



AMONG THE NATION'S FINEST

Westfield Gas & Electric 2019/2020 Energy Outlook October 2, 2019



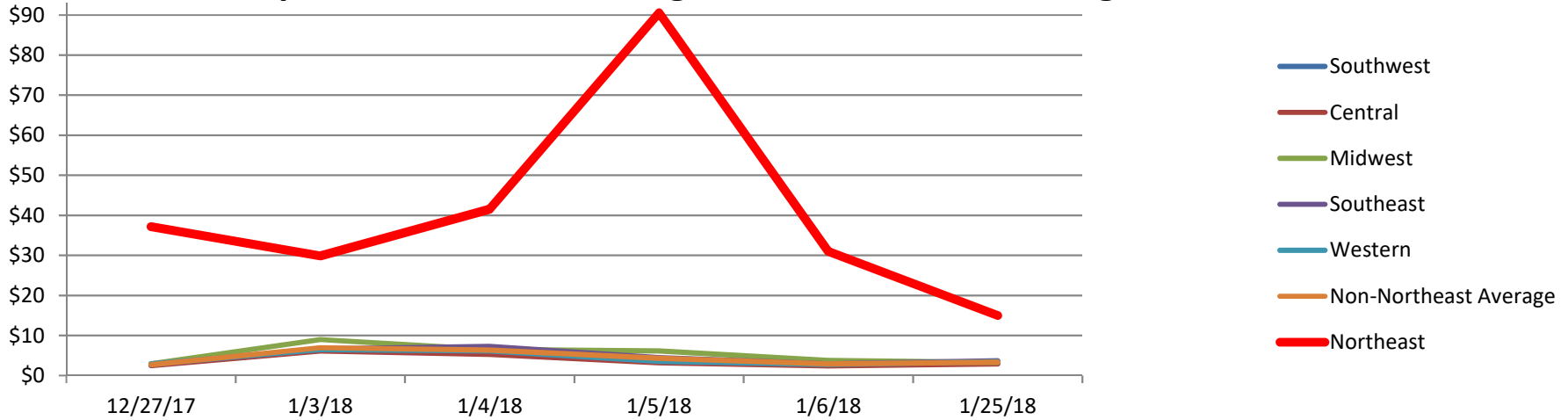
Connection of Natural Gas & Electric Power

- **While natural gas supplies are plentiful, the delivery infrastructure in the Northeast remains inadequate.**
- **Many of the natural gas transmission pipelines were built decades ago when natural gas was first introduced into the region (1950's).**
- **The demand for natural gas, particularly in the electric generation business, had been relatively flat since the pipelines were built (about 10% of generation in New England was from natural gas).**
- **This began changing a little over a decade ago. In 2019, roughly half of electric generation was fueled by natural gas.**

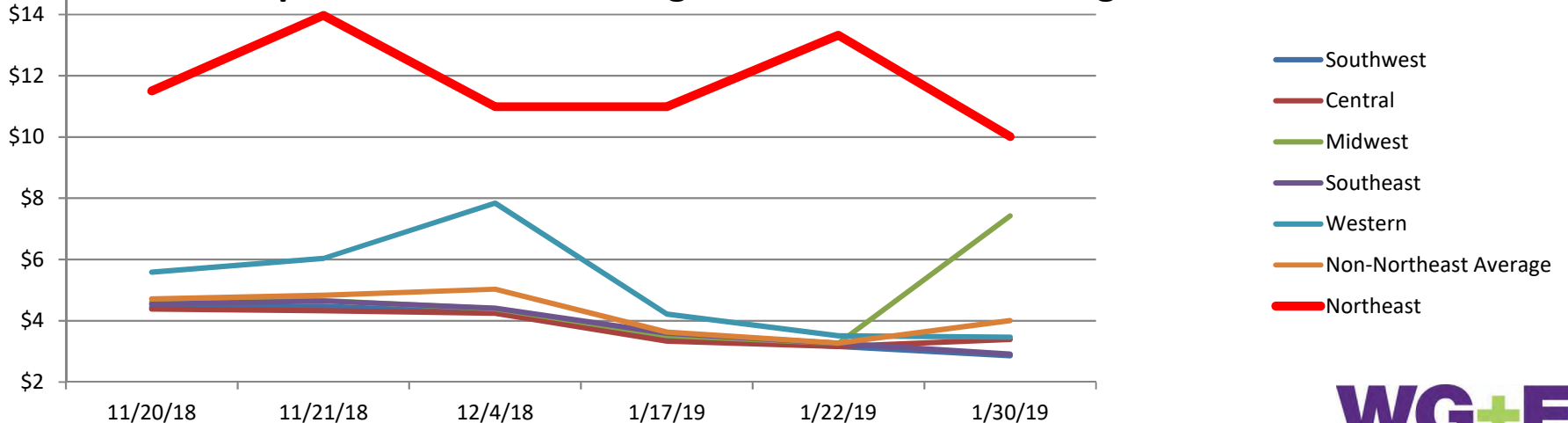
Limited Transport Translates to Higher Costs

Sample Spot Pricing – 2 Recent Winters

Sample Winter 2017-18 Regional Natural Gas Pricing



Sample Winter 2018-19 Regional Natural Gas Pricing





Limited Transport Translates to Higher Costs

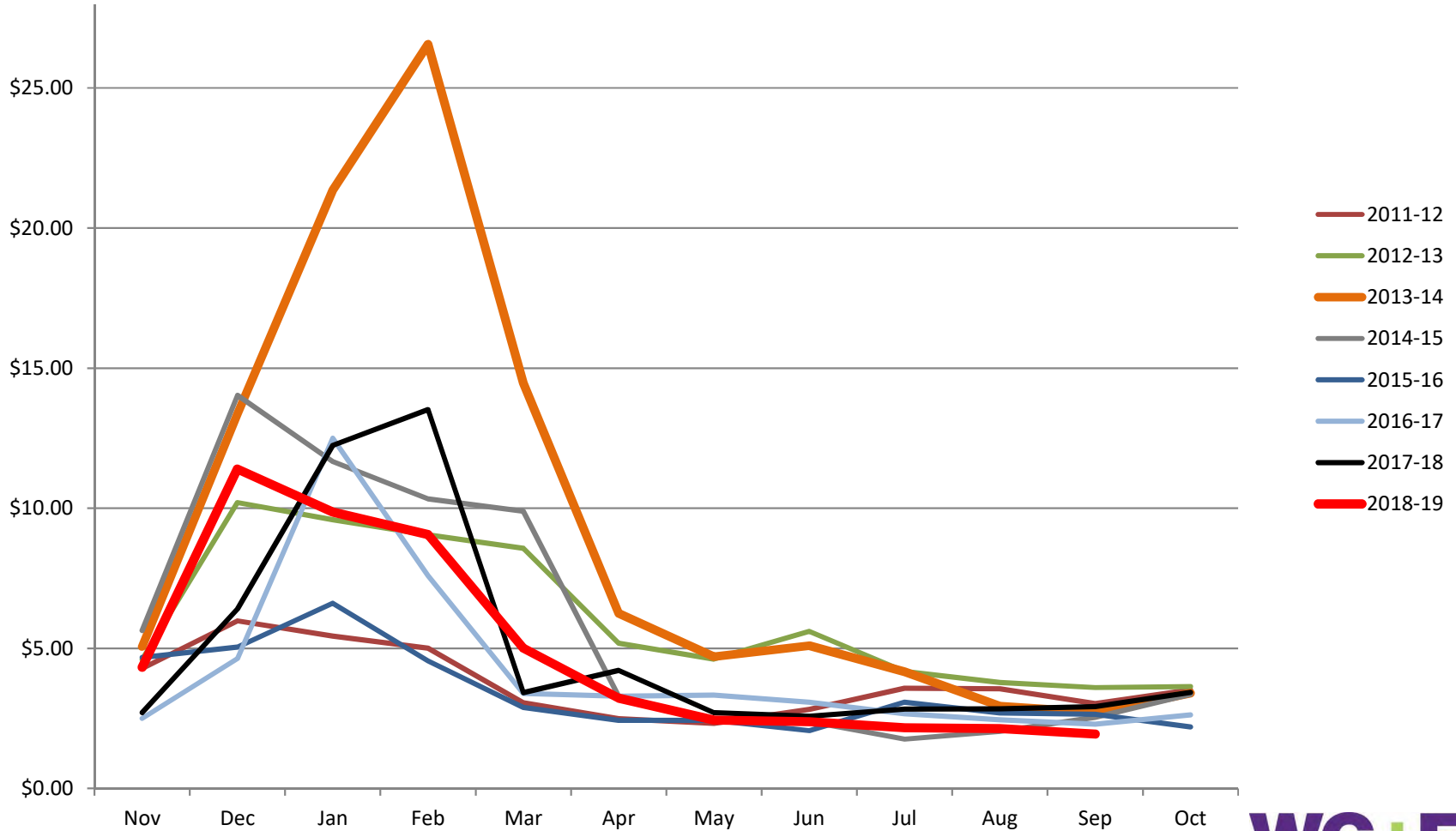
Sample Winter 2018-19 Pricing

Region	11/20/18	11/21/18	12/4/18	1/17/19	1/22/19	1/30/19
Southwest	4.44	4.48	4.26	3.48	3.17	2.86
Central	4.38	4.33	4.25	3.34	3.16	3.39
Midwest	4.62	4.66	4.40	3.52	3.26	7.43
Southeast	4.54	4.65	4.42	3.59	3.27	2.91
Western	5.59	6.04	7.84	4.22	3.51	3.47
Non-Northeast Average	\$ 4.71	\$ 4.83	\$ 5.03	\$ 3.63	\$ 3.27	\$ 4.01
Northeast	\$ 11.51	\$ 13.98	\$ 10.99	\$ 11.00	\$ 13.33	\$ 10.02
Northeast Premium	244%	289%	218%	303%	407%	250%

Winter in Review

- New England delivered gas costs experienced last winter during peak demand periods were higher than the rest of the nation, yet much more contained than in the previous winter.
- Several factors worked in unison to affect New England delivered gas costs including:
 - Lack of sustained frigid weather** – Although heating degree days for the entire winter period were slightly higher than normal, the lack of extreme and sustained cold kept heating demand in check.
 - Continued low crude oil prices** – Robust supplies of crude has put downward pressure on its price.
 - Availability of LNG in New England** – Foreign LNG contracts tied to the cost of oil allowed LNG deliveries to flow to the New England market, providing relief to the high wholesale energy prices that would likely have occurred had LNG not been available.
 - ISO New England's Pay for Performance Program** – Put into effect to replace the ISO's Winter Reliability Program, the relatively new Pay for Performance Program helps to ensure electric generation resources have adequate fuel supplies and are ready and able to operate during times of stress on the regional power system.

Historical New England Delivered Gas Cost



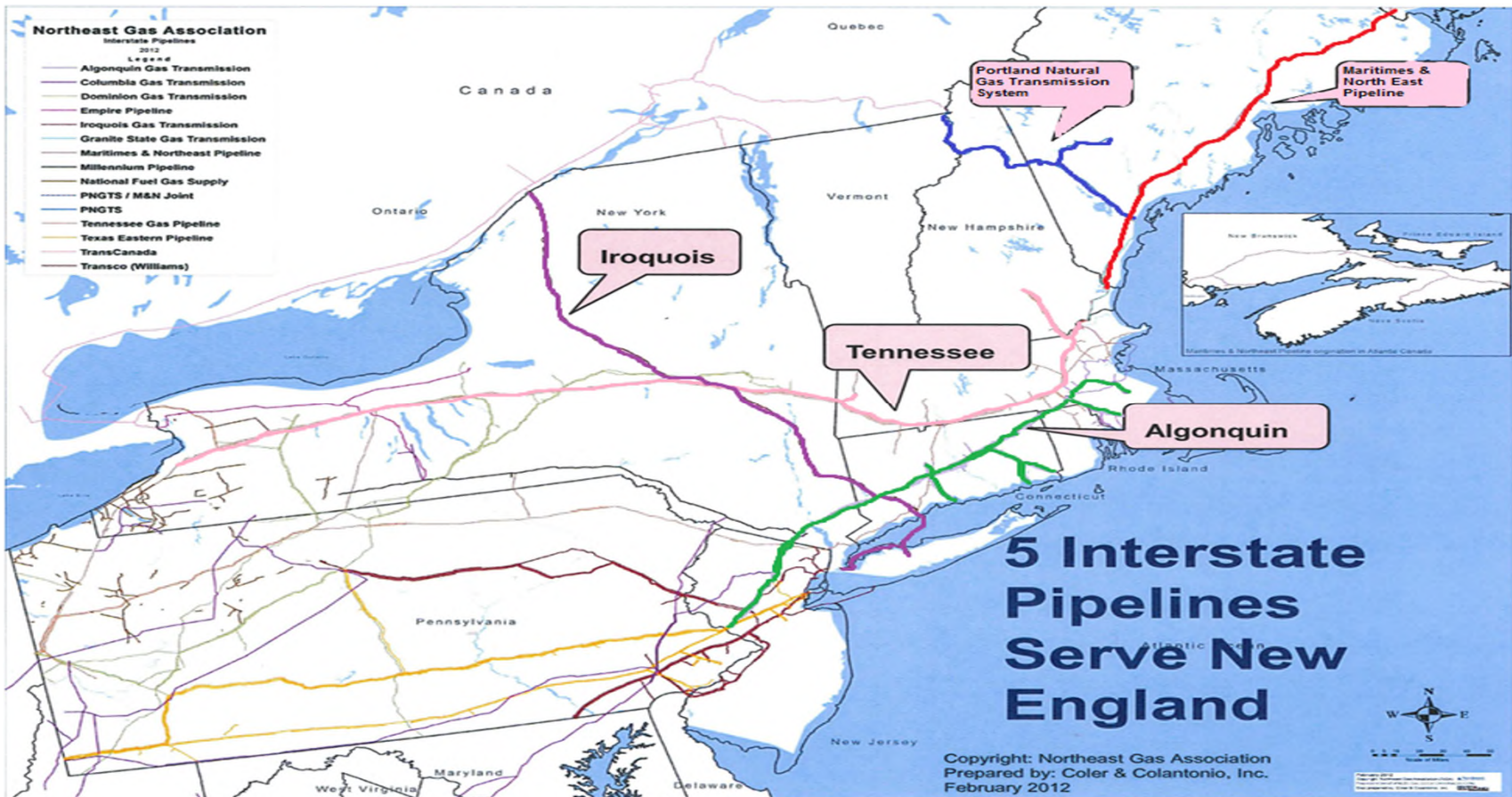
Pipeline Investment

- The natural gas interstate pipeline system is **designed solely to fulfill its contractual arrangements.**
- **Pipeline capacity is added only** to meet the needs of gas customers requesting primary firm service and who are willing to **execute long term firm transportation contracts** that pay for the required capital investment and operating costs. Because of very high cost of pipeline expansion, **there is no “If we build it they will come” mindset.**
- Instead, without long term firm commitments and arrangements, projects do not proceed and if they do, **local opposition and state permitting can derail the project - as has occurred to the Constitution Pipeline project in New York.**



Natural Gas Demand & Limited Infrastructure

Although shale supplies are plentiful, limited transport exists from the shale regions into New England



Natural Gas Pipeline Infrastructure & Management

- The Federal Energy Regulatory Commission (**FERC**) determines
 - **the rate-setting methods for interstate pipeline companies,**
 - **sets rules for business practices, and**
 - **has the sole responsibility for authorizing the siting, construction, and operations of interstate pipelines, natural gas storage fields, and liquefied natural gas (LNG) facilities.**
- The FERC **does not manage the overall pipeline system the way a regional electric ISO or RTO does.**
- **Pipeline Owners will only expand their service when a guaranteed rate of return is met.**

What Does It All Mean

- **Prices in both gas and electric utilities will be subject to significant fluctuations for the foreseeable future**
 - Natural gas is the preferred fuel for a significant portion of newer electric generating plants
 - During periods of high demand, transportation costs will drive the New England markets
 - With increased pipeline capacity unlikely to occur, these fluctuations will continue
- This effect is **negative for the consumer and business alike**
 - On the **commercial** side, investment by business in the region will be adversely affected. This hurts **job growth, economic stability, and investment in infrastructure and the community**
 - On the **residential** side, people's **disposable income contracts** for many reasons and **detracts from any meaningful recovery**

What Can We Expect This Winter?

- **Although one can never tell where prices will end up, several factors are lining up which may once again keep New England delivered gas costs between the high levels experienced during the Winter '13-'14 and the lower levels seen during the Winter '15-'16**

Crude oil prices remain relatively low – Continued excess supply of crude oil has caused its forward price (as of today) to remain at or below \$60/bbl over the next 10 years.

High levels of natural gas production – Despite relatively low natural gas wholesale prices, daily production continues at record levels. The Northeast region continues to be the largest natural gas-producing region in the country, accounting for 34% of the national total.

Growing LNG demand in Asia – As domestic gas liquefaction capacity continues to increase, growing LNG exports to China drive demand growth in the near future while other developing Asian economies will spur long-term demand growth.

Availability of LNG in New England – Such global LNG supply/demand forces in unison with the New England region's electric market pay for performance requirements will support global LNG costs while continuing to make the New England market attractive.

What is WG+E Doing

- Westfield continues to diligently
 - Utilize a **risk management portfolio** for both gas and electric purchases through an Enterprise Risk Management Program
 - **Control distribution expenses**
 - **Invest** in programs and technological advances to deliver energy in the most cost-effective manner
 - Utilize a **rate stabilization program**
 - **Utilize hedge programs** to optimize supply purchases
 - **Educate** its customers, utilizing various methods, regarding the impacts of this dilemma