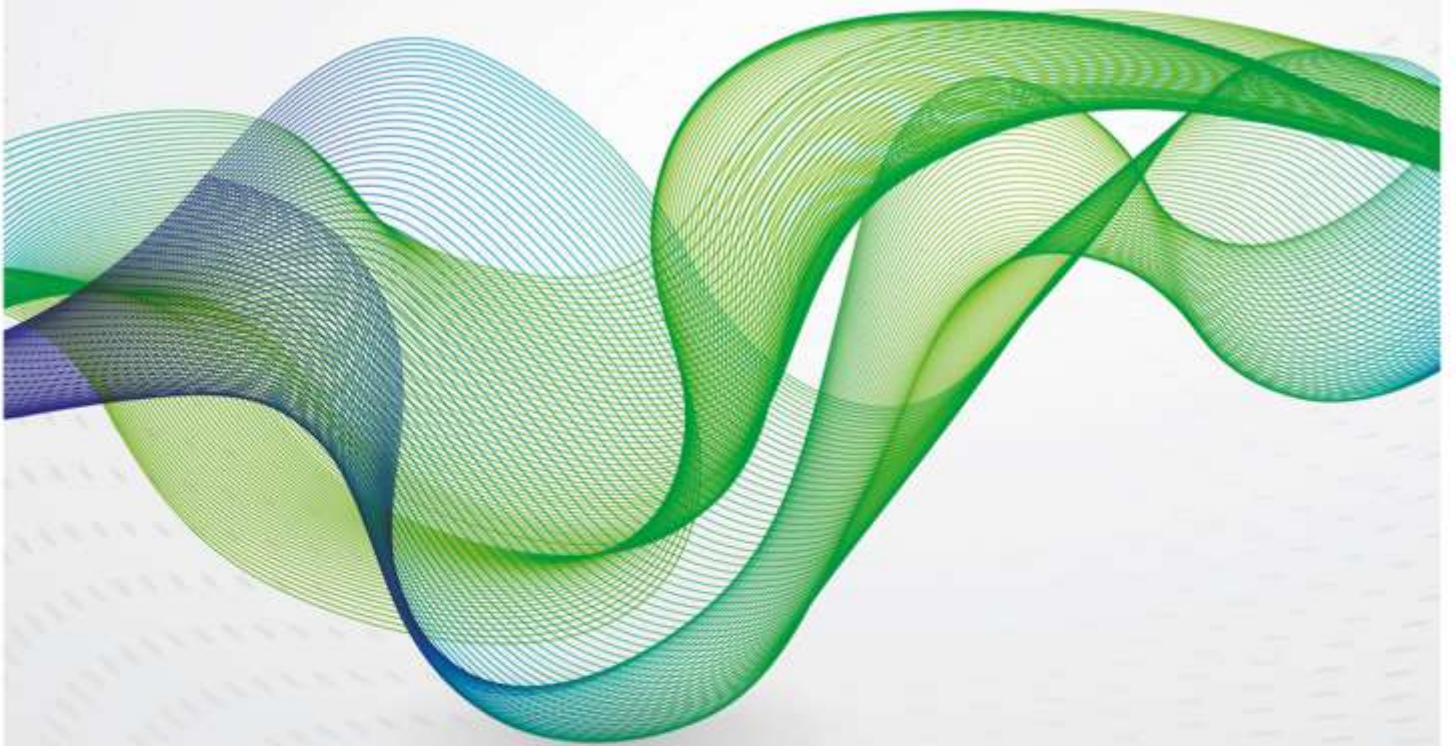


January 2024

# What next for US LNG Exports?



## Introduction

On January 26, the Biden administration announced a pause on the approvals of exports from new liquefied natural gas (LNG) projects. The US Department of Energy (DOE)<sup>1</sup> said in a statement “that it will initiate a process to update the assessments used to inform whether additional liquefied natural gas (LNG) export authorization requests to non-Free Trade Agreement countries are in the public interest”. In evaluating the public interest of proposed projects, the DOE noted that it “must use the most complete, updated, and robust analysis possible on market, economic, national security, environmental considerations, including current authorized exports compared to domestic supply, energy security, greenhouse gas emissions including carbon dioxide and methane, and other factors. Today’s action will begin an update of this analysis, and until updated, DOE will pause determinations on pending applications for export of LNG to non-Free Trade Agreement<sup>2</sup> countries”. This temporary pause on pending applications will not affect already authorized exports.

The DOE has jurisdiction over the authorisation, on the basis of the public interest, in respect of gas trade. For countries with which the US has a free trade agreement (FTA), approval is automatic. For non-FTA countries, the DOE is required to grant export authority, unless it finds that the proposed exports are not consistent with the public interest – or are prohibited by law or policy.

The Federal Energy Regulatory Commission (FERC) has jurisdiction over the siting, construction and operation of LNG export facilities. FERC leads the environmental impact assessments of proposed projects consistent with the National Environmental Policy Act, with DOE a cooperating agency.

The Biden administration has been coming under increasing pressure from environmental groups and the left of the Democratic Party to stop new US LNG export projects on “environmental” grounds. As such this appears to be a political move in an election year designed to placate the left of the party. It would also appear that the DOE procedures on approval would need amending to change the criteria to take into account wider environmental and climate change factors. As yet there has been no executive order by the President directing the DOE to implement the policy. This may be forthcoming in the next few weeks or months. On the other hand, the DOE’s authorities and discretionary national interest determination may already allow for the licensing procedures to be amended to take climate into account. This does suggest the decision was taken hastily, under political pressure, and more clarification may be forthcoming in the next few weeks or months.

In any event, the practical impact of this is that all pending applications will not be approved, or otherwise, until after the presidential election on November 5<sup>th</sup>, or more likely until after the inauguration of the new president in January 2025.

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<sup>1</sup> <https://www.energy.gov/articles/doe-update-public-interest-analysis-enhance-national-security-achieve-clean-energy-goals>

<sup>2</sup> The United States has comprehensive free trade agreements in force with 20 countries. These are: Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Jordan, Korea, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Singapore. Many of these are existing or potential LNG importers but it is still quite restrictive to operate without non-FTA approval

## Affected LNG Projects

Projects which already have non-FTA approvals are not impacted by this pause. All the US and Mexican projects which have taken FID and are effectively under construction all have non-FTA approval from the DOE. These are:

Project	Capacity (MTPA)	Expected Start
Golden Pass	18.1	2025
Corpus Christi Phase 3 T1-7	10.4	2025
Plaquemines	20.0	2025
Energia Costa Azul (Mexico)	3.2	2025
Port Arthur Phase 1	13.0	2028
Rio Grande	17.5	2028

In April 2023, the DOE made a policy adjustment saying it will not extend non-FTA export authorizations beyond an initial seven years unless construction has commenced on the facilities and they have encountered extenuating circumstances. Out of the projects listed above, the Rio Grande project's non-FTA deadline is February 2027 and if they haven't started exporting LNG from the project by then, there is a risk that they won't be able to export to non-FTA countries, unless they seek an extension. It is unclear from the DOE statement on January 26 whether requesting extensions such as this, would be treated as a "pending application" and would therefore also be paused. The DOE has shown a willingness to extend non-FTA deadlines if a financial close (FID) has already been reached, having extended the deadline for the Port Arthur project above. However, those projects, which may require extensions, may be in no rush to test the DOE before a new administration is in place.

There are also a few projects which have non-FTA approval with FID possibly imminent which would also require a deadline extension. These include a Mexican project (Mexico Pacific) totalling some 9.4 mtpa. The Cameron Phase 2 project of some 6.75 mtpa would also require an extension and is thought to be close to FID. There are also many other US projects which have non-FTA approval and would require extensions but these seem some way away from taking FID.

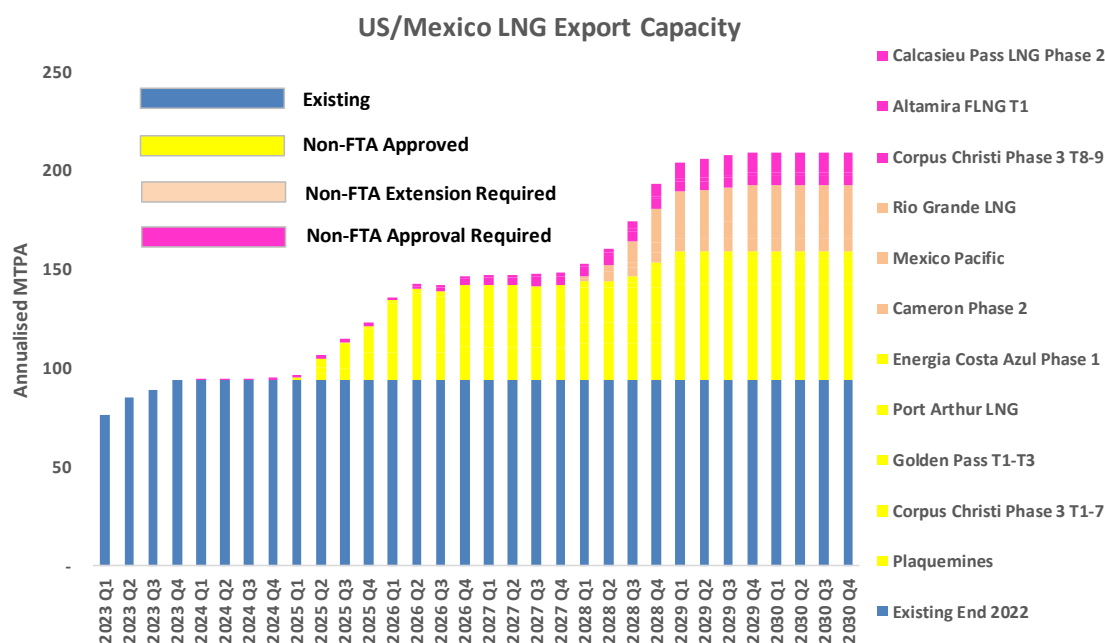
There are additional projects, which have applied for non-FTA approval which are thought to be well on the way to FID and include Calcasieu Pass Phase 2 (10 to 30 mtpa), Altamira FLNG in Mexico (1.4 mtpa) and Corpus Christi Phase 3 T8-9 (5 mtpa). Commonwealth LNG (9.3 mtpa), Port Arthur Phase 2 (13.5 mtpa) also have pending non-FTA approval and Lake Charles (16.5 mtpa) and Magnolia LNG (8.8 mtpa) are seeking new approvals rather than asking for extensions.

The figure below summarises the US and Mexico LNG export capacity – annualised MTPA – into existing projects, those fully approved with non-FTA, those with extensions to non-FTA required and those awaiting non-FTA approval from the DOE. There is some 50 mtpa in the latter two categories – 33.5 mtpa requiring extensions and 16.5 mtpa awaiting approval<sup>3</sup>. These are the projects which OIES expect to come on before 2030, assuming they are not disrupted by the DOE pause.

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<sup>3</sup> Assuming Calcasieu Pass Phase 2 at 10 mtpa not the full 30.

**Figure 1: US/Mexico LNG Export Capacity**



Source: NexantECA World Gas Model

## What happens under a new President

It seems likely that this pause on non-FTA approvals will be in place until at least January 2025, raising the question about what might happen under a new administration. We will not address the political element here but instead make the following observations.

The DOE have said that they are reassessing the criteria “on market, economic, national security, environmental considerations, including current authorized exports compared to domestic supply, energy security, greenhouse gas emissions including carbon dioxide and methane, and other factors”. The DOE should be able to reconsider the criteria and come up with a revised set of assessments within a year, even if the publication is somehow delayed until after the November election.

One argument that has been deployed against exporting LNG from the US was that it would lead to increased domestic gas prices. Studies<sup>4</sup> done before exports began suggested there would not be a material impact and while there have been a few scare stories on the impact of US LNG exports on prices, including looking only at the higher priced years of 2021 and 2022, there is scant evidence, so far, that the rise in US LNG exports has led to an increase in domestic gas prices. In real terms, US wholesale<sup>5</sup> gas prices were at their lowest level in 2023 since the 1970s, apart from the Covid induced fall in 2020. In addition, US gas production is some 35 percent higher than in 2016 – the first year of US LNG exports from the Lower-48.

By 2030, however, US LNG export capacity is expected to more than double from 2023 levels and this could clearly have some impact on prices as a significant increase in supply would be required. The extent to which supply needs to rise to feed the proposed projects will also depend on the level of domestic US gas demand over the next few years. While gas demand is rising at the moment, the impact of the Inflation Reduction Act may begin to exert some downward pressure as renewable power

<sup>4</sup> Most recent one was in May 2023. [https://www.eia.gov/outlooks/aeo/IIF\\_LNG/pdf/LNG\\_Issue\\_in\\_Focus.pdf](https://www.eia.gov/outlooks/aeo/IIF_LNG/pdf/LNG_Issue_in_Focus.pdf)

<sup>5</sup> Either Henry Hub or US average wellhead prices

builds. So far, the US gas supply curve has been very elastic, and able to supply increasing volumes at \$3 per MMBtu or less. It remains to be seen whether this can continue as US LNG exports continue to rise.

In respect of greenhouse gas emissions, the general argument and analysis is that LNG, even if exported from the US to, for example, Asian markets to replace coal, reduces greenhouse gas emissions at the global level<sup>6</sup>. There have been studies which dispute this, but these largely seem to use very high assumptions on methane emissions from natural gas, especially in the US, and also seem to ignore methane emissions from coal altogether. It is largely indisputable that natural gas has lower life cycle greenhouse gas emissions than coal, when proper emissions assessments are used. The question is whether the additional emissions from liquefying and transporting the LNG from the US are high enough to increase the lifecycle emissions above those of domestically produced coal, in the LNG importing country. Again, this does not generally appear to be the case. Furthermore, if the cancellation of US LNG projects, simply led to their replacement by LNG projects elsewhere – as discussed below – then this may make no difference to global greenhouse gas emissions from natural gas, and could even make it worse if the replacement LNG exports came from higher emitting gas producers.

There are a number of possible scenarios as to what might happen under a new US administration. The **first scenario** would be that the DOE immediately concludes that the pending non-FTA approvals should be granted, possibly subject to more stringent environmental considerations, particularly on flaring and methane emissions. This would mean approval for those projects which are well advanced and close to FID - Calcasieu Pass Phase 2, Altamira FLNG in Mexico and Corpus Christi Phase 3 T8-9. In such a scenario the likely outcome would be simply a short delay in these projects coming online, with likely no material impact on global LNG supply growth and the market balance, as the LNG market would be in a period of strong supply growth. In addition, any request to extend the deadline on previously approved non-FTA applications, would also be granted. The impact of the pause, therefore, may only be temporary, potentially pushing back the start-up dates for the affected projects.

The **second scenario**, is that the DOE continues to delay and defer any pending non-FTA approvals for a year or so. This could mean that some of the projects, even those which are fully contracted, such as Calcasieu Pass Phase 2, could be abandoned, thereby, at least initially, reducing the growth in global LNG supply, and somewhat tightening the market.

The **third scenario** would be that, for whatever reason, the DOE simply denies all the pending and any new non-FTA approvals, thereby leading to all future US projects, lacking non-FTA approval, being cancelled. This would, other things being equal, tighten the global LNG market, at least initially. However, this denial would make other US LNG projects, which currently have non-FTA approval, more attractive to potential offtakers, assuming that they could easily extend the non-FTA deadline – although any deadline extensions could also be affected.

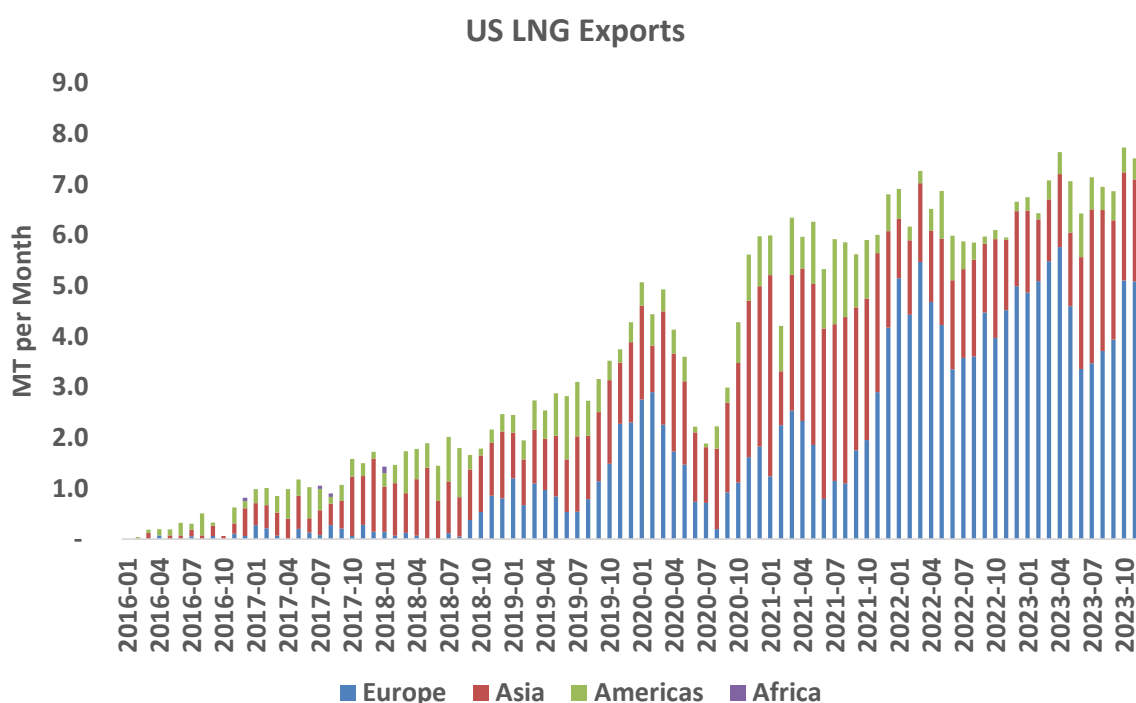
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<sup>6</sup> <https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions>

## Consequences of a long delay or stopping non-FTA approvals

When Russia invaded Ukraine at the end of February 2022, President Biden was very quick to assure European leaders that he would help secure new LNG supplies from the US to offset any loss of Russian pipeline imports. The reality was that exports of US LNG to Europe surpassed all expectations.

**Figure 2: US LNG Exports by Destination**



Source: Kpler

LNG exports from the Lower-48 of the US began in early 2016 as the first of the Cheniere Sabine Pass trains started up. In the early days, not much US LNG came to Europe, but this increased in 2019 as the oversupply of LNG largely ended up in European storage. In 2020, Covid hit and the sharp fall in prices led to a lot of US LNG being shut in. In 2021 as cold weather hit the northern hemisphere, US LNG diverted to Asia to meet demand and Europe drew down on its gas in storage. Then in 2022, the Russian invasion of Ukraine, saw a surge in US LNG coming to Europe, to partly offset the loss of pipeline imports from Russia.

The Biden administration went further and encouraged Europe to wean itself completely off Russian gas and replace it with US LNG. Late in 2023, the Biden administration also imposed sanctions on Arctic 2 LNG<sup>7</sup>, to put pressure on companies to pull out of the project and/or not to take cargoes. This has led to both Novatek, the operator, and all offtakers – European and Asian buyers – to declare Force Majeure (FM).

Those US projects which have taken FID and already have non-FTA approvals from the DOE will not be impacted by the announced pause on approvals. Rio Grande could potentially be impacted if the DOE decides not, at least temporarily to grant extensions, but the developers do not need to ask for an extension for another year or two. Mexico Pacific and Cameron Phase 2 which have not yet taken FID but have non-FTA approvals, are also likely to need extensions. However, all these projects are not expected to come on until 2028 at the earliest, so global LNG supply would not be impacted until that

<sup>7</sup> <https://www.state.gov/taking-additional-sweeping-measures-against-russia/>

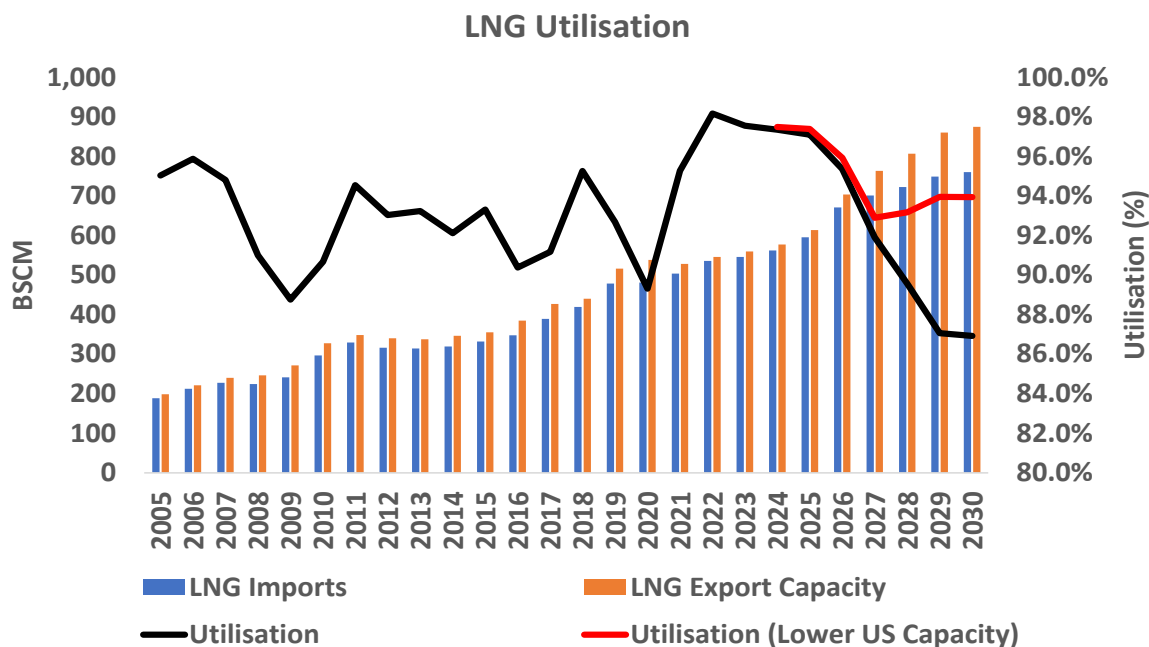
year if there were any delay or cancellation of these projects. The total LNG capacity of these projects is some 34 mtpa.

The three projects, which OIES has in its assumptions on future global LNG supply, and require non-FTA approval, are Calcasieu Pass Phase 2, Altamira FLNG and Corpus Christi Phase 3 T8-9. Our expectation was that Calcasieu Pass Phase 2 was also a 2028 start up, but Altamira FLNG could start up very soon and Corpus Christi T8-9 in 2026. At a minimum these projects total some 16.5 mtpa<sup>8</sup>, with 6.5 mtpa due in the next couple of years.

In total, therefore, some 50 mtpa of US/Mexico LNG export capacity could be at risk – two thirds of this at risk if extensions to existing non-FTA approvals are not granted, and one-third if pending non-FTA approvals are not approved. The OIES forecasts growth in LNG export capacity at the global level between 2023 and 2030 at some 230 mtpa – an increase of some 55 percent on available LNG export capacity in 2023. Our expectation is that this increase would lead to an oversupply of LNG in the late 2020s, with utilisation of available LNG export capacity at some 87 percent in 2029 and 2030, compared to 98 percent currently (this is effectively full capacity). The loss of the full 50 mtpa, assuming that happened, would tighten the market significantly, with utilisation – assuming unchanged demand – of available LNG export capacity estimated at some 94 percent (see Figure 3). This would be similar to our estimates of utilisation for 2021, 2018 and 2011. The loss of just the 16.5 mtpa would only impact utilisation by less than two percentage points – effectively increasing utilisation to maybe 90 percent by 2030.

However, it should be noted that the likelihood of what is described above as the third scenario with a 50 mtpa loss of capacity occurring, is relatively low, in OIES’s view – maybe only a 10 percent chance. The second scenario, with a 16.5 mtpa loss of capacity, has maybe a 30 percent chance of occurring in our view, while the first scenario – return to the normal approval process is rated at a 60 percent chance in our view<sup>9</sup>.

**Figure 3: Global LNG Export Capacity Utilisation**



Source: IEA, NexantECA World Gas Model, OIES Estimates

<sup>8</sup> Assuming Calcasieu Pass Phase 2 at 10 mtpa not the full 30.

<sup>9</sup> Assuming there are only three scenarios.

This is based on the OIES analysis of projected LNG export capacity and LNG demand, and we have, for a long time now, been projecting a glut of LNG in the late 2020s. This is consistent with our view that LNG demand is likely to peak around 2030 or shortly thereafter, so all the capacity being built or expected to be built may be underutilised in the 2030s. While this may not impact the project developers, as they are fully contracted, it could impact the offtakers who would have surplus LNG.

Other analysts and industry players have different projections of demand (and supply) and may have a much tighter market than we do by 2030, so the impact globally of the loss of some 50 mtpa would be more significant.

However, the above analysis assumes that, in the event that US LNG export projects are impacted, then nothing changes in the rest of the world. Firstly, there are a number of projects in the US which have non-FTA approval – well over 100 mtpa – but don't look likely to necessarily take FID anytime soon and therefore would require an extension to the non-FTA deadline. The only project which has a deadline long in the future for non-FTA exports is Alaska LNG.

A more likely source of replacement LNG export capacity, if US projects do not get non-FTA approval (including extensions), is, paradoxically, Russia. There are any number of Russian projects which could be developed, possibly by 2030, to fill any gap, including Novatek's Murmansk (20 mtpa) and Obsky (5 mtpa) projects and Gazprom's Ust Luga (13 mtpa) project. These would clearly be more likely to progress in the event of some kind of deal to resolve the Russia–Ukraine war. In such an event, the Europeans may well be more willing to see Russian gas (pipeline or LNG) back into Europe, if the perception is that the US, by pausing non-FTA approvals, are damaging European energy security. In respect of our assumed 50 mtpa of projects at risk, as a result of the pause in non-FTA approvals by the DOE, half of these have LNG contracted to European buyers. In addition, Chinese and other Asian buyers may become more emboldened in their willingness to contract for Russian LNG.

## Conclusions

The Biden administration's pause in non-FTA approvals for LNG exports is an overtly political decision, seemingly taken hastily, in an election year to curry favour with the left of the Democratic party and environmental lobbyists. If, once a new president is sworn in, this pause is abandoned, then, at worst, this may delay some projects for a short while. In any event, projects which have already taken FID and have non-FTA approval are not affected anyway, so the timetable of LNG supply coming on before 2028 is barely impacted.

However, if the denial of non-FTA approvals becomes permanent, then future LNG supply could be materially affected. This would be especially true if the pause/denial also applied to extensions of the non-FTA deadline. On OIES analysis this could, in total, impact some 50 mtpa of planned US and Mexican projects, although more likely only around one third of this, assuming extensions to non-FTA deadlines, for projects which have taken FID, are not affected. The likelihood of the full 50 mtpa of US and Mexican projects not receiving non-FTA approval, or extensions being denied, is seen as a relatively low probability, but cannot be ruled out.

The loss of up to 50 mtpa of US/Mexican LNG (however unlikely) would significantly tighten the market, in the absence of any other projects coming on to replace them. However, other countries especially Russia, would be keen to step in. Plus, European and Asian buyers may look more favourably on buying Russian LNG, or pipeline gas (whatever the US says or does), especially if the Russian-Ukraine war is ended in one form or another. It would be the ultimate irony, if the actions of the Biden administration in pausing non-FTA approval on LNG export projects, simply resulted in more Russian LNG and/or pipeline gas being exported to Europe and elsewhere.