

Enabling sustainability

Cost competitiveness, operational flexibility and sustainable pricing are crucial to the long-term development of LNG, argues the IEA's Fatih Birol.

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How can LNG transition to a more sustainable growth path?

Additional investments will be needed to avoid the prospect of a tight market. 2018 marked a return to LNG investment growth after several years of decline, and it is gathering speed in 2019. More capacity was sanctioned in the first quarter of this year than over the past two years, plus there is a long list of projects that have announced that their final investment decision is set to be taken in 2019.

Flexibility is key to adapting to the growing role of more price-sensitive buyers from developing economies. We have observed profound changes in recent years with the development of spot trading, the emergence of global portfolio players and an increase in destination-free contracts. LNG is also growing in terms of diversity, from a limited number of importers – less than 10 in 2000 – to over 40 last year, and almost 50 in the coming decade. LNG is no longer the privilege of rich importers.

Prices in fast-growing economies also need to converge with international benchmarks to ensure long-term market development and foster domestic investment.

What should stakeholders do to enhance the industry's cost structure?

Flexibility is of paramount importance – the development of short-term trading and pricing reforms are necessary preconditions to the emergence of gas trading hubs in emerging markets. Liquid trading hubs will enable a shift from oil indexation and regulated pricing to prices reflecting supply and demand fundamentals – and therefore downstream competition.

The changes also encompass LNG project financing – recent investment decisions have highlighted an evolution with several projects going ahead without the support of long-term contracts. Global portfolio players are creating an alternative to traditional project financing by using their own balance sheets and supply portfolios to take investment decisions.

“Operational flexibility and competitiveness is improving with more standardization of contracts, operations and regulations – to have a truly global market everybody needs to speak the same language.” — Fatih Birol

Another changing link of the chain is shipping, which is moving to more flexible and short-term chartering to adapt to the changes in LNG trading.

Finally, operational flexibility and competitiveness is improving with more standardization of contracts, operations and regulations – to have a truly global market everybody needs to speak the same language.

How important are LNG's green credentials for the industry's success?

2018 is a very good example of the positive contribution gas can make, with the rise of Chinese consumption which is mainly driven by policy action to battle against air pollution. Improving air quality in major urban areas is a key concern in many countries, and gas is one of the tools that help reduce air pollution and CO2 emissions.

The use of LNG in maritime transportation is another interesting example. It is currently a niche market – especially outside of LNG carriers – yet the fleet of LNG-powered vessels is growing fast and is expected to double by 2024, as analyzed in our recent medium term forecast (Gas 2019). The market is being driven by the implementation of the International Maritime Organization's global sulfur cap on maritime fuels from January 2020. Passenger ships, and cruise ships in particular, are expected to be large contributors to this expansion of the LNG-powered fleet.

What are the key steps stakeholders can take to reduce LNG's carbon footprint?

Efforts must continue to minimize the environmental footprint of gas use. This includes progress on CO2 emissions but also on methane emissions – analysis from our latest World Energy Outlook

shows that eliminating methane leaks is one of the most cost-effective measures designed to provide drastic reductions to the emissions intensity of gas supply.

The development of large-scale carbon capture, utilization and storage (CCUS) capacity is an important enabler of a reduction in CO2 emissions and can be realized at relatively low cost – especially for upstream emissions – and could even be monetized or used for other activities such as enhanced oil recovery.

Diversification of the gas supply mix with a greater share of renewable gases, such as biomethane and hydrogen sourced from renewable sources, is another source of emissions reduction.

Will LNG become a fuel of transition or a true partner in the era of renewables?

The overall share of fossil fuels – oil, coal and gas – in global energy demand has not changed over the last 25 years and they remain central to today's global energy system. How they fare in the future will depend to a large extent on the level of policy ambition and technology innovation.

Each year in our World Energy Outlook report, the IEA analyses various different scenarios for the future of global energy. Gas consumption grows in every one of them, underpinned by its versatility and environmental advantages relative to other fossil fuels.

Even in our most ambitious Sustainable Development Scenario, gas demand continues to grow to 2025 before flattening out. Gas is the only fossil fuel for which demand in 2040 is higher than today, and it is set to become the largest fuel in the global energy mix.