

# Liquefied Natural Gas Limited



## Investor Meetings

### New York



August 2017

ASX: LNG and OTC ADR: LNGLY

# Overview



LNGL is an Australian public company (ASX: LNG)

- Developer of LNG export terminals
- North America focused
- Experienced leadership
- 16 – 20 mtpa of capacity under development
- Patented OSMR® liquefaction process technology
- Low cost, mid-scale strategy
- High efficiency and reliability
- Fully permitted and approved by regulators
- Key turnkey contracts signed
- Mature project financing plans in place
- Very competitive full cycle economics

## Recent LNGL news

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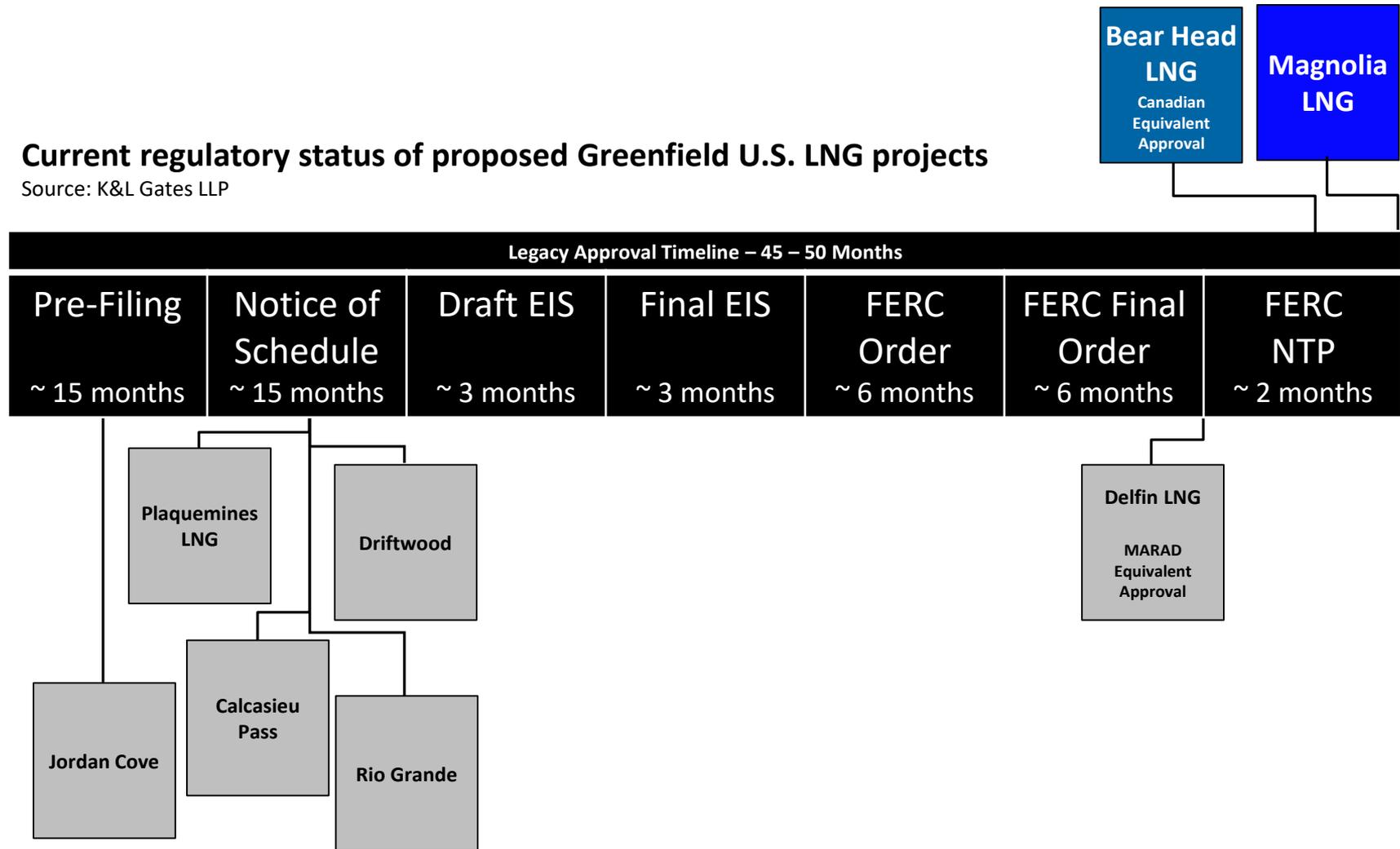
- **Amended and Restated Equity Commitment Agreement with Stonepeak Infrastructure Partners relating to equity financing of the Magnolia LNG Project**
  - ✓ Provides LNGL with commitment expected to fund the full Magnolia LNG project equity requirement
  - ✓ Strong message to the industry about the virtues and advantages of the Magnolia project.
  - ✓ Potential offtakers have taken positive notice of the agreement
  - ✓ Outlook on Magnolia remains bullish.
- **Exploring the possibility of redomiciling LNGL to the U.S. accompanied by a listing on the NYSE or Nasdaq**
  - ✓ Alignment with the Company's North American project focus
  - ✓ Possible improved enterprise valuation
  - ✓ Potential for new investor interest
  - ✓ Closer association with other LNG development companies on U.S. exchanges
- **Exited Fisherman's Landing LNG project in Australia due to the inability to secure a long-term gas supply**

- **Regulatory gridlock at FERC**
  - ✓ LNG's Magnolia LNG project remains the only shovel-ready greenfield U.S. LNG export project.
  - ✓ Senate confirmation of Neil Chatterjee and Robert Powelson on August 3<sup>rd</sup> re-established a quorum at FERC for the first time in nearly 180 days.
  - ✓ Public statements relating to the timing of final investment decisions by unpermitted LNG export projects are purely speculative and unreliable.
  - ✓ The timeline for approvals continues to increase with no projected timetable from FERC for future permits.
  - ✓ Public pronouncements from certain U.S. LNG export developers regarding potential shorter-term agreements or different gas pricing schemes are not realistic and only serve to delay and disrupt the market.
- **Recent agreements between South Korea and U.S. LNG export project developers are non-binding and may not ever be consummated.**
- **Cancellation of Pacific Northwest LNG**
  - ✓ Further strengthens case for Bear Head LNG as viable option for monetizing Western Canadian shale gas

# Regulatory timeline – setting the record straight

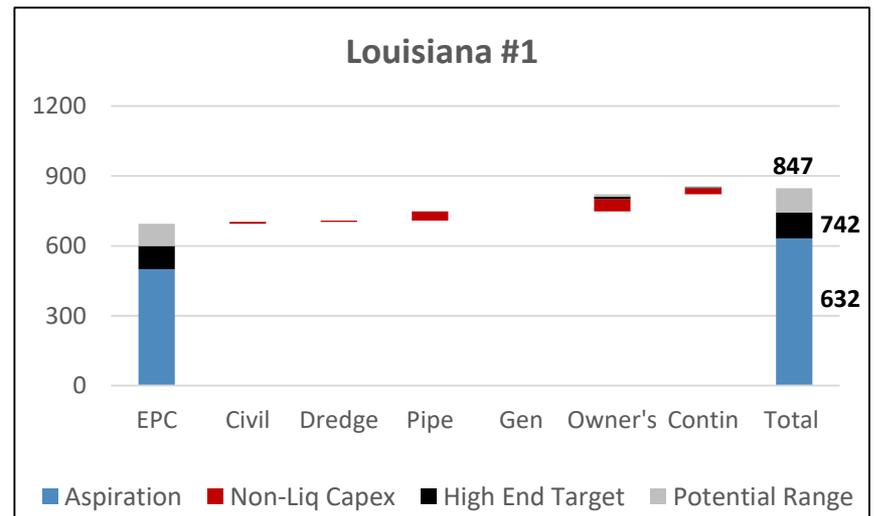
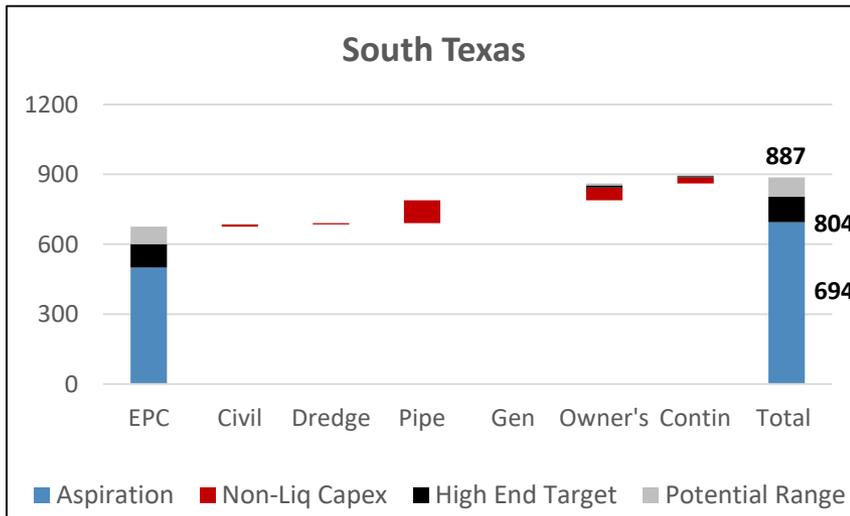
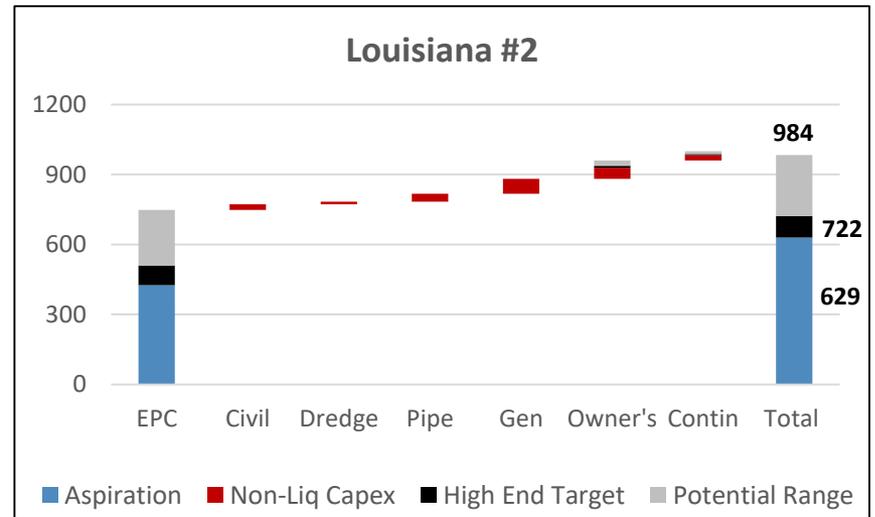
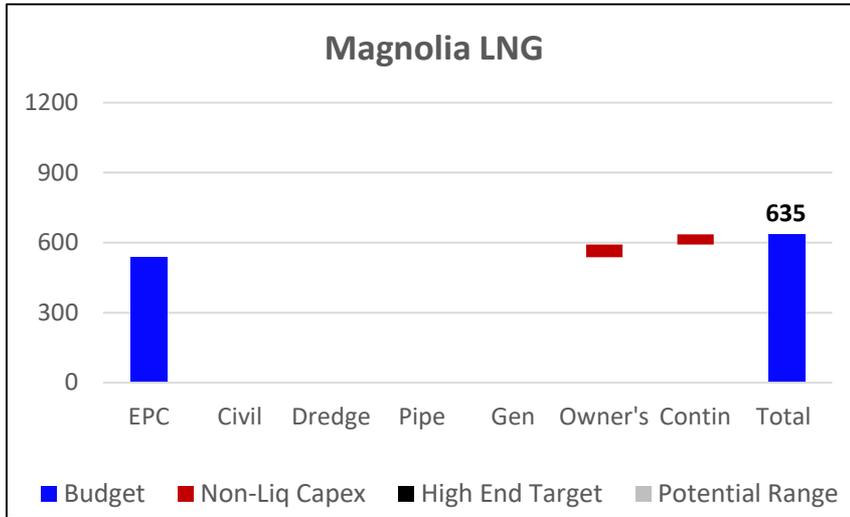
## Current regulatory status of proposed Greenfield U.S. LNG projects

Source: K&L Gates LLP



With a significant backlog at FERC, any prediction from other LNG export developers as to when they will receive all the necessary permits and approvals is purely speculative and unreliable.

# EPC cost stack analysis



**Magnolia's economics outclass other LNG export development projects**

# Economic Assumptions

## Competitor scope:

Scope for comparison to Magnolia LNG includes land-based greenfield export projects, including approved for construction and development projects in the permitting process.

Projects considered for inclusion in the scope by disclosed area include:

South Texas – Annova, Texas, Rio Grande, Port Arthur, Corpus Christi, etc.

Louisiana - SCT&E, G2, Driftwood, Calcasieu Pass, Plaquemines Parish, etc. (Louisiana #1 assumes use of gas-fired turbines, whereas Louisiana #2 assumes use of inside-the-fence newly constructed combined cycle generation installed capacity)

West Coast – Woodfibre, Pacific Northwest, Oregon LNG and Jordan Cove (West Coast #1 assumes use of inside-the-fence newly constructed combined cycle generation installed capacity, whereas West Coast #2 assumes use of gas-fired turbines)

The final scope of projects included in the analysis was based on a number of factors, with a major factor for inclusion in the analysis being the availability of a robust set of technical data to underpin the various economic assessments. A second key factor was consideration of a blend of technologies selected by competing projects to insure that the comparison to Magnolia LNG (using the patented OSMR<sup>®</sup> liquefaction process) was robust.

## Primary information sources:

Data supporting the economic analyses was provided through or derived from Project specific FERC filings available through the FERC website, other regulatory sources, and company press releases.

This data was supplemented through publicly available industry analyst reports from such sources as Poten, WoodMac, financial analysts, etc., as well as government reports from such sources as the U.S. Energy Information Administration (EIA).

Where applicable, data was validated through analogy to EPC and sub-contractor negotiations which continue routinely through work related to Magnolia LNG's lump sum, turnkey EPC contract with KSJV, a joint venture between KBR and SKE&C.

Analogy was also made against 'in operation' or 'in construction' brownfield projects in the Gulf Coast region, Sabine Pass, Cameron, and Freeport, if applicable.

## Scenarios:

In most cases, each development project has disclosed an EPC cost range, typically on a per ton of design capacity basis, for example \$500/ton to \$600/ton. These cost per ton estimates are assumed to be solely for construction of the liquefaction capacity and are before incremental costs for civil work, waterway dredging, pipeline construction (as applicable), and other similar design specific construction costs, as well as, owners' costs, financing costs, and related lender required contingencies.

The low end per ton EPC cost target was used in the economics associated with the 'Aspiration' cases in this presentation.

The high end per ton EPC cost target was used in the economics associated with the 'High End Target' cases in this presentation. Where developers have only disclosed a single EPC cost target, a High End Target was derived by multiplying the single target per ton EPC cost by 120%.

A third scenario referred to herein as the 'Potential Range' cases represents an internal estimate by our construction engineering, process engineering and operations technical teams utilizing LNG's proprietary cost model, data gleaned from market interaction with contractors and sub-contractors, independent quotes from third-party market participants, actual costs on analogous projects, and application of the team's combined 100+ years of industry experience in constructing and operating LNG liquefaction facilities while employed at companies such as KBR, Bechtel, BG Group, Cheniere, etc.

## Global assumptions:

All project analyses were based on a 20-year term, with no post 20-year economic terminal values.

Henry Hub natural gas prices were fixed at a flat \$3.00/mmBtu for all cases.

All projects assumed leverage at a 75/25 debt /equity ratio.

All projects under development by independent developers (entities having a sole line of business being development of liquefaction facilities) were charged a 3% fee paid to the source of equity contributed.

Debt terms on all projects assumed mortgage-type retirement and 18 year term, with no subsequent refinancing.

Cost of debt financing (fees and interest rates) was at rates consistent with current market for similar transactions, applied consistently across all projects including Magnolia LNG.

All analyses assumed the project economics returned debt service coverage ratios at levels that would likely lead to an investment grade rating for the project entity by the ratings agencies.

All projects were assumed to begin construction on the same date. Completion of construction was ratable within a one-year period at 1/4, 1/4, 1/4, and 1/4 every three months, regardless of design capacity aspirations.

There were no cost assumptions made to take account for potential costs associated with site ingress / egress improvements, work site camp construction requirements, or infrastructure service basics (such as dedicated emergency, care, fire, safety, security, chemicals, lab work, etc.) that some projects will be required to invest in while others will share with other industrial operations or already existing.

## Economic methodology:

The economic model for each project considers the all-in cost inclusive of liquefaction EPC, project dedicated pipeline, site civil work, site dredging, power generation construction, owner's capital costs, contingency on the liquefaction EPC cost, and financing costs. The model further evaluates the cost of fuel delivered to the inlet point of the liquefaction facility (Henry Hub + location + pipeline transport costs + pipeline fuel) as determined on a site-by-site basis assuming market using forward curve quotes but holding Henry Prices constant at \$3.00/mmBtu. The models further assess the efficiency of each discrete project based on technologies selected by individual developers, which relates to the amount of natural gas entering the liquefaction inlet point and consumed by the facility in producing the LNG delivered at the outlet of the plant. O&M costs were estimated based on known existing costs at current facilities, taking account of project site sizes, technology complexities, required maintenance turnarounds, and similar factors.

Based on these inputs, the models solved for a fixed toll price specific to each project that is required to enable the project to deliver an IRR representing a financeable liquefaction project based on current market terms.

Where a project requires construction of a dedicated lateral pipeline to deliver gas from a mainline natural gas header, the models compute a demand charge that recoups the cost of the pipeline and an IRR commensurate with industry standard targets for pipeline projects.

The model sums the toll price with the cost of gas procurement (Henry Hub + location + pipeline transport costs + pipeline fuel) to determine the offtake price for each facility as a reflection of the buyers full cycle cost of LNG prior to sea transportation and re-gasification.

In addition, for purposes of dollar averaging analyses in cases where only a portion of full design capacity is built, it is assumed that ~ 70% of EPC cost is incurred for one-half of a facility's capacity to account for construction of shared infrastructure required to produce LNG. The incremental capital is then added at ~ 15% for 3/4s of a plant and full cost for construction of design capacity.

## Outputs:

Each disclosed area (South Texas, Louisiana and West Coast) is summarized at each of the computed cost levels - Aspiration, High End Target and Potential Range, respectively. Outputs include analysis using gas-fired turbines, inside-the-fence built gas-fired generation or electric power.