Capturing Carbon, Cultivating Talent
Sourcing the Right People for the CCS Revolution

Carbon Capture and Storage (CCS) could contribute to up **to 20% of the global emissions cuts** needed by 2050, making it a critical pillar of decarbonisation efforts. With the recent UK Government investment of **£21.7 billion** into CCS technologies, it's clear that the sector is gaining momentum, not only in the UK but globally. Energy companies such as Chevron, Shell, BP, ExxonMobil, and others are pouring resources into developing CCS technologies, recognising the dual need to decarbonise and remain competitive in a rapidly evolving energy landscape.

However, while the technology is critical, it's the **talent** behind these projects that will determine their success. The leaders, engineers, and visionaries who can drive CCS forward are a special breed—drawn not just from traditional energy backgrounds, but from **diverse sectors** such as chemical engineering, finance, digital technologies, and even aerospace. Here we explore where top-tier talent in the CCS space comes from, what qualities they possess, and how companies should target individuals who can thrive in this sector.

Common Thread: The System

The defining quality of talent in the CCS space is the **ability to think in systems**. CCS involves complex systems that blend geology, engineering, and financial structures, making multidisciplinary expertise essential. For this reason, CCS leaders must not only have deep technical expertise but also be able to **integrate knowledge from disparate fields** into a coherent vision. According to Peter Terium, CEO of NEOM Energy, "CCS is not a single technology but a complex system of technologies, policies, and markets. Leaders in this space need to be **master integrators**—capable of understanding how each component fits together."

At the executive level, this often means drawing from talent with experience in managing large-scale, technically complex projects. For instance, many leaders in the CCS space come from sectors like chemical engineering, where processes such as gas separation and purification are analogous to those used in CCS. Chevron's Gorgon Project, one of the world's largest CCS ventures, is led by an executive team who cut their teeth

managing vast industrial operations in the chemicals and refining sectors. These are individuals used to working with intricate technologies at scale and handling the challenges of operationalising them within strict regulatory environments. According to Nigel Hearne, President of Chevron's Eurasia-Pacific business, "The talent leading our CCS efforts has deep roots in operational excellence from upstream, refining, and chemicals. Their ability to think in both detail and in terms of system-level challenges is what allows us to take on projects like Gorgon."

But leadership is only one part of the equation. At the technical level, engineers from a wide range of industries bring the **intricate systems thinking** necessary to manage CCS operations effectively. For instance, chemical, mining, and other heavy industry engineers, used to handling large, complex systems, are particularly well-suited for carbon capture technologies. BP's partnership with Equinor on the Northern Lights CCS project in Norway, for instance, is led by individuals with a mix of backgrounds in petroleum engineering and process management, reflecting the multi-disciplinary nature of CCS. Leaders coming from sectors used to handling hazardous materials, high-pressure systems, and large-scale logistics are particularly well-suited for CCS operations, where similar challenges arise.

This is going to cause a **fundamental shift** in search strategies for organisations as they no longer go to the traditional pool of candidates for new hires. Thinking outside of the box and taking their hiring focus to more innovative sectors will be key to their continued success. However, this is a challenge that HR teams will have to grapple with as hiring managers are likely to be resistant to such change in what is, until now a very traditional industry. **It is those who adapt that will thrive**.

Strategic and Financial Acumen: Executives and Middle Managers Bridging Industry and Policy

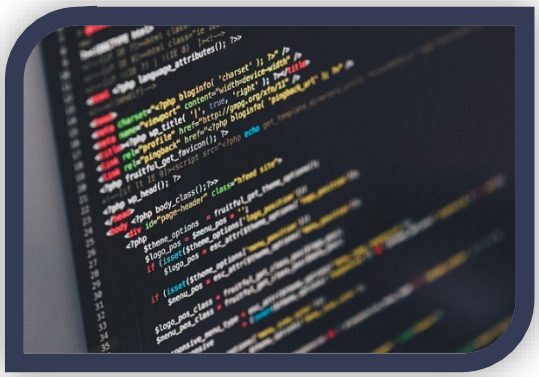
Another key area from which CCS talent is emerging is within the finance and infrastructure sectors, especially those with experience in project financing, public-private partnerships, and environmental, social, and governance (ESG) frameworks. **The capital-intensive nature** of CCS, coupled with its reliance on governmental subsidies and carbon pricing mechanisms, means that executives need to have a strong grasp of financial modelling and regulatory landscapes. According to Angus Gillespie, Vice President of Carbon Solutions at Shell, "We need leaders who understand how to structure deals in ways that can unlock public and private funding,

particularly in an era where carbon pricing will become critical to making CCS projects commercially viable."

At the mid senior level—those upper-middle managers who bridge the gap between high-level strategy and on-the-ground execution must be adept at not just **project management** but **stakeholder engagement**. Many of those who will successful managers within the landscape of CCS will have honed their skills in the infrastructure or large-scale construction sectors, where complex logistics, tight deadlines, and managing multiple stakeholder groups are par for the course. ADNOC, for example, has drawn from its deep pool of engineering and construction managers to oversee its CCS project in Al Reyadah, the first of its kind in the Middle East. This focus on infrastructure management allows ADNOC to apply lessons from the oil and gas industry, ensuring that its CCS projects remain on time and within budget.

A Focus on Digitalisation: The New Skillset for Junior Talent

While many senior CCS leaders come from traditional engineering or operational backgrounds, the younger generation of talent is being sourced from sectors that are on the **cutting edge of digitalisation and data analytics**. It is clear that the future of CCS is increasingly digital, with real-time monitoring, AI-driven reservoir management and big data analysis revolutionising how carbon capture and storage are managed. This requires expertise in artificial intelligence, machine learning, and big data analytics, all of which are increasingly critical to the efficient running of CCS operations.



For instance, ExxonMobil is currently piloting AI-driven models to predict carbon dioxide behaviour in underground reservoirs, ensuring that it remains securely sequestered. Young engineers and scientists, often with backgrounds in **data science or computer engineering**, are the ones developing these models. "We're looking for individuals who can apply digital technologies to traditional energy systems," said Joe Blommaert, President of ExxonMobil's Low Carbon Solutions. "In the CCS space, the ability to predict subsurface behaviour and optimise injection sites using AI is a **game-changer**."

In this sense, companies in the CCS space are starting to recruit more heavily from technology firms and universities known for their data science and AI expertise. Chevron, for example, has formed **partnerships** with MIT and Stanford, where students with backgrounds in earth sciences are exposed to AI tools for geological modelling. The aim is to create a new generation of talent capable of marrying digital technologies with conventional energy systems.

Additionally, industries such as aerospace and automotive engineering are increasingly being tapped for junior CCS talent. The rigorous quality control and safety protocols in

these industries align well with the operational challenges of CCS. Companies like BP have recruited engineers from Boeing and Lockheed Martin, recognising that their experience with high-stakes, high-precision projects brings valuable skills to carbon capture initiatives. BP's Graduate Programmes, for example, aim to expose junior engineers to a wide array of fields beyond traditional oil and gas development, blending traditional energy systems with emerging CCS technologies.

The Talent Pipeline: An Interdisciplinary Future for CCS

So where will the next wave of CCS talent come from? The future looks **interdisciplinary**, with individuals increasingly being drawn from sectors traditionally outside of oil and gas. As digitalisation and systems thinking become more integral to CCS operations, the recruitment pool will widen to include fields like software engineering, environmental policy, and even finance.

The characteristics that define CCS leaders across all levels—whether at executive, mid-senior, or junior—are their ability to work across disciplines, navigate complex regulatory frameworks, and integrate new technologies into existing energy infrastructures. As Alan James, Senior Vice President of CCS at Equinor, pointed out, "Leaders in CCS must be curious by nature. They need to understand energy systems, but they also need to be **open to bringing in expertise from outside the sector**. That's how we innovate, and that's how we drive real change."

In Summary

As companies scale up CCS efforts, the success of these projects will hinge on the **strength of the talent pipeline**. Established supermajors like BP and Exxon, with their vast financial resources, often struggle with slower adaptation processes, while agile startups are capitalising on high oil prices, climate urgency, and tightening regulations. Firms will need to rethink how they engage with the talent market—where they hire from, how they hire, and most importantly, **who they hire**. This shift requires not only adaptability but also organisational buy-in, especially from senior team members resistant to change in a sector that has operated relatively unchanged for decades.

By partnering with expert firms like Moloney Search, which specialise in headhunting top-tier talent for the sector, businesses can source the **diverse, interdisciplinary workforce** needed to meet ambitious climate goals. This approach not only lays the foundation for a sustainable future but also ensures long-term success in an ever-evolving energy landscape.

At Moloney Search, we are deeply connected within the sector. We have worked with a wide range of businesses, from established supermajors to innovative startups, enabling us to understand the unique challenges and opportunities each client faces and to provide multifaceted support to our clients. A number of which we have detailed below:

Moloney Search

As we approach our 30th Anniversary, we've invested in a dedicated team focused on sourcing, tracking, and engaging with top talent across the UK and international energy industry. Our team, some of whom have worked in research on CCS development, are uniquely positioned to connect with professionals in this market. With the advent of new technologies presenting unique challenges for strategic hiring, the talent market is rapidly evolving. Access to an extensive network of professionals is invaluable for attracting individuals who are not only flexible and innovative but also eager to embrace and drive change within organisations.

For more information or to follow up on this article please email **ap@moloneysearch.com**