The US is closer to passing regulations that would allow liquefied natural gas (LNG) to be shipped by rail. However, there is opposition from a variety of interested parties to the implementation of the new rules, and following the recent closing of a public consultation on the matter, changes may yet be made to the final regulations.

The new rules were proposed following an executive order signed last year by US president, Donald Trump, with the aim of speeding up energy infrastructure development. Under the proposal, LNG will be allowed to be shipped by rail in DOT-113 tank cars, which are capable of carrying cryogenic liquids.

The plan has been welcomed by the energy industry, as natural gas output in the US continues to rise but pipeline capacity constraints remain across several major gas-producing regions. Notable among these is the US northeast, where a number of proposed gas pipelines remain delayed by regulatory and legal obstacles. Indeed, periods of cold weather in the winter of 2018-19 resulted in additional imports of LNG into New England, even as gas production in other parts of the northeast – namely the Appalachian Basin – was booming.

In other regions such as the Permian and Williston basins, meanwhile, flaring of associated gas production – a by-product of drilling for oil – has become routine. New all-time highs for the volumes of gas flared were recorded last year, both in North Dakota, which holds much of the Williston’s Bakken play, and in the Permian Basin.

**ATTRACTIVE ALTERNATIVE?**

Against this backdrop, some natural gas players have suggested that transporting LNG by rail could be an attractive alternative to waiting for new pipeline capacity to be built. Using trains can give shippers more flexibility in terms of destinations for the gas, as well as potentially easing flaring and congestion on pipeline networks.

An energy and environment fellow at Rice University’s Baker Institute for Public Policy, Rachel Meidl told NGW that the transport of LNG by rail has the potential to expand existing gas markets and open up new ones. She said that in regions such as the US northeast, LNG shipments by rail have the potential to reduce dependence on foreign markets during periods of high gas demand during the winter.

At the same time, though, opponents of LNG-by-rail have been voicing their concerns over the plans. A public comment period on the LNG-by-rail rules proposed by the Pipeline and Hazardous Materials Safety Administration (PHMSA), part of the...
US Department of Transportation (DoT), closed on January 13. Those submitting comments included the attorneys-general of 16 states, which urged the PHMSA to withdraw the proposal pending the completion of safety studies and the development of an environmental impact statement. The attorneys general warned that transporting LNG by rail increased the risk of highly flammable spills and claimed that safety testing of DOT-113 cars for carrying the fuel had not been completed.

Despite the objections raised, it seems unlikely that the proposal will be withdrawn, given that the promotion of energy infrastructure is among the Trump administration’s priorities. The PHMSA has said it will evaluate all of the concerns raised, with safety as its top priority. But the regulations governing US rail shipments of hazardous materials (hazmat) are controversial.

“While transporting LNG by rail will likely play a role in the future, the regulatory and political obstacles it faces will determine its fate,”

— RACHEL MEIDL, BAKER INSTITUTE FOR PUBLIC POLICY

**SMALL STEPS**

The US has already started awarding special permits for LNG-by-rail shipments on a case-by-case basis, though this practice is also in its early days. Such a special permit was issued in December to a subsidiary of New Fortress Energy, with previous LNG-by-rail approvals granted to companies in Florida and Alaska.

New Fortress’ permit allows the company to load tank cars with LNG in Pennsylvania’s Marcellus shale and transport them over a distance of 200 miles to a yet-to-be-built terminal at a river port in New Jersey. There, the LNG will be loaded on to vessels bound for gas-fired power plants in the Caribbean region, among other regions.

The plan is a relatively small-scale one, with New Fortress planning to liquefy and ship about 300mn ft³/day of gas. However, it is thought to be a sign of things to come, with LNG-by-rail shipments likely starting out in limited quantities, constrained initially by the limited availability of DOT-113 tank cars, before being ramped up.

New Fortress did not respond to NGW’s requests for comment, but previously welcomed the special permit as a “significant milestone” in the push to move LNG by rail.

The PHMSA has said its proposed regulations are warranted given the US’ rising gas supplies and ongoing pipeline constraints. It has also noted that LNG can be hauled by truck, and moving such shipments on to rail would reduce public risk on roads.

No timeframe has been announced for the regulations to be finalised, and over 300 comments on the proposal have been submitted. However, it seems that the regulations are now close to becoming reality, though they remain open to alteration.

“While transporting LNG by rail will likely play a role in the future, the regulatory and political obstacles it faces will determine its fate,” Meidl said.

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