

We Get Energy





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Staying true to our roots while continuing to evolve, NOV helps our customers produce energy no matter the source. We have a long and proud legacy of innovation and technology dating back to the earliest days of the oilfield. Building on that history, we continue to provide technology-driven solutions that empower the global energy industry. As the world expands its energy portfolio to lower-carbon sources, we are at the forefront of this energy evolution, continuously growing our core engineering, manufacturing, and project management expertise to offer new and exciting opportunities. The energy industry relies on NOV's expertise and technology to continually improve operations and advance the energy transition toward a more sustainable future. We are all stakeholders in the progress of our industry, and our combined efforts will help drive the innovation that carries us forward.

Precision at scale

We build extremely large structures and equipment that move with high precision.

Durable under extreme conditions

Our technology offers stability in extreme weather and harsh environments.

Performance with agility and skill

We are experts at scale transport, and we mechanize processes to minimize onsite intervention.

Made to last

We design our products to last and offer equipment inspections, servicing, maintenance, and monitoring to ensure their long-term health.

Contents

Offshore Wind	04
Onshore Wind	04
Carbon Capture, Utilization, and Storage	06
Hydrogen and Subsea Storage	08
Geothermal	09
Deep-sea Mineral Extraction	10
Biogas	11



Wind Energy

Offshore Wind

We have been at the forefront and a market leader in the offshore wind industry. Through our wind tower installation vessel design and equipment, we have enabled offshore wind construction in every corner of the world. Deep waters also bring challenges of their own. To unlock the massive energy potential in global offshore deep waters, we have developed an innovative and economical floating technology that is ready for full scale offshore application, enabling the commercialization of floating offshore wind energy. We also outfit offshore construction vessels to handle pipe lay and cable lay operations, tying together critical infrastructure.

Technologies

- Wind Tower Installation Vessel (WTIV) design
- Floating offshore wind turbine platform and mooring systems
- Pipe and cable lay equipment for offshore construction
- Condition monitoring and data analytics

Onshore Wind

One of the major constraints that land wind farm development runs into is that towers become exponentially more expensive to construct and transport with height. NOV has invested in technology that enables taller towers through a tapered spiral welding process that enables the automated production of wind tower sections, which can significantly decrease production times and reduce cost by 50% or more. The technology has the potential to be deployed for infield manufacturing operations, effectively eliminating many of the severe logistical limitations of transporting larger diameter tower sections over the road. We are working on our first order of 100 tower sections from a major wind turbine manufacturer, and upon completion, have the capacity to deliver hundreds of towers annually.

Technologies

- On-site construction of tower sections with patented tapered spiral welding
- Modular tower cranes with rapid mobilization technology





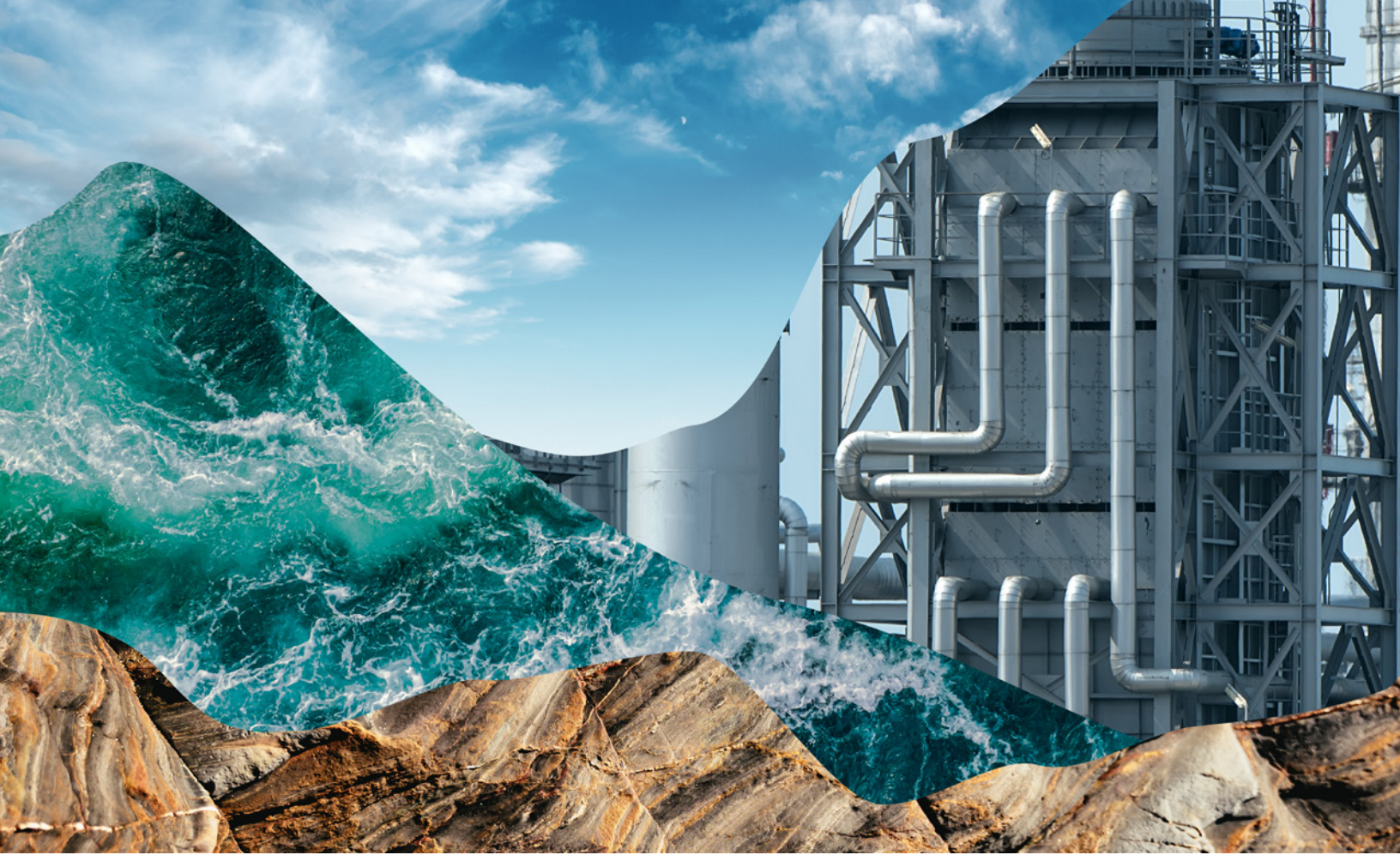
Carbon Capture, Utilization, and Storage

With over 30 years of experience in gas sweetening and dehydration projects, NOV is uniquely positioned to effectively engineer, design, and fully execute built-for-purpose carbon capture systems for many industry applications. Leveraging our expertise in gas processing technologies allows us to select from a pool of technologies including solvents and membranes to provide the optimal solution with the lowest energy requirement.

Solvent-based carbon capture is in many ways identical to natural gas sweetening by amine systems in which we separate CO₂ or H₂S from natural gas, then dry and compress for transport.

What can you expect from NOV?

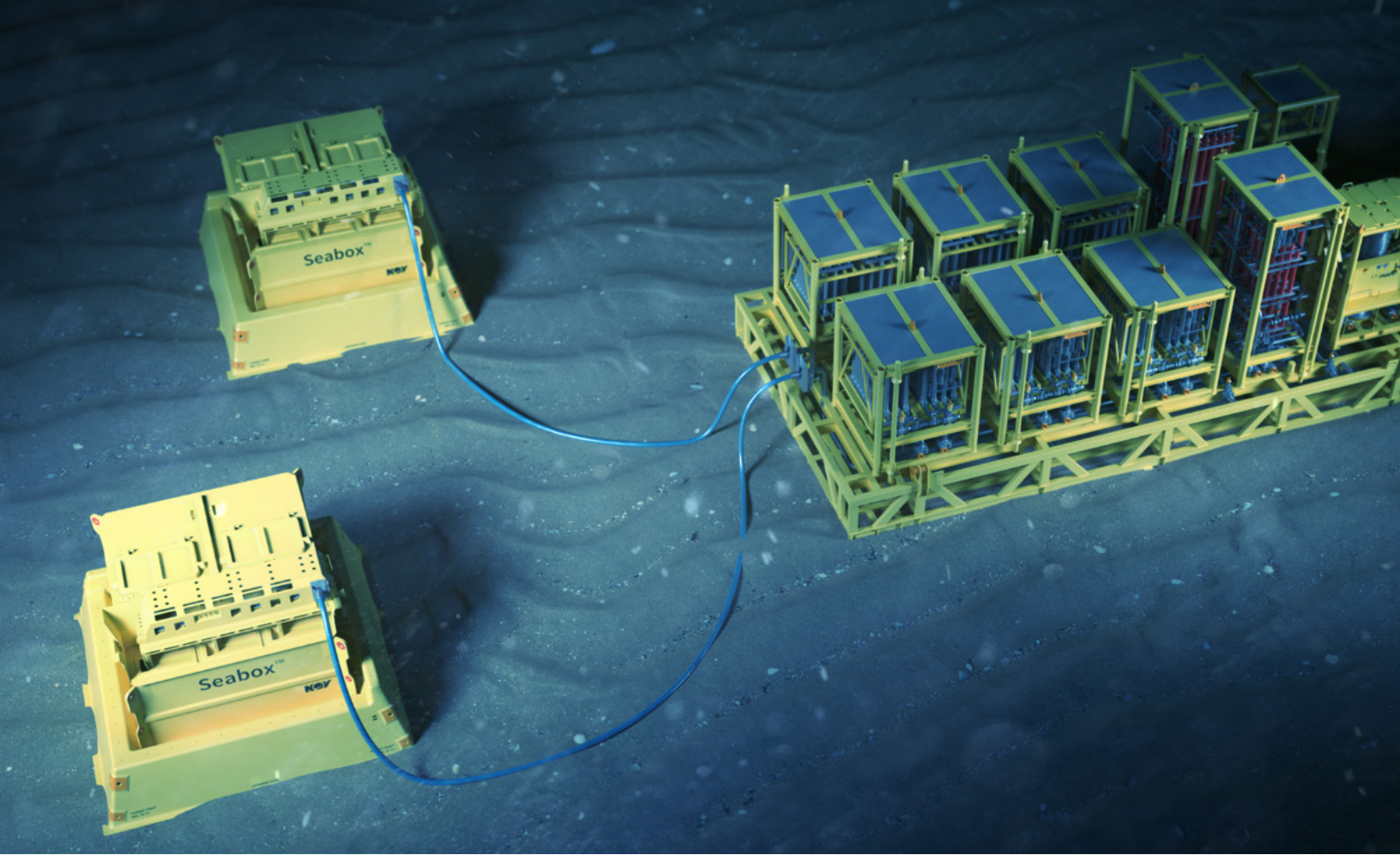
- Global execution and supply chain agility utilizing local fabrication decreases delivery times.
- Experience in standardization and packaging drives effective and efficient projects.
- Precision with large-scale projects mitigates risk associated with engineering design and project management.
- Research and development keeps your operations leading in performance with CCUS technology advancements.
- Vast well construction understanding creates secure solutions for storage operations.



With additional CCUS value chain capabilities including transport, offshore offloading, and storage, our industry-leading solutions support your CCUS operations and strategies every step of the way.

Technologies

- Post-combustion carbon capture systems
- CO₂ dehydration systems
 - Triethylene glycol (TEG) gas dehydration
 - Molecular sieves
 - Silica gel
- CO₂ conditioning systems
- CO₂ for Enhanced Oil Recovery (EOR)
- Vessel designs for CO₂ storage, transportation, and injection
- CO₂ pipeline
- Offshore offloading and injection systems
- Drilling equipment for onshore and offshore CO₂ injection and storage
- Repurposing and upgrading topsides, rigs, and platforms for EOR and/or geological CO₂ storage in mature oil and gas fields



Hydrogen and Subsea Storage

We have been developing solutions in the hydrogen space for years and have developed, tested, and certified technology for safe hydrogen transport. As one of the world's largest fiberglass and composite pipe providers, our composite piping systems can be a key solution to hydrogen embrittlement of steel.

Our unique subsea storage system enables ammonia storage at ambient pressure at 100m water depth or deeper, significantly reducing CAPEX and OPEX. This system is also available for the subsea storage of oils and chemicals.

Moreover, offshore green hydrogen production is one area NOV can already provide solutions to, with water conditioning, desalination, molecular sieves (dry solid beads) to dry the produced hydrogen and make it ready for fuel cell or other applications.

Technologies

- Turret mooring and loading systems
- Flexible pipe
- Water conditioning as feed to electrolyzer
- Scrubbers for gas/liquid separation
- Hydrogen deoxygenation and drying



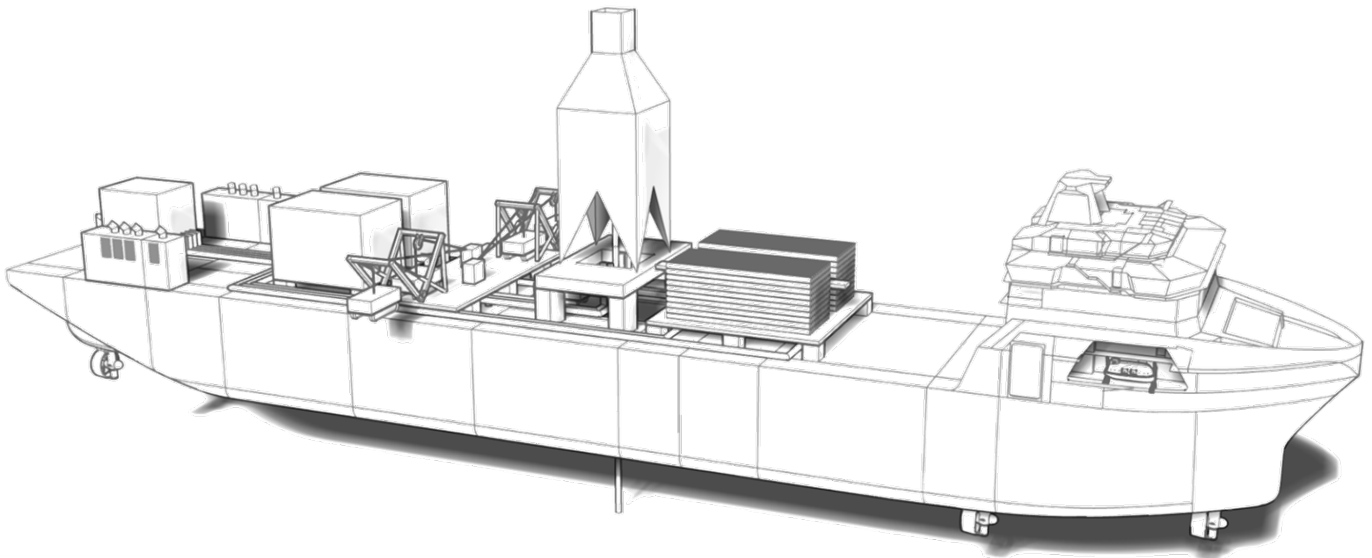
Geothermal Energy

NOV has been a leader in the Geothermal industry for decades and supports geothermal projects through our extensive tool knowledge, service experience, and fit-for-purpose technologies that can withstand high temperatures and hard, heterogeneous rocks.

As a leading technology manufacturing company, we design custom solutions that deliver performance in harsh environments and reduce the well-cost by increasing operational efficiencies. Our comprehensive product portfolio serves as a customizable geothermal kit, providing a simple solution that allows power generators and service companies to independently use, maintain, and service our tools for their operations. With over 70 purposely built products and services that address and overcome current geothermal challenges, our geothermal toolbox allows us to collaborate as an active partner in a wide range of global geothermal developments.

Technologies

- Drill bits
- Corrosion resistant coatings
- Drilling motors
- Purpose-built drilling rigs
- Condition monitoring and data service
- Mud Cooling
- GRE (FGS Piping)



Deep-sea Mineral Extraction

Deep-sea mineral extraction is a strategic development for NOV, looking at environmentally sustainable and effective solutions for ultra-deep water minerals extraction in various areas around the world, for both international- and national territories. With our extensive offshore and marine construction experience, we are transferring these innovative skills to develop effective ways to transport minerals from the seafloor. We are leading the development of an ultra-deep vertical transportation system (riser concept) for deep-sea projects, operating in water depths of up to 5,500m. NOV is also taking a system integration approach for both vessel design concept and equipment for deep-sea mineral extraction. We are reviewing environmentally friendly, cost-effective ways to redesign and convert existing offshore vessels for the initial exploration operational phase. These redesigns and conversions are based on Magellan deep water drillship design, and integrate surface mission equipment in order to optimize specific ultra-deep water operational requirements.

Technologies

- Vessel design and equipment integration
- Vertical transport system (riser)
- Vessel conversion – new build
- Offloading systems
- Lifting systems
- Condition monitoring and data analysis



Biogas

In biogas energy, NOV has been supporting the industry with pumping and mixing technology for decades. We have a broad portfolio of equipment for pumping, grinding and mixing, pipework, tanks, moving abrasive materials, handling corrosive fluids, and monitoring operations.

Technologies

- Feedstock handling systems
- Solids handling and processing
- Fluid handling and processing
- Gas upgrading
- Composite structures and handrails
- Corrosion control
- Condition monitoring and data analysis
- Waste water treatment
- Aftermarket support

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