Natural Gas in Maine Manufacturing

Maine Energy & Environmental Policy: Priorities for the 126th Legislature

March 21, 2013

VERSO®
Turn to us.™

Verso is a Maine Company

Androscoggin Mill

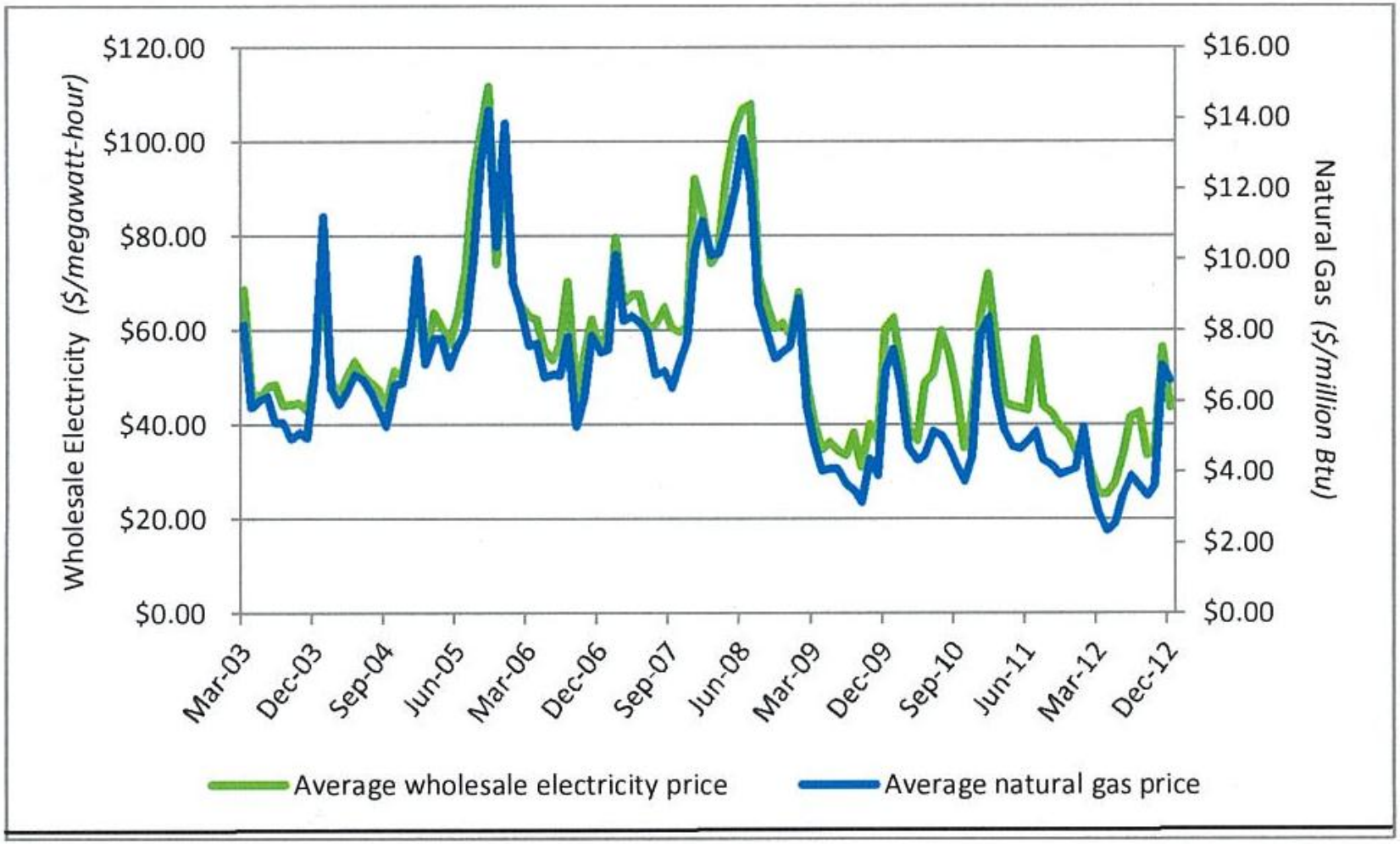
- Opened for business in 1965.
- Employees more than 960 people operating five paper machines.
- Capable of producing more than 1900 tons per day of coated groundwood and coated freesheet papers for offset and rotogravure printing on three coated machines. Also produces specialty grades on two other machines.

Bucksport Mill

- Opened for business in 1930.
- Employees more than 580 people operating four paper machines.
- Capable of producing more than 1050 tons per day of lightweight coated groundwood papers for offset and rotogravure printing. Also produces specialty grades for packaging and printing.

- **Total 2012 annual payroll:** $165 million in wages and benefits for +1500 folks.
- **Total 2012 annual purchases from in-state vendors:** $450 million in goods and services purchased from 300 Maine companies in more than 250 Maine towns.

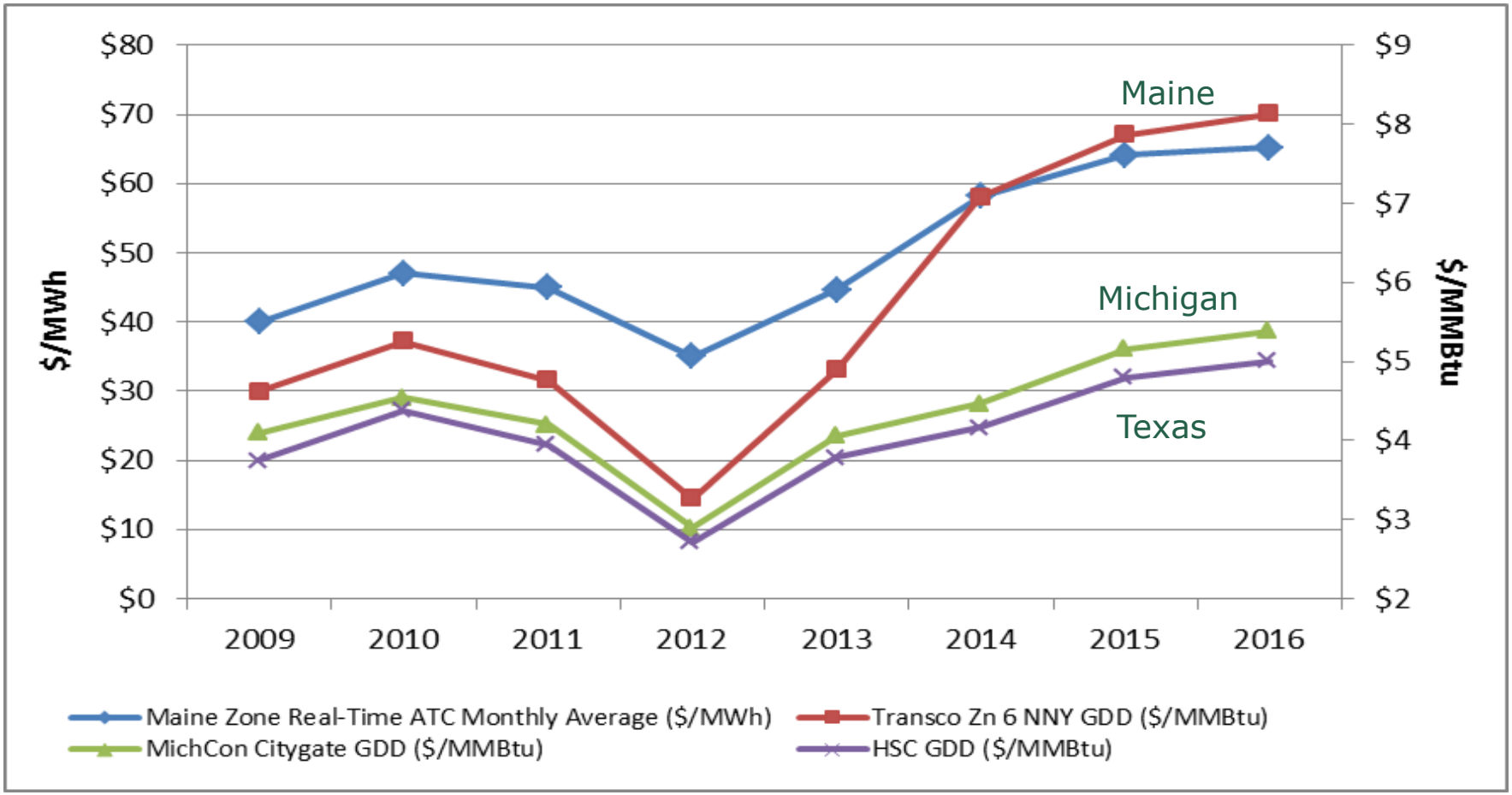
Maine Manufacturing Competitiveness



Source: ISO–NE - January 2013

Manufacturing Competitiveness

- Maine natural gas price is highest in nation
  - Difference forecast to increase

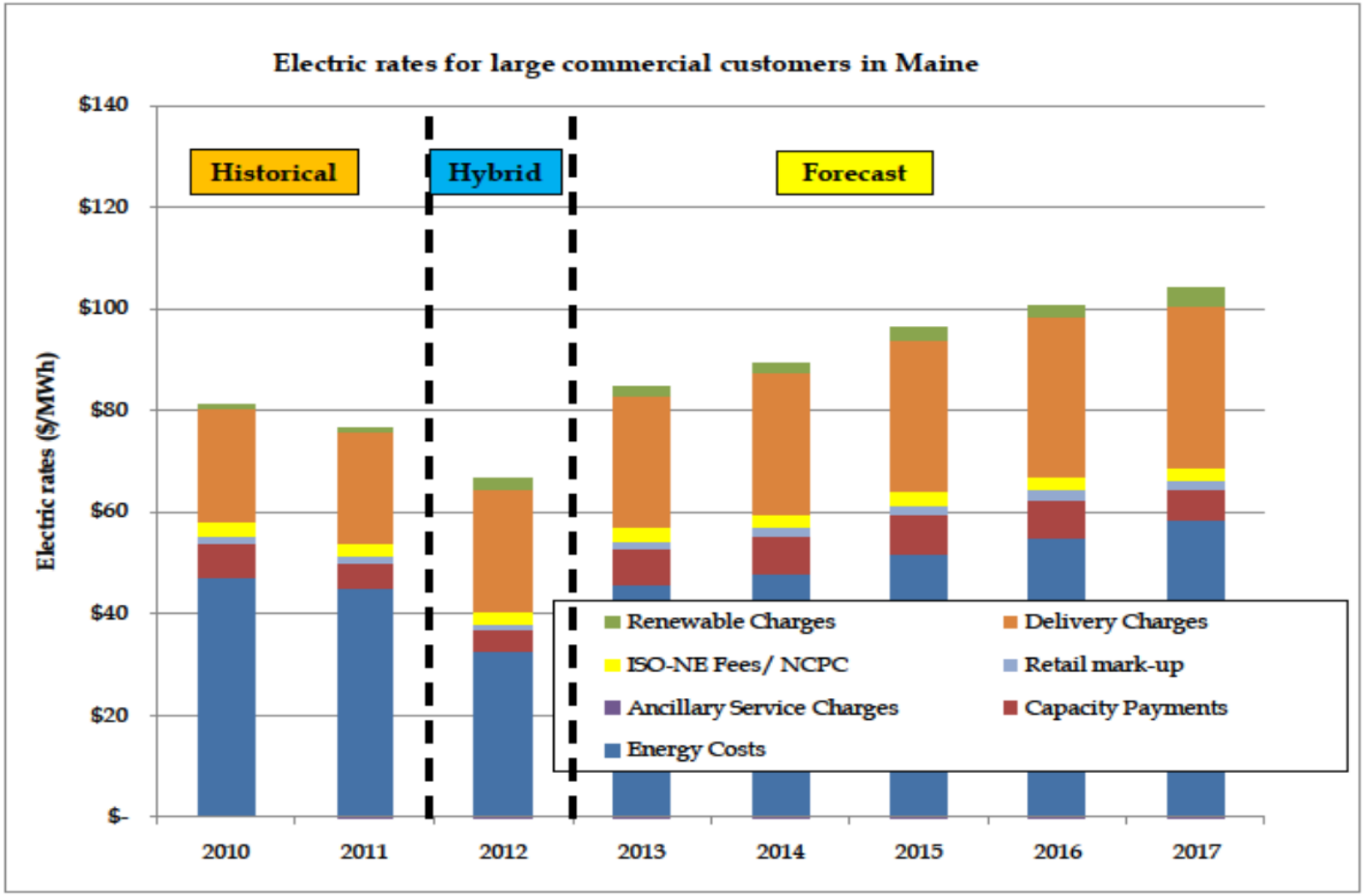


Natural Gas Price Mechanisms

- Delivered natural gas price has 3 components
  - Commodity
    - NYMEX or "Henry Hub" price
  - Basis
    - "Transportation" to get gas to different physical location
  - Adder
    - To cover Suppliers capacity charges and margin

- Why do we care?
  - Basis & adder are a few <u>dimes</u> (combined) for most of US
  - Basis & adder are a few <u>dollars</u> in New England
    - Peak during February was more than $30

Forecast/Breakdown: Commercial Electric Rates



Source: London Economics International – December 2012

What to do?

- Maine based manufacturing must remain competitive: how?
  - Support KV and PV gas pipelines
  - Must also support initiatives to increase NG flow to region
    - New gas pipeline into southern New England
    - Development of New Brunswick shale gas plays

- NG conversion conundrum
  - Savings for those currently on oil: but not to national par
  - Increase for those currently with access to NG (incl. LNG)
  - Neither will be competitive without additional supply capacity into region

Questions???

Appendix

Verso Generation

- Electrical Generation Mix:
  - 300+ MW Combustion turbine capacity
    - Primarily natural gas
    - Merchant plant operation
    - All dual fuel: the only units in Maine
  - 50 MW Natural gas steam turbine generation
  - 130+ MW Biomass generation
  - 30 MW Run-of-River hydro generation
    - Low Impact Hydropower Institute (LIHI) Certified
  - 20 MW Oil generation (rarely operates)

Verso Demand Response

- What is Demand Response (DR)?
- Reducing electricity load at times of high demand
  - I.e. shutting down paper machines during heat wave or cold snap
- NG pipeline restraints: ISO-NE is concerned
  - Demand Response helps grid during these events
- ISO-NE rule changes led to nearly 1000 MW of DR delisting in recent capacity auction
- Verso has provided substantial DR
  - Load reduction plus exporting generation to grid

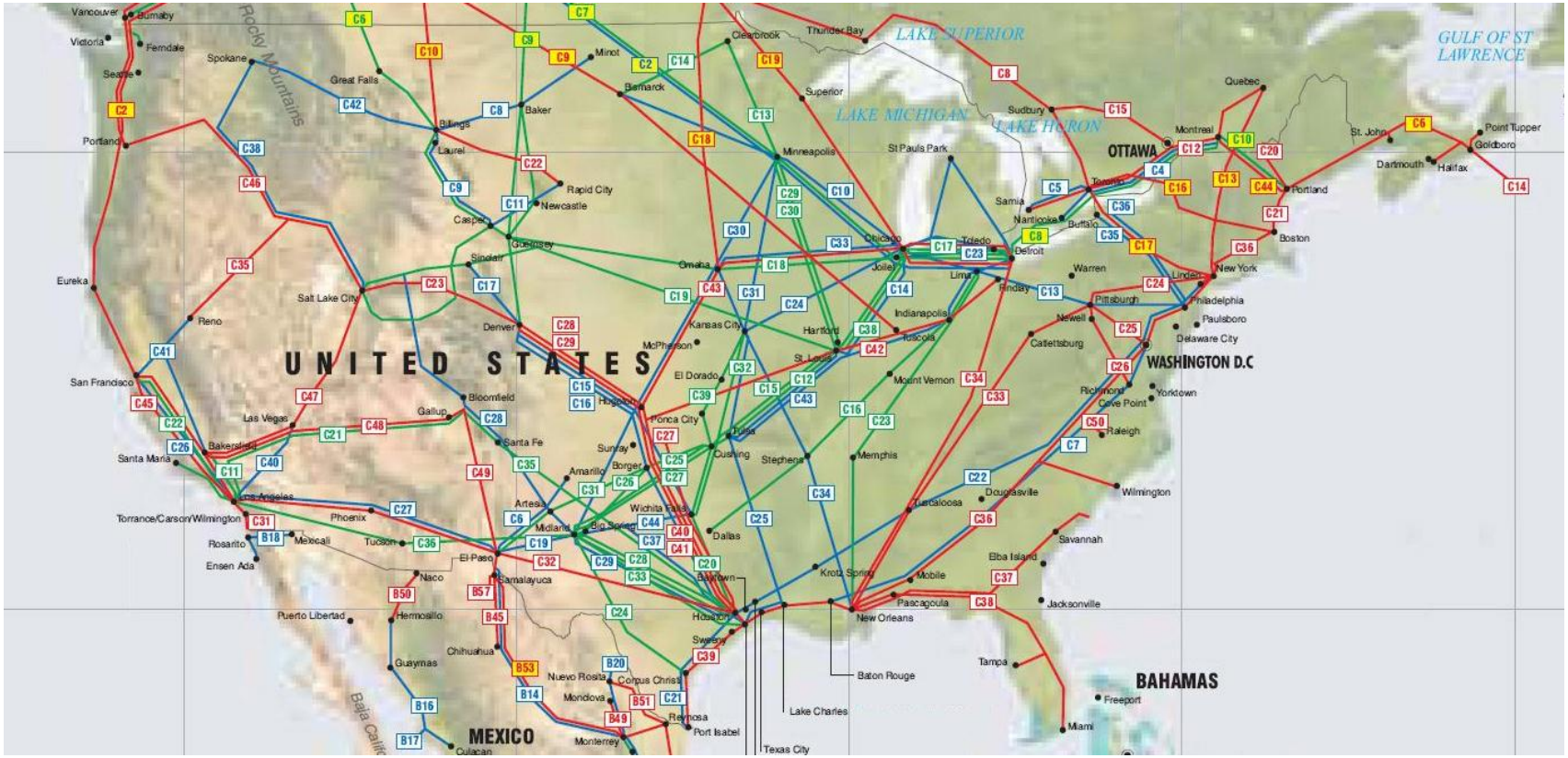
Verso Energy Efficiency

- Efficiency Maine Trust/DOE Projects
  - Efficiency Improvement Projects
    - Heat recovery, compressed air savings
    - Water reuse
    - Efficient equipment component design
  - Generation efficiency improvements - hydro facility
  - EMT Projects saved or generated 6.5 MM kWh/yr

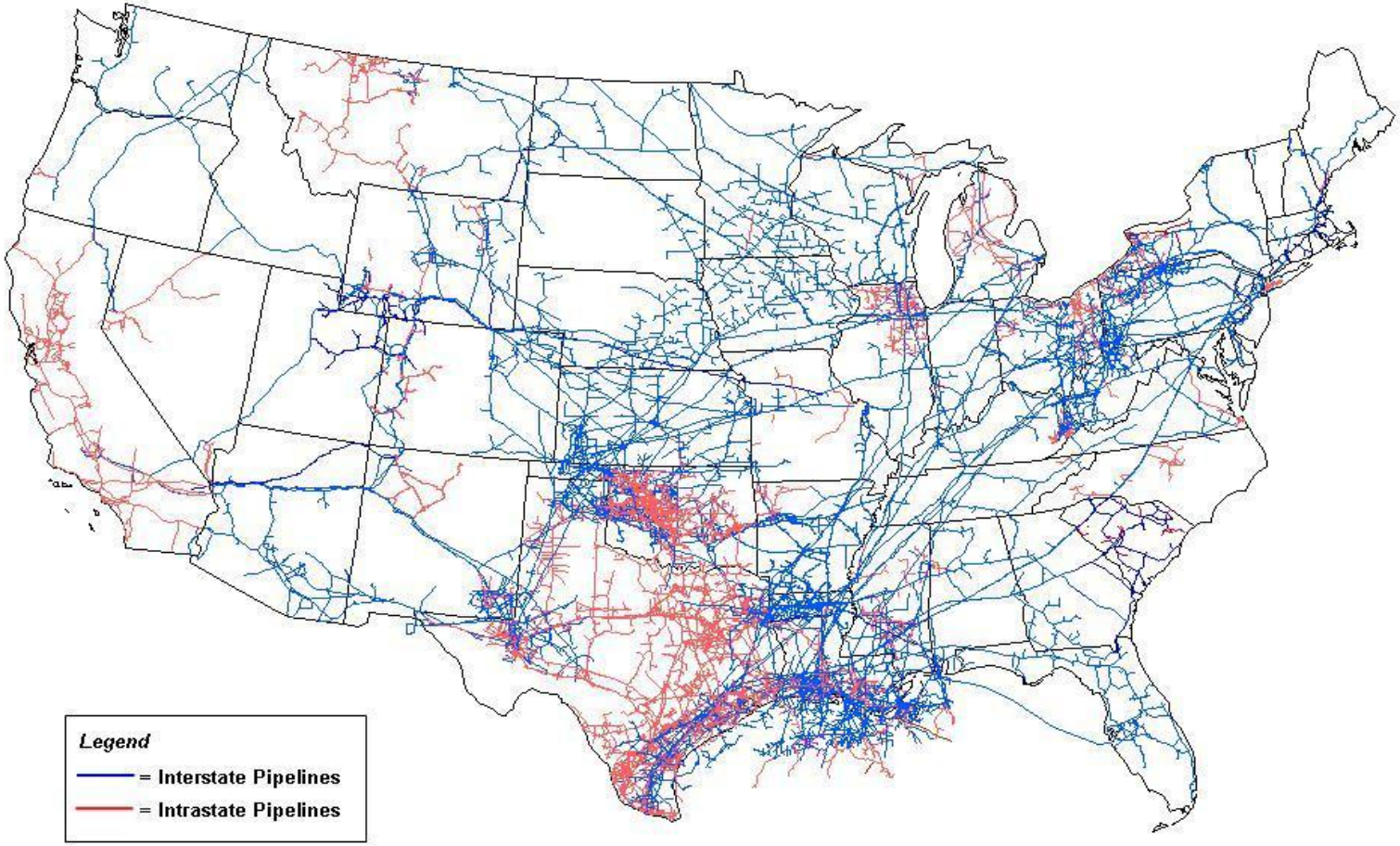
- Energy Engineers
  - Dedicated engineers coordinate energy savings opportunities
  - Potential energy efficiency and conservation project list
    - 80-100 projects/initiatives evaluated and tracked

Natural Gas Pipelines: New England

Major Oil and Gas Pipelines: US



Natural Gas Pipeline Map



Source: Energy Information Administration, Office of Oil & Gas, Natural Gas Division, Gas Transportation Information System

Regional Gas Pricing Volatility: A Measure of Risk

Algonquin Pipeline (New England) -- Daily Pricing Settles

Last 5 Winters		Winter '12 / '13	
Average of Highest 5 Pricing Days (within same winter)	Highest Monthly Average: Jan. 2009	Average of Highest 5 Pricing Days (Through March 13, 2013)	Highest Monthly Average: Feb. 2013 (Through March 13, 2013)
$15.66 (Winter '10 / '11)	$8.99	$31.58	$17.87
		*Average Winter '12 / '13 Daily Price	$9.77

Source: Schneider Electric

The Problem: Regional Risk

*Region-specific factors have increased risk for customers with physical open (floating) transportation positions.

Recurring Factors

- Cold Weather (increased demand for gas)
- Interstate Pipeline Capacity Constraints (Algonquin pipeline)
- Few Third-Party Supplier Options
- Nuclear Outages (Pilgrim: Plymouth, MA)

New Fundamental Shifts in Market

- Increased Gas-Fired Generation (New England)
- Merchant Generators -- purchasing interruptible capacity
- Competition for Canadian Gas from Algonquin Demand
- Canadian Supply Problems
  - -Deep Panuke (delays change behavior of term buyers)
  - -LNG (unreliable supply)
  - -Pipe Capacity (New Brunswick; Maritimes)
  - -Rapid well depletion rate (ex. Sable Island)