2025

Energy

Surplus Market Trends Report

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LIQUIDITY SERVICES

Energy Surplus Market Trends Report

The 2025 Energy Surplus Market Trends Report highlights how shifting energy demands, technological advances, and growing environmental regulations are reshaping the oil and gas, oilfield equipment, and renewable energy sectors.

As we enter 2025, global oil consumption remains high, especially in non-Organization for Economic Co-operation and Development (OECD) countries across Asia, which are driving ongoing pressure on traditional fuels.

Companies increasingly prioritize investment in renewable sources and carbon-reducing technologies, such as Carbon Capture and Storage (CCS) and green hydrogen. Within this framework, surplus asset management emerges as a strategic approach that repurposes idle or underutilized assets to optimize operations, cut costs, and help organizations meet sustainability targets.

This report explores how these trends influence the surplus energy market and outlines the proactive measures necessary to navigate and thrive in the ongoing energy transition.

Oil and Gas Market Outlook

Crude oil is among the most highly demanded commodities globally. Its diverse applications span from transportation fuels to the production of chemicals and pharmaceuticals. Consequently, the oil industry significantly influences the global economy, and fluctuations in benchmark oil prices have substantial effects on various manufacturing sectors and consumers.

Despite increasing worries about fossil fuel usage, oil consumption is currently at an all-time high. The United States leads the world in oil consumption and production (Carter and Slattery, 2024); however, China's oil demand has consistently risen over the past decade. Due to its lack of significant domestic reserves, China has also become the largest oil importer globally (Statista Research Department, 2024).

In 2023, the global oil and gas market was valued at US$ 17.5 billion and is expected to expand to US$ 65.8 billion by 2032, with a compound annual growth rate (CAGR) of 15.84% from 2024 to 2032 (IMARC, 2024). The market is shaped by geopolitical tensions, technological progress, and evolving environmental policies, resulting in price volatility. Below are some of the key aspects affecting the global oil and gas industry (Carter and Slattery, 2024):

- **Demand**: Growth is driven by increasing global energy demand, particularly from emerging economies in the Asia Pacific region
- **Geopolitical Influence**: Geopolitical tensions and alliances significantly impact global supply and prices
- **Environmental Policies**: Shifting environmental policies and consumer demand for sustainable energy are pushing the industry toward cleaner practices

The oil and gas industry is experiencing a profound transformation. While technological advancements play a crucial role, other factors such as sustainability initiatives, regulatory pressures, and market demands also significantly influence the sector. This shift drives companies' investments in emission-reducing technologies and greener energy solutions to achieve ambitious carbon reduction targets (Jelinek and Kirsch, 2024; Carter and Slattery, 2024; Keystone Energy Tools, N/D).

The following key trends are shaping the oil and gas industry:

- **Energy Transition and Decarbonization:** Companies are focusing on reducing carbon emissions (CCS) and investing in greener technologies (hydrogen and biofuels) (Klesse and Selvaraju, 2024).
- **Digital Transformation**: The adoption of AI, IoT, and big data is enhancing efficiency, safety, and cost-effectiveness.
- **Automation and Robotics**: Increased use of automation and robotics is improving operational efficiency and safety.
- **Sustainability**: There is a growing emphasis on reducing environmental impact and adopting sustainable practices.
- **Geopolitical Influences**: Political instability and trade sanctions affect global supply and prices.
- **Supply Chain Resilience**: Companies are strengthening supply chains to mitigate disruptions.
- **Advancements in Drilling Technologies**: New technologies are making drilling more efficient and less environmentally damaging.
- **Regulatory and Environmental Pressures**: Stricter regulations are pushing companies to adopt cleaner practices.
- **Shift Toward Natural Gas**: Natural gas is becoming a more prominent part of the energy mix.
- **Investment in Renewable Energy**: Companies are increasingly investing in renewable energy sources like wind and solar.

To stay competitive and meet the net-zero ambitions set out by governments and businesses, oil and gas companies must innovate in alternative energy production while optimizing existing traditional methods. With the goal of 50% reduction of emissions intensity by 2030 and 80% by 2050 (World Economic Forum, 2030), this dual strategy improves operational efficiency and helps meet the rising demand for cleaner energy solutions.

Decarbonizing the oil and gas sector hinges on three main elements: the availability of clean power for electrifying facilities, effective CO2 management and CCS at processing plants and refineries, and the capacity to generate clean hydrogen for refineries.

The necessary infrastructure investments for these elements could reach up to $300 billion, less than the industry's annual capital expenditures. Given the industry's expertise in CCS, natural gas, hydrogen infrastructure, and renewables, it is well-positioned to lead the creation of infrastructure hubs. While the above trends are expected to continue shaping the industry, some newer trends are slowly seeing an uptake among industry leaders (Oil & Gas IQ, 2024; World Economic Forum, 2023):

Electrification
Although it may seem paradoxical for the oil and gas sector, electrification has rapidly become a key theme in the energy transition.

Given the ongoing global reliance on oil and gas, electrifying operations is crucial for minimizing their carbon footprint. Companies can achieve this solution through various methods, such as fully electrifying offshore installations and converting hydraulic systems to electric control systems. With the industry's focus on energy security, affordability, and sustainability, electrification emerges as a vital enabler for decarbonizing oil and gas production, contributing to a more sustainable energy mix.

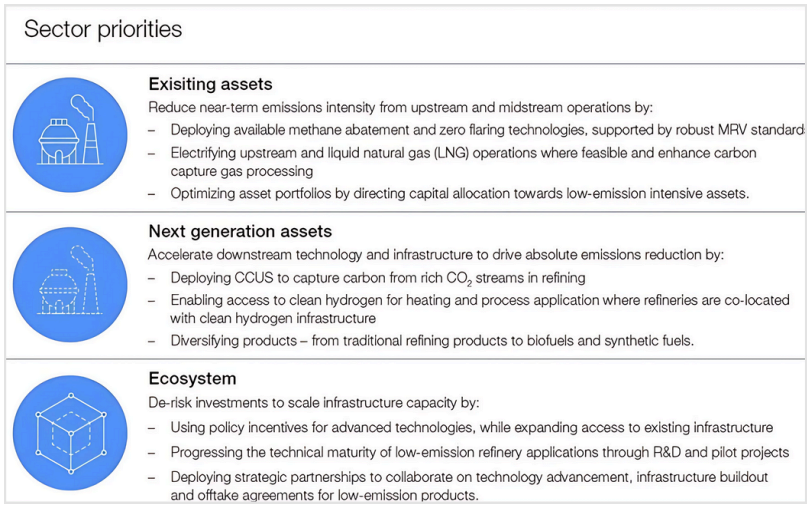
Green Hydrogen
As nations aim to enhance energy security and achieve net-zero targets, green hydrogen is emerging as a key solution. It supports climate action goals by producing renewable electricity to split water into hydrogen and oxygen.

Countries are setting ambitious targets: the US aims for 10 million tonnes of clean hydrogen annually by 2030, increasing to 50 million by 2050; the United Kingdom targets 10GW of low-carbon hydrogen by 2030; and the European Union is advancing with new legislative measures.

The International Energy Agency's 2023 Global Hydrogen Review emphasizes the need for green production methods and low-emission applications to meet climate goals. However, the high costs of these processes may pose challenges (Oil & Gas IQ, 2024).

Many oil and gas companies have already committed billions of dollars to develop their future business around CCS and hydrogen, thus providing decarbonized energy solutions for those emissions that cannot be easily decarbonized through electrification. Examples include:

ExxonMobil: The company plans to invest $15 billion in lower-emission initiatives, including CCUS and hydrogen projects, over the next six years (Woods, 2021).
Chevron: Chevron is investing $10 billion through 2028 in lower-carbon technologies, focusing on CCUS, hydrogen, and renewable fuels (Chevron Newsroom, 2022).
Occidental Petroleum: Occidental is heavily investing in direct air capture technology and aims to build the world's largest direct air capture facility, with significant investments in CCUS (Oxy, 2023).
BP: BP has committed to spending $5 billion annually on low-carbon energy, including hydrogen and CCUS projects (BP, 2020).



Source: World Economic Forum, 2023

Short-Term Forecast for the Oil and Gas Industry

In terms of natural gas consumption and production, the US Energy Information Administration (2024) forecasts the following:

- **Natural Gas Consumption:** A slightly colder winter forecast for 2024–25 is expected to increase US natural gas consumption for heating to 36 billion cubic feet per day (Bcf/d), 4% more than last winter.
- **Natural Gas Production**: US-marketed natural gas production is forecasted to average 113 billion cubic feet per day (Bcf/d) in 2024, with a slight increase to 114 Bcf/d in 2025, driven by a 6% rise in the Permian region and a 5% increase in the Eagle Ford, while production in the Appalachian Basin is expected to decline slightly.
- **Natural Gas Prices:** The Henry Hub natural gas spot price is expected to average $2.80 per million British thermal units (MMBtu) in Q1 2025, rising to $2.90/MMBtu for the year due to increased demand for US liquefied natural gas exports. Below is a summary of the key price predictions for the end of 2024 and 2025.

U.S. energy market indicators	2023	2024	2025
Brent crude oil spot price (dollars per barrel)	$82	$81	$76
Retail gasoline price (dollars per gallon)	$3.50	$3.30	$3.20
U.S. crude oil production (million barrels per day)	12.9	13.2	13.5
Natural gas price at Henry Hub (dollars per million British thermal units)	$2.50	$2.20	$2.90
U.S. liquefied natural gas gross exports (billion cubic feet per day)	12	12	14
Shares of U.S. electricity generation			
Natural gas	42%	42%	40%
Coal	17%	15%	15%
Renewables	22%	23%	25%
Nuclear	19%	19%	19%
U.S. GDP (percentage change)	2.9%	2.7%	2.1%
U.S. CO_2 emissions (billion metric tons)	4.8	4.8	4.8

Source: US Energy Information Administration, 2024

Liquified Natural Gas in 2025 and Beyond

According to Yeo et al. (2024), the Liquified Natural Gas (LNG) landscape in 2025 and beyond carries certain headwinds. Below are the key trends shaping the LNG industry:

- **Tighter Supply Expected**: Delays in LNG projects like Golden Pass LNG and Energia Costa Azul LNG are expected to limit new supply growth, leading to tighter market conditions in 2025
- **Spot Prices Vulnerable**: Spot LNG prices are anticipated to be vulnerable to supply-side shocks and unforeseen events, with potential increases in 2025
- **Strategic Buying**: LNG buyers are shaping their 2025 strategies by securing more cargoes during annual delivery program (ADP) discussions to capture potentially lower prices
- **European Demand**: The expiry of the Russia-Ukraine gas transit deal is expected to create a deficit in Europe, increasing demand for LNG cargoes
- **Asian Demand**: Incremental demand from Asia is expected to moderate in 2025 compared to 2024, aligning with new supply.
- **Geopolitical Influences**: Ongoing conflicts and geopolitical issues will likely influence spot LNG prices, with European inventory levels playing a significant role.

Oil and Gas (Oilfield) Equipment Market

The oilfield equipment market size was valued at $124.89 billion in 2022, reaching an estimated R134.20 billion in 2024, and is expected to reach between USD 156/18 billion and USD 161.67 billion by 2030/2031 (Straits Research, 2024; Grand View Research, 2024; Mordor Intelligence, 2022).

The key factors influencing the market are:

- **Drivers**: An increasing number of deep-water and ultra-deepwater fields across the globe, as well as the redevelopment of mature oil wells
- **Restraints**: Volatile oil prices resulting from geopolitical factors, fluctuations in foreign currencies, and the supply-demand gap
- **Opportunities**: Technological advancements, including AI, IoT, and more (Straits Research, 2024; Grand View Research, 2024; Mordor Intelligence, 2022)

In 2025, the onshore segment is expected to dominate the oilfield equipment market growth on a global scale. This command is partly due to global crude oil prices recovering and onshore projects being easier to initiate than offshore ones (Mordor Intelligence, 2022).

Regarding regional trends, North America is the largest oilfield equipment market shareholder and is expected to grow steadily up to 2030. As new oil reserves are discovered, Latin America is expected to exhibit the fastest growth up to 2029 (Mordor Intelligence, 2022).

While the demand for oilfield equipment is increasing, the volatility of oil prices, geopolitical risks, regulatory and administrative shifts in major economies like the US, and the supply-demand gap are causing headwinds.

These challenges make an investment in new equipment beyond the comfort level of some companies. Another avenue to procure equipment is through the used oilfield equipment market, a resource expected to exhibit substantial growth between 2024 and 2031. Increased demand across Latin America, Africa, and Asia is the primary driver of this growth (Market Research and News, 2024).

Research on used oilfield equipment market trends is limited. However, companies like Liquidity Services, which provides surplus asset disposal solutions and oilfield equipment 2auctions, saw a significant uptick in oilfield equipment auction sales in FY22 - up 158% from FY21. This increase is partly due to recovery from COVID-19 imposed supply chain disruption and the numerous bankruptcies of oilfield services companies starting in FY20 and culminating in FY21/22 (Haynes Boone, 2022).

Renewable Energy

The global energy landscape is going through a tremendous shift, with the need to address climate change and transition to sustainable energy sources at center stage. The oil and gas industry has been crucial for global energy needs, supporting transportation, manufacturing, and heating. However, the reliance on fossil fuels leads to significant greenhouse gas emissions and climate change (United States Environmental Protection Agency, 2024; Centre for Climate and Energy Solutions, N/A).

Market fluctuations in the price of Brent crude and geopolitical tensions are causing uncertainties and challenges, and worldwide, governments are setting stricter emission targets, causing major oil and gas companies to rethink their strategies (DNV, 2024).

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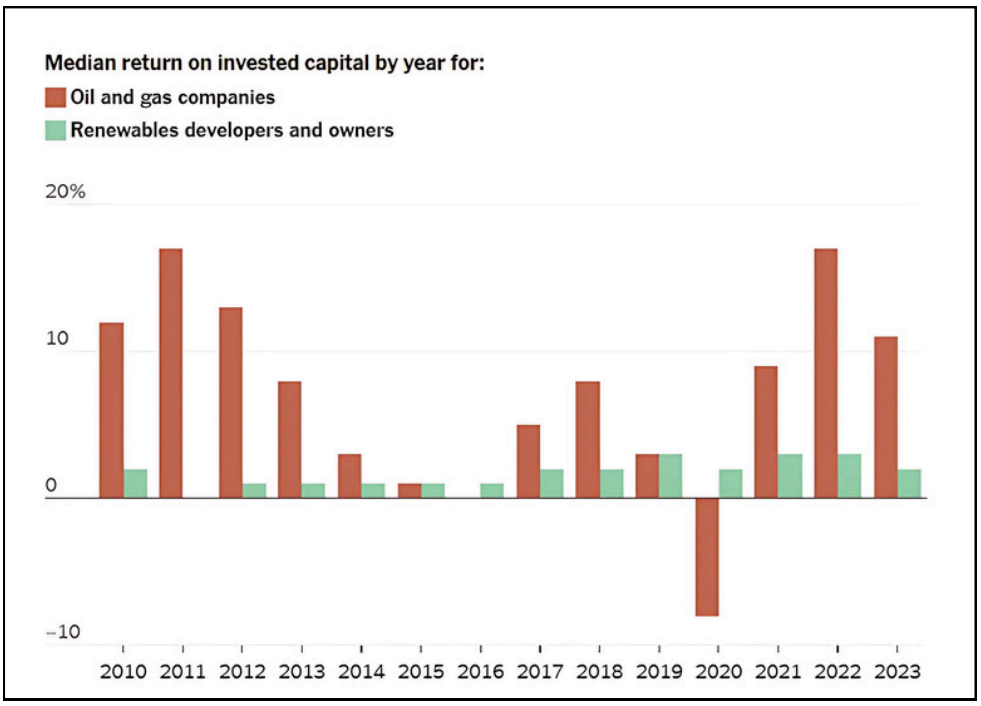

Source: Elliott, 2024

Examples of companies that saw their ROI in renewables plummet include:

- BP committed to reducing its oil and gas production by 40% by the decade's end (Reed, 2020). However, the company reversed this decision within three years, announcing plans to increase its fossil fuel investments. Last year, BP wrote off $1.1 billion in offshore wind investments and recently indicated its intention to sell additional wind assets, although it remains active in renewable energy investments (Reed, 2024).
- Shell's shift in strategy is linked to their increasing investment in clean molecules (renewable fuels, CCS, hydrogen, digital technologies, …), which is expected to bring higher ROI than investments in clean electrons (solar, wind, …) (Hong, 2024).

While investors are still focused on cleaner energy solutions, the focus is more on decarbonization, as industry experts understand that fossil fuels are projected to account for 48% of the global energy mix by 2050 (for comparison, wind is expected to account for 28%) (DNV, 2024; Kienzler et al., 2023). Consequently, companies and investors are re-evaluating strategies to find practical routes towards a sustainable future and leveraging the below to achieve that goal:

1. **Digitalization and Intelligent Asset Management**: The industry leverages digital technologies to enhance efficiency and sustainability, including using real-time data for preventative maintenance and optimizing resource management
2. **Co-Innovation and Partnerships**: Companies are collaborating with partners to develop renewable energy projects and improve sustainability practices
3. **Generative AI**: The emergence of generative AI is expected to revolutionize equipment monitoring and operational efficiency (Galer, 2024).

Conclusion

The 2025 Surplus Energy Market Outlook illustrates an industry in the midst of a dynamic, far-reaching transformation. Heightened oil demand—particularly in Asia—continues to underscore the importance of traditional fossil fuels, but intensifying geopolitical pressures and more robust environmental policies are reshaping the entire energy landscape. Companies are under increasing pressure not just to operate efficiently, but also to innovate in cleaner solutions like carbon capture, green hydrogen, and digitalized asset management. These technologies promise both profitability and sustainable growth, but success will hinge on careful balancing of near-term energy needs with longer-term climate commitments.

Amid this shift, surplus asset management stands out as a critical tool for mitigating cost pressures and environmental impacts. By redeploying idle equipment or repurposing it for cleaner processes, organizations can unlock both operational efficiencies and new avenues for decarbonization. Meanwhile, renewable energy sources, from wind and solar to emerging green hydrogen technologies, continue to gain traction—even if profitability in these areas lags behind legacy oil and gas operations. As investors and policymakers align around net-zero targets and energy security, this dual emphasis on cleaner assets and optimized fossil-fuel operations lays a resilient foundation for industry leaders.

Going forward, energy companies best positioned for long-term success will be those that blend traditional oil and gas capabilities with innovative, lower-carbon strategies—turning geopolitical volatility, regulatory mandates, and evolving consumer preferences into opportunities rather than roadblocks. The ability to harness data analytics, AI, and automation to streamline processes, reduce emissions, and reallocate surplus assets will be indispensable. As a result, the sector's path to net-zero will be defined by collaborative ventures, cross-sector partnerships, and targeted technology investments that make energy production both more profitable and more sustainable. This is the new frontier of the surplus energy market—one that requires agility, bold thinking, and a steadfast commitment to cleaner, smarter operations.

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