# Partnering for Success:

## Collaborations to advance the energy industry

CERA

S&P Global Energy

2026 EAGE ANNUAL
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ABERDEEN | UK

# Foreword

2026 is shaping up to be the year of a strategic inflection point. As 2025 drew to a close, the geoscience community found itself operating at the intersection of heightened complexity and renewed possibility. Volatile markets, accelerating energy-security concerns, and mounting expectations around decarbonization placed unprecedented demands on subsurface decision-making. Yet, for geoscientists, the year was also marked by tangible progress: cloud-enabled collaboration moved from aspiration to routine, AI-assisted interpretation matured from experimentation to operational use across some organizations while others struggled to recognize value. Finally, a continuing theme has been cross-disciplinary teams becoming more the norm rather than the exception. These shifts reinforced a simple truth; no single discipline or technology stack can unlock the full value of the subsurface alone.

The impetus for partnership in 2025 was both practical and strategic. Capital discipline forced companies to rethink how they innovate, leading to new corporate structures that blur traditional boundaries between operators, service companies, technology providers, startups, and academia. European energy players, in particular, leaned into consortia and joint ventures to accelerate progress while managing risk. This collaborative mindset is reshaping the way we approach the subsurface. It is enabling geoscientists and engineers to augment their expertise with interoperable platforms, and AI models trained across broader, more diverse datasets. These new ways of working are set to deliver insights with greater confidence under tough time constraints.

Looking ahead, as we begin 2026, the industry's ambition is expanding. "Shooting for the moon together" is no longer a metaphor reserved for frontier exploration alone; it now encompasses bold collective efforts in subsurface imaging, automation, and integrated decision systems that span the energy lifecycle. The same collaborative frameworks are proving essential for advancing low-carbon commercialization. From carbon storage and geothermal, to energy-system integration, where subsurface uncertainty, the ever-evolving complexities of regulatory influence, and long project timelines demand shared learning and aligned incentives.

As the EAGE Annual Conference convenes this year in Aberdeen, this brief highlights how partnerships are becoming the primary engine for value creation.The path forward is clear: maximizing value through technology requires maximizing trust, openness, and collaboration across the energy ecosystem. By partnering for success, across disciplines, borders, and energy pathways, the geoscience community is not only advancing the oil and gas industry, but also shaping a more resilient, innovative, and responsible energy future.

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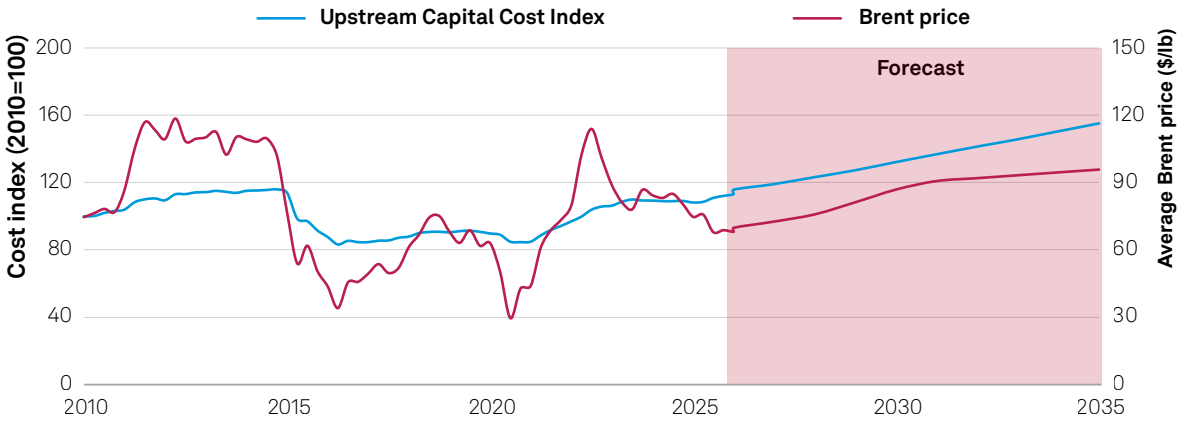
## The impetus for partnership

The oil and gas sector appears to be in the midst of yet another transition. Peak demand is looming over the next 5 to 10 years. Company finances are being tested by an impending period of moderate oil prices coupled with annual cost inflations exceeding 3% (Figure 1). Low-carbon ambitions are being scaled back but not abandoned entirely as companies focus instead on those segments that can benefit most from core industry capabilities. And finally, a suite of promising new technologies is entering the industry that are challenging organizations to adapt existing workflows to enhanced capabilities.

### Figure 1.

**Upstream capital cost index vs. Brent pricing**




As of January 28, 2026.
Notes: UCCI = Upstream Capital Cost Index, see the Upstream Capital Costs Service Summary of All Indexes.
Brent price = nominal annual. See the
Source: S&P Global Energy CERA.


The phrase "do more with less" thus has growing resonance and is becoming firmly entrenched in the industry's lexicon. As a maturing sector shifts to lower staffing levels, expectations are not going away for companies to continue delivering hydrocarbon resources in the most efficient, effective and low-carbon manner. Beyond simply asking staff to work harder, there are few levers available for companies to maximize their organizations' potentials. These could include AI and other digital technologies that offer pathways to increased productivity, centralized organizations that facilitate expertise and resource sharing, and corporate arrangements that integrate assets and knowledge. All present unique opportunities and challenges.

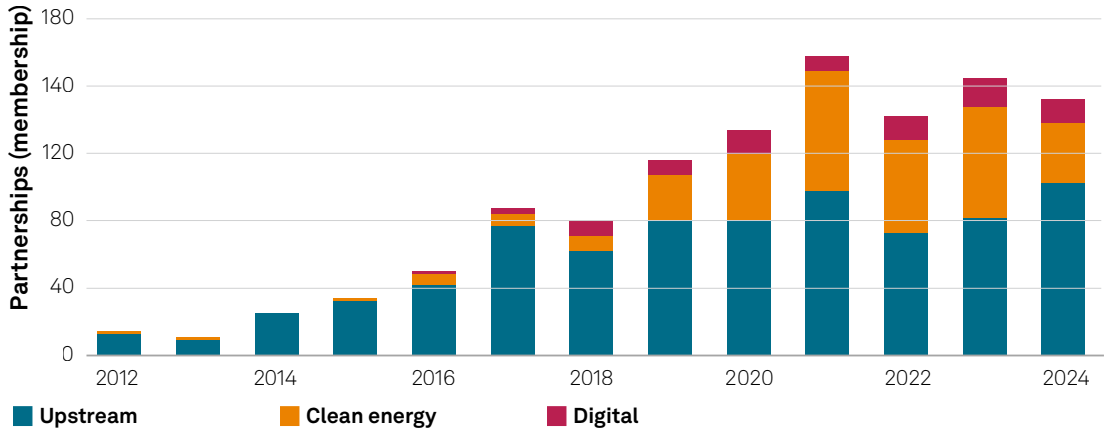
A common thread running through all these industry developments are opportunities for companies to collaborate more extensively with one another to help manage costs, augment organizational capabilities and accelerate solution development. Partnering is a hallmark of how the oil and gas sector has long done business. From sharing the costs and risks associated with resource discovery, to solving some of the industry's more vexing technical challenges (e.g., methane containment), partnerships are now extending further afield within the commercial, technology and low-carbon domains. If a tightening industry is to continue delivering energy affordably and reliably while at the same time growing into new areas, it needs to think different about how it operates. Partnering in new ways is one such alternate approach, and this report explores key potential directions for its expansions:

- **Corporate marriages.** Combining forces in maturing regions to bring greater focus, scale, and technical horsepower and data to asset portfolios.
- **Augmented upstream workflows.** Leveraging specialized capabilities to adapt and incorporate emerging AI and digital technologies into subsurface, well construction and facility workflows.
- **Joint moonshots.** Overcoming the industry's growing reluctance to make long-term investments by sharing costs and risks amongst a cohort of technically complementary parties.
- **Low-carbon commercialization.** Tapping external knowledge and expertise to advance technology development, market understanding and scaling.

We're already seeing expanded partnerships forming in such areas as technology development (Figure 2), resulting in accelerated solution delivery and better outcomes. As the industry moves forward with these and other forms of open collaboration, questions are beginning to arise over what will drive competitive differentiation in the future? Part of the answer may well lie in an ability to effectively establish and execute arrangements with external entities and integrate them with broader organizational capabilities.

### Figure 2.

**Oil and gas technology development partnership, by domain**




Date compiled December 12, 2025.
Digital investments include those technologies whose application across the energy value chain (upstream or clean energy) is not specified, such as cybersecurity and quantum computing. See the Upstream Software and Technology Strategy Oil and Gas Technology Department Partnerships Database.
Source: S&P Global Energy.

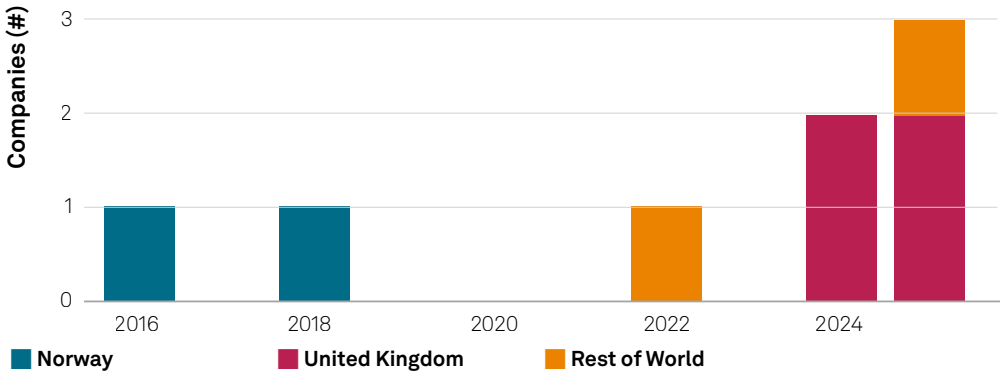

## New corporate structures

Oil companies increasingly grapple with maturing portions of their portfolios that may no longer meet financial hurdles or match corporate strategies. The traditional move in such cases has been to free up capital by divesting those assets to companies able to bring greater focus and lower cost structures. An emerging alternative, however, is instead to seek synergies and scale with adjacent operators, while maintaining an ownership stake and basin presence.

Termed satellite companies, SmashCo's and other clever names, these entities transfer parent companies' regional assets into a combined standalone corporate structure. Different ownership and operating models are taking shape, but most result in independently managed companies that seek to maximize value from the collective assets and staff. The current generation was kicked off in 2016 by Det norske's combination with BP's Norwegian continental shelf assets to form Aker BP. Over the decade since, the concept has expanded in Norway, become the dominant model in the United Kingdom and pushed into global locations (e.g., Angola, Southeast Asia) (Figure 3).

### Figure 3.

**Satellite companies, by announcement year and region**




Date compiled January 19, 2026.
Source: S&P Global Energy.

The pursuit of such arrangements appears to be primarily financially- and optionality-motivated. Key secondary benefits include expertise sharing across the expanded workforce, enhanced operational optimization opportunities, and access to broader sets of subsurface data. As companies come together, barriers to resource sharing and cross-value chain optimization fall away, hopefully resulting in better outcomes.

The oil and gas sector has experimented in the past with such tighter integration of independent companies' operational activities in maturing regions. Examples include coordinating logistics and transport fleets in the Southern North Sea and exchanging completions and subsurface data in unconventional North America basins. These efforts have yielded mixed results, with contractual issues, company favoritism and differing corporate cultures sometimes torpedoing them. The SmashCo model helps to overcome these roadblocks by forming a single legal entity with aligned incentives.

Many of these new entities are too recently formed to be able to pass judgment on their enhanced operational effectiveness. However, company announcements and anecdotal accounts do suggest that the resulting collaborations are leading to better results. Employees tout the complementary skill sets each side brings to the new organization (e.g., operational delivery versus commercial execution), expanded and integrated subsurface data sets and teams, and shared infrastructure access (e.g., gathering systems, refineries) as some of the factors driving these improvements.

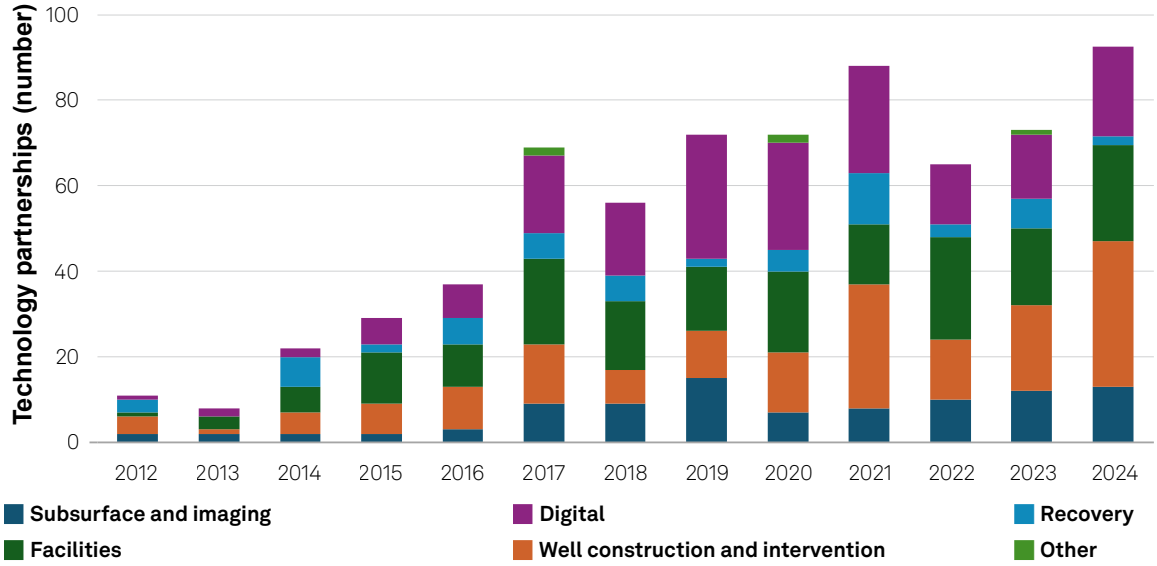
## Augmenting subsurface workflows

Owing to digital technology's rapid scalability and clear line-of-sight to value, its incorporation into upstream workflows is emerging as a preferred path for greater operational efficiency. These might include AI algorithms for real-time optimization of artificial lift settings, underwater autonomous vehicles for subsea integrity monitoring, and real-time seismic acquisition quality assurance.

Partnerships are critical in these areas, as they offer avenues for the leading nontraditional technology players (e.g., technology startups, hyper scalers) to participate in the oil and gas innovation ecosystem. Solutions developed outside the industry by these types of companies can then be modified and refined for specialized oil and gas needs by more traditional oilfield services firms, in some cases also through formal collaboration. In addition to supporting technology development, these collaborations also serve as a means for the oil and gas sector to stay abreast of rapidly evolving digital technologies developed elsewhere (e.g., deep learning, quantum computing).

### Figure 4.

**Oil and gas upstream technology partnerships, by focus area**

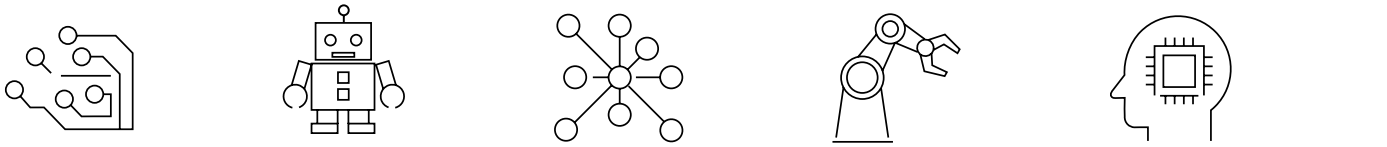



Upstream digital denotes digital technology development partnerships developing a solutions without a targeted application to a specific segment of the E&P value chain, whereas digital enablement denotes the application of a digital technology to a specifc functional activity, e.g., robotic drilling. See the Upstream Software and Technology Strategy Oil and Gas Technology Development Partnerships Database.
Data compiled September, 2025.
Source: S&P Global Energy CERA.

While partnerships are delivering solutions across the E&P value chain (Figure 4), the subsurface and well construction domains have seen particularly strong growth and impressive results over the past few years:

- **Subsurface.** As the industry seeks to be more responsive in its ability to bring new resources to market, one approach is to reduce seismic processing and interpretation times. Rapid advances in AI coupled with low-cost computing infrastructure are driving partnerships in these areas (e.g., Shell's May 2023 partnership with Spark Cognition, TotalEnergies's April 2024 partnership with Earth Science Analytics), transforming tasks that would take weeks to complete to ones providing answers within minutes. By reducing seismic interpretation times, earth scientists are able to more comprehensively interrogate the uncertainties associated with their interpretations (e.g., level of grid refinement, velocity model parameter selection) to better understand the risks associated with the subsurface and thus improve exploration outcomes.
- **Well construction.** The focus on reducing well costs and delivering more productive ones is driving the industry toward higher levels of drilling automation, and ultimately autonomy. For the industry to achieve these objectives, integration and optimization across the various siloed drilling system components must occur. Digitalization is the glue that can tie these systems together, and the industry is turning to partnerships to come up with the right formulations (Figure 5). Examples include matching drilling data frequency to the speed of decision making, data platforms that integrate different sources of data that reflects the complex and interconnected nature of the well construction process (Precision Drilling's May 2025 partnership with Prescient to develop a drilling digital twin), and algorithms that analyze and optimize equipment (e.g., ADNOC, AiQ and Corva's December 2024 partnership to develop AI algorithms for real-time, optimized drilling parameters).

**Figure 5. Select leading examples of well construction digital partnerships**



| Data and network infrastructure | Roboticization and mechanization | Integrated modeling platforms | AI, analytics and machine learning | Automation and autonomy |
|---|---|---|---|---|
| **Reelwell-Odfjell Technology** (December 2024) | **ConocoPhillips-Precision Drilling** (June 2022) | **Equinor-Oliasoft** (July 2024) | **Enovate Ai-Redback Drilling Tools and Manufacturing** (October 2024) | **Corva-Nabors** (April 2025) |
| Integrate real-time telemetry, wellbore power and data analytics into drilling and intervention operations | Integrate modular robotics technology on the rig floor for automated pipe handling | Integrate automated simulation capability with digital well planning platform | Leverage real-time data and AI to optimize bottom hole assembly operation | Integrate rig instrumentation with AI and drilling analytics for real-time closed loop drilling |

**Increasing digital technology sophistication**

As of Jan. 19, 2026.
Source: S&P Global Energy.


The rise of technology development partnerships reflects the changing nature of oil and gas innovation in response to increasing demands on the business. These changes have implications not only for the types of organizations participating in oil and gas technology development and where innovation is sourced, but also for what constitutes competitive advantage (e.g., ability to identify partners with which a company can effectively collaborate and align on goals).

## Shooting for the moon, together

One outcome of recent oil price downturns has been the industry's growing reluctance to make investments in long-term capability development. In contrast to AI- and digitally-augmented upstream workflows, the technologies associated with these enhanced capabilities tend to be capital-intense and slower (i.e., decades) to deliver value ‚Äî think subsea processing, new EOR methods and seismic acquisition techniques. Those who believe that new technologies are still needed to open oil and gas plays and to deliver step changes in industry performance should be concerned over these developments.

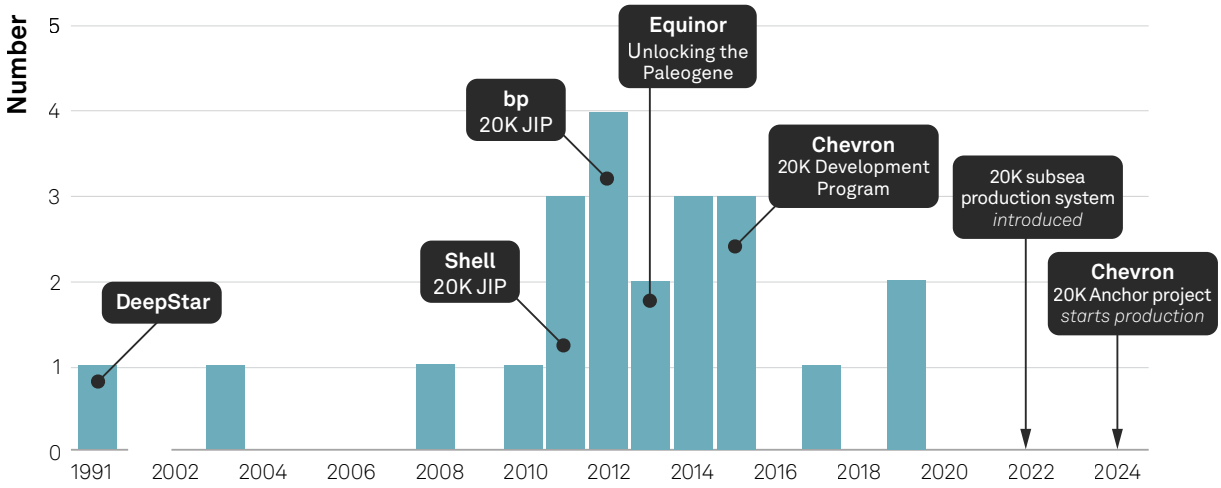
With oil companies less willing to invest and the oilfield services sector less apt to perform speculative technology development, the most likely path forward is increased industry collaboration. This collaboration often takes the form of industry consortiums, joint R&D activities and project-driven technology development. The aim is to share the high costs and risks of development, while at the same time creating sustained commercial opportunities for contributing suppliers.

One advanced technical domain in which this approach recently bore fruit is 20,000 psi (20K)-rated production equipment. Confronted by extreme pressure conditions in Gulf of Mexico Lower Tertiary reservoirs that exceeded equipment qualifications, companies acted to advance the technical capabilities that could unlock this promising play:

- Oil industry players initiated 20 collaborative technology development activities between 2008-20 to develop 20K-rated wellheads, valves, flowlines and other key equipment (Figure 6)
- This higher rated equipment enabled Chevron to achieve first production from its 20K Anchor field in 2024, with four additional 20K project FIDs moving forward between 2023-25 (e.g., bp's Kaskida).

Despite this recent success, few additional industry "moonshots" are appearing on the horizon. Does the industry still require these types of enhanced capabilities, and if so, how best to initiate them?

**Figure 6.**
**20K collaborative technology development activities, # and announcement year**



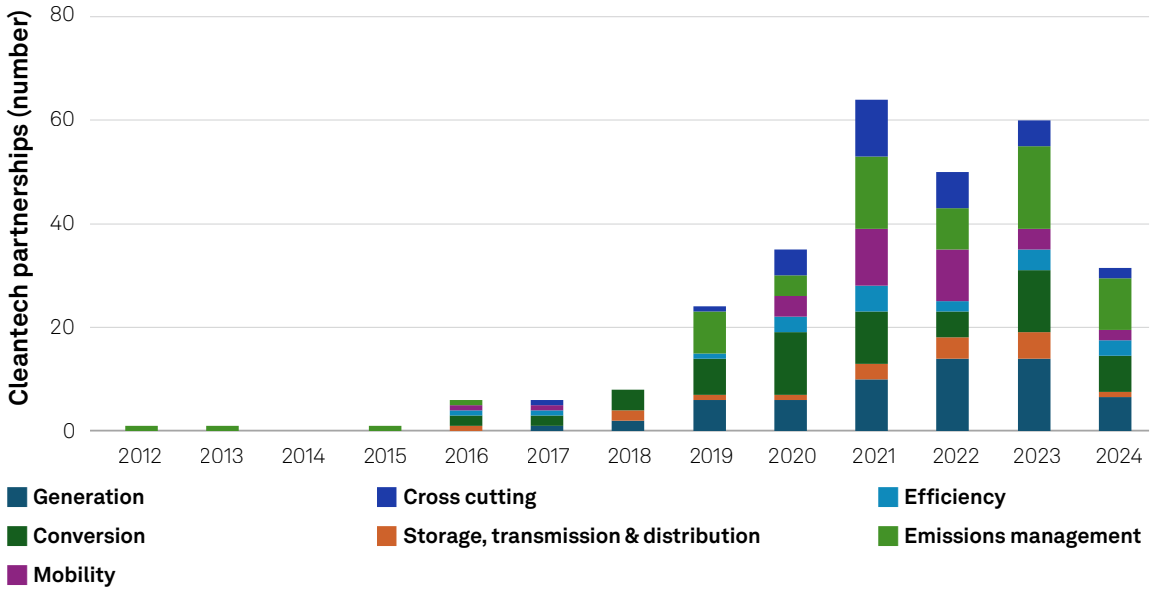

Data compiled December 12, 2025.
Source: S&P Global Energy.


## Advancing low-carbon commercialization

Growing stakeholder pressure to decarbonize and increasingly intertwined government and industry energy strategies prompted the oil and gas sector to pursue its own low-carbon agenda. This agenda included not only reducing emissions associated with its operations but also building new low-carbon business lines that could tap emerging commercial opportunities. As greater clarity around the pace of market development and government policies has emerged, company strategies have begun to retrench to those low-carbon segments best able to leverage core oil and gas capabilities and assets (e.g., accurately characterize the subsurface for safe and secure CO2 storage, efficiently drill and complete complex geothermal wells, process large volumes of water for lithium extraction).

## Figure 7.

**Oil and gas cleantech partnerships, by focus area**




Conversion technologies include methane pyrolysis, next generation biofuels and e-fuels. Emissions management includes carbon capture technologies. See the Upstream Technology Strategy Oil and Gas Technology Development Partnerships Database.
Data compiled September 12, 2025.
Source: S&P Global Energy CERA


Partnerships play critical roles in the oil and gas industry's entrv©e into these low-carbon segments, along with its ability to execute once there (Figure 7):

- **Understanding low-carbon markets.** Although many of the low-carbon pathways that oil companies are pursuing leverage core capabilities, companies are nonetheless entering new markets with new customers, new suppliers and new competitors. Partnering allows companies to more rapidly come up to speed in areas where they lack strong domain expertise by tapping the knowledge and relationships of their collaborators to engage with key players and to understand commercial models. A good example of this progression was Equinor's investments in wind technology startups in the late 2000s that helped to inform its M&A strategy (e.g., entry into the Arkona and Dudgeon offshore wind projects in 2016) and provided the commercial capabilities and regulatory knowledge to develop its own projects (e.g., Hywind Tampen).
- **Accelerating low-carbon technology development.** Many of the technologies needed to advance these low-carbon energy systems (e.g., more efficient CO2 capture and separation materials, high-temperature drilling equipment for advanced geothermal) are at early-stages. Coupling the developers of these technologies with the oil industry's ability to design, finance and execute large-scale and complex projects is especially well suited to later stages of the technology development life cycle when long duration field pilots and first-of-a-kind deployments occur. A good example is Quaise's August 2021 partnership with Nabors Industries that resulted in the integration of its millimeter wave drilling system with Nabors's full-scale oil and gas rig in April 2025 to enable fast and efficient granite drilling for superhot geothermal developments.
- **Advancing low-carbon market development.** The value chains associated with deep decarbonization segments (e.g., CCUS, hydrogen) remain at early stages,Äîsupply still needs to scale, end use markets still need to grow, and distribution networks still need to develop. Consequently, an increasing number of industry partnerships leverage companies' own facilities to serve as a source of either supply or demand to share the commercial and operational risks associated with maturing these new value chains (e.g., Shell's Alberta Polaris CCS project supplies blue hydrogen to its Scotford refinery operations while also delivering CO2 to the Altas Carbon Hub). Oil and gas players also feature prominently in developing a commercial scale CCS hub at PORTHOS. In addition to TAQA Energy and the PORTHOS partners collaborating to develop CO2 injection infrastructure, ExxonMobil is working with FuelCell Energy to demonstrate carbonate fuel cell technology to capture CO2 at its Rotterdam refinery.

Because of the commercial and technical uncertainties associated with these new low carbon pathways, many first-of-a-kind projects are being funded off corporate balance sheets, even with significant government support. The robust balance sheets within the oil and gas industry and companies' ability to manage the risks of major capital projects through commodity price cycles ensures that partnerships will continue to play a key role in driving the pace and pathways of decarbonizing global energy systems.

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