

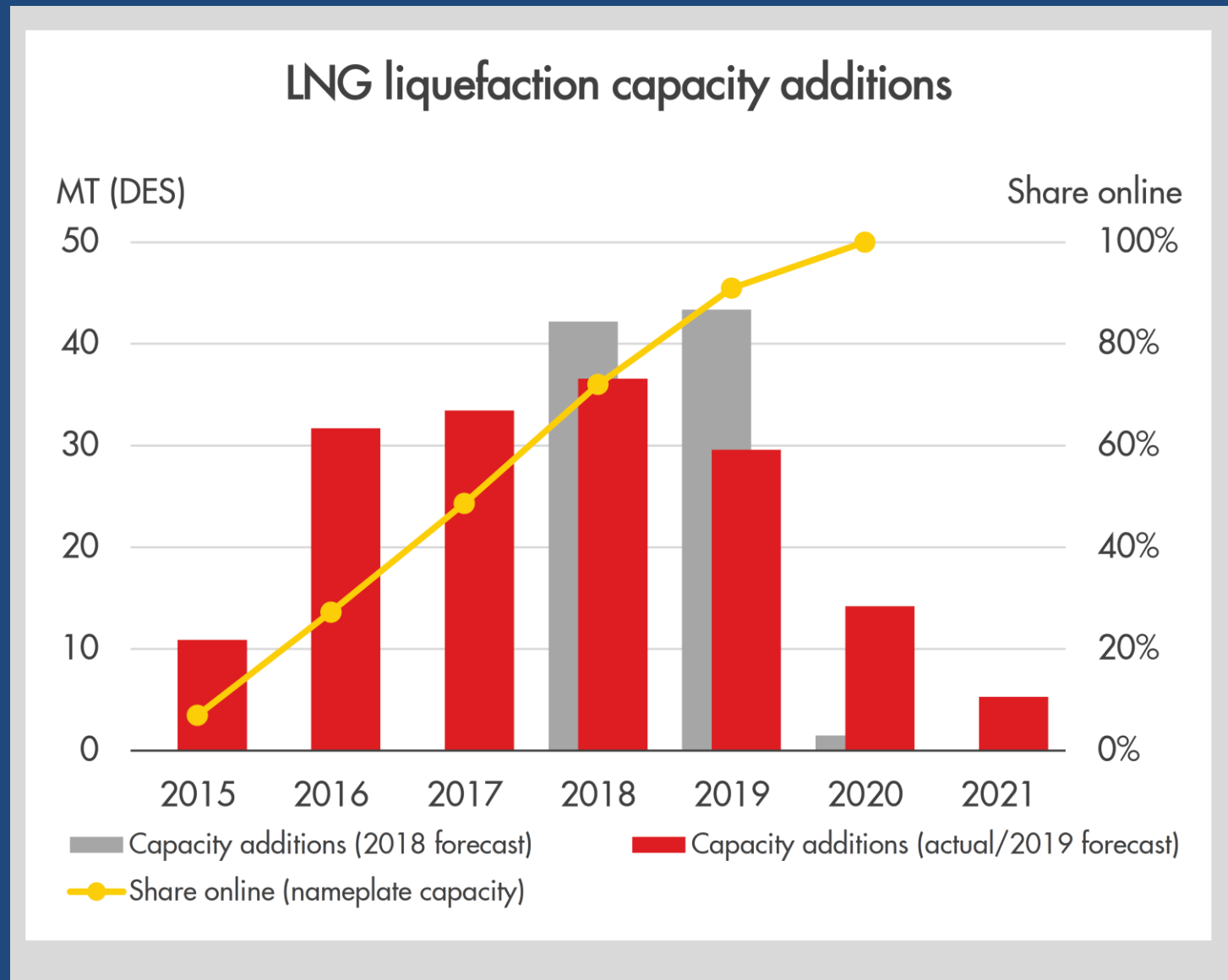
Why US LNG export projects will continue to play an important role in global markets



FLAME / FLNG 2019

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Where are future supplies going to come from?



Outside of US, list of new projects coming on line 2022 onwards is limited....



Project	Country	Date	Volume
LNG Canada	Canada	>2023	13 MTA
Coral FLNG	Mozambique	2022	3.8 MTA
Rovuma	Mozambique	2024	15 MTA
Mozambique LNG	Mozambique	2024	13 MTA
Tortue LNG	Senegal / Mauritania	2022	2.5 MTA
Qatar Expansion	Qatar	2023	30 MTA
PNG Expansion	PNG	2024	10 MTA
Arctic LNG 2	Russia	2023	19.8 MTA

There seems to be an impression that there are many non-US supply options...but, nearly all of the 120 MTA volumes above can be absorbed by India and China alone, who are expected to add upto 100 MTA demand over next five years

Where will the required new supply come from?

ALL of the non-US projects have Total, Exxon, BP, or Shell involvement



Project	Country	Date	Volume	
LNG Canada	Canada	>2023	13 MTA	Shell
Coral FLNG	Mozambique	2022	3.8 MTA	BP offtake
Rovuma	Mozambique	2024	15 MTA	Exxon
Mozambique LNG	Mozambique	2024	13 MTA	Total (via Oxy)
Tortue LNG	Senegal / Mauritania	2022	2.5 MTA	BP
Qatar Expansion	Qatar	2023	30 MTA	Likely Exxon, Total, Shell
PNG Expansion	PNG	2024	10 MTA	Exxon, Total
Arctic LNG 2	Russia	2023	19.8 MTA	Total

All major non-US projects have involvement of the four super majors – and this will have likely implications for the global market.

*Exxon and Shell are also involved in many of the US LNG projects under development.
Buyers should support independent projects such as Texas LNG*

US has the capacity to increase LNG exports..but FIDs have to be taken for second wave projects

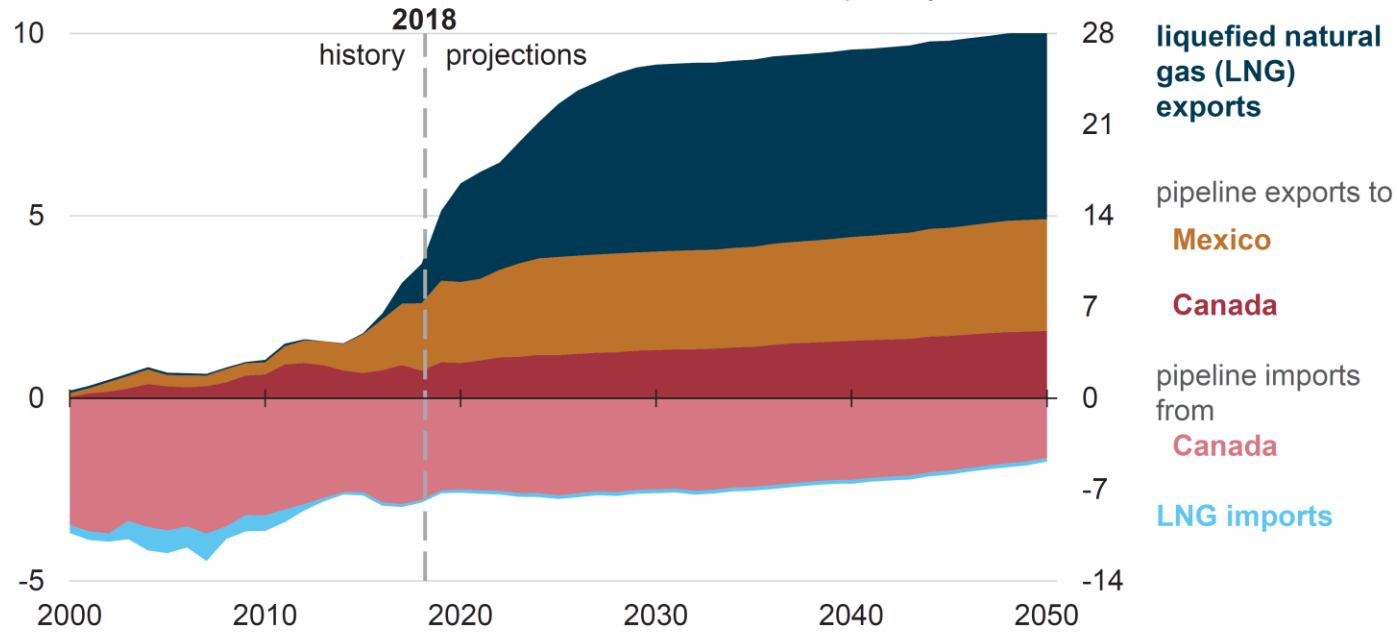


Net exports of natural gas from the United States continue to grow in the Reference case—

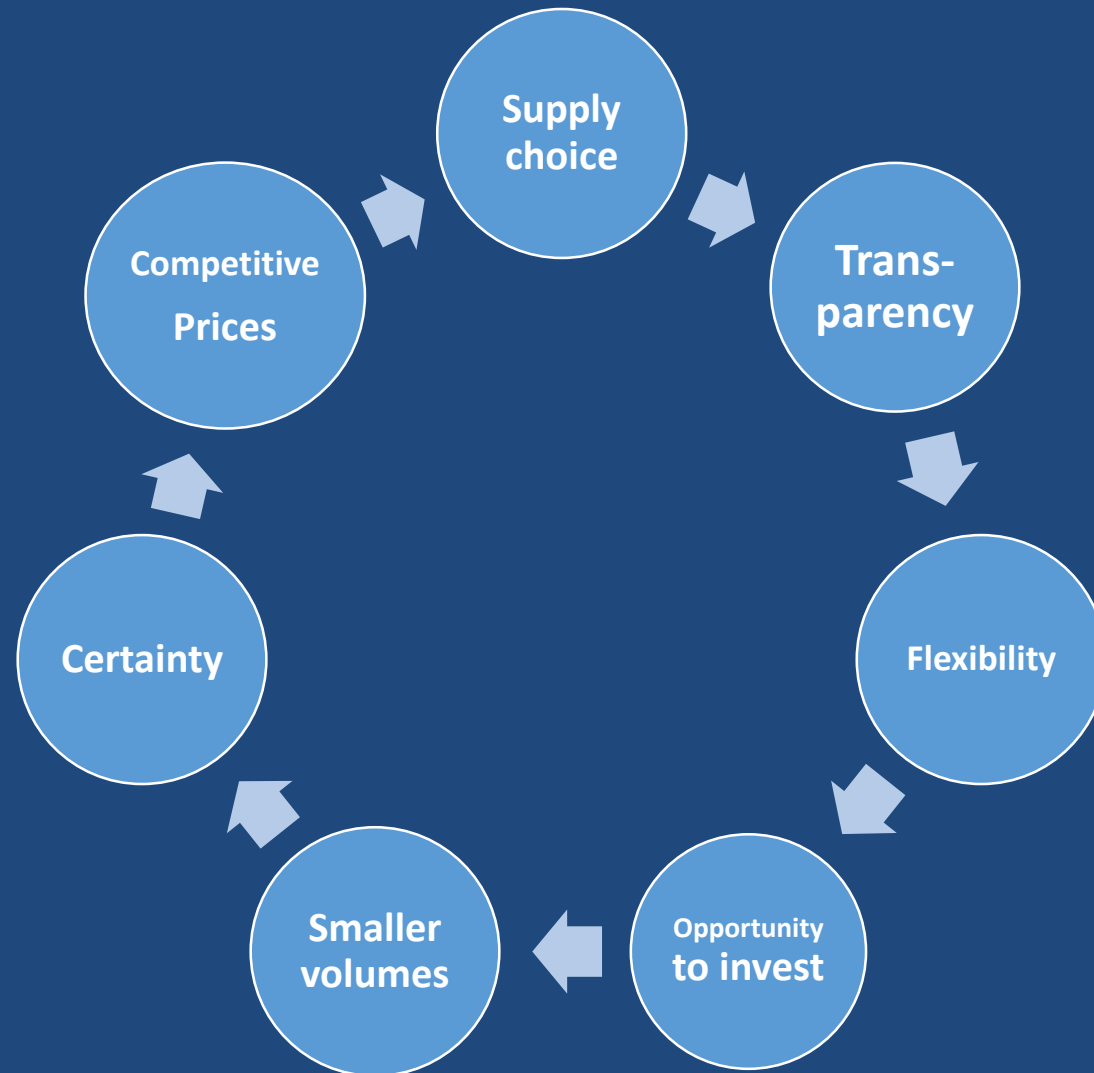
Natural gas trade (Reference case)

trillion cubic feet

billion cubic feet per day



What do LNG customers want?



How do non US Suppliers score?

	Non US Suppliers (Legacy and future) (i.e. SE Asia, Australia, Russia, Qatar)	
Supply choice	Limited – most legacy producers have flat or declining production	Yellow
Transparency	None. Business model generally based on keeping contract terms secret and playing off customers against each other!	Red
Flexibility	Limited. Take it or leave it mentality.	Yellow
Opportunity to invest	Limited. If available, require massive investment by customer.	Yellow
Smaller volumes	Prefer to deal with larger customers buying large volumes.	Red
Certainty	Yes	Green
Competitive Prices	Most contracts linked to oil price, and thus uncompetitive in periods of high prices. Prices unrelated to production costs and based on charging customers as much as possible!	Yellow

How do US 'new and future' suppliers score?



	US new and Future Suppliers (i.e. Cheniere, Texas LNG)	
Supply choice	Yes. Most second wave US LNG project have not signed binding agreements so volumes available.	Green
Transparency	Cheniere has released its contract data (in part due to regulatory requirements) but this is changing.	Yellow
Flexibility	All US projects provide destination flexibility.	Green
Opportunity to invest	Available in many US LNG projects.	Yellow
Smaller volumes	Mid-size projects specifically targeting customers seeking 0.7 – 1 MTA volumes. Other projects chasing large volumes.	Green
Certainty	Once FERC permit is granted, high certainty. FERC process is relatively certain. Relatively little technical or schedule risk.	Yellow
Competitive Prices	Cost plus pricing, unrelated to oil prices. Low capex costs and flat/declining US feed gas prices ensure US LNG will be competitive in future.	Green

And the winner is...

	Non-US Suppliers	US current and future suppliers
Supply choice	Yellow	Green
Transparency	Red	Yellow
Flexibility	Yellow	Green
Opportunity to invest	Yellow	Yellow
Smaller volumes	Red	Green
Certainty	Green	Yellow
Competitive Prices	Yellow	Green

US LNG projects are the best fit for the needs of Emerging / Asian customers!

Asia buyers have been absent from recent US LNG agreements



Between 2017 – 2019

- Venture Global has signed offtake agreements with Royal Dutch Shell (2 MTA), Edison (1 MTA), Galp Energia (1 MTA), BP (2 MTA), Polish PGNiG (2 MTA), and Repsol SA (1 MTA).
- Cheniere signed with Vitol (0.7 MTA), CPC Taiwan (2 MTA), CNPC (1.2 MTA) and Trafigura (1 MTA)
- Sempra Port Arthur signed with Polish PGNiG (2 MTA) and Total (MOU, volume not specified)
- Golden Pass volumes of 15 MTA will be absorbed by Exxon and Qatar in their trading volumes.
- Driftwood announced SPA with Total, MOU with Vitol (1.5 MTA) and Petronet (volume unknown)
- NextDecade signs SPA with Shell

- Based on my observation, since 2017, there has only been **two Asian SPAs** signed with US exporters (CPC Taiwan and CNPC). Prior to then, majority of US SPAs were with Asian buyers.
- Since 2017, there have been at least five European SPAs (Edison, Galp, PGNiG x 2, and Repsol) and many trading company / Portfolio SPAs (Shell, BP, Exxon, Qatar, Vitol, Trafigura and Total).

Where are the non-European end-users??? absent from US SPA deals!

Texas LNG Project Overview

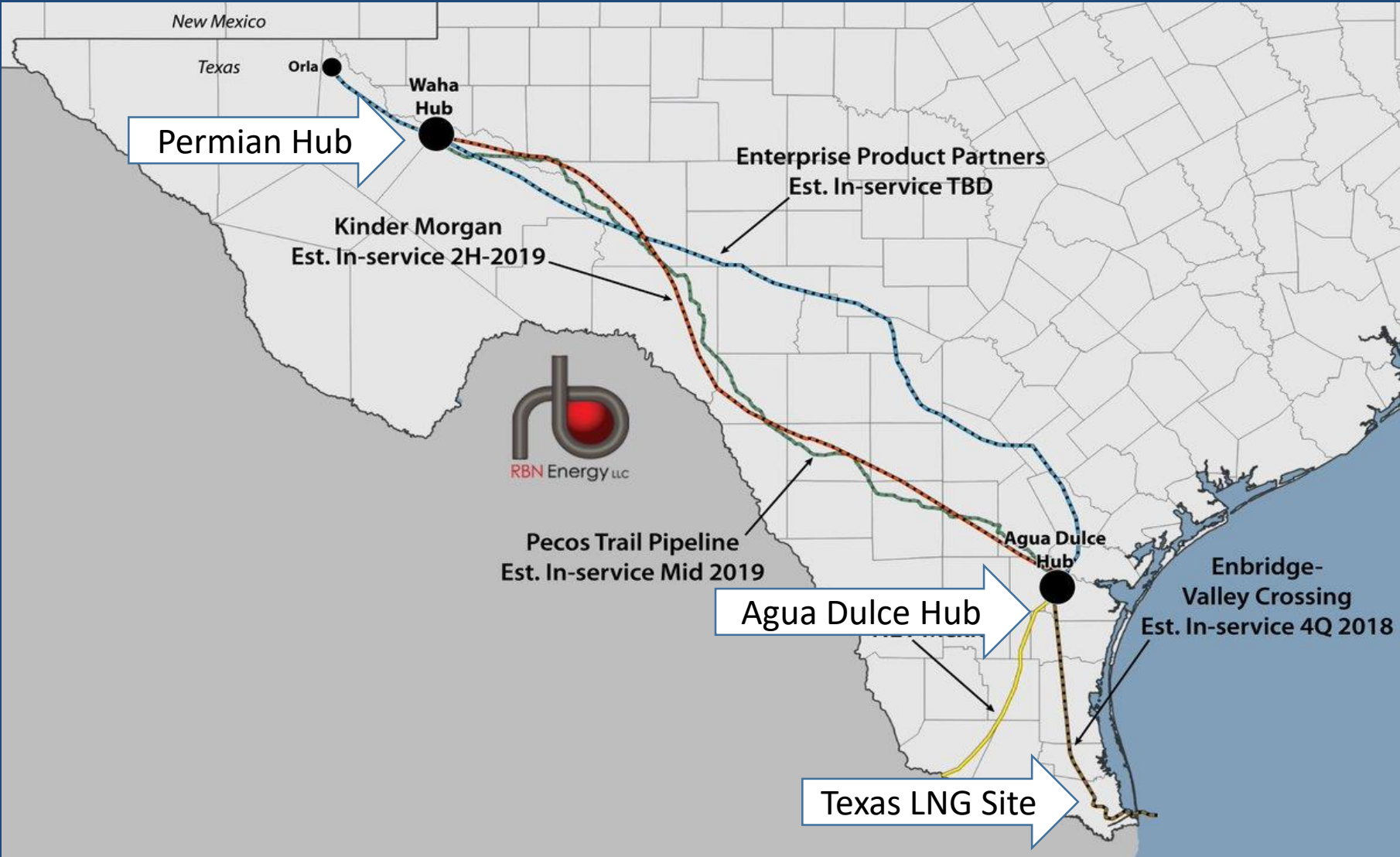
- Port of Brownsville, Texas
- 4 MTA in 2 Phases
- Access to cheap Permian gas
- FID expected in 2020, Commercial operation 2024
- Offtake discussions ongoing, multiple MOUs signed (Asia, Europe)
- Nearing end of permitting process. Final FERC approvals expected within weeks.
- Minority equity partners include Samsung Engineering



Access to low cost Permian gas

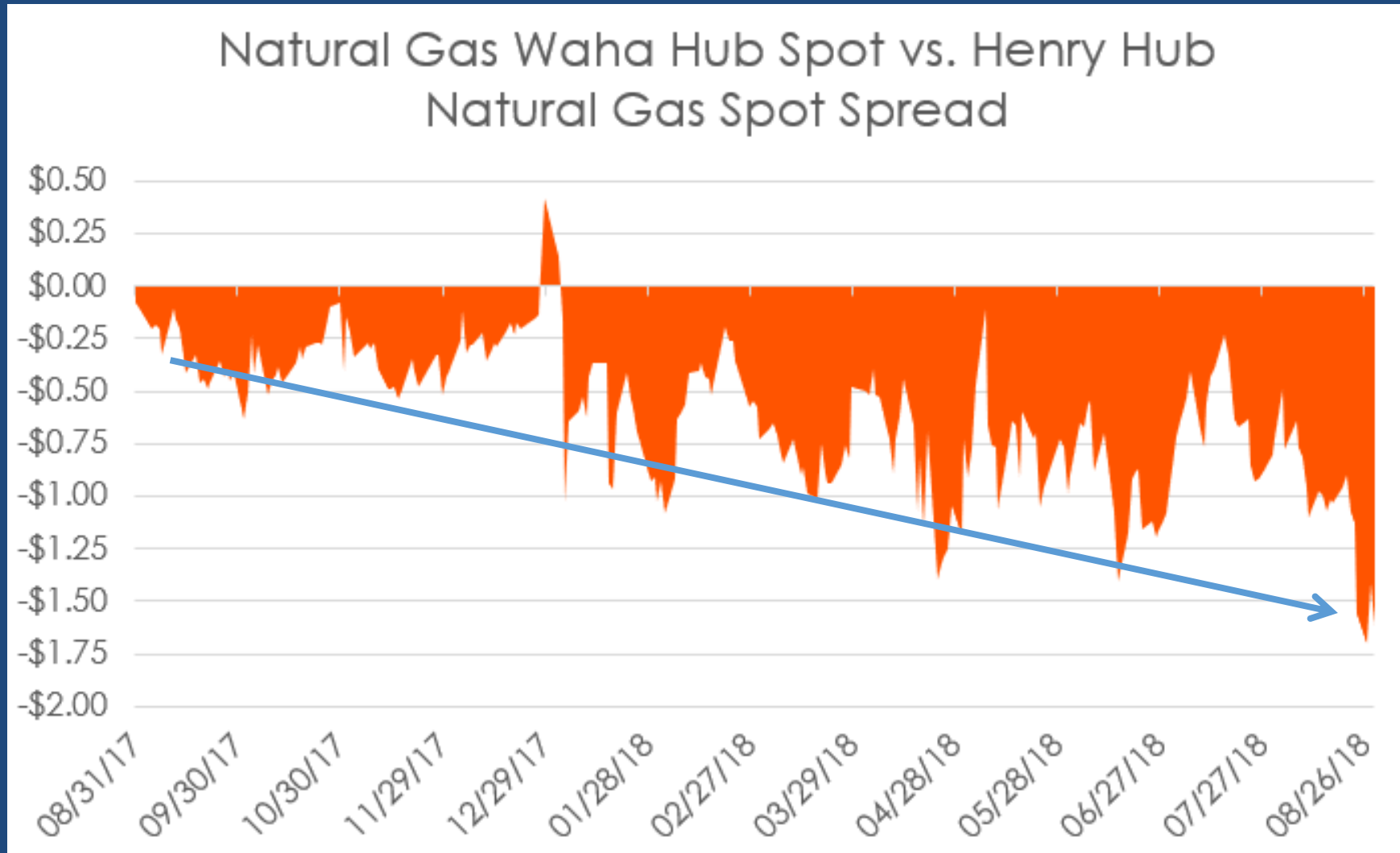
Multiple pipeline options being built from Permian to Agua Dulce Hub.

Existing pipeline from Agua Dulce runs adjacent to Texas LNG site



Permian gas trades at a massive discount to Henry Hub

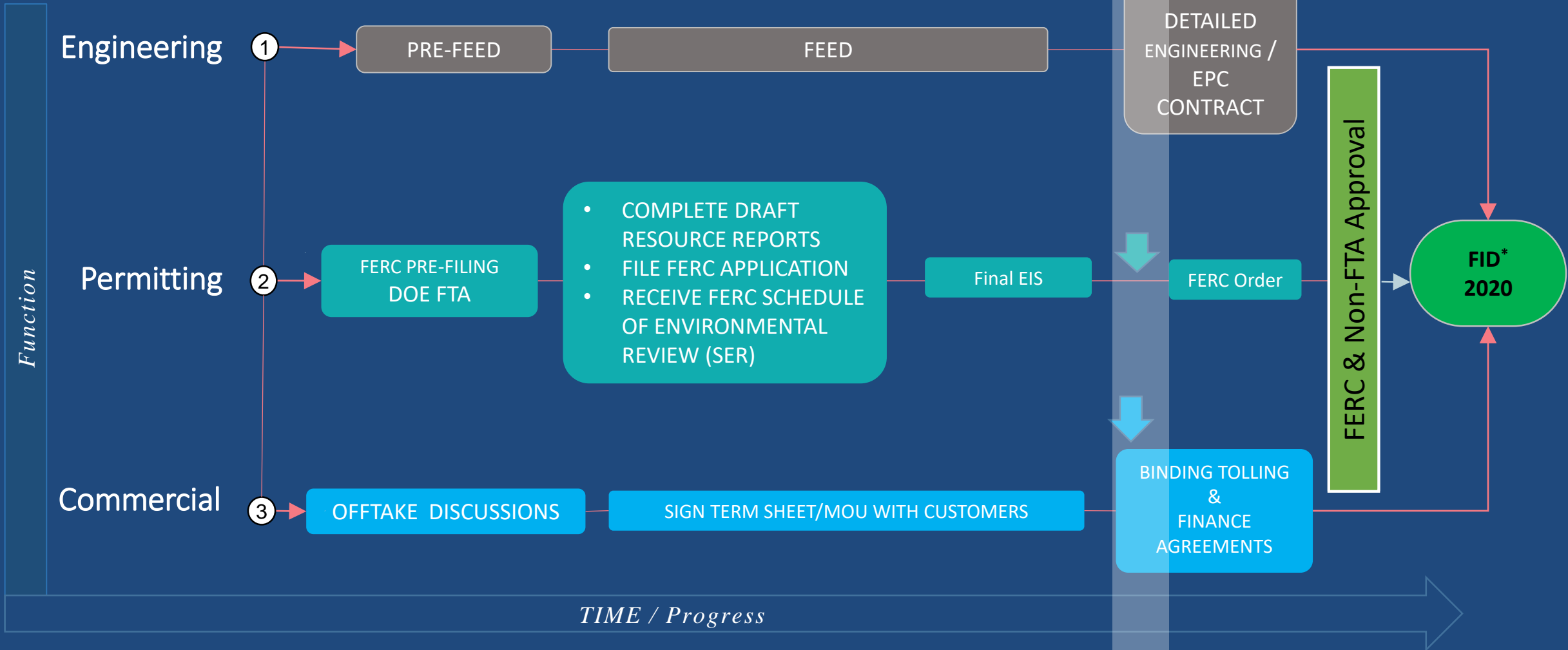
Texas LNG is one of only four potential projects to have access this cheap and plentiful gas



On May 10 2019, Permian gas at Waha hub was trading at **\$0.25/MMBtu**, a differential of **\$2.36/MMBtu** below Henry Hub price of **\$2.61/MMBtu**

During some recent days in March / April 2019, Waha was actually trading close to ZERO!

Low Risk: Texas LNG Advanced Progress to FID



1 Access to low-cost feed gas from Permian and EagleFord

2 Located on large deepwater site close to Gulf of Mexico avoiding congestion issues likely to occur in other locations

3 Leverage existing infrastructure and pipeline access

4 Low risk design based on standard technology and modular construction

5 Flexible commercial model focused on proving low-cost solutions

6 Received Final EIS, weeks from FERC approval, and chances of reaching financial close higher because of realistic Phase 1 output of 2 MTA suited to smaller volume emerging market and trading customers

What makes
Texas LNG
different from
other US
projects?

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