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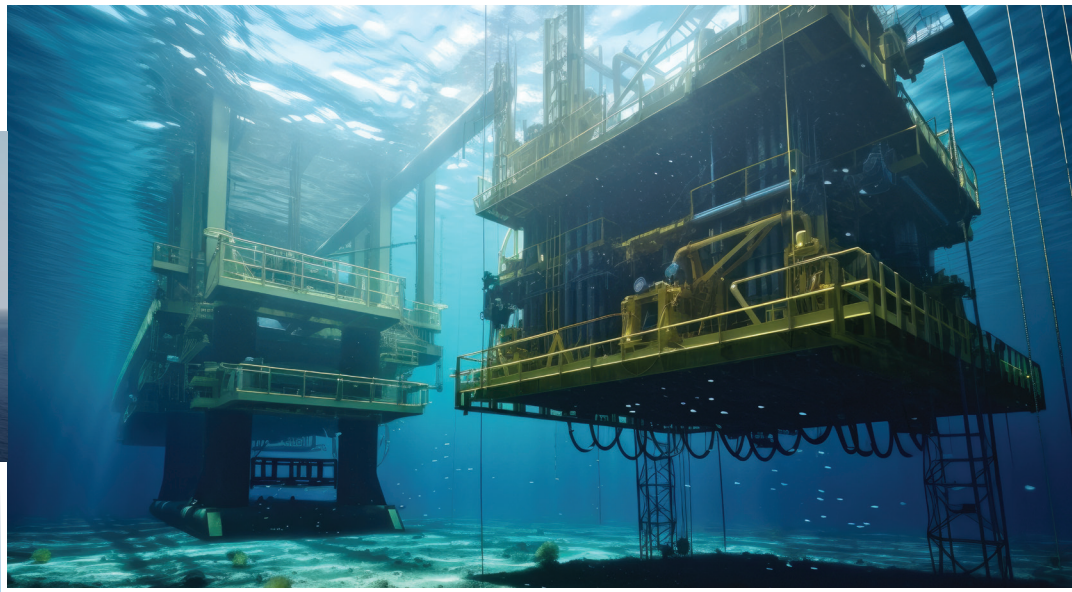


THE STATE OF OFFSHORE ENERGY:

Two Sides of the Same Coin

Executive Summary

Emerging technologies, political challenges, and supply chain limitations are reshaping the landscape of subsea oil and gas extraction as well as offshore wind power development. With approximately **$31.60 billion** currently tied to **subsea oil and gas production projects** and **$2.24 trillion** proposed for investment in **offshore wind projects** globally, the stakes have never been higher. This white paper delves into the challenges and opportunities faced by industry professionals and outlines how leveraging IIR's trusted database platform can provide clarity and direction amidst market uncertainty.

Navigating Offshore Energy

Offshore energy encompasses the exploration, extraction, production, and transportation of renewable and non-renewable resources from ocean environments. This includes traditional energy sources such as offshore oil and gas extraction, where advanced and emerging subsea capabilities play a critical role. Offshore energy also covers renewable power sources such as offshore wind power installations, which leverage ocean winds to generate electricity. Together, these sectors are pivotal in meeting global energy needs, even with the presence of significant operational and logistical hurdles.

Offshore Oil & Gas

Offshore oil and gas production has witnessed groundbreaking advances. Modern subsea technology now allows for production without constructing new platforms. Subsea tiebacks, which connect extraction facilities up to 50 miles away to a central platform, are drastically reducing infrastructure costs.

Subsea technology is growing at an astonishing speed, decreasing the number of additional offshore platforms necessary to drill since they are now able to produce miles away from the mother platform. In fact, operators in Europe can directly connect subsea infrastructure to onshore facilities, eliminating the need for offshore platforms entirely. Robotics play a critical role in setting up these systems, with skilled operators managing complex installations completely remotely. With IIR currently tracking **260 planned subsea plants and over 640 active and unconfirmed subsea projects worth roughly $31.60 billion**, opportunities for innovation in this space remain vast.

While many companies have been investing heavily in green energy over the past few years and moving away from traditional fuel sources, the oil and gas industry is stepping back into the spotlight. Major oil companies are shifting their focus from prioritizing alternative and clean energy to, once again, investing in more traditional oil and gas projects.

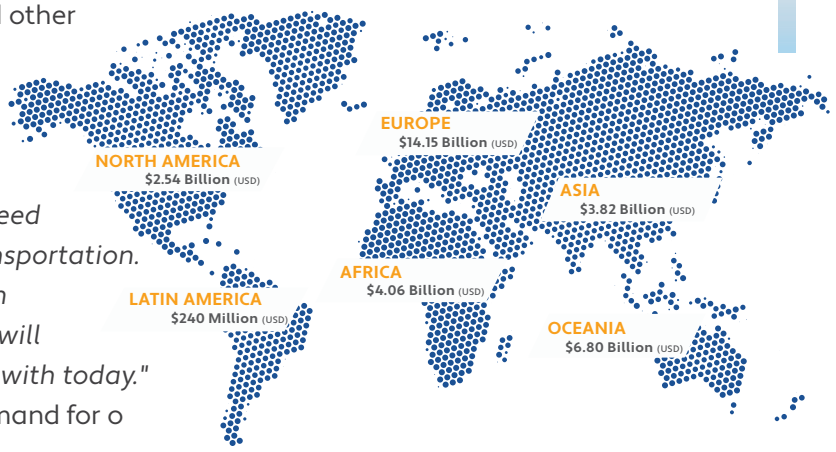
Trends in Offshore Oil & Gas

- **Subsea Revolution:** *Subsea tiebacks are transforming extraction economics. Companies can de-risk developments while expanding production capabilities further offshore.*
- **Tech-Powered Operations:** *Robotics adoption is becoming indispensable for precision underwater engagements and maintenance.*

However, these innovations come with their fair share of challenges:

- **High Costs:** *Deepwater projects and cutting-edge technology require significant capital investment, especially with rising the cost of raw material, limiting market entry for smaller operators.*
- **Manpower Shortages:** *A lack of skilled specialists delays installations and increases costs. Not only is it becoming difficult to hire the right people for the job, but these specialized roles call for higher labor costs.*
- **Political Considerations:** *Global market fluctuations and geopolitical tensions often stall projects, although these delays are typically temporary.*

Despite these hindrances, oil and gas remain irreplaceable in industries such as plastics manufacturing and other foundational materials. According to **Gordon Gorrie, Industrial Info's Senior Vice President of Research in Oil & Gas,** *"There's nothing to replace oil and gas yet. In transportation, yes, there will be less of a need for oil for cars, trucks, and other modes of transportation. I do think the demand for internal combustion engine vehicles has probably peaked, but we will still need oil and gas for the basics we all live with today."* This resilience hints at a strong long-term demand for o ffshore oil and gas.



(Figures as of May 2025)

> *"Right now, we are seeing a trend in which major oil companies are pulling back on their plans for alternative fuel and clean energy. Instead, they are going back to more traditional oil and gas capital spending."*
>
> – Gordon Gorrie, Industrial Info's Senior Vice President of Research in Oil & Gas

So, does this mean we are seeing a global halt in trend of focusing on renewable energy? Not necessarily – while budgets are shifting (especially for domestic projects) for some, investment in renewable energy sources still remains strong internationally.

Offshore Wind Power

Offshore wind is a key player in the global push towards renewable energy. With IIR tracking **1,204 active and unconfirmed offshore wind projects valued at a potential $2.24 trillion investment**, the figures suggest a prosperous future. However, it is important to note that while this sector definitely seems to be flourishing internationally, this is not the case for the United States.

The U.S. offshore wind industry is currently facing some strong setbacks:

- **Regulatory Hurdles:** *Political decisions, such as leasing bans, have significantly slowed offshore wind's expansion. For instance, an order issued on January 21, 2025, in the United States withdrew offshore wind leases, leaving only 6 of 33 planned U.S. projects with a high likelihood of completion in the near-term.*
- **Supply Chain Disruptions:** *Essentials like transformers and inverters, even blades in some cases, force production delays due to tariffs and a fragmented supply chain.*
- **Installation Vessel Shortages:** *In the United States specifically, there aren't enough Jones Act-compliant vessels to meet installation demands. Globally, the vast demand for installation vessels compared to the availability of such vessels has been seen as a constraint for ambitious turbine projects.*

The domestic short-term market outlook is one of delays, regulatory pauses, and supply chain reevaluations as unpredictable variables take hold. These challenges have been further compounded by an administration that is pulling back from offshore wind tax credits.

Opportunities in offshore wind, primarily outside of the United States, remain promising as developers adapt to these barriers. Upstream innovations, such as the construction of substations and converter stations enabling stronger DC-AC power conversion, continue to drive the industry forward.

Trends in Offshore Wind Power

- **Global Push for Renewables:** *The increasing adoption of renewable energy goals accelerates offshore wind development, particularly within Asia and Europe.*
- **Focus on Grid Connectivity:** *Significant advancements in offshore transmission and distribution infrastructure propel the integration of wind power with onshore grids.*

(Figures as of May 2025)

Conclusion

The offshore energy sector quickly evolving due to emerging technologies, political complexities, and supply chain constraints. Subsea oil and gas extraction is advancing with innovations such as subsea tiebacks and robotics, enabling cost-efficient production and reducing reliance on offshore platforms. Despite challenges such as high entry costs, manpower shortages, and geopolitical issues, the oil and gas industry remains vital for foundational materials and long-term energy demand.

Meanwhile, offshore wind power continues to thrive internationally, driven by substantial investments and advancements in grid connectivity, particularly in Asia and Europe. However, the sector faces hurdles in the United States, including regulatory setbacks, supply chain disruptions, and installation vessel shortages, which have stalled progress domestically.

Overall, subsea technology within offshore oil and gas as well as offshore wind serve as two sides of the same coin. While both are strong sources of offshore energy, they are opposites that are both facing obstacles, opportunities for growth, innovation, and strong global investment; at the same time, each sector is playing a critical role in meeting the world's energy demands.

Offshore energy industries are facing unprecedented challenges, but opportunity is abundant for those equipped with the right tools. Hear firsthand from **Britt Burt**, our **Senior Vice President of Research in the Power industry**, how Industrial Info's trusted database platform is beneficial to industry professionals: ***"The dynamic nature of our database means we are actively tracking project status – we have details on those moving forward as well as information with projects that are delayed and the reasons for those delays. We are in constant communication with key decision makers to have those cutting-edge details on what projects are moving forward and which are delayed."*** Industrial Info's trusted database solutions are your ticket to resilience, efficiency, and growth in this competitive market.

In this rapidly evolving landscape, Industrial Info Resources helps you ***navigate the currents of change.***

Contact Us Today!

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Our team is ready to provide the insights & solutions you need to make informed decisions and stay ahead in the industry.