

Multi-Client Study

Micro-, Small-, and Mid-Scale LNG in North America

Market data, intelligence, analysis, and insights



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Four key drivers are enabling new growth and interest in the micro-, small-, and mid-scale LNG market in North America

1

Cheap and abundant gas supply

- Large supply of natural gas from North American unconventional plays
- Cheap natural pricing forecasted through the next 15 years enables cost-effective production of LNG

2

Flared and stranded gas

- Flaring in plays such as Bakken and Eagle Ford is leading to new regulations and demand for small-scale, modular gas monetization options
- Some plays, e.g., northeastern Marcellus, with stranded gas assets have similar needs

3

New demand segments and regional markets

- New and growing interest for LNG use in various demand segments including marine, heavy-duty trucking, rail, high-horsepower industrial equipment, etc.
- Maturing regional economies in the Caribbean and Central America that could be optimally served through small-scale LNG plants

4

New and improved technologies

- New technologies have helped reduce the size, scale, and cost of liquefaction plants enabling more players an opportunity to consider LNG investments
- Other emerging technologies in the supply and end-user segments will facilitate further growth in small-scale LNG markets

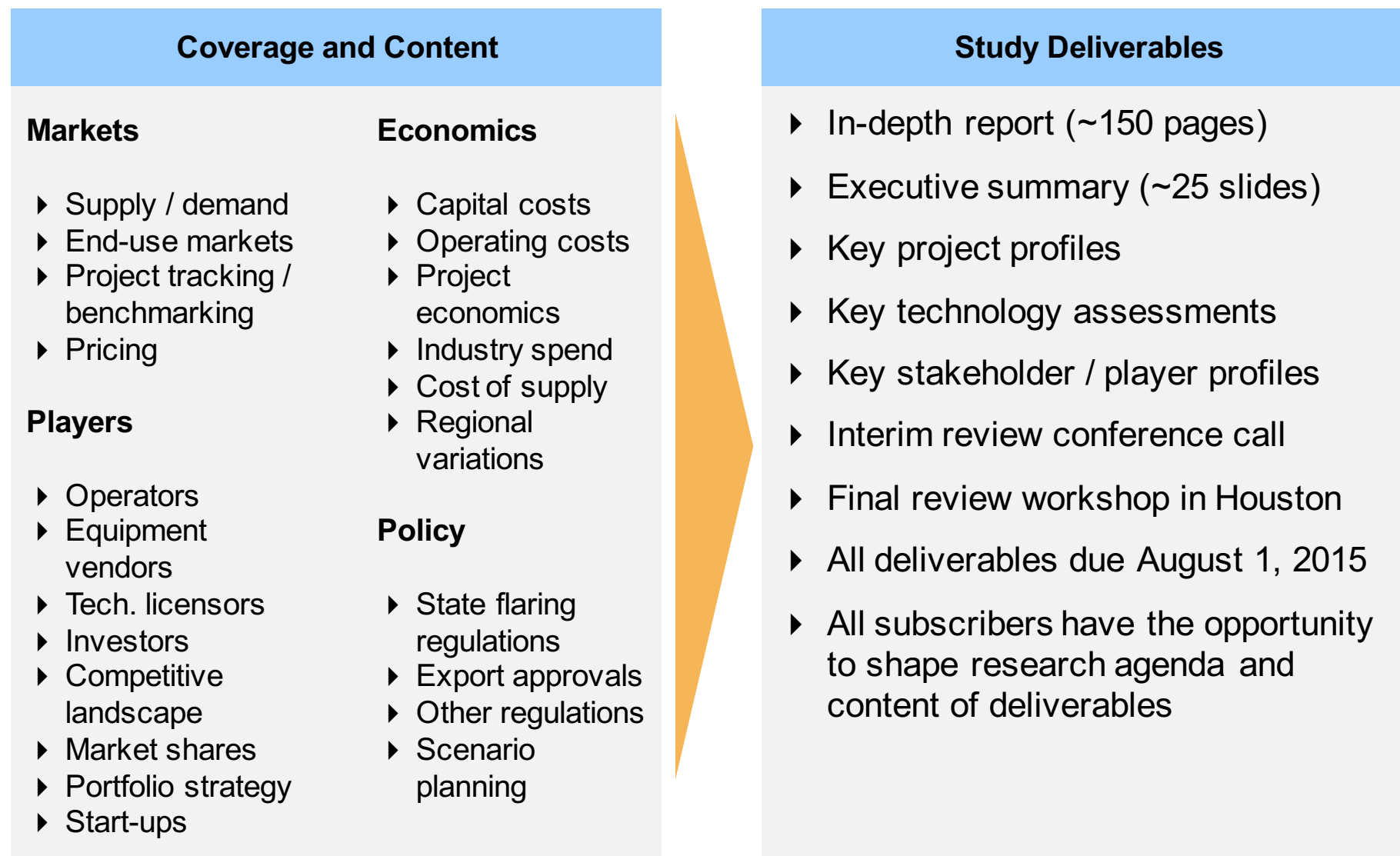
This multi-client study will address several questions around the small-scale LNG value chain ...

A Demand	<ul style="list-style-type: none">▪ What are the key drivers for small- and mid-scale LNG demand?▪ Where is LNG most competitive with diesel: marine, trucking, rail, or HHP?▪ Can new business models tackle barriers to small-scale LNG demand growth?▪ How will small- and mid-scale LNG demand evolve in a low-oil price scenario?
B Supply	<ul style="list-style-type: none">▪ What and where is the existing supply from small- and mid-scale LNG plants?▪ How much new small- and mid-scale LNG capacity is expected through 2020?▪ What markets and end-use segments are current and new plants serving?▪ Who are the players in small/mid-scale LNG and how are they positioned?
C Economics and Infrastructure	<ul style="list-style-type: none">▪ Where is current and future small- and mid-scale LNG infrastructure located?▪ How competitive are the costs and economics of existing and new plants?▪ What projects are coming online and what demand segments will they serve?▪ Will there be linkages between small-, mid-, and large-scale LNG projects?
D Technology	<ul style="list-style-type: none">▪ What liquefaction technologies are used in small- and mid-scale plants?▪ Who are the major manufacturers of small- and mid-scale LNG technology?▪ What new technologies are emerging in small- and mid-scale LNG? Impacts?▪ What are the costs and economics associated with different technologies?

... Through a structured and comprehensive report reflected in the proposed “Table of Contents”

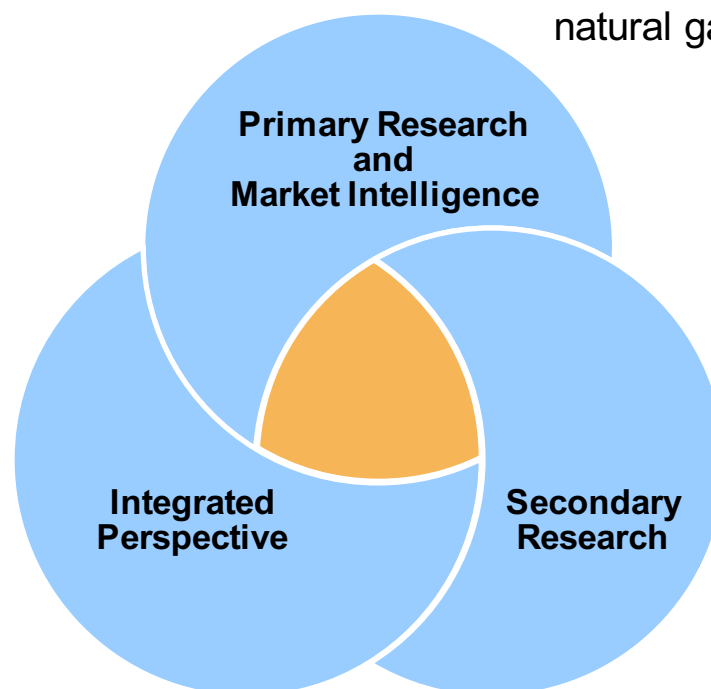
1	Demand	<ul style="list-style-type: none">▪ Drivers of small/mid-scale LNG demand in North America and globally▪ LNG demand by segment in marine, rail, trucking, HHP, and other uses▪ LNG export opportunities to regional economies in North/South America
2	Supply	<ul style="list-style-type: none">▪ Current and forecasts of LNG supply through 2020 by region▪ Existing and upcoming supply infrastructure by location and volume▪ New supply models to serve economies in North/South America
3	Infrastructure	<ul style="list-style-type: none">▪ Regional and play-wise look at small- and mid-scale LNG infrastructure▪ Linkages with availability of feedstock gas and demand segments▪ Regional export infrastructure including transport and shipping models
4	Costs, Economics, and Pricing	<ul style="list-style-type: none">▪ Costs and economics of switching to LNG in various demand segments▪ Costs and economics of micro-, small-, and mid-scale LNG supply▪ Price forecasts and mechanisms by region and demand segment
5	Projects and Players	<ul style="list-style-type: none">▪ LNG supplier and end-user company profiles and market strategies▪ Profiles and benchmarking of existing and upcoming projects▪ Project feedstock sourcing and LNG product off-take strategies
6	Technology and Regulatory	<ul style="list-style-type: none">▪ Equipment manufacturer company profiles and strategies▪ Current and emerging technology profiles with costs and economics▪ State and federal regulations and impacts on small- and mid-scale LNG

Our study offers a wide range of coverage and content offering various benefits to different subscribers



The multi-client study will combine proprietary analytics, authentic market intelligence, and rigorous research

Primary research through first-hand interviews with operators, investors, market players, and field staff brings authentic market intelligence across all natural gas monetization markets



Unique, **holistic coverage** of all natural gas monetization options that provide subscribers with **an integrated view** of natural gas demand

Secondary research covering literature, open and proprietary data sets, SEC filings, company presentations, news, and government reports

An expert team will research and deliver this market study...



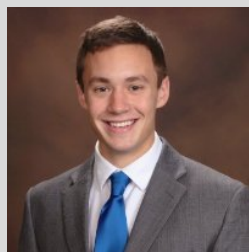
Uday Turaga holds a PhD in Fuel Science from Penn State and an MBA from UT Austin. Through stints at ExxonMobil, ConocoPhillips, Booz, and ADI Analytics Uday brings a deep commercial and technical understanding of the natural gas value chain across a wide range of gas monetization options. He has published widely and has been quoted in media outlets including NPR and Bloomberg.



Vis Viswanathan brings 35 years of experience with Akzo-Nobel, ConocoPhillips, and Lummus in process development, economics, and technology evaluation for refining and chemicals. He brings deep expertise in gas monetization with a deep emphasis on gas-to-liquids and the methanol value chain. He holds a PhD from University of Minnesota in Chemical Engineering.



Vishakha Shembekar brings deep expertise in oil and gas, chemicals, and renewables with emphasis on chemical industry applications of natural gas as well as the role of natural gas in transportation and industrial markets. She holds a PhD from the Indian Institute of Technology, Mumbai and brings nearly 10 years of experience gained at Cornell, Dow, and Merck.



Tyler Wilson holds a B.A. in Economics and Business Administration from Coe College and has work experience on the Chicago Board of Trade as a Junior Trader. Since joining ADI Analytics, Tyler has added value in various due diligence projects and conducted research and analysis over LNG exporting projects in North America as well as publishing several articles over the monetization of natural gas.

... Building on our experience with oil, gas, and energy clients



ADI Analytics is a consulting and advisory firm specializing in oil and gas, coal and power, energy, and chemicals. In the past six years, we have completed over 150 projects for more than 70 clients including BP, Shell, Chevron, ConocoPhillips, Marathon, BASF, SK, Mitsui, Santos, Reliance, and the U.S. Department of Energy.

We help clients with market research, strategic planning, competitive benchmarking, and technology assessments. Our team differentiates itself through deep, field-based industry expertise, proprietary analytics, and cost-effective delivery.



For more information on this multi-client study or our Natural Gas Monetization research service, please contact:

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