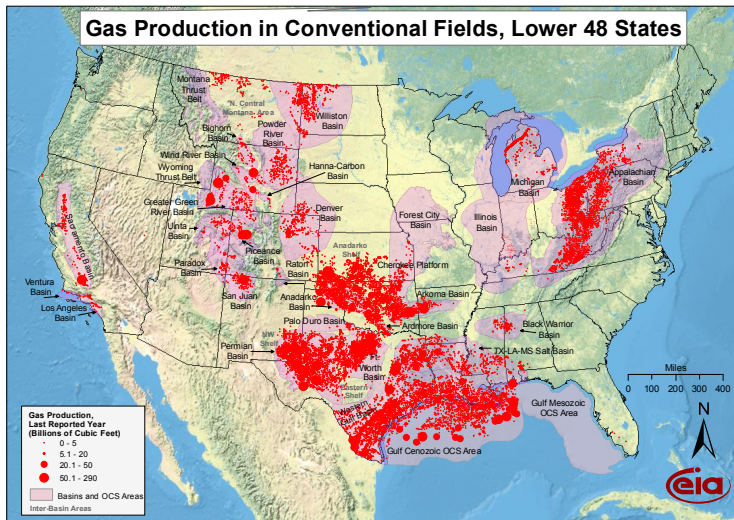


# Introduction to Natural Gas

James Woods

# Where is it produced? Just conventional



Source: Energy Information Administration based on data from HPDI, IN Geological Survey, USGS  
Updated: April 8, 2009

Figure 1:

More in the shale areas.

## Shale plays in the Lower 48 states

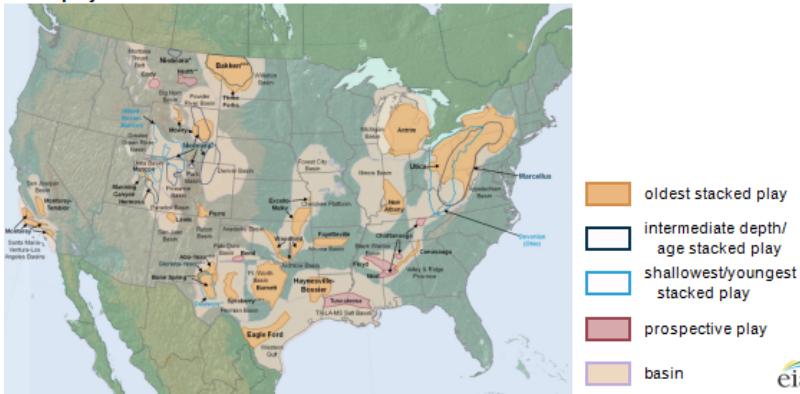


Figure 2:

How do you move it within the US? Pipelines (Interstate only).

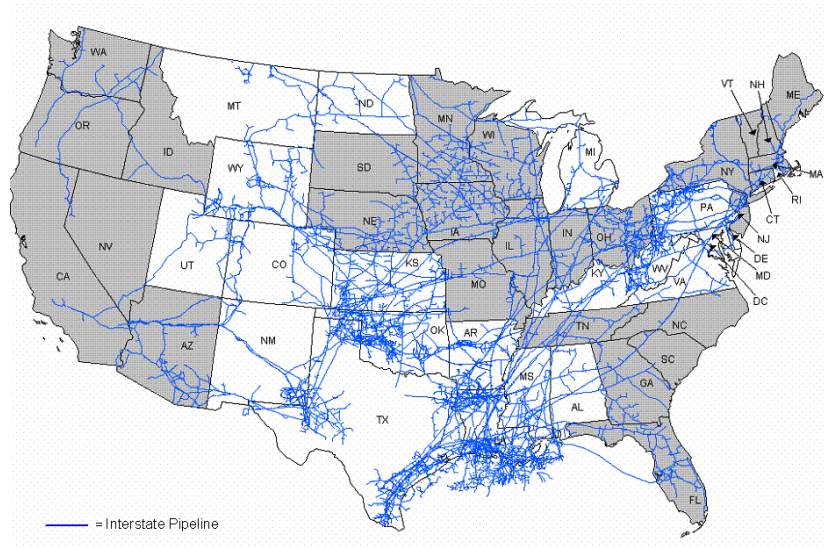


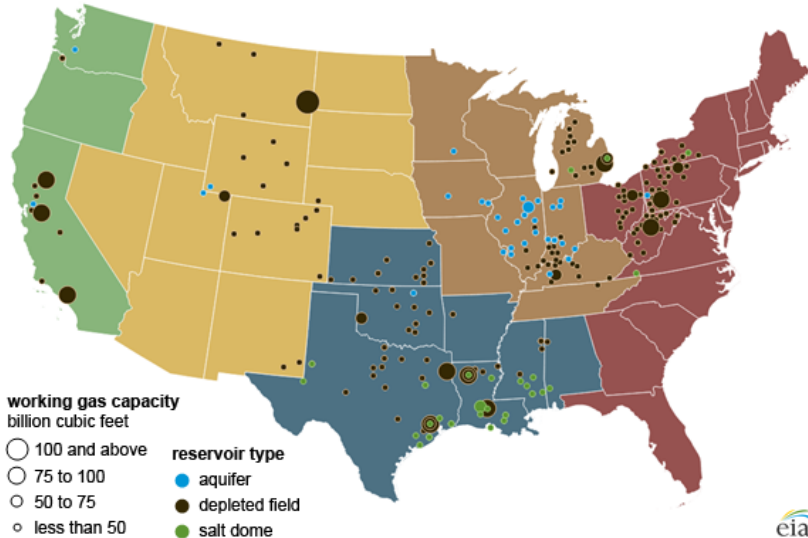
Figure 3:

# What about those pipelines?

- ▶ There are more intrastate pipelines than shown, plenty in TX and CA but also other states
- ▶ Read more here  
[https://www.eia.gov/pub/oil\\_gas/natural\\_gas/analysis\\_publications/ngpipeline/transcorr.html](https://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/transcorr.html)
  - ▶ Picture pipes ranging from a foot to three+ feet for trunk lines.
  - ▶ Compressor stations every 50-100 miles, ~1,500 total
  - ▶ 200 psi to 1,500 depending
- ▶ They are privately owned [https://www.eia.gov/pub/oil\\_gas/natural\\_gas/analysis\\_publications/ngpipeline/MajorInterstatesTable.html](https://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/MajorInterstatesTable.html)
  - ▶ Open access, posted prices, is a thing.
  - ▶ For intrastate, withing, state PUC regulate
  - ▶ For interstate, FERC regulates (You can find current Tarrifs at <http://etariff.ferc.gov/TariffList.aspx>)

# Storage is important

U.S. underground natural gas storage facilities by type (July 2015)



Hubs, where transactions are made

