

A Huge Wave of New LNG Projects Coming in the Next 18 Months: Positive for The E&C Companies

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EXECUTIVE SUMMARY

Our analysis shows that there are an unbelievable 25+ LNG developers that have stated (within the last year) they will take a final investment decision (FID) on their LNG liquefaction plants in 2019. Unless demand surprises to the upside, the expected LNG supply deficit in the mid-2020s could easily turn into a glut. In total there is almost 250 million tonnes per annum (mtpa) of capacity that plans to take FID this year - the equivalent of 80% of current global supply. In total there are ~US\$180bn of contracts up for grabs - it should be a bumper year for the oil service (E&C) companies. This should be positive for the LNG contractors such as [Mcdermott Intl \(MDR US\)](#), [TechnipFMC PLC \(FTI FP\)](#), [Chiyoda Corp \(6366 JP\)](#) and [Jgc Corp \(1963 JP\)](#).

Exxon Q4'18 conference call, *"While we see a lot of high growth opportunities in LNG, capacity will come on in big chunks. It won't be necessarily coordinated, so we'll see, I suspect, periods of oversupply."*

LNG Construction Companies Exposed

We see Chiyoda Corp (6366 JP), Jgc Corp (1963 JP), Mcdermott Intl (MDR US), Saipem SpA (SPM IM) and TechnipFMC PLC (FTI FP) as all well positioned for the upcoming expected contract awards. Generally oil service stocks perform strongly on LNG contract awards as they tend to be material additions to companies' backlogs. Baker Hughes (BHI US)'s CEO Lorenzo Simonelli said that he estimated a potential 100mtpa of LNG capacity could get the green light this year, which we agree with and see upside to.

Chiyoda Corp (6366 JP) - LNG contracts have caused large losses for Chiyoda in the US but we see the underperformance as an opportunity ahead of a flurry of potential contract awards, with Chiyoda potentially bidding on >90mtpa of capacity in 2019. It has just won the contract for Qatar Petroleum/Exxon's Golden Pass project in the US. Chiyoda is involved in the largest potential LNG contract award in 2019, doing the initial engineering work for Qatar's huge 32 mtpa expansion, which is expected to be sanctioned this year. It is also likely to be bidding on both Mozambique projects (from Anadarko Petroleum (APC US) and Exxon Mobil (XOM US)), NLNG T7 in Nigeria and Freeport's next train in the US. Chiyoda and McDermott tend to bid together on projects. Chiyoda has set its construction order target for fiscal 2018 at 800 billion yen, 2.6 times the previous year.

Jgc Corp (1963 JP) - JGC is fresh off winning the biggest LNG contract of last year, LNG Canada from Royal Dutch Shell (RDSA LN). It is well positioned to win further contracts but lost out on Golden Pass. It is bidding on Exxon Mobil (XOM US)'s project in Mozambique, NLNG T7, Rosneft Oil Co PJSC (ROSN RM)'s Far East LNG project in Russia and Pembina Pipeline (PPL CN)'s Jordan Cove project in the US. JGC has set its fiscal 2018 construction order target at 1 trillion yen, among the highest in its history.

Mcdermott Intl (MDR US), formerly Chicago Bridge & Iron Co Nv (CBI US) - McDermott, through its purchase of CB&I, has heavy exposure into the LNG space, which has been a burden given cost overruns on CB&I's existing US projects at Cameron and Freeport LNG. It has just won the contract for Golden Pass in the US. Furthermore, we see the order intake outlook as very strong as it is bidding on both of the major projects in Mozambique and is likely to be in the running for Freeport's next train. There are a couple of more speculative projects too with Goldboro in Canada (Pieridae Energy) and NextDecade Corp (NEXT US)'s Rio Grande project in the US.

TechnipFMC PLC (FTI FP) - Technip has come off the very successful execution of Novatek PJSC (NVTK LI)'s Yamal LNG project, putting it in a strong position for Novatek's 2nd Arctic LNG project. It is also bidding on Exxon's Mozambique project with Samsung Heavy Industries (010140 KS). Other projects it is looking at are Sempra Energy (SRE US)'s Costa Azul in Mexico, NLNG T7 and potentially Royal Dutch Shell (RDSA LN) and Energy Transfer LP (ET US)'s Lake Charles project.

Saipem SpA (SPM IM) - Saipem is in partnership with CB&I and Chiyoda to bid on both Mozambique projects. It is also bidding on Arctic LNG, NLNG T7 and Rio Grande. It has also had a torrid performance so any contract awards should have a material impact on performance.

Fluor Corp (FLR US) - Fluor is also fresh off winning the biggest LNG contract of last year, LNG Canada but lost out on Golden Pass. It has teamed up with JGC to bid on Exxon's Mozambique project and Far East LNG. It is also in the running for Rio Grande.

Kbr Inc (KBR US) - KBR is exposed to generally smaller projects with the Canadian Woodfibre project, the one that is most likely to go ahead. It is also involved in a couple of smaller and riskier projects in the US: Magnolia LNG (Liquefied Natural Gas (LNG AU)) and Texas LNG. It is also bidding on NLNG T7.

Golar Lng Ltd (GLNG US) - After successfully bringing on stream the Cameroon FLNG project, Golar is looking at further FLNG vessels. There is the potential to revive the Equatorial Guinea Fortuna FLNG project, which is FID ready and it is also looking at sanctioning the Delfin LNG project in the US this year.

Other companies - Sembcorp Marine (SMM SP) would benefit if the Ethiopia FLNG project from Gcl Poly Energy Holdings Limited (3800 HK) goes ahead. Private companies Bechtel, Zachry Group and Kiewit are involved in a number of projects too. Chart Industries (GTLS US) is an important subcontractor. There should also be a knock-on positive effect for the shipbuilders as new LNG vessels will need to be ordered as noted in a [recent article](#). The beneficiaries will be Daewoo Shipbuilding & Marine Engineering (042660 KS), Samsung Heavy Industries (010140 KS) and Hyundai Heavy Industries (009540 KS). These companies secured orders for >60 LNG carriers in 2018.

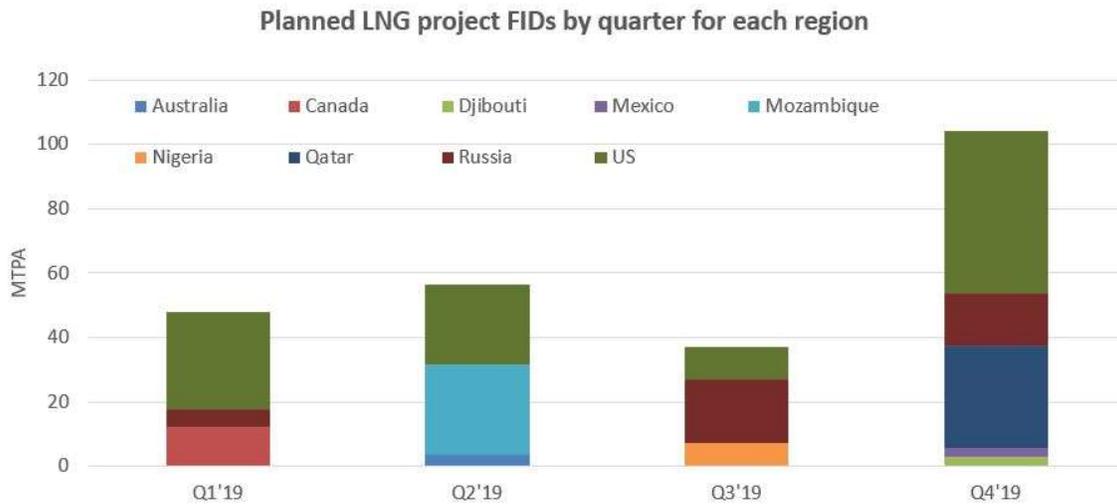
Potential 2019 LNG FIDs and our list of expected contractors bidding

Name	Country	Contractor
Sabine Pass T6	US	Bechtel
Woodfibre	Canada	KBR
Area 4: Mamba Rovuma LNG	Mozambique	CB&I, Chiyoda, Saipem; Fluor, JGC; TechnipFMC, Samsung
Area 1: Afungi LNG	Mozambique	CB&I, Chiyoda and Saipem
Jacksonville LNG	US	n/a
Qatar expansion	Qatar	Chiyoda
Calcasieu Pass	US	Kiewit
Arctic LNG	Russia	Saipem, TechnipFMC
Driftwood LNG phase 1	US	Bechtel
Freeport LNG T4	US	Chiyoda; CB&I

Barossa	Australia	n/a
Costa Azul	Mexico	TechnipFMC, Kiewit
Golden Pass (sanctioned)	US	Chiyoda, CB&I, Zachry
Goldboro	Canada	CB&I
Sakhalin 2 - T3	Russia	Chiyoda
Texas LNG	US	KBR, Samsung
NLNG T7	Nigeria	Technip, JGC, KBR; Saipem, Chiyoda and Daewoo
Rio Grande T1-2	US	Saipem, CB&I; Bechtel; Fluor
Port Arthur	US	Bechtel
Magnolia T1-2	US	KBR; SK E&C
Poly GCL Ogadem	Djibouti	SembCorp (Gravifloat)
Delfin	US	Golar
Baltic LNG	Russia	n/a
Far East LNG	Russia	Fluor; JGC
Lake Charles	US	Technip
Jordan Cove	US	Kiewit, JGC
Plaquemines phase 1	US	Kiewit

Source: Company Data, AKap Energy estimates

LNG project outlook



Source: Akap Energy estimate

Whilst the market appears unconcerned, as the assumption is that very few projects proceed, our bottom up analysis suggests 100-150mtpa will get sanctioned this year (>30% of current supply). There are 13 projects where we see a 75% or higher probability of being sanctioned with a total risked capacity of 110mtpa. In the US alone 115mtpa of capacity is up for FID this year and 100mtpa in Qatar, Russia and Mozambique. Inevitably some of the projects will slip into 2020, however there are a further 15 projects looking to take FID in 2020.

Potential 2020 LNG FIDs

Name	Country
Cameron T4	US
Scarborough: Pluto T2	Australia
Transborders FLNG	Australia
Steelhead	Canada
Bear Head	Canada
Marine XII FLNG	Congo
Fortuna FLNG	Equatorial Guinea
Alaska LNG	US

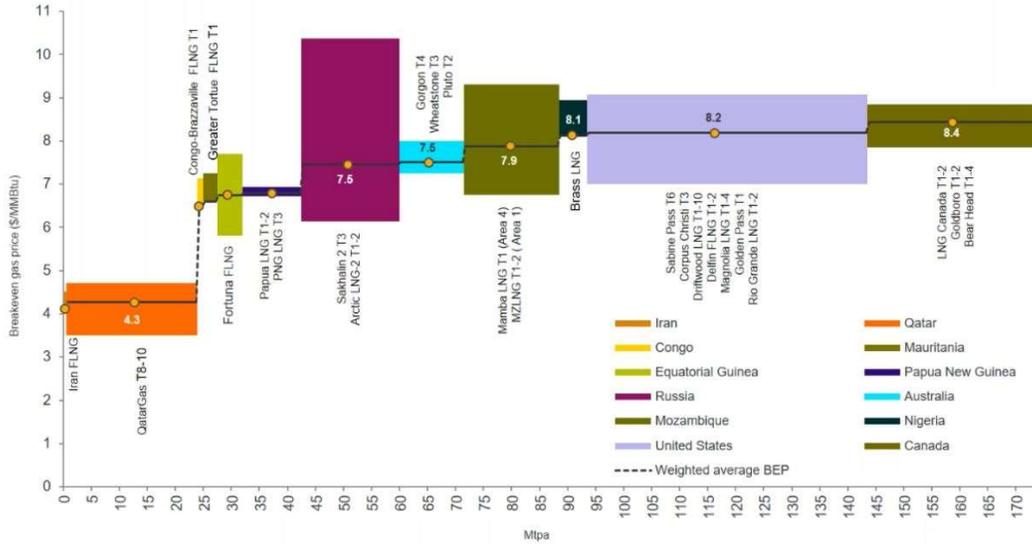
Annova	US
Gulf LNG	US
Main Pass	US
Monkey Island	US
Pointe	US
Jordan Cove	US
Commonwealth	US
PNG LNG expansion	PNG

Source: Akap Energy estimate

Markets seem to assume that offtake contracts must be in place in order for projects to proceed, thereby limiting expansion. But, in fact, many projects do appear to have sufficient firm contracts in place (e.g. Mozambique and Calcasieu Pass in the US), some brownfield projects can rely on existing cashflow to fund expansions and many of the supermajor/NOC led projects don't need offtake in place to proceed (e.g. Qatar and Golden Pass). Based on our analysis we have identified ~50mmpta of contracted volumes for the projects, the vast majority of which is associated with the riskier greenfield projects. As well as the typical Asian buyers, European buyers have become more prominent and there are a number of oil majors that have contracted from independent project developers such as NextDecade Corp (NEXT US).

Over 150 Mt LNG projects with breakeven prices under \$8/MMBtu to compete for 2025 start-up

Volumes and breakeven prices for unsanctioned LNG projects, 2025
 USD per MMBtu, MT per annum



Source: Rystad Energy Ucube

There are plenty of reasons why projects can and will get delayed: many of the 2019 planned FIDs have already been delayed from previous years. However the sheer volume of projects and the fact that many are close to shovel ready means that plenty of projects will go ahead. Almost 2/3 of the proposed projects have no supermajor/NOC involvement in the project, reflecting the shift towards independents developing projects, especially in North America. Around 40% of the projects are expansions or on existing LNG regasification sites, lowering the cost and improving the economics. The average cost for the LNG projects (plant only) is ~\$700/t.

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— *Anish Kapadia (6 February 2019)*