

M&A Quarterly Market Report: 4Q21 Review

# Global Renewable Energy

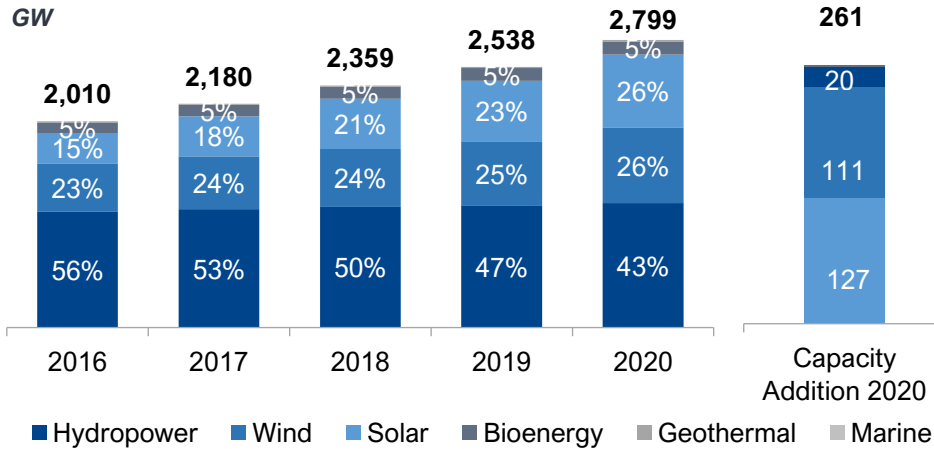
---



# Global Renewable Energy Sector Overview

The sector is projected to grow at 8.4% to USD1,978 billion by 2030

## Global Renewable Energy Capacity Growth

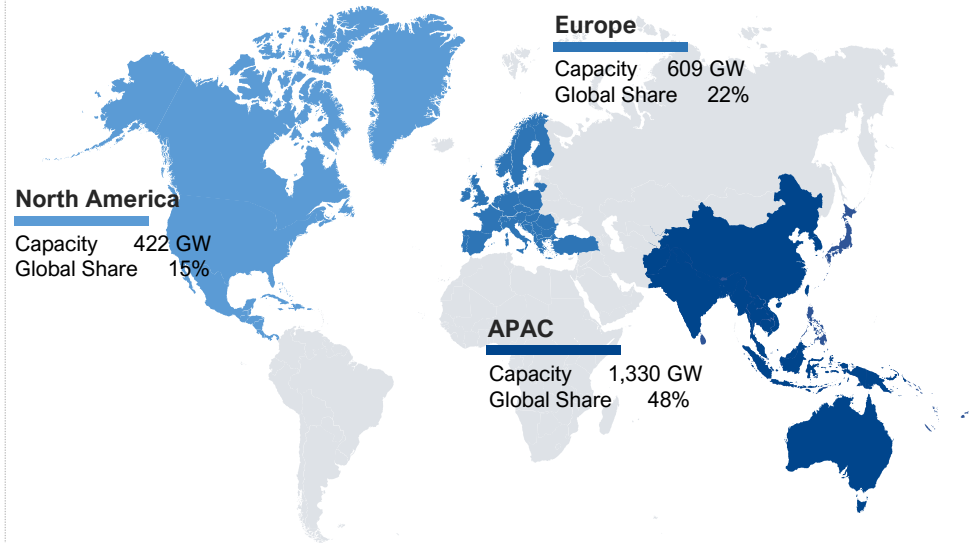


Note: Geothermal represented ~1% and marine >1% across years.

- Global renewable energy capacity increased at a CAGR of 8.6% from 2016 to 2020.
- Solar and wind continued to dominate capacity addition, with 91% contribution in 2020. Historically, hydropower was the highest contributor to total capacity; however, it observed a downward trend in the year.
- Globally, the renewable share in total energy consumption surged to 11.2% in 2019 from 8.7% in 2009.
- Renewable demand rose 3% in 2020, primarily driven by ~7% growth in electricity generation.
  - The share of renewables in global electricity generation climbed to 29% in 2020.

Source: IRENA, IEA, Allied Market Research, Aranca Research

## Regional Insights



Note: South America (8%), Eurasia (4%), Africa (2%), Middle East (1%), Central America (1%).

**APAC** is the fastest growing market by region owing to the increasing renewable capacity. Asia accounted for 64% of new capacity in 2020. Majority of this increased capacity came from China through wind (72 GW) and solar (49 GW).  
**The market size is expected to expand at a CAGR of 9.6% from 2021-2030.**

In **Europe**, the continued decommissioning of non-renewable capacity fueled growth, making it the second highest contributor with a capacity addition of 34 GW in 2020.

In **North America**, capacity expanded by 32 GW in 2020, primarily driven by additions in the US through wind (14 GW) and solar (15 GW). This makes the North American market second highest contributor after China.

# Global Renewable Energy Market Dynamics

Increasing demand and limited contribution is attracting new entrants

## Key Market Trends



### Solar

- Witnessing boost in distributed rooftop solar PV systems, driven by rush of installations in Vietnam, Australia, Germany, and the US
- Competition and price pressures continue to encourage investment; sector observes entry of new players, despite numerous challenges
- China leads in new solar thermal installations, followed by Turkey, India, Brazil, and the US



### Wind

- Growing interest in offshore wind power due to high-capacity factors, large-scale and uniform generation profiles, and falling costs
- Accounts for major share in electricity generation in several countries: Denmark (58%), Ireland (38%), and the UK (24%)
- To diversify, turbine manufacturers and project developers continue venturing into new sectors; entrants, including oil majors, expand further into the sector



### Hydro

- Despite 24% rise in capacity, led by China, global market shows no signs of recovery even after several years of deceleration
- Challenges include operational and technical factors, environmental and social acceptability, and global decline in electricity prices



### Other

- Aiming at decarbonization, industry stakeholders pursue hydrogen production and storage projects to cut carbon emissions
- Renewables reaching record levels in electricity mix while sales of heat pumps, EVs, and energy storage showing strong growth

## Market Concentration

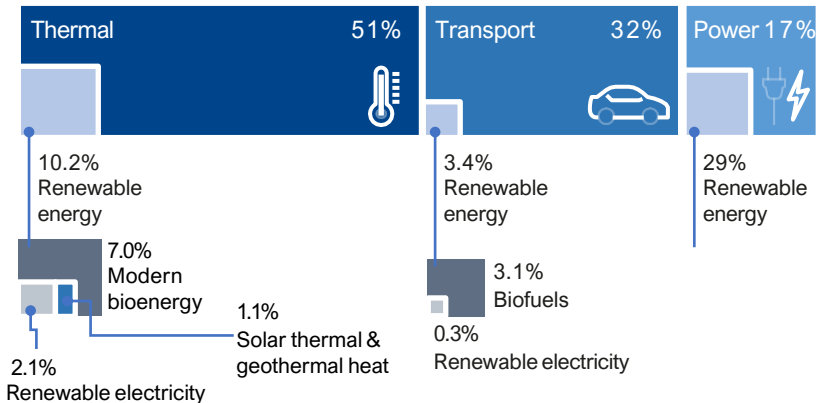
**Consolidated**  
(Market dominated by 1–5 major players)

**Fragmented**  
(Highly competitive market with no dominant players)



Renewable Energy Market

## Renewable Energy in Total Energy Consumption



- Renewable energy market is aiming to tap in the growing portion of energy demand from buildings, transportation and power with a small contribution in industrials.

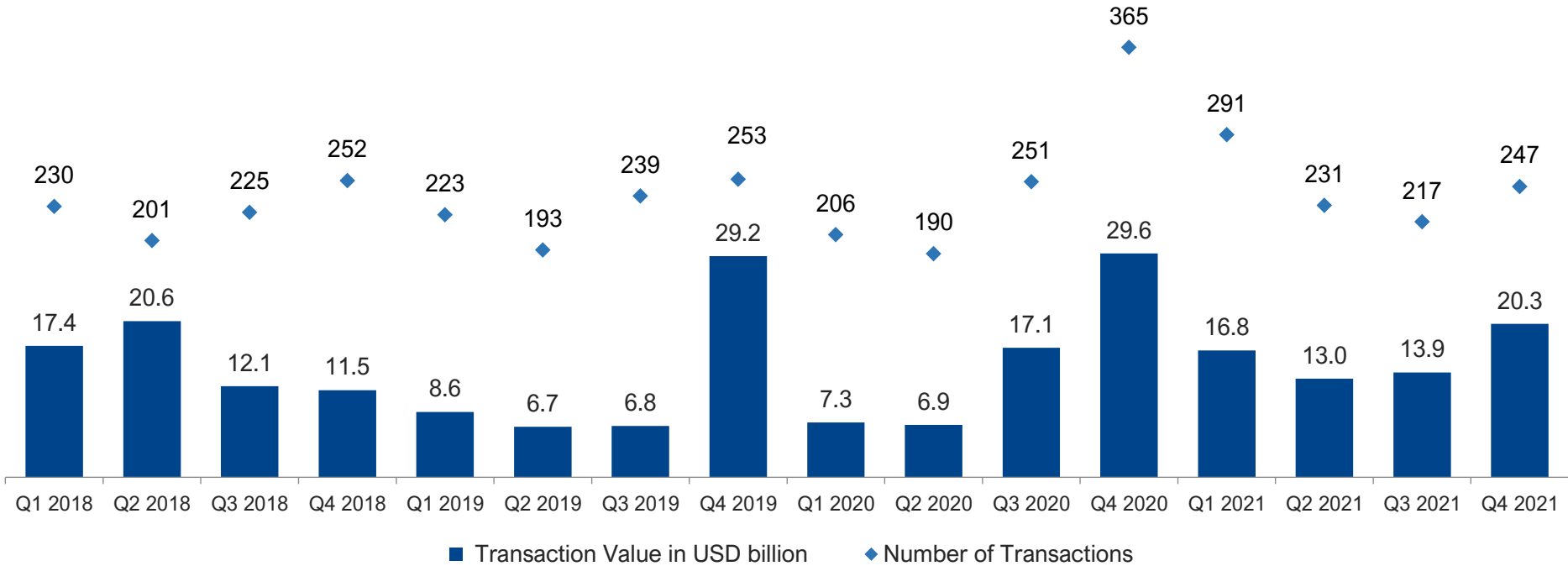
Source: IRENA, IEA, Mordor Intelligence, Aranca Research

# M&A Transactions Trend – Total Transaction Value and Transaction Volume

Highest transaction volume and value observed in last three years recorded in 4Q20 in renewable energy space

M&A transactions, which were adversely affected by the onset of the pandemic in 1H20, recorded the highest number of deals in 2H20. The rebound in M&A activity continued well into the next year.

Growth in transactions was driven by buyers’ strategic decision to modify their portfolios and inject capital into high-yield assets, turning the attention to “net zero” energy sources.



Note: Volume and total transaction value might differ due to lack of availability of undisclosed transactions.

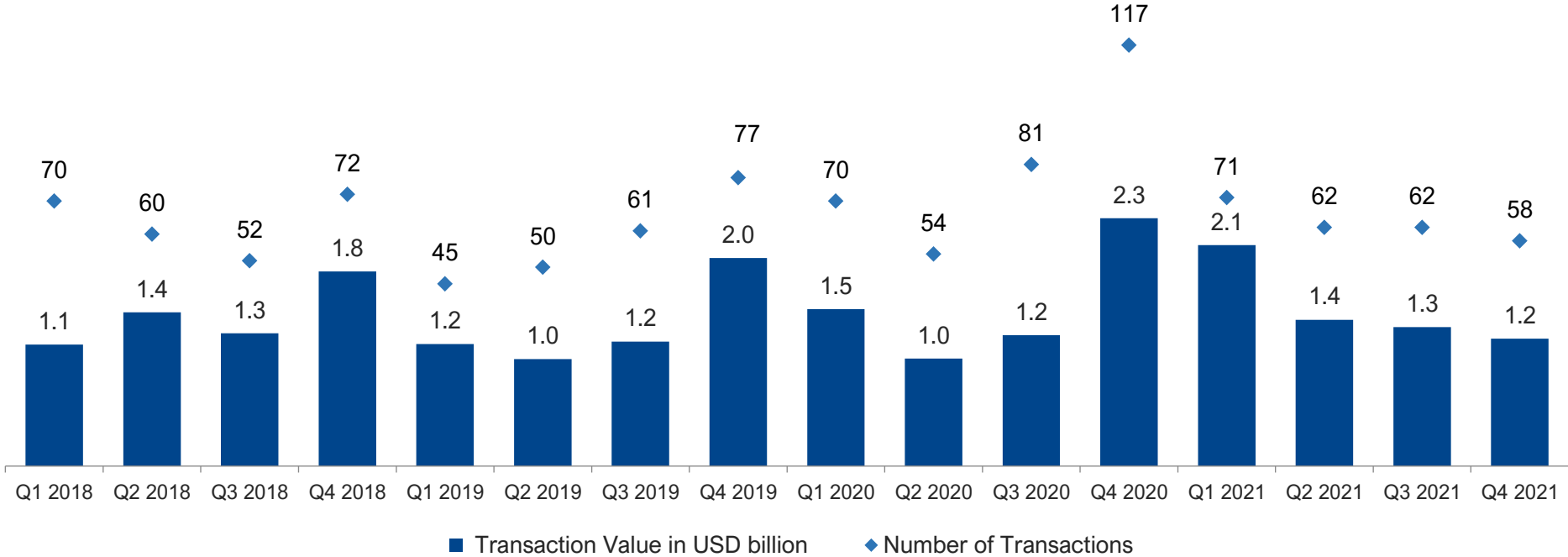
**Average Valuation Multiples: EV/Revenue – 6.6x and EV/EBITDA – 11.6x**

Source: S&P Capital IQ, Aranca Research

# M&A Transactions Trend – Under USD100 Million

Historically 25–30% of total transactions (with disclosed values) are worth less than USD100 million

Historically, in the global renewable energy market space, 2H20 has been more active in terms of transactions and the total ticket size. 4Q20 recorded the maximum number of transactions in the last three years, indicating a healthy recovery from the pandemic.



Note: Volume of transactions under USD50 million might differ from the actual number due to lack of availability of undisclosed transactions.

**Average Valuation Multiples: EV/Revenue – 2.9x and EV/EBITDA – 18.5x**

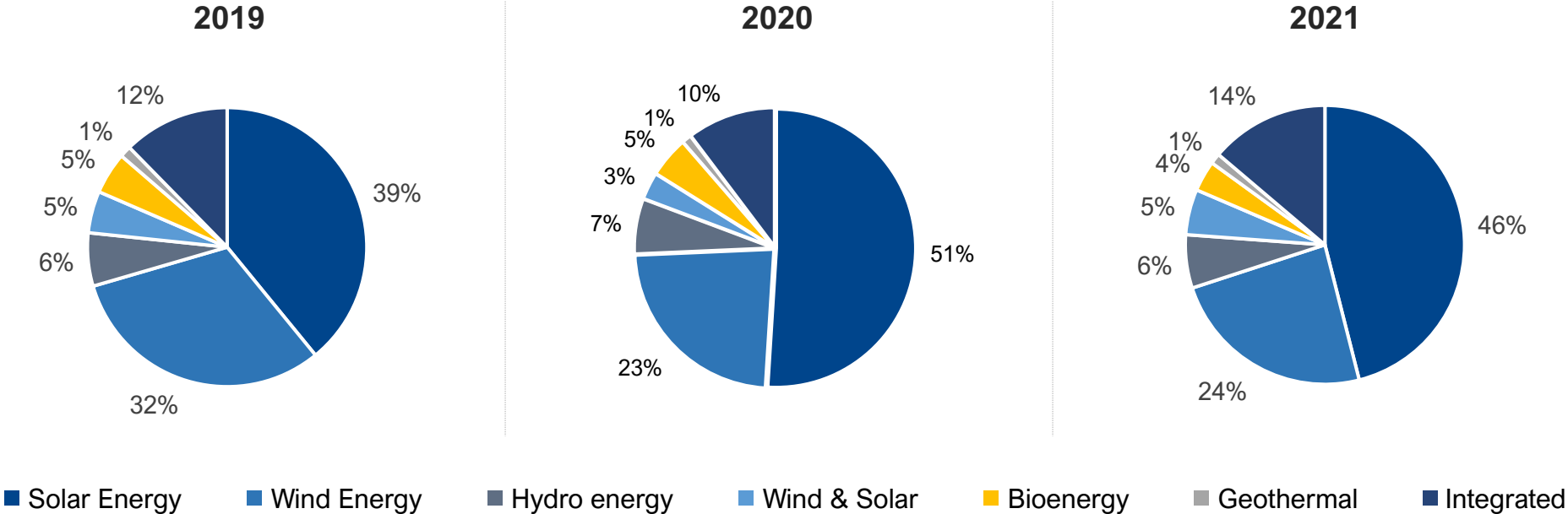
Source: S&P Capital IQ, Aranca Research

# M&A Transactions Trend – By Subsector

Solar energy leads among subsectors, with share in transactions increasing to 46% in 2021 from ~40% in 2019

Solar and wind energy account for ~75% of transactions in the renewable energy space. While M&A activity in wind energy saw a decline from 2019 to 2021, that in solar energy remained unaffected by the pandemic.

## Share of Transactions



The sectoral trend in M&A is likely to continue in 2022 as industry consolidations are required to meet growing demand from the government and corporations.

Source: S&P Capital IQ, Aranca Research

# Select SPAC Activity in Renewable Energy Space

Green SPAC popularity likely to continue in near future

Demand for clean energy-focused companies has soared as policymakers drive the transition to net zero emissions, and investors are equally eager to make their portfolio greener. SPACs are increasingly looking for green companies. Apart from renewable energy, clean SPACs have targeted ESG-centered businesses.

2021  




Heliogen, AI-enabled concentrated solar energy provider, announced a merger with Athena Technology Acquisition Corp. at a pro forma enterprise value of USD2 billion; gross proceeds of ~USD415 million are expected.

2021  




Altus Power, a US-based solar energy company, concluded a USD1.5 billion merger with CBRE Acquisition Holdings. Altus Power received proceeds of USD636.5 million from the deal.

2021  





Rice Acquisition Corp. inked an agreement with Aria Energy and Archaea Energy to create a renewable natural gas platform, Archaea Energy. The combined entity would have ~USD350 million in cash.

2020  




ReNew Power completed its merger with Nasdaq-listed SPAC RMG Acquisition Corp. II. The merger puts an enterprise value of ~USD8 billion on the new entity, ReNew Energy Global Plc.

## SPACs Searching for Targets Within Renewable Energy Space

| SPAC                               | Potential Focus                                     | IPO Size (USD million) |
|------------------------------------|---|------------------------|
| ArcLight Clean Transition Corp. II | Renewable Energy, Energy Transition, Sustainability | 311.2                  |
| AltEnergy Acquisition Corp.        | Renewable Energy or Related Clean Tech              | 230.0                  |
| Clean Earth Acquisitions Corp.     | Clean and Renewable Energy Industry                 | 200.0                  |
| AMCI Acquisitions Corp. II         | Decarbonization, Sustainability, Energy Transition  | 150.0                  |

Source: S&P Capital IQ, Spactrack, Aranca Research



# Top 10 M&A Transactions by Value in Renewable Sector – Last Four Years

Total transaction value above USD40 billion, with a mix of strategic and financial buyers

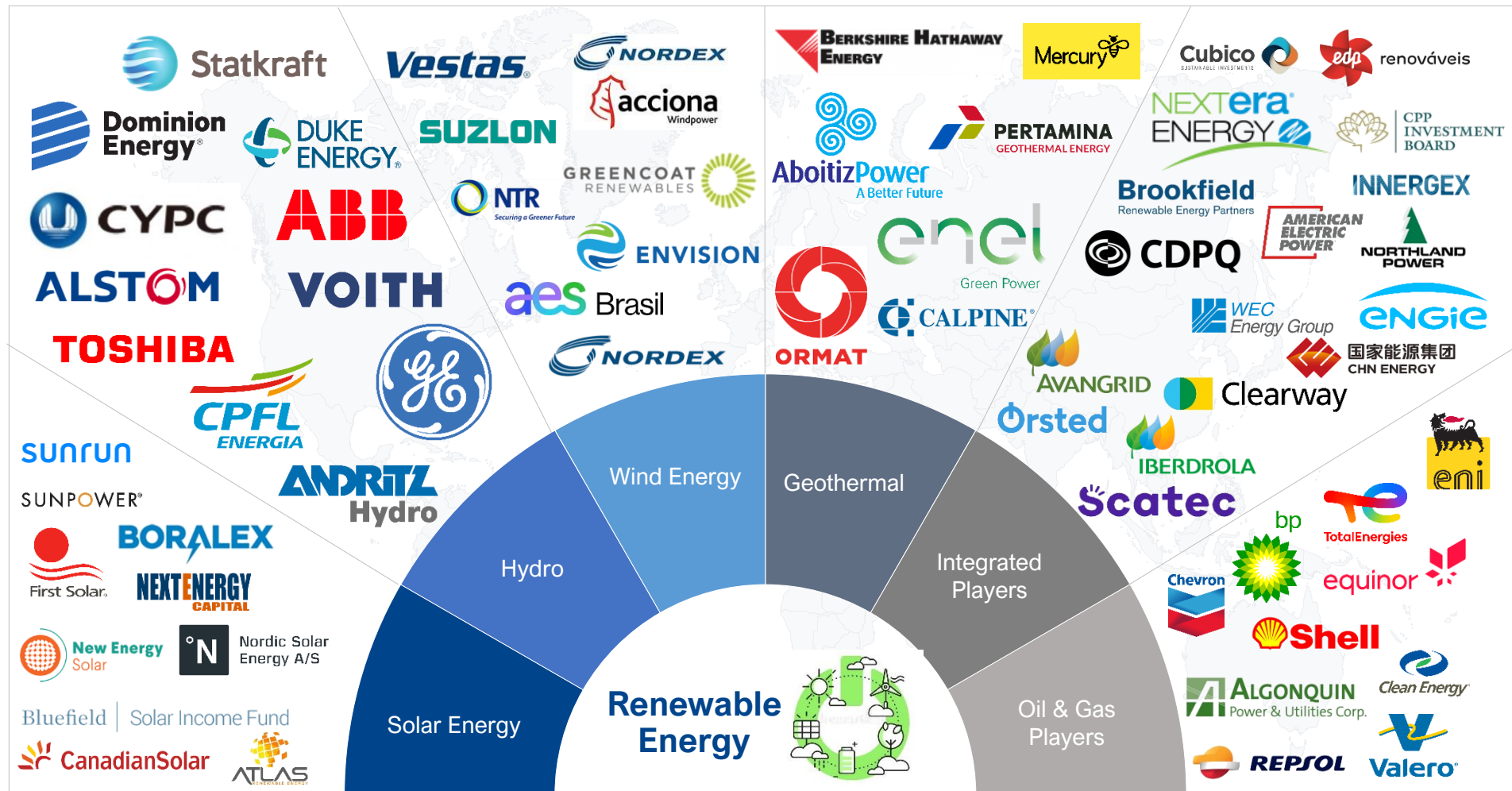
| Date    | Target  | Buyer  | Transaction Value (USD billion) | Strategic / Financial Buyer |
|---------|---|--|---------------------------------|-----------------------------|
| Nov-19  | Pattern Energy Group Inc.                                     | Canada Pension Plan Investment Board                           | 6.4                             | Financial                   |
| Mar-18  | Snowy Hydro Ltd.  | Federal Government of Australia                                | 5.5                             | Strategic                   |
| July-21 | Covanta Holding Corporation                                   | EQT Partners AB  | 5.4                             | Financial                   |
| Nov-19  | Eneco Groep N.V.  | Mitsubishi Corp; Chubu Electric Power Company Netherlands B.V. | 4.5                             | Strategic                   |
| Feb-21  | Glow Energy Public Co. Ltd                                    | Global Power Synergy Public Co Ltd                             | 4.4                             | Strategic                   |
| Jul-20  | Vivint Solar Inc.   | Sunrun Inc.  | 3.6                             | Strategic                   |
| Jul-20  | Viesgo Infraestructuras Energéticas, S.L (Renewable Business) | EDP Renováveis, S.A.   | 3.3                             | Strategic                   |
| Feb-18  | Saeta Yield, S.A.   | TerraForm Power, Inc.  | 3.2                             | Strategic                   |
| Mar-21  | Tilt Renewables Limited                                       | Powering Australian Renewables                                 | 2.6                             | Strategic                   |
| Sep-18  | NextEra Energy Resources (Wind and Solar Projects)            | NextEra Energy Partners, LP                                    | 2.2                             | Strategic                   |

Source: S&P Capital IQ, Aranca Research



# Active M&A Players in Renewable Energy Sector

Industry map comprises six subsectors with numerous active strategic and financial buyers



Source: S&P Capital IQ, Aranca Research

# Outlook

Renewable industry well positioned for sustained period of strong M&A activity on increased participation from large-scale utility and power companies, decarbonization initiatives, and higher demand

M&A activity in the renewable energy sector slowed with the outbreak of the pandemic in early 2020. However, the number of deals rebounded sharply in 2H20 and comparatively recorded an upward trend in 2021.

According to estimates from the Energy Transitions Commission, a global union of leaders from across the energy industry, attaining net zero emissions by 2050 would require an investment of USD1–2 trillion per annum. M&A in renewables and green energy is expected to play a vital role in delivering investment at this scale.

Impact investing represents a lucrative opportunity for the renewable sector space, as funds are anticipated to create a positive, measurable social and environmental impact with a financial return. Renewable assets have demonstrated their resilience amid the COVID-19 pandemic in 2020 with soaring valuations.

M&A deal activity in the renewable space is on the rise due to stricter renewables targets and mandates, along with the magnitude of public and private capital deployment in renewables.

Global oil & gas players are aiming to accomplish their decarbonization goals and ESG targets, which in turn has encouraged their greater participation in acquiring renewable assets. This would make the renewable market more attractive in the coming years.

The Biden administration's focus on clean energy and benefits from tax credits would create opportunities for M&A in the sector.

*Source: Deloitte, Aranca Research*



**500+**

Strong, professional team across multi-disciplinary domains

**2500+**

Global clients

**120+**

Sectors and sub-sectors researched by our analysts

**80+**

Countries where we have delivered projects

## ABOUT ARANCA



### Business Research & Advisory

CXOs in Strategy, SBUs, Sales, Marketing, CI/MI, Innovation



### Valuation & Financial Advisory

CFOs in Start-ups, PE/VC Firms, Corporate M&A Teams, Mid-market Companies



### Technology | IP Research & Advisory

R&D, Tech Scouting, Open Innovation, IP Teams, Product Development



### Investment Research & Analytics

Brokerage, Hedge Funds, IRPs, I-Banks, AMCs, Investor Relations

# Connect with our Team



**Ashima Gupta**

Senior Analyst, Investment  
Research

+91.9999885348  
ashima.gupta@aranca.com



**Ashish Lakra**

Senior Manager, Investment  
Research

+91.124.668.9999  
ashish.lakra@aranca.com



**Avinash Singh**

AVP, Investment Research

+91.124.668 9999 (Extn: 951)  
avinashg.singh@aranca.com

**For more details:** [www.aranca.com](http://www.aranca.com) | <https://www.linkedin.com/company/aranca> | <https://www.aranca.com/knowledge-library>

# Decide Fearlessly

---

From startups to the Fortune 500, private equity and global financial firms, Aranca is the trusted research and advisory partner for over 2500 companies



[www.aranca.com](http://www.aranca.com)



This material is exclusive property of Aranca. No part of this presentation may be used, shared, modified and/or disseminated without permission.  
All rights reserved.