

Green Energy Tidbits 1.02

Hydrogen Stocks Valuations In-Line With Typical Growth Stock Valuations; Positive For BKR

- We have historically looked at the energy industry where valuations metrics are matured. Accordingly, hydrogen sector valuations (~50x FY2 EV/Sales) make us uncomfortable. Hence, we looked at the other growth stocks in multiple industries for comparison. We chose EV/5 Year Out Sales metric owing to the growth expectations and the general assumption that profitability margins will "normalize" once a certain business scale is reached. We conclude:
 - Hydrogen stocks such as BLDP, FCEL and PLUG seem expensive on near term trading multiples (50/47/36x on EV/FY1 Sales and 35/31/24x on EV/FY2 Sales). However, assuming (we will come back to it later) longer term revenues forecast are reasonable, they are trading in-line with current/historical valuations for other growth stocks of 8-11x EV/5-Year Out Sales (EV/2025 Sales) in semis, technology, internet, bio-tech and pharma sectors.
 - Over 30 of the ~75 growth companies we looked at have traded over 7x EV/5-Year Out Sales early in the company's history. Many companies traded at such levels for one-to-four years and some like ALXN, EDIT, EXAS, FATE, and MSFT traded consistently for over five years at similar elevated levels.
 - Hydrogen stocks are still the most expensive stocks on EV/2025 Sales within the Green Energy space (battery, solar, wind, EV and EV charging).
 - Within hydrogen, BLDP is the most expensive on EV/2025 Sales then FCEL and PLUG. Bloom Energy (BE) and Chart (GTLS) are the least expensive.
- Methodology: We looked at ~75 growth stocks' EV/Sales valuations across multiple industries such as health care, technology, internet, semi conductors, pharmaceuticals and a handful of disparate stocks such as Zillow, Tesla, etc. See Page 13 for a full list. We considered valuations since 1995 (early years of internet/technology) on EV/5-Year Out Sales. Given FCEL and PLUG are trading currently at ~8-11x EV/2025 Sales, we show stocks only with over 7x EV/5-Year Out Sales for comparison. The stocks that have not traded over 7x EV/5-Year Out Sales multiple are highlighted in grey on Page 13, which include household names such as Amazon, Dell, Facebook, Monster, Netflix and Tesla.
- Fundamentally, we are bullish on hydrogen from the social aspect i.e., reducing emissions. However, in our opinion, stocks are under-appreciating the enormous risks for achieving sector and company targets, despite a lack of long track record. A handful of companies with some mis-steps recently within commercial electric vehicles and battery space are good examples of such risks. Within the hydrogen sector, we prefer companies with an established track record. We also prefer stationary power applications over on-road mobility applications for hydrogen. Albeit EV/5-Year Out Sales valuation look in-line with other growth stock valuations, **we wonder about Sales consensus estimates for 2025**. Our 2025 Sales estimate for PLUG is ~30% lower vs. Street est. BLDP's 2025 Street Sales estimates have declined by ~35% since our initiation in July 2021 and are now only ~5% above our unchanged 2025 estimates. Though we believe in secular growth for the sector, the fact that fuel cell pricing could decline by 60-70% by 2030 and the impact it could have on revenues and margins is significantly underappreciated, in our opinion. Please see our [Deep Dive Into Mobility TAM – Hydrogen Sector Initiation](#) for details.
- Overall, we continue to like BE followed by GTLS within the Hydrogen sector. BE's growth is driven by products and markets where the company already has a strong track record and decent valuation. Street almost has this dichotomy in valuation methodology that since BE generates positive EBITDA, it will be considered a mature company and be valued on EV/EBITDA while peers with negative EBITDA will be valued on inflated EV/Sales multiple. GTLS has exposure to three secularly growing sectors, LNG, Carbon Capture and Hydrogen. The company is a **FCF machine** and using that cash to grow in Specialty Products segment.
- **Baker Hughes (BKR) also has positive implications** as the company could potentially break up the company into Oilfield Services and Equipment and Industrial Energy Technologies owing to the two very different growth profile. BKR believes CCUS and hydrogen markets have the potential to create a new businesses approaching the size of TPS by 2030. Historically, TPS revenues have been in the \$5.5-8.6B range with EBIT margins 13-23%. BLDP is currently trading at 1.6x EV/2030 Sales, FCEL 2.1x and PLUG 1.1x. Assuming \$7B potential revenues from hydrogen and CCUS by 2030 and 1.0-1.5x EV/2030 Sales imply \$7.0-10.5B additional Enterprise Value for BKR or ~25%-35% upside from the current level.

OILFIELD SERVICES & GREEN ENERGY

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Sector Initiation Reports

Links

- [Hydrogen Sector](#)
- [Bloom Energy](#)
- [Ballard Power](#)
- [Chart Industries](#)
- [FuelCell Energy](#)
- [Plug Power](#)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
OTHER COMPANIES																										
COINBASE GLOBA-A																										
Share Price	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	254	254	254	254	254	
Ent. Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	53	53	53	53	
Sales Growth - FY5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.7x	6.1x	1.1x		
EV/Sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.7x	8.5x	7.8x	6.7x	7.1x	
EV/Sales - FY5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1x					

Companies Used In Analysis (Grey Shaded Show Companies EV/5 Yr. Out EBITDA Multiple Below 7x)

Green Energy Companies		Semi Conductors/ Technology/Bio-Tech./Pharmaceuticals/Other Companies	
Company	Tkr.	Company	Tkr.
1 ARRAY TECHNOLOGI	ARRY	1 ADV MICRO DEVICE	AMD
2 ARRIVAL SA	ARVL	2 ALEXION PHARM	ALXN
3 BALLARD POWER	BLDP	3 ALPHABET INC-C	GOOG
4 BLINK CHARGING C	BLNK	4 AMAZON.COM INC	AMZN
5 BLOOM ENERGY C-A	BE	5 APPLE INC	AAPL
6 CANADIAN SOLAR I	CSIQ	6 APPLIED MATERIAL	AMAT
7 CHARGEPOINT HOLD	CHPT	7 ASE TECHN-ADR	ASX
8 CHART INDUSTRIES	GTLS	8 ASML HOLDING-NY	ASML
9 ENPHASE ENERGY	ENPH	9 BEAM THERAPEUTIC	BEAM
10 EVGO INC	EVGO	10 BERKELEY LIGHTS	BLI
11 FIRST SOLAR INC	FSLR	11 BIOSPECIFICS TEC	BSTC
12 FUELCELL ENERGY	FCEL	12 BOOKING HOLDINGS	BKNG
13 GENERAC HOLDINGS	GNRC	13 BROADCOM INC	AVGO
14 HYLIION HOLDINGS	HYLN	14 CERUS CORP	CERS
15 HYZON MOTORS INC	HYZN	15 CISCO SYSTEMS	CSCO
16 JINKOSOLAR-ADR	JKS	16 CLOUDERA INC	CLDR
17 LI-CYCLE HOLDING	LICY	17 COINBASE GLOBA-A	COIN
18 LIGHTNING EMOTOR	ZEV	18 COMPUGEN LTD	CGEN
19 LION ELECTRIC CO	LEV	19 CORNING INC	GLW
20 NIKOLA CORP	NKLA	20 CRISPR THERAPEUT	CRSP
21 ORSTED A/S	ORSTED DC	21 DELL TECHN-C	DELL
22 PLUG POWER INC	PLUG	22 DOCUSIGN INC	DOCU
23 PROTERRA INC	PTRA	23 DRAFTKINGS INC-A	DKNG
24 QUANTUMSCAPE COR	QS	24 EDITAS MEDICINE	EDIT
25 ROMEO POWER INC	RMO	25 EXACT SCIENCES	EXAS
26 SIEMENS ENERGY A	ENR GR	26 FACEBOOK INC-A	FB
27 SOLAREDGE TECHNO	SEDG	27 FATE THERAPEUTIC	FATE
28 STEM INC	STEM	28 FLEX LTD	FLEX
29 SUNNOVA ENERGY I	NOVA	29 INTEL CORP	INTC
30 SUNPOWER CORP	SPWR	30 INTELLIA THERAPE	NTLA
31 TPI COMPOSITES I	TPIC	31 INVITAE CORP	NVTA
32 VESTAS WIND SYST	VWS DC	32 IOVANCE BIOTHERA	IOVA
33 VOLTA INC	VLTA	33 IRIDIUM COMMUNIC	IRDM
		34 JUNIPER NETWORKS	JNPR
		35 MARVELL TECHNOLO	MRVL
		36 MATERIALISE-ADR	MTLS
		37 MEDIVATION INC	MDVN
		38 MICRON TECH	MU
		39 MICROSOFT CORP	MSFT
		40 MONSTER BEVERAGE	MNST
		41 NANOSTRING TECHN	NSTG
		42 NETFLIX INC	NFLX
		43 NEWMARKET CORP	NEU
		44 NVIDIA CORP	NVDA
		45 NXPI SEMICONDUCTO	NXPI
		46 ORACLE CORP	ORCL
		47 PACIFIC BIOSCIEN	PACB
		48 PAGERDUTY INC	PD
		49 PALANTIR TECHN-A	PLTR
		50 PURE STORAGE-A	PSTG
		51 QORVO INC	QRVO
		52 QUALCOMM INC	QCOM
		53 REGENERON PHARM	REGN
		54 ROBINHOOD MARK-A	HOOD
		55 ROKU INC	ROKU
		56 SEA LTD-ADR	SE
		57 SERES THERAPEUTI	MCRB
		58 SHOPIFY INC - A	SHOP
		59 SKILLZ INC	SKLZ
		60 SKYWORKS SOLUTION	SWKS
		61 SNOWFLAKE INC-A	SNOW
		62 SPOTIFY TECHNOLO	SPOT
		63 SQUARE INC - A	SQ
		64 STMICROELECTR-NY	STM
		65 TAIWAN SEMIC-ADR	TSM
		66 TELADOC HEALTH I	TDOC
		67 TERADYNE INC	TER
		68 TESLA INC	TSLA
		69 TEXAS INSTRUMENT	TXN
		70 TRIMBLE INC	TRMB
		71 TWILIO INC - A	TWLO
		72 TWITTER INC	TWTR
		73 UIPATH INC - CL A	PATH
		74 UNIVERSAL INSURA	UVE
		75 ZILLLOW GRO-C	Z
		76 ZOOM VIDEO COM-A	ZM

Appendix A – Required Disclosures

Analyst Certification

I, Vaibhav (Vebs) Vaishnav, certify that to the best of my knowledge, the views and opinions in our research reports accurately reflect my personal views about the subject company (companies) and its (their) securities. I have not and will not receive direct or indirect compensation related to the specific recommendations or opinions of this report. Unless otherwise stated, the individuals listed on the cover page of this report are analysts for Coker Palmer Institutional (CPI). Coker Palmer Institutional (CPI) is the brand name used to distinguish Coker & Palmer's institutional only, sell side equity research operations.

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CPI has not been involved with any investment banking/consulting activities in the Oilfield Services and/or Green Energy sector in the past six months.

Rating Methodology

Coker Palmer Institutional (CPI) is restarting formal rating systems. The firm has a three-tiered rating system, with ratings of Sector Outperform, Sector Perform, and Sector Underperform. Each Research Analyst assigns a rating that is relative to his or her coverage universe or an index identified by the Research Analyst that includes, but is not limited to, stocks covered by the Research Analyst. The rating assigned to each security covered in this report is based on the CPI Research Analyst's 12-month view on the security. Research Analysts may sometimes express in research reports shorter-term views on these securities that may impact the price of the equity security in a manner directly counter to the Research Analyst's 12-month view.

These shorter term views are based upon catalysts or events that may have a shorter-term impact on the market price of the equity securities discussed in research reports, including but not limited to the inherent volatility of the marketplace. Any such shorter-term views expressed in research report are distinct from and do not affect the Research Analyst's 12-month view and are clearly noted as such.

Ratings

Sector Outperform (SO)

The stock is expected to outperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Appendix A – Required Disclosures Contd.

Sector Perform (SP)

The stock is expected to perform approximately in-line with the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Sector Underperform (SU)

The stock is expected to underperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Coker & Palmer Institutional Ratings Distribution

Category	Count	Percent
Sector Outperform	4	29%
Sector Perform	4	29%
Sector Underperform	6	43%
Total	14	100%

Price Target Methodology:

Coker Palmer Institutional (CPI) price targets are essentially based on DCF methodology.

Valuation/Risk Factors

Oilfield Services (OFS) business is inherently risky. OFS investors should be fully aware of these risks, which include, but are not limited to, volatile natural gas, NGL's and crude oil prices, demand for and competition for a company's product and/or service, asset quality, customer risks, changes in operating costs, company capital structures, operating and working capital needs and ability to raise both debt and equity capital to fund operations. We value OFS equities on many different metrics, including but not limited to, our subjective view as to the quality of management, discounted cash flows, net asset values, enterprise value to EBITDA or cash flow multiples, price to earnings or cash flow multiples, reinvestment risk and full cycle economics. These factors are uncertain and our outlook is subject to change, sometimes quite quickly. Any changes in the above factors can impede achievement of our valuation assessments.

Green Energy businesses are inherently risky. The industry is still at a nascent stage and long-term viability is still not established. Investors should be fully aware of these risks, which include, but are not limited to, viability of new products and markets targeted, volatile commodity prices, demand for and competition for a company's product and/or service, asset quality, customer risks, changes in operating costs, company capital structures, operating and working capital needs and ability to raise both debt and equity capital to fund operations. We value Green Energy equities on many different metrics, including but not limited to, our subjective view as to the quality of management, discounted cash flows, net asset values, enterprise value to EBITDA or cash flow multiples, price to earnings or cash flow multiples, reinvestment risk and full cycle economics. These factors are uncertain and our outlook is subject to change, sometimes quite quickly. Any changes in the above factors can impede achievement of our valuation assessments.

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The Exploration and Production (E&P) business is inherently risky. Investors in E&P equities should be fully aware of these risks, which include, but are not limited to, volatile natural gas, NGL's and crude oil prices, regional pricing differences, field and company asset quality, reserve depletion factors, drilling risks, operating costs, company capital structures, operating and working capital needs and ability to raise both debt and equity capital to fund operations. . E&P Valuation Methods used to determine the Price Target: We value E&P companies on many different metrics, including, but not limited to, our estimate of net asset value (NAV), enterprise value to EBITDA or cash flow multiples, price/earnings or cash flow multiples, discounted cash flow analysis and breakup/acquisition values. All our estimates and valuations are highly and inherently uncertain. They are based on, but not limited to, our outlook for the commodity price, our subjective view as to the quality of management, net asset value, quality of the proven and unproven reserves and resources, ability to develop and produce these reserves/resources, financial strength, cash flow, access to capital, and full cycle economics of investments. These factors are uncertain and our outlook is subject to change, sometimes quite quickly. Any changes in the above factors can impede achievement of our valuation assessments.

Industrials: This category might cover many different types of companies with various business models and various factors affecting the operations and stock prices, some of which include overall economic growth, end market demand, product inventories and competition. Some of these companies might have various energy-related exposure through both sales and/or costs. In general, industrial company risks include, but not limited to, high fixed operating costs, rising input costs, currency and commodity price fluctuations, variable demand, inventory levels, quality of management, competition and obsolescence.

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