Reliable Public Power Provider

WG+E
WESTFIELD GAS + ELECTRIC

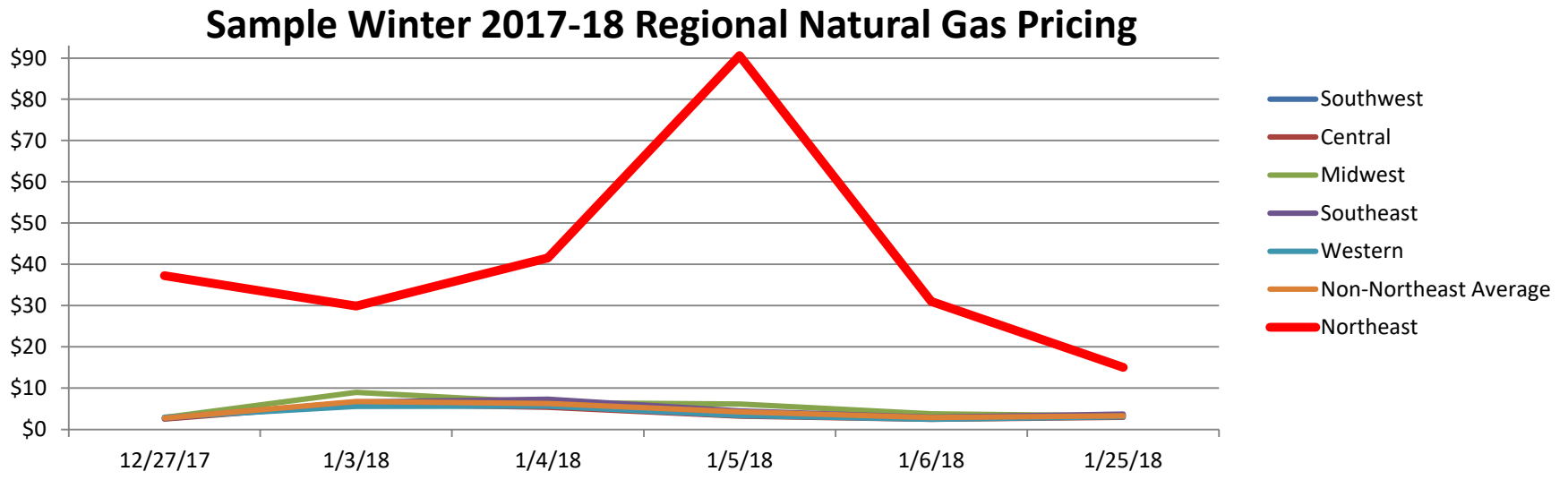
AMONG THE NATION'S FINEST

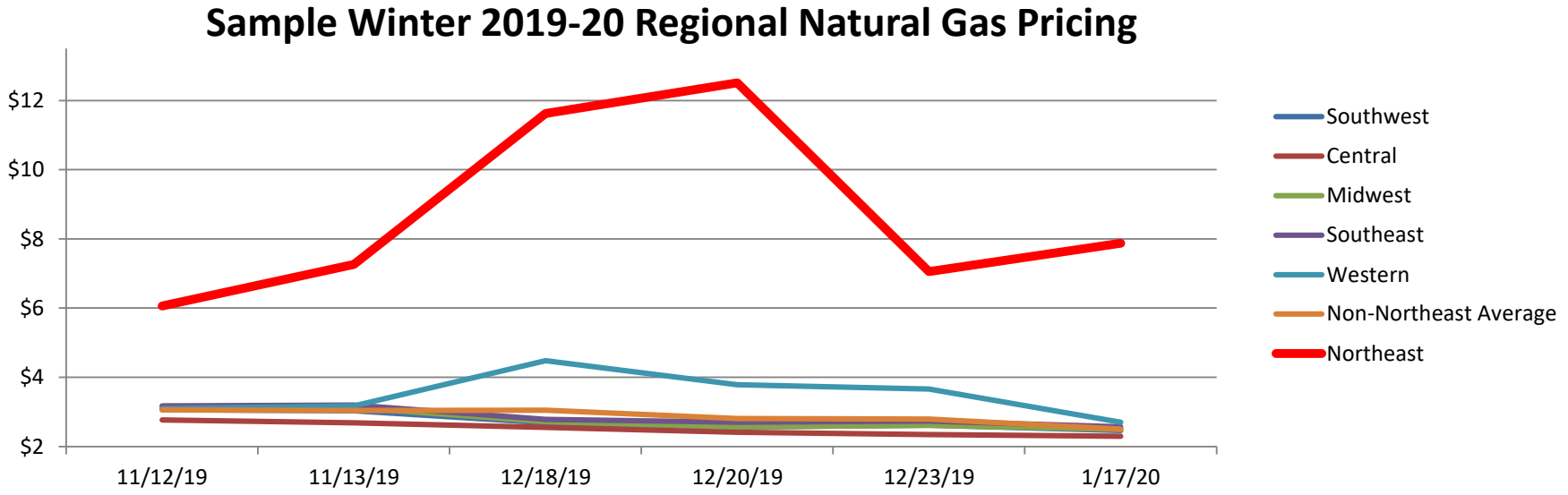
Westfield Gas & Electric 2020/2021 Energy Outlook October 7, 2020

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 2020, roughly half of New England's electric supply was fueled by natural gas.

Limited Transport Translates to Higher Costs
Sample Spot Pricing – 2 Recent Winters





Limited Transport Translates to Higher Costs
Sample Winter 2019-20 Pricing

Region	11/12/19	11/13/19	12/18/19	12/20/19	12/23/19	1/17/20
Southwest	2.57	2.54	2.18	2.06	2.12	1.96
Central	2.27	2.18	2.06	1.91	1.85	1.80
Midwest	2.67	2.63	2.22	2.07	2.11	2.00
Southeast	2.67	2.70	2.29	2.20	2.23	2.07
Western	2.60	2.68	3.99	3.29	3.16	2.21
Non-Northeast Average	$ 2.56	$ 2.54	$ 2.54	$ 2.31	$ 2.29	$ 2.01
Northeast	$ 5.56	$ 6.76	$ 11.12	$ 12.01	$ 6.55	$ 7.37
Northeast Premium	**218%**	**266%**	**437%**	**521%**	**286%**	**367%**

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 most recent winters.

- Several factors worked in unison to affect New England delivered gas costs including:

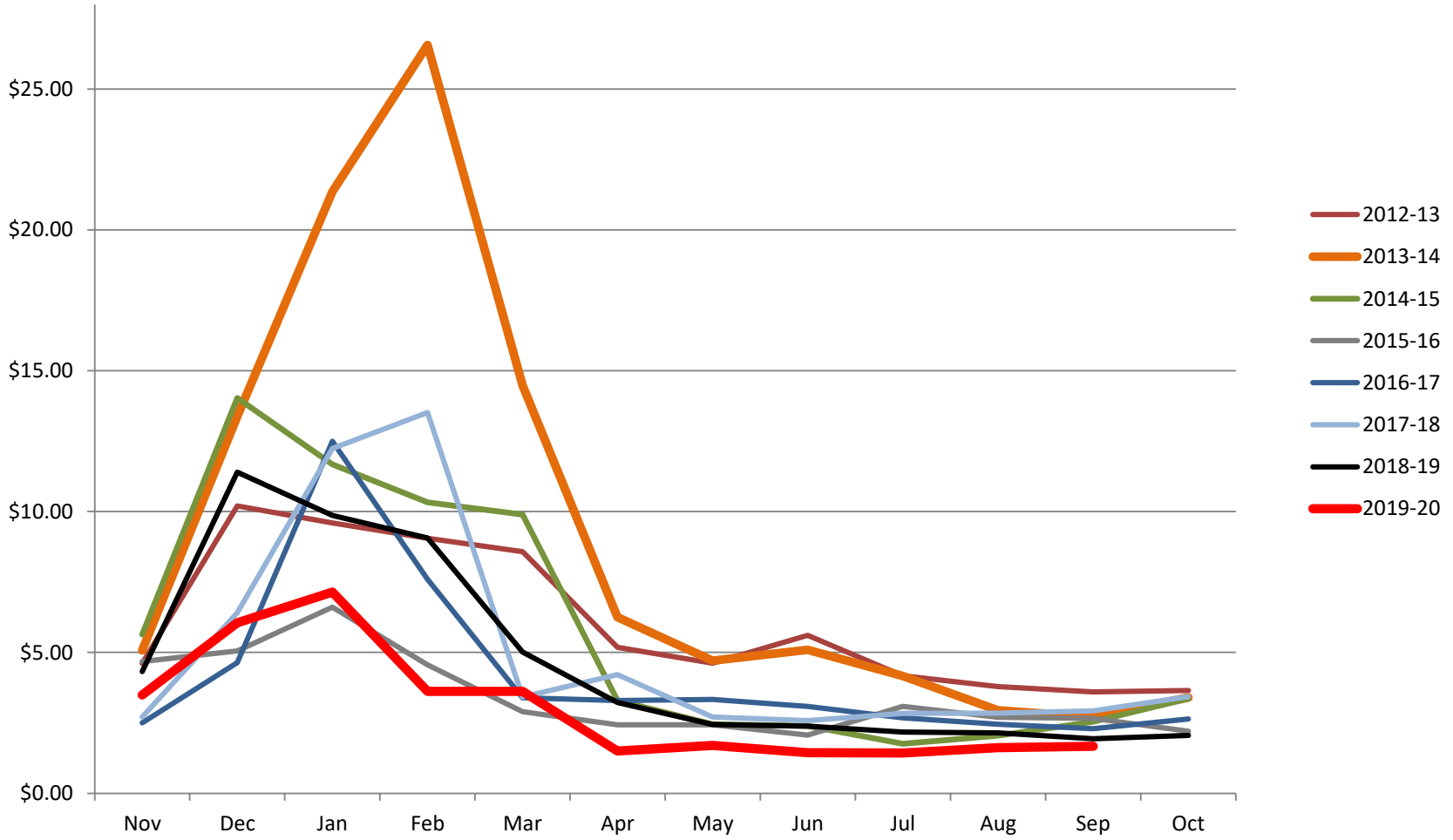
  The winter was warmer than normal – Heating degree days for the entire winter period were roughly 3% less than the average of the last 20 years and a lack of extreme and sustained cold kept high heating demand days in check.

  Continued low crude oil prices – Robust supplies of crude have put downward pressure on its price.

  Availability of Liquified Natural Gas (LNG) in New England – LNG deliveries were available to flow to the New England market when needed, providing relief to high wholesale energy prices that could occur when LNG is not available.

Natural Gas Demand & Limited Infrastructure

Historical New England Delivered Gas Cost



Pipeline Investment

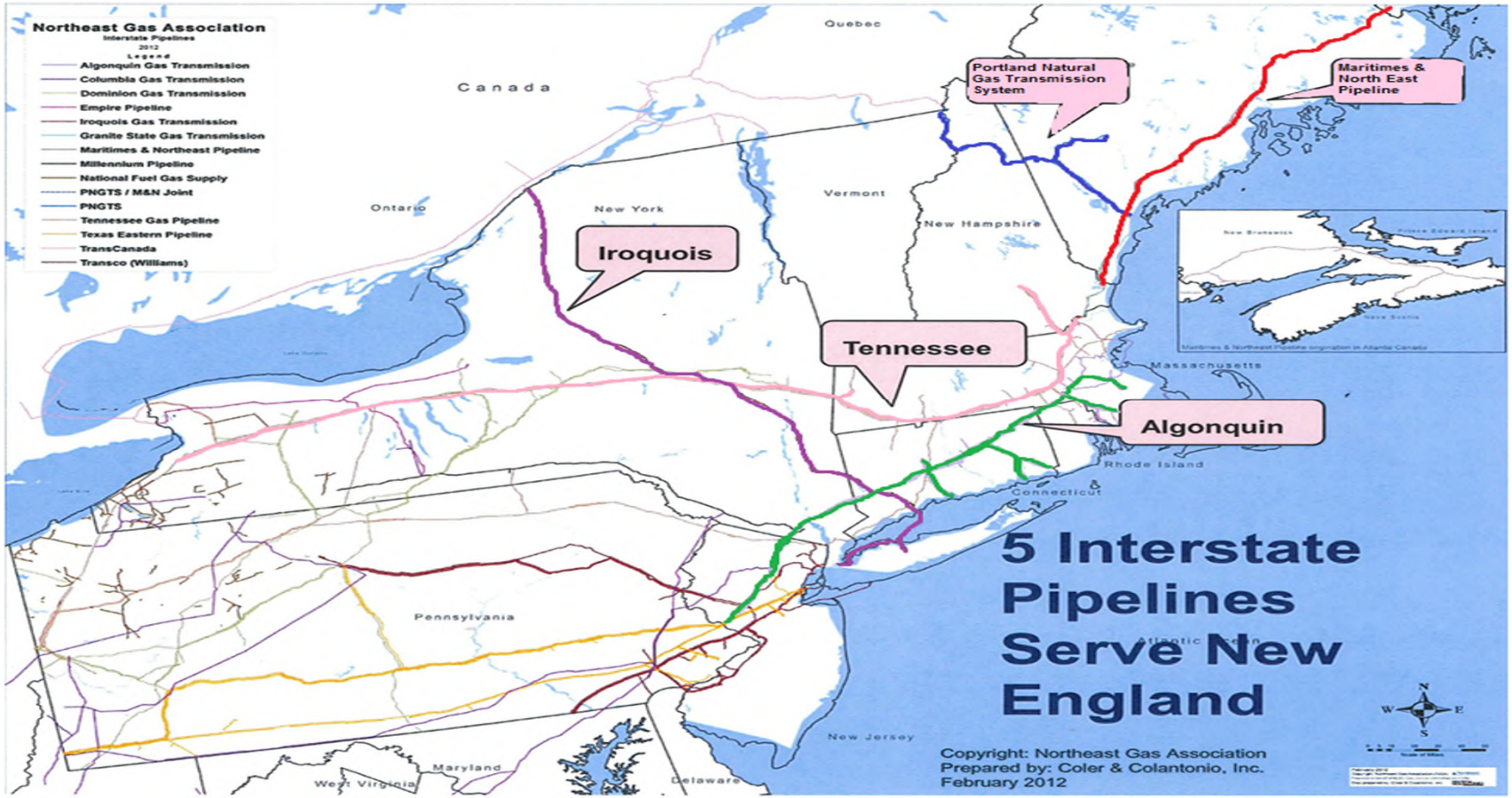
- The natural gas interstate pipeline system is **designed solely to fulfill its contractual arrangements.**

- **Pipeline capacity is added only** to meet the needs of gas customers requesting primary firm service and who are willing t**o 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**.

- **Environmental groups continue to organize their efforts to restrict future pipeline expansion and State mandates are aimed to eliminate fossil fuels by 2050.**

What Does It All Mean

- **Prices in both gas and electric utilities will be subject to significant fluctuations for the foreseeable future**
  - Natural gas continues to be 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 '19-'20**

  COVID-19 – Reduced economic activity related to the COVID-19 pandemic has resulted in lower Commercial demand, contributing to the availability of robust energy supplies.

  Crude oil prices remain relatively low – Continued excess supply of crude oil has energy experts predicting its forward price to average below $50/bbl through 2021.

  High levels of natural gas production – Despite relatively low natural gas wholesale prices, daily production remains robust.

  Natural Gas in Storage – EIA estimates total U.S. working gas in storage ended August 13% above the previous 5-year average and it is expected we'll enter the winter period with supplies 6% above the 5-year average.

  Availability of LNG in New England – Global LNG supply/demand forces will work in unison to make the New England market attractive for LNG cargoes.

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