



Winter Operations Recap Winter 2021-2022

ISO New England

NGA 2022 Regional Market Trends Forum

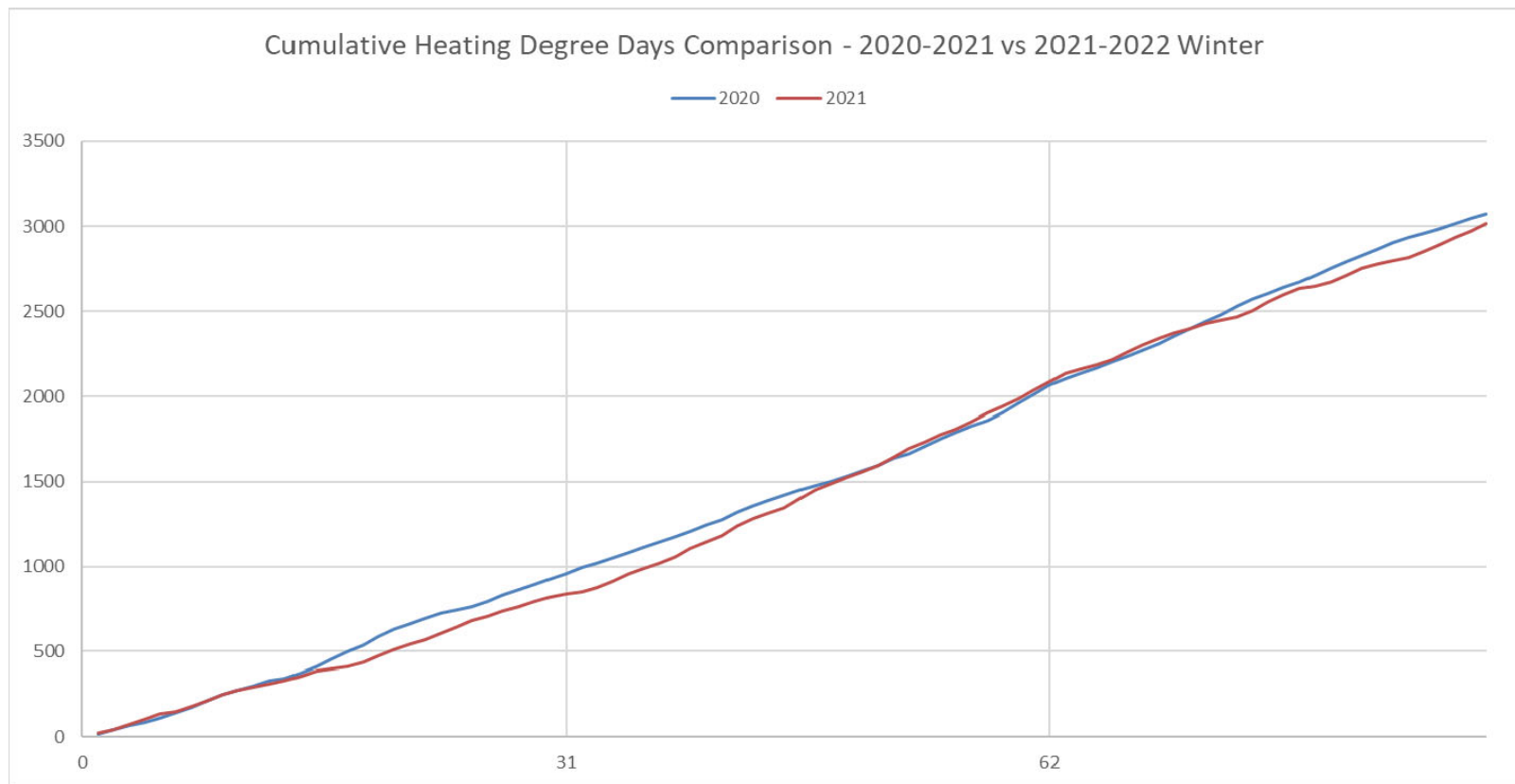
Mike Knowland

MANAGER, OPERATIONS FORECAST AND SCHEDULING



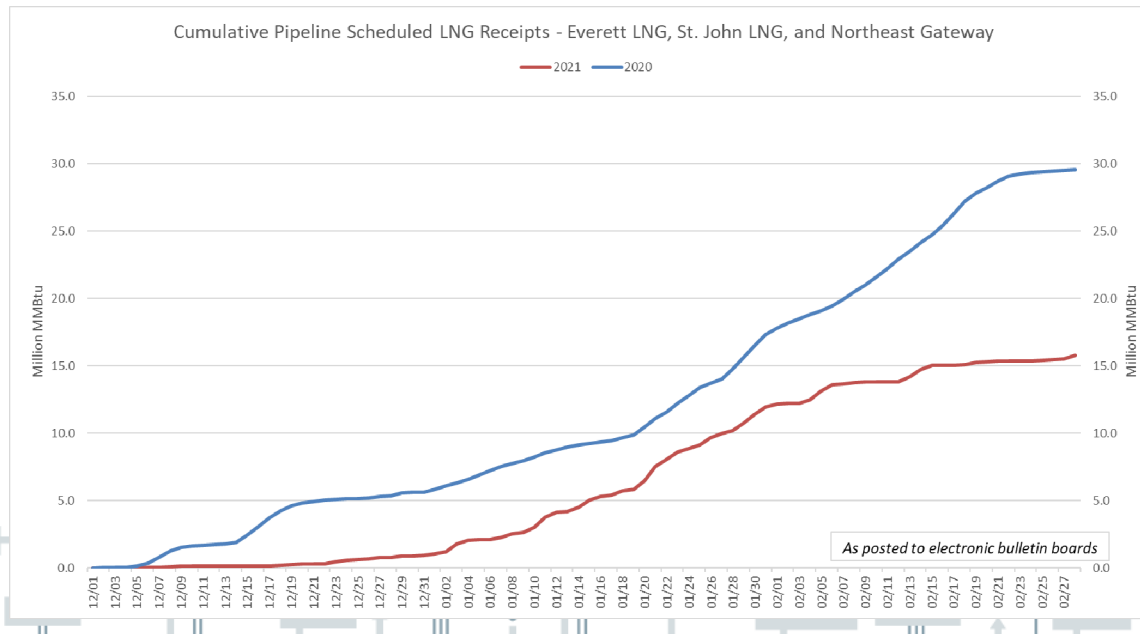
Two Similar Winters

- Winter 2020-2021 and 2021-2022 were very similar in terms of temperature and energy demand



Winter LNG Demand

- Natural gas prices in European and Asian markets, pre-winter forward vs. AGT forward prices indicated that New England could be expecting less LNG available in the winter of 2021-2022.
 - LNG scheduled to New England interstate pipelines (as reported on electronic bulletin boards) was reduced by approximately 50% from the winter of 2020-21



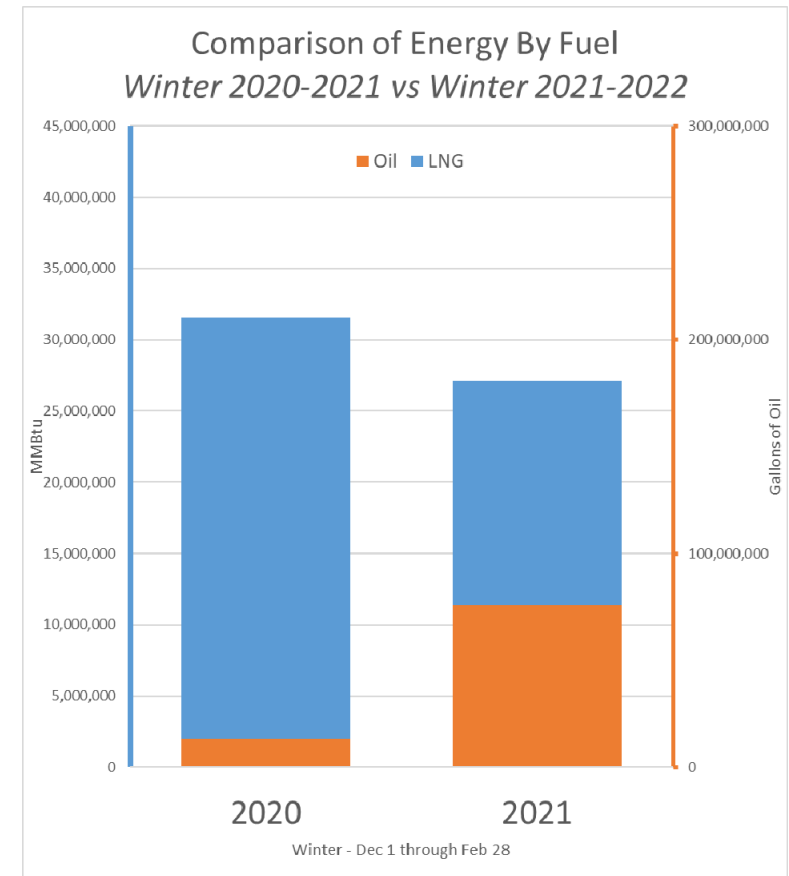
High Volatility of European Natural Gas Prices

- Forward prices for European natural gas in January 2022 rose from below \$5.00 to nearly \$50.00 per MMBtu between mid-2020 and December 2021 (shown on chart below)
- New England (Algonquin Citygates) forward gas prices were approximately \$19.00 / MMBtu in mid-September



Comparison of Fuel from Winters: 2020-2021 vs. 2021-2022

- Comparing stored fuel utilization between two winter seasons
 - Assumption is that pipelines are fully utilized in the winter and the balance of energy comes from stored fuel
 - Stored fuel described here is oil at generation stations and LNG vaporized to pipelines
 - Equivalency is estimated using 150,000 Btu per gallon



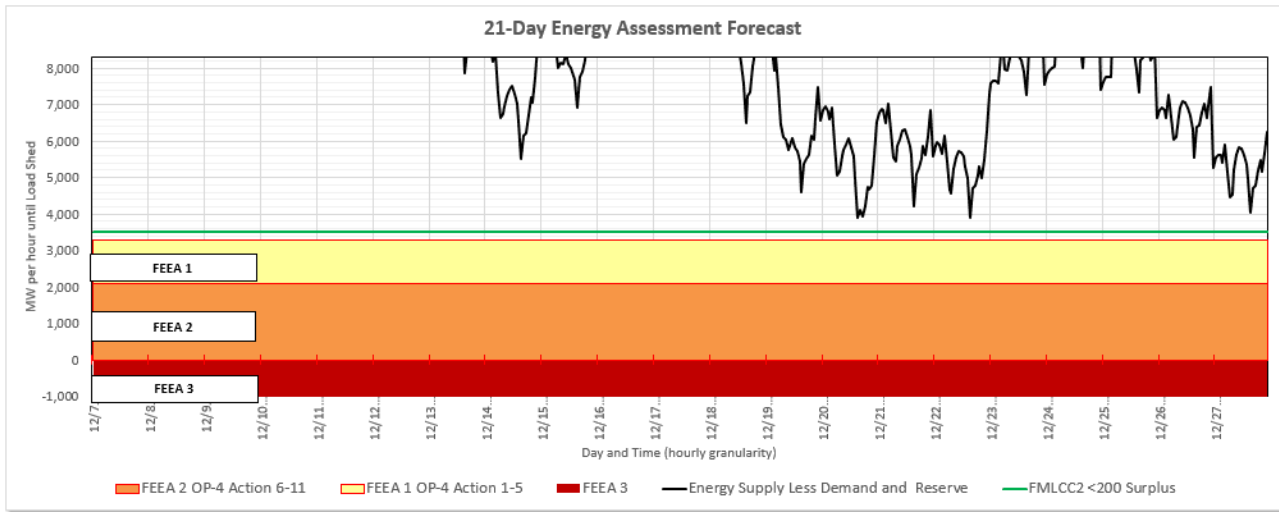
21-Day Energy Emergency Forecast

- The goal of the ISO New England 21-Day Energy Emergency Forecast is to alert regional stakeholders of actual or anticipated near-term energy deficiency conditions such that stakeholders with resources in short supply of fuel or with potential environmental limitations, can take action to replenish fuel supplies and mitigate environmental limitations
- Using forecast conditions for the upcoming three week time period and the expected utilization of all available fuels, the report shows an hour by hour evaluation of the generation available to serve power system demand and maintain adequate operating reserves
 - Fuel supply is modeled as accurately as possible using surveys of generator stored fuels and estimated firm gas demand



Capacity Surplus Chart

- The final result of the 21-Day Energy Emergency Forecast is a chart showing the capacity surplus in each hour of the study period, after accounting for outages due to depleted fuel or emissions restrictions



Questions

