



WEBBER
RESEARCH | ADVISORY



Uncommon Detail. Unparalleled Insight.

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, emission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



W|EPC: Platform Overview

Term: Quarterly (*billable and cancelable*). Two Quarter Minimum.

Platform Pricing (3-4 Users): email us at info@webberresearch.com

Individual Pricing: bespoke

Subscription Includes:

Comprehensive Research & Insights: Immediate access to our **Top-Ranked LNG, Energy & Utility,** and **Alternative Fuels** research, curated data & updates, distributed via email with secure, individualized links, including:

Full Coverage Of The LNG Value Chain, Energy Infrastructure, & Alternative Fuels:

- [LNG Project Deep Dives](#) (including in-house timeline estimates, budgets, and cost-overruns)
- Satellite & drone imagery, analysis of key updates and market changes – *differentiated depth.*
- **W|EPC Project Database:** key cost, timeline, & regularly data - *cutting through the clutter.*
- Independent project timeline & budget analysis - *identifying issues before the market.*
- Alternative fuel comparisons, infrastructure deep dives – *adding definition to a sea of white space.*
- Corporate Access (includes access to Fireside Chats, replays & takeaways)

Full Research Library Access:

- Access to our full **Research Library**
- Updated models, industry data & satellite imagery
- Our multi-factor LNG S/D model – probability weighting +70 liquefaction and +100 Regas projects
- Webber Research’s LNG Weekly & Other Insights

On-Demand Analyst Access:

- On-demand access to our analyst teams, EPC experts & engineers in New York & Houston
- Bespoke sensitivity analysis & project work
- Project reviews, teach-ins, or client calls – *live expertise, whenever or wherever it’s needed.*

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk

Renewables

Hydrogen

- Plug Power (**PLUG**)
- Ballard (**BLDP**)
- Fusion Fuel (**HTOO**)
- Bloom Energy (**BE**)
- FuelCell Energy (**FCEL**)
- Advent (**ADN**)
- ITM Power (**ITM-GB**)
- NEL ASA (**NEL-NO**)
- Loop Energy (**LPEN-CA**)
- Next Hydrogen (**NXH-CA**)
- Ceres Power (**CWR-GB**)

Biofuels

- Clean Energy Fuels (**CLNE**)
- Aemetis (**AMTX**)
- Montauk Renewables (**MNTK**)
- Westport Fuel Systems (**WPRT**)
- Darling Ingredients (**DAR**)
- Greenlane (**GRN-CA**)
- Archer-Daniels-Midland (**ADM**)
- Delek US (**DK**)
- Neste (**NESTE-FI**)

EV Charging

- ChargePoint (**CHPT**)
- EVgo (**EVGO**)
- Tritium (**DCFC**)
- ADS-TEC Energy (**EUSG**)
- Volta (**VLTA**)
- Blink Charging (**BLNK**)
- Beam Global (**BEEM**)
- NUVVE (**NUVVE**)

Storage

- EnerSys (**ENS**)
- Generac (**GNRC**)
- Stem (**STEM**)
- Fluence Energy (**FLNC**)
- CBAK Energy (**CBAT**)
- Romeo Power (**RMO**)

Solar

- Enphase Energy (**ENPH**)
- SolarEdge Technologies (**SEDG**)
- Sunrun (**RUN**)
- Sunnova Energy (**NOVA**)
- First Solar (**FSLR**)
- SunPower (**SPWR**)
- Azure Power (**AZRE**)

Alt Fuel Vehicles

- GreenPower Motors (**GP**)
- Proterra (**PTRA**)
- Workhorse (**WKHS**)
- Nikola (**NKLA**)
- Arrival (**ARVL**)
- Tesla (**TSLA**)
- Hyllion (**HYLN**)
- Lordstown Motors (**RIDE**)

Wind

- TPI Composites (**TPIC**)
- Broadwind (**BWEN**)
- Vestas (**VWS-DK**)
- Avangrid (**AGR**)
- Eneti (**NETI**)
- Orsted (**ORSTED-DK**)

Other

- Ameresco (**AMRC**)
- Advanced Energy Industries (**AEIS**)
- Clearway Energy (**CWEN**)
- Ormat Technologies (**ORA**)
- Energy Recovery (**ERII**)

Energy Infrastructure

LNG

- Cheniere Energy (**LNG**)
- Cheniere Energy Partners (**CQP**)
- NextDecade (**NEXT**)
- Tellurian (**TELL**)
- Golar LNG (**GLNG**)
- Cool Company Ltd. (**GLOP**)
- New Fortress Energy (**NFE**)
- Excelerate Energy (**EE**)
- Flex LNG (**FLNG**)

Tankers & LPG

- Frontline (**FRO**)
- DHT (**DHT**)
- Euronav (**EURN**)
- Teekay Tankers (**TNK**)
- Intl Seaways (**INSW**)
- Scorpio Tankers (**STNG**)
- Ardmore Shipping (**ASC**)
- Tsakos Energy Navigation (**TNP**)
- Navigator Holdings (**NVGS**)
- Dorian LPG (**LPG**)

Containers

- Atlas (**ATCO**)
- Costamare
- Capital Product Partners (**CPLP**)
- Triton (**TRTN**)
- Textainer (**TGH**)
- Zim Integrated Shipping (**ZIM**)
- Jones Act
- Kirby (**KEX**)
- Overseas Shipping (**OSG**)
- Matson (**MATX**)

*existing equity coverage
*industry coverage

W|EPC Project & Industry Coverage

Ameresco (**AMRC**)

- Fluor Corp (**FLR**)
- KBR (**KBR**)
- McDermott Intl (**MCDIF**)
- JGC Corp (**JGCCY**)
- Southern Company (**SO**)
- Sempra (**SRE**)
- Dominion (**D**)
- American Electric (**AEP**)
- CenterPoint (**CNP**)
- Enterprise (**EPD**)
- Kinder Morgan (**KMI**)
- Energy Transfer (**ET**)
- Methanex (**MEOH**)
- ExxonMobil (**XOM**)
- Shell (**RDS**)
- TotalEnergies (**TTE**)

Hydrogen & Atl.

- Hydrogen (H2)
- Methanol
- Ammonia
- Fuel Cells & Mobility
- Stationary Power
- Biofuels & CNG

LNG Projects

- LNG Canada
- Calcasieu Pass
- Plaquemines LNG
- Golden Pass
- Costa Azul (ECA)
- Mozambique
- Qatar NFE
- Commonwealth LNG
- Arctic 2 LNG
- And Many More...

Comprehensive Energy Infrastructure, LNG, and Renewables Research Universe

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk

Full Research Library Access: Webber Research is committed to adding value through a mosaic of context, insight, thought leadership, hard work, and diligence – creating unparalleled research and tailored, bespoke solutions for our research and consulting clients.

Our Library Includes:

- Historical reports & presentations (via Blue Matrix)
- Access to our proprietary **W|EPC Project Data Base**
- Relevant company & industry Models
- Industry data, satellite images, & supporting documentation (via secure email link)

Title	Symbol	Author	Type	Date	📧
Webber Research: Global LNG Project Rankings, Outlook & LT Supply Demand Model (H123)	EXP	Greg Wasikowski, CFA	Industry Note	Jan 10 2023 01:34PM	<input type="checkbox"/>
W EPC: Freeport LNG Project Update – Restart Analysis & Review Q123	EPC	Greg Wasikowski, CFA	Industry Note	Jan 09 2023 02:46PM	<input type="checkbox"/>
Webber Research: LNG Weekly	EXP	Greg Wasikowski, CFA	Industry Note	Dec 28 2022 03:28PM	<input type="checkbox"/>
Webber Research: Renewables Weekly	RNW	Greg Wasikowski, CFA	Industry Note	Dec 21 2022 02:00PM	<input type="checkbox"/>
W EPC: Plaquemines Parish LNG – Project Update Q422	EPC	Greg Wasikowski, CFA	Industry Note	Dec 19 2022 09:00AM	<input type="checkbox"/>
PLUG: Multi-Faceted Hydrogen Agreement & Strategic Relationship With NKLA	PLUG	Greg Wasikowski, CFA	Company Note	Dec 15 2022 01:35PM	<input type="checkbox"/>
Webber Research: LNG Weekly	EXP	Greg Wasikowski, CFA	Industry Note	Dec 14 2022 01:49PM	<input type="checkbox"/>
ENS: Fireside Chat Key Takeaways & Notes	ENS	Greg Wasikowski, CFA	Company Note	Dec 14 2022 12:00PM	<input type="checkbox"/>
Webber Research: Hydrogen Tracker	RNW	Greg Wasikowski, CFA	Industry Note	Dec 07 2022 12:10PM	<input type="checkbox"/>
W EPC: Golden Pass LNG – Project Update Q422	EPC	Greg Wasikowski, CFA	Industry Note	Dec 06 2022 10:00AM	<input type="checkbox"/>
CHPT: Mixed FQ3, Opex Reduction Counterbalances Lower Gross Margins-Earnings Recap, PT & Est Updates	CHPT	Greg Wasikowski, CFA	Company Note	Dec 02 2022 09:40AM	<input type="checkbox"/>
FRO: Q3 EPS In-line, Seasonally Strong Rates Point To Strong Q4 - Earnings Recap, PT & Est. Updates	FRO	Greg Wasikowski, CFA	Company Note	Dec 01 2022 12:00PM	<input type="checkbox"/>
HTOO: Expands Into North America & Italy Markets With Two Anchor Projects - Q3 Recap & Est. Updates	HTOO	Greg Wasikowski, CFA	Company Note	Nov 29 2022 03:31PM	<input type="checkbox"/>
Webber Research: Hydrogen Tracker	RNW	Greg Wasikowski, CFA	Industry Note	Nov 23 2022 04:05PM	<input type="checkbox"/>
GLNG: Q3 Results Mixed, But Strong FLNG Earnings Hedged Through 2024 - Earnings Recap	GLNG	Greg Wasikowski, CFA	Company Note	Nov 18 2022 08:00AM	<input type="checkbox"/>
Renewables: Q3 Earnings Roundup: ENS, SEDG, & CLNE - Price Target & Estimate Updates	RNW	Greg Wasikowski, CFA	Industry Note	Nov 18 2022 07:30AM	<input type="checkbox"/>
Webber Research: LNG Weekly	EXP	Greg Wasikowski, CFA	Industry Note	Nov 11 2022 11:15AM	<input type="checkbox"/>
Renewables: Q3 Earnings Roundup: PLUG & BLDP - Downgrading PLUG To Market Perform From Outperform	RNW	Greg Wasikowski, CFA	Industry Note	Nov 11 2022 08:00AM	<input type="checkbox"/>
DHT: Q3 Miss, But Seasonally Strong Quarter Ahead - Earnings Recap, PT & Estimate Updates	DHT	Greg Wasikowski, CFA	Company Note	Nov 09 2022 12:46PM	<input type="checkbox"/>
Cheniere: Eyes Further Brownfield Expansion At Both Sites Downgrading - CQP To Underperform	EXP	Greg Wasikowski, CFA	Industry Note	Nov 08 2022 08:00AM	<input type="checkbox"/>
EURN: Q3 EPS In-Line, Tender Offer Pushed Out To Q1 - Earnings Recap, PT & Estimate Updates	EURN	Greg Wasikowski, CFA	Company Note	Nov 07 2022 10:30AM	<input type="checkbox"/>
TPIC: Positioning For 2024 Recovery - Upgrading To Market Perform - Q3 Earnings Recap	TPIC	Greg Wasikowski, CFA	Company Note	Nov 04 2022 11:00AM	<input type="checkbox"/>
Cheniere: Q3 EBITDA In-line, Beats On Revenue, Reaffirms FY22 Guide - 2023 Guide Conspicuously Absent	EXP	Greg Wasikowski, CFA	Industry Note	Nov 03 2022 10:48AM	<input type="checkbox"/>
AMRC: SCE Project Slippage Uncovers Modest Effective Guidance Raise - Q3 Earnings Recap	AMRC	Greg Wasikowski, CFA	Company Note	Nov 03 2022 07:30AM	<input type="checkbox"/>
Webber Research: LNG Weekly & GLOP Q3 Earnings Recap	EXP	Greg Wasikowski, CFA	Industry Note	Oct 28 2022 04:27PM	<input type="checkbox"/>
Webber Research: Q3 Earnings True Up	EXP	Greg Wasikowski, CFA	Industry Note	Oct 26 2022 05:12PM	<input type="checkbox"/>
Webber Research: Renewables Weekly	RNW	Greg Wasikowski, CFA	Industry Note	Oct 26 2022 04:18PM	<input type="checkbox"/>
ENPH: Playing The Hits, Another Impressive Quarter & Guide - Q3 Earnings Recap, PT & Est Updates	ENPH	Greg Wasikowski, CFA	Company Note	Oct 26 2022 08:36AM	<input type="checkbox"/>
KEX: Long Awaited Contract Renewals On Deck, Further Speculation Around D&S Spin - Q3 Earnings Recap	KEX	Greg Wasikowski, CFA	Company Note	Oct 25 2022 09:29AM	<input type="checkbox"/>
W EPC: LNG Canada – Project Update Q422	EPC	Greg Wasikowski, CFA	Industry Note	Oct 24 2022 10:03AM	<input type="checkbox"/>
Webber Research: Hydrogen Tracker	RNW	Greg Wasikowski, CFA	Industry Note	Oct 21 2022 12:48PM	<input type="checkbox"/>
KEX: Upbeat Inland/Coastal Sentiment Further Highlights Idea of D&S Spin	KEX	Greg Wasikowski, CFA	Company Note	Oct 21 2022 08:00AM	<input type="checkbox"/>
Webber Research: Alternative Fuel Vehicle Rankings – Multi-Factor Model H222 Update	RNW	Greg Wasikowski, CFA	Industry Note	Oct 20 2022 01:44PM	<input type="checkbox"/>
Webber Research: bp Acquires Archaea Energy For \$4.1B - Positive Read-Through For CLNE & AMRC	RNW	Greg Wasikowski, CFA	Industry Note	Oct 18 2022 04:15PM	<input type="checkbox"/>
Webber Research: LNG Weekly	EXP	Greg Wasikowski, CFA	Industry Note	Oct 17 2022 10:17AM	<input type="checkbox"/>
PLUG: 2022 Revenue Guidance Cut Due To Supply Chain & Project Slippage	PLUG	Greg Wasikowski, CFA	Company Note	Oct 14 2022 12:20PM	<input type="checkbox"/>
PLUG: 2022 Symposium Preview - What To Expect Heading Into Next Week	PLUG	Greg Wasikowski, CFA	Company Note	Oct 14 2022 12:00PM	<input type="checkbox"/>
Webber Research: Renewables Weekly	RNW	Greg Wasikowski, CFA	Industry Note	Oct 12 2022 04:38PM	<input type="checkbox"/>
Webber Research: Hydrogen Tracker	RNW	Greg Wasikowski, CFA	Industry Note	Oct 06 2022 01:18PM	<input type="checkbox"/>
Fireside Chat With Next Hydrogen (NXH-CA) – Key Takeaways & Notes	RNW	Greg Wasikowski, CFA	Industry Note	Oct 05 2022 04:53PM	<input type="checkbox"/>
Webber Research: LNG Weekly	EXP	Greg Wasikowski, CFA	Industry Note	Oct 04 2022 03:57PM	<input type="checkbox"/>
Webber Research: Renewables Weekly	RNW	Greg Wasikowski, CFA	Industry Note	Sep 28 2022 05:00PM	<input type="checkbox"/>
TELL: Hits The Reset Button. Update Following SPA Cancellation	TELL	Greg Wasikowski, CFA	Company Note	Sep 23 2022 05:30PM	<input type="checkbox"/>
W EPC: Tellurian (TELL) - Driftwood LNG Q422 Project Update	EPC	Greg Wasikowski, CFA	Industry Note	Sep 23 2022 12:56PM	<input type="checkbox"/>
Webber Research: Hydrogen Tracker - IAA Transportation 2022 In Germany - H2 Updates	RNW	Greg Wasikowski, CFA	Industry Note	Sep 23 2022 12:35PM	<input type="checkbox"/>
Webber Research: LNG Weekly	EXP	Greg Wasikowski, CFA	Industry Note	Sep 22 2022 05:08PM	<input type="checkbox"/>
Webber Research: Renewables Weekly	RNW	Greg Wasikowski, CFA	Industry Note	Sep 16 2022 01:41PM	<input type="checkbox"/>
W EPC: Energia Costa Azul Phase 1 - Project Update Q422	EPC	Greg Wasikowski, CFA	Industry Note	Sep 16 2022 11:36AM	<input type="checkbox"/>
Webber Research: Hydrogen Tracker & HTOO Q2 Earnings Recap	RNW	Greg Wasikowski, CFA	Industry Note	Sep 14 2022 04:08PM	<input type="checkbox"/>
Cheniere: Capital Allocation Update & 4th FY22 Guidance Raise. New 20/20 Vision Through 2026.	EXP	Greg Wasikowski, CFA	Industry Note	Sep 13 2022 09:50AM	<input type="checkbox"/>

Showing 1 to 50 of 570 entries

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



WEBBER

RESEARCH | ADVISORY

Corporate Access: Hosted 20+ Fireside Chats, Client Calls & Conferences

Fireside Chat Events:

- DOE Office of Energy Transition**
Director Edward Rios
- NextDecade (NEXT)**
CEO Matt Schatzman
- Clean Energy Fuels (CLNE)**
CEO Andrew Littleflair
- Plug Power (PLUG)**
CSO Sanjay Shrestha
- Energys (ENS)**
CEO David Shaffer
- Ameresco (AMRC)**
CFO Doran Hole
- LNG Canada**
Q423 Client Call
- Golden Pass**
Q124 Client Call
- Plaquemines**
Q124 Client Call
- Cool Co Ltd. (CLCO)**
Richard Tyrrell CEO



BALLARD POWER SYSTEMS INC. (BLDP)
BLDP: Fireside Chat With President & CEO, R
Key Takeaways

BLDP: Fireside Chat With President & CEO, Rios
Ballard Power Systems Inc. is a leading manufacturer of fuel cells for several verticals: Arcola Energy, bus, truck, rail, and notes. Recd

Price Targets: 1
Fireside Chat

Addressable Market

- In the Day as

- Bus and -1

- Rail like

- Marine

- Expect duty to

MBA

- Strateg custom

- Four at

-

-

-

- BLDP: given electro

Please see import

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-



KIRBY CORPORATION (KEX)
KEX: Fireside Chat With CEO/CFO Key Takeaway:

Upcoming Fireside Chat

For access info: info@webberresearch.com

KEX Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway

KEX: Fireside Chat with CEO/CFO Key Takeaway



AMERESCO, INC. (AMRC)
AMRC: Fireside Chat With CFO – Key Takeaway:

AMRC Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

AMRC: Fireside Chat with CFO Key Takeaway

DECEMBER 16, 2021

Stock Rating	Outperform
Price Target	\$20.00
Current Price	\$22.72
Upside/Downside	57%

MAY 6, 2022

Stock Rating	Outperform
Price Target	\$79.00
Current Price	\$65.15
Upside/Downside	21%

JUNE 10, 2022

Stock Rating	Market Perform
Price Target	\$62.00
Current Price	\$53.37
Upside/Downside	18%

October 5, 2022
Renewable Energy
Greg Wasikowski, CFA
646-993-0654



ENERGYS (ENS)
ENS: Fireside Chat Key Takeaways & Notes

Upcoming Fireside Chat Events:

- Plug Power (PLUG) CSO, Sanjay Shrestha - 1/11 @ 12PM EST
- DOE Office of Energy Transitions Executive, Edward Rios - 1/18 11AM EST
- NextDecade (NEXT) CEO, Matt Schatzman - TBD
- Clean Energy Fuels (CLNE) - AMG Development - TBD

For access information, contact info@webberresearch.com or Webber Research Institutional Sales at Walter.Lobo@webberresearch.com

ENS: Fireside Chat With ENS CFO/CTO. We hosted ENS CFO, Andrea Funk and CTO, Joern Tinnemeyer for a Fireside Chat this week. The call discussed ENS's ongoing price/mix-cost recapture strategy, record backlog, recession playbook, and technical specifications around battery chemistry, Material Handling, and EV Charging. See below for our key takeaways and notes from the call (reply is also available upon request).

Price Target: \$77 (unchanged) based on 14x our NTM EPS of \$5.53. Market Perform.

Fireside Chat Takeaways & Notes

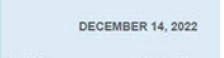
- ENS continuing to execute and progress on "show-me" story, being at least partially overshadowed by the pandemic, supply chain, labor constraints, etc.
- Confident in ability to navigate an economic slowdown - Energy Systems and Specialty largely cycle-independent while Motive Power Open remains flexible.
- Continuing to communicate transition from flooded lead acid battery manufacturer to full energy systems provider - flooded lead acid now less than 40% of revenue.

Price/Mix Recapture

- FQ223 price/mix of \$30.40/share adjusted EPS more than offset costs of -\$0.22/share adjusted EPS.
- \$0.55/share of additional price/mix cost recapture opportunity when costs stabilize (presumably over the next few quarters).
- Normalization would likely include declining costs at a more rapid rate than price increases.

- Still within a significant inflationary period - lots of noise.
- Focusing on absolute margin dollar in addition to margin percentage is important context.
- Updated 5-year model to elaborate further (Investor Day in June next year).

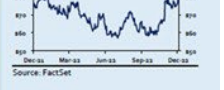
Please see important disclosures at the end of this report.



DECEMBER 14, 2022

Stock Rating	Market Perform
Price Target	\$77.00
Current Price	\$79.39
Upside/Downside	-3%

52 Week Range: \$55.40-\$83.25



Market Cap (\$MM)	\$3,142
Enterprise Value (\$MM)	\$4,360
Dividend Yield	0.9%
CF Yield	-1.4%
P/E (NTM)	14.0x
EV/EBITDA (NTM)	10.5x
Debt to Cap	50%

Webber ESG Quantile	N/A
Carbon Disclosure	N/A

Renewable Energy

Michael Webber, CFA
646-993-0654
michael.webber@webberresearch.com

Greg Wasikowski, CFA
646-993-0654
greg.wasikowski@webberresearch.com

Chris Tsung, CFA
646-993-0654
chris.tsung@webberresearch.com

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk

Hydrogen & Alternative Fuels Coverage: Unapparelled Detail & Depth



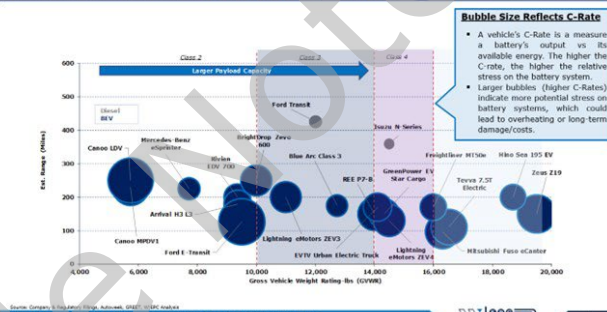
Alternative Fuel Vehicle Rankings: Multi-Factor Model Output

Make & Model	Fuel Type	Current Ranking	Previous Ranking	AUP / Overall
Hyundai Niro	Hydrogen	1	1	0
Hyundai Nexo	Hydrogen	2	3	2
Tesla Model S	BEV	3	6	1
Chrysler Pacifica	BEV	4	2	2
BMW i4	BEV	5	7	2
Tesla Model 3	BEV	6	4	2
Mitsubishi Outlander PHEV	BEV	7	8	2
Hyundai Tucson Fuel Cell	Hydrogen	8	5	3

Future of Transportation
Alternative Fuel Vehicle Rankings: Multi-Factor Model
 Class 8 Trucks + Delivery Vans + Trucks & Small Vehicles
 H222

Analysts: Greg Moskowitz, Chris Tsang, Shashank Nath, Rajesh Menon, Eric Smith.

Alternative Fuel Vehicle Rankings: Delivery Vans - GVWR vs. Range



Hydrogen Roadmap
 Future of Transportation – Emissions, Feedstock, and Gas Stations
 Q121 Fuel Comparisons

Power System	Vehicle Range	Energy Efficiency	Safety	Emissions TTW ¹	Emissions WTW ²	Feedstock	Gas Station	Vehicle Production	Average Score
Methanol FC ¹	4	3	4	4	4	4	4	2	3.6
Diesel	5	2	4	1	2	5	5	1	3.6
Biofuels (FAME) ¹	4	1	5	4	5	3	2	1	4
BEV ²	2	5	3	5	2	4	2	1	4
CNG Hybrid ¹	5	2	2	3	5	5	2	3	3.4
Hydrogen FC ¹	3	3	2	5	2	3	1	1	3
Ethanol FC	2	1	3	2	5	4	4	1	2.8
Ammonia FC ¹	2	2	1	3	3	4	3	1	2.4

Score Rankings: 5=Best & 1=Worst
 Part 3 of the Future of Vehicle Transportation

Future of Vehicle Transportation – Emissions, Feedstock, and Gas Stations

Future of Vehicle Transportation – Emissions, Feedstock, and Gas Stations

WIEPC Rankings – Fuels vs Fuel Cells From Current Available Tech & Pricing

Power System	Vehicle Range	Energy Efficiency	Safety	Emissions		Implementation Cost			Average Score
				TTW ¹	WTW ²	Feedstock	Gas Station	Vehicle Production	
Methanol FC ¹	4	3	4	4	4	4	4	2	3.6
Diesel	5	2	4	1	2	5	5	1	3.6
Biofuels (FAME) ¹	4	1	5	4	5	3	2	1	4
BEV ²	2	5	3	5	2	4	2	1	4
CNG Hybrid ¹	5	2	2	3	5	5	2	3	3.4
Hydrogen FC ¹	3	3	2	5	2	3	1	1	3
Ethanol FC	2	1	3	2	5	4	4	1	2.8
Ammonia FC ¹	2	2	1	3	3	4	3	1	2.4

Score Rankings: 5=Best & 1=Worst
 Part 3 of the Future of Vehicle Transportation

Future of Vehicle Transportation – Emissions, Feedstock, and Gas Stations

NYSE, NASDAQ & SPACs For Renewable Energy – Electric Vehicles

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk.



WEBBER

RESEARCH | ADVISORY

Webber Research: Alternative Fuels Coverage

RENEWABLE ENERGY
Webber Research: Hydrogen Tracker
 Greg Wasikowski, CFA

- Hydrogen T**
- HTOO
 - GNRC
 - NKLA
 - FCCEL
 - Orsted
 - Alstom
 - HTEC
 - ADN
 - BW
 - Nusca
 - Existent
 - New H
 - Port O
 - RWE
 - Maersk
 - Dismey
 - Tenaris
 - Valiant
 - Hydrog
 - Indust

Hydrogen
 HTOO Consort announced Agenda Coordin (5) of Portugal' to HTOO's H2 C3.5MM for R&D within the cons Collaborative Li been selected b funding and exp

GNRC Acquire
 GNRC WATT's sold on includes 1 Boari

Please see important

11/21
 Ireland an exiv
 Improv
 Other e
 selecti
 begin a

Please see important



RENEWABLE ENERGY

Webber Research: Renewables Weekly

Greg Wasikowski, CFA

Highlights:

- CLNE
- AMRC
- EPA
- CPUC
- DOE
- ADG
- Fluenc
- Rivian
- Green
- Westp
- Shell
- Solar
- LOE
- Global
- Global
- U.S. W



ENPHASE ENERGY, INC. (ENPH)

ENPH: Picking Up Where It Left Off – Q4 Beat & I

Q4 Earnings

ENPH: Q4 Beat another positive

ENPH's has mind, 2) NEM 3 timeline, but 3) Conservation for ENPH were resolved comp

BP Ups The Ac acquired by bo B) in cash (~\$4 10/14). Pendin expected to do (AMRC & partic to ramping and benchmark for

NEM 3.0 Overl from California, on 12/13 to jus indicated Califo subsequently d

AMRC Updates 12/7: its prev year pe low ca efficient of low t invest

11/21 Ireland an exiv recovered 20%

Our Table: EN Investor Day in amount to be o that coul' nerr structure, parti factors from nar (from \$215) b

Q4 Earnings f (\$0.59) and o Consistat (\$4 provided guid outperformance over 100MWh +40% gross ma of \$420MM-\$4 expected batter Please see impor

Valuation Mar EBITDA, howev 2027 (with full a traditional FY) a multi-factor I 2027 EBITDA in CLNE's current our existing pric complicated gin stake in CLNE.

Please see important

Please see important

Please see important

Please see important

December 7, 2022
 Renewable Energy

Greg Wasikowski, CFA

December 21, 2022
 Renewable Energy

Greg Wasikowski, CFA

FEBRUARY 9, 2022

Stock Rating	Outperform
Price Target	\$220.00
Current Price	\$144.59
Upside/Downside	52%

October 18, 2022
 Renewable Energy

Greg Wasikowski, CFA
 646-993-0694



PLUG POWER INC. (PLUG)

PLUG: Multi-Faceted Hydrogen Agreement & Strategic Relationship With NKLA

PLUG: Adding NKLA To The Rollodex. Earlier today, PLUG & NKLA announced a new strategic relationship and multi-faceted agreement where PLUG will supply green hydrogen to NKLA, NKLA will purchase a 30tpd liquefier from PLUG, and PLUG will purchase up to 75 NKLA Tre FCEVs over the next 3 years (full details below). Overall, we think the partnership makes sense. NKLA needs national, diversified, and reliable hydrogen supply while PLUG was inevitably going to need to expand its transportation network, and despite its countless partnerships/2Vs, it doesn't have much of an existing presence or connection in the heavy-duty Class 8 FCEV space. We wouldn't be surprised to see/hear some apprehension given the headline risk associated with NKLA's past, but we don't think that's necessarily a lasting concern – both stocks are flat to slightly down at the time of writing, modestly better than the rest of the hydrogen group.

Price Targets: \$20 (unchanged) based on 3x our 2025e sales of ~\$2.9B. MP.

Green Hydrogen Supply Agreements: PLUG will begin supplying green hydrogen to NKLA as soon as 1/1/23 and scale up to 125tpd by the end of 2026, with 80% under take-or-pay commitment (a first for PLUG to our knowledge). The supply agreement will be national in scope but likely primarily centered around NKLA's Arizona Hydrogen Hub project (below) and adds to PLUG's growing list of supply contracts including ~30tpd to AMZN, up to ~20tpd to WMT, and ~10tpd to Certarus. We note at full scale, PLUG's supply agreements now account for ~185tpd, which is ~37% of its YE25 North American capacity target of 500tpd (vs 70-80% targeted long-term offtake).

Liquefier Sale: PLUG will also sell a 30tpd liquefaction system (scalable to as much as 150tpd) to NKLA for the first phase of its Arizona Hydrogen Hub where it expects to ultimately provide up to 300tpd of hydrogen supply and 60 hydrogen dispensing stations by 2026. NKLA recently announced the hub project was invited into Phase II of the U.S. DOE's \$1.3B Lean Application Process (see our [Hydrogen Tracker from 12/7](#)). It is currently undergoing permitting and rezoning while procuring long-lead equipment like the liquefier, which will be designed, engineered, and manufactured by PLUG. We note this is the first example of PLUG executing on the previously forehadowed third-party sales opportunities from its Joule acquisition in January – which it previously said could be as much as ~\$250MM per year (see our [PLUG Note from 1/20/22](#)).

FCEV Purchases: Lastly, PLUG will purchase up to 75 NKLA Tre FCEVs over the next 3 years. Pricing details were not provided but the trucks will most likely be heavily subsidized given federal and state tax credits and subsidies (45W Commercial Clean Vehicle Credit of 40%, NYTVP up to \$185k, and California's HVP up to \$120k). First delivery is expected in 2023, likely as part of NKLA's first wave of customer pilot projects –mid-next year. PLUG plans to combine the trucks with its ...continued...

Please see important disclosures at the end of this report.

DECEMBER 15, 2022

Stock Rating	Market Perform
Price Target	\$20.00
Current Price	\$17.95
Upside/Downside	11%



Source: FactSet

Market Cap (\$MM)	\$8,595
Enterprise Value (\$MM)	\$10,457
Dividend Yield	N/A
CF Yield	-3.5%
P/E (NTM)	N/A
EV/EBITDA (NTM)	N/A
Debt to Cap	16%

Webber ESG Quante	N/A
Carbon Disclosure	N/A

Renewable Energy

Greg Wasikowski, CFA
 646-993-0694
 greg.wasikowski@webberresearch.com

Chris Tsung, CFA
 646-998-8290
 chris.tsung@webberresearch.com

Bhavesh Nath
 646-993-0693
 bhavesh.nath@webberresearch.com

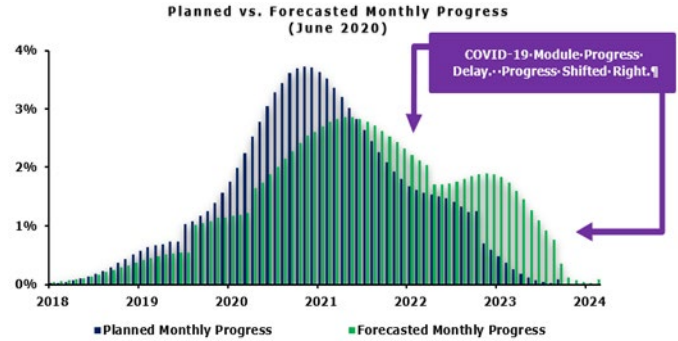
For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



Project Tracking: Digging Deeper Into Large-Scale Capital Projects

Webber Research identifies potential schedule issues, significant cost overruns, and material deviations from expectations or guidance – **before the surprise.**



High Resolution Satellite Imagery: A More Accurate Picture of Project Progress

We use high-res satellite imagery to support our core research reports to show actual project sites, temporary locations, module yards, parking facilities, storage and laydown facilities – all in an effort to assess actual progress and evolving dynamics.



Capital Project Analysis: Unique Perspective & Analysis of Utility & Energy CAPEX Backlogs

We blend our decades of energy infrastructure, finance, EPC, and commercial experience with deep and thorough analysis of federal and local databases, economic models, and industry expertise to add unparalleled context and value.

Mozambique LNG: Baseline Report Q121

EPC Consortium Cost Breakdown

Overview		Estimated Cost Breakdown ¹			
		Company	Scope	%	\$(MM)
<ul style="list-style-type: none"> EPC Contract Awarded: In June 2019, CCS JV was awarded an EPC contract for ~\$8B; we believe the contract is a joint & several liability structure (as typical with projects/contracts of this size). EPC Contract Structure: A joint & several contract structure means two or more parties are jointly liable for damages, & the failure of one party can increase costs to other parties through no fault of their own. What's at Stake: Saipem & MDR have the most upside/downside, as they are responsible for ~74.9% & ~24.9% of the overall costs, respectively. Post Chapter 11: Considering MDR's ongoing recovery from Chapter 11 & Saipem leading the EPC services, we believe the focus and attention on MZLNG will increase over the next several quarters. 		Saipem (Leader)	EPC Services	74.95	\$6,033
		McDermott	EPC Services	24.98	\$2,010
		Chiyoda	Technical Support	0.07	\$5.6
		Total		100%	\$8,050

¹ McDermott 10-K & Company & Regulatory Filings

Saipem & MDR Are Responsible for ~74.9% & ~24.9% Of The EPC Costs & Overruns, Respectively.

Webber Research & Advisory: Energy & Utility Infrastructure • LNG • Renewables • EPC Risks

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, emission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk

LNG & Utility Project Coverage: Unapparelled Detail & Depth



LNG Canada Project Update: Q222

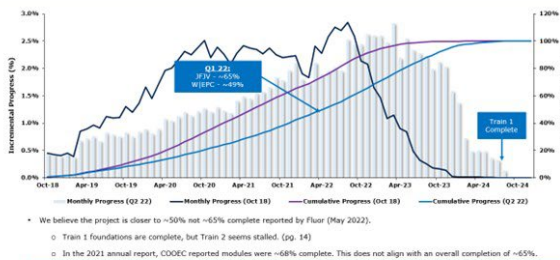
Owners: Shell (SHEL)
Petrobras (PBRG)
PetroChina (PTR)
Mitsubishi Corporation (MSBH)
Korea Gas Corporation (36460-KR)
EPC: Fluor (FLR)
JGC Corporation (JGCC)

Michael Webber, CFA Managing Partner
Greg Wisniewski, CFA Associate Partner
Chris Tsang, CFA Associate
Eric Smith Director - Energy Project Management
Robert Maney Director - Energy Engineering & Technology

LNG Canada Project Update: Q222 Key Takeaways

- Analyzing Fluor's ~65% Progress Claim**
 - In May 2022, Fluor (FLR) reported LNG Canada was ~65% complete, which seems inflated based on visible progress and the following:
 - The module fabricator, COOEC, reported "LNG Canada" modules were ~68% complete (as of the end of 2021). (pg. 14)
 - Fluor indicated ~92 (out of 215) modules will be delivered by the end of Q222. (pg. 4) 51 of 215 have been delivered but are mainly small pipe rack modules.
 - Train 1 Foundations appear complete and ready to receive modules; however, Train 2 Foundations are still being constructed. (pg. 12)
 - Only one "major" module (gas gas inlet module) has been delivered to date (May 2022). (pg. 4 & 14)
 - Movement on-site structural steel, piping, and I&M construction progress and two significant staff decreases based on COVID impact (reduction of indirect labor).
 - WJ&C estimates progress is ~50% in order to support a 65% overall progress claim, structural, piping, instrumentation and electrical, and indirect labor need to carry the bulk of the 65% progress claim (considering engineering, site prep, and piling are complete). Visible progress supports far less progress. (pgs. 8 & 12-15)
- Project Comps**
 - Yes, comparing a module (LNG Canada) vs. stick build (Sabine Pass LNG) is a bit apples and oranges. However, it is worth looking at because EPC contractors often believe their way is the best way to execute a project.
 - Dechtel took ~20-months to advance Chemex's LNG Sabine Pass LNG (SPLNG) from 65% complete to Train 2 in-service or 1.66% per month.
 - Fluor/JGC originally forecasted ~26-months from first module arrive to Train #2 in-service. The first module arrived in November 2021; therefore, Train #2 in-service could be around June 2024.
- Change Orders**
 - We believe JGC and Fluor are positioned for change orders based on staffing, actual progress, milestones, etc. (pg. 1)
 - Project owners will need to decipher between required staffing based on activities and potential overstaffing by construction to increase their change order claims.
 - When change orders are added to the project one of two things will happen (1) progress stalls, or (2) progress goes backwards temporarily.

LNG Canada Project Update: Progress Analysis



LNG Canada Project Update: Progress Breakout Comparison

Progress Discrepancy	WJ&C Estimated Progress Status																																								
<ul style="list-style-type: none"> Update: In May 2022, Fluor announced LNG Canada was ~65% complete, but module and site progress do not support this. Analysis: From site photos, WJ&C can estimate site prep, piling, and foundation progress. Fluor may have claimed early progress on several key disciplines that hold ~50% of the progress: <ul style="list-style-type: none"> Indirect Labor - Management and overhead staff Steel - Structural steel fabric. Piping - Module interconnections and site installs Electrical - Site installs and module integration What This Shows: There is a disconnect between the 65% overall progress and onsite / module progress. Warning On Change Orders: JGC mentioned their expected change orders (May 2022 earnings presentation). Once WJ&C are approved and add hours, we will most likely see a stalled progress from Fluor. 	<table border="1"> <thead> <tr> <th>WJ&C Forecast</th> <th>Fluor¹</th> </tr> <tr> <th>May 22 Current</th> <th>May Progress</th> </tr> </thead> <tbody> <tr> <td>EPC Progress Complete</td> <td>~49%</td> <td>~65%</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">WJ&C Estimated Progress Breakdown</th> </tr> <tr> <th>Discipline</th> <th>WJ&C</th> <th>Fluor</th> </tr> </thead> <tbody> <tr> <td>Engineering</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Module Fabrication</td> <td>68%</td> <td>68%</td> </tr> <tr> <td>Indirect Labor</td> <td>46%</td> <td>79%</td> </tr> <tr> <td>Site Prep</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Piling</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>Foundations</td> <td>60%</td> <td>60%</td> </tr> <tr> <td>Steel</td> <td>8%</td> <td>50%</td> </tr> <tr> <td>Pipe</td> <td>6%</td> <td>40%</td> </tr> <tr> <td>I&M</td> <td>6%</td> <td>35%</td> </tr> </tbody> </table>	WJ&C Forecast	Fluor ¹	May 22 Current	May Progress	EPC Progress Complete	~49%	~65%	WJ&C Estimated Progress Breakdown			Discipline	WJ&C	Fluor	Engineering	100%	100%	Module Fabrication	68%	68%	Indirect Labor	46%	79%	Site Prep	100%	100%	Piling	100%	100%	Foundations	60%	60%	Steel	8%	50%	Pipe	6%	40%	I&M	6%	35%
WJ&C Forecast	Fluor ¹																																								
May 22 Current	May Progress																																								
EPC Progress Complete	~49%	~65%																																							
WJ&C Estimated Progress Breakdown																																									
Discipline	WJ&C	Fluor																																							
Engineering	100%	100%																																							
Module Fabrication	68%	68%																																							
Indirect Labor	46%	79%																																							
Site Prep	100%	100%																																							
Piling	100%	100%																																							
Foundations	60%	60%																																							
Steel	8%	50%																																							
Pipe	6%	40%																																							
I&M	6%	35%																																							

Aerial Images & Reported Module Progress Challenge Fluor's Reported ~65% Complete.

Several Areas Do Not Align With Site Photos and FLR's ~65% Progress Claim.



Golden Pass LNG Project Update - Q222

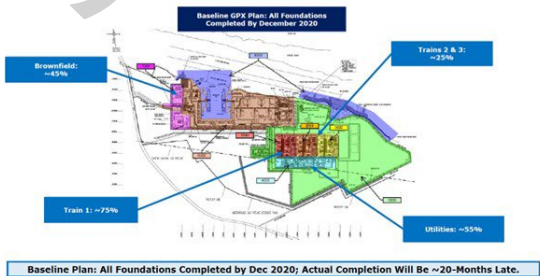
Project Owners: Qatar Petroleum & ExxonMobil (XOM)
EPC Contractor: Chiyoda, Zachry, & McDermott
LNG Technology: Air Products (APD)

Michael Webber, CFA Managing Partner
Greg Wisniewski, CFA Associate Partner
Chris Tsang, CFA Associate
Eric Smith Director - Energy Project Management
Robert Maney Director - Energy Engineering & Technology

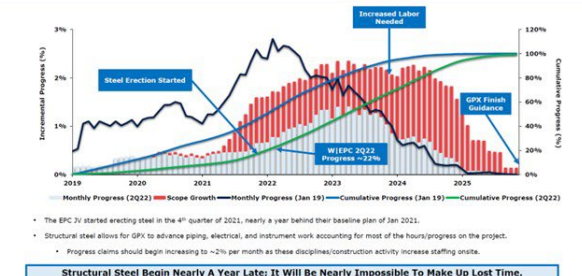
Golden Pass LNG Project Update: Q222 Key Takeaways

- New Forecasted EPC Costs (~\$11.7B) - \$3.2B Higher Than Baseline & Will Likely Escalate Going Forward**
 - On March 23, 2022, FERC approved Golden Pass LNG's (GPX) request to increase on-site peak labor from 2,200 to 7,700 and 24/7 construction.
 - We believe Chiyoda (6366-JP), Zachry, and McDermott (MCDM), (aka EPC JV) have added ~480M labor hours to the project (vs. our baseline forecast) or an ~140% increase. With 70% of the project remaining, the \$3.2B cost increase is likely to escalate because: (pg. 4)
 - Construction Milestones: The EPC JV has missed nearly all construction milestones to date (likely driven by engineering changes & previously reported impact). For example, concrete installations will be completed ~20-months late and steel installation started nearly a year late. (pgs. 7 & 8, 11 - 12)
 - Productivity: Staffing increases and 24/7 labor has an exponential impact on the efficiency of labor. Long duration overtime and night shifts could result in 40-50% efficiency losses and increase cost/schedule. (pg. 4)
 - GPX Guidance: In March 2022, GPX confirmed they are on track for a start-up for Train 1 in 2024 (aggressive considering current progress) and Chiyoda maintains a 2025 completion for all 3 Trains. Certainly, current LNG price dynamics provide an incentive to pick up the pace.
 - Project Comps Are Scary Unless You Are Bechtel and Chiesne**
 - Project Comps: 38-months post FID, Sabine Pass LNG (SPLNG) was on the verge of first LNG and Cameron LNG (significant cost and schedule overruns) was ahead of GPX. (pgs. 12-14)
 - Forecast: GPX could be worse than Cameron LNG, which bankrupted one EPC contractor (McDermott) and nearly another (Chiyoda).
 - Key Questions You Should Be Asking**
 - GPX: As more workloads shift out, staffing has increased 3-4x onsite to accommodate for unplanned parallel work. Is GPX paying to maintain baseline finish dates based on current LNG market prices? If so, has the EPC accommodated for the increased site congestion and productivity losses for this change.
 - Chiyoda: Delays in civil work is a key sign that either site data was incorrect or that process/equipment changes are causing changes to foundation designs. Unlike Cameron LNG, where the EPC contract was joint and several liability, each JV member has more risk exposure related to their impact on overruns.
- How much of the overruns are driven by client changes or Chiyoda engineering slippage?

Golden Pass LNG Project Update: Foundation Progress



Golden Pass LNG Project Update: Steel Progress Curve



For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



WEBBER

RESEARCH | ADVISORY

Webber Research: LNG Weekly & Detailed LNG Project Coverage

October 17, 2022
Energy Infrastructure
Greg Wasikowski, CFA
646-993-0694

October 28, 2022
Energy Infrastructure
Greg Wasikowski, CFA
646-993-0694

NOVEMBER 18, 2022
Stock Rating: Buy
Price Target: \$35.00
Current Price: \$24.44
Upside/Downside: 41%

November 8, 2022
Energy Infrastructure
Greg Wasikowski, CFA
646-993-0694
greg.wasikowski@webberresearch.com

December 14, 2022
Energy Infrastructure
Greg Wasikowski, CFA
646-993-0694
greg.wasikowski@webberresearch.com

Chris Tsung, CFA
646-998-8290
chris.tsung@webberresearch.com

Bhavesh Nath
646-993-0693
bhavesh.nath@webberresearch.com

Highlights:

- Cheniere
- Venture
- Shell
- TotalE
- Floatin
- MidOc
- Global
- Petroe
- Novate
- LNG Ca
- Venc
- FSRU E
- U.S. L
- U.S. L
- Global
- LNG Ca
- Histori

Cheniere Start Cheniere (CQF) project (7 mids Cheniere Note), the site further trains. ~3.2MTP

Venture Globa EnBW (EBK-DE 1.5MTPA) of off LNG (two phase

Shell & Exxon reported Shell i partners in Q4 expansion proje note TotalEnerg [Link LNG Week](#) (out of the 25%

Please see Important i

Sempra Receiv On 10/20, Sem Bechtel Energy with a contract ~12.0MTPA of i 3.0MTPA, RWE 3.0MTPA. Separ complete Phase 2028 (original d cing delays du

Shell Joins Qa announced it w proposed North [TTE] was the ExxonMobil (XG stake in the pr available to out

Hedge of adju ~\$150i produc The Gr track fi o Ph distribut in 1 rangebound for pre-filing expan formal filing was time frame - we and therefore m time. We're ste

LNG Price Tarz CQP Price Tarz

Please see Important i

Freepor Received 64 Questions/Clarifications From FERC: On 12/12, FERC sent Freepor LNG a list of 64 questions/clarifications that need to be addressed before it can restart its terminal. This comes after Bloomberg reported on 12/2, that Freepor LNG expects to restart around year-end. While a growing number of LNG carriers are signaling Freepor as a destination, with three reportedly waiting (the Grace Fressa, Prism Diversity & Prism Courage), we note according to the Financial Post, Freepor LNG has not yet made a request to the Pipeline and Hazardous Material Safety Administration (PHMSA) to resume normal operations as it works through its Remedial Work Plan. *Webber Note: It's hard to tell without seeing the real details (which are confidential), but our guess would be months and not days/weeks as we expect there will be at least one or two more back-and-forths with FERC to finalize plans.*

Santos Loses Appeal In Federal Court To Resume Drilling At Barossa: On 12/2, Reuters reported Australia's Federal Court denied Santos' (STO-AU) appeal to resume drilling at its Barossa offshore gas field on grounds that STO-AU did not consult all the indigenous people on its environmental plan, a claim brought by the Munupi clan (drilling has been suspended since late-September). However, STO-AU still expects first gas from the Barossa Gas Project in H125, we note STO-AU said the Barossa project was 46% complete in its Q3 earnings report. ...continued

Please see Important disclosures at the end of this report.

Highlights:

- Freepor Received 64 Questions/Clarifications From FERC
- Santos Loses Appeal In Federal Court To Resume Drilling At Barossa
- Sempra Secures ~70% Oftake Needed For Port Arthur Phase 1 FID
- QatarEnergy Signs Longest Ever LNG Deal
- IEA Forecasts A 57Bcm Supply Gap For The EU In 2023
- Cheniere Results From Tender Offer
- GLNG Accepted ~\$140MM In Reverse Dutch Auction
- New Fortress Energy Updates Dividend Policy
- Global LNG Pricing Firmer W/W
- ExxonMobil In Talks For An FLNG In Mozambique
- Cameron Enters Renewable Energy Service MOU With Entergy
- LNG Carrier Rates Mixed W/W
- Maintenance Nearly Complete At Eemshaven LNG
- ENBW Signs Import Agreement With MEH
- U.S. LNG Export Arbitrage Window
- U.S. LNG Export Flows
- Global Gas Prices
- LNG Carrier Orderbook
- Historical LNG Spot Rate Assessment

Energy Infrastructure
Cheniere: Eyes Further Brownfield Expansion At Both Sites Downgrad

Cheniere Exe- Cheniere has r boosting adjuste DCF ~150% (\$ ~33% (\$3.00-1 and within budg also signing six- class and espec for LNG and are

FY23 Guidanc announced it w from its usual y next year, com maintenance fo That said, when Cheniere's FY2 estimate of \$11. still 88% higher confident in Che ability to main (from Market Pe a 7.0% target y

CQP Downgrad \$4.00-\$4.25/un given our expe scheduled main distribut in 1 rangebound for pre-filing expan formal filing was time frame - we and therefore m time. We're ste

LNG Price Tarz CQP Price Tarz

Please see Important i

Energy Infrastructure
GOLAR LNG LIMITED (GLNG)
GLNG: Q3 Results Mixed, But Strong FLNG Earning: Q3 Earnings

GLNG: Q3 Ear above Consensu a \$37.8MM real adjustments of from project di expected intere (\$31.2MM comp below Consensu expected realiz

Earnings Pote to the Hill's TTI EBITDA for 202 fees. GLNG cou 2021, and \$35a 2024 TTF-linked Long-Lead Itc for long-lead itc can also be use 1 design, or lan takes another o support. GLNG \$56.7MM realiz realized gain) is Price Target: \$ Q3 Highli [Upstream/Flh](#)

Hedge of adju ~\$150i produc The Gr track fi o Ph distribut in 1 rangebound for pre-filing expan formal filing was time frame - we and therefore m time. We're ste

LNG Price Tarz CQP Price Tarz

Please see Important i

Energy Infrastructure
Cheniere: Eyes Further Brownfield Expansion At Both Sites Downgrad

Cheniere Exe- Cheniere has r boosting adjuste DCF ~150% (\$ ~33% (\$3.00-1 and within budg also signing six- class and espec for LNG and are

FY23 Guidanc announced it w from its usual y next year, com maintenance fo That said, when Cheniere's FY2 estimate of \$11. still 88% higher confident in Che ability to main (from Market Pe a 7.0% target y

CQP Downgrad \$4.00-\$4.25/un given our expe scheduled main distribut in 1 rangebound for pre-filing expan formal filing was time frame - we and therefore m time. We're ste

LNG Price Tarz CQP Price Tarz

Please see Important i

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



WEBBER

RESEARCH | ADVISORY

Webber Research: Multi-Factor LNG Supply & Demand Model

Global LNG Project Rankings

Q2 2022 Update

Greg Wasikowski, CFA
Senior Analyst - Energy Infrastructure
greg.wasikowski@webberresearch.com
W: (646) 993-0084 M: (717) 919-3367

Chris Tsung, CFA
Associate Analyst - Energy Infrastructure
chris.tsung@webberresearch.com
W: (646) 998-8290 M: (646) 515-0957

Bhavesh Nath
Associate - Energy Infrastructure
bhavesh.nath@webberresearch.com
W: (646) 993-0693

Webber R|A: Global LNG Project Rankings - Sector Thesis & Outlook

Sector Thesis & Outlook

LNG Exports: Structural Undersupply Potentially **Understated** Due To EPC Risks
LNG Exports: Systemic EPC Risks Could Herald FLNG's Breakout Decade
LNG Carriers: Ton-Mile Volatility From Shifting Trade Patterns, Storage Potential
Regas: Mixed, Europe Cannibalizing Focus, But Frictional Issues Abound

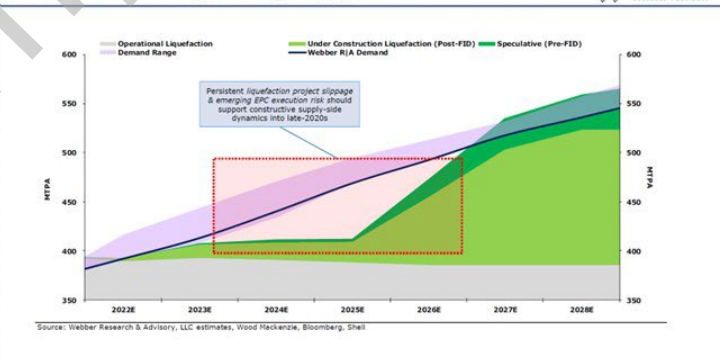
OP: LNG, GLNG, NEXT | **MP:** CQP, TELL Exposed: NFE
MP: GLOP | Exposed: FLNG, DLNG
OP: GLNG | Exposed: NFE, HMLP, AVENIR-NO, EXM-BE

- Key Themes:**
- LNG Market Is Fundamentally Undersupplied Through ~2026
 - We Believe Significant Delays Related To Under Construction Projects (2nd Wave) are underappreciated by the market. Specifically Golden Pass, LNG Canada, Arctic 2 (not to mention paused projects in Mozambique, construction disruptions in Russia, etc.).
 - We expect this dynamic to create a significant lag in incremental, pre-factored volumes hitting the market, with such delays largely absent from most supply/demand models.
 - We believe the aftermath (delays, litigation, LDs) from EPC issues associated with the previous LNG Project wave (2nd Wave), will have a significant impact on the timeline and viability of new projects looking to participate in Wave 3. Please see our recent W|EPC project reports on LNG Canada, Golden Pass, Calcasieu Pass, Nigeria T7, etc. for more details, including our updated schedule and cost over-run estimates, and project comps.
 - Both of these factors could serve to extend the window of undersupply by up to 2 years, assuming conditions don't worsen from here.
 - FLNG projects, given the shorter construction timelines, are already among the few viable mechanisms to bring swing capacity to the market during that undersupplied window. As heightened EPC execution risks gradually rise to the surface, we believe it increases the long-term viability of FLNG projects, in both North America and abroad.

Webber R|A: Global LNG Project Rankings - Top 20 Projects

Rank	Pre-FID Proposed Project	Capacity (MTPA)	Running Total
1	CHENIERE Corpus Christi Stage 3 (China LNG)	10.0	10.0
2	VENTURE GLOBAL LNG Plaquemine LNG	20.0	30.0
3	PLAZA LNG Phase 1 (1.0) & 2 (1.0)	1.2	31.2
4	VENTURE GLOBAL LNG Plaquemine Phase 2 (1.0) & 3 (1.0)	4.2	35.4
5	VENTURE GLOBAL LNG Plaquemine Phase 4 (1.0) & 5 (1.0)	6.8	42.2
6	QATAR LNG North Field South Phase 2 (1.1) & 3 (1.1)	16.0	58.2
7	WOODFORD LNG Woodford LNG	2.1	60.3
8	KOSMOS 6 Greater Tortugas Phase 2	2.5	62.8
9	NEXT ENERGY Next Energy LNG (1.0) & 2 (1.0)	10.8	73.6
10	TELLUS LNG Tellus LNG Phase 1	11.0	84.6
11	VENTURE GLOBAL LNG Plaquemine Phase 6 (1.0) & 7 (1.0)	13.5	98.1
12	VENTURE GLOBAL LNG Plaquemine Phase 8 (1.0) & 9 (1.0)	4.2	102.3
13	VENTURE GLOBAL LNG Plaquemine Phase 10 (1.0) & 11 (1.0)	16.5	118.7
14	VENTURE GLOBAL LNG Plaquemine Phase 12 (1.0) & 13 (1.0)	20.0	138.7
15	VENTURE GLOBAL LNG Plaquemine Phase 14 (1.0) & 15 (1.0)	5.1	143.8
16	VENTURE GLOBAL LNG Plaquemine Phase 16 (1.0) & 17 (1.0)	5.4	149.2
17	VENTURE GLOBAL LNG Plaquemine Phase 18 (1.0) & 19 (1.0)	4.0	153.2
18	MRV Mozambique Rovuma Venture (Exxon, Eni, CNPC-led JV)	15.2	168.4
19	VENTURE GLOBAL LNG Plaquemine Phase 20 (1.0) & 21 (1.0)	4.2	172.6
20	HMLP Mexico Pacific LNG/Puerto Libertad LNG	14.1	186.7

Webber R|A: Global LNG Project Rankings - Supply & Demand Model



For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



WEBBER

RESEARCH | ADVISORY

Cheniere (LNG) Sum Of The Parts Analysis

	Liquefaction Volumes									
	Corpus Christi Contracts					Midscale 8 & 9		Cheniere Marketing ¹		
	Train 1	Train 2	Train 3	Stage 3	CMI-Related	Midscale 8 & 9	CMI	Utilization	Corpus Christi	Sabine Pass 1-6
	Total	Total	Total	Total	Total	TBD/Mix	Utilization: 95%	Utilization	95%	100%
Contracted Annual Capacity (MMBtu)	157.0	241.7	205.5	504.4	106.8	137.3	15.3	Available Annual Capacity	200.3	427.0
% Of Total Capacity	58%	89%	75%	93%		90%	10%	% Of Total Capacity	15%	26%
Fixed Fee (\$/MMBtu)	\$3.50	\$3.50	\$2.50	\$2.50	\$3.00	\$2.75	\$2.30	Net Revenue (\$/MMBtu)	\$2.50	-\$0.14
Annual Cash Flows	\$549.5	\$845.9	\$513.7	\$1,261.1	\$266.9	\$377.5	\$33.32	Annual Cash Flows	\$475.64	-\$59.79
Maintenance & Opex ²	(60.0)	(60.0)	(60.0)	(120.0)	0.0	(30.9)	(3.4)	Allocated Maintenance & Opex ²	0.0	(94.1)
Pipeline Expense ²	(50.0)	(50.0)	(50.0)	(100.0)	0.0	0.0	0.0	Allocated Pipeline Expense ²		
Maintenance Capex ²	(33.0)	(33.0)	(33.0)	(66.0)	0.0	(17.0)	(1.9)	Allocated Maintenance Capex ²		
EBITDA (\$MM)	\$406.5	\$702.9	\$370.7	\$975.1	\$266.9	\$329.6	\$28.0	EBITDA (\$MM)	\$475.6	-\$153.9
EBITDA Multiple ³	10.0x					10.0x		EBITDA Multiple ³	10.0x	
Enterprise Value (\$MM)	\$4,065.1	\$7,029.0	\$3,707.0	\$9,751.0	\$2,669.0	\$3,296.4	\$280.1	Enterprise Value (\$MM)	\$4,756.4	\$0.0
Less: Est Allocated Net Debt ²	(1,340.4)	(1,340.4)	(1,340.4)	(2,680.8)	0.0	(1,143)		Less: 2024E Net Debt (\$MM) ²		
Equity Value (\$MM)	\$2,724.7	\$5,688.6	\$2,366.6	\$7,070.2	\$2,669.0	\$2,153.6	\$280.1	Equity Value (\$MM)	\$4,756.4	\$0.0
/ LNG Shares Outstanding (MM)	249.9					249.9		/ LNG Shares Outstanding (MM)		
Equity Value/Share	\$10.90	\$22.76	\$9.47	\$28.29	\$10.68	\$8.62	\$1.12	Equity Value/Share	\$19.03	\$0.00
Weighted Average Cost Of Capital ⁴	4.8%					4.8%		Weighted Average Cost Of Capital ⁴	4.8%	
Corpus Christi CF/Share (PV)	\$10.40	\$21.72	\$9.03	\$24.56	\$10.19	\$6.81	\$0.89	CMI CF/Share (PV)	\$18.16	\$0.00
Total CF/Share (PV)	\$94.06									
Current CQP Unit Price (\$/unit)	\$57.03					\$5.11	\$0.66			
x CQP Units Owned (MM) ⁵	249.8									
CQP Equity Stake (\$MM)	\$14,246									
CQP GP IDR (\$MM, at 12x)	\$11,499									
Total CQP GP/Equity Ownership Value	\$25,745									
/ LNG Shares Outstanding	249.9									
CQP Equity Stake (\$/share)	\$103.02									
Plus: PV Of Corpus Christi Volumes	\$94.06									
Plus: Probability Weighted Midscale 8 & 9	\$5.77									
Total Implied Value - LNG/Share	\$203									

- (1) Assumes excess uncontracted volumes sold by Cheniere Marketing at a \$7.0/MMBtu less relevant input costs. For SPL's CMI volumes: HH + premium, Toll, Transport. For CCL's, HH + Transport. An 95% utilization rate applies.
- (2) Assumes proportionate allocation of maintenance, operating, and pipeline expenses based on nominal contracted capacity amounts, and proportionate allocation of net debt based on EBITDA contribution.
- (3) 10.0x EBITDA multiple represents discount to recent private market transactions (Cove Point - 12.0x)
- (4) Utilizes current 20-year U.S. Treasury note yield as proxy for risk-free rate, 4.84% cost of debt, 1.0x debt/equity ratio, 8% expected market return, and 5-year historical beta
- (5) Until contract details disclosed at FID, unsold CC3 volumes sold through CMI, using existing CMI utilization, margin estimates
- (6) Includes GP units

Source: Webber Research & Advisory, LLC, FactSet, Company filings

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



WEBBER

RESEARCH | ADVISORY

Trusted Clients & Partners:



For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk



WEBBER

RESEARCH | ADVISORY

Contact Information

webberresearch.com • info@webberresearch.com



Michael Webber, CFA

Managing Partner
Energy Infrastructure
michael.webber@webberresearch.com
W: (646) 993-0693



Eric Smith

Director
Energy & EPC Risk Management
eric.smith@webberresearch.com
W: (346) 337-7788



Greg Wasikowski, CFA

Associate Partner
Energy Infrastructure
greg.wasikowski@webberresearch.com
W: (646) 993-0694



Chris Tsung, CFA

Associate Analyst
Energy Infrastructure
chris.tsung@webberresearch.com
W: (646) 998-8290



Walter Lobo

Institutional Sales
walter.lobo@webberresearch.com
W: (646) 767-6425



Robert Meaney

Director
Engineering & Technology
robert.meaney@webberresearch.com
W: (832) 368-8456



Qamer Iqbal

Engineering Manager
Carbon Capture
gamer.iqbal@sentinelcorellc.com
W: (713) 499-9159



Toni Soria

Engineering
H2 Midstream & Emissions
toni.su@sentinelcorellc.com
W: (832) 605-2829

For access information, please email us at info@webberresearch.com

Disclaimer: COPYRIGHT AND DISCLAIMER FOR USE OF © Webber Research & Advisory, LLC Clients only. No portion of this report may be produced, reused, or otherwise distributed in any form without the prior written consent or as further outlined in your subscription agreement between client and Webber Research & Advisory, LLC. The information and analysis contained herein is generated from public sources considered reliable, but the accuracy and completeness are not warranted. The opinions and analyses below are for informational purposes only. Webber Research & Advisory, LLC is not responsible nor liable for any errors, omission, loss, damage, or expenses associated with reliance on the information. This report is not legal or financial advice and clients should use all information in this document at their own risk