

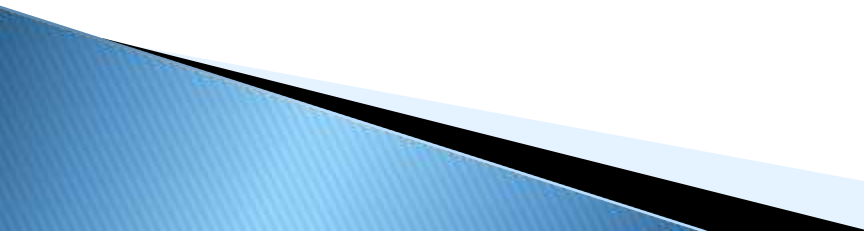


## Energy in the Pelican State NASEO Annual Meeting New Orleans



Paul D. Miller P.E.  
Director, Technology Assessment Division  
Louisiana Department of Natural Resources

# Louisiana's Energy Priorities

- ▶ **To Ensure a Stable and Resilient Supply of Affordable Energy for Louisiana's Citizens, Business, and Industry**
  - ▶ **To Promote Energy Efficiency in Louisiana Homes, Schools, Businesses, Industry, and Government Facilities**
  - ▶ **To Promote the Development of all Forms of Energy including Renewable Sources such as Wind, Solar, Biomass, Hydro, Geothermal and Ocean Kinetic**
  - ▶ **To Promote the Use of Alternative Transportation Fuels such as Electricity, Propane, and Natural Gas**
- 

# Louisiana's Diverse and Flexible Energy supply

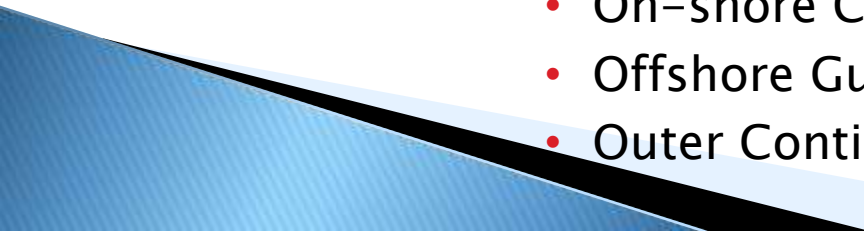
## **Electricity Generation**

- Natural Gas
- Coal
- Nuclear
- Limited Renewables

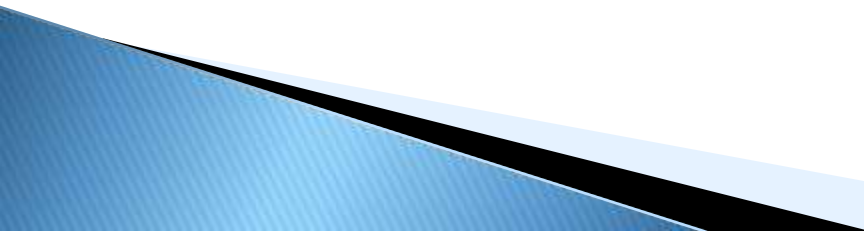
## **Transportation Fuels**

- Conventional Petroleum
- Propane
- Natural Gas
- Electric

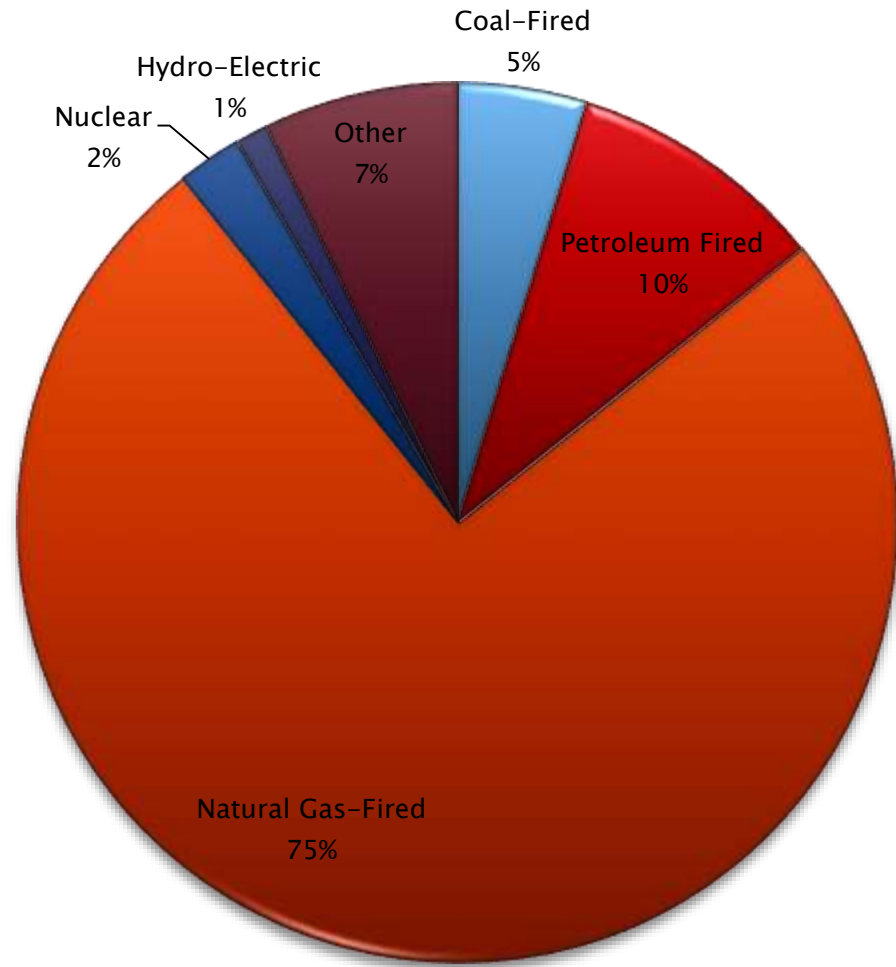
## **Fossil Fuel Production**

- Hanesville Shale Gas
  - On-shore Conventional Production
  - Offshore Gulf of Mexico Production
  - Outer Continental Shelf Production
- 

# Energy Statistics

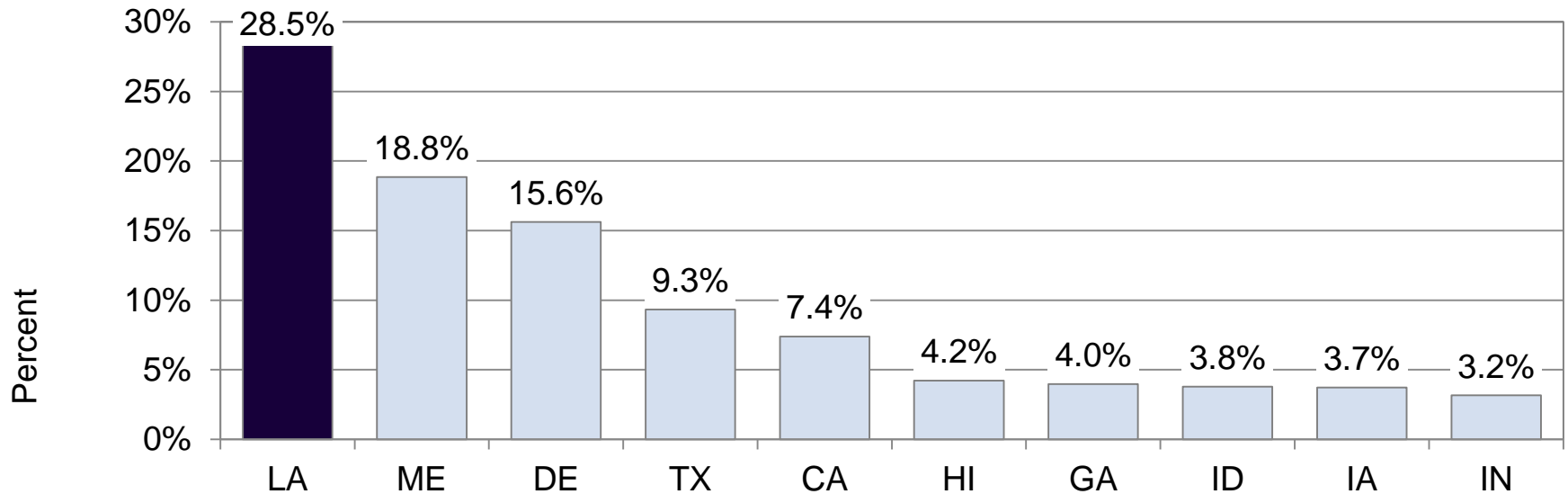
- For many years, Louisiana has been at or near the top of oil and natural gas production in the United States and we have seen first hand the shale gas revolution and its impact on energy supply for our nation.
  - Louisiana leads the Nation in the exporting of Liquefied Natural Gas which makes our world a more stable place and our Allies more secure
  - But Louisiana is looking toward future with the State Energy Office participating in a comprehensive study by the Bureau of Ocean Energy Management (BOEM) and the National Energy Renewable Energy Laboratory on evaluating all forms of renewable energy in the Gulf of Mexico.
  - Likewise we are participating with 14 other states in promoting the evaluation and development of carbon capture projects in combination with enhanced oil recovery
- 

# Electric Generation in Louisiana Including Industrial & Cogeneration



## Industrial cogeneration shares by leading states (2015).

**Close to 30 percent of Louisiana's electricity is generated at industrial CHP facilities: a level considerably more significant than just about any other state including Texas.**

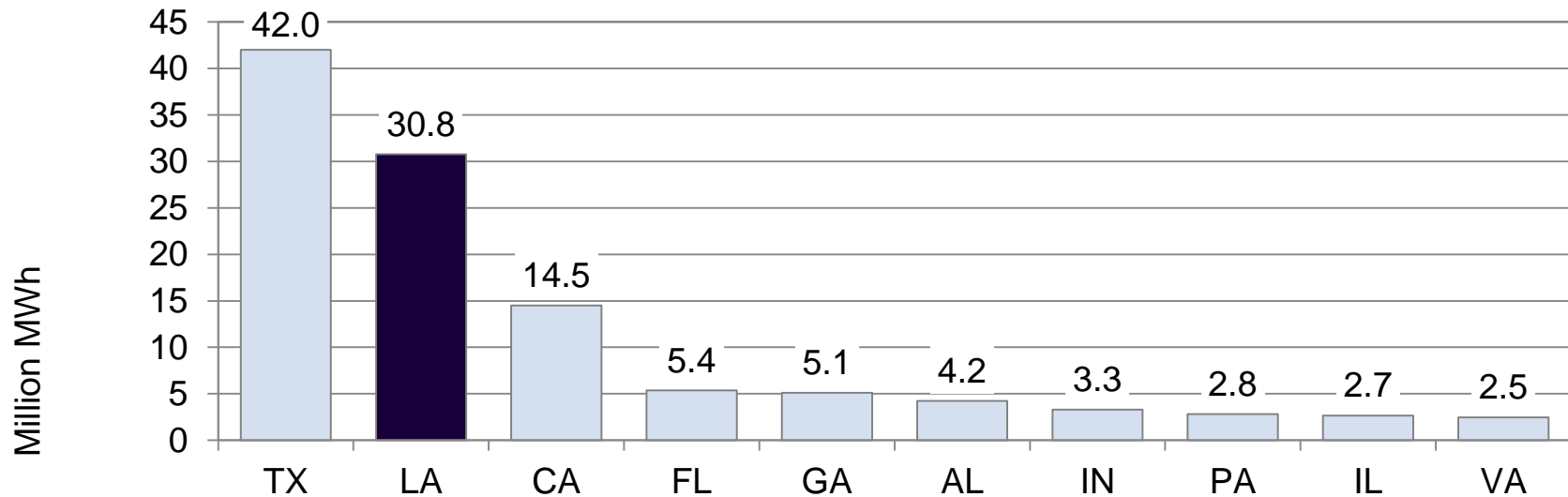


Note: Includes Industrial CHP only, as defined by Energy Information Administration.

Source: Energy Information Administration, U.S. Department of Energy.

## Industrial cogeneration by leading states (million MWh).

In 2015, Louisiana's industries generated almost 31 million MWh of electricity, making Louisiana the second largest industrial CHP generator (in absolute terms) in the U.S.

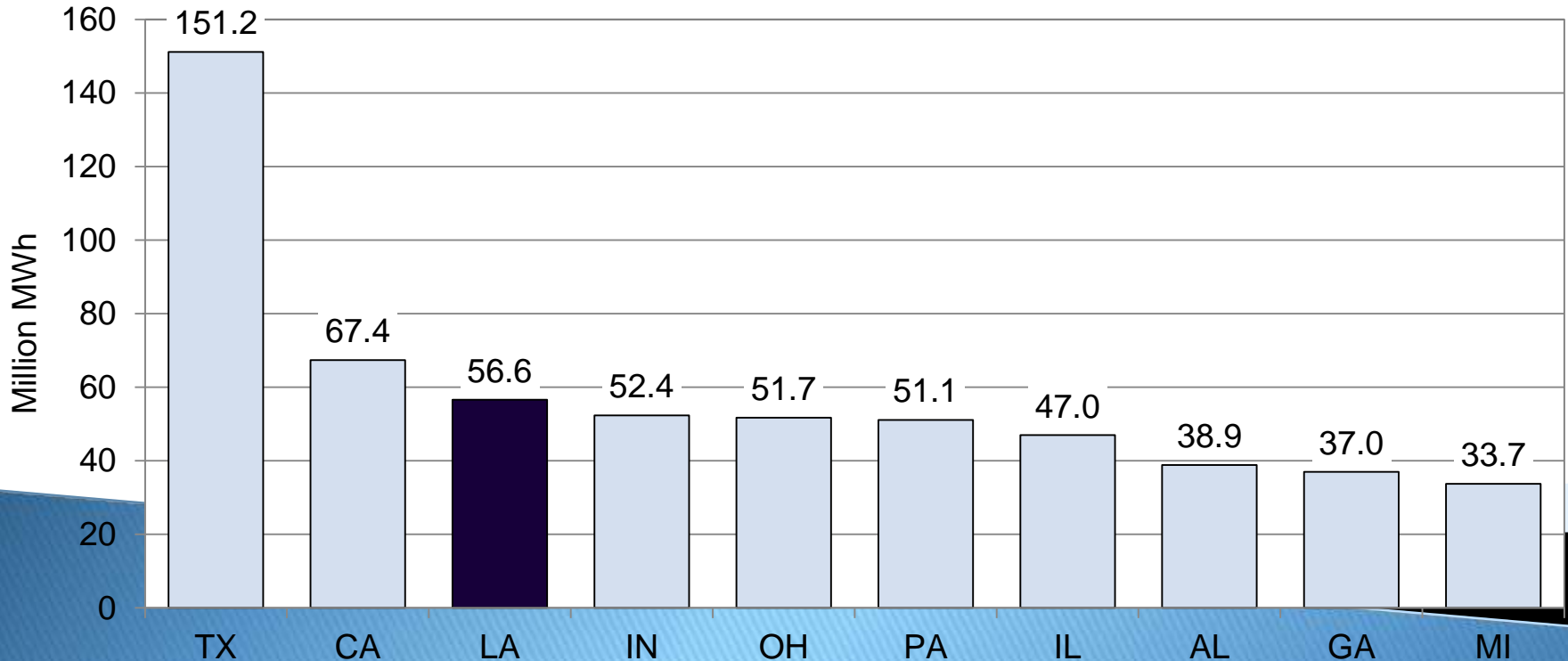


Note: Includes Industrial CHP only, as defined by Energy Information Administration.

Source: Energy Information Administration, U.S. Department of Energy.

**Combined industrial usage and CHP generation comparison (2015).**

**Louisiana ranks third in combined industrial usage and CHP.**



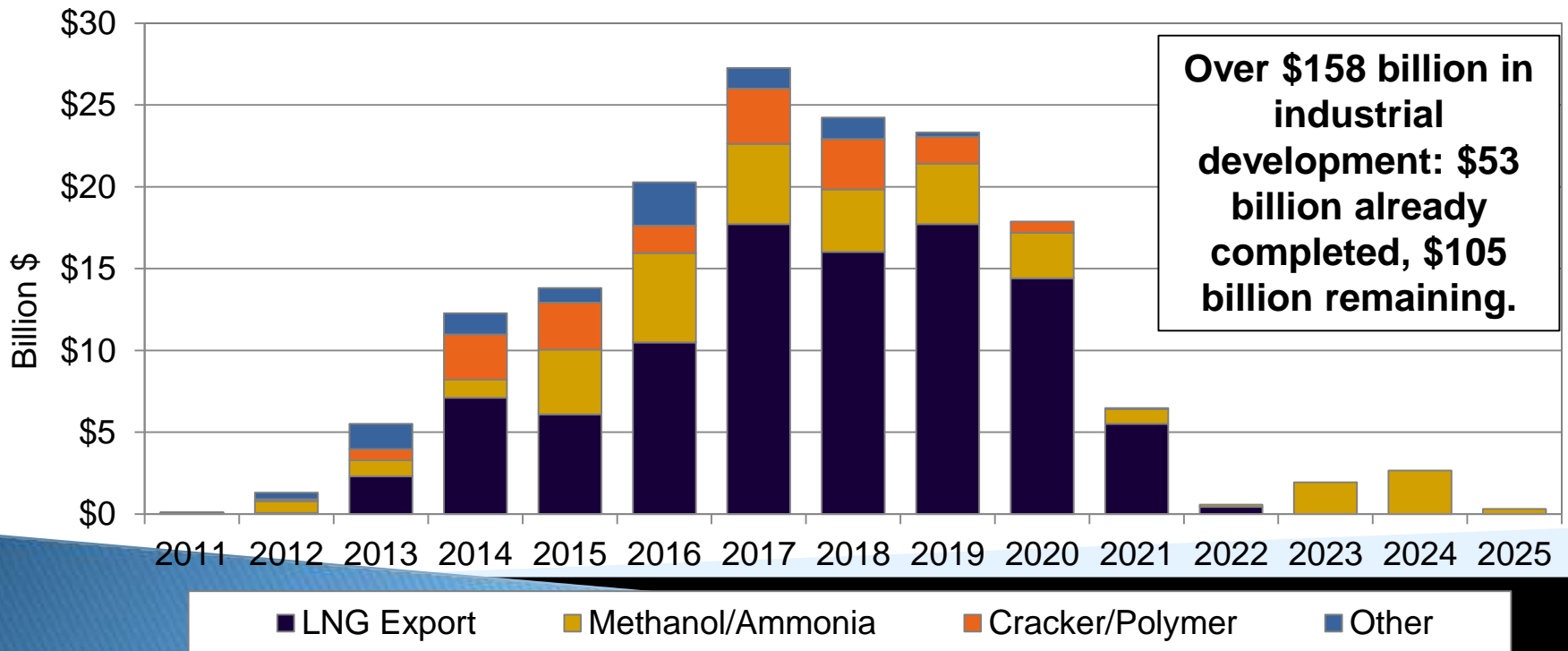
Note: Includes Industrial CHP only, as defined by Energy Information Administration.

Source: Energy Information Administration, U.S. Department of Energy.



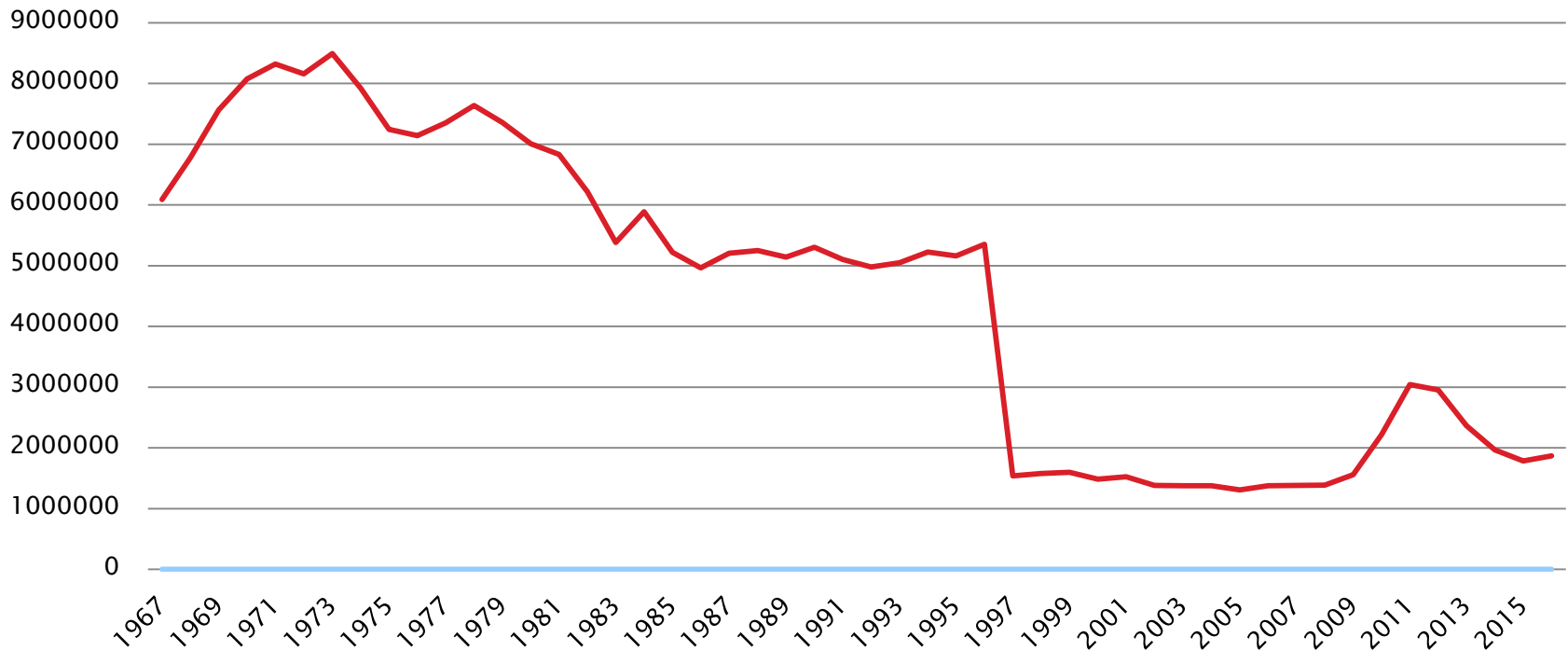
Motivations for understanding utilization trends – new industrial facilities.

There may be CHP potentials at new industrial facilities. Perceptions about Louisiana-based CHP risk and profitability important for development decisions.



# Natural Gas Production

Louisiana Natural Gas Gross Withdrawals Million Cubic Feet

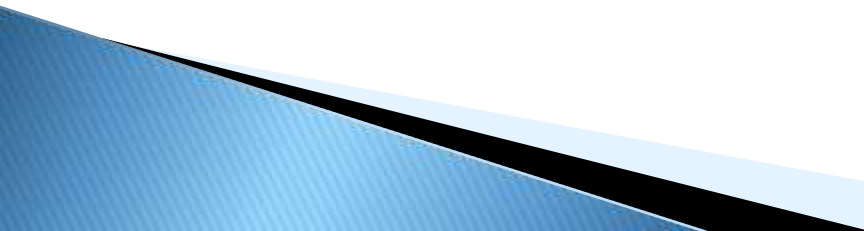


# NATURAL GAS

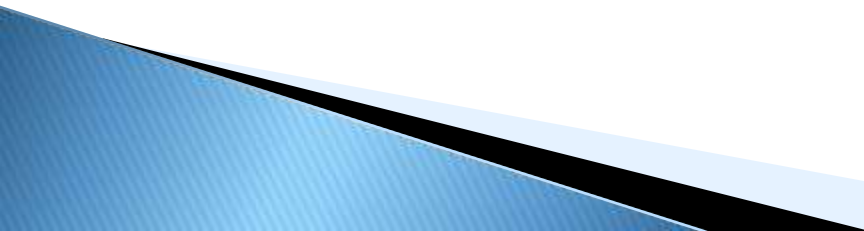
## Natural Gas Infrastructure Overview

- ▶ Gas Wells: 19,683 (4% total U.S.)
- ▶ Processing Plants: 54 (10% total U.S.)
- ▶ Storage Fields: 21 (5% total U.S.)
- ▶ Interstate Pipelines: 44,640 Miles (9% total U.S.)
- ▶ Local Distribution Companies: 108 (6% total U.S.)

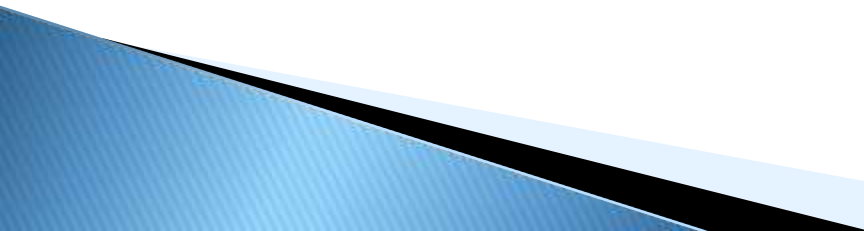
# Natural Gas Production

- ▶ Louisiana #5 in natural gas production (non-OCS)
  - ▶ The Haynesville Shale was a leader shale plays and fracking in the United States
  - ▶ The Haynesville boom more than doubled Louisiana's natural gas production from 2006 to 2011
  - ▶ With refineries and generation, Louisiana is the #1 per capita energy user in the US, using 6% of all natural gas
- 

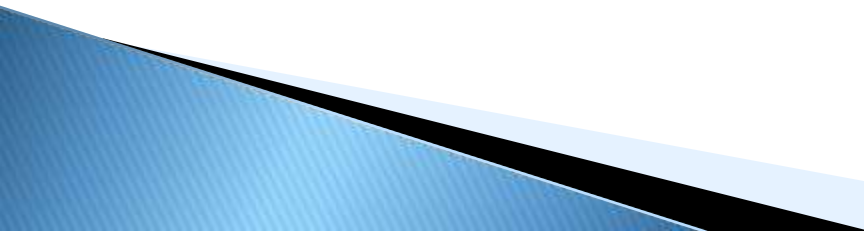
# Petroleum Production

- ▶ Since 1983, production has fallen from 547k bbl/day to 154k bbl/day in 2016
  - ▶ The elevated prices in the early 2010s helped drive an increase in production until 2013
  - ▶ 6.9% of all rigs employed nationally are currently in Louisiana
  - ▶ Louisiana #9 in crude production (non OCS)
- 

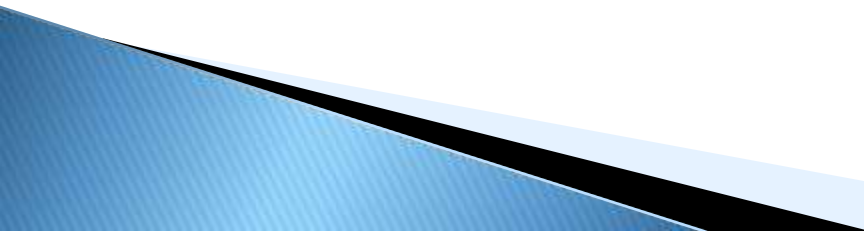
# PETROLEUM Infrastructure Overview

- ▶ Refineries: 19 (13% total U.S.)
  - ▶ Terminals: 92 (5% total U.S.)
  - ▶ Crude Pipelines: 2,625 Miles (5% total U.S.)
  - ▶ Product Pipelines: 57,600 Miles (9% total U.S.)
  - ▶ Bio-Refineries (Ethanol): 1 (<1% total U.S.)
- 

# Carbon Capture Use & Storage

- ▶ Southern States Energy Board/ DOE Industrial CCUS Efforts
  - ▶ National Enhanced Oil Recovery Initiative
  - ▶ IRS 45 Q Tax Credits
  - ▶ Bipartisan Congressional “Future Act” by Senator Heitkamp of North Dakota
  - ▶ Representative Conaway’s of Texas House Legislation HR 3761 “Carbon Capture Act”
  - ▶ Both make permanent and increase the amount of the IRS 45Q CCUS Tax Credit
- 

# Our Energy “Future”

- Continue to promote responsible energy exploration and development
  - Continue to support CCUS for activities such as Enhanced Oil Recovery
  - Continue to promote Alternative Transportation Fuels
  - Continue to promote Energy Efficiency Projects
  - Continue to promote Renewable Energy
- 



# Contact Info:



Paul D. Miller, PE  
Director, Technology Assessment Division  
Louisiana Department of Natural Resources  
225-342-1275  
[paul.miller@la.gov](mailto:paul.miller@la.gov)