Green Economy M&A Overview

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February 2024
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2023 M&A
2023 M&A Overview

Acquisitions in the B2B and B2C made up over 50% of total M&A deals in 2023.

Source: Pitchbook 2023 Annual Global M&A Summary
US M&A sector volume for 2023 remained solid with B2B and IT leading the market with most acquisitions, despite economic pressures.

Source: Pitchbook 2023 Annual US M&A Summary
A Call for Sustainable Change for Our Planet's Future

1. 8.3 billion tons of plastics have been generated, all of which have become or will turn into waste. This plastic waste is present in every corner of the globe, even at the depths of our oceans.

2. Studies have shown that waste plastics are having a negative effect on animals, fish, and plant life and are damaging the ocean bacteria that produces 10% of the oxygen that we breathe.

3. Plastics are made so durably that they require over 400 years to decompose, with an estimated 88% of all plastics ever manufactured still existing on Earth.

4. Significant global challenges persist and intensify annually. There's a need for change towards a more sustainable and cleaner future, benefiting both our nation and the planet.
Scrap Tires & Plastic Waste

Millions of tons of scrap tires and plastic piling up globally

- **~350M** Scrap tires are discarded in the US, with only ~10% repurposed for resale and the rest, amounting to 115 million, lacking a market solution and ending up in landfills.

- **Toxic Chemicals** Globally, tire fires in landfills pose significant issues, emitting toxic smoke that includes carcinogens, carbon monoxide, and sulfur dioxide.

- **~40M** Tons of plastic waste enters the Municipal Solid Waste stream (MSW), lacking an environmentally friendly reuse option.

- **~400K** of agricultural plastic waste, utilized to improve crop yields and quality, is either buried in landfills or incinerated.

- **Non-Biodegradable Materials** These practices burden landfills for decades and impose financial costs on municipalities through taxpayer funds.

- **>10%** of plastic used each year that finds its way into the oceans is equivalent to 700 billion plastic bottles.
Acquirers have been focusing on expanding in the following spaces:

- **Electric Vehicles (EVs)**
- **Waste Management**
- **Renewable Energy**
- **Green IT**

### Why these Areas?

- Private equity firms are eyeing green energy investment, as traditional energy investments have yielded low returns over the last 10 years.\(^1\)
- Environmentally favourable federal policies including tax rebates to accelerate the clean energy transition have increased demand.
- Limited Partners (LPs) key fund selection criteria involves Managers’ ESG Practices as a very important factor.\(^2\)
- Investment in Renewable Energy is expected to reach $1.3T by 2030 from $500B in 2020.\(^3\)

Source: \(^1\)S&P Global, \(^2\)Stax, \(^3\)Schroders
Deal volumes in 2023 declined 24% from 2022 levels.

Source: Pitchbook, as of December 31, 2023
Despite a temporary slowdown in deal making, Private Equity continues to see its Dry Powder at records levels of close to $1T.
Private Equity continues to compete against strategic buyers in global M&A, accounting for nearly 34% of transactions in 2023.

Source: Pitchbook, as of December 31, 2023
US Corporations are sitting on record levels of cash. Strong corporate balance sheets can often act as another driver for increased M&A.

**U.S. Corporations: Total Cash on Hand and in U.S. Banks ($MM)**

- **Q3 2013**: 146,981
- **Q3 2018**: 134,561
- **Q3 2023**: 225,896

Source: Federal Reserve Bank of St. Louis
2024 M&A Outlook
2024 Trends

EV market forecasted to grow strongly on the back of innovation

### Electric Vehicles (EVs)

- Global EV sales – battery-electrics and plug-in hybrids are forecasted to reach **16.7M** in 2024, translating into a **21%** YoY increase, with **70%** of those being expected to be fully electric.¹

- With the ability to pack more energy-producing capability into the same space as current EV batteries, the **solid-state EV-battery technology** holds tremendous potential.²

- Automakers will adopt the charging ports that Tesla uses for its vehicles potentially making **Tesla’s charging plug an industry standard.**²

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**Gasoline Powered Vehicle**

- ~**80%** of the energy lost due to various inefficiencies
- ~**75 – 84%** of the original energy is lost
- ~**16 – 25%** of original energy goes to wheels

**Electricity Powered Vehicle**

- ~**11%** of the energy lost due to various inefficiencies
- ~**31 – 35%** of the original energy is lost but **22%** is recaptured
- ~**87 – 91%** of original energy goes to wheels

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Source: ¹Bloomberg, ²Nasdaq Technology Report
2024 Trends

Waste Management industry is poised for strong growth, driven by several key trends

**Waste Management**

- Implementation of new Extended Producer Responsibility (EPR) laws, alongside continuous efforts in EPR execution.
- Enhanced understanding and action regarding regulations of Per- and Polyfluoroalkyl Substances (PFAS).
- Activation of Renewable Natural Gas (RNG) initiatives as they become operational.
- Expansion of organics processing capabilities driven by legislative measures.

**Key Industry Numbers**

- 500,000 Number of individuals employed in "waste management and remediation services" as of November 2023.
- 100+ Number of M&A transactions involving US solid waste companies in 2023
- ~$3B Est. M&A expenditure of the industry's top five publicly traded firms, led by Republic Services, until Q3 '23
- $105M Solid Waste Infrastructure for Recycling grants released by the US EPA in 2023

Source: ¹Waste Dive – Key Trends (2024), ²Waste Dive – Key 2023 Trends and Numbers
2024 Trends

Renewable set for secular growth, supported by fed funding & clean energy shift

Renewable Energy

- EIA anticipates a 17% increase in renewable deployment, reaching 42 GW by 2024, with renewables projected to contribute ~25% of electricity generation.

- 29 jurisdictions, covering half of US electricity sales, mandate renewable portfolio standards; meanwhile, 24, including 2 new states in 2023, aim for zero GHG emissions or 100% renewable energy by 2030-2050.

- In the initial 10 months of 2023, 30 companies joined RE100, a global initiative where corporations commit to sourcing all their electricity from renewable sources, bringing the total membership to 421.

Source: ¹Deloitte, ²Visual Capitalist

Key Industry Numbers (2024)

-24%  
Projected share of renewable energy in the total US energy mix in 2024, up from 22% in 2023

+3%  
Estimated increase in daily electricity generation in the US between 2023 - 2024

-9%  
Estimated change in electricity generation in the US via coal between 2023 - 2024

-0.1%  
Projected change in total US energy emission between 2023 - 2024

 Securities offered through Merit Securities, LLC, a broker-dealer, Member FINRA/SIPC.
2024 Trends

Focus on developing new technology in the following

Green IT¹

- End User devices emit 1.5 – 2x more carbon than data centers however, ~50 – 60% emissions can be addressed through sourcing changes, primarily by procuring fewer devices per person and extending the life cycle of each device through recycling.

- Moving to the cloud and optimizing usage of the cloud can result in a reduction in carbon emission by more than 55% - about 40 megatons of CO2e worldwide, equivalent to the total carbon emissions from Switzerland.

"Hyperscalers are aggressively investing in sustainable cloud operations and delivery, aspiring to eventually achieve net zero emissions within the decade, or sooner. Gartner expects increased availability of tools that help organizations calculate and reduce their carbon emissions through effective use of cloud services, similar to tools that assist in optimizing cloud spending today.” – Gartner²

Source: ¹McKinsey, ²Gartner
M&A Drivers in 2024

The Federal Reserve has been on a pause with respect to interest rate hikes over the last few months. Since November, interest rates have receded somewhat but still remain elevated.

- Amidst macroeconomic headwinds such as rising rates and supply chain costs, more than offsetting US government subsidiaries, energy transition deals have seen normalization in 2023, after 3 consecutive years of rise.¹
- The energy sector has seen total transactions surpassing $320B as of November 2023, indicating that the industry is refining its capital frameworks in preparation for the energy transition.²

Source: ¹Bain & Company, ²BCG, ³St. Louis Federal Reserve
M&A Drivers in 2024

Selling

- Clean Energy transition continues to drive demand for renewable developers and green energy companies.
- US government subsidies to offset higher labor costs.
- Divestitures - Disciplined corporations will cast off underperforming assets/divisions to acquire the right green technology and maintain liquidity levels.
- During “growth recession” premiums will be offered for higher-growth green technology companies.
- Global acquirers will remain active and competitive despite the US Dollar value.
- Look for more minority investments from PE and creative deal structures to offset lower leverage available in the market.
- Strategy resets and speed will dominate in 2024.
- However diligence and risk assessment will slow time to close – Seller Patience.
M&A Drivers in 2024

Acquiring

- Cash Flush Strategics will have an advantage over PE Buyers (low / no leverage).
- Add-ons will continue to dominate PE acquisitions – existing credit facilities.
- Lower seller expectations and some multiple contraction will provide opportunities to acquire new technologies.
- Valuation equilibrium to remain in place in 2024.
- Dramatic green technology offerings that suffer from lower VC interest and funding will become available.
- Corporate divestitures (portfolio analysis/liquidity), take-private transactions, and transformative acquisitions will stay elevated in 2024.
- Outbound Global acquisitions will be aided by currency imbalances.
- Prepare for greater regulatory scrutiny in larger deals.