

LNG MARKETS

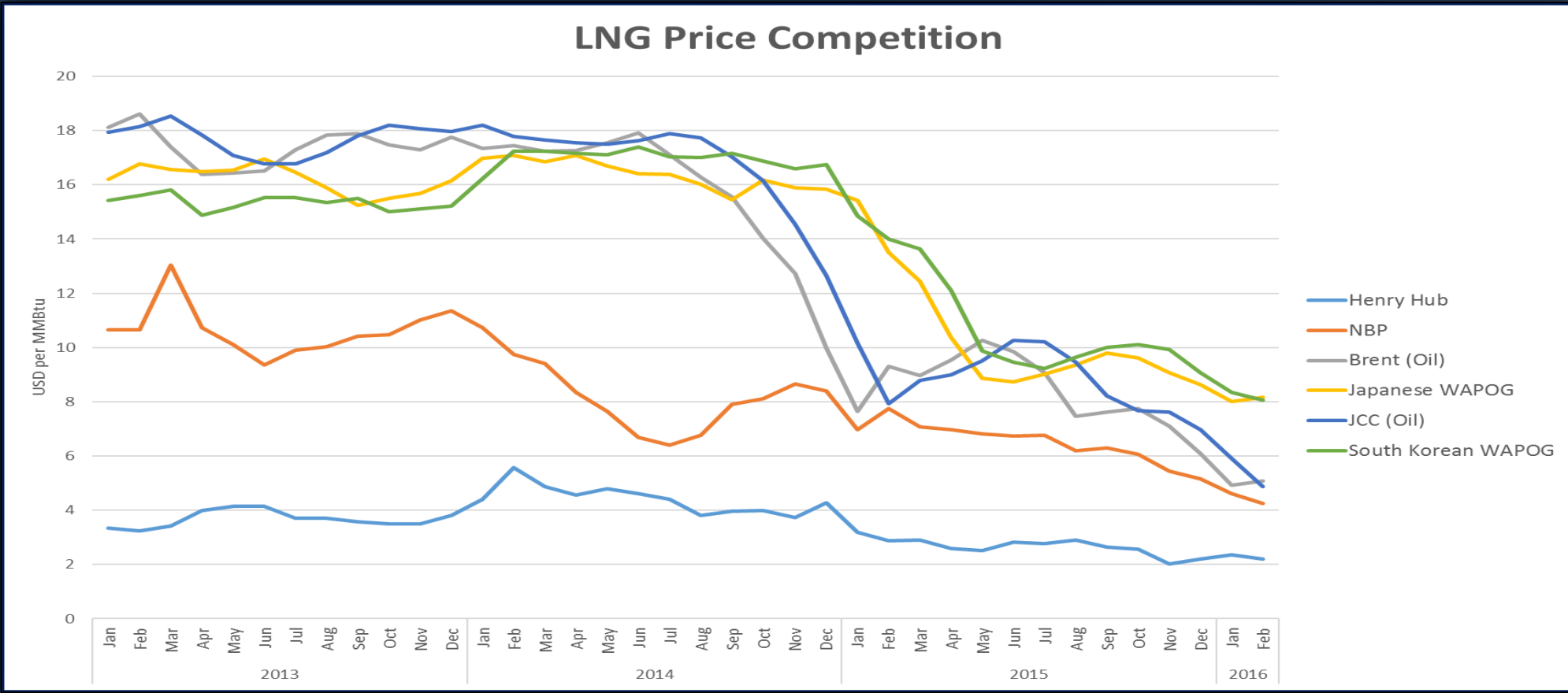
IMPLICATIONS OF A LOW ENERGY
PRICE ENVIRONMENT FOR
DEMAND AND U.S. EXPORTS – AN
EXPORTER'S PERSPECTIVE

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PRESIDENT



U.S. EIA Energy Conference
11-12 July 2016
Washington, D.C.

SIGNIFICANT PRICE CHALLENGES FOR USA LNG IN WORLD MARKETS



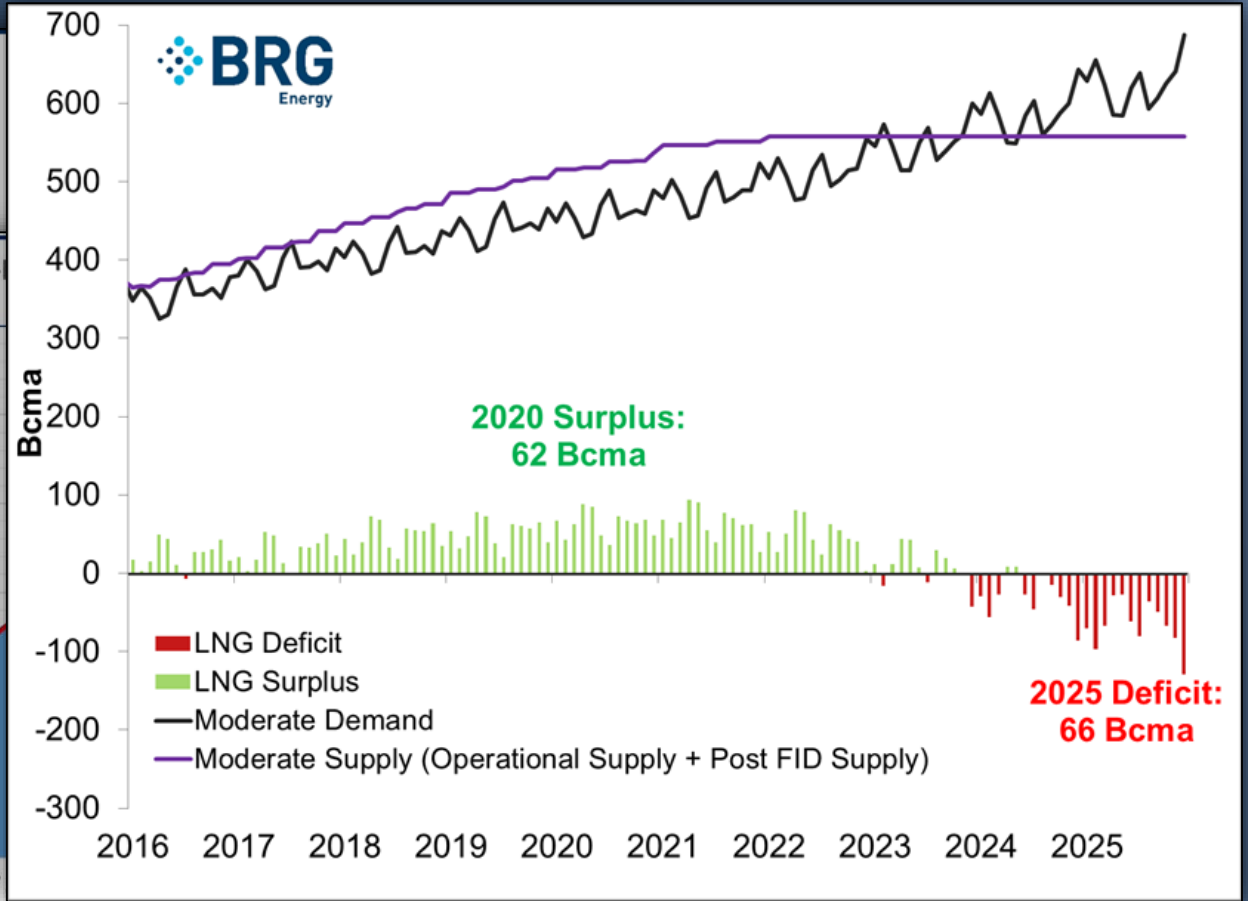
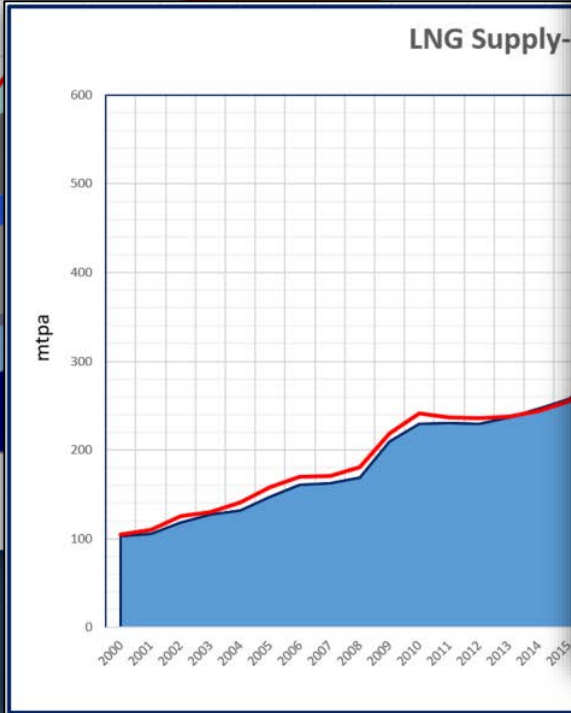
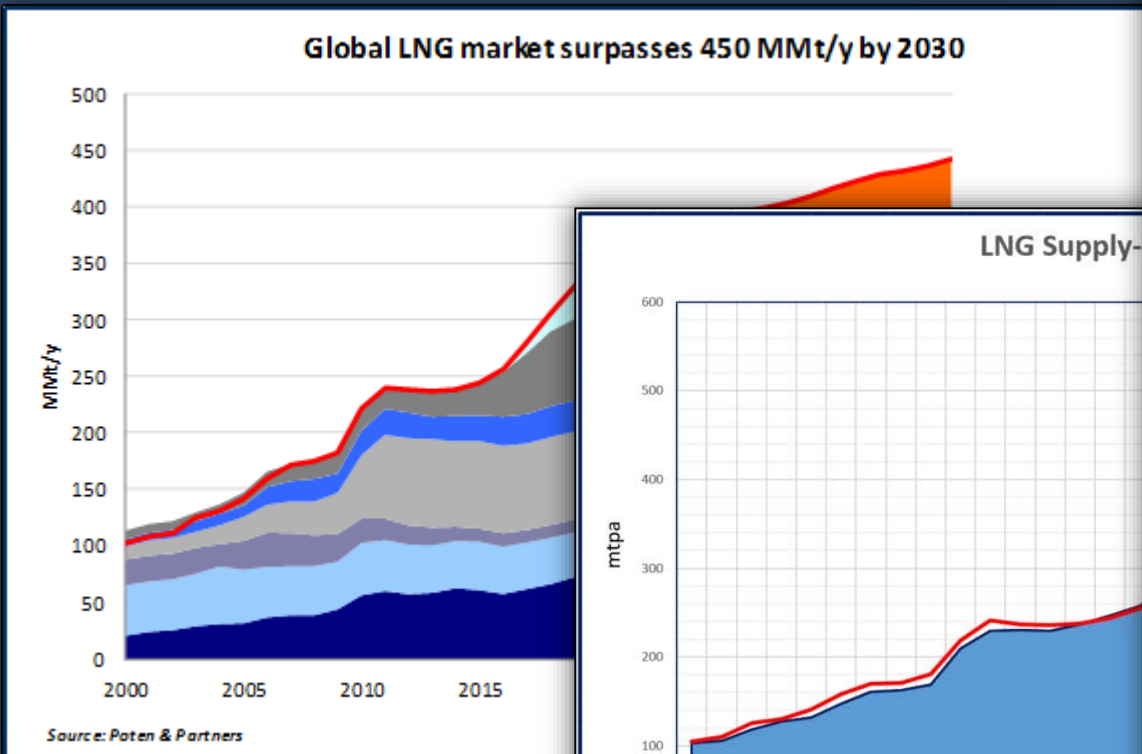
Source: Wood Mackenzie

Arbitrage opportunities in both Asia and Europe markets have been negatively affected by the collapse of oil prices. Oil price recovery is anticipated but timing is uncertain.



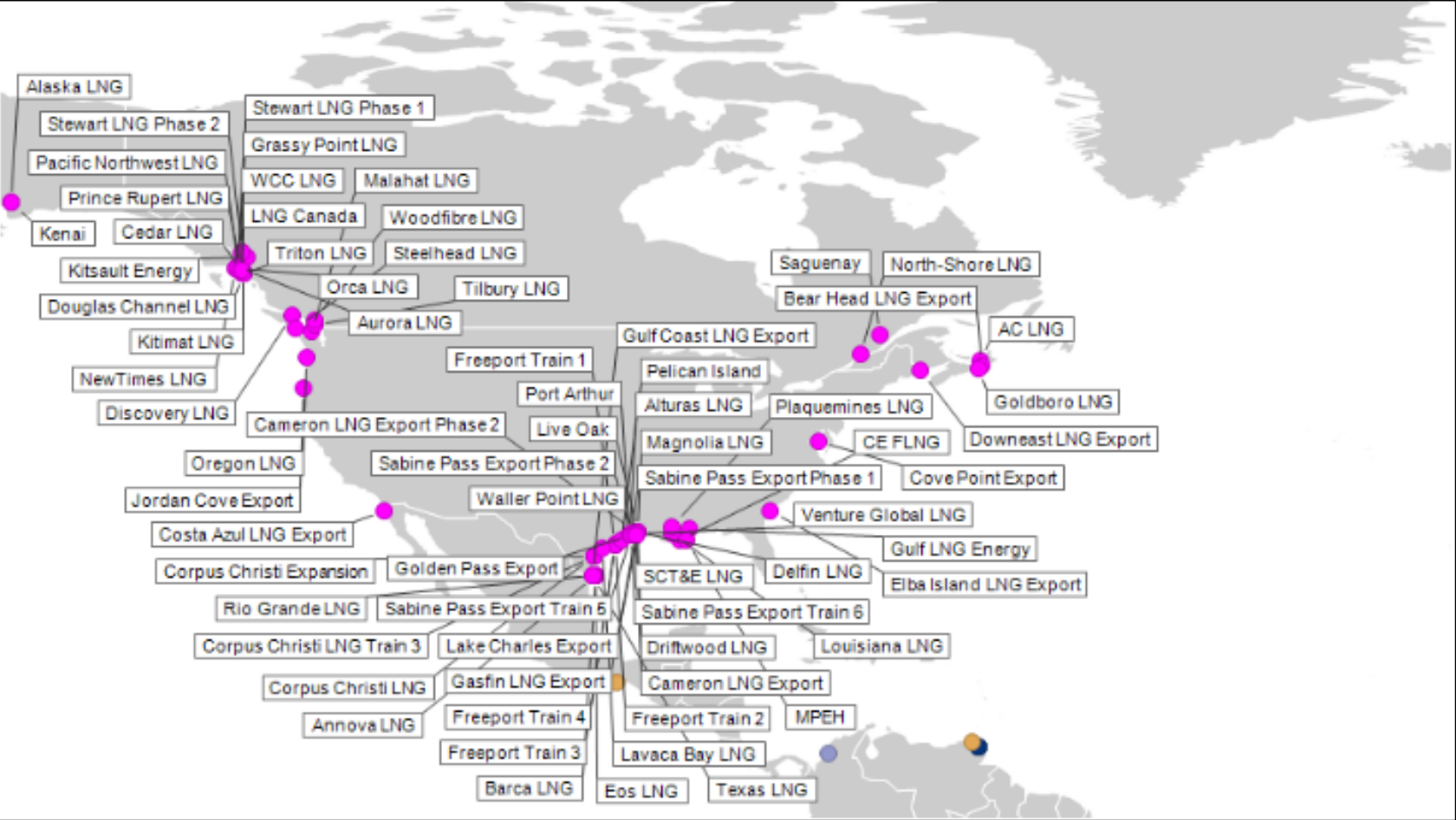
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WORLD LNG MARKET OVER-SUPPLY TO LAST UNTIL MID-2020's



While current LNG supply outweighs demand in the short-term, steady increase in long-term demand is anticipated.

CROWDED NORTH AMERICAN LNG EXPORT MARKET



Source: Wood Mackenzie

Besides the five projects currently under construction, there are several projects which have received their FERC Order and others at various stages of progress in their permitting.

LNG EXPORT MARKETS NEED TO CHANGE

"Honey, It's Time To Shrink The LNG Project"

Forbes 12 April 2016

"Projects need to be smarter, they need to be phased, and they don't always need to be bigger"

Peter Coleman, chief executive of Woodside Petroleum

"Future LNG projects will have to be creative to overcome these obstacles."

Jimmy Straughan, Chief Commercial Officer - LNG Americas, BP

DOES SIZE MATTER? MY TRAIN IS BIGGER THAN YOUR'S!

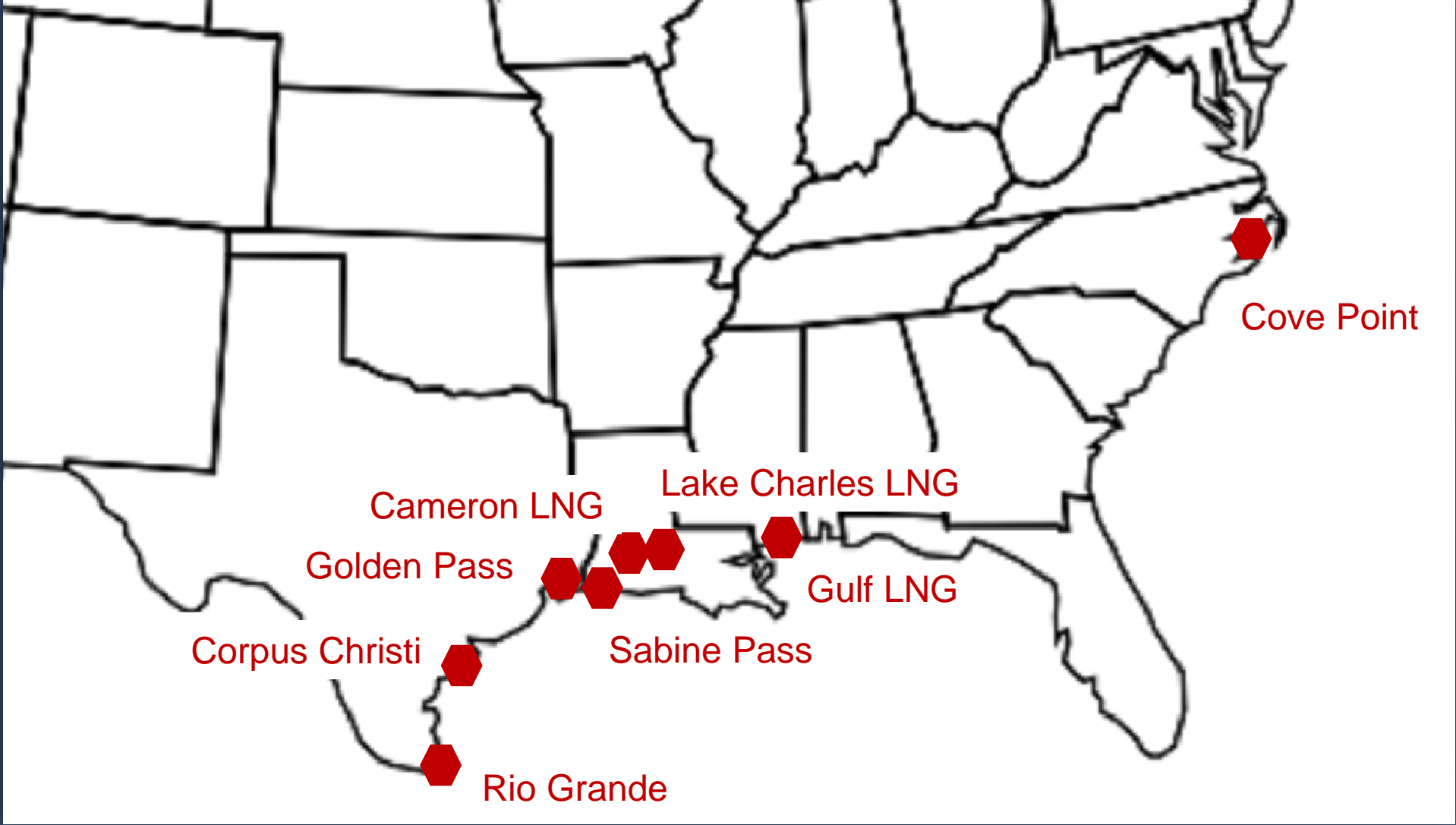


VS



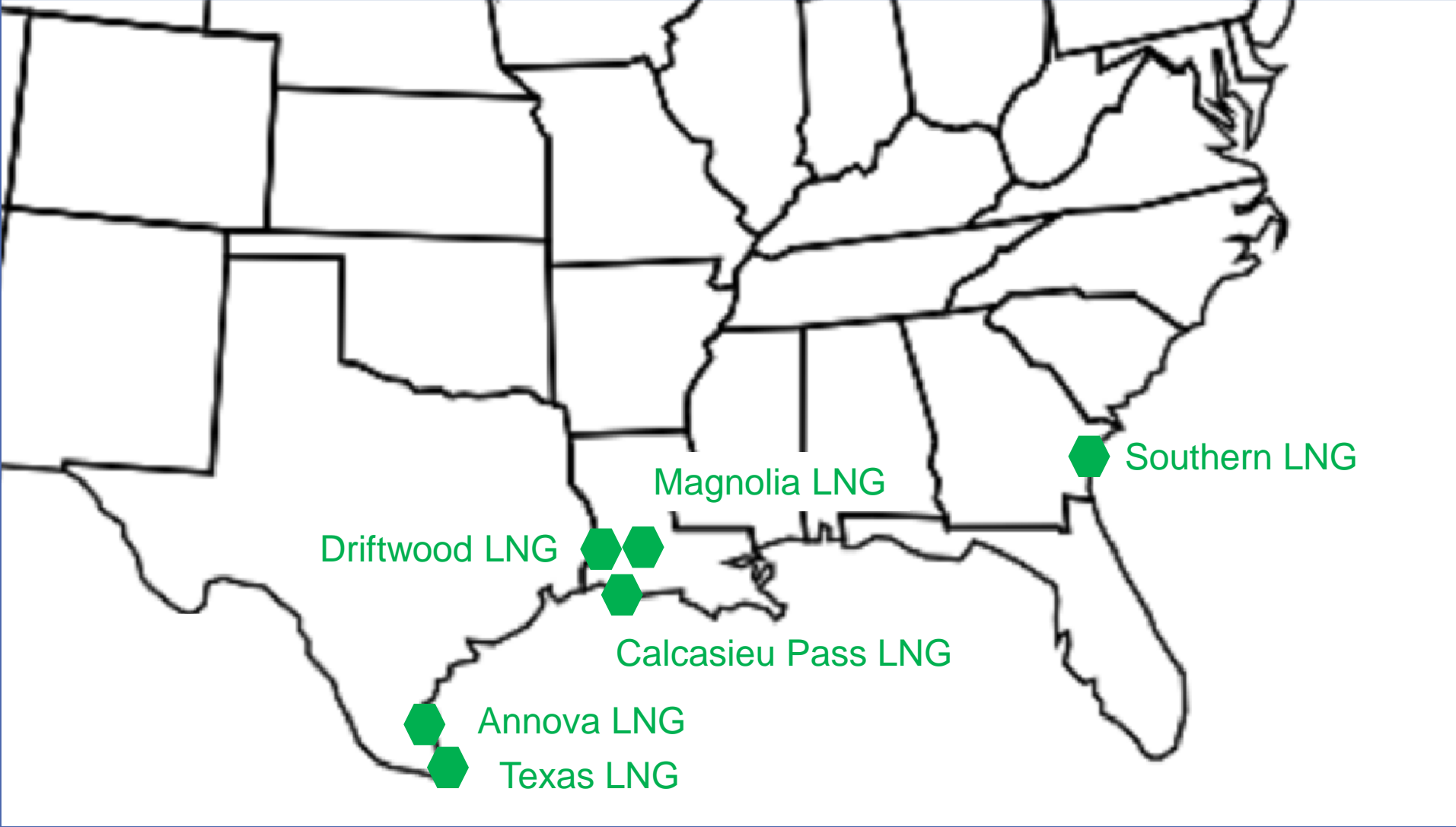
Historically, the use of the term 'train' in LNG vernacular became synonymous with a design capacity of approximately 5 mtpa. New innovative liquefaction designs and changing market conditions are challenging this ingrained paradigm.

US LNG EXPORT PROJECTS PREDOMINANTLY LARGE-TRAIN (± 5 mpta)



Over 150 mtpa from eight projects based on large-scale trains (± 5 mtpa)

USA PROJECTS BEGINNING TO CONSIDER SMALLER TRAIN SIZES



Nearly 60 mtpa from six projects based on mid-scale trains (1-2 mtpa)

DIFFICULT TO CHANGE INDUSTRY WITH LONG DEVELOPMENT CYCLES



VS



Most US LNG export projects are based on liquefaction technologies that are nearly identical to those developed 20-30 years ago for harsh environments in remote locations around the world. Competitive market conditions and mature construction capabilities in the USA are driving project sponsors to consider newer, lower-cost and higher-efficiency liquefaction technologies, benefiting customers.

BUYERS' MARKET IS REQUIRING CHANGES IN COMMERCIAL TERMS

	Past	Today	Future
Term	Long-term (15-25 yrs)	Spot / Short-term (<5 yrs)	Mix of spot, short-term and long-term
Delivery Flexibility	Point-to-Point, limited diversion rights	More flexible cargo delivery rights	Higher flexibility
Index	Oil-linked (Brent, JCC, etc.)	Oil-linked from Australia HH-linked from USA	Multiple regional indices
Pricing	Oil-linked slopes	Tolling or SPA (HHx115% + Capex Recovery)	Mixture of tolling & SPAs (oil or HH linked)
Buyer Flexibility	Very limited	Mix of inflexible legacy terms with flexible terms	Flexible

Project developers will need to balance customer requests for more flexible terms with project financing requirements for projects to proceed to FID.

CURRENT LNG MARKET CONDITIONS ARE CHALLENGING

- Supply exceeds demand for LNG in world markets for next 5-7 years. However, growth in demand is consistently forecasted.
- Many projects are vying for success in North American export market. Not all will be successful.
- Success will come to those who build credible teams, build strong long-term relationships with customers, execute on milestones and are innovative in their approach to technology choices, execution strategies and finding ways to respond to customer's commercial terms.

THANK YOU

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