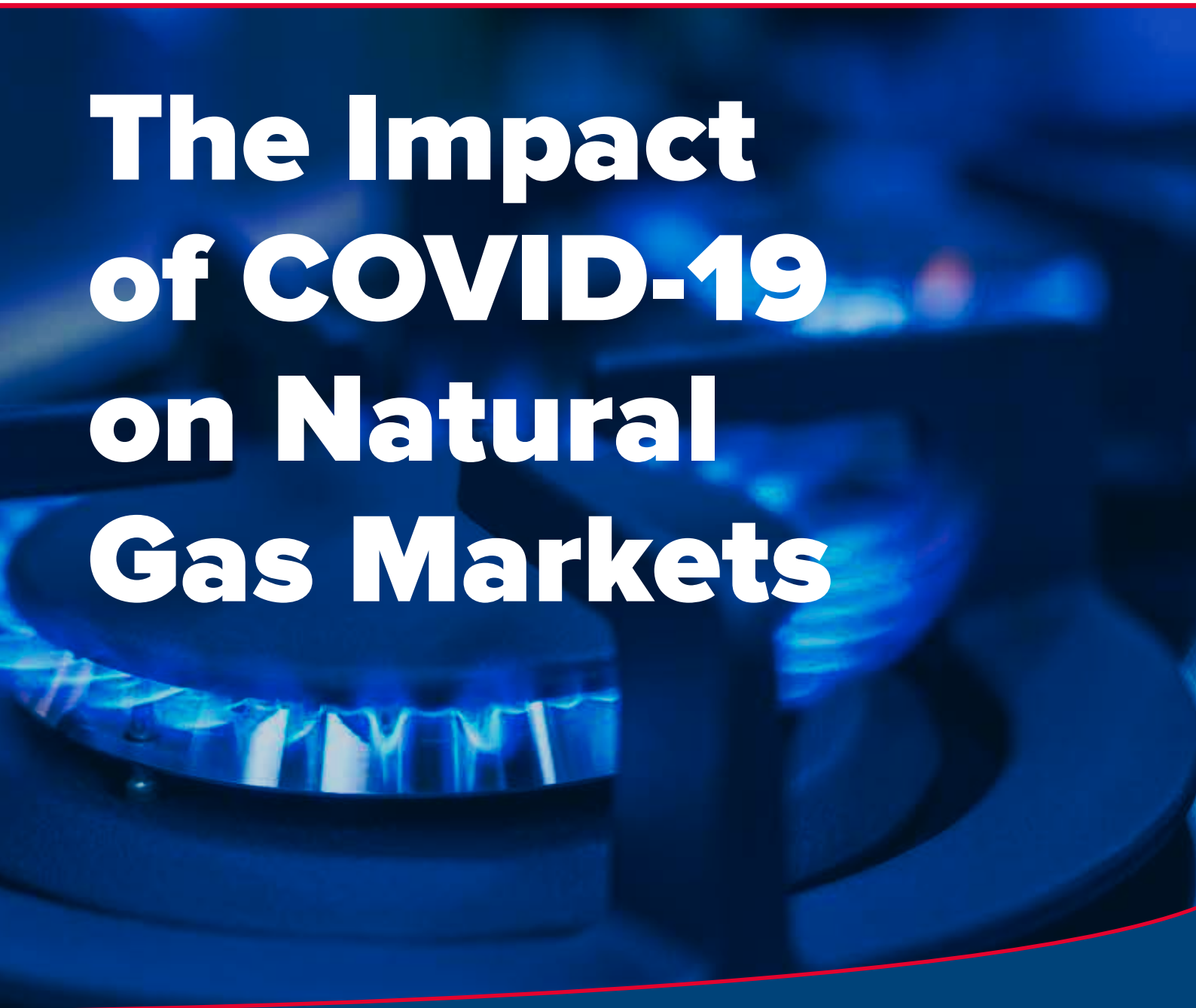
IEF INSIGHT BRIEF

May 2020



The Impact of COVID-19 on Natural Gas Markets

Riyadh, Saudi Arabia | **May** 2020

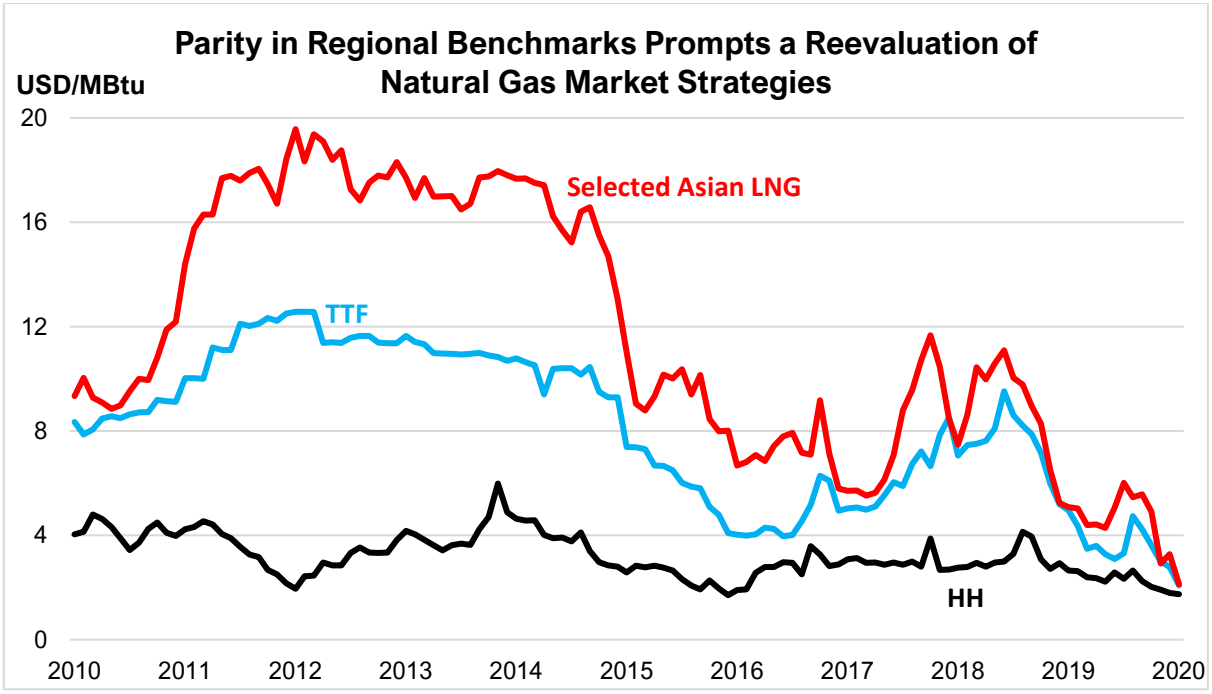
KEY POINTS:

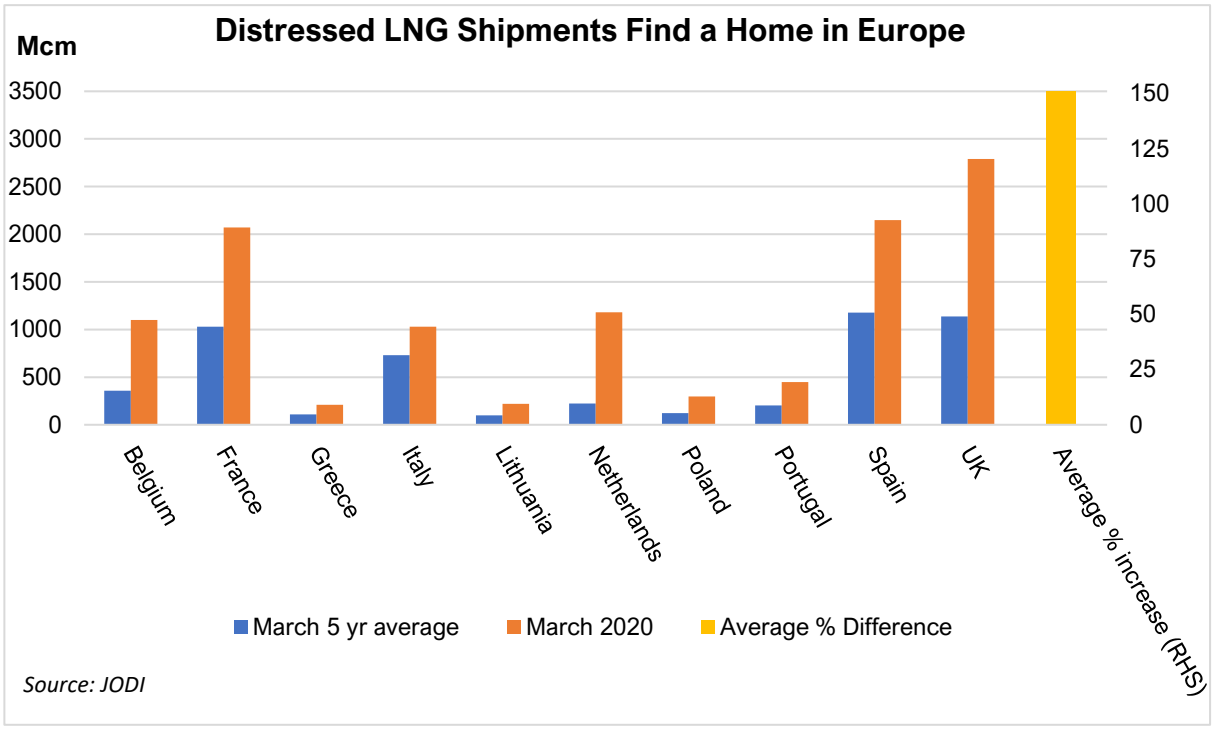
- **Natural gas demand, closely linked to world economic growth, is set to decline by around 3 to 5 percent in 2020, dependent on public health restrictions, economic activity, and the speed of recovery.**
- **Governments may choose to capitalise on abundant and competitive natural gas supplies to place greater emphasis on clean air requirements and inclusive energy transitions in post-pandemic recovery strategies.**
- **Natural gas technologies can accelerate fuel-switching and synergies by integrating renewables, green gas, hydrogen, and carbon dioxide solutions to achieve the net-zero emissions envisioned by green growth concepts such as the Circular Carbon Economy.**
- **Producers and consumers will have to adjust strategies due to limited available storage and downward convergence among regional gas price markers. While this may reduce opportunities for international gas trade, it is likely to add flexibility to long-term contracts and stimulate investment in gas storage in emerging markets.**
- **The exceptional energy market circumstances created by the COVID-19 pandemic may enable governments to make progress in enhancing natural gas market transparency for which government support remains essential.**
- **The next major opportunity for producer and consumer countries to take the energy dialogue on natural gas markets forward will be at the 7th IEF-IGU Ministerial Gas Forum scheduled to take place virtually on 3 December 2020 hosted by Malaysia.**

CONTEXT:

As of May 30, close to 6 million people are infected almost 370,000 deaths in 216 countries, areas, or territories according to most recent WHO data. After social distancing and lockdown efforts, some countries are partially re-opening their economies in attempts to revive the global economy.

Natural gas demand is less sensitive to COVID-19 in the short-term compared to oil, due to its limited exposure to the transport sector. Although natural gas demand in the power sector is affected, the loss in commercial and industrial electricity demand is in part transferred to residential uses. However, natural gas demand could fall much further as the year progresses due to reduced demand in the power and industry sectors. Future demand will be dependent on how industrial uses of natural gas will be affected, short- and long-term impacts of natural gas sector investment cuts, and the degree to which government policies aimed at accelerating clean air and energy transitions will promote fuel switching and encourage investment in energy systems integration. This can be done through technologies offered by natural gas, green gas, hydrogen, and carbon dioxide solutions. Any outcome for these criteria will be dependent on the duration of the COVID-19 pandemic, the speed of economic recovery, and how government stimulus packages incorporate clean air and policy goals pertaining to energy transitions.


Parity in Regional Benchmarks Prompts a Reevaluation of Natural Gas Market Strategies
USD/MBtu
20
16
12
8
4
0
Selected Asian LNG
TTF
HH
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020


Distressed LNG Shipments Find a Home in Europe
Mcm
3500
3000
2500
2000
1500
1000
500
0
150
125
100
75
50
25
0
Belgium
France
Greece
Italy
Lithuania
Netherlands
Poland
Portugal
Spain
UK
Average % increase (RHS)
March 5 yr average
March 2020
Average % Difference
Source: JODI

GLOBAL IMPACTS:

The below points illustrate how COVID-19 may impact natural gas supply-demand fundamentals.

Demand:

1. **Natural gas demand will be impacted in the short-term, but long-term demand will depend on the recovery of the global economy and government policies –** Although overall natural gas demand will fall substantially, any exact determination on long-term demand will depend on how government stimulus packages affect energy policies and the future trajectory of the economy given the strong correlation between GDP growth and natural gas demand. Natural gas markets are insulated to some extent given that natural gas demand is not driven primarily by transportation as in the case of oil. Natural gas makes up a significant percentage of the power mix in some countries which is relevant for heating homes and powering key industries even during the COVID-19 pandemic.
2. **LNG demand will decrease in 2020 compared to its pre-pandemic outlook after growing every year since 2012 –** Natural gas importing markets in Europe and Asia facing an economic downturn due to COVID-19 will have a direct impact on LNG demand in the short-term. This has been demonstrated by the force majeure clauses invoked throughout the LNG value chain. Buyers are postponing or cancelling contracts and producers are delaying the building of new projects due to safety and off-take concerns. The pandemic has also curtailed LNG demand in China, the second-largest LNG importer and fastest-growing market for LNG.

Supply:

1. **Natural gas production will decrease due to the lack of short-term demand and the impact of oil market volatility –** In addition to abundant natural gas supplies, OPEC oil production adjustments that went into effect in May along with shut-ins of non-OPEC oil production will naturally reduce drilling operations globally. As producers shut down oil wells, "associated" gas production will also decline. The decline in associated gas along with potential shut-ins of natural gas production for existing LNG and pipeline gas projects can work to reduce natural gas supply over time.
2. **Investments in natural gas and LNG projects will decrease in the short-to medium-term –** Investment decisions for proposed LNG export terminals globally have been delayed or cancelled in recent weeks. COVID-19 outbreaks have also interrupted supply chains and caused work force shortages, delaying construction of approved projects. A lack of investment for the foreseeable future could cause a rebalancing of the market over the longer term but is not expected to produce a shortage. Investment cuts in a well-supplied market will eventually rebalance and tighten the market in the medium-term for which large projects and expansions plans remain in position.
3. **Natural Gas Storage is filling up fast due to abundant supply and falling demand –** An already oversupplied natural gas market is now facing an unprecedented drop in demand resulting in natural gas storage filling up faster than usual. Markets in Europe and Asia may capitalise on more competitively priced natural gas, take advantage of available storage, or invest in new facilities.

IMPLICATIONS:

1. **Natural gas is now more competitive creating greater fuel switching opportunities thus maintaining momentum for natural gas demand in energy transitions –** Due to social distancing efforts and restrictions on movement, electricity demand is being transferred from businesses and industry to residential use. The application of competitive natural gas in the power sector can pave the way for more fuel switching to reduce pollution. Abundant and more competitively priced gas supplies will provide consumers with an unparalleled opportunity to accelerate recovery based on clean, affordable, and more diverse natural gas supplies.
2. **Low spot prices and parity in regional benchmarks will lead to a revaluation of LNG market strategies, loosening oil price linkages, and more flexible long-term contracts –** The emergence of COVID-19 has made spot prices more competitive with oil-indexed term contracts that make up the majority of LNG sales. The impact of the COVID-19 pandemic has also led to an unprecedented fall in regional gas demand and strengthened global convergence on short-term price signals on existing and newly emerging gas trading hubs.
3. **LNG trade dynamics have the potential to change as producers begin to strategically evaluate markets based on shifting risk profiles and buyers seek to maximise value and flexibility –** LNG producers may incorporate a more thorough evaluation of their competitive position versus other producers that will include offering greater contract flexibility and marketing LNG through new technologies and business models. Buyers may explore ways to increase contract flexibility and natural gas storage capacity to lock in low-cost supply for the longer term.

RECOMMENDATIONS:

1. **Collaborate on abundant and competitive gas sector technologies and infrastructure solutions that offer new opportunities for clean air and energy transitions in the post-COVID-19 recovery.**

   As new cases of COVID-19 peak and then decline, a simultaneous economic upswing will inevitably increase energy demand. Natural gas as a cleaner fossil fuel will aid in this recovery by enabling clean air, energy transitions, and the achievement of shared goals. The role of natural gas infrastructure in relation to renewable electricity generation and a viable integration of other gases such as bio-methane, hydrogen, and carbon dioxide solutions will facilitate greater system flexibility and create greater synergies. An integrated natural gas approach coupled with carbon-conversion technologies and Carbon Capture Use and Storage will engender carbon-neutral whole system solutions to achieve the net-zero emissions envisioned by green growth concepts such as the Circular Carbon Economy.

2. **Improve global energy data transparency, especially on natural gas storage through the Joint Organisations Data Initiative (JODI).**

   To restore energy market stability and meet globally shared goals, energy data requirements will demand greater transparency to deepen market insight across countries and organisations. JODI is the only database and repository with government provided oil and gas data. JODI could improve upon existing gas datasets above all through comprehensive data on natural gas stock levels and changes for non-OECD countries, pipeline, and LNG trade flows. The exceptional energy market circumstances created by the COVID-19 pandemic may enable governments to make progress in enhancing natural gas market transparency which remains dependent on government support.

3. **Engage in inclusive energy dialogue on the role natural gas will play in the recovery towards a more sustainable future at the 7th IEF-IGU Ministerial Gas Forum scheduled to take place virtually on 3 December 2020 hosted by Malaysia.**

   Long-term impacts to natural gas demand and growth opportunities will depend on the nature of the global economy, its pace of recovery, and how government stimulus measures impact energy policies. Ongoing and inclusive dialogue will highlight the role of natural gas as it pertains to strengthening energy security and accelerating orderly energy transitions to ensure a swift recovery from the impacts of the COVID-19 pandemic in increasingly carbon constrained world. This will enable fuel-switching to natural gas technologies and facilitate greater system flexibility and synergies by integrating renewables, green gas, hydrogen, and carbon dioxide solutions necessary to achieve net-zero emissions.