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Energy Industry Update

Q1 2023

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Executive Summary

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Evolving Energy Industry Landscape and the Impact of Green Technology

- The energy industry is undergoing significant transformations influenced by market dynamics and global trends.
- Industry trends in oil highlight a focus on strengthening balance sheets, concerns over geopolitical events and Russia's oil supply, while global oil demand shows positive signs.
- The gas/LNG sector is witnessing increased exports, higher prices, and a growing interest in liquified natural gas (LNG), driven by supply chain control and the clean energy transition.
- Renewables, specifically solar and wind energy, demonstrate cost-competitiveness and rapid growth, while green technology and energy tech are emerging as crucial factors shaping the energy landscape.
- The current industry trends indicate the importance of embracing sustainability, technological advancements, and strategic partnerships to thrive in the rapidly changing energy industry.

Energy Industry Overview Q1 2023

- Deal activity in the oil and gas industry indicates a focus on natural gas assets and reduced mergers and acquisitions.
- Growing interest is observed in liquefied natural gas (LNG) to capitalize on rising exports, higher prices, and supply chain control.
- Policies promoting natural gas investment drive the adoption of low-emission and carbon-neutral LNG.
- Residential solar demand is rising due to escalating retail electricity prices and weather-related power outages.
- The renewables sector experiences increased mergers and acquisitions in solar, supported by the IRA and global solar demand.
- Green technology and energy tech play a crucial role in reducing environmental impact, driven by government incentives and corporate investments.

Key Highlights from Q1 2023

- Solar and wind energy continue to lead the renewable energy sector, with solar experiencing a 35% increase in residential demand in H1 2022.
- Wind power capacity in the US has grown by over 60% since 2017, reaching 143 GW in 2023.
- The implementation of the Inflation Reduction Act (IRA) in August 2022 has resulted in $369B in spending and tax credits, making solar investments more favorable.
- The IRA also provides tax credits for “green” energy and technology, encouraging investment and innovation in the sector.
- Major corporations, such as Stripe, Alphabet, and Microsoft, along with VC firms, are investing significantly in climate technology companies, with 14 cents of every VC invested dollar going to climate tech.

Subsector Analysis

Oil & Gas Sector

- Growing free cash flows per barrel are allowing upstream companies to strengthen balance sheets, mainly through debt repayments and dividend payouts.
- Debt repayments and dividend payouts have been a more popular option than M&A. Oil and Gas M&A fell to its lowest levels since 2008.
- Russia's oil supply remains a point of worry for many. Because of current events in Ukraine, Russia has lost key markets in the US and UK.
- Global oil demand has shown positive signs and is expected to grow by 1.6 mb/d. The increasing Chinese oil demand is a significant reason for this.
- Over the past few years, buyers have shown greater interest for liquid natural gas (LNG) to monetize rising exports from the US, higher prices in Europe and Asia, and to control the supply chain.
- New policies in the EU and US are expected to increase natural gas investment in 2023. This relates to the clean energy transition, as certified natural gas and carbon-neutral LNG are expected to continue gaining momentum in 2023.

Industry Trends in Gas/LNG
(Natural Liquefied Gas)

Natural Gas Production

The US is increasing natural gas production to reduce carbon and methane emissions.

Low-Carbon Natural Gas

The volume of low-carbon natural gas increased by 100 times in 2022.

Corporate Strategies

Low-emission gases (like bio-methane) are gaining traction among major gas players.

Electric Gas & Utilities

•Authorized return on equity (ROE) averages have decreased since the 1980s due to the decreasing interest rate environment.

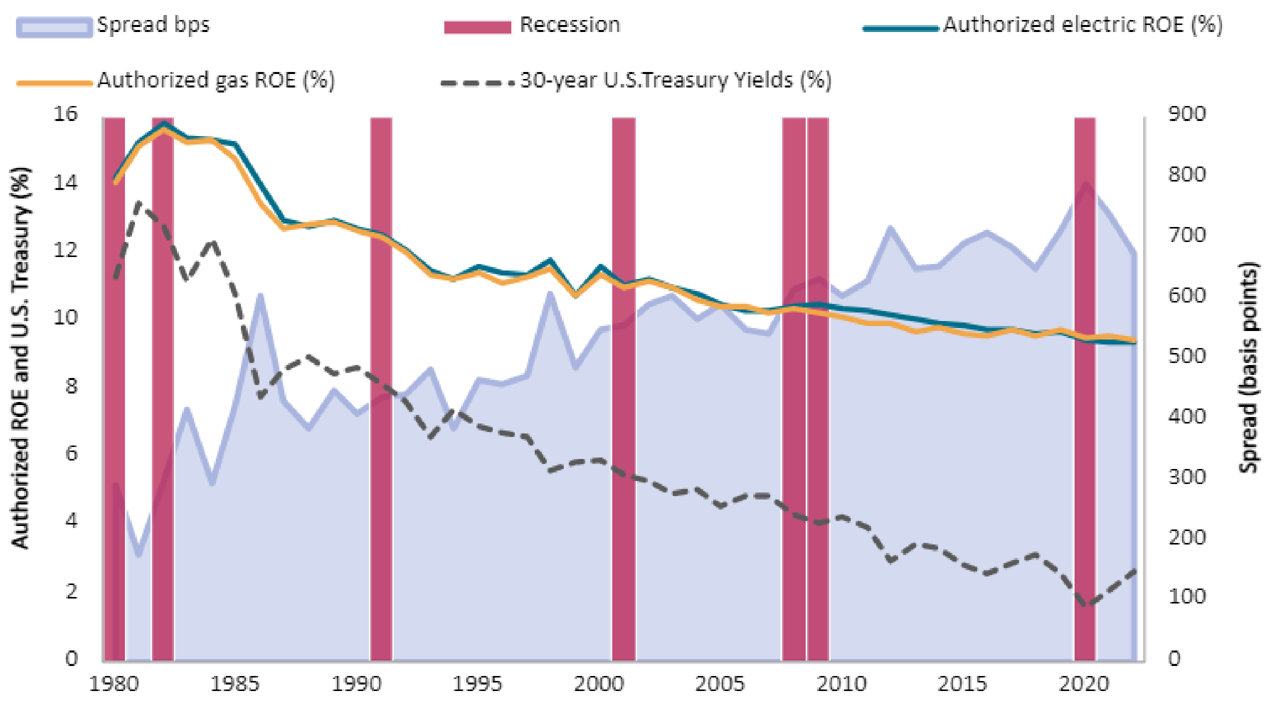
•Electric and gas utility allowed returns reached new record lows in the first nine months of 2022.

•Regulators will prioritize affordability in 2023 due to challenges posed by rising gas prices, inflationary pressures, and substantial planned capital spending in the industry.

•The industry's capital spending is primarily aimed at funding the energy transition.

•Regulators will need to balance the need for investment in the energy transition with the affordability concerns of consumers.

US average electric and gas authorized ROEs since 1980



Source: [S&P Global – 2023 Electric, Natural Gas & Water Utilities Outlook]

Renewables – Solar

- Solar energy demonstrates cost-competitiveness and rapid growth, positioning it as a prominent player in the renewables sector.
- The IRA in the US has increased incentives and investment opportunities for solar, leading to a surge in residential solar demand.
- Solar M&A transactions have seen a notable increase in volume, indicating a growing interest and activity in the solar market.
- The Ukraine conflict and the IRA have had a positive impact on solar demand globally, further fueling market activity in the solar sector.
- Solar power exhibits a strong market presence, with expanding capacity and increasing cost competitiveness in renewable energy markets.
- The solar sector presents a significant opportunity for investment and development, attracting attention from both public and private entities.
- The growth of the solar industry highlights its long-term viability and importance in the transition to a more sustainable and carbon-conscious energy landscape.

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Renewables - Wind

- Renewable energy costs may continue to rise temporarily in 2023 due to ongoing supply chain challenges.
- However, wind and solar will likely remain the cheapest energy sources in most areas, as fuel costs for conventional generation have been rising faster than renewable costs.
- The IRA also extends wind and solar tax credits for projects that begin construction before 2025 and tech-neutral credits through 2032.
- By mid-2022, US offshore wind project development pipeline had grown to more than 40 GW of potential generating capacity across 12 states.

Hydrogen & Geothermal

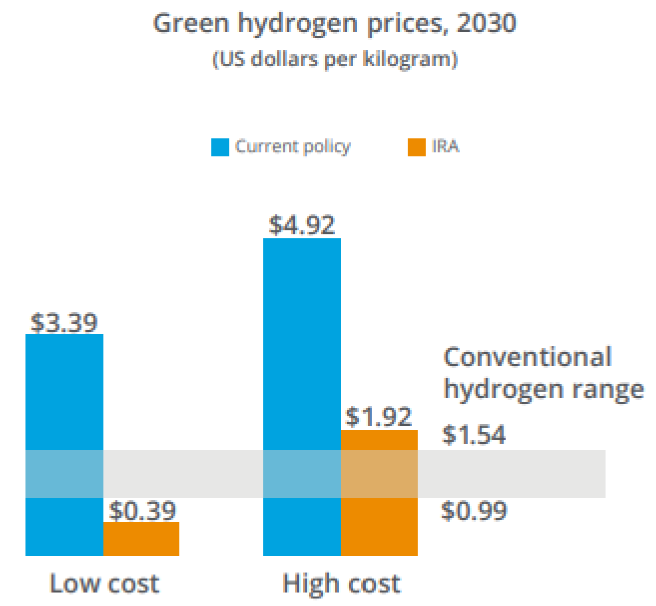
- The IRA is providing tax credits up to $3/kg for 10 years, making green hydrogen produced in the US the cheapest form of hydrogen in the world. Governments are implementing policies that will encourage increased hydrogen demand.

- Key new hydrogen applications are progressing, Key new hydrogen applications are progressing, including the implementation of pure hydrogen in steel projects, along with hydrogen fuel cell trains, seen in Germany.

- Asia Pacific is expected to be the largest regional market in the near future, seen with geothermal projects in China and Indonesia.

- Low-to-moderate temperature geothermal energy is seen as an emerging opportunity – characterized by temperatures 300 degrees F or less.

Figure 2. Green hydrogen is typically more cost competitive under the IRA



Note: Green hydrogen assumed to be produced with utility-scale solar. Other zero-emitting electricity sources will lead to different costs.

Source: John Larsen et al., "A turning point for US climate progress: Assessing the climate and clean energy provisions in the Inflation Reduction Act," Rhodium Group, August 12, 2022.

Sources: *International Energy Agency*, *EY Renwables Report*

M&A Activity in the Energy Industry

Overview of M&A Activity in the Energy Industry

Upstream:

- 82% of upstream and midstream deals were for natural-gas-based assets in 2022.
- The Permian Basin, located in Western Texas and Southeastern New Mexico, accounted for the largest share in upstream M&A in 2022.
- Upstream M&A in 2022 ended at $97B and 207 deals, the lowest since 2005. Despite oil prices rising 43% from 2021 to 2022, total deal value decreased by 29%, and deal volume decreased by 18%.

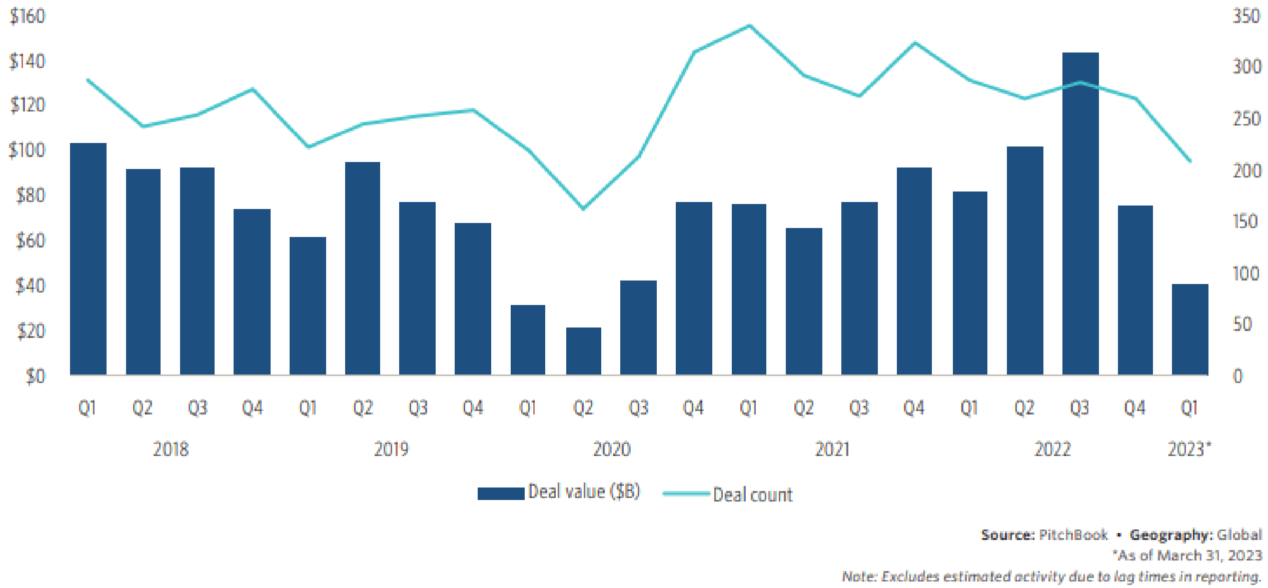
Midstream:

- Midstream M&A in 2022 ended at $53B, its second-lowest point since 2012. However, deal volume increased by 36% from 2021 to 2022.
- Total deal value decreased by nearly 66% from 2021 to 2022.
- PE and VC firms are gaining interest in midstream assets, with $10.7B in asset divestitures in 2022.

Downstream:

- Downstream M&A in 2022 ended at $12B, the lowest since 2013.
- Transportation and storage assets accounted for 13% of total downstream deal value, and 31% of deal volume in 2022.
- Customer-facing assets accounted for 46% of deal volume in 2022.

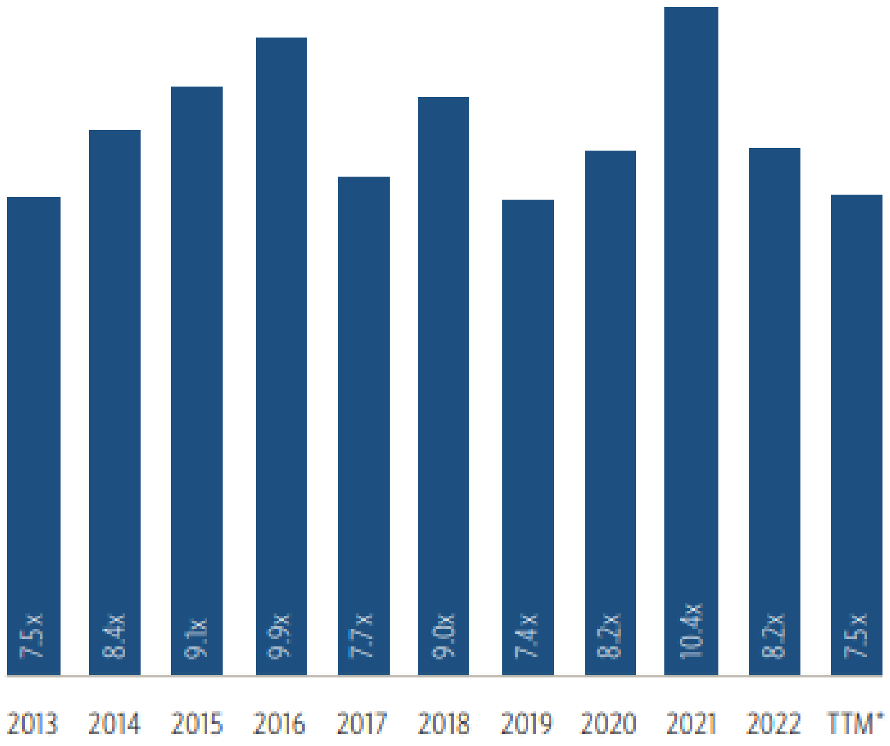
Energy M&A Activity by Quarter



- M&A activity in the energy space slowed down in Q1 of 2023 due to prolonged macroeconomic and geopolitical headwinds.
- However, the corporate push for decarbonization is driving deals across the globe, leading to an increased range of M&A opportunities.
- This benefits both companies actively seeking to acquire renewable assets in order to align with decarbonization initiatives, as well as investors who are willing to invest capital in industries projected to experience rapid growth.

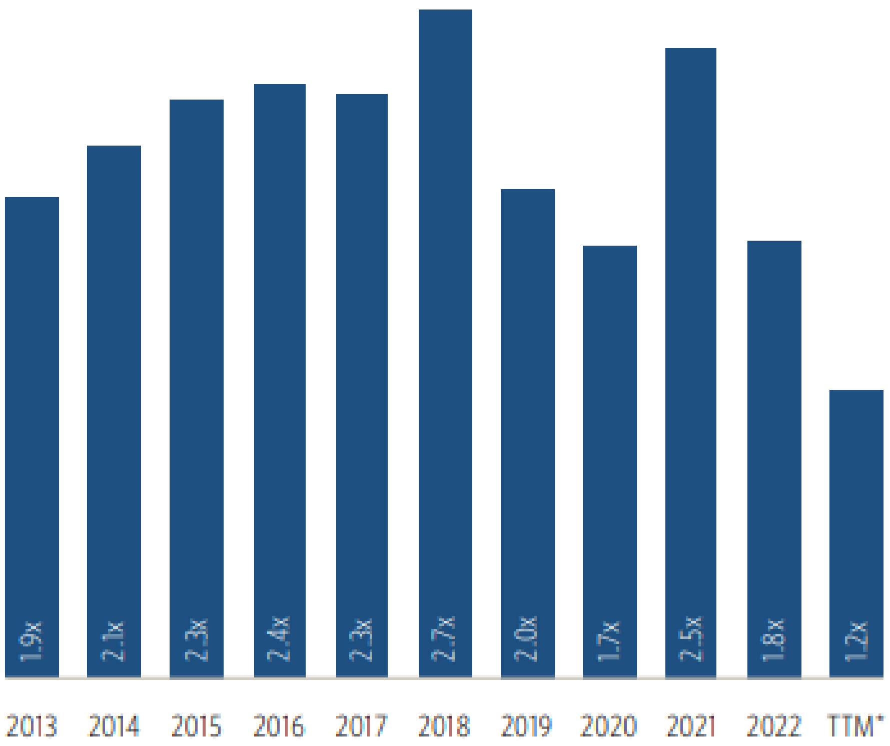
EV/EBITDA Multiples in the Energy Industry

Energy M&A EV/EBITDA multiples



Source: PitchBook • **Geography:** North America & Europe
*As of March 31, 2023

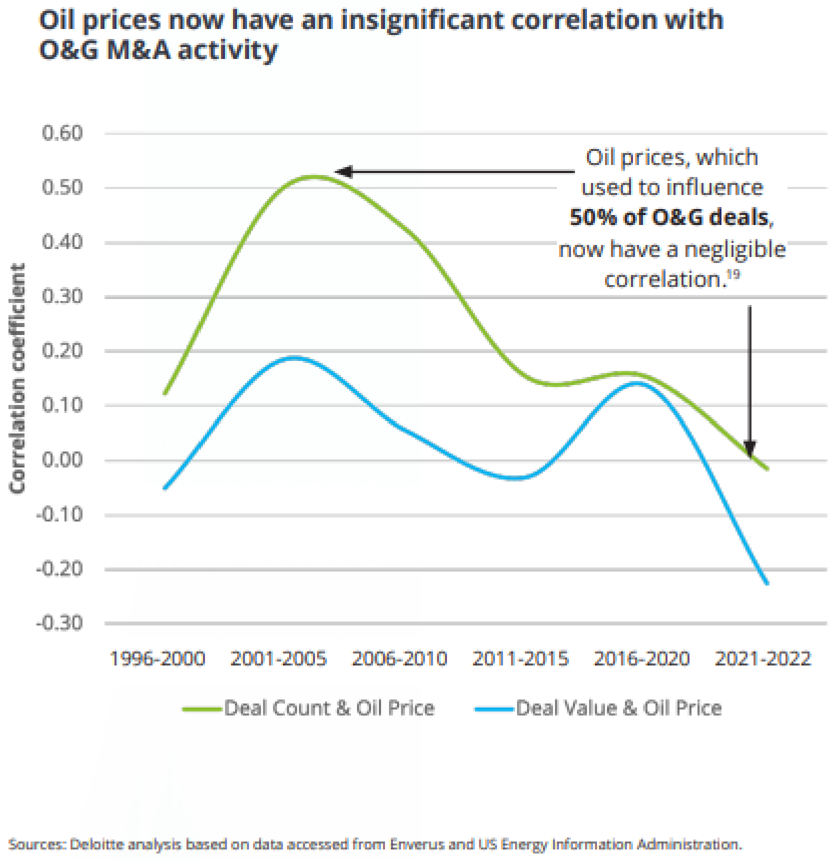
Energy M&A EV/revenue multiples



Source: PitchBook • **Geography:** North America & Europe
*As of March 31, 2023

M&A Activity Deal Trends – Oil & Gas

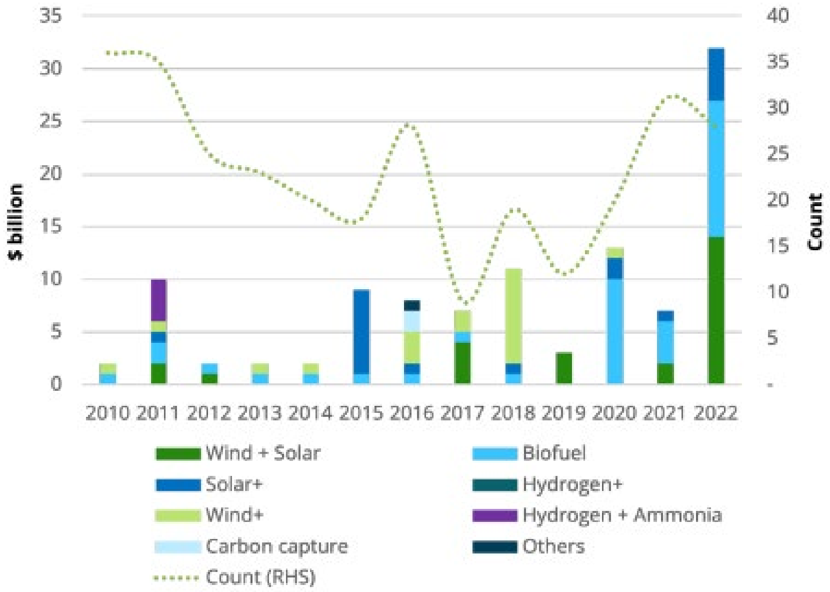
- As shown in Deloitte's chart to the right, oil prices no longer influence O&G M&A activity as much as they used to.
- Oil services M&A in 2022 ended at $13B, showing a 35% growth in total deal value. Deal volume increased by 50% from 2021 to 2022.
- Companies are opting to acquire specific assets instead of multiple assets, shown by a 55% decline for multiple assets from 2021 to 2022.
- Drilling rigs accounted for 65% of the deal value seen in 2022, marking its highest share in oil services since 2005.
- According to Deloitte, "Healthy balance sheets coupled with low levels of debt-heavy deals are expected to reduce the impact of the ongoing interest rate hikes on deal-making in 2023."



M&A Activity Deal Trends – Solar

- Accelerating energy transitions drove $32 billion of clean energy M&A by O&G companies in 2022.
- Biofuels along with combined solar and wind assets account for nearly 80% of clean energy deals by O&G companies in 2022.
- There were 128 Solar M&A transactions in 2022, and total deal volume was up by 20% from 2021 to 2022.
- The Ukraine war and the IRA have boosted solar demand not only in the US, but across the world.

Deals for clean energy assets by O&G companies



Note: Solar+ includes solar energy alongside other clean energy sources (except wind); Wind+ includes wind energy alongside other clean energy sources (except solar); Hydrogen+ includes hydrogen alongside other clean energy sources (except solar, wind, and ammonia); Others include hydropower, geothermal, and battery storage.

Source: Deloitte analysis based on data accessed from S&P Capital IQ.

ACT Capital Advisors' Energy Group

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ACT Capital Advisors' Energy Industry Group has years of proven expertise in the sector. We understand the industry dynamics and know what's important to the private equity buyer, enabling us to create superior outcomes for our clients.

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