Investment opportunities in the energy sector

Key investment trends in the energy transition

Key investment trends

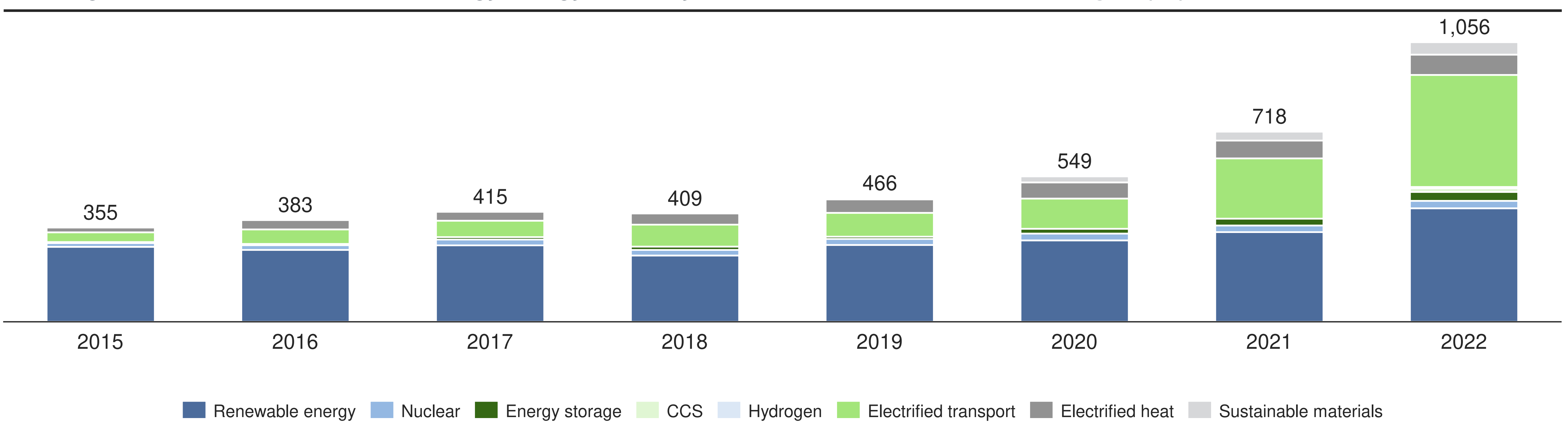
- Investments in clean energy technologies is **on the brink of overtaking fossil fuel** investments
- While current investments are mainly driven by **financial support schemes**, increased efficiency and rising fossil fuel prices are making the investments in renewable energy **more cost-efficient**
- Emerging long-duration **energy storage technologies and smart grids** will be critical for supporting the wide scale deployment of renewable energy sources
- The **market for electric vehicles (EVs) has grown rapidly** in recent years - investors are increasingly looking at companies involved in **EV manufacturing** and those involved in the production of battery materials
- The introduction of **carbon pricing mechanisms** is expected to encourage investment in low-carbon technologies and discourage investment in high-carbon activities
- The **market for green bonds** has grown rapidly as investors seek to **support** the transition to a low-carbon economy

Source: Accuracy analyses

Investments in clean energy surged past €1 trillion in 2022…

Global energy transition

Annual global investment in renewable energy, energy efficiency and other transition-related technologies (€b), 2015-2022

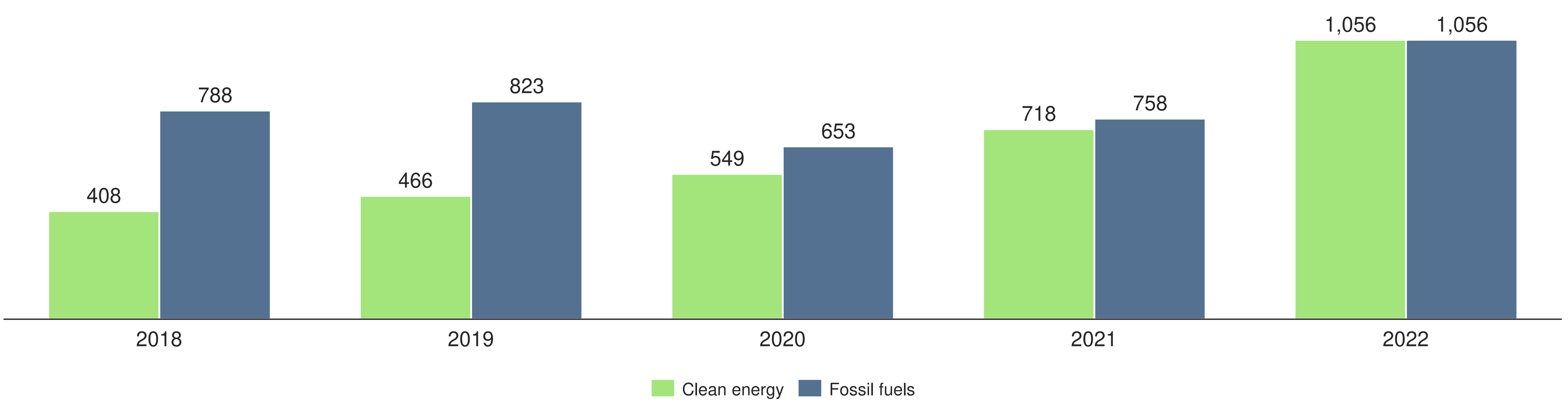


Source: IRENA, Global landscape of renewable energy finance, 2023

… and have caught up with investments in fossil fuels

Global energy transition

Investments in energy transition versus fossil fuels (€b), 2018 – 2022



Source: BloombergNEF, IEA World Energy Investment 2022 report

Key trends driving M&A activity in the energy industry

Trend	Description	Example of deals
Consolidation for scale	Companies are engaging in mergers and acquisitions to achieve greater scale, enabling them to compete more effectively in the rapidly evolving energy landscape	A consortium of Mitsubishi Corporation and Chubu Electric Power acquired Eneco in 2019, whose shares until then were 100% held by 44 municipalities
Portfolio diversification	Many companies are diversifying their portfolios to include a mix of renewable energy sources, energy storage solutions, and smart grid technologies. This approach helps them adapt to changing market dynamics and regulatory environments	After a portfolio strategy review, in 2019 Stedin group sold Joulz, a provider of essential energy infrastructure equipment and services to 3i private equity
Digitalization and innovation	M&A activities are often centered around acquiring digital and innovative technologies. This includes investments in smart grids, advanced analytics, and other digital solutions to enhance operational efficiency and performance	Persefoni offers a digital platform that focuses on carbon and sustainability management. In 20223 it has raised investment from EDF and Bain & Co, amongst others
Strategic partnerships	In addition to traditional M&A, strategic partnerships and collaborations are on the rise. Companies were forming alliances to share resources, mitigate risks, and leverage each other's strengths in pursuing sustainable energy projects	Shell and Microsoft have formed a strategic alliance in 2020 to further collaborate on the development of new technologies

Source: Accuracy analysis

The energy transition fundamentally changes the value chain and creates opportunities for companies beyond their core business

Electricity value chain

Centralised generation and production → Transmission and distribution → Trading and retail → Metering → "Behind the meter" (BTM)

Value is shifting behind the meter

- **On-site generation**: Power and heat (and steam) generation through decentral assets at customer site (PV[1], CHP[2])
- **Energy efficiency services**: Solutions and services to reduce customers' energy bill – in buildings and in core production processes (incl. data management)
- **Storage & flexibility management**: Storage facilities to compensate volatile energy generation and exploit price differences
- **E-mobility**: Charging stations on key locations in cities, corporate car parks, to serve the growing electric car market
- **Energy sharing**: P2P[3] energy sharing allows users to share their local energy resources (e.g. rooftop PVs, home batteries) on an agreed cost-sharing mechanism

Notes: [1] PV – Photovoltaics; [2] CHP – Combined Heat and Power; [3] P2P – Peer-to-peer

Key challenges related to the energy transition

Key challenges

- The **uncertainty regarding government policies and regulations** poses to be a significant challenge in the energy transition
- **The energy market is volatile.** The fluctuation of traditional and renewable energy prices creates additional uncertainty for investors, who may struggle to accurately **predict future demand**
- Investing in new technologies comes with significant **technological risks**, as these **might not perform as expected, may take longer to develop than anticipated or become obsolete** before they can be fully deployed
- The energy transition requires **significant investments in infrastructure**. The **high upfront costs** of renewable energy projects pose to be an important **barrier to entry** for many investors
- The **geographic concentration** of essential mineral processing facilities in a few limited regions including China poses a **threat** to the reliability of the **supply chain**
- **Access to finance** can be a major challenge for investors, especially for smaller investors or those operating in developing countries

Source: Accuracy analyses