Energy

INDUSTRY REPORT

Winter | 2024

CREATING

M&A STRATEGIES

FOR BUSINESS OWNERS

SINCE 1956

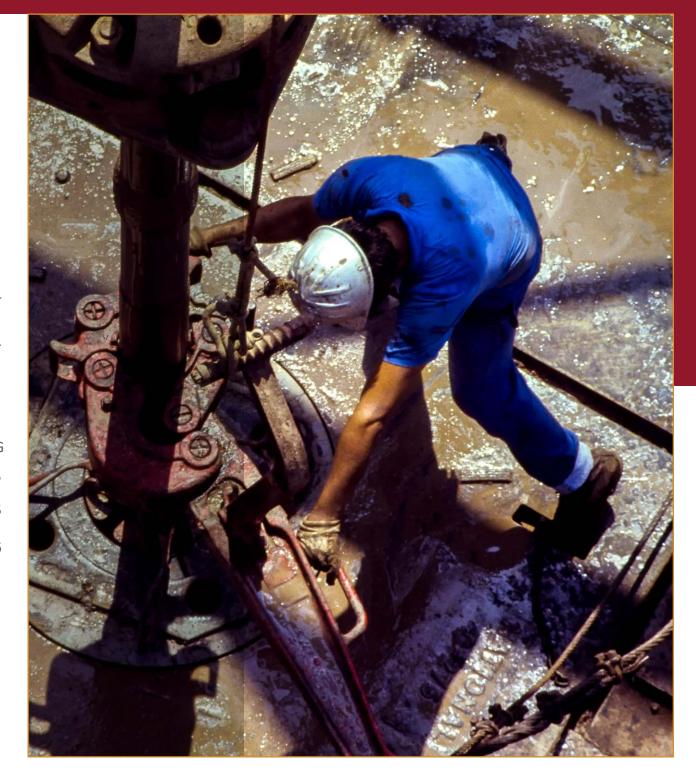
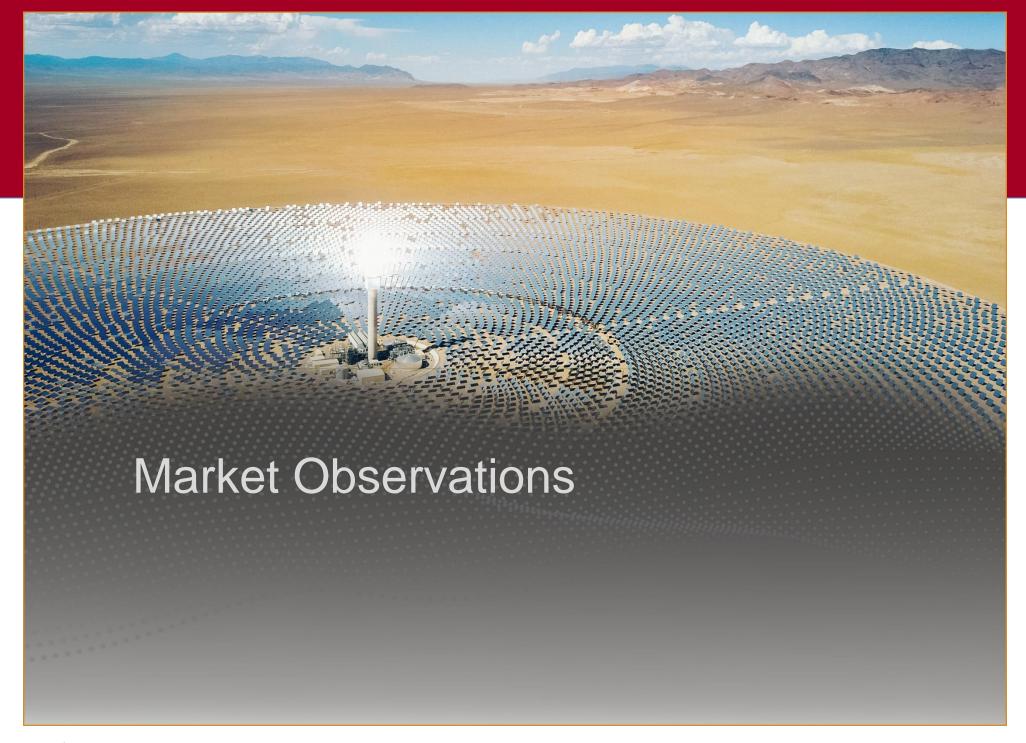




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Market Summary

Energy Market

Energy serves as the catalyst for investments, innovations, and the emergence of new industries, acting as the driving force behind job creation, inclusive growth, and shared prosperity for entire economies. Yet, around 675 million worldwide lack electricity, and 2.3 billion rely on polluting traditional fuels for cooking. The increased volatility in energy prices, triggered by the impact of the COVID-19 pandemic and the Ukraine conflict, is posing challenges to achieving the Sustainable Development Goal 7 of universal access to affordable, reliable, sustainable, and modern energy by 2030. Developing nations, reliant on imported energy, face the brunt, leading to shortages and rationing. This amplifies poverty concerns, compounding the challenge of sustaining consistent and affordable energy access. Tackling climate change has emerged as a paramount concern on the global stage, with a notable escalation in climate initiatives and aspirations. The United Nations' Intergovernmental Panel on Climate Change (IPCC) projects that meeting the objectives outlined in the Paris Climate Agreement necessitates a yearly investment of \$2.4 trillion in energy systems until 2035. According to WorldBank, to achieve net-zero emissions by 2050, investments in the energy sector in developing countries need to quadruple to \$1 trillion in 2030, including a dramatic acceleration of solar, onshore wind, and offshore wind investments. In developing countries, limited funds and financial access make upfront investments in renewable energy unfeasible. Macroeconomic and political uncertainties further deter private-sector investors from backing renewable projects.

Public Company Valuations

The CFAW Select Fossil Index decreased by 0.7% in the fourth quarter of 2023, and the 12-month return on the index fell by 5.1%. The CFAW Select Renewables Index increased by 18.9% in the fourth quarter of 2023; and fell by 13.7% during the 12-month return. For Q4 2023, the Oil and Gas Refining and Marketing Index increased by 14.2% followed by a 15.1% increase for the 12 months. The Renewable Energy Generation Index increased by 20.9% in the fourth quarter of 2023 followed by a decrease of 24.9% during the 12-month return for the Renewable Energy Products and Services Index. The Oil & Gas Midstream Index has the highest median EBITDA with 12.55x and median revenue with 4.13x. The Oil and Gas Integrated Index have the lowest EBITDA multiple with 4.55x and Oil & Gas Refining & Marketing Index has the lowest revenue multiple with 0.43x. The Renewable Energy Products & Services Index has a median EBITDA and revenue multiple of 19.49x and 1.01x. In contrast, the Renewable Energy Generation Index has a median EBITDA and revenue multiple of 11.58x and 2.56x.



The Fossil Fuel Index and Renewables Index have increased in Q4 2023...

Mergers and Acquisitions

The M&A activity in the energy sector increased in Q4 2023. In an era of expanding and diverse investor participation, substantial capital flows into M&A and various projects, compelling global companies in all sectors to undergo significant business model shifts driven by factors like decarbonization, digitalization, shifting consumer trends, and geopolitical uncertainties. The energy, utilities, and resources (EU&R) sector, in particular, is reaping the benefits of these overarching trends, witnessing an upsurge in capital as entities and investors actively pursue transformation and reinvention goals. The central challenge for businesses amidst this transformative phase is striking a delicate balance between delivering immediate shareholder value and cultivating the resilience and adaptability essential for success in a technologically advanced, low/no-carbon landscape with a pronounced emphasis on environmental, social, and governance (ESG) considerations.

Fossil Fuels Industry Trends

Coal Industry Faces a Juncture As Environmental Concerns Drive Transition To Cleaner Energy Sources

The global coal industry, a longstanding pillar of energy production, is confronting a precarious future amid escalating environmental concerns. As the second-largest energy source worldwide since 2019, coal accounted for over a quarter of global energy consumption in 2022. Fossil fuels, including coal, contribute to climate change and are deemed unsustainable, prompting a global shift towards more eco-friendly energy sources. This transition is unsettling for coal workers, with projections indicating the potential loss of up to half a million jobs by 2035, particularly impacting China and India, where millions are employed in coal mines. The abrupt departure of such a substantial workforce raises significant economic and social challenges. While some countries, exemplified by Spain, are leading the way in coal phase-out strategies, effective models must prioritize worker support to mitigate the adverse consequences of this energy shift. Implementing successful transition plans, inspired by such role models, is imperative for fostering a smoother energy transition while safeguarding the well-being of affected workers and their communities.

The Mining and Metals Sector's Transition to Circular Economy Leadership

In the evolving landscape of the global economy, marked by a growing emphasis on sustainability through initiatives like carbon pricing and ESG measures, the mining and metals sector is undergoing a significant transformation. Companies are reevaluating their traditional roles as metal producers, exploring new avenues for value creation. This shift is imperative as the linear economic model faces challenges from climate change, environmental degradation, and pollution. Embracing a circular economy (CE)



emerges as a sustainable alternative, offering a framework to decouple from finite materials and minimize negative impacts. While the industry has made strides in circularity, driven by waste recycling and water reuse, there is a need to shift from reactive approaches to value-driven circular strategies. Adopting CE principles, including designing out waste, retaining product value, and regenerating natural systems, presents an opportunity for mining and metals companies to enhance their ESG scores and shape the growth of the wider CE. The industry's proactive embrace of circularity, characterized by strategic rethinking, ecosystem mapping, investment in relevant expertise, scaling successful initiatives, and safeguarding market share, can position it as a key influencer in sustainable development and economic transformation.

Shifting Dynamics in Oil Demand: Navigating the Impact of Electric Vehicle Growth

Over the past two decades, global oil demand has surged by 18 million barrels per day (mb/d), predominantly fueled by the exponential growth in road transport. With the global car fleet expanding by over 600 million cars in the last 20 years, road transport constitutes ~45% of the total global oil demand, surpassing the petrochemicals sector, the second-largest share at 15%. The landscape rapidly changes with electric vehicle (EV) sales surging, surpassing traditional gasoline and diesel vehicle sales in 2017, 2018, and 2019. Anticipated to reach 18% of global car sales by end of 2023, with 14 million EVs sold, the trend is reshaping the road transport sector, marking the end of its contribution to oil demand growth by the end of this decade. While oil demand for petrochemicals, aviation, and shipping may continue to rise, the overall outlook suggests a peak in oil demand before 2030, ushering in a slow but persistent decline through 2050.

Renewable Energy Industry Trends

Geothermal Energy is a Rising Sustainable Option Propelled by Technological Progress

Geothermal energy is gaining momentum as a sustainable alternative amidst the ongoing shift away from fossil fuels. Geothermal projects harness the Earth's natural heat to generate electricity, offering a nearly boundless power source. Although the geographic reach is initially constrained, technological advancements, including drilling capabilities extending up to 5 thousand feet deep, are widening its potential impact. Prominent markets include Indonesia, the Philippines, and New Zealand, while Japan and the United States find themselves uniquely positioned to tap into this resource. Despite cultural considerations in Japan impeding full geothermal utilization, the U.S. is exploring cutting-edge methods like fracking and plasma technology to unlock additional energy potential. Ongoing research addresses environmental concerns, such as induced seismic activity, and cost considerations, with expectations of cost reductions and enhanced safety. As these developments progress, geothermal energy is poised to become a valuable and efficient component of the global energy landscape, contributing to a more sustainable and diversified energy future.

IRA Helps Spur Renewable Providers to Pursue Opportunities in Low-Income Communities

Renewable energy providers are shifting their focus towards low-income communities, led by the enactment of federal policies, such as the Justice40 Initiative, emphasizing environmental justice. Approximately 44% of US households fall into the low-income category, facing a disproportionately high "energy burden" that is 3.5 times the national average. Federal incentives, including the IRA's 30% investment tax credit with additional bonuses for projects in "environmental justice" areas, are catalyzing this expansion.



Business models like community solar are anticipated to flourish in low-income communities, offering residents predictable and affordable rates while bolstering economic security and creating local jobs. States with specific provisions for low- and moderate-income customers in community solar programs are on the rise. With Biden administration's commitment to directing 40% of climate and clean energy benefits to marginalized communities, renewable energy projects are becoming a key tool in addressing environmental and economic disparities. A Deloitte survey indicates that 46% of power and utility executives have plans to engage in renewable energy projects in low-income communities.

Renewable Energy Industry Focuses on Managing Increasing Cyber Risk

As the industry evolves, it becomes a prime target for cyber threats, with a particular focus on utility-scale and distributed renewable energy assets. The sector's heightened emphasis on cybersecurity is evident, especially with the proliferation of digitally controlled, third-party-owned, and aggregated energy resources. Recognized as one of the 16 critical infrastructure sectors by the US government, the energy industry, including oil, gas, and electric power infrastructure, has experienced a notable uptick in cyberattacks. This trend is expected to continue, with potential threats from ransomware groups, nation-state-affiliated actors, and individual malicious hackers. The vulnerability of industrial control systems, often exploited through phishing attacks, adds complexity to the risk landscape. An assessment by the US Department of Energy emphasizes the need for cybersecurity standards to safeguard the burgeoning distributed energy resources (DER) sector, which is poised to quadruple by 2025. There is a growing focus on internal development and training programs to bolster the sector's cybersecurity resilience in the long run.



Significant News

Renewable energy's share on German power grids reaches 55% in 2023

Reuters, January 03, 2024

"The share of renewables on Germany's power grids rose by 6.6 percentage points to 55% of the total last year, the sector's regulator said on Wednesday, as Europe's largest economy moves closer to its 2030 target."

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India's Adani Green to raise \$1.12 Bn to expand renewable capacity

Reuters, December 26, 2023

"India's Adani Green Energy (ADNA.NS) on Tuesday said its key shareholders will invest 93.50 billion rupees (\$1.12 billion) in the company to expand its renewable power capacity."

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Asia's energy market: The new global epicenter

GIS Reports, December 20, 2023

"Asia is a crucial market for every established energy exporter, but suppliers' bets are not risk-free. In the last two decades, the Asia-Pacific region has emerged as the leading area of global energy consumption. In 2001, it overtook North America as the most significant energy market – a position it has maintained since."

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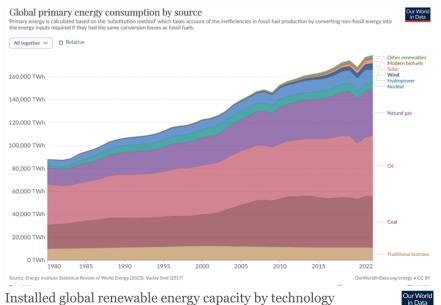
Clean energy surpasses fossil fuel industry in post-pandemic job creation, says IEA report

Mint, November 16, 2023

"Amid increased demand to cut CO2 emissions and meet the net-zero emissions target, there has been a significant rise in investment in the clean energy segment. Hence, the sector has surpassed the fossil fuel industry in terms of job creation post-pandemic."

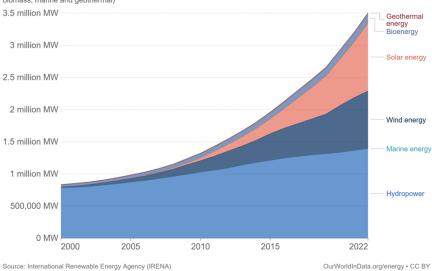
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Industry Barometers



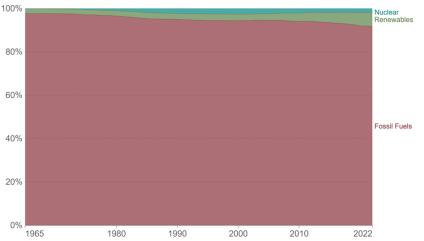
Installed global renewable energy capacity by technology

Installed global renewable energy capacity in megawatts (MW) by energy technology (hydropower, solar, wind, biomass, marine and geothermal)



Direct primary energy consumption from fossil fuels, nuclear and renewables, World

Direct primary energy does not account for inefficiencies in fossil fuel production



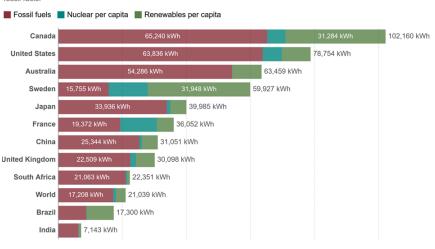
Source: Energy Institute Statistical Review of World Energy (2023) Note: Renewables includes hydropower, solar, wind, geothermal, wave, tidal and bioenergy. It does not include traditional biofuels.

OurWorldInData.org/energy • CC BY

Per capita energy from fossil fuels, nuclear and renewables, 2022



Primary energy is calculated based on the 'substitution method' which takes account of the inefficiencies in fossil fuel production by converting non-fossil energy into the energy inputs required if they had the same conversion losses as



Source: Energy Institute Statistical Review of World Energy (2023)

OurWorldInData.org/energy-mix • CC BY

M&A Metrics

Fossil Fuel Industry

M&A activity in the Fossil Fuel industry increased in the fourth quarter of 2023. The number of M&A transactions increased from 46 in Q3 2023 to 55 in Q4 2023. The number of sub-\$50 million transactions decreased from 35 in Q3 2023 to 34 in Q4 2023. The number of transactions above \$100 million increased from 9 in Q3 2023 to 18 in Q4 2023. The total number of M&A transactions increased by 7.8% year on year from 51 in Q4 2022 to 55 in Q4 2023.



M&A Deal Summary Table | Count by Deal Size over Time

Transaction Value	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
Not Disclosed	23	33	28	22	23
Under \$10 MM	5	7	3	8	7
\$10 - \$25 MM	4	2	2	3	3
\$25 - \$50 MM	3	2	1	2	1
\$50 - \$100 MM	1	2	2	2	3
\$100 - \$500 MM	10	10	8	1	8
\$500 MM+	5	5	8	8	10
Total Transactions	51	61	52	46	55

M&A Metrics

Renewable Industry

M&A activity in the Renewable industry has increased in the fourth quarter of 2023. The number of M&A transactions has increased from 76 in Q3 2023 to 94 in Q4 2023. The number of sub-\$50 million transactions increased from 65 in Q3 2023 to 75 in Q4 2023. The number of transactions above \$100 million increased from 10 in Q3 2023 to 18 in Q4 2023. The total number of M&A transactions decreased 21.6% year on year from 120 in Q4 2022 to 94 in Q4 2023.



M&A Deal Summary Table | Count by Deal Size over Time

Transaction Value	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
Not Disclosed	90	80	59	57	68
Under \$10 MM	9	3	1	5	5
\$10 - \$25 MM	4	1	2	0	1
\$25 - \$50 MM	5	3	3	3	1
\$50 - \$100 MM	4	0	3	1	1
\$100 - \$500 MM	4	10	7	7	11
\$500 MM+	4	4	1	3	7
Total Transactions	120	101	76	76	94

Industry Metrics Fossil Fuels

Industry Financial Data and Ratios

NAICs 211120 - Crude Petroleum Extraction

NAICs 213112 - Support Activities for Oil and Gas Operations

Financial Metric	Last12 Mo	2023	2022
Current Ratio	3.71	3.71	3.21
Gross Profit Margin	67.63%	67.63%	61.97%
Net Profit Margin	17.15%	17.15%	13.12%
Accounts Receivable Days	79.26	79.26	77.62
Accounts Payable Days	76.62	76.62	85.93
Debt-to-Equity Ratio	1.68	1.68	2.06
Return on Equity	37.50%	37.50%	49.11%
Sales per Employee			
Profit per Employee			
Sales Growth	36.30%	36.30%	44.33%
Profit Growth	52.45%	52.45%	46.06%

Source: Profit Cents

NAICs 213111 - Drilling Oil and Gas Wells

Financial Metric	Last12Mo	2023	2022
Current Ratio	2.28	2.28	3.19
Gross Profit Margin	66.55%	66.55%	70.65%
Net Profit Margin	17.24%	17.24%	19.25%
Accounts Receivable Days	114.07	114.07	95.98
Accounts Payable Days	86.16	86.16	137.21
Debt-to-Equity Ratio	1.21	1.21	1.66
Return on Equity	15.22%	15.22%	42.73%
Sales per Employee			
Profit per Employee			
Sales Growth	17.85%	17.85%	41.85%
Profit Growth	-1.00%	-1.00%	52.27%

NAICs 424720 - Petroleum & Petroleum Products Merchant Wholesalers

Financial Metric	Last12Mo	2023	2022
Current Ratio	2.09	2.08	2.18
Gross Profit Margin	9.17%	9.17%	8.61%
Net Profit Margin	1.81%	1.81%	2.21%
Accounts Receivable Days	20.13	19.88	21.77
Accounts Payable Days	17.36	17.21	18.54
Debt-to-Equity Ratio	2.85	2.83	2.96
Return on Equity	35.05%	34.76%	42.27%
Sales per Employee			
Profit per Employee			
Sales Growth	13.90%	13.90%	47.71%
Profit Growth	5.23%	5.23%	49.78%

Industry Metrics

Industry Financial Data and Ratios

NAICs 324110 - Petroleum Refineries

Financial Metric	Last12Mo	2023	2022
Current Ratio	1.56	1.56	0.99
Gross Profit Margin	32.62%	32.62%	32.43%
Net Profit Margin	4.19%	4.19%	1.79%
Accounts Receivable Days	21.46	21.46	23.36
Accounts Payable Days	42.28	42.28	38.68
Debt-to-Equity Ratio	1.06	1.06	2.56
Return on Equity	41.65%	41.65%	25.35%
Sales per Employee			
Profit per Employee			
Sales Growth			82.88%
Profit Growth			64.05%

NAICs 221114 - Solar Electric Power Generation

Financial Metric	Last12Mo	2023	2022
Current Ratio	2.84	2.84	3.12
Gross Profit Margin	80.70%	80.70%	84.13%
Net Profit Margin	14.89%	14.89%	13.79%
Accounts Receivable Days	49.37	49.37	59.84
Accounts Payable Days	73.19	73.19	55.75
Debt-to-Equity Ratio	1.41	1.41	1.46
Return on Equity	13.11%	13.11%	8.49%
Sales per Employee			
Profit per Employee			
Sales Growth	6.57%	6.57%	16.84%
Profit Growth	67.06%	67.06%	28.92%

Source: Profit Cents

NAICs 486110 - Pipeline Transportation of Crude Oil

Financial Metric	Last12Mo	2023	2022
Current Ratio	1.82	1.82	1.85
Gross Profit Margin	91.32%	91.32%	88.95%
Net Profit Margin	39.33%	39.33%	29.87%
Accounts Receivable Days	89.45	89.45	73.73
Accounts Payable Days			4.52
Debt-to-Equity Ratio	0.68	0.68	0.57
Return on Equity	14.25%	14.25%	9.20%
Sales per Employee			
Profit per Employee			
Sales Growth			26.95%
Profit Growth			1.72%

NAICs 221115 - Wind Electric Power Generation

TWICE ZZTTTS WING ZIEGENET GWEI GENETAGON						
Financial Metric	Last12Mo	2023	2022			
Current Ratio	5.51	5.51	2.51			
Gross Profit Margin	50.71%	50.71%	64.16%			
Net Profit Margin	1.18%	1.18%	9.19%			
Accounts Receivable Days	77.11	77.11	52.56			
Accounts Payable Days	28.08	28.08	41.5			
Debt-to-Equity Ratio	1.13	1.13	1.37			
Return on Equity	8.70%	8.70%	13.10%			
Sales per Employee						
Profit per Employee						
Sales Growth			34.42%			
Profit Growth			-18.19%			



Notable Transactions



In December 2023, **Global Operating LLC**, a subsidiary of Global Partners LP, acquired the business and assets related to 25 Liquid Energy Terminals Facilities from **Motiva Enterprises LLC** for US\$305.8 million in cash with an undisclosed amount in liabilities assumed. The transaction will be funded through Global Operating LLC's revolving credit facility. The acquisition expands Global Operating LLC's terminal capacity and operating footprint. The assets to be acquired is located in United States and assets related to the 25 liquid energy terminals facilities. The transaction was subject to customary closing conditions, including regulatory approvals, and expected to close by end of the year 2023.





In November 2023, **EQT Infrastructure** has agreed to acquire **Statera**, a UK-based battery storage and flexible generation infrastructure developer and operator with 1GW of flexible generation in operation and under construction, enough to power around 750,000 homes. EQT Infrastructure is committed to further investing in Statera's ongoing development of battery storage and other flexible energy projects, which is expected to play an integral part in helping the UK reach its Net Zero targets.





In November 2023, **SilverBow Resources Inc** acquired Oil and Gas Assets of **Chesapeake Energy Corp** for US\$750 million in cash and contingent payout. Under the terms of transaction, SilverBow Resources Inc would pay US\$700 million in cash and US\$50 million in contingent payout to Chesapeake Energy Corp. The acquisition is immediately accretive to financial and operating metrics of SilverBow Resources Inc. The transaction would be financed through cash on hand, bank loan and bonds or notes. The acquisition would expand the business portfolio of SilverBow Resources Inc. The Oil and gas assets to be acquired are located in South Texas, United States and engages in oil and gas assets.





In November 2023, **Swire Renewable Energy A/S**, a subsidiary of Swire Energy Services Ltd acquired **WPS Sweden AB** for an undisclosed amount. Following the transaction WPS Sweden AB will operate under the name of Swire Renewable Energy A/S. The acquisition would allow Swire Renewable Energy A/S to enhance its portfolio of service offerings. Founded in 2014 by Emil Fhärm and Mattias Broman, WPS Sweden AB is located in Öjebyn, Norrbotten, Sweden and engages in service, repairs and installation of wind turbines. It has turnover of SEK41million and 23 employees in the year of 2022.



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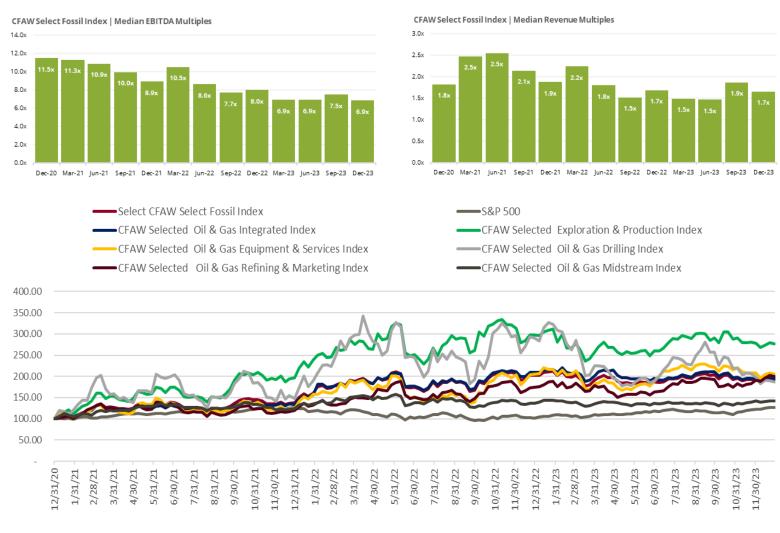
Select M&A Transactions

Date	Target Name	Acquirer Name	Enterprise Value(MM)	Revenue	EBITDA
21-Dec-2023	First Source Fuels LLC	Bridgesource LLC	-	-	-
21-Dec-2023	Motiva Enterprises LLC /25 Liquid Energy Terminals Facilities/	Global Operating LLC	305.80	-	-
19-Dec-2023	30MW Pozzolo Solar Project	Encavis AG	-	-	-
14-Dec-2023	100MW Solar Projects	NextEnergy Capital Ltd.	-	-	-
01-Dec-2023	Holly Energy Partners LP	HF Sinclair Corp	4,346.91	570.58	335.51
30-Nov-2023	Chesapeake Energy Corp. /Oil And Gas Assets South Texas/	SilverBow Resources, Inc.	750.00	-	-
15-Nov-2023	Chemoil Energy Services LLC (Glencore)	Argonaut Private Equity LLC	-	-	-
15-Nov-2023	Pogo Resources LLC (United States)	HNR Acquisition Corp.	145.32	40.20	25.34
10-Nov-2023	Renaissance Oil Corp.	Chame Energy Corp.	10.83	-	-
09-Nov-2023	WPS Sweden AB	Swire Renewable Energy A/S	-	3.77	-
06-Nov-2023	Pro-Tech Energy Solutions LLC	Madison Energy Holdings LLC	-	-	-
02-Nov-2023	Denbury, Inc.	Exxon Mobil Corp.	4,707.79	1,479.19	661.89
24-Oct-2023	Covenant Testing Technologies LLC	Kingswood Capital Management LP	-	-	-
23-Oct-2023	Hoosier Penn Oil Co., LLC	Wellspring Capital Management LLC; Cadence Petroleum Group	-	-	-
17-Oct-2023	Esso Italiana SRL /Italian Downstream Fuels Business/	italiana petroli SpA	-	-	-
14-Oct-2023	Quarternorth Energy LLC /Plugging & Abandonment Business/	Helix Energy Solutions Group, Inc.	-	-	-
13-Oct-2023	Meritage Midstream Services II LLC	Western Midstream Partners LP	885.00	-	-
04-Oct-2023	Energiekontor AG /37 2 MW Strathrory Wind Project/	Capital Dynamics AG	-	-	-
(\$ in millions)	Source: Factset				



Industry Performance Fossil Fuels

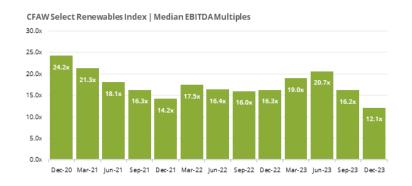
CFAW Select Fossil Fuel Index





Industry Performance Renewable Energy

CFAW Select Renewable Energy Index

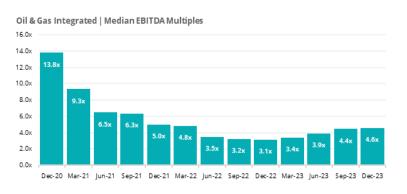


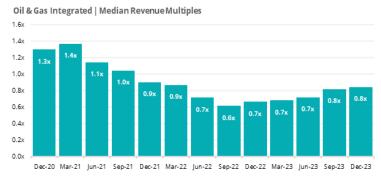






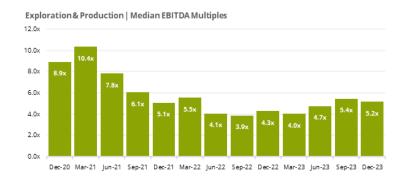
Oil and Gas Integrated

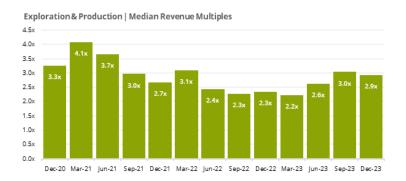




FactSet	Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
Identifier								Revenues	EBITDA
тот	TotalEnergies SE Sponsored ADR	\$67.38	2,412	\$162,538	\$198,856	\$228,133	\$49,408	0.9x	4.0x
XOM	Exxon Mobil Corporation	\$99.98	4,006	\$400,533	\$416,643	\$344,999	\$69,268	1.2x	6.0x
CVX	Chevron Corporation	\$149.16	1,882	\$280,726	\$296,025	\$202,701	\$45,048	1.5x	6.6x
ВР	BP p.l.c. Sponsored ADR	\$35.40	2,861	\$101,268	\$145,474	\$227,944	\$61,188	0.6x	2.4x
SHEL-GB	Shell Plc	\$32.78	6,516	\$213,616	\$257,948	\$318,760	\$50,729	0.8x	5.1x
Е	Eni S.p.A. Sponsored ADR	\$34.01	1,688	\$57,408	\$72,626	\$106,921	\$19,318	0.7x	3.8x
Mean					\$231,262	\$238,243	\$49,160	0.9x	4.6x
Median					\$228,402	\$228,038	\$50,068	0.8x	4.6x

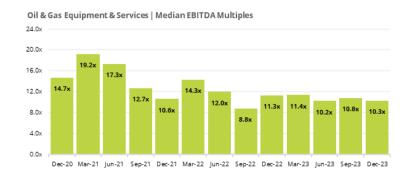
Exploration and Production

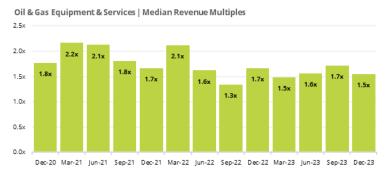




FactSet	Company	Share	Shares	Market Cap	Enterprise Value	Revenues	EBITDA (LTM)	Enterprise Value /	
Identifier	\$USD in Millions	Price	O/S			(LTM)		Revenues	EBITDA
HES	Hess Corporation	\$144.16	307	\$44,280	\$52,233	\$11,577	\$6,329	4.5x	8.3x
MRO	Marathon Oil Corporation	\$24.16	585	\$14,140	\$19,810	\$6,425	\$4,277	3.1x	4.6x
APA	APA Corporation	\$35.88	307	\$11,005	\$17,631	\$8,584	\$5,178	2.1x	3.4x
PXD	Pioneer Natural Resources Company	\$224.88	233	\$52,467	\$57,518	\$19,472	\$9,765	3.0x	5.9x
COP	ConocoPhillips	\$116.07	1,187	\$137,822	\$147,440	\$59,508	\$24,166	2.5x	6.1x
DVN	Devon Energy Corporation	\$45.30	641	\$29,024	\$34,898	\$15,632	\$7,765	2.2x	4.5x
EOG	EOG Resources, Inc.	\$120.95	583	\$70,532	\$69,349	\$23,727	\$12,841	2.9x	5.4x
COG	Coterra Energy Inc.	\$25.52	752	\$19,196	\$20,903	\$6,319	\$4,226	3.3x	4.9x
Mean					\$52,473	\$18,906	\$9,318	2.9x	5.4x
Median					\$43,566	\$13,605	\$7,047	2.9x	5.2x

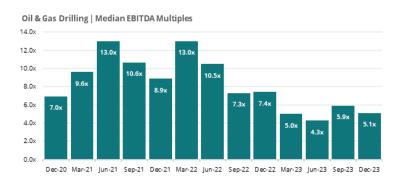
Oil and Gas Equipment Services





NOV NO	SUSD in Millions NOV Inc. Dil States International, Inc.	Price \$20.28	O/S 394	Сар	Value	(LTM)	(LTM)	Dovernos	FRITRA
		\$20.28	304		Value	(LTM)	(LTM)	Revenues	EBITDA
OIS Oi	Oil States International Inc		J) 4	\$7,989	\$9,903	\$8,306	\$930	1.2x	10.6x
	on states international, inc.	\$6.79	64	\$434	\$542	\$776	\$78	0.7x	7.0x
SLB Sc	schlumberger N.V.	\$52.04	1,428	\$74,337	\$84,068	\$32,023	\$6,970	2.6x	12.1x
RKR	Baker Hughes Company Class A	\$34.18	1,006	\$34,393	\$36,894	\$24,576	\$3,576	1.5x	10.3x
HAL Ha	Halliburton Company	\$36.15	895	\$32,356	\$39,259	\$22,861	\$4,979	1.7x	7.9x
15	enaris S.A. Sponsored ADR	\$34.76	590	\$20,518	\$18,084	\$15,093	\$5,136	1.2x	3.5x
CHX Ch	ChampionX Corporation	\$29.21	195	\$5,690	\$6,062	\$3,801	\$736	1.6x	8.2x
FTI Te	echnipFMC plc	\$20.14	435	\$8,770	\$10,257	\$7,884	\$840	1.3x	12.2x
WHD Ca	Cactus, Inc. Class A	\$45.40	65	\$2,933	\$3,128	\$1,010	\$305	3.1x	10.2x
CLB Co	Core Laboratories Inc.	\$17.66	47	\$825	\$1,042	\$533	\$74	2.0x	14.0x
Mean					\$20,924	\$11,686	\$2,362	1.7x	9.6x
Median					\$10,080	\$8,095	\$885	1.5x	10.3x

Oil and Gas Drilling





FactSet	Company \$USD in Millions	Share	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
Identifier		Price						Revenues	EBITDA
HP	Helmerich & Payne, Inc.	\$36.22	99	\$3,601	\$3,791	\$2,872	\$923	1.3x	4.1x
PTEN	Patterson-UTI Energy, Inc.	\$10.80	417	\$4,507	\$5,796	\$3,351	\$999	1.7x	5.8x
NBR	Nabors Industries Ltd.	\$81.63	9	\$773	\$3,907	\$3,040	\$915	1.3x	4.3x
PDS	Precision Drilling Corporation	\$54.29	15	\$790	\$1,524	\$1,462	\$413	1.0x	3.7x
RIG	Transocean Ltd.	\$6.35	809	\$5,137	\$11,716	\$2,697	\$729	4.3x	16.1x
SHLF-NO	Shelf Drilling Ltd.	\$2.86	213	\$609	\$1,985	\$832	\$282	2.4x	7.1x
VTDRF	Vantage Drilling International	\$24.33	13	\$322	\$442	\$332	\$41	1.3x	10.8x
MDI-CA	Major Drilling Group International Inc.	\$6.98	82	\$573	\$511	\$549	\$115	0.9x	4.4x
Mean					\$3,709	\$1,892	\$552	1.8x	7.0x
Median					\$2,888	\$2,079	\$571	1.3x	5.1x

Oil & Gas Refining & Marketing

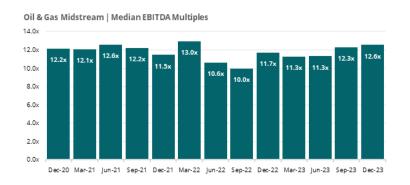


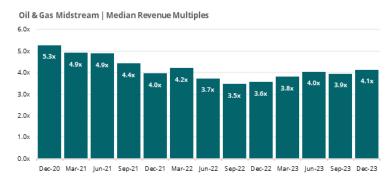


FactSet	Company \$USD in Millions	Share	Shares O/S	Market Cap	Enterprise Value	Revenues	EBITDA	Enterprise Value /	
Identifier		Price				(LTM)	(LTM)	Revenues	EBITDA
PSX	Phillips 66	\$133.14	440.0	\$58,576	\$75,649	\$149,492	\$11,192	0.5x	6.8x
VLO	Valero Energy Corporation	\$130.00	340.5	\$44,259	\$51,800	\$151,122	\$17,238	0.3x	3.0x
CSAN	Cosan S.A. Sponsored ADR	\$15.66	468.5	\$7,337	\$21,984	\$7,988	\$1,973	2.8x	11.1x
HFC	HF Sinclair Corporation	\$55.57	219.5	\$12,197	\$14,312	\$33,286	\$3,895	0.4x	3.7x
VVV	Valvoline, Inc.	\$37.58	130.0	\$4,885	\$6,202	\$1,444	\$369	4.3x	16.8x
SUN	Sunoco LP	\$59.93	84.1	\$5,038	\$9,133	\$23,345	\$979	0.4x	9.3x
INT	World Kinect Corporation	\$22.78	60.2	\$1,371	\$1,918	\$49,761	\$618	0.0x	3.1x
CVI	CVR Energy, Inc.	\$30.30	100.5	\$3,046	\$3,987	\$9,725	\$1,619	0.4x	2.5x
NGL	NGL Energy Partners LP	\$5.57	131.9	\$735	\$4,475	\$7,645	\$693	0.6x	6.5x
Mean					\$21,051	\$48,201	\$4,286	1.1x	7.0x
Median					\$9,133	\$23,345	\$1,619	0.4x	6.5x



Oil & Gas Midstream



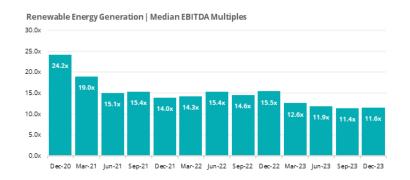


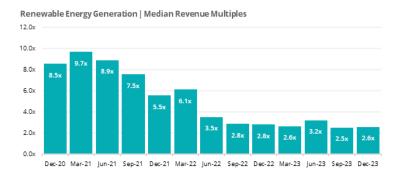
FactSet	Company	Share	Shares	Market	Enterprise	Revenues	EBITDA	Enterprise Value /	
Identifier	\$USD in Millions	Price	O/S	Сар	Value	(LTM)	(LTM)	Revenues	EBITDA
ENB	Enbridge Inc.	\$36.02	2,126	\$76,563	\$139,812	\$33,874	\$9,869	4.1x	14.2x
EPD	Enterprise Products Partners L.P.	\$26.35	2,172	\$57,229	\$86,954	\$48,494	\$8,047	1.8x	10.8x
TRP	TC Energy Corporation	\$39.09	1,037	\$40,536	\$89,845	\$11,236	\$6,592	8.0x	13.6x
KMI	Kinder Morgan Inc Class P	\$17.64	2,223	\$39,210	\$71,437	\$15,330	\$5,826	4.7x	12.3x
WMB	Williams Companies, Inc.	\$34.83	1,216	\$42,371	\$68,481	\$10,304	\$5,456	6.6x	12.6x
MPLX	MPLX LP	\$36.72	1,001	\$36,765	\$57,915	\$10,406	\$5,260	5.6x	11.0x
OKE	ONEOK, Inc.	\$70.22	583	\$40,907	\$62,682	\$17,262	\$3,658	3.6x	17.1x
ET	Energy Transfer LP	\$13.80	3,363	\$46,404	\$108,793	\$78,555	\$12,261	1.4x	8.9x
PBA	Pembina Pipeline Corporation	\$34.42	549	\$18,909	\$28,907	\$7,060	\$2,039	4.1x	14.2x
Mean					\$79,425	\$25,836	\$6,556	4.4x	12.7x
Median					\$71,437	\$15,330	\$5,826	4.1x	12.6x



Public Comparables Renewable Energy

Renewable Energy Generation

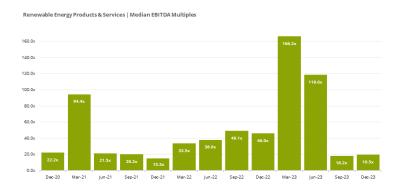




FactSet	Company	Share	Shares	Market	Enterprise	Revenues	EBITDA	Enterprise Value /	
Identifier	\$USD in Millions	Price	O/S	Сар	Value	(LTM)	(LTM)	Revenues	EBITDA
BEP	Brookfield Renewable Partners LP	\$26.28	288	\$7,581	\$54,832	\$5,100	\$3,176	10.8x	17.3x
NEE	NextEra Energy, Inc.	\$60.74	2,052	\$124,621	\$205,837	\$22,628	\$10,231	9.1x	20.1x
IBDRY	Iberdrola SA Sponsored ADR	\$52.45	1,588	\$83,266	\$149,662	\$58,401	\$14,474	2.6x	10.3x
DNNGY	Orsted Unsponsored ADR	\$18.49	1,261	\$23,318	\$32,529	\$12,946	\$1,246	2.5x	26.1x
TA-TSE	TransAlta Corporation	\$8.36	310	\$2,590	\$6,082	\$2,566	\$549	2.4x	11.1x
NPIFF	Northland Power Inc.	\$18.26	254	\$4,634	\$10,151	\$1,695	\$1,074	6.0x	9.5x
INGXF	Innergex Renewable Energy Inc.	\$6.97	204	\$1,424	\$5,987	\$740	\$495	8.1x	12.1x
CE2-DE	CropEnergies AG	\$12.70	87	\$1,108	\$883	\$1,346	\$148	0.7x	6.0x
CLNE	Clean Energy Fuels Corp.	\$3.83	223	\$854	\$910	\$430	(\$31)	2.1x	NM
Mean					\$51,875	\$11,761	\$3,485	4.9x	14.1x
Median					\$10,151	\$2,566	\$1,074	2.6x	11.6x

Public Comparables Renewable Energy

Renewable Energy Products & Services





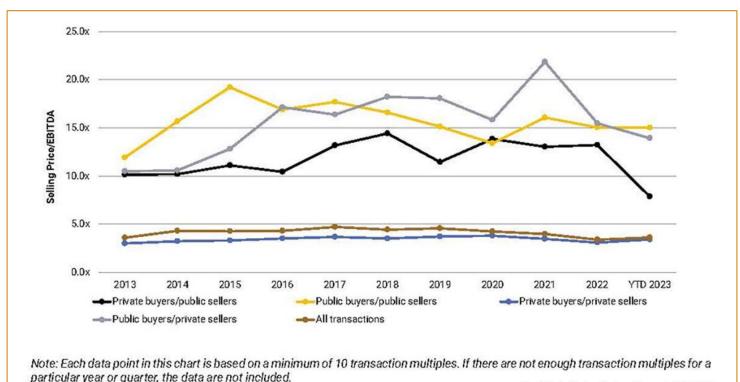
FactSet	Company	Share	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
Identifier	\$USD in Millions	Price						Revenues	EBITDA
CSIQ	Canadian Solar Inc.	\$26.23	65	\$1,695	\$4,408	\$7,989	-	0.6x	
RUN	Sunrun Inc.	\$19.63	218	\$4,277	\$15,430	\$2,352	(\$296)	6.6x	NM
FSLR	First Solar, Inc.	\$172.28	107	\$18,407	\$17,120	\$3,161	\$878	5.4x	19.5x
SEDG	SolarEdge Technologies, Inc.	\$93.60	57	\$5,318	\$5,023	\$3,551	\$436	1.4x	11.5x
SPWR	SunPower Corporation	\$4.83	175	\$847	\$1,105	\$1,827	(\$24)	0.6x	NM
VWDRY	Vestas Wind Systems A/S Unsponsored ADR	\$10.49	3,030	\$31,781	\$33,887	\$16,323	\$288	2.1x	117.6x
JKS	JinkoSolar Holding Co., Ltd. Sponsored ADR	\$36.94	52	\$1,932	\$8,054	\$16,483	-	0.5x	
NRDXF	Nordex SE	\$11.56	236	\$2,733	\$2,548	\$6,954	(\$364)	0.4x	NM
Mean					\$10,947	\$7,330	\$153	2.2x	49.5x
Median					\$6,538	\$5,253	\$132	1.0x	19.5x

Public Vs. Private Comparables

Valuation Premiums Can Be Considerable

Regardless of industry, publicly traded companies often trade at premium valuations to privately held companies. This is reflected in M&A transactions and can lead to unrealistic value expectations for some business owners. The chart below illustrates this variance and shows that the variance has been both long term and growing.

Transactions between private buyer and private seller tend to be small by comparison and thus do not benefit from a "size" premium that is associated with transactions in general. While this chart does not breakout private equity transactions, our analysis indicates those transactions usually fall between public and private and move closer to public as size increases.



DealStats Value Index Report Q4-2023



About CFA

Who We Are / What We Do

Corporate Finance Associates (CFA) is an independent international investment banking firm serving middle-market businesses. For over 65 years Corporate Finance Associates has been advocating on behalf of business owners who are guiding a company through either a sale, merger, acquisition or recapitalization. Combining the knowledge and leverage of a larger bank with the customer focused detail of a boutique firm, from inception to completion, our senior principals provide hands-on expertise to each of our clients.

This Energy Industry Practice Group was established to draw on the experience of CFA advisors, many of whom as former business owners and CEOs, have first-hand knowledge and have completed many transactions in this industry. Working with your local CFA representative, you can be sure that the collective wealth of knowledge is available to every CFA client.



Sell-Side Advisory

Whether as a divestiture strategy or a recapitalization strategy selling all or part of a business requires equal parts creative thinking, critical analysis, expert advice, sound planning and flawless execution. Having the right team of investment banking professionals working for you is critical to ensure



Capital Markets

Our commitment to remaining independent from any investment or lending affiliates ensures that we deliver unbiased guidance. It also promotes maximum competition among lending sources, helping to fully leverage value for our clients. Our role is to help you raise the type of capital that best fits your needs.



Buy-Side Advisory

Growth through acquisition is a complex process. It involves strategy, planning, critical analysis, coordination and negotiation. When you want to take advantage of the fast growth offered by a consolidation or roll-up, CFA's broad reach, sources of financing and efficient closings can help you achieve your business growth goals.



Financial Advisory

Now that you have made the decision to raise capital for your business, choosing the right investment banker is critical. Whether you are buying out a partner, financing an acquisition or seeking growth capital, CFA is the right choice to help you achieve your financing goals



Exit Planning

Every business will ultimately undergo a transfer via sale or merger, a charitable donation, a transfer to a child or relative or even bankruptcy, liquidation or death. Every ownership transfer carries with it a unique set of consequences and the best consequences usually begin with a clearly defined exit plan.



Business Valuation

"What is my business worth" is a question we often hear from business owners contemplating a business sale, merger or recapitalization. Answering this question depends on many factors, including the business valuation methods that are employed in the calculation.

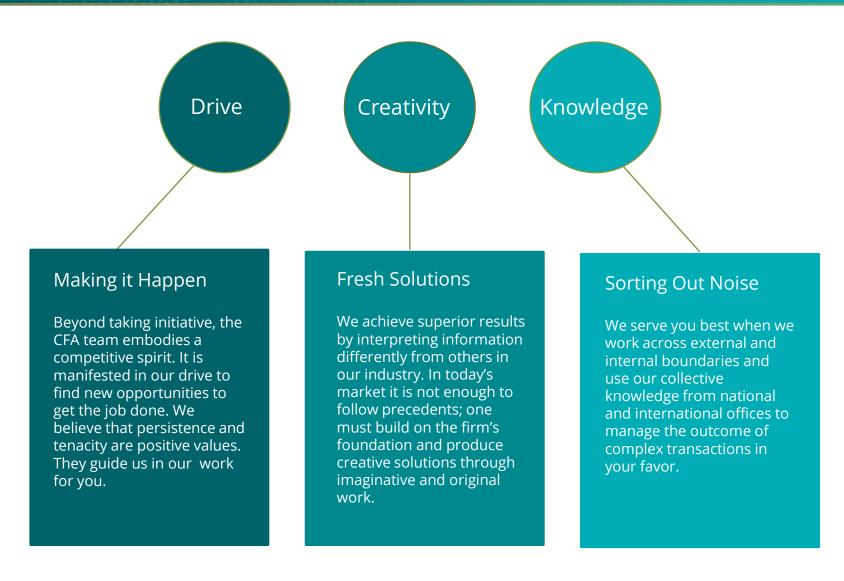
Local Service, Global Reach

Where We Are

With offices across the USA and in Austria, Belgium, Brazil, Germany, Hong Kong, India, Ireland, Italy, Mexico, Netherlands, Poland, Spain, Switzerland and the United Kingdom providing middle-market companies with a wide range of M&A, financial advisory services and access to capital resources.



Delivering Results



Founded in 1956 • 70 Managing Directors • 37 Offices Worldwide • Billions in M&ATransactions

Industry Practice Groups

Energy



The Energy practice group is comprised of accomplished dealmakers with extensive experience in advising both public and private companies in the industry. These dealmakers offer expert service in acquisitions, divestitures, financing, and strategic planning to a wide range of companies operating in multiple subsectors including:

- Upstream
 - Exploration & Production Companies
 - Producing Properties and Mineral Interests
 - Drilling Contractors
 - Oil & Gas Service Companies
 - Equipment and Supply Manufacturers
 - Transport Services
 - Engineering and Construction Services
 - Geophysical and Geoscience Services
 - Consulting and Regulatory Advisory Services
- Midstream and Downstream
 - Pipeline Companies
 - Refiners
 - Storage and Terminals
 - Gatherers
 - Wholesale Distributors
- Renewable Energy
 - Solar, Wind and Geothermal
 - Alternative Fuels
 - Renewable Energy Services

Aerospace/Defense/Government

Agriculture

Animal Health

Business Services

Commercial Real Estate

Consumer Retail

Energy

Engineering/Construction

Financial Services & FinTech

Food/Beverage

Healthcare/Life Sciences

Industrials

Metal Fabrication

Print/Packaging

Semiconductors

Specialty Chemicals

Technology/Media/Telecom

Transportation/Logistics/Supply Chain

Wholesale Distribution

Selected Energy Industry Transactions

This announcement appears as a matter of record only

Houston Fuel Oil Terminal Co.

bas been acquired by



Apex Oil Company

A member of the Energy Industry Practice Group acted as financial advisor in the transaction



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This announcement appears as a matter of record only



The Port of Los Angeles

has been acquired by

Japan Coal Development Co.

A member of the Energy Industry Practice Group acted as financial advisor in the transaction



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This announcement appears as a matter of record only

Oiltanking of Texas, Inc.

has been acquired by



Marquard & Bahls Investment Corp.

A member of the Energy Industry Practice Group acted as financial advisor in the transaction



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Mustang Gas Compression Ltd.

bas secured funding from

CATERPILLAR

Caterpillar Financial Services Corp.

The undersigned initiated the transaction and acted as financial advisor to Mustang Gas Compression Ltd.



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This announcement appears as a matter of record only



M&M Pump Supply, Inc. PD Investments McCoy Machine and Gear

bave been acquired by

DN Partners

The undersigned initiated and acted as advisor in the transaction



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Eagle Excavation

has been acquired by



The undersigned initiated and acted as an advisor to the Seller in the transaction



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Houston Fuel Oil Terminal Co.

bas been acquired by



ArcLight Capital Partners

The undersigned initiated and acted as advisor in the transaction



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Houston Fuel Oil Terminal Co.

bas been acquired by



Royal Dutch Shell Group

A member of the Energy Industry Practice Group acted as financial advisor in the transaction



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Since 1956

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Taylor Gas Liquids, Inc.

has been acquired by



The Halifax Group

The undersigned initiated and acted as the exclusive representative of the seller



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Has Been Recapitalized By

Crystal Ridge Partners

The undersigned initiated and acted as financial advisor in the transaction



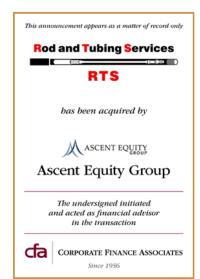
CORPORATE FINANCE ASSOCIATES

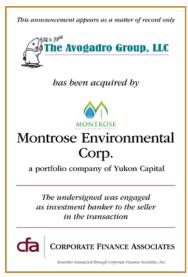
Since 1956



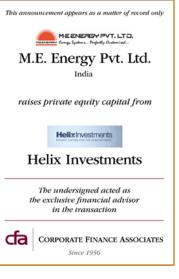
Selected Energy Industry Transactions



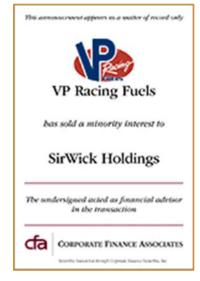




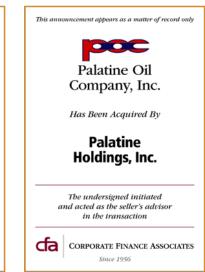


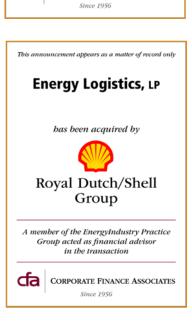












Selected Energy Industry Transactions





bas been acquired by



The undersigned initiated and acted as financial advisor in the transaction



This announcement appears as a matter of record only



bas been acquired by



The undersigned initiated and acted as exclusive financial advisor to the seller in the transaction



This announcement appears as a matter of record only



has entered into a Technology Licensing, Product and Market Development Agreement with



The undersigned initiated and acted as financial advisor in the transaction



CORPORATE FINANCE ASSOCIATES

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This announcement appears as a matter of record only



Delta Energy Services, LLC

bas been acquired by



Edison Energy, LLC

The undersigned initiated and acted as the investment banker to the seller in the transaction



CORPORATE FINANCE ASSOCIATES

Securities transacted through Corporate Finance Securities, Inc.

This announcement appears as a matter of record only



bas acquired a majority ownership in



The undersigned initiated and acted as exclusive advisor in the transaction



CORPORATE FINANCE ASSOCIATES

Since 1956

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bas been acquired By

Gate Holdings, Inc.

The undersigned initiated and acted as financial advisor in the transaction



This announcement appears as a matter of record only



has been acquired by



The undersigned initiated and acted as financial advisor in the transaction



CORPORATE FINANCE ASSOCIATES

Since 1956

This announcement appears as a matter of record only



has been acquired by



a portfolio company o



The undersigned initiated and acted as financial advisor in the transaction



CORPORATE FINANCE ASSOCIATES

Since 1956

This announcement appears as a matter of record only



Texas Geologic Services, LLC

has been acquired by

Ruston Partners, LLC

The undersigned initiated and acted as financial advisor in the transaction



CORPORATE FINANCE ASSOCIATES

Securities transacted through Corporate Fanance Securities, Inc.

This announcement appears as a matter of record only



has been acquired by



Ireland, Northern Ireland, United Kingdom

CFA Dublin initiated and acted as advisor to the seller in the transaction



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Worldwide Transactions

