

MAY 2024  
SECOND  
EDITION

# AMID THE ENERGY TRANSITION, FOCUS HAS TURNED UPSTREAM

BY RUSSELL CLARKE AND EMMA LOWRY

**Many businesses across the energy transition, whether capital searching for opportunities to invest in the space or companies operating within the sector aiming to create value, are looking upstream — toward the conception of project lifecycles — to take advantage of insights, efficiencies and tools to drive greater value.**

Small decisions and minor wins in the beginning stages of infrastructure deployment or ahead of renovation and repowering can create heightened value later in the lifecycle (downstream), which can affect the end results across numerous infrastructure segments, both horizontal and vertical. Pinch points, bottlenecks and delays in the implementation and ongoing maintenance of infrastructure have serious value implications for project and infrastructure owners and other stakeholders. This is increasing the industry's focus on minimizing potential issues before they occur and investing upstream to de-risk and improve returns downstream.

The continued march of renewables has proven to be a long-term trend. As a result, many energy transition, renewables and climate investors are expanding their approaches, moving from project capital, for example, to broader mandates. These include business models or segments that haven't historically been part of their investment landscape — such as software, specialty products and equipment, and niche services. Given this new wave of opportunity, companies operating in the energy transition with these offerings can hold outsized value.

# WHAT'S DRIVING THE SHIFT UPSTREAM?

Several key factors are behind the increased focus on the beginning of the value chain in the energy transition process:

- Critical services aid infrastructure deployment.** The difference between a profitable project asset and a money-losing venture can sometimes be attributed to small changes upstream. When greater control is exercised at the onset of a project, it can make all the difference. Investing in a software or service that aids downstream economics or ongoing operations is a win-win situation.
- Private capital allocation is changing.** There's a noticeable increase in growth capital deployed to proven but undersized opportunities that are in key positions to scale and unlock greater value. Many traditionally focused infrastructure investors and venture funds have broadened their mandates to include services, software and products that require a growth-focused investment style. This is done to further accelerate

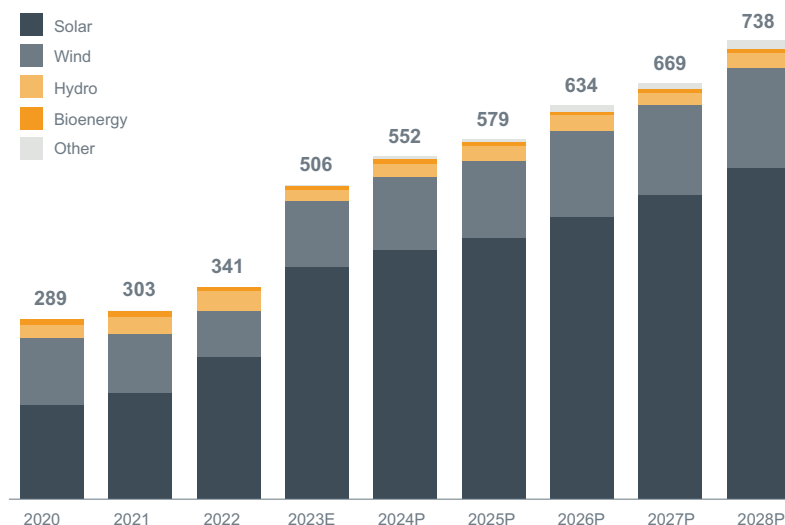
opportunities that have proven market traction, and often profits, but need additional investment to scale at a faster rate.

Growth equity constituted 21.5% of the number of 2023 private equity deals, an increase from the five-year average of 18%, according to [Pitchbook data](#). This has been even more apparent when focused on the energy transition segment. 2023 was also the first year in which growth equity deals accounted for a larger share of all private equity transactions than leveraged buyouts (LBOs), reflecting a broader shift to generally smaller investments and objectives that include more than leveraged financial returns.

- Niche firms are getting more attention.** Investors are more confident in the growth potential of smaller, niche firms that are focused upstream in project cycles compared to larger downstream opportunities. Heavily researched sub-themes combined with time have allowed defensible thesis and increased conviction to be reached around certain segments. Combined with the recent growth of many of these technologies, products and services, this has made sometimes-smaller niche opportunities more attractive additions to portfolios.

## 2023: A STEP CHANGE IN RENEWABLE POWER DEPLOYMENT

### NET ELECTRICITY CAPACITY ADDITIONS BY TECHNOLOGY, IN GIGAWATTS



Source: [International Energy Agency](#)



## THE ROLE OF SELECT SEGMENTS

[FMI Capital Advisors' energy transition group](#) has been focused on several key subsegments that enable the energy transition. While nothing offers a holistic solution, we believe these areas will be especially important in achieving net zero across the built environment.

**Power grid software.** As we navigate the transition toward a cleaner and more resilient grid, software has emerged as a linchpin for modern power grid operations. In a new era of increasing energy demand coupled with the growing integration of renewable energy sources like solar and wind power, software is critical in balancing the grid while also optimizing the integration of more intermittent renewable energy sources.

Grid stakeholders have increasingly come to rely on power market analysis software like that developed and provided by [PowerGEM](#) to optimize decision-making around long-term planning and short-term operations. Market simulations and reliability analyses allow users to run different congestion scenarios, anticipate issues and identify potential bottlenecks, as well as plan how to best respond to these scenarios without interrupting power supply to consumers. Software products that leverage data from the grid and provide robust analytics to help users make informed decisions at the outset of planning and improve operational performance will be critical in maintaining the long-term reliability and stability of the grid in this new era.

**Renewables design and engineering.** Talent shortages in the engineering industry have long posed a constraint to the deployment of renewables. Companies that have been able to attract and retain the engineering talent needed for the energy transition have garnered significant interest in the market. Further, engineering disciplines that are positioned with access across the entire project lifecycle can generate additional value.

“While expenses incurred during initial planning and development may seem modest compared to those later in the project, the value of getting it right cannot be overstated,” says Eric Curry, CEO of [FastGrid](#), a leader in design and engineering for utility-scale solar and energy storage projects. “We are increasingly hearing from our clients the greater focus on upstream professional services involved in owners’ engineering and getting ahead of issues that can cost serious time and money later in a project during later-stage engineering or deployment. This is especially critical with energy storage.”



Developers and owners are prioritizing proactive risk management — searching for partners who perform formal engineering but also help mitigate risks and uncertainties from the initial conception of the project lifecycle.

**Utility data analytics.** In today's data-driven world, organizations and consumers are frequently looking for ways to gain insights, improve decision-making and earn a competitive edge. Energy producers and consumers are no different, seeking greater visibility and control over their usage so that they can make better decisions about their consumption and expenditures, as well as improve desired production.

The challenge is access to quality data and turning it into insights that can be used to make decisions at scale. Companies like [Power TakeOff](#) have successfully positioned themselves upstream so they have access to vast amounts of advanced meter infrastructure (AMI) or smart meter data from utilities. With that information, the company uses its proprietary artificial intelligence/machine learning (AI/ML) tools to create personalized energy efficiency recommendations for users to save money and energy. Data-driven services and energy efficient solutions will continue to shape the way consumers contribute to decarbonized and more efficient grids.

## COMMON BENEFITS OF UPSTREAM POSITIONING

Upstream positioning can offer several common benefits from both operational and investment perspectives. These can include:

- **Pricing inelasticity.** When a company can deliver a high value at a smaller cost, it is extremely attractive. In the scheme of broader infrastructure spending, the cost of a single engineering scope, interconnection study or one seat of a software license relative to the total capital outlay for a project can make customers less sensitive to price, especially for proven providers delivering high-quality results consistently. Firms providing reputable products or services in critical markets can establish pricing power and higher switching costs that keep clients in long-term partnerships. Front-end services like design and engineering can also be less price sensitive because they inform the rest of the project lifecycle, including construction and operations, prioritizing accuracy over price given the importance.
- **Speed and scalability.** Businesses are increasingly standardizing or automating workflows using internal systems, processes and technologies, to capture additional operating insights and deliver faster results to clients. And scalable business models are more cost effective and can accommodate increases in demand without requiring proportional increases in resources. By growing revenue faster through replicable but bespoke services, firms can thoughtfully manage hiring needs and maximize utilization and profitability, enabling sustainable growth.



- **Technical expertise.** There's a limited pool of existing technical talent across various segments of the energy transition, and prospective talent can be difficult to find. Consequently, software, services and products built on technical expertise are valued more amid this growing scarcity of specialized talent. In many cases, technical expertise is what allows a company to achieve greater quality, reliability and performance standards, which means firms that have successfully cultivated a team of technical experts and industry credentials can command a premium.
- **Information scarcity.** Companies with access to unique or proprietary information, coupled with the products, services and insights that support it, can have a competitive advantage across the energy transition. When a company has access to information that is not commoditized, its perceived value and reputation as a go-to provider or go-to source of a critical service or product may be enhanced, thus building its credibility and brand in the market. Internally developed code, software or process designs as well as proprietary technology and relationships can all drive additional value – reducing the threat of new competition and helping a company maintain and grow its market share.

## LOOKING AHEAD

In short, the heightened interest in upstream components of the energy transition value chain will likely continue for some time. However, as more investors broaden their focus, it's easy to picture a scenario in which the investor landscape becomes further mixed. Proven opportunities could likely command more attention and become more expensive at scale and will ultimately help accelerate the long-term energy transition over time.





# AUTHORS



**RUSSELL CLARKE** brings significant experience across the energy transition, energy solutions and climatetech landscape to his role as managing director at FMI Capital Advisors. He executes merger and acquisition advisory and capital formation engagements for middle-market companies including energy efficiency and energy service companies, consulting engineers, energy and utility software, power and renewable generation, electric vehicle infrastructure, and utility infrastructure services firms. He can be reached at [Russell.Clarke@fmicorp.com](mailto:Russell.Clarke@fmicorp.com).



**EMMA LOWRY** is an associate with FMI Capital Advisors. Emma is responsible for company valuation, financial analysis, market and industry research, prospective buyer research and overall support for the energy transition team. She can be reached at [Emma.Lowry@fmicorp.com](mailto:Emma.Lowry@fmicorp.com).





## CONTACT US



**RALEIGH HEADQUARTERS**  
223 S. West Street  
Suite 1200  
Raleigh, NC 27603



919.787.8400

FMI is a leading consulting and investment banking firm dedicated to serving companies working within the built environment. Our professionals are industry insiders who understand your operating environment, challenges and opportunities. FMI's sector expertise and broad range of solutions help our clients discover value drivers, build resilient teams, streamline operations, grow with confidence and sell with optimal results.

## OFFICES

Denver  
44 Cook Street  
Suite 900  
Denver, CO 80206  
303.377.4740

Houston  
1301 McKinney Street  
Suite 2000  
Houston, TX 77010  
713.936.5400

[FMICORP.COM](http://FMICORP.COM)