

Recommendation:

Promote disclosure of hydraulic fracturing chemicals to the OCC in a manner easy to comply with for both small and large operators in order to address public concerns of transparency through the Ground Water Protection Council and Interstate Oil & Gas Compact Commission’s FracFocus (fracfocus.org)

For additional information visit: www.fracfocus.org
“Ensure the OCC has the capacity to carry out its statutory purpose”

Recommendation:

Consider at some point restoring the petroleum excise tax to the OCC as was originally intended by the legislature in order to adequately fund permitting and inspection responsibilities.
Long-Term Gas Contracts

“Promote Oklahoma’s flagship fuel, natural gas”

Recommendation:

Enable the use of long-term natural gas contracts for power generation to stabilize prices and reduce price volatility
R&D: The Oklahoma Energy Initiative

“Advance new R&D efforts through the creation of the Oklahoma Energy Initiative”

Recommendations:

Draw individuals from Oklahoma’s state, national, and private agencies, programs, institutions, and companies to form a cooperative effort focused on advancing Oklahoma’s core energy resource competencies in unconventional natural gas, CO₂ EOR, wind forecasting, and advanced biofuels.
Residential, Commercial, & State Buildings: State Leadership Initiatives

“Benchmark all state buildings, conduct energy audits, and set target efficiency gains (what gets measured gets managed)”

Recommendations:

Establish an efficiency improvement target between .5% and 2% per year across all agencies through 2002 to capitalize on new technologies that offer the same comforts and conveniences.
Natural Gas & Oil: Keystone XL

“Address the price differential between Oklahoma crude prices and global crude prices to correct marketplace distortions”

Recommendation:

Enhance pipeline takeaway capacity from Cushing by supporting projects such as the Keystone XL oil pipeline

June 28, 2012

WTI Cushing Spot: $ 80.43
Dated Brent Spot: $ 92.22
Lost State Tax Revenue ($11.79 * 74,319,000 * 7%): $61,335,470

Source: Oklahoma Annual Crude Oil Production EIA (2012), Bloomberg Energy & Oil Prices, June 28, 2012
Transportation, Distribution, & Infrastructure: Rolling Pipelines

“Clear transportation impediments in the marketing and distribution of new, increasing supplies of crude oil”

Recommendations:

Utilize railroads where possible to alleviate pipeline constraints, recognizing that rail can be one of the most efficient methods for transportation

For additional information visit: http://www.okladot.state.ok.us/tiger/index.htm
“Encourage the build out of electric transmission to optimize power generation assets in the grid”

Recommendations:

Support development of energy resources for export done in conjunction with prudent build out of state energy needs
Environment: Energy Efficiency & Smart Metering

“Utilize demand-side management and energy efficiency to control emission levels and ensure air quality”

Recommendations:

Promote the continued spread of energy efficiency programs and smart meters/grids in homes and business, communicating the message that more informed consumption often leads to lower demand peaks, which precludes the need for additional generation or the utilization of less-efficient generation sources for meeting peak demand.
“Address the need and promote the promising opportunity for employment in Oklahoma’s energy industry”

Recommendations:

Coordinate with the military and National Guard to ensure adequate industry representation at job fairs
Renewables: Forging A Wind/Gas Partnership

“Enhance the integration of renewables into the power generation system by leveraging the complementary partnership potential of wind and natural gas”

Recommendations:

Coordinate and promote a partnership between Oklahoma’s wind and natural gas industries to address the integration challenge
Renewables: Resetting Renewable Targets

“Encourage increased use of renewables for power generation through the use of flexible, next-generation natural gas combined cycle equipment”

Recommendations:

Pursue, exceed, and raise Oklahoma’s 15% renewable energy target

*Projects Under Construction

Source: EIA Electric Power Annual, 2010; OK Dept. of Commerce, 2012
Where We Are & Where We Might Be

Existing Portfolio

20% Wind Scenario

Electric Power Demand

Wind Farm Production

A Workday in July

Power [MW]

12am  12pm  12am

Coal

Gas

Wind

Power [MW]

12am  12pm  12am

Coal

Gas

Wind
Moving Forward

Ensuring Equitable Assessment of Ad Valorem Taxes

Combined Heat & Power (CHP)

Energy Efficient Building Codes (IECC)

CO₂ EOR
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