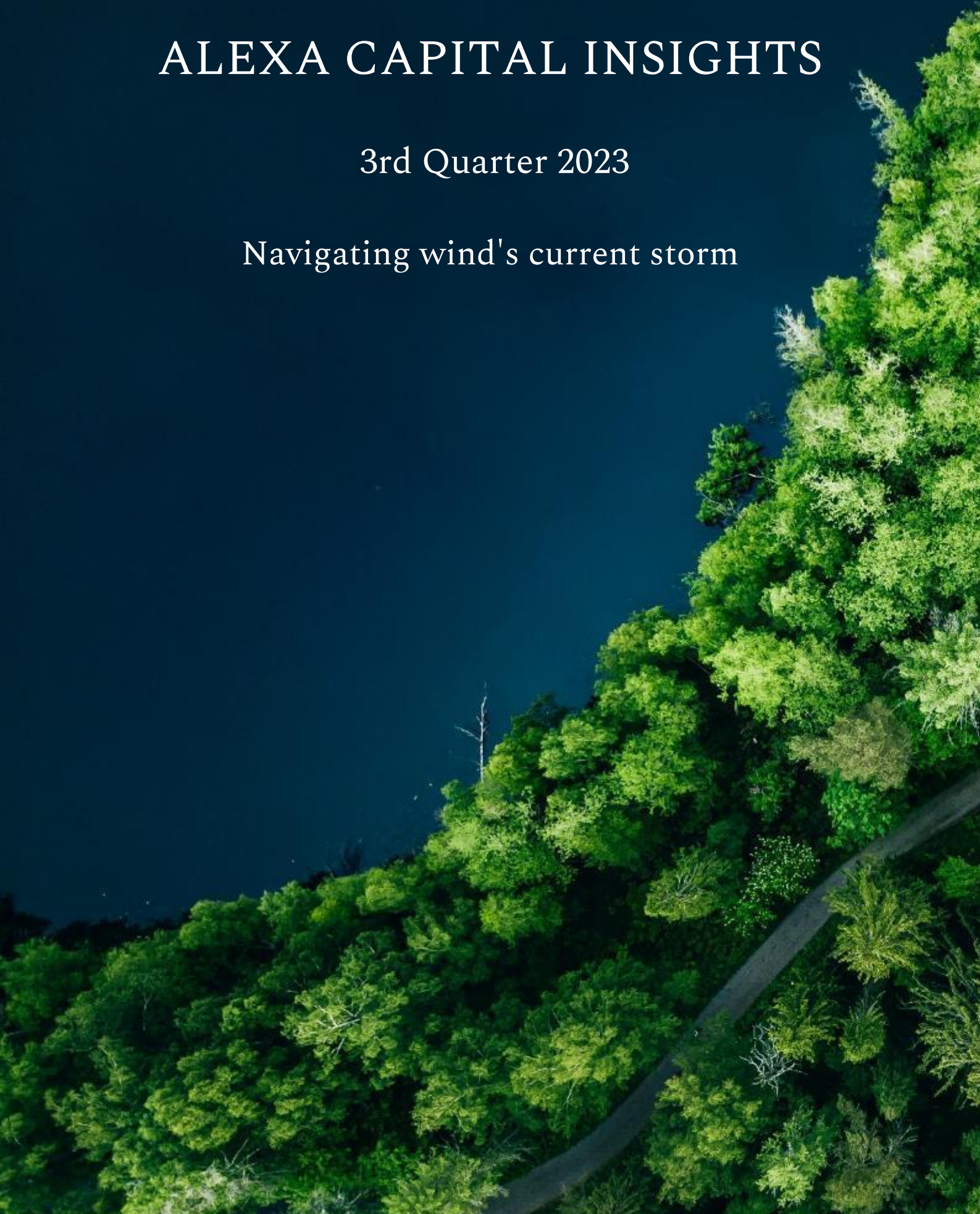


ALEXA CAPITAL INSIGHTS

3rd Quarter 2023

Navigating wind's current storm



ALEXA CAPITAL INSIGHTS

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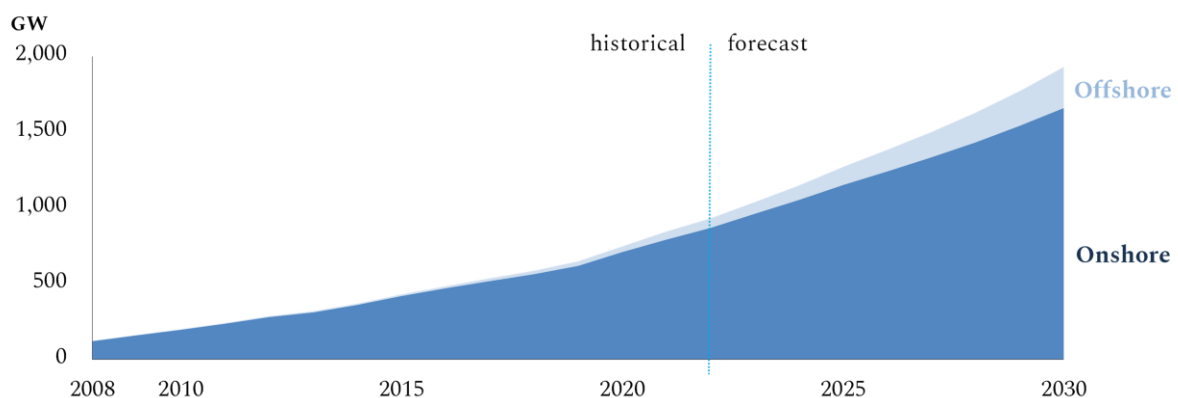
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Navigating wind's current storm

Why is investing in wind so challenging?

Wind is one of the two largest forms of clean energy generation with global cumulative installed capacity set to hit 2.38 terawatt-hours by 2032 (Source: Wood Mackenzie). This represents a 10-year compound annual growth rate of more than 10%, a remarkable outlook for an asset class that has arguably been around for more than a hundred years. And there is little doubt that growth will continue beyond 2030 as governments seek to achieve decarbonisation targets.

Cumulative wind installs have grown in recent years, with 1 TW turbines in place by year-end



Source: Bloomberg

But the wind industry is facing head-winds. As things stand, the sector is having a challenging time delivering against its promise, with setbacks on several fronts.

In **onshore wind**, the most mature segment of the industry, new projects face permitting problems and growing opposition as prime sites become saturated and developments move closer to inhabited areas. Anti-wind NIMBYism is not helped by the increasing size of wind turbines. Chinese manufacturer Goldwind has an onshore machine on the market with a generating capacity of 16MW that has a rotor diameter of 252 meters, exceeding the length of two football pitches—not an easy sell for those who prefer the view without turbines.

In **offshore wind**, where there is the most promising growth outlook, recent large-scale development auctions have failed due to the disconnect between governments' low-cost targets and increased supply chain costs. Developers could not see a way to build projects at the rates being offered by governments. In August 2023, for instance, only one of three US offshore wind leases in the Gulf of Mexico was taken up in a lacklustre auction that featured just two bidders. In September, there was not a single offshore wind deal struck in the UK's fifth contract for differences auction – where this development poses a significant risk to the UK's plan to triple Britain's offshore wind capacity to reach 50GW by 2030. This

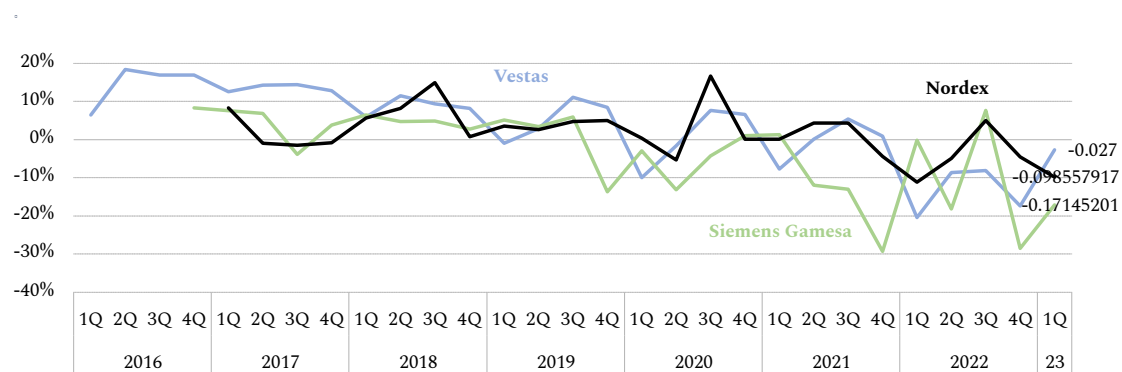
will also be a blow to the regional green economy supply chain, which was expected to create more than 100,000 new jobs by the end of the decade.

Supply Chain Pain

Outside of China, all parts of the industry are suffering supply chain pains. After managing to achieve cost reductions of 57% onshore and 73% offshore between 2012 and 2022, Western wind turbine manufacturers are heavily lossmaking, largely due to four main issues:

- *Intense competition* has forced major players to overreach in terms of new product development, rushing to market with sub-par machines. In February 2023, for example, Siemens Gamesa—now folded into Siemens—blamed a quarterly net loss of \$974 million on warranty provisions from faulty components, especially blade failures. These failures could cost turbine manufacturers considerable sums for years to come on installed capacity.
- *Chinese vendors*, which have long played catch up in the industry, are now besting Western manufacturers on performance and cost thanks to greater scale and vertical integration. The world's most powerful wind turbines are now being made in China.
- *Thin margins* – Beyond making ever-larger versions of current concepts, the scope of innovation in the industry is limited by the paper-thin margins that manufacturers are forced to accept so developers can win government auctions.
- *Increasing costs* – High commodity prices are driving inflation in the industry, with the nominal cost per megawatt of capacity for onshore wind rising 21% in the last five years.

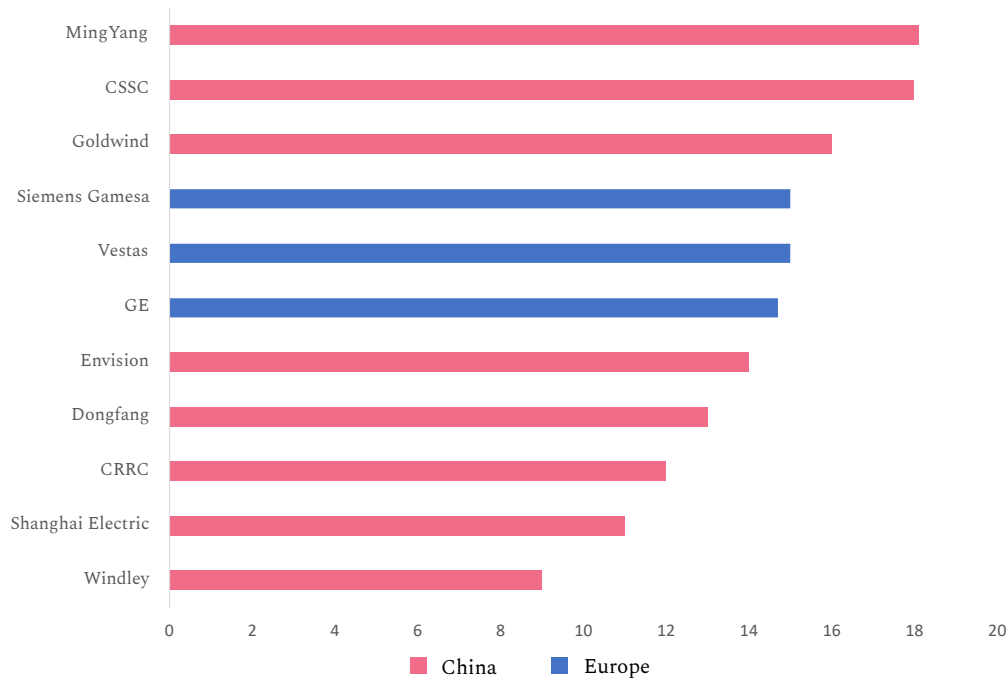
Major Western wind turbine manufacturer EBIT margin performance



Source: Bloomberg

While the supply chain remains under stress, there is a danger that some of the biggest Western supplier names in the industry today could go under. German turbine maker Enercon has already [called for government support](#) in the face of Chinese competition.

Chinese turbine manufacturers now dominate the 100GW per annum global market
...now with 130 GW of capacity

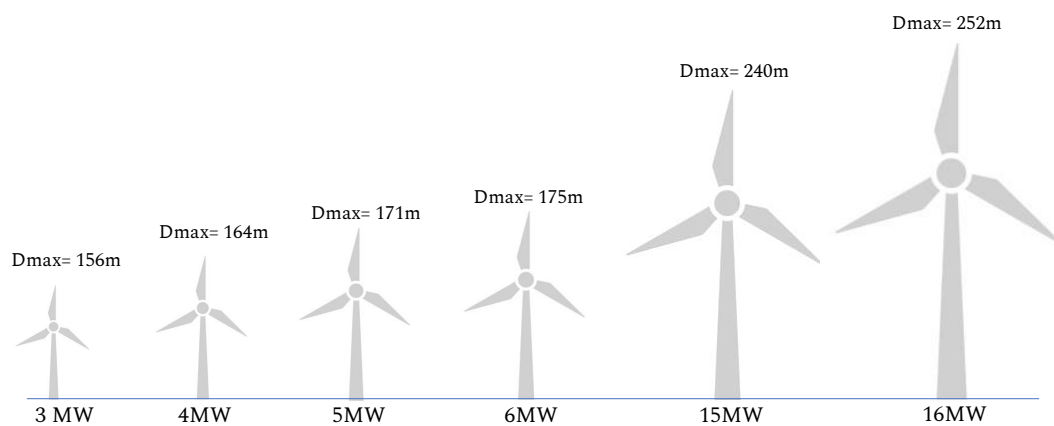


Source: Bloomberg

Is innovation limited primarily to size?

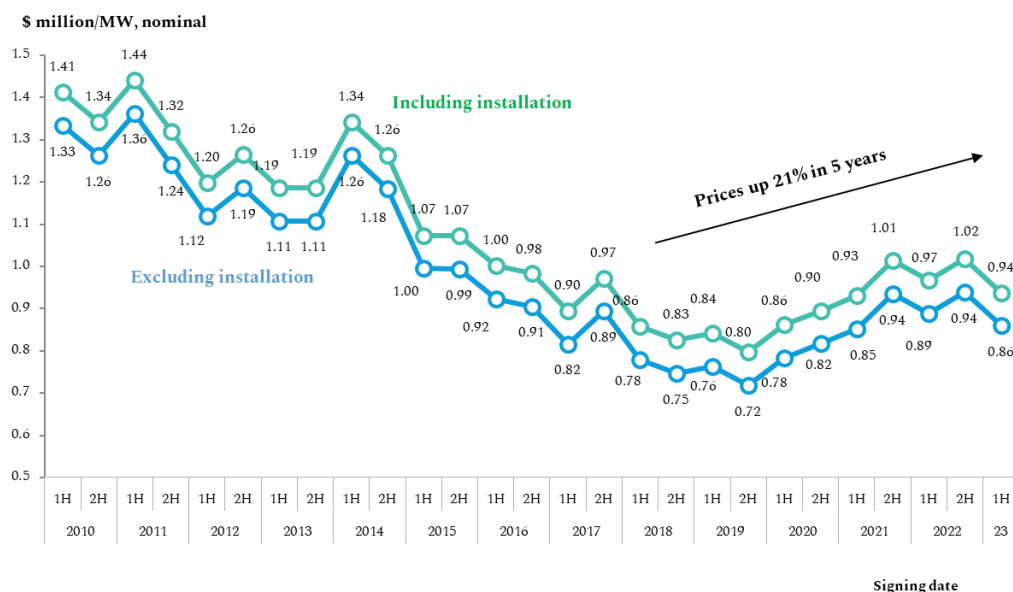
It's interesting to note that innovation over the past decades has been primarily about increasing generation output, with turbines just getting larger and larger. A decade and half ago, turbines were less than 1MW rated capacity. With today's largest turbines, market leader Goldwind is testing its 12MW onshore and 16MW offshore designs, which have 240m and 252m the turbine blade diameters compared to the deployments [a decade ago]. Simply competing on size creates some concerns both on siting these large generators, also on maintainability.

Wind turbine innovation has focused on increased size to achieve higher efficiencies
...but with growing public resistance – who wants to have these in view of their back gardens?



With technology advances to-date, costs appear to be going up, not down. For the wind sector, by contrast to solar PV, there appears a narrower focus on innovation. PV designs compete on cost, size, efficiency, building-integrated designs and flexible form factors. Yet in wind, the varied form factors (micro-wind generation, etc) have remained 'niche'.

While other renewable technologies have benefited from cost reductions, recent wind generation developments show increasing costs.



Source: Bloomberg

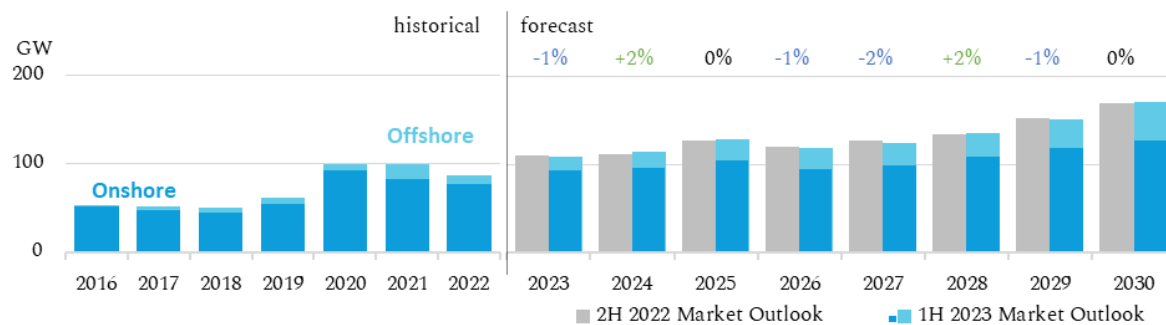
Development challenges

Beyond these wind-specific challenges, the sector faces three further problems that are common to all forms of renewable generation. The first is increased power price volatility from the growing presence of renewables on the grid, combined with climate change and geopolitical shifts. Without subsidies, wind project owners cannot make money from low or negative power prices, and so will likely require continued government support to build new plants. But this need is hindered by the second headwind, which is that government budgets are under pressure in many major markets, reducing government subsidies that have historically been a critical part of developing the asset class.

Not only are governments struggling with high inflation, but when it comes to electricity networks then they have a growing need to balance a buildout of intermittent generation with more secure—and often more expensive—source of supply, such as nuclear, biomass, storage and other plants. Also affecting government spending is the third problem for renewables: in many markets, a lack of transmission infrastructure and bottlenecks in existing grid connectivity are materially impacting progress for developers. Without significant government spending on new grid infrastructure, clean energy will simply not get built.

For all these reasons, wind development looks set to fall short of its near-term growth potential. Bloomberg's recent forecasts suggest relatively flat growth over the balance of the decade.

Global Wind Installations (GW)



Source: Bloomberg

4 reasons to remain hopeful for wind's long-term outlook.

The wind industry's struggles represent a low point for an industry that should be flourishing as society moves from fossil fuels to renewables. Yet despite this bleak picture, there are still good reasons to support capital flows into wind. Inflationary pressures are subsiding, long-term demand for renewables remains strong and the European Union and the US, which together accounted for almost 39% of global wind power in 2021, are looking to attract clean energy investment, with energy security becoming more of a driver. A careful appraisal of recent developments suggests that the outlook for wind could be brighter than it currently looks.

Let's look at each trend.

Inflationary pressures are subsiding – Global inflation, arguably the biggest problem for the wind industry in 2022, is expected to fall from 8.8% in 2022 to 6.6% in 2023 and 4.3% in 2024, according to the International Monetary Fund. In the euro area, inflation has been falling throughout 2023, dropping to 5.2% in August from 9.2% in December 2022. And in the US the rate has been dropping since the middle of last year, down from a peak of 9.1% in June 2022 to 3.6% in August 2023.

Long-term demand for renewables remains strong – To say that more wind capacity will be needed in the coming years would be a vast understatement. Growth estimates for onshore wind in Europe and the US are more than 40% while those for offshore projects are above 100%. Furthermore, these forecasts are largely based on confirmed project pipelines and completely ignore the fact that deployment of wind and other renewables must grow geometrically in the future if society is to achieve the climate goals set out in the Paris Agreement.

A key feature of the energy transition is that most of electricity generation will need to come from either solar or wind power by 2050. According to the International Energy Agency's Net Zero by 2050 pathway, annual capacity additions for wind worldwide will need to rise from 111 gigawatts a year in 2020 to 390 gigawatts by 2030. The IEA says that **wind power will need to see an elevenfold increase in capacity by 2050.**

The European Union and the US are looking to attract investment – In August 2022, a less-than-vibrant market for renewables in the US was galvanised by the passing of the Inflation Reduction Act (IRA), the largest-ever Federal package to support clean energy development. For wind, the IRA's main gift was to provide regulatory certainty over tax-based funding up to the end of this decade. The importance of the IRA cannot be understated, since renewables advocates have long complained that the short-term nature of tax incentives provided little support for local manufacturing and long-term planning. Rystad Energy estimated the IRA could increase US renewables installations up to 40% by 2030, adding 85 gigawatts of onshore wind capacity to the 193 gigawatts that would have been expected under the previous regulatory regime.

Mindful that manufacturers and developers could decamp to the US in search of profits, the European Union has been working on a big support package of its own in 2023. It presented a Green Deal Industrial Plan in February and followed this up with a Net-Zero Industry Act proposal in March. The Act provides a regulatory framework for the quick deployment of renewables, ensuring simplified and fast-track permitting, promoting European strategic projects and developing standards to support the scale-up of technologies across the single market.

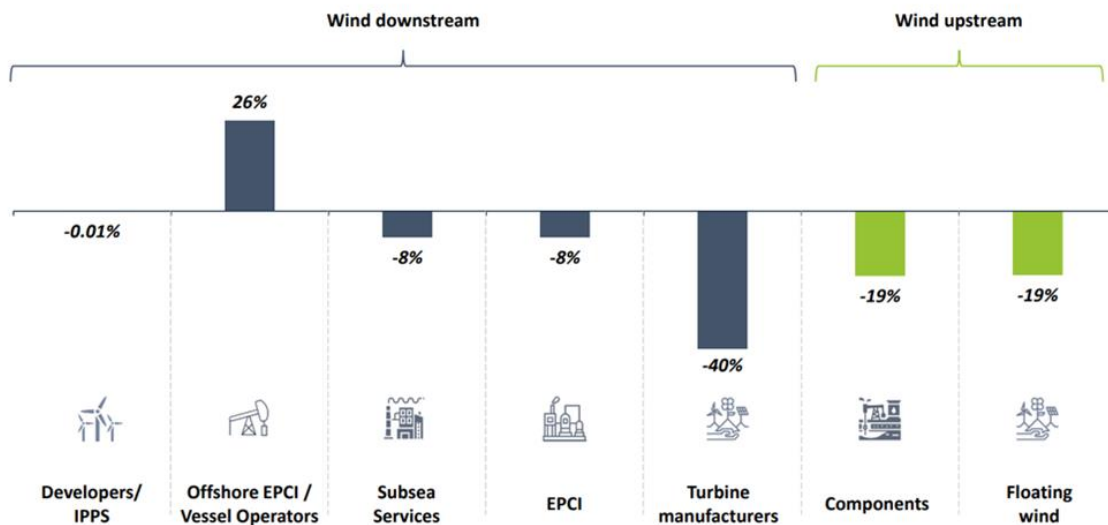
Energy security concerns are driving support for wind – Russia's invasion of Ukraine showed how fossil fuel energy supplies could be weaponised in a geopolitically unstable world. In Europe, particularly, this has led to a dash for homegrown renewables, with wind and solar at the forefront. Wind is attractive from an energy security standpoint not only because it is a mature, cost-effective technology that can be deployed at scale, but also—for now—because it can largely be built out using local supply chains.

As policymakers fight to provide the best possible environment for renewables deployment, there is little doubt that wind will benefit. The question for investors is: what areas of wind should we be looking at now?

Areas that are still investable

While the outlook for European turbine and component manufacturers remains uncertain, with Chinese players increasingly likely to dominate emerging growth markets in Asia Pacific and elsewhere, there are many segments of the wind industry that can offer significant returns. Some of the most interesting are as follows.

Not all segments of the value chain are suffering.



Source: Bloomberg

IPPs and integrated development platforms – Owning and operating wind farms is sizeable business, since operational assets can generate revenues for 30 years or more. Major wind operators include Iberdrola Renewables of Spain, NextEra Energy Resources of the US and EDP Renovaveis of Portugal. Alongside these giant portfolio holders, a host of independent power producers (IPPs) can offer plenty of opportunity for growth capital. Engineering, procurement and construction (EPC) players have always been assured of steady revenues in the wind sector, but the transformation of these companies into so-called development platforms has inflated valuations and sparked frenzied deal activity from 2021 onwards. In deals such as Ørsted's takeover of Brookfield Renewable Partners' onshore wind business, acquirers are interested not only in the EPC capabilities of the developer but also in their project pipeline.

Operations and maintenance services – As the installed base of global wind power grows, so does the need for efficient operations and maintenance. This is a segment populated by a teeming ecosystem of inspection, repairs and maintenance companies, often with significant digital capabilities. Alongside these groups, there is an emerging growth opportunity in repowering, lifetime extension, decommissioning, recycling and other circular economy activities related to the wind industry. Turbine blades are expected to yield 660,000 tonnes of waste by 2030.



Offshore wind supply chain – The Global Wind Energy Council expects offshore wind capacity, which topped 21 gigawatts worldwide in 2021, to hit 30 gigawatts in 2027 and 50 gigawatts in 2030. And these estimates could fall short following developments such as the IRA and the Net-Zero Industry Act. Getting this capacity commissioned will require a massive scale up of supply chain infrastructure, including investments in ports, cabling and installation vessels and subsea operations, as well as improved grid infrastructure and large-scale recruitment and training programmes. If offshore is amongst the most interesting part of the wind industry from a growth potential, then floating platforms represent arguably one of the most interesting parts of offshore. The nascent floating offshore wind market exploded in 2022 with the *Scotwind* auction in the UK and the Pacific Wind leasing round in California. The UK aims to have 24 gigawatts of floating wind in the Celtic Sea alone by 2045, creating a €59 billion economy, while the US has a target of 15 gigawatts by 2035 and the California Energy Commission is looking to have 25 gigawatts installed by 2045, with up to 5 gigawatts by 2030.

Small and micro-wind – Small and micro wind for domestic and farm operation continues to be a niche growth sector. Developments are progressing, with a wide array of solutions becoming more and more cost competitive, especially when complementing solar PV and other efficiency solutions. While it may be a while before we see cost and efficiency breakthroughs in this segment, the IRA and other regional subsidies are causing residential and rural commercial customers to integrate these solutions. In regions with increasingly volatile and high power prices, we can expect to see more installations.



At Alexa, we recognise the significance of wind power. We have expertise to guide capital through the various parts of the value chain of what will continue to remain a pivotal part of the energy transition.

An aerial photograph of a lush, green forest. A dark, winding river flows through the landscape, creating a meandering path. The forest is dense with various shades of green, and the river's banks are clearly visible. The overall scene is serene and natural.

SECTOR TRADING ANALYSIS

MOBILITY

Company	Price Current	Weekly % Change	YTD Price % Change	Market Cap	Enterprise Value	Revenue 2022	EBITDA 2022	EV/Revenue 2022 2023E 2024E	EV/EBITDA 2022 2023E 2024E	P/E 2022 2023E
EV Manufacturers										
Tesla	\$265.28	-1%	145%	841,997	825,785	81,462	18,201	10.1x 8.3x 6.5x	45.4x n.a. 36.0x	n.a. n.a.
BYD	¥247.17	-2%	-5%	96,104	90,921	63,061	6,097	1.4x 1.1x 0.9x	14.9x 11.0x 8.6x	38.9x 28.2x
Rivian	\$23.71	1%	37%	22,480	15,625	1,658	-6,204	9.4x 3.6x 2.2x	n.a. n.a. n.a.	n.a. n.a.
Lucid Motors	\$5.64	-5%	-9%	12,874	9,978	608	-2,363	16.4x 12.5x 5.2x	n.a. n.a. n.a.	n.a. n.a.
NIO	\$10.31	-2%	7%	17,207	17,896	7,327	-1,732	2.4x 2.1x 1.4x	n.a. n.a. n.a.	n.a. n.a.
XPeng	\$18.46	-1%	81%	15,982	14,508	3,994	-1,085	3.6x 3.3x 1.9x	n.a. n.a. n.a.	n.a. n.a.
Li Auto	\$39.68	-3%	89%	42,050	33,617	6,734	-363	5.0x 2.1x 1.4x	n.a. 36.8x 17.8x	n.a. 44.7x
Arrival	\$1.49	-4%	-83%	23	467	0	-389	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.
Fisker	\$6.57	2%	-5%	2,255	2,498	0	-517	n.a. 3.2x 0.9x	n.a. n.a. n.a.	n.a. n.a.
Nikola	\$1.59	74%	-28%	1,362	1,502	51	-724	29.5x 13.4x 3.8x	n.a. n.a. n.a.	n.a. n.a.
Embark Technology	n.a.	n.a.	1%	70	-38	0	-151	n.a. n.a. n.a.	0.2x n.a. n.a.	n.a. n.a.
REE Automotive	\$0.17	3%	-59%	57	-75	0	-123	n.a. n.a. n.a.	0.6x 0.9x 1.0x	n.a. n.a.
Lion Electric	\$2.03	-5%	-5%	459	545	140	-69	3.9x 1.9x 1.0x	n.a. n.a. n.a.	25.8x n.a.
Faraday Future	\$4.68	21%	-78%	87	179	0	-443	n.a. 11.9x 0.9x	n.a. n.a. n.a.	n.a. n.a.
Proterra	n.a.	n.a.	n.a.	n.a.	n.a.	309	-201	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.
Polestar	\$2.59	-7%	-51%	5,465	5,927	2,462	-1,128	2.4x 2.0x 1.2x	n.a. n.a. n.a.	n.a. n.a.
Canoo	\$0.46	-12%	-63%	290	350	0	-495	n.a. 17.5x 0.6x	n.a. n.a. n.a.	n.a. n.a.
Workhorse	\$0.57	-11%	-65%	119	67	5	-127	13.3x 1.2x 0.4x	n.a. n.a. n.a.	n.a. n.a.
Hyliion	\$1.31	2%	-43%	237	14	2	-156	6.8x 1.3x 0.2x	n.a. n.a. n.a.	n.a. n.a.
VivoPower International	\$0.43	-11%	79%	11	39	n.a.	n.a.	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.
XOS Trucks	\$0.35	-1%	-29%	62	62	36	-107	1.7x 1.5x 0.5x	n.a. n.a. n.a.	n.a. n.a.
Lightning E-Motors	n.a.	n.a.	n.a.	n.a.	n.a.	24	-69	n.a. n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.
Amulair Thermal Technology	NT\$39.80	4%	28%	111	146	25	-6	6.0x n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.
Greenpower Motor	\$3.41	-9%	94%	85	89	34	-13	2.6x 1.2x 0.8x	n.a. n.a. 20.6x	n.a. n.a.
Median								5.0x 2.1x 1.0x	7.8x 11.0x 17.8x	32.4x 36.5x
Average								7.6x 5.2x 1.7x	15.3x 16.2x 16.8x	32.4x 36.5x
EV Charging Infrastructure										
Chargepoint Holdings	\$5.37	-5%	-41%	1,976	2,063	449	-304	4.6x 3.4x 2.5x	n.a. n.a. n.a.	n.a. n.a.
EVGO	\$3.73	-6%	-9%	1,116	912	55	-114	16.7x 6.6x 3.5x	n.a. n.a. n.a.	n.a. n.a.
Wallbox	\$2.51	-7%	-27%	493	481	152	-126	3.2x 2.5x 1.3x	n.a. n.a. n.a.	n.a. n.a.
Alten Beheer	€44.60	3%	-48%	1,038	1,082	463	82	2.3x 2.1x 1.6x	13.2x 19.9x 12.8x	18.6x 38.3x
Volta	\$0.58	-24%	-62%	93	196	125	-82	1.6x 0.8x 0.4x	n.a. n.a. 20.5x	n.a. n.a.
Blink Charging	\$3.58	-6%	-67%	233	174	61	-75	2.9x 1.5x 1.1x	n.a. n.a. n.a.	n.a. n.a.
Allego	\$2.71	11%	-12%	724	1,059	141	-303	7.5x 5.4x 3.0x	n.a. n.a. 12.4x	n.a. n.a.
Pod Point	£34.00	0%	-47%	65	-1	88	-15	n.a. n.a. n.a.	0.0x 0.0x 0.1x	n.a. n.a.
Beam Global	\$7.83	-8%	-52%	109	87	22	-19	4.0x 1.4x 1.0x	n.a. n.a. n.a.	n.a. n.a.
Median								3.6x 2.3x 1.4x	6.6x 9.9x 12.6x	18.6x 38.3x
Average								5.3x 3.0x 1.8x	6.6x 9.9x 11.4x	18.6x 38.3x
Mobility services										
Uber	\$46.51	-3%	83%	95,044	101,706	31,877	-598	3.2x 2.7x 2.3x	n.a. 26.6x 18.0x	n.a. n.a.
Didi	\$3.36	-3%	-5%	16,328	11,121	20,937	-1,886	0.5x 0.4x 0.4x	n.a. n.a. 13.8x	n.a. n.a.
Grab	\$3.53	-7%	2%	13,781	10,246	1,433	-1,223	7.2x 4.4x 3.6x	n.a. n.a. n.a.	n.a. n.a.
Lyft	\$10.83	-5%	-3%	4,183	3,508	4,095	-1,237	0.9x 0.8x 0.7x	n.a. 18.0x 12.5x	n.a. n.a.
Bird	\$0.70	-16%	-86%	9	99	245	-410	0.4x n.a. n.a.	n.a. n.a. n.a.	n.a. n.a.
Swvl	\$0.96	-7%	-80%	5	5	95	-82	0.0x 0.0x n.a.	n.a. n.a. n.a.	n.a. n.a.
Median								0.7x 0.8x 1.5x	n.a. 22.3x 13.8x	n.a. n.a.
Average								2.0x 1.7x 1.8x	n.a. 22.3x 14.8x	n.a. n.a.
Automotive Manufacturers										
Tesla	\$265.28	-1%	145%	841,997	825,785	81,462	18,201	10.1x 8.3x 6.5x	45.4x n.a. 36.0x	n.a. n.a.
Toyota	¥2,880.00	8%	60%	318,147	475,899	264,294	35,342	1.8x 1.7x 1.6x	13.5x 12.7x 11.7x	16.9x 14.1x
Volkswagen	€126.60	0%	-18%	64,376	57,836	294,110	53,187	0.2x 0.2x 0.2x	1.1x 1.2x 1.1x	4.0x 3.8x
BYD	HK\$246.60	-3%	22%	96,104	90,921	63,061	6,097	1.4x 1.1x 0.9x	14.9x 11.0x 8.6x	38.9x 28.2x
Hyundai	₩190,000.00	2%	21%	30,330	103,732	110,630	11,704	0.9x 0.9x 0.8x	8.9x 7.0x 7.1x	5.3x 3.4x
General Motors	\$33.34	0%	-1%	45,873	41,297	156,735	21,922	0.3x 0.2x 0.2x	1.9x 2.3x 2.4x	4.6x 4.8x
Honda	¥5,407.00	7%	78%	66,317	98,608	120,769	11,076	0.8x 0.8x 0.7x	8.9x 8.3x 7.6x	13.5x 11.1x
Ford	\$12.34	-1%	6%	49,387	39,141	158,057	14,366	0.2x 0.2x 0.2x	2.7x 2.4x 2.5x	n.a. 7.5x
BMW	€97.44	1%	14%	66,064	153,241	150,208	23,753	1.0x 1.0x 0.9x	6.5x 5.7x 6.1x	3.5x 5.5x
Mercedes Benz Group	€66.93	0%	5%	76,595	43,522	158,010	26,234	0.3x 0.3x 0.3x	1.7x 1.5x 1.6x	5.0x 5.2x
Stellantis	\$18.94	0%	30%	59,861	35,447	189,161	28,237	0.2x 0.2x 0.2x	1.3x 1.1x 1.1x	3.4x 3.0x
Ferrari	€281.80	1%	39%	54,363	56,159	5,367	1,868	10.5x 9.0x 8.3x	30.1x 23.5x 21.0x	n.a. 42.4x
SAIC	¥14.94	0%	4%	23,942	38,782	110,647	4,131	0.4x 0.4x 0.4x	9.4x 8.7x 7.9x	10.0x 10.6x
NIO	\$10.31	-2%	7%	17,207	17,896	7,327	-1,732	2.4x 2.1x 1.4x	n.a. n.a. n.a.	n.a. n.a.
Tata Motors	n.a.	n.a.	7%	28,184	39,476	40,539	3,739	1.0x 0.8x 0.7x	10.6x 6.5x 5.4x	n.a. 17.9x
Volvo	SEK 40.85	2%	-18%	10,953	9,815	32,737	3,369	0.3x 0.3x 0.3x	2.9x 2.9x 2.7x	7.1x 8.4x
Geely	HK\$9.65	-2%	-19%	12,422	9,884	22,003	1,791	0.4x 0.4x 0.3x	5.5x 5.9x 4.9x	15.9x 18.5x
Kia	₩79,400.00	2%	29%	24,090	12,673	67,187	7,494	0.2x 0.2x 0.2x	1.7x 1.2x 1.2x	5.7x 3.6x
Nissan	¥710.10	10%	72%	20,293	14,341	74,421	7,685	0.2x 0.2x 0.2x	1.9x 2.3x 2.2x	12.5x 9.0x
Guangzhou Automobile	HK\$3.95	-3%	-26%	11,890	10,037	16,359	-50	0.6x 0.5x 0.5x	n.a. 16.7x 13.7x	10.0x 12.4x
Suzuki	¥6,291.00	5%	52%	20,921	23,121	32,376	3,585	0.7x 0.7x 0.6x	6.4x 5.8x 5.2x	13.7x 12.5x
Renault	€38.67	5%	16%	12,234	11,347	48,796	6,028	0.2x 0.2x 0.2x	1.9x 1.5x 1.4x	n.a. 3.5x
Dongfeng	HK\$3.05	2%	-32%	3,315	2,656	13,780	-81	0.2x 0.2x 0.2x	n.a. 3.6x 2.8x	2.2x 3.5x
Subaru	¥3,094.00	5%	56%	16,114	8,846	26,041	3,402	0.3x 0.3x 0.3x	2.6x 2.5x 2.3x	12.9x 9.5x
Mazda	¥1,852.50	9%	90%	7,925	7,340	27,018	1,736	0.3x 0.3x 0.2x	4.2x 3.5x 3.1x	8.4x 7.6x
Mitsubishi	¥662.60	12%	37%	6,686	5,653	17,418	1,654	0.3x 0.3x 0.3x	3.4x 3.2x 3.0x	6.2x 7.1x
Median								0.3x 0.3x 0.3x	4.2x 3.6x 3.1x	7.7x 8.0x
Average								1.4x 1.2x 1.0x	8.1x 5.9x 6.5x	10.0x 10.5x

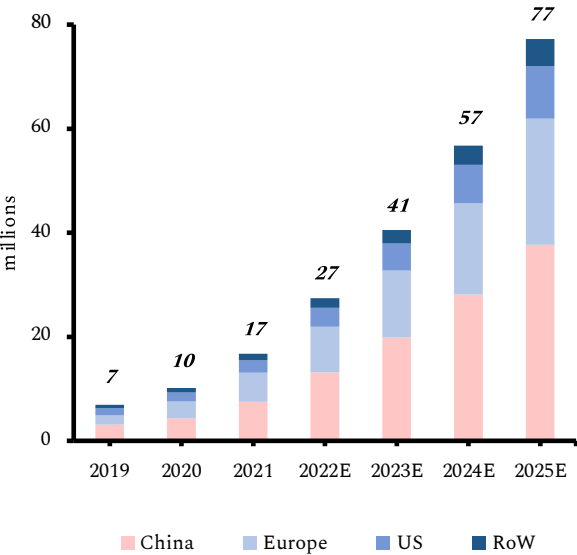
Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

N/A: Not Applicable

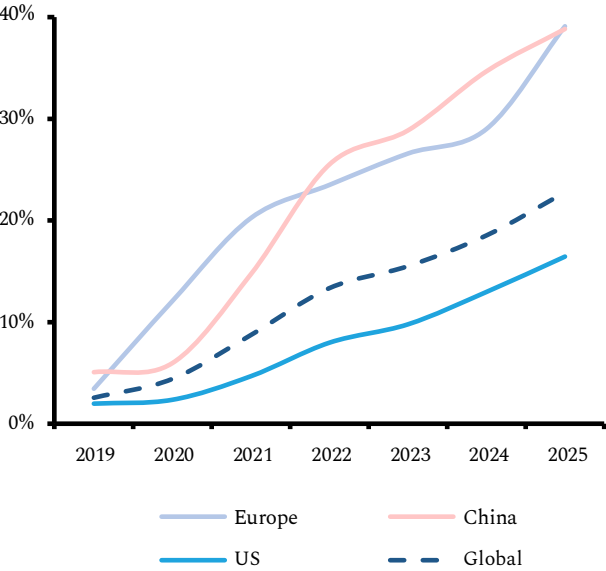
Source: Bloomberg as of 19 September 2023.

MOBILITY (cont'd)

Global EV fleet by region



EVs as a % of total vehicle sales



Source: Bloomberg

SOLAR

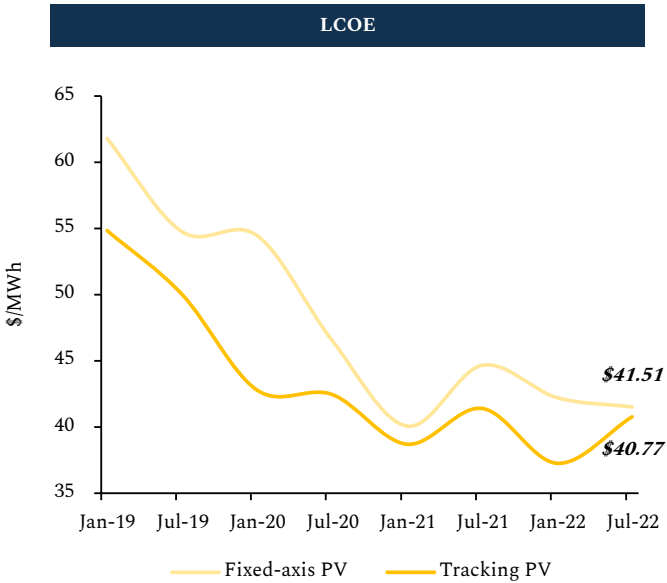
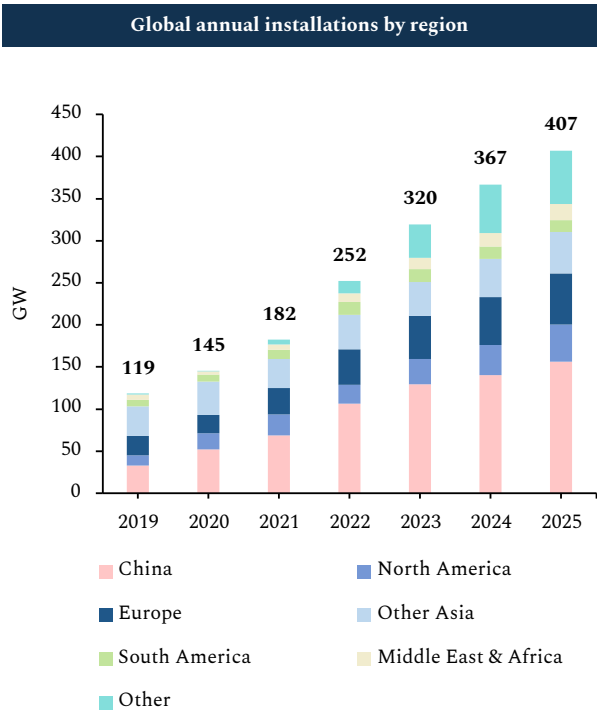
Company	Price	Weekly	YTD Price	Market	Enterprise	Revenue	EBITDA	EV/Revenue			EV/EBITDA			P/E		
	Current	% Change	% Change	Cap	Value	2022	2022	2022	2023E	2024E	2022	2023E	2024E	2022	2023E	2024E
Solar Downstream																
Sunrun	\$14.10	-4%	-40%	3,062	14,047	2,321	-183	6.1x	6.0x	5.5x	n.a.	n.a.	n.a.	17.7x	n.a.	n.a.
Sunnova Energy	\$11.82	-14%	-33%	1,445	8,241	558	58	14.8x	10.3x	8.1x	n.a.	n.a.	23.5x	n.a.	n.a.	n.a.
Scatec	68.00 kr	0%	-15%	1,006	3,073	391	267	7.9x	7.2x	6.0x	11.5x	10.1x	8.3x	n.a.	17.6x	25.8x
Sunpower	\$6.77	-7%	-61%	1,186	1,459	1,743	47	0.8x	0.8x	0.8x	n.a.	25.8x	11.8x	21.3x	n.a.	n.a.
Solaria Energia	€14.64	9%	-15%	1,957	2,869	147	155	19.6x	12.2x	9.6x	18.5x	14.1x	11.0x	20.6x	18.4x	15.7x
Advanced SolTech	SEK 9.53	0%	-48%	46	137	16	15	8.8x	7.4x	6.5x	9.3x	9.2x	7.7x	n.a.	n.a.	13.1x
Otovo	7.51 zł	0%	-62%	104	108	67	-26	1.6x	0.9x	0.6x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
G-Energy	0.31 zł	-1%	-10%	7	7	5	1	1.6x	n.a.	n.a.	12.8x	n.a.	n.a.	n.a.	n.a.	n.a.
Columbus Energy	6.10 zł	0%	-29%	96	225	313	21	0.7x	n.a.	n.a.	10.9x	n.a.	n.a.	n.a.	n.a.	n.a.
Soltech Energy	€8.91	9%	-15%	106	144	192	-11	0.8x	0.5x	0.3x	n.a.	16.7x	5.7x	n.a.	n.a.	n.a.
Solar Philippines	\$1.46	0%	22%	934	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Altus Power	\$5.91	-4%	-5%	946	1,573	101	48	15.6x	9.1x	5.9x	n.a.	15.5x	9.9x	17.1x	n.a.	25.5x
Soltec	€3.44	-7%	-19%	337	498	598	29	0.8x	0.8x	0.7x	17.5x	9.0x	5.7x	24.4x	17.1x	8.9x
Holuz-Clidom	€4.96	-2%	-27%	116	180	969	0	0.2x	0.3x	0.3x	n.a.	n.a.	9.3x	n.a.	n.a.	n.a.
Onde	10.18 zł	-1%	-1%	128	132	246	7	0.5x	0.5x	0.5x	19.6x	12.6x	13.2x	n.a.	25.6x	n.a.
Median								1.6x	3.5x	3.1x	12.8x	13.3x	9.6x	20.6x	18.0x	15.7x
Average								5.7x	4.7x	3.7x	14.3x	14.1x	10.6x	20.2x	19.7x	17.8x
Solar Upstream																
Longi Green Energy	¥25.95	-3%	-38%	26,985	25,394	19,183	1,990	1.3x	1.2x	1.0x	12.8x	8.6x	6.9x	12.3x	10.9x	9.3x
Trina Solar	¥29.67	-4%	-55%	8,846	12,409	12,648	880	1.0x	0.8x	0.6x	14.1x	8.2x	6.0x	16.2x	8.5x	6.5x
Jinko Solar Co	¥9.81	-3%	-34%	13,456	17,253	12,294	873	1.4x	1.2x	1.1x	19.8x	9.8x	7.8x	n.a.	13.1x	10.4x
GCL-Poly Energy	HK\$1.36	-3%	-31%	4,696	6,714	5,343	2,532	1.3x	1.4x	1.5x	2.7x	3.4x	4.3x	2.0x	3.9x	5.6x
Hanwha Solutions	₩32,000.00	-3%	-33%	4,151	9,418	10,598	1,273	0.9x	0.9x	0.9x	7.4x	7.9x	6.3x	14.9x	14.8x	8.4x
First Solar	\$167.74	-7%	15%	17,920	16,519	2,619	257	6.3x	4.7x	3.6x	n.a.	14.3x	8.5x	n.a.	22.2x	12.8x
AU Optronics	NT\$16.85	0%	9%	4,052	5,302	8,283	252	0.6x	0.7x	0.6x	21.1x	12.1x	5.1x	n.a.	n.a.	n.a.
Wacker Chemie	€137.45	4%	12%	7,668	8,103	8,647	1,868	0.9x	1.1x	1.1x	4.3x	8.2x	7.1x	5.8x	20.0x	16.0x
Shanghai Aiko Solar	¥20.30	-11%	-24%	5,090	5,522	5,216	567	1.1x	1.1x	0.8x	9.7x	7.3x	5.5x	14.7x	11.8x	8.8x
Jinkosolar Holding	\$29.33	-6%	-29%	1,507	9,044	12,362	474	0.7x	0.6x	0.5x	19.1x	7.2x	6.1x	16.3x	3.3x	2.9x
Sino-American Silicon	NT\$163.50	2%	12%	2,994	4,224	2,748	1,097	1.5x	1.6x	1.5x	3.8x	4.5x	4.2x	10.2x	10.4x	9.7x
Canadian Solar	\$26.68	-3%	-12%	1,725	4,398	7,469	606	0.6x	0.5x	0.4x	7.3x	4.4x	3.7x	7.2x	4.0x	3.6x
Dago New Energy	\$31.62	-4%	-21%	2,443	855	4,608	3,148	0.2x	0.3x	0.3x	0.3x	0.7x	1.0x	1.3x	4.1x	6.6x
United Renewable Energy	NT\$15.10	-1%	-27%	768	991	631	62	1.6x	1.8x	1.5x	16.1x	12.6x	12.6x	23.0x	n.a.	n.a.
Meyer Burger	CHF 0.35	-7%	-36%	1,416	1,423	154	-33	9.2x	4.6x	2.0x	n.a.	n.a.	17.8x	n.a.	n.a.	n.a.
FTC Solar	\$1.35	-11%	-48%	159	115	123	-99	0.9x	0.6x	0.3x	n.a.	n.a.	10.7x	n.a.	n.a.	n.a.
Motech Industries	NT\$26.85	-1%	-6%	325	322	180	21	1.8x	2.3x	1.9x	15.6x	n.a.	n.a.	n.a.	20.9x	15.7x
Tainergy Tech	NT\$32.25	-1%	17%	227	207	75	-1	2.8x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ocean Sun	4.85 kr	-3%	-32%	20	16	0	-2	n.a.	16.5x	11.8x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Verditek	£0.47	-2%	-14%	3	3	1	-2	4.9x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ML System	69.80 zł	5%	24%	118	143	63	8	2.3x	n.a.	n.a.	17.4x	n.a.	n.a.	n.a.	n.a.	n.a.
Saule Technologies	3.40 zł	-5%	-7%	65	66	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Midsummer	SEK 1.95	-11%	-76%	23	32	5	-7	6.1x	6.0x	1.0x	n.a.	n.a.	2.7x	n.a.	n.a.	2.8x
TubeSolar	n.a.	n.a.	-99%	n.a.	n.a.	0	-6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Absolicon	SEK 34.90	1%	-70%	12	11	0	-6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sunworks	\$0.68	-9%	-56%	30	32	162	-22	0.2x	0.2x	0.1x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Median								1.3x	1.2x	1.0x	12.8x	8.0x	6.1x	12.3x	10.9x	8.6x
Average								2.2x	2.4x	1.6x	11.4x	7.8x	6.8x	11.3x	11.4x	8.5x

Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

N/A: Not Applicable

Source: Bloomberg as of 19 September 2023.

SOLAR (cont'd)



WIND

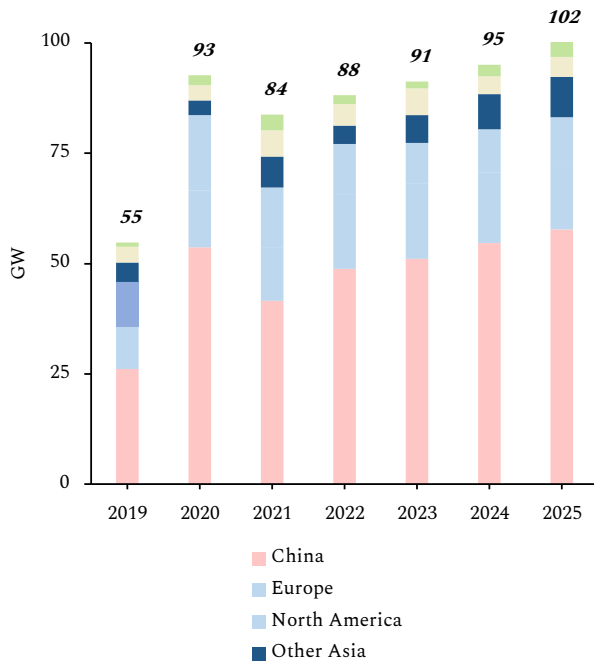
Company	Price Current	Weekly % Change	YTD Price % Change	Market Cap	Enterprise Value	Revenue 2022	EBITDA 2022	EV/Revenue 2022	EV/Revenue 2023E	EV/Revenue 2024E	EV/EBITDA 2022	EV/EBITDA 2023E	EV/EBITDA 2024E	P/E 2022	P/E 2023E	P/E 2024E
Wind Downstream																
Energiekontor	€83.30	2%	8%	1,244	1,562	198	105	7.9x	5.5x	4.9x	14.9x	12.9x	11.5x	26.5x	22.8x	20.0x
PNE	€13.08	4%	-37%	1,072	1,632	133	37	12.3x	8.4x	6.3x	n.a.	n.a.	20.7x	n.a.	n.a.	n.a.
ABO Wind	€51.20	1%	-31%	505	691	244	52	2.8x	2.6x	2.2x	13.2x	12.0x	11.6x	19.5x	17.9x	20.3x
Edda Wind	23.60 kr	0%	-13%	247	373	28	7	13.1x	8.2x	4.6x	n.a.	22.8x	9.1x	n.a.	n.a.	18.2x
Cloudberry Clean Energy	10.28 kr	-3%	-16%	279	169	23	3	7.5x	3.2x	3.0x	n.a.	4.3x	4.7x	22.6x	5.9x	13.5x
Arise	38.30 kr	1%	-25%	153	195	115	84	1.7x	4.5x	3.9x	2.3x	6.7x	5.9x	2.0x	7.9x	6.4x
Ørsted	€407.50	7%	-37%	24,581	34,200	18,728	4,165	1.8x	2.3x	2.2x	8.2x	9.9x	8.7x	11.5x	n.a.	17.6x
Cadeler	38.12 kr	-2%	-2%	701	806	112	67	7.2x	8.0x	6.2x	12.0x	17.5x	14.7x	18.7x	n.a.	n.a.
Eneti	€10.42	0%	7%	403	384	199	80	1.9x	2.8x	3.2x	4.8x	16.3x	13.2x	3.8x	n.a.	n.a.
Integrated Wind Solutions	33.20 kr	-2%	-3%	121	101	23	-2	4.4x	4.2x	1.7x	n.a.	n.a.	5.6x	n.a.	n.a.	18.2x
Terna Energy	€15.73	-3%	-24%	1,987	2,799	314	128	8.9x	9.7x	7.1x	21.9x	19.8x	11.5x	n.a.	n.a.	20.4x
MDI Energia	1.51 zł	-7%	-13%	16	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Median								7.2x	4.5x	3.9x	12.0x	12.9x	11.5x	18.7x	12.9x	18.2x
Average								6.3x	5.4x	4.1x	11.0x	13.6x	10.7x	15.0x	13.6x	16.8x
Wind Upstream																
Vestas Wind Systems	153.86 kr.	7%	-24%	22,296	23,714	15,258	-535	1.6x	1.5x	1.3x	n.a.	22.5x	11.8x	n.a.	n.a.	29.9x
Siemens Energy	€12.56	3%	-27%	10,739	12,311	31,647	620	0.4x	0.4x	0.3x	19.9x	n.a.	4.5x	n.a.	n.a.	18.9x
Nordex	€11.72	8%	-9%	2,964	2,783	5,997	-101	0.5x	0.4x	0.4x	n.a.	n.a.	8.4x	n.a.	n.a.	n.a.
Suzlon Energy	₹ 24.75	9%	131%	4,179	4,370	758	104	5.8x	5.1x	3.7x	n.a.	n.a.	24.4x	16.0x	27.5x	29.6x
Inox Wind	€196.55	2%	80%	769	1,090	88	-34	12.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Xinjiang Goldwind	₹ 9.20	-3%	-19%	4,738	9,464	6,878	923	1.4x	1.4x	1.2x	10.2x	10.1x	8.6x	13.4x	13.9x	12.0x
Broadwind Energy	€3.45	-13%	95%	74	114	177	2	0.6x	0.5x	0.5x	n.a.	6.5x	4.1x	n.a.	12.4x	4.0x
China Ruifeng New Energy Holdings	₹ 0.25	0%	65%	54	264	45	22	5.8x	n.a.	n.a.	11.9x	n.a.	n.a.	n.a.	n.a.	n.a.
Siemens	€135.98	0%	5%	116,366	157,313	78,194	13,840	2.0x	1.9x	1.8x	11.4x	10.6x	9.8x	22.9x	13.9x	13.8x
BW Ideol	₹ 8.28	-2%	20%	24	23	7	-3	3.3x	3.5x	2.8x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hexicon	€0.67	-3%	-53%	22	28	1	-8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Scana (Norway)	₹ 2.29	-3%	117%	94	151	95	7	1.6x	1.0x	0.9x	20.5x	8.6x	7.7x	n.a.	n.a.	n.a.
SeaTwirl	€21.05	-1%	-63%	11	9	0	-1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TPI Composites	\$3.13	-13%	-68%	133	788	1,523	57	0.5x	0.5x	0.5x	13.7x	n.a.	10.6x	n.a.	n.a.	n.a.
Median								1.6x	1.2x	1.1x	12.8x	10.1x	8.6x	16.0x	13.9x	16.3x
Average								3.0x	1.6x	1.3x	14.6x	11.6x	10.0x	17.4x	16.9x	18.0x

Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

N/A: Not Applicable.

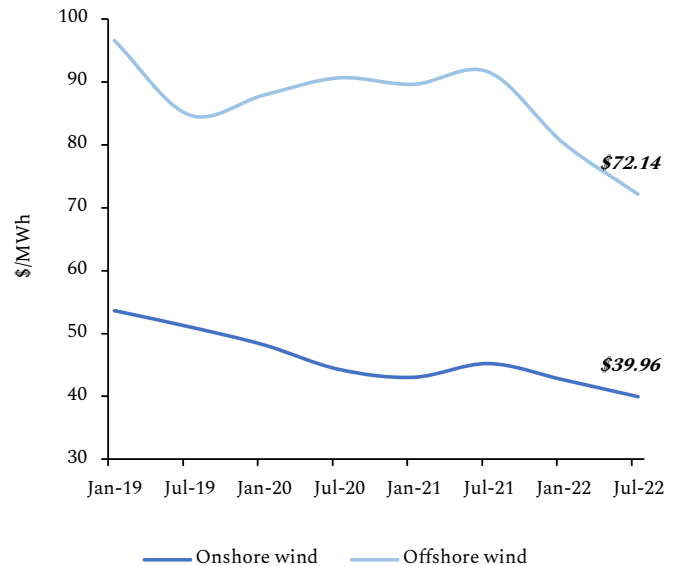
Source: Bloomberg as of the 19 September 2023

Global onshore wind installations by region



Source: Bloomberg.

LCOE



ENERGY STORAGE

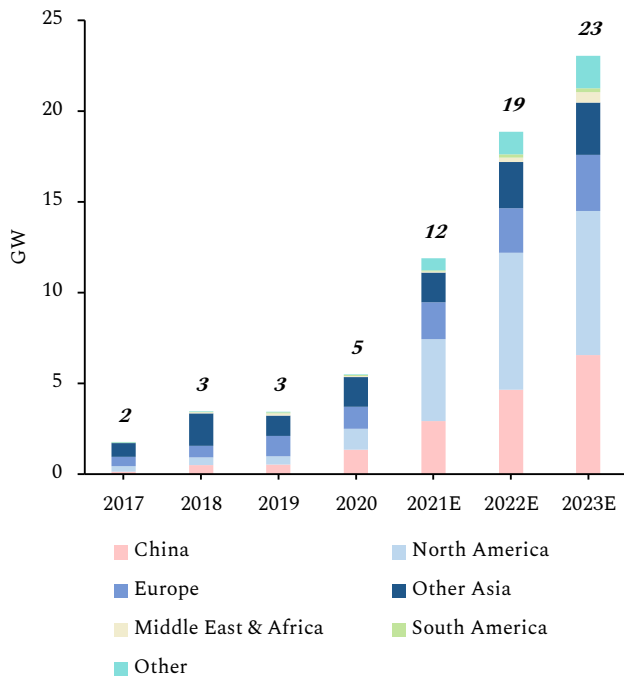
Company	Price Current	Weekly % Change	YTD Price % Change	Market Cap	Enterprise Value	Revenue 2022	EBITDA 2022	EV/Revenue 2022	2023E	2024E	EV/EBITDA 2022	2023E	2024E	P/E 2022	2023E	2024E
Storage																
Tesla	\$265.28	-1%	145%	841,997	825,785	81,462	18,201	10.1x	8.3x	6.5x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CATL	¥212.32	-3%	-2%	128,058	132,362	48,864	6,523	2.7x	2.2x	1.8x	20.3x	13.9x	10.7x	28.0x	20.2x	15.6x
LG Energy Solutions	₩496,500.00	-1%	11%	87,676	93,406	19,870	2,368	4.7x	3.5x	2.7x	n.a.	24.1x	14.5x	n.a.	n.a.	n.a.
LG Chem	₩552,000.00	-1%	-9%	29,407	44,531	40,258	4,959	1.1x	1.0x	0.8x	9.0x	8.0x	5.3x	20.5x	19.0x	10.0x
Panasonic	¥1,784.00	6%	63%	29,646	34,866	60,172	5,024	0.6x	0.6x	0.6x	6.9x	6.5x	5.7x	15.2x	12.0x	11.7x
Gotion High-Tech	¥23.53	-3%	-20%	5,741	8,882	3,428	204	2.6x	1.7x	1.2x	n.a.	21.5x	14.5x	n.a.	n.a.	26.1x
Sunwoda Electronic	¥15.32	-4%	-30%	3,913	6,835	7,757	380	0.9x	0.8x	0.6x	18.0x	14.1x	10.4x	24.7x	26.2x	17.2x
Quantumscape	\$6.90	-2%	28%	3,348	2,507	0	-383	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Fluence	\$24.36	-6%	50%	4,314	4,042	1,415	-231	2.9x	1.8x	1.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Varta	€19.61	-5%	-18%	894	1,493	850	71	1.8x	1.7x	1.5x	21.2x	n.a.	14.7x	n.a.	n.a.	n.a.
Farasis Energy	¥19.95	-1%	-27%	3,334	3,213	1,723	-60	1.9x	1.2x	0.9x	n.a.	20.0x	11.5x	n.a.	n.a.	20.9x
Energys	\$97.53	0%	34%	4,003	4,686	3,622	375	1.3x	1.3x	1.2x	12.5x	9.5x	8.2x	23.8x	14.9x	11.7x
Pylon Technologies	¥126.06	-7%	-60%	3,037	2,325	894	226	2.6x	2.2x	1.4x	10.3x	7.6x	5.3x	16.0x	13.1x	8.9x
Camel Group	¥8.22	-1%	-1%	1,323	1,343	1,996	141	0.7x	0.6x	0.6x	9.5x	6.8x	5.5x	18.9x	12.4x	9.7x
Stem	\$4.49	-10%	-47%	700	1,173	363	-86	3.2x	2.0x	1.4x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Exide Industries	₹ 265.95	0%	47%	2,715	2,698	1,808	192	1.5x	1.4x	1.3x	14.0x	12.8x	11.0x	12.8x	21.8x	17.9x
Energy Vault	\$2.91	-6%	-6%	416	214	146	-54	1.5x	0.6x	0.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ess Tech	\$1.36	-16%	-41%	212	78	1	-102	n.a.	7.9x	1.0x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Li-Cycle	\$4.35	-9%	-8%	775	481	13	-96	n.a.	12.3x	2.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Freyr	\$5.52	-10%	-35%	771	458	0	-122	n.a.	n.a.	10.8x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Chongqing Wanli	¥11.20	-3%	-27%	235	232	70	0	3.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Amita Technologies	NT\$48.00	-1%	40%	416	726	25	-8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Kung Long Batteries	NT\$131.50	0%	-4%	337	267	246	37	1.1x	n.a.	n.a.	7.3x	n.a.	n.a.	11.4x	n.a.	n.a.
Leclanche	CHF 0.53	0%	7%	347	430	19	-62	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EOS Energy	\$2.28	-14%	68%	306	520	18	-214	n.a.	17.8x	2.2x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ferroamp Elektronik	SEK 11.44	-1%	-68%	32	10	20	-5	0.5x	0.2x	0.2x	n.a.	n.a.	3.2x	n.a.	n.a.	17.4x
Seri Industrial	€4.10	2%	-30%	237	350	185	19	1.9x	1.3x	0.9x	18.9x	13.2x	6.1x	n.a.	n.a.	12.2x
Invinity Energy Systems	£38.50	-4%	-7%	91	87	3	-19	n.a.	3.3x	1.7x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Median								1.8x	1.7x	1.3x	12.5x	13.0x	9.3x	18.9x	16.9x	13.9x
Average								2.3x	3.3x	1.9x	13.4x	13.2x	9.0x	19.1x	17.5x	14.9x

Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

N/A: Not Applicable.

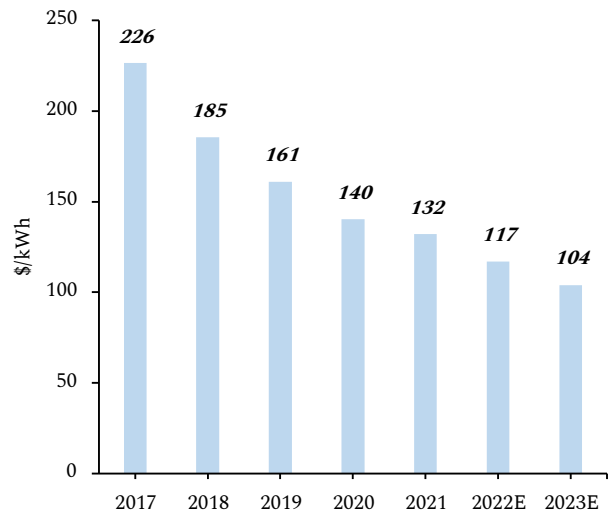
Source: Bloomberg as of the 19 September 2023..

Global annual energy storage installations



Source: Bloomberg.

Battery pack prices



HYDROGEN & FUEL CELLS

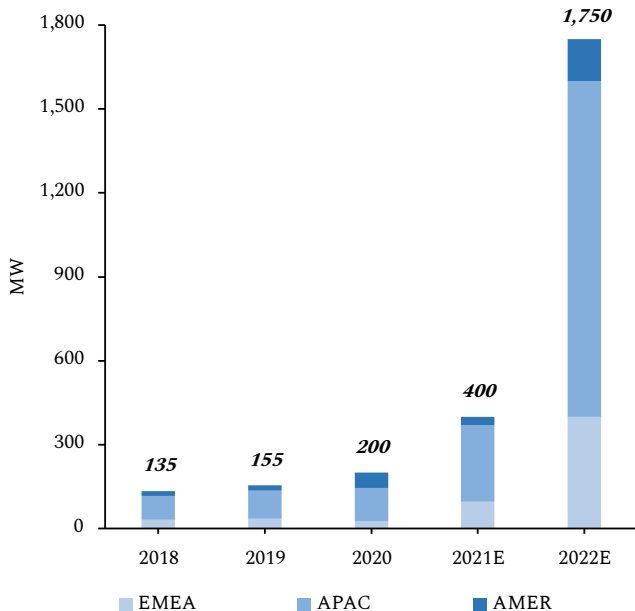
Company	Price	Weekly	YTD Price	Market	Enterprise	Revenue	EBITDA	EV/Revenue			EV/EBITDA			P/E		
	Current	% Change	% Change	Cap	Value	2022	2022	2022	2023E	2024E	2022	2023E	2024E	2022	2023E	2024E
Power Generation - Fuel Cells																
Bloom Energy	\$14.47	-6%	-25%	3,257	3,955	1,199	-174	3.3x	2.7x	2.1x	n.a.	67.0x	19.7x	n.a.	n.a.	n.a.
Thyssenkrupp	€7.06	-2%	22%	4,703	2,090	42,857	2,611	0.0x	0.1x	0.1x	0.8x	1.1x	1.0x	4.9x	16.4x	7.5x
ITM Power	£78.84	-1%	-19%	603	257	6	-97	n.a.	14.4x	5.4x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Beijing Sinohtec	¥52.37	-6%	-4%	1,126	1,059	110	-22	9.6x	7.0x	4.1x	n.a.	n.a.	65.0x	n.a.	n.a.	n.a.
Ballard Power Systems	C\$5.37	-2%	-17%	1,193	390	84	-146	4.7x	4.4x	2.8x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nel	10.35 kr	-2%	-26%	1,610	1,249	95	-116	13.1x	8.0x	5.4x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ceres Power	£369.40	9%	3%	882	665	27	-55	24.3x	12.7x	9.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Fuelcell Energy	\$1.17	-13%	-56%	527	347	130	-117	2.7x	2.6x	1.9x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Powercell	SEK 62.60	-1%	-48%	294	279	24	-7	11.5x	9.2x	6.7x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Enapter	€12.45	0%	-13%	362	386	15	-11	25.0x	14.0x	6.2x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hexagon Purus	18.40 kr	6%	-18%	474	463	100	-42	4.6x	3.3x	1.8x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Proton Motor Power Systems	£7.75	-6%	-37%	149	299	3	-12	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
McPhy Energy	€5.82	-6%	-55%	174	75	17	-39	4.4x	3.1x	1.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Forsee Power	€3.16	-1%	-8%	241	253	117	-20	2.2x	1.4x	1.0x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SFC Energy	€21.05	-6%	-14%	391	347	90	9	3.9x	2.8x	1.9x	38.0x	23.3x	14.1x	n.a.	77.6x	36.6x
Atome Energy	€95.00	-12%	-11%	47	44	0	-4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
AFC Energy	£15.56	-3%	-19%	144	104	1	-22	n.a.	n.a.	12.0x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Advent Technologies	\$0.48	4%	-72%	29	30	8	-81	3.8x	1.5x	0.2x	n.a.	n.a.	1.5x	n.a.	n.a.	n.a.
Everfuel	10.00 kr	-14%	-75%	80	64	3	-12	22.0x	13.3x	3.0x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
S-FuelCell	₩17,020.00	0%	-15%	90	79	36	2	2.2x	1.8x	1.6x	36.8x	22.4x	17.5x	n.a.	70.0x	39.7x
Gencell	₩ 136.60	5%	-24%	39	40	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Median								4.5x	3.3x	2.4x	36.8x	22.9x	15.8x	4.9x	70.0x	36.6x
Average								8.6x	6.0x	3.7x	25.2x	28.5x	19.8x	4.9x	54.7x	27.9x
Hydrogen																
Haffner Energy	€1.53	-9%	-21%	73	22	0	-14	n.a.	1.0x	0.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Green Hydrogen Systems	7.87 kr.	14%	24%	212	309	1	-35	n.a.	16.1x	6.2x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Plug Power	\$8.15	-2%	-33%	4,906	4,483	701	-560	6.4x	3.5x	2.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Clean Power Hydrogen	£21.25	6%	-30%	71	69	0	-4	n.a.	12.0x	1.6x	n.a.	n.a.	29.7x	n.a.	n.a.	n.a.
PowerHouse Energy	£0.50	-3%	-56%	26	19	0	-57	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Fusion Fuel	\$1.09	-6%	-76%	16	7	0	-36	n.a.	0.7x	0.1x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hazer Group	A\$0.46	-3%	-17%	59	55	0	-9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Median								6.4x	3.5x	1.6x	n.a.	n.a.	29.7x	n.a.	n.a.	n.a.
Average								6.4x	6.7x	2.1x	n.a.	n.a.	29.7x	n.a.	n.a.	n.a.

Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

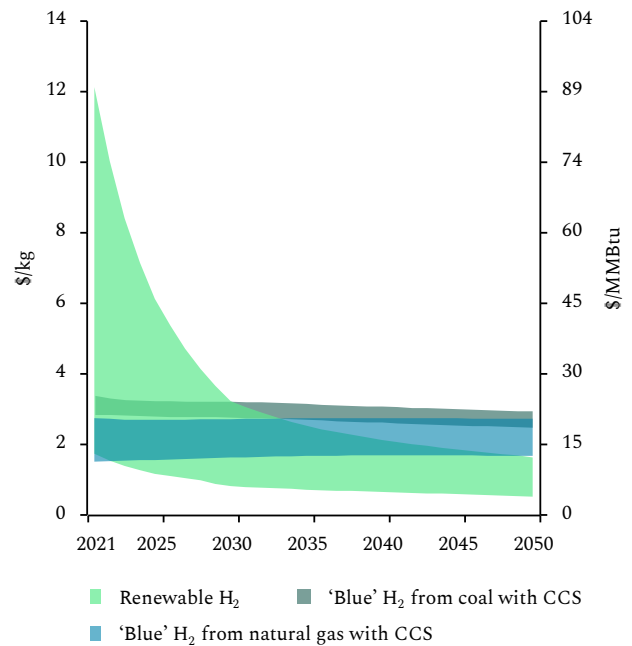
N/A: Not Applicable.

Source: Bloomberg as of the 19 September 2023.

Annual electrolyser shipments



Source: Bloomberg.

Global range of 'green' and 'blue' LCOH₂

SEMICONDUCTORS

Company	Price Current	Weekly % Change	YTD Price % Change	Market Cap	Enterprise Value	Revenue 2022	EBITDA 2022	EV/Revenue			EV/EBITDA			P/E		
								2022	2023E	2024E	2022	2023E	2024E	2022	2023E	2024E
Larg-cap																
Nvidia	\$439.66	-2%	207%	1,085,960	1,080,891	27,043	6,424	40.0x	20.8x	13.7x	n.a.	n.a.	23.0x	225.1x	49.1x	29.9x
TSMC	NT\$538.00	-1%	19%	435,792	418,959	75,986	52,311	5.5x	6.4x	5.2x	8.0x	9.4x	7.7x	12.8x	17.9x	14.7x
Broadcom	\$850.00	1%	54%	350,825	378,111	33,720	19,938	11.2x	10.4x	9.6x	19.0x	16.4x	15.3x	29.3x	24.3x	21.6x
Intel	\$37.99	-2%	42%	159,102	181,452	62,034	15,296	2.9x	3.5x	3.1x	11.9x	17.9x	10.7x	20.2x	n.a.	29.9x
Texas Instruments	\$162.83	0%	0%	147,844	149,511	20,028	11,186	7.5x	8.3x	7.8x	13.4x	16.6x	15.1x	16.9x	21.9x	20.5x
Advanced Micro Devices	\$102.37	-3%	60%	165,396	161,971	23,219	5,466	7.0x	7.1x	5.9x	29.6x	n.a.	21.8x	127.4x	111.5x	39.1x
Qualcomm	\$112.75	1%	5%	125,829	132,642	42,029	16,375	3.2x	3.7x	3.4x	8.1x	10.6x	9.8x	10.9x	16.4x	14.5x
Analog Devices	\$179.72	3%	11%	89,557	95,390	12,089	5,802	7.9x	7.9x	8.5x	16.4x	14.9x	16.0x	31.2x	27.7x	34.9x
Micron Technology	\$70.50	0%	40%	77,219	79,742	25,743	12,240	3.1x	4.7x	3.4x	6.5x	19.6x	8.7x	19.9x	n.a.	118.8x
NXP Semiconductors	\$199.29	0%	29%	51,377	58,989	13,205	5,113	4.5x	4.5x	4.2x	11.5x	11.0x	10.5x	18.4x	18.1x	16.6x
Marvell International	\$54.78	-2%	52%	47,264	51,229	5,820	1,627	8.8x	9.2x	8.0x	n.a.	28.6x	21.7x	n.a.	n.a.	165.5x
Infineon Technologies	€31.34	-3%	9%	43,787	47,341	15,710	5,193	3.0x	2.7x	2.5x	9.1x	7.4x	7.0x	16.9x	13.2x	12.8x
Microchip Technology	\$77.95	-1%	13%	42,431	48,222	8,040	3,895	6.0x	5.6x	5.5x	12.4x	11.2x	11.1x	21.2x	17.7x	17.7x
STMicroelectronics	€40.67	-1%	22%	39,614	37,769	16,128	5,717	2.3x	2.2x	2.1x	6.6x	6.0x	5.7x	10.0x	9.8x	9.7x
GlobalFoundries U.S.	\$58.25	-3%	13%	32,193	32,235	8,108	2,790	4.0x	4.3x	3.9x	11.6x	11.9x	10.0x	22.2x	32.7x	18.6x
onsemi	\$94.60	-2%	54%	40,823	41,966	8,326	2,960	5.0x	5.0x	4.7x	14.2x	12.7x	11.5x	21.5x	18.6x	16.8x
Monolithic Power Systems	\$463.19	-2%	35%	22,130	21,196	1,794	571	11.8x	11.6x	10.1x	n.a.	n.a.	26.6x	50.6x	51.6x	43.5x
Renesas Electronics	¥2,264.50	-1%	93%	30,029	31,839	11,486	4,670	2.8x	3.1x	2.9x	6.8x	7.8x	7.2x	15.3x	14.9x	14.0x
UMC	NT\$46.20	-1%	12%	18,044	14,363	9,355	4,983	1.5x	2.1x	1.8x	2.9x	4.6x	4.1x	6.2x	10.2x	9.8x
Skyworks Solutions	\$98.50	2%	9%	15,700	16,721	5,316	2,201	3.1x	3.5x	3.3x	7.6x	8.3x	7.8x	13.0x	15.2x	13.4x
ASML	\$563.10	-2%	9%	242,830	240,833	22,302	7,770	10.8x	8.3x	7.7x	n.a.	23.8x	20.9x	41.0x	30.0x	27.0x
Applied Materials	\$140.27	-3%	45%	117,341	116,804	25,936	8,310	4.5x	4.4x	4.4x	14.1x	14.4x	14.3x	18.0x	18.2x	18.0x
Lam Research	\$635.65	-3%	53%	84,231	84,105	17,378	5,702	4.8x	5.3x	5.2x	14.8x	16.6x	16.2x	18.4x	21.2x	20.6x
KLA	\$456.51	-6%	21%	62,414	65,234	9,859	4,255	6.6x	6.5x	6.5x	15.3x	15.4x	15.2x	18.6x	20.1x	20.2x
Tokyo Electron	\$20,750.00	0%	62%	66,263	61,206	15,966	4,843	3.8x	4.9x	4.6x	12.6x	17.4x	15.8x	19.3x	28.1x	25.3x
Teradyne	\$96.76	-1%	13%	14,902	14,207	3,155	967	4.5x	5.3x	4.4x	14.7x	22.0x	15.4x	20.8x	32.8x	19.8x
Advantest	¥15,955.00	-4%	93%	20,692	20,642	3,882	1,290	5.3x	6.0x	5.5x	16.0x	20.4x	17.9x	23.4x	32.2x	27.0x
Entegris	\$92.80	-2%	45%	13,930	18,926	3,282	777	5.8x	5.2x	4.9x	24.3x	19.0x	16.2x	66.7x	55.5x	32.5x
Asm International	\$388.95	-7%	64%	20,565	20,052	2,539	795	7.9x	7.2x	6.4x	25.2x	23.5x	20.1x	50.2x	27.2x	28.3x
Median								5.0x	5.3x	4.9x	12.6x	15.2x	15.1x	20.0x	21.6x	20.5x
Average								6.7x	6.2x	5.5x	13.3x	14.9x	13.9x	34.5x	28.3x	30.4x
Mid-cap																
Soitec	€156.60	-3%	3%	5,982	5,819	1,076	366	5.4x	5.1x	4.0x	15.9x	14.4x	10.6x	25.5x	26.4x	18.9x
Universal Display	\$162.09	1%	52%	7,674	7,148	617	314	11.6x	12.2x	10.3x	22.8x	27.4x	21.6x	36.5x	40.4x	33.3x
Be Semiconductor Industries	€91.08	-6%	59%	7,906	7,843	761	334	10.3x	12.7x	9.3x	23.5x	n.a.	21.0x	31.2x	42.8x	27.4x
IPG Photonics	\$100.28	1%	4%	4,750	3,672	1,430	272	2.6x	2.8x	2.5x	13.5x	10.7x	9.0x	43.2x	21.3x	17.8x
Onto Innovation	\$124.98	-1%	83%	6,132	5,601	1,007	306	5.6x	6.8x	6.0x	18.3x	27.1x	21.2x	27.4x	48.5x	33.4x
Nova (Israel)	\$113.14	-3%	36%	3,259	2,938	571	173	5.1x	5.8x	5.0x	17.0x	18.7x	16.6x	23.2x	26.1x	22.4x
Qorvo	\$96.87	2%	9%	9,485	10,788	3,851	813	2.8x	3.0x	2.7x	13.3x	15.6x	11.6x	28.0x	52.8x	25.1x
Cree	\$40.78	-8%	-39%	5,108	6,463	839	-160	7.7x	6.8x	5.3x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Lattice Semiconductor	\$86.84	-2%	35%	11,970	11,927	662	225	18.0x	15.6x	13.9x	n.a.	n.a.	n.a.	66.8x	56.9x	48.6x
Synaptics	\$86.03	5%	-7%	3,358	3,453	1,543	415	2.2x	2.9x	2.9x	8.3x	13.3x	11.2x	20.5x	n.a.	n.a.
Silicon Labs	\$118.13	-3%	-12%	3,764	3,338	1,026	183	3.3x	3.7x	3.5x	18.2x	21.8x	21.7x	38.7x	148.9x	120.3x
Amkor Technology	\$22.84	2%	-10%	5,612	5,754	7,092	1,591	0.8x	0.9x	0.8x	3.6x	4.9x	4.0x	7.3x	14.2x	8.9x
Power Integrations	\$79.94	3%	12%	4,588	4,242	651	221	6.5x	8.5x	7.1x	19.2x	n.a.	24.6x	26.9x	69.9x	41.1x
Allegro Microsystems	\$33.20	-2%	13%	6,387	6,081	915	240	6.6x	5.7x	5.2x	25.3x	17.0x	14.7x	37.7x	28.4x	24.5x
Technoprobe	\$7.18	-3%	4%	4,619	4,166	578	258	7.2x	9.1x	7.2x	16.1x	26.2x	17.1x	29.7x	50.4x	29.3x
ams	\$5.70	2%	-21%	1,743	3,970	5,076	906	0.8x	1.0x	1.0x	4.4x	3.8x	4.4x	n.a.	n.a.	n.a.
Melexis	\$80.30	-1%	-1%	3,470	3,435	881	286	3.9x	3.3x	3.1x	12.0x	10.2x	10.0x	16.7x	15.1x	14.4x
Diodes	\$76.95	0%	1%	3,535	3,401	2,001	549	1.7x	1.9x	1.9x	6.2x	7.6x	6.8x	10.7x	13.6x	12.6x
Nordic Semiconductor	\$111.65	-4%	-32%	2,003	1,787	777	206	2.3x	2.9x	2.4x	8.7x	22.0x	14.6x	16.4x	61.9x	32.4x
Aixtron	\$34.29	-4%	25%	4,160	3,930	488	116	8.1x	5.8x	5.3x	n.a.	20.5x	18.0x	39.3x	27.2x	24.4x
Median								5.3x	5.4x	4.5x	15.9x	16.3x	14.7x	27.7x	40.4x	25.1x
Average								5.6x	5.8x	5.0x	14.5x	16.3x	14.4x	29.2x	43.8x	31.5x

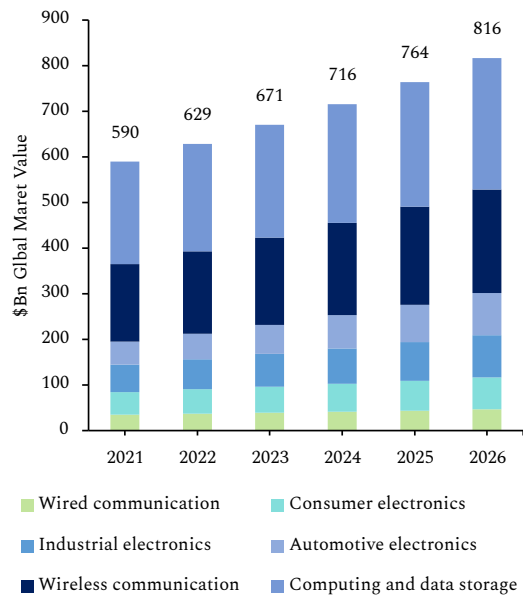
Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

N/A: Not Applicable.

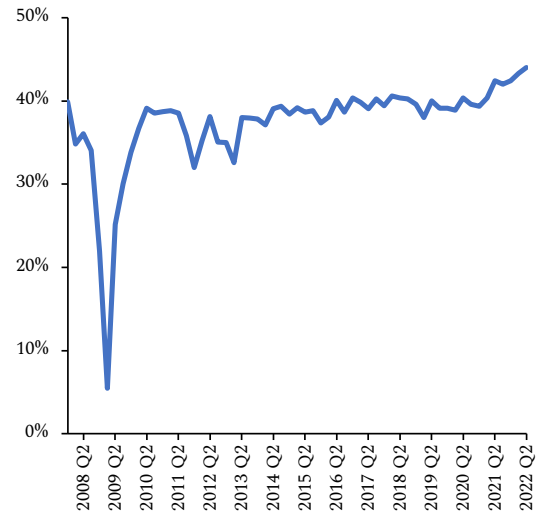
Source: Bloomberg as of the 19 September 2023.

SEMICONDUCTORS (cont'd)

Global semiconductor market value by vertical



Semiconductor Companies Gross Margin (%) Average



Source: Bloomberg

EUROPEAN UTILITIES

Company	Price	Weekly	YTD Price	Market	Enterprise	Revenue	EBITDA	EV/Revenue			EV/EBITDA			P/E		
	Current	% Change	% Change	Cap	Value	2022	2022	2022	2023E	2024E	2022	2023E	2024E	2022	2023E	2024E
European Utilities																
Enel	€6.25	1%	21%	67,981	161,147	142,881	21,068	1.1x	1.4x	1.4x	7.6x	7.3x	7.1x	38.4x	10.7x	9.7x
Iberdrola	€11.14	3%	1%	75,639	153,978	56,823	13,438	2.7x	2.6x	2.6x	11.5x	9.9x	9.5x	16.6x	15.2x	14.5x
EDF	n.a.	n.a.	0%	n.a.	n.a.	151,120	-13,211	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eni	€15.26	1%	11%	55,100	70,495	139,572	26,032	0.5x	0.7x	0.7x	2.7x	3.1x	3.2x	3.8x	7.2x	7.1x
Engie	€15.24	2%	12%	39,690	69,716	98,866	4,890	0.7x	0.7x	0.7x	14.3x	4.5x	4.8x	n.a.	12.4x	8.8x
Orsted	407.50 kr.	7%	-37%	24,581	34,200	18,728	4,165	1.8x	2.3x	2.2x	8.2x	9.9x	8.7x	11.5x	43.2x	17.6x
Naturgy Energy	€27.58	3%	12%	28,606	43,910	35,775	4,861	1.2x	1.4x	1.5x	9.0x	8.0x	8.4x	16.5x	14.1x	15.8x
EDP	€4.20	3%	-11%	18,775	42,898	21,751	4,497	2.0x	2.0x	2.0x	9.5x	8.2x	7.8x	26.3x	16.3x	14.2x
Verbund	€79.80	5%	1%	29,656	33,541	10,897	3,253	3.1x	2.9x	3.0x	10.3x	7.6x	7.8x	16.4x	12.0x	12.3x
Fortum	€12.42	1%	-22%	11,921	13,562	9,273	1,941	1.5x	1.8x	1.9x	7.0x	6.2x	6.9x	n.a.	9.5x	10.8x
RWE	€36.37	0%	-13%	28,939	34,681	40,410	-3,536	0.9x	0.8x	0.9x	n.a.	4.4x	5.4x	10.1x	7.6x	10.8x
EnBW	€82.80	-3%	-7%	24,499	36,399	58,986	4,737	0.6x	n.a.	n.a.	7.7x	n.a.	n.a.	13.4x	n.a.	n.a.
Endesa	€20.02	3%	12%	22,674	32,086	34,649	5,691	0.9x	1.2x	1.3x	5.6x	6.3x	6.0x	8.5x	13.2x	12.2x
CEZ	962.50 Kč	3%	23%	22,658	24,568	12,054	5,944	2.0x	1.6x	1.5x	4.1x	4.7x	4.7x	6.5x	15.1x	15.2x
A2A	€1.85	3%	46%	6,198	11,603	24,169	1,486	0.5x	0.5x	0.5x	7.8x	6.1x	5.8x	14.7x	11.9x	11.8x
Hera	€2.91	2%	12%	4,633	9,613	21,152	1,036	0.5x	0.5x	0.6x	9.0x	6.5x	6.4x	17.2x	11.6x	12.0x
Iren	€1.97	2%	31%	2,740	7,669	8,034	1,039	1.0x	1.0x	0.9x	7.4x	6.2x	5.8x	11.5x	10.0x	9.0x
BKW	CHF 164.80	1%	29%	9,706	11,287	5,307	1,306	2.1x	2.1x	2.0x	8.6x	11.2x	11.3x	16.8x	21.6x	20.7x
Public Power	€9.65	3%	45%	3,943	7,196	11,853	1,285	0.6x	1.0x	1.1x	5.6x	5.5x	5.0x	n.a.	20.8x	12.7x
Centrica	£172.20	5%	87%	11,763	8,705	29,353	415	0.3x	0.2x	0.2x	21.0x	2.2x	3.1x	n.a.	5.7x	10.6x
EVN	€24.20	4%	42%	4,656	6,429	4,113	737	1.6x	1.9x	1.9x	8.7x	8.0x	7.9x	17.5x	12.2x	12.5x
Drax Group	£525.60	-2%	-22%	2,504	4,276	9,613	477	0.4x	0.4x	0.4x	9.0x	2.9x	2.9x	23.8x	4.5x	4.0x
PGE	7.59 zł	-2%	10%	3,919	5,560	16,527	1,949	0.3x	0.2x	0.3x	2.9x	2.4x	3.1x	5.2x	4.6x	5.5x
Redes Energeticas Nacionais	€2.49	0%	-2%	1,781	4,321	620	503	7.0x	4.7x	4.7x	8.6x	8.0x	8.0x	15.1x	13.3x	13.9x
Tauron Polska	3.78 zł	0%	77%	1,524	4,837	8,281	711	0.6x	0.5x	0.6x	6.8x	3.4x	4.6x	n.a.	2.1x	4.5x
Inter RAO UES	4.27 ₺	-1%	25%	4,636	1,803	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Alerion Cleanpower	€27.95	0%	-12%	1,621	2,080	277	237	7.5x	8.3x	5.8x	8.8x	11.0x	7.8x	21.7x	n.a.	n.a.
AB Ignitis Grupe	€20.50	0%	8%	1,587	2,643	4,615	566	0.6x	0.7x	0.8x	4.7x	5.5x	5.1x	5.1x	9.1x	9.2x
Romande Energie	n.a.	n.a.	n.a.	n.a.	n.a.	778	148	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Good Energy	£194.50	13%	8%	41	17	307	3	0.1x	0.1x	0.1x	5.4x	3.2x	1.8x	3.6x	20.5x	10.6x
SkandiaEnergi	0.50 kr	0%	-77%	3	-1	58	-9	n.a.	n.a.	n.a.	0.1x	n.a.	n.a.	n.a.	n.a.	n.a.
Median								0.9x	1.1x	1.2x	7.8x	6.2x	5.9x	14.9x	12.0x	11.8x
Average								1.6x	1.6x	1.5x	7.8x	6.2x	6.1x	14.5x	13.0x	11.4x
Grid Companies																
National Grid	£1,019.50	2%	2%	46,586	96,275	25,156	8,077	3.8x	3.6x	3.7x	11.9x	11.4x	10.9x	6.0x	9.8x	14.2x
E.ON	€11.72	1%	24%	33,114	70,130	121,822	4,950	0.6x	0.6x	0.7x	14.2x	7.5x	7.9x	17.2x	11.2x	12.3x
SSE	£1,661.00	3%	0%	22,439	35,651	13,930	1,020	2.6x	2.4x	2.4x	35.0x	11.7x	7.9x	28.5x	15.1x	10.0x
Snam	€4.77	0%	3%	17,159	33,178	3,682	2,336	9.0x	8.3x	7.8x	14.2x	13.0x	11.7x	24.3x	14.2x	13.2x
Terna-Rete Elettrica Nazona	€7.75	0%	11%	16,672	26,772	3,053	2,180	8.8x	8.1x	7.5x	12.3x	11.8x	10.6x	18.5x	17.9x	15.7x
Red Electrica Corporacion	€15.45	1%	-6%	8,877	15,022	2,204	1,587	6.8x	6.8x	7.4x	9.5x	9.2x	10.3x	12.7x	12.6x	16.6x
Elia Group	€105.00	2%	-22%	8,258	15,334	4,059	1,131	3.8x	3.5x	3.3x	13.6x	11.8x	10.8x	22.9x	24.3x	24.5x
Enagas	€16.57	3%	4%	4,644	8,443	1,015	627	8.3x	8.3x	8.7x	13.5x	10.3x	10.9x	11.7x	13.9x	18.0x
Acea	€10.88	1%	-18%	2,479	8,201	5,221	1,193	1.6x	1.6x	1.7x	6.9x	5.8x	5.6x	8.4x	7.6x	7.3x
Albioma	n.a.	n.a.	n.a.	n.a.	n.a.	657	240	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
MVV Energie	€31.40	-2%	3%	2,214	3,522	6,433	380	0.5x	0.6x	n.a.	9.3x	3.8x	n.a.	n.a.	11.7x	n.a.
Ascopiave	€2.16	1%	-11%	543	1,113	172	82	6.5x	6.4x	5.7x	13.6x	13.6x	9.8x	15.9x	18.4x	13.3x
Transelectrica	28.90 lei	6%	31%	456	369	1,260	185	0.3x	0.4x	0.4x	2.0x	n.a.	n.a.	4.1x	n.a.	n.a.
Median								3.8x	3.5x	3.7x	12.9x	11.4x	10.4x	15.9x	13.9x	13.7x
Average								4.4x	4.2x	4.5x	13.0x	10.0x	9.6x	15.5x	14.2x	14.5x

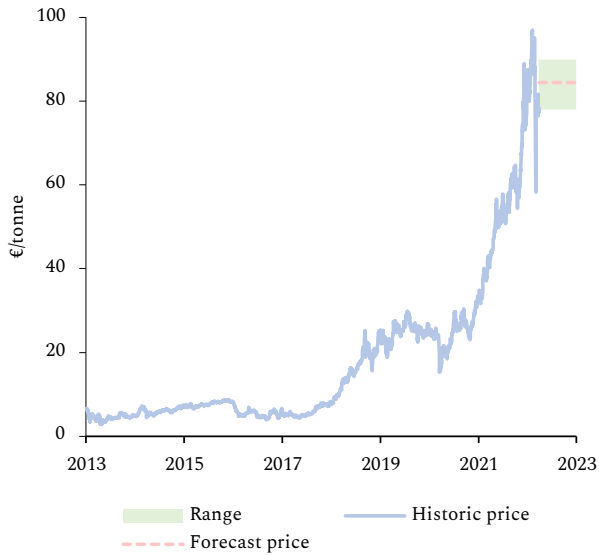
Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

N/A: Not Applicable.

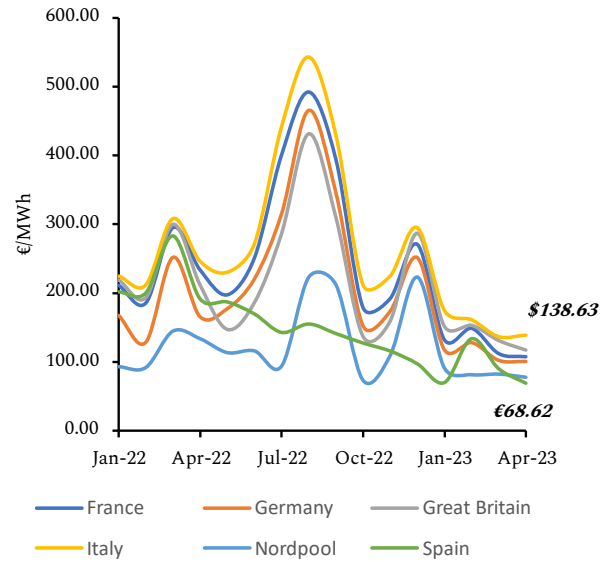
Source: Bloomberg as of the 19 September 2023.

EUROPEAN UTILITIES (cont'd)

EU ETS carbon price outlook



Monthly electricity prices in Europe



Source: Bloomberg

NORTH AMERICAN UTILITIES

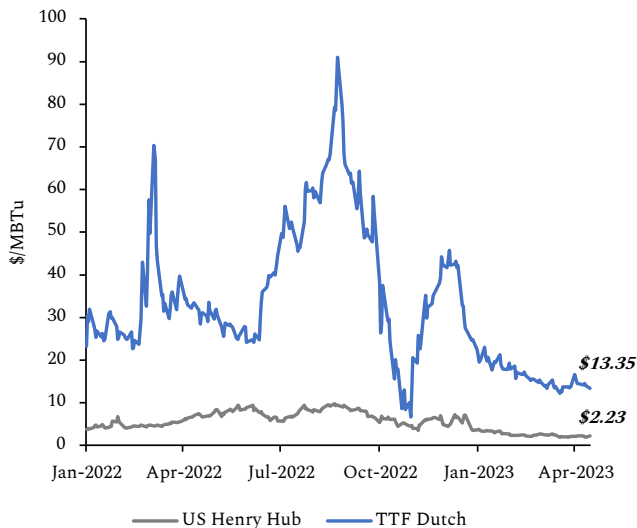
Company	Price	Weekly	YTD Price	Market	Enterprise	Revenue	EBITDA	EV/Revenue			EV/EBITDA			P/E		
	Current	% Change	% Change	Cap	Value	2022	2022	2022	2023E	2024E	2022	2023E	2024E	2022	2023E	2024E
North American Utilities																
Nextera Energy	\$68.24	1%	-19%	138,098	218,277	20,956	8,941	10.4x	8.7x	8.2x	24.4x	15.4x	14.3x	33.3x	21.9x	19.9x
Exelon	\$41.49	2%	-4%	41,253	83,042	19,084	6,924	4.4x	4.2x	4.1x	12.0x	11.0x	10.3x	19.0x	17.7x	16.4x
Xcel Energy	\$57.99	1%	-17%	31,983	58,510	15,310	5,262	3.8x	3.8x	3.7x	11.1x	11.4x	10.5x	18.4x	17.3x	16.1x
Edison International	\$71.22	1%	11%	27,298	65,693	17,220	4,748	3.8x	3.7x	3.5x	13.8x	10.5x	9.6x	33.1x	16.2x	13.8x
Public Service Enterprise	\$61.33	1%	-1%	30,610	49,895	9,800	2,720	5.1x	4.8x	4.9x	18.3x	12.2x	13.7x	29.7x	17.7x	16.7x
Entergy	\$98.78	3%	-9%	20,888	47,322	13,764	4,307	3.4x	3.5x	3.3x	11.0x	10.2x	9.5x	19.0x	14.7x	13.6x
Transalta Renewables	C\$12.93	-2%	14%	2,567	3,121	431	178	7.2x	8.1x	6.8x	17.5x	8.8x	8.2x	45.1x	22.4x	16.4x
Fortis	C\$56.37	4%	2%	20,398	44,767	8,490	3,348	5.3x	5.2x	5.0x	13.4x	12.3x	11.8x	19.0x	18.8x	17.7x
Algonquin Power & Utilities	C\$9.61	-1%	4%	4,924	15,082	2,765	871	5.5x	5.4x	5.1x	17.3x	12.1x	11.5x	n.a.	20.5x	11.4x
Emera	C\$52.10	3%	-1%	10,580	26,085	5,834	1,990	4.5x	4.7x	4.6x	13.1x	11.8x	11.0x	13.7x	14.9x	15.3x
Canadian Utilities	C\$31.63	1%	-14%	6,356	15,104	3,112	1,423	4.9x	5.2x	5.1x	10.6x	10.1x	9.9x	13.1x	12.9x	12.8x
FirstEnergy	\$36.77	3%	-13%	21,083	45,338	12,459	3,284	3.6x	3.6x	3.4x	13.8x	11.8x	10.8x	51.9x	14.7x	13.3x
Constellation Energy	\$110.74	2%	35%	35,613	42,845	24,440	2,922	1.8x	2.2x	2.3x	14.7x	12.3x	10.8x	n.a.	22.8x	19.1x
Wec Energy	\$86.68	3%	-8%	27,342	45,713	9,597	3,053	4.8x	4.8x	4.6x	15.0x	13.8x	12.9x	19.4x	18.8x	17.6x
DTE Energy	\$107.00	3%	-9%	22,054	41,886	19,228	3,276	2.2x	2.4x	2.3x	12.8x	11.5x	10.8x	20.4x	17.2x	16.0x
Nisource	\$27.55	2%	0%	11,385	25,310	5,851	2,097	4.3x	4.4x	4.2x	12.1x	11.3x	10.2x	14.2x	16.0x	14.2x
Median								4.4x	4.5x	4.4x	13.6x	11.6x	10.8x	19.2x	17.5x	16.0x
Average								4.7x	4.7x	4.5x	14.4x	11.7x	11.0x	25.0x	17.8x	15.6x
Integrated Utilities																
Duke Energy	\$94.96	3%	-8%	73,214	156,356	28,768	12,084	5.4x	5.4x	5.3x	12.9x	12.2x	11.4x	28.7x	16.9x	15.9x
The Southern Company	\$70.95	3%	-1%	77,443	141,691	29,279	9,731	4.8x	5.2x	5.0x	14.6x	14.0x	13.1x	21.9x	19.7x	17.5x
Dominion Energy	\$48.63	2%	-23%	40,692	90,485	17,174	4,762	5.3x	5.2x	5.2x	19.0x	12.2x	11.7x	40.9x	15.0x	15.3x
American Electric Power	\$80.23	3%	-15%	41,333	85,662	19,640	6,926	4.4x	4.3x	4.2x	12.4x	11.5x	10.7x	17.9x	15.3x	13.9x
PG&E Corporation	\$17.30	2%	10%	36,178	91,081	21,680	6,193	4.2x	3.9x	3.7x	14.7x	10.4x	9.2x	19.9x	14.6x	13.1x
Edison International	\$71.22	1%	11%	27,298	65,693	17,220	4,748	3.8x	3.7x	3.5x	13.8x	10.5x	9.6x	33.1x	16.2x	13.8x
Hydro One	\$37.14	5%	0%	16,551	28,107	5,982	2,057	4.7x	4.8x	4.6x	13.7x	13.3x	12.7x	20.5x	21.0x	19.7x
Eversource Energy	\$64.29	3%	-24%	22,443	46,946	12,289	3,853	3.8x	3.7x	3.6x	12.2x	12.1x	11.0x	16.0x	14.6x	13.5x
DTE Energy	\$107.00	3%	-9%	22,054	41,886	19,228	3,276	2.2x	2.4x	2.3x	12.8x	11.5x	10.8x	20.4x	17.2x	16.0x
Ameren Corporation	\$80.68	2%	-9%	21,177	37,306	7,957	2,953	4.7x	4.5x	4.4x	12.6x	11.9x	10.8x	19.7x	18.3x	16.7x
Centerpoint Energy	\$29.15	3%	-1%	18,348	35,548	9,321	2,860	3.8x	3.8x	3.7x	12.4x	11.5x	10.6x	17.4x	19.6x	17.8x
CMS Energy	\$57.01	2%	-11%	16,631	32,132	8,596	2,356	3.7x	3.8x	3.6x	13.6x	11.8x	10.9x	19.9x	18.3x	16.8x
PPL Corporation	\$25.67	2%	-12%	18,921	33,410	7,902	2,627	4.2x	4.1x	4.1x	12.7x	10.4x	9.8x	25.0x	17.2x	15.6x
Pinnacle West Capital	\$79.09	3%	6%	8,962	19,164	4,324	1,672	4.4x	4.3x	4.1x	11.5x	12.0x	10.7x	18.5x	18.7x	15.4x
Black Hills	\$55.12	0%	-22%	3,699	8,114	2,552	706	3.2x	3.2x	3.1x	11.5x	11.2x	10.8x	14.3x	n.a.	n.a.
Median								4.2x	4.1x	4.1x	12.8x	11.8x	10.8x	19.9x	17.2x	15.8x
Average								4.2x	4.2x	4.0x	13.4x	11.8x	10.9x	22.3x	17.3x	15.8x

Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

N/A: Not Applicable.

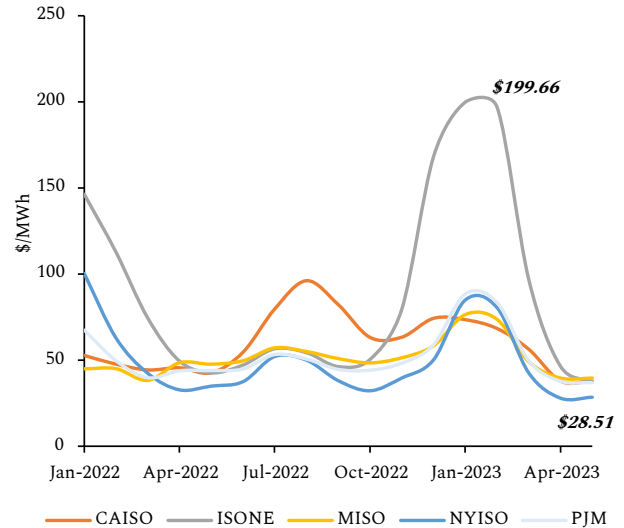
Source: Bloomberg as of the 19 September 2023.

Monthly gas prices in the US and Europe



Source: Bloomberg

Monthly electricity prices in the US



OIL & NATURAL GAS

Company	Price Current	Weekly % Change	YTD Price % Change	Market Cap	Enterprise Value	Revenue 2022	EBITDA 2022	EV/Revenue 2022	2023E	2024E	EV/EBITDA 2022	2023E	2024E	P/E 2022	2023E	2024E
Oil & Gas MAIors																
Saudi Aramco	34.15 ر.س.	3%	16%	2,203,226	2,211,161	534,516	329,105	4.1x	4.6x	4.6x	6.7x	8.4x	8.1x	13.9x	18.3x	17.1x
Exxon Mobil	\$117.64	0%	10%	470,936	490,855	398,675	89,362	1.2x	1.4x	1.4x	5.5x	6.8x	7.0x	8.4x	12.8x	13.3x
Chevron	\$167.22	0%	-4%	312,241	325,118	235,717	58,628	1.4x	1.5x	1.4x	5.5x	6.5x	6.2x	8.8x	12.4x	12.0x
Royal Dutch Shell	€30.63	3%	13%	218,026	258,931	381,314	81,638	0.7x	0.8x	0.8x	3.2x	3.8x	3.9x	5.2x	8.4x	8.1x
TotalEnergies	€62.91	3%	5%	168,120	194,562	263,310	60,382	0.7x	0.8x	0.8x	3.2x	4.0x	4.2x	8.2x	7.2x	7.7x
Gazprom	171.14 P	-3%	4%	42,093	107,034	173,119	44,736	0.6x	n.a.	n.a.	2.4x	n.a.	n.a.	2.3x	n.a.	n.a.
BP	£524.10	0%	8%	111,404	157,524	241,392	28,724	0.7x	0.7x	0.7x	5.5x	3.5x	3.7x	n.a.	6.4x	7.4x
Petrobras	R\$ 37.36	1%	43%	96,658	139,359	124,448	70,091	1.1x	1.4x	1.4x	2.0x	2.7x	2.9x	2.6x	4.3x	4.6x
ConocoPhillips	\$124.48	1%	10%	149,064	158,693	78,494	34,267	2.0x	2.8x	2.6x	4.6x	6.3x	5.9x	8.0x	14.3x	12.4x
Equinor	356.90 kr	3%	1%	99,732	84,967	149,004	87,833	0.6x	0.8x	0.8x	1.0x	1.7x	1.7x	3.5x	7.9x	7.9x
Novatek	1,609.40 P	-3%	49%	50,770	50,862	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eni	€15.26	1%	11%	55,100	70,495	139,572	26,032	0.5x	0.7x	0.7x	2.7x	3.1x	3.2x	3.8x	7.2x	7.1x
Marathon Petroleum	\$156.34	0%	41%	62,512	86,477	177,453	24,519	0.5x	0.6x	0.6x	3.5x	4.8x	6.6x	4.3x	6.4x	11.5x
Canadian Natural Resources	C\$87.20	-1%	22%	70,767	80,618	32,526	17,007	2.5x	3.1x	3.1x	4.7x	6.6x	5.9x	8.4x	12.0x	11.0x
Lukoil	6,398.50 P	-4%	55%	46,060	38,887	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Phillips 66	\$122.45	-1%	21%	54,526	72,525	169,990	11,547	0.4x	0.5x	0.5x	6.3x	5.8x	6.9x	4.9x	7.5x	9.5x
Valero Energy	\$146.28	0%	22%	51,656	60,047	176,383	18,513	0.3x	0.4x	0.4x	3.2x	3.9x	6.0x	4.5x	5.7x	10.4x
Omv	€45.73	1%	-7%	16,009	29,684	65,618	14,737	0.5x	0.7x	0.7x	2.0x	3.2x	3.2x	4.2x	5.8x	5.7x
Repsol	€15.45	2%	2%	21,118	30,302	79,157	8,636	0.4x	0.4x	0.5x	3.5x	2.8x	3.1x	4.7x	5.0x	6.0x
Galp Energia	€14.14	2%	10%	12,329	16,194	28,270	3,962	0.6x	0.7x	0.7x	4.1x	4.5x	4.7x	7.9x	13.2x	14.9x
Petronas Gas	RM17.20	0%	2%	7,247	7,286	1,402	751	5.2x	5.6x	5.5x	9.7x	9.7x	9.5x	19.4x	17.8x	17.4x
Petronet LNG	₹ 238.30	2%	10%	4,293	3,902	6,844	643	0.6x	0.6x	0.6x	6.1x	6.8x	6.2x	10.3x	11.2x	10.2x
China Oil & Gas	HK\$0.23	0%	-19%	166	1,271	2,225	335	0.6x	n.a.	n.a.	3.8x	n.a.	n.a.	1.4x	n.a.	n.a.
Median								0.6x	0.8x	0.8x	3.8x	4.5x	5.9x	5.0x	7.9x	10.2x
Average								1.2x	1.5x	1.5x	4.3x	5.0x	5.2x	6.7x	9.7x	10.2x

Figures in dollars millions except for share price; actuals are converted using FX rate as of the relevant fiscal year-end, estimates using the latest FX rate as of 19 September 2023.

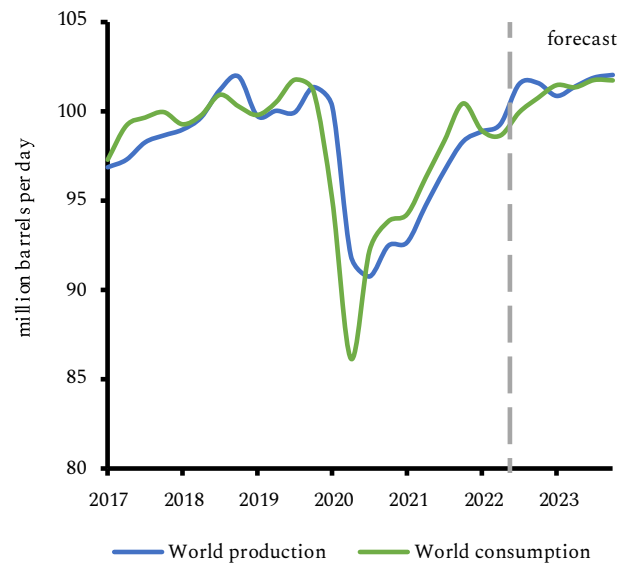
N/A: Not Applicable.

Source: Bloomberg as of the 19 September 2023.

West Texas Intermediate Crude Oil Price



Daily global crude oil demand



Source: Bloomberg

An aerial photograph of a coastline. The left side of the image shows a dense, lush green forest or coastal scrub. The right side shows a deep blue ocean. The text "SELECTED M&A" is centered over the image, spanning the boundary between the land and the water.

SELECTED M&A

SELECTED M&A TRANSACTIONS

Date	Target	Country	Valuation (\$m)	Solution	Acquirers
Semiconductors					
06 Apr	Silicon Frontline	US	n.a.	EDA	Synopsys
26 Apr	TSI Semiconductors	US	n.a.	Semiconductors	Bosch
08 May	Autotalks	Israel	n.a.	V2X Chips	Qualcomm
17 May	eMagin	US	218	OLED Displays	Samsung Electronics
01 Jun	Diakopto	US	n.a.	EDA	Ansys
01 Jun	Pantronics	Austria	n.a.	Wireless Connectivity	Renesas Electronics
Renewables					
19 Apr	Sunergy Renewables	US	475	Residential Solar & BESS	ESGEN Acquisition (SPAC)
20 Apr	Eren Groupe	France	n.a.	Renewables Developer	TotalEnergies
04 May	Solar Flexrack	US	n.a.	Solar Equipment	Hanwha Solutions
12 May	Evolar	Sweden	80	Solar Equipment	First Solar
22 May	Asterion Energies	Spain	637	Renewables Platform	Repsol
07 Jun	Telge Energi	Sweden	42	Renewables Utility	Fortum
22 Jun	Wessex EcoEnergy	UK	4	Residential Solar	Good Energy Group
12 Jul	Primus Wind Power	US	n.a.	Wind Equipment	Ryse Energy
20 Jul	Solizer	Germany	n.a.	Solar Developer	Vattenfall
27 Jul	Parkwind	Belgium	1,712	Wind Developer	Jera
Mobility					
10 Apr	Careem	UAE	795	Mobility Tech	Emirates Telecommunications Group
28 Apr	Zapp Electric Vehicles	US	573	Electric Vehicles	CIIG Capital Partners II (SPAC)
16 May	TIER	Germany	n.a.	Micro Mobility	Bolt
25 May	Embark Trucks	US	71	ADAS	Applied Intuition
13 Jun	LeddarTech	Canada	348	ADAS	Prospector Capital (SPAC)
31 Jul	Wiferion	Germany	n.a.	EV Charging	Tesla
01 Aug	QEV Technologies	Spain	209	Electric Vehicles	SPEAR Investments I (SPAC)
Energy Storage & Fuel Cells					
10 May	Livent	US	3,800	Lithium Producer	Allkem
15 May	Oneida Energy Storage	Canada	513	BESS	Northland Power
28 Jun	Richborough Energy Park	UK	93	BESS	Generali
24 Jul	Schmid Silicon Technology	Germany	n.a.	Li-Ion Batteries	Group14 Technologies
Green Molecules					
24 Apr	Firefly Green Fuels	UK	6	Biofuels	Wizz Air
07 Jun	Tekart	UK	n.a.	Biofuels	Triboron International
01 Aug	SunCoal	Germany	n.a.	Biofuels	UPM Biochemicals

Source: Bloomberg