

BLOOM ENERGY CORP.

4Q21 Preview: Eyes on 2022 Guidance & Supply Chain/Inflation

Quick Take: We fear supply chain issues/inflation could dampen BE gross margins expectations for 2022, assuming takeaways from Oil Services earnings so far, particularly given a smaller scale for BE. We model \$1.25B/\$70M revenues/EBITDA for 2022 vs. Street's \$1.20B/\$102M est., respectively. We are reducing our PT to \$17 from \$24 as we lower our long-term product gross margins to 38% from 40% (\$3/share impact) and assume higher SG&A (\$4/share impact).

Thesis/Update

We have been negative on the hydrogen sector since initiation in July 2021. See [Hydrogen Sector Initiation](#). The sector should see a secular, yet cyclical growth. There are many unknowns around total addressable markets and green hydrogen cost economics. However, stocks are under-appreciating the enormous risks for achieving sector and company targets, despite a lack of long track record.

Bloom Energy Corp. (BE) is our only Sector Outperform in the sector as BE's growth is driven by products and markets where the company already has a strong track record. See [BE Initiation](#). We prefer stationary power applications over on-road mobility applications for hydrogen. We are reducing our PT to \$17 from \$24 as we lower our long-term product gross margins to 38% from 40% (\$3/share impact) and assume higher SG&A (\$4/share impact). Notably, we do not provide any benefit of hydrogen revenues i.e. hydrogen fueled energy server or electrolyzers.

Focus on the Call

- Longer term tailwinds in country policies and government incentives.
- 2022 guidance: We model \$1.25B/\$70M revenues/EBITDA for 2022 assuming \$85M stock-based compensation (SBC) vs. Street's \$1.20B/\$102M est., respectively. BE anticipates that its 2022 projections will be in line with prior growth guidance for the years beyond 2022. The company typically expects ~35% y/y volume growth and ~25% revenue growth owing to lower sales price with 10-15% annual cost reduction targets. In 2022, we think given inflation could work against cost declines, revenues could be up ~35% y/y. However, given supply chain disruptions and inflation we expect gross margins could be flattish y/y ~22% ex- SBC. **To be explicitly clear, we have not spoken with the company as it has been in quiet period.** However, inflation/supply chain issues have hampered Oil Services margins. NOV Inc., a global manufacturer of products, saw one of the most impact. We are assuming BE, a product manufacturer, could have similar issues, more so given its smaller scale. BE typically pays for product deliveries. There has been a significant inflation for freight and truck driver shortages. We expect ~\$345M operating expenses.
- Product backlog as it gets rolled into revenues typically in two years. Product backlog conversion rate in 2019/20/21E have been 83/47/63%.
- Cost and supply chain issues update? Can Installation margins be breakeven and Services margins positive as per prior guidance?
- Any update on hydrogen powered fuel cell and electrolyzer awards and manufacturing capacity buildout?

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- [PLUG: Strong Guidance But Looking For More Color](#)
- [BE: Increasing Visibility](#)
- [Tidbits 1.04: Troughish Green Energy Stocks](#)
- [PLUG: Expect Positive Announcements At Symposium](#)
- [Tidbits 1.02: Growth Stock Valuations](#)
- [BE: 2Q21 Earnings Recap](#)
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- [Deployable Frac Capacity Approaching Full Utilization](#)
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- [4Q21 Earnings Preview](#)
- [Another Way To Look AT U.S. Spending Up 45% in 2022 Y/Y](#)
- [Recent Data Points Support US Spending Up ~45% In 202 Y/Y](#)
- [More Confidence in US Spending Up 45% in 2022 Y/Y](#)
- [U.S. Spending Up 45% in 2022: Upgrading TS](#)
- [FTI: Deep Dive Into 2025 Guidance](#)

3Q21 Call Takeaways

- BE and SK ecoplant (SK) signed a transformational agreement whereby BE announced 500 MW of product and services commitment from SK for 2022-25 representing \$4.5B of revenues. SK is also targeting \$500M of equity investments in BE and two hydrogen innovation centers. The details were to be finalized in December 2021. See [BE: Increasing Visibility](#) for more details.
- Backlog
 - BE has the largest commercial pipeline for Bloom AlwaysOn Server.
 - Historically highest commercial pipeline across all product lines.
- Supply chain issues and inflation drove guidance lower (see below). Supply chain issues also impacted installing new manufacturing capacity and delay in \$20M of sales to 4Q21 from 3Q21.
 - Cost pressures impact is estimated to be ~5% gross margins for 2021.
 - Manufacturing capacity: BE is adding manufacturing capacity at Fremont, CA but supply chain pressures have impacted certain installations.
 - BE was not able to bring the product cost down by 10-15% targeted annually due to inflation.
- Accelerating use of 3rd party EPC vendors for margins dilutive installations which implies \$35M lower revenues.
- Launched new products
 - Hydrogen Energy Server: A demo unit of the solid oxide fuel cell power system in Korea with commercial availability of the product starting 2022. BE's power server can use 50% of hydrogen as fuel without any modification. But the company now has a product that can utilize 100% of input as green hydrogen to produce power. The company has already deployed 100 kW of solid oxide fuel cell powered solely by hydrogen in South Korea. BE will supply 1.8 MW of hydrogen powered fuel cells through a multi-stage deployment from late 2021 into 2022.
 - First utility scale solid oxide combined heat and power project in Korea.
 - Bloom Electrolyzers: Energy efficient electrolyzers which the company claims is 15-45% more efficient than the competition. BE has already won award to supply its solid oxide electrolyzer cells (SOEC), which will be capable of producing green hydrogen via solar and battery, in Korea in 2022.
- Progress on marine application is progressing well.
 - The company achieved two key milestones for its marine product, ahead of time. BE received Approval in Principle from DNV, a premier international maritime classification society, for fuel cell powered LNG carrier. The company also received verification as an alternative power source for vessels as part of the American Bureau of Shipping's (ABS) New Technology Qualification (NTQ) service. BE and Samsung are targeting to get design approval from IMO in 2022. The company expects to complete testing on land, simulating the ocean environment, and a final testing phase which is an on-water demonstration in 2022. Samsung and BE target to present the design to potential customers in 2022. Vessels are typically built in 24 months hence BE expects marine revenues to begin in 2025. Following commercialization, the two companies anticipate that the market for Bloom Energy Servers on SHI ships could grow to 300 MW annually.

2021 Guidance

- 170-180 MW acceptances, unchanged
- Revenues \$935-965M vs. \$950M-\$1B prior. 3rd party EPC use driving \$35M lower installation revenues.
- Gross margins 21% vs. 25% earlier
- Operating loss 3% vs +3% earlier
- CFOA approaching positive now in 2022 vs. 2021 prior

Questions To Ask

- 2022 guidance:
 - Fair to expect product acceptance growth of 30-40% y/y. Would it be fair that even revenues grow the same level as product cost did not decline in 2021 and inflation is expected to continue?
 - Gross margins should improve modestly but not all the way to ~25% as inflation persists?
 - Capex for 2022 vs. \$50-75M for 2021?
 - Can CFOA be positive in 2022?
- SK Announcement
 - Details of SK's orders were expected to be finalized in December 2021. What are the updates? How should we think about potential electrolyzer cells as 500 MW is only for fuel cells.
 - What are expectations around SK's exercising option to acquire additional 11M shares at 15% premium to current price?
 - Timing and capex requirements for two hydrogen innovation centers in Korea and the U.S.?
- When do you expect to announce additional manufacturing capacity beyond 200 MW for Bloom 7.5? Capex and timeline?
- Product/strategic updates
 - Update on hydrogen powered fuel cell and electrolyzers? Any orders so far beyond the initial ones in Korea?
 - Update on agreement with BKR? BE and BKR were expected to launch micro grid using BE's fuel cell and BKR's gas turbines.
 - Update on marine market efforts?
 - Update on international sales? Expectation for international sales in 2022 given a team of ~10 senior people were hired in April 2021? Fair to expect 30MW bookings in 2021?
 - Update on carbon capture product?
 - Update on biogas powered server? The company has a prototype testing in its lab. The company expects demonstration projects in 2022 with first commercial projects in 2023.
- What is the cost of electricity today using BE energy servers? What new states were you able to add and target in 2022? The company was expecting earlier that its products would lower the power cost enough to compete in 42/48 states in 2022/23 vs. 28 in 2021.
- What are normalized gross margins for product sales? They were 27/26/36% in 2018/19/20 with 2021 expected to be about 29%?
- What are steps to get to 20% Services margins from current breakeven?
- Plans around 6% converts?

Company Model (US\$M)

Summary	1Q21	2Q21	3Q21	4Q21E	1Q22E	2Q22E	3Q22E	4Q22E	2019	2020	2021E	2022E	2023E	2024E	2025E	2040E
Revenue	194	228	207	299	270	300	308	366	882	794	929	1,244	1,475	1,722	1,987	6,848
Consensus	208	235	239	311	263	286	301	352	786	794	943	1,208	1,530	1,862	2,296	-
EBITDA	16	(11)	(10)	9	7	15	16	32	68	45	4	70	163	272	337	1,043
Consensus	10	14	10	17	14	16	24	37	97	45	16	102	181	258	373	-
EPS	(\$0.14)	(\$0.31)	(\$0.30)	(\$0.20)	(\$0.20)	(\$0.13)	(\$0.12)	(\$0.04)	(\$2.16)	(\$1.04)	(\$0.95)	(\$0.49)	(\$0.06)	\$0.39	\$0.64	\$2.28
Consensus	(\$0.07)	(\$0.05)	(\$0.10)	(\$0.06)	(\$0.07)	(\$0.05)	(\$0.02)	\$0.04	(\$0.30)	(\$0.67)	(\$0.61)	(\$0.09)	(\$0.09)	(\$0.09)	\$0.00	\$0.00
Products																
Korea Market																
Units Sold (100 KW) - Korea	238	222	0	0	0	0	0	0	579	772	1,000	1,200	1,425	1,125	1,125	1,125
Growth %									253%	33%	30%	20%	19%	-21%	0%	0%
Product Revenues/Acceptance (\$/KW)									3,500	3,500	3,500	3,500	3,150	2,835	2,552	1,507
Growth %									0%	0%	0%	0%	-10%	-10%	-10%	0%
Korea Revenue	83	78	0	0	0	0	0	0	203	270	350	420	449	319	287	169
Growth %									253%	33%	30%	20%	7%	-29%	-10%	0%
Units Sold (100 KW) - US									615	554	776	893	1,027	1,181	1,358	11,047
Growth %									-5%	-10%	40%	15%	15%	15%	15%	15%
Units Sold (100 KW) - Intl. Ex Korea											0	15	100	200	300	2,441
Growth %													567%	100%	50%	15%
Units Sold (100 KW) - Marine														500	1,500	2,500
Vessel														1	3	5
MW / Vessel														0	50	50
Units Sold (100 KW) - Biogas											50	100	100	100	100	708
Plant											1	2	2	2	2	14
MW/Plant											5	5	5	5	5	5
Non Korean Units Sold (100 KW)									615	554	826	1,008	1,227	1,981	3,258	16,696
Growth %									-5%	-10%	49%	22%	22%	61%	64%	12%
Non-Korea Product Revenues (\$M)									460	249	352	408	447	649	961	2908
Product Revenue / Acceptance (\$/kW)									7,483	4,484	4,259	4,046	3,642	3,278	2,950	1,742
Growth %									6%	-40%	-5%	-5%	-10%	-10%	-10%	0%
Products Revenue	138	147	129	212	185	213	217	271	663	519	625	885	1,044	1,164	1,248	3,078
Change %	-20%	6%	-12%	65%	-13%	15%	2%	25%	29%	-22%	21%	42%	18%	12%	7%	12%
Product Cost	(87)	(109)	(94)	(154)	(131)	(151)	(154)	(192)	(492)	(333)	(444)	(629)	(678)	(722)	(774)	
Product Gross Margin	37%	26%	27%	27%	29%	29%	29%	29%	26%	36%	29%	29%	35%	38%	38%	

Source: Bloomberg; Company reports; CPI est.

Company Model Contd. (US\$M)

Installation	1Q21	2Q21	3Q21	4Q21E	1Q22E	2Q22E	3Q22E	4Q22E	2019	2020	2021E	2022E	2023E	2024E	2025E	2040E
Units Sold (100 KW) - Korea									579	772	1,000	1,200	1,425	1,125	1,125	1,125
Non-Korea Units Sold (100 KW)									615	554	826	1,008	1,227	1,981	3,258	16,696
Inst. Revenue/ Acceptance (\$/kW)									1,188	1,838	986	986	986	986	986	986
Change %									-16%	55%	-46%	0%	0%	0%	0%	0%
Installation Revenue	3	29	22	28	24	24	24	24	73	102	81	94	109	166	257	823
Change %	-91%	986%	-23%	25%	-15%	0%	0%	0%	-20%	40%	-20%	16%	15%	53%	55%	12%
Installation Gross Profit	(2)	(8)	(3)	(7)	(2)	(2)	(2)	(2)	(15)	(15)	(20)	(9)	0	0	0	
Installation Gross Margin	-74%	-26%	-16%	-26%	-10%	-10%	-10%	-10%	-21%	-14%	-25%	-10%	0%	0%	0%	
Service																
Cumulative MW deployed	604	648	683	739	787	842	899	969	456	568	739	969	1,249	1,584	2,023	17,006
Service Revenue \$/kW	241	221	230	230	223	223	223	223	211	193	208	201	203	204	204	204
Change %	7%	-9%	4%	0%	-3%	0%	0%	0%	-5%	-8%	8%	-3%	1%	1%	0%	0%
Service Revenue	36	36	39	42	44	47	50	54	96	110	154	195	254	323	413	3,471
Change %	13%	-2%	10%	8%	3%	7%	7%	8%	17%	14%	40%	27%	30%	28%	28%	12%
Service Gross Profit	0	0	(0)	0	1	1	1	1	(5)	(23)	1	4	13	49	83	
Service Gross Margin	1%	0%	-1%	1%	2%	2%	2%	2%	-5%	-21%	0%	2%	5%	15%	20%	
Electricity																
Electricity revenue	17	17	17	17	17	17	17	17	96	110	154	195	254	323	413	3,471
Change %	2%	0%	0%	0%	0%	0%	0%	0%	17%	14%	40%	27%	30%	28%	28%	12%
Electricity Gross Profit	0	0	0	0	0	0	0	0	(14)	17	24	23	23	23	23	
Electricity Gross Margin	33%	40%	34%	34%	34%	34%	34%	34%	-28%	27%	35%	34%	34%	34%	34%	

Source: Bloomberg; Company reports; CPI est.

Company Model Contd. (US\$M)

Income Statement	1Q21	2Q21	3Q21	4Q21E	1Q22E	2Q22E	3Q22E	4Q22E	2019	2020	2021E	2022E	2023E	2024E	2025E	2040E
Total Revenues	194	228	207	299	270	300	308	366	882	794	929	1,244	1,475	1,722	1,987	6,848
Corporate Expenses	(46)	(54)	(53)	(53)	(57)	(57)	(57)	(57)	(227)	(163)	(206)	(228)	(270)	(281)	(285)	(844)
Gross Profit	55	37	37	56	58	66	67	83	137	166	185	274	401	514	580	1,808
Gross Profit Margin	28%	16%	18%	19%	21%	22%	22%	23%	16%	21%	20%	22%	27%	30%	29%	26%
EBIT	(14)	(43)	(44)	(24)	(28)	(20)	(19)	(3)	(194)	(81)	(125)	(70)	15	0	179	827
EBIT Margin	-7.4%	-18.7%	-21.2%	-8.2%	-10.4%	-6.6%	-6.1%	-0.8%	-22.0%	-10.2%	-13.5%	-5.6%	1.0%	6.8%	9.0%	12.1%
Incr EBIT Margin	18%	-82%	6%	21%	12%	26%	18%	27%	26%	-130%	-33%	18%	36%	41%	24%	12%
D&A	(13)	(13)	(13)	(13)	(14)	(14)	(14)	(14)	(71)	(52)	(53)	(55)	(60)	(62)	(65)	(124)
EBITDA	(1)	(29)	(31)	(11)	(14)	(6)	(5)	11	(123)	(29)	(72)	(14)	74	179	244	951
EBITDA Margin	-0.5%	-12.8%	-14.8%	-3.7%	-5.3%	-2.0%	-1.6%	3.0%	-14.0%	-3.6%	-7.8%	-1.1%	5.0%	10.4%	12.3%	13.9%
Interest Expense	(15)	(14)	(14)	(14)	(15)	(8)	(9)	(10)	(64)	(75)	(58)	(42)	(43)	(35)	(26)	(11)
Tax	(0)	(0)	(0)	0	0	0	0	0	(1)	(0)	(1)	0	0	(20)	(38)	(204)
Tax Rate	0%	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	25%	25%
Net Income	(24)	(54)	(52)	(35)	(39)	(24)	(24)	(8)	(249)	(145)	(165)	(95)	(11)	79	132	629
Other	(1)	-	-	-	-	-	-	-	0	(13)	(1)	-	-	-	-	-
Diluted Shares	171	173	174	176	189	190	191	193	115	139	173	191	195	200	206	276
Clean EPS	(\$0.14)	(\$0.31)	(\$0.30)	(\$0.20)	(\$0.20)	(\$0.13)	(\$0.12)	(\$0.04)	(\$2.16)	(\$1.04)	(\$0.95)	(\$0.49)	(\$0.06)	\$0.39	\$0.64	\$2.28
Cash Flows																
Net Income	(30)	(58)	(57)	(35)	(39)	(24)	(24)	(8)	(323)	(179)	(179)	(95)	(11)	79	132	629
D&A	13	13	13	13	14	14	14	14	79	52	53	55	60	62	65	124
WC Changes	(93)	76	(52)	(1)	14	(15)	(4)	(28)	97	(73)	(70)	(32)	(38)	(16)	(35)	(83)
Other	3	4	2	-	-	-	-	-	116	27	9	-	-	-	-	-
CFO	(89)	54	(73)	(2)	10	(4)	8	(2)	158	(99)	(110)	13	99	218	255	763
Capex	(13)	(22)	(10)	(20)	(33)	(33)	(33)	(33)	(51)	(38)	(65)	(130)	(80)	(80)	(130)	(205)
FCF	(102)	32	(83)	(23)	(22)	(36)	(25)	(34)	107	(137)	(175)	(117)	19	138	125	557
Debt Changes	(3)	(4)	(7)	16	(233)	36	25	34	(64)	167	2	(138)	(19)	(138)	(7)	-
Equity Changes	58	8	6	6	255	-	-	-	13	23	79	255	-	-	-	-
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(22)
Other	-	-	-	-	-	-	-	-	-	(7)	-	-	-	-	-	-
Cash at Beginning	417	366	401	320	320	320	320	320	280	377	417	320	320	320	320	5,326
Cash at End	366	401	320	320	320	320	320	320	377	417	320	320	320	320	438	5,861
Balance Sheet																
Cash	366	401	320	320	320	320	320	320	377	417	320	320	320	320	438	5,861
Receivables	108	54	62	63	49	64	67	95	38	100	63	95	133	148	183	830
Inventories	153	163	183	183	183	183	183	183	110	142	183	183	183	183	183	183
Payables	73	87	102	102	102	102	102	102	56	58	102	102	102	102	102	102
Total Debt	290	291	291	307	74	111	136	170	381	168	307	170	151	13	6	6
Ratios																
Net Debt/Cap	-26%	-41%	-12%	-5%	-96%	-72%	-59%	-42%	3%	-101%	-5%	-42%	-41%	-68%	-65%	-81%
Net Debt/EBITDA	-19.4x	12.5x	0.6x	0.2x	2.9x	3.4x	5.1x	10.5x	0.0x	8.7x	0.2x	10.5x	-2.3x	-1.7x	-2.4x	-6.2x
Capex/Sales	7%	9%	5%	7%	12%	11%	11%	9%	6%	5%	7%	10%	5%	5%	7%	3%
Working Capital/Sales	24%	14%	17%	12%	12%	12%	12%	12%	10%	23%	15%	14%	14%	13%	13%	13%

Source: Bloomberg; Company reports; CPI est.

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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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.

Appendix A – Required Disclosures Contd.

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.

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	6	43%
Sector Perform	3	21%
Sector Underperform	5	36%
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.

Appendix A – Required Disclosures Contd.

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.

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.

E&P, Oilfield Service, Industrials, Green Energy, as well as investments in the other subsectors we follow are subject to a myriad of external factors, including but not limited to, commodity price risk, geopolitical risk, changes in interest rates, the value of worldwide currencies, especially the U.S. dollar, changing regulations, both domestically and abroad, regulatory enforcement levels, and changes in domestic or global economic fundamentals. Please see specific companies' most recent SEC filings, including 10-Ks, 10-Qs, 8-Ks, and proxy filings for additional risks and considerations. For companies based outside the US, please see country specific regulatory filings for additional risks and considerations.