



# US LNG-BY-RAIL PLAN MOVES CLOSER TO REALITY

US regulators are moving closer to finalising new legislation that will allow the transport of LNG by rail, despite certain states and other groups opposing the plan.

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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

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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.

"In addition to the protracted and complex rule-making process coupled with the increasing polarity in the political arena, the Association of American Railroads (AAR) Tank Car Committee (TCC), the standard setting organisation for North America's railroads, has delegated authority under the DoT's hazmat regulations to establish industry-wide standards for the design and operation of tank cars," Meidl said. "The AAR TCC, comprised of railroads, railcar owners, manufacturers, and hazmat shippers with active participation from DoT, Transport Canada and the National Transportation Safety Board (NTSB), has been intensely criticised for being unbalanced and having a heavy influence from railroad companies, with some contending it provides the committee an incentive to focus on measures that would cost shippers, not railroads," she continued.

"Moreover, while the federal government sets minimum standards for rail cars, the TCC, on behalf of railroad companies that own the rails, have the authority to establish 'interchange standards' that are more stringent than federal requirements. Interchange standards circumvent the federal rule-making process, do not require a cost/benefit analysis, and have led to many stakeholders calling into question this delegated authority granted by the federal government," Meidl said. "This mechanism has been challenged for years."

Despite its participation in the TCC, the NTSB was among the organisations to submit comments to the PHMSA calling for additional study of safety issues involved. The NTSB's concerns centred on the limited availability of DOT-113 cars that meet the PHMSA's specifications. The way the agency had assessed safety risk – by using the transport of liquid petroleum gas (LPG) and LNG by truck as proxies – was also called into question.

Meidl expressed confidence that the comments submitted on the proposal would have an impact. "Regulations are improved through public participation," she said. "The federal rule-making process recognises that changes may be made to the proposed rule based on the array of expertise generated from the public comments received, so long as the changes in the final rule are a logical outgrowth of the proposal. Thus, considering there has been longstanding opposition to this rule-making, it is likely there will be some changes integrated into the final rule that could perhaps require some type of operational controls."

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**“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

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## 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 ft<sup>3</sup>/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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