

EGYPT OIL&GAS
RESEARCH & ANALYSIS

BRIDGING FDI AND ENERGY TRANSITION

Pathways to a Sustainable Future

STRATEGIC APPROACH
Vol. 1

NOVEMBER
2024

The Team

CEO
Mohamed Fouad

General Manager
Ayman Rady

Research & Analysis Manager
Dr. Mahinaz El Baz

Research & Analysis Supervisor
Reham Gamal

Associate Research Analysts
Jolly Monsef
Mariam Ahmed

Research Analysts
Alaa Al Masry
Nermeen Kamal

Statistician
Nada Abbas

Managing Editor
Ihab Shaarawy

Senior Editor
Nader Ramadan

Chief Reporter
Wael El-Serag

Senior Marketing Executive
Amira Essam

Creative Art Director
Omar Ghazal

Graphic Designer/Motion Designer
Amira Hassan

Graphic Designer
Aya Soliman



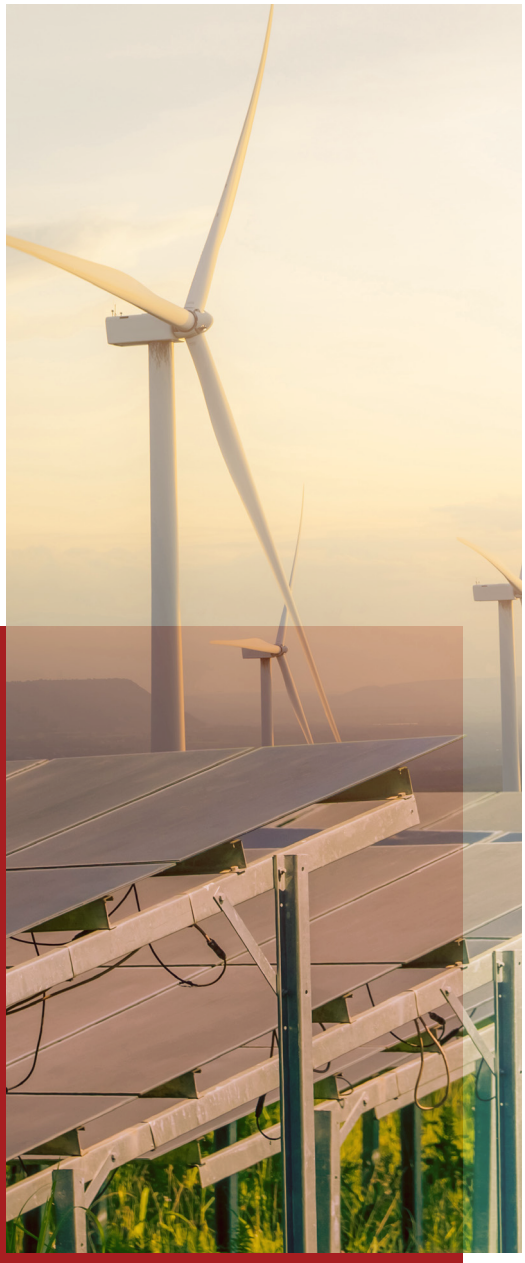


Table of
Contents

Overview	06
Key Trends	08
Spotting the Gap	14
Egypt’s Resilience	15

Overview

BY MARIAM AHMED & ALAA AL MASRY



In light of the global trend towards sustainable energy, there is a growing demand for investments in energy transition assets.

Efficient energy transition requires substantial investment in clean energy, sustainable infrastructure, decarbonization of industry, and progressive decommissioning of fossil fuel assets. This is in addition to the advocacy for cleaner power generation alternatives, according to the World Economic Forum (WEF).

Global clean energy investment has surged by 40% from 2020 to 2023. This recent growth has primarily been concentrated in advanced economies and China. While other emerging and developing economies received less than 15% of the total investment despite accounting for 65% of the world's population and generating about a third of global gross domestic product (GDP). This disparity highlights a concerning trend in financing the energy transition in emerging and developing economies, WEF stated.

It is worth mentioning that today's investment trends do not seem to be in line with the required levels for the world to successfully move to clean energy, limit global warming to 1.5 °C above pre-industrial levels, and meet the interim goals set at COP28, according to the International Energy Agency (IEA).

The progress of the global energy transition has slowed in 2023 due to economic instability, geopolitical tensions, and technological challenges. Despite this, the global average Energy Transition Index (ETI), released by the WEF, has reached its highest levels. ETI covers 120 countries in terms of their current energy system performance on equity, sustainability, and security and readiness of the enabling environment on policies and regulatory framework, infrastructure, innovation, education and human capital, and finance and investment.

In 2024, 107 out of 120 countries advanced over the past decade. The top 10 ranked countries in the ETI in 2024 are predominantly advanced economies, mainly from Northern Europe. Sweden leads the rankings, followed by Denmark and Finland, according to the WEF.

Egypt was ranked 75th on the 2024 ETI, facing energy security challenges due to a rise in domestic energy consumption and a significant dependency on natural gas for producing electricity. Nonetheless, Egypt has effectively mitigated these risks over the past year through a strong commitment to diversifying its energy mix, increasing the contribution of renewable energy, and advancing infrastructure development.

Moreover, Egypt adopted the National Climate Change Strategy (NCCS) 2050, which aims to integrate climate resilience into infrastructure projects and diversify power generation technologies, according to the WEF.

Key Trends

Global Clean Energy Investment Landscape

Global investment in the energy transition climbed by 17% in 2023 from 2022 to hit a record $1.8 trillion. Most of this investment was directed to electrified transport, accounting for $634 billion, up 36% year-on-year (YoY). Renewable energy showed more modest momentum, rising 8% to $623 billion. There was also strong growth in emerging energy areas, with hydrogen investment tripling to $10.4 billion YoY, carbon capture and storage (CCS) nearly doubled to $11.1 billion, energy storage hiked by 76% to $36 billion, and clean industry evolved by 7% to $49 billion, according to BloombergNEF.

China remains the largest energy transition investor, dominating 38% of the global total at $676 billion. Yet, the United States (US) recorded strong growth, spending $303 billion. The 27 members of the European Union (EU) spent $360 billion in energy transition investment, BloombergNEF noted.



Growth of Global Investments in Energy Transition in 2023

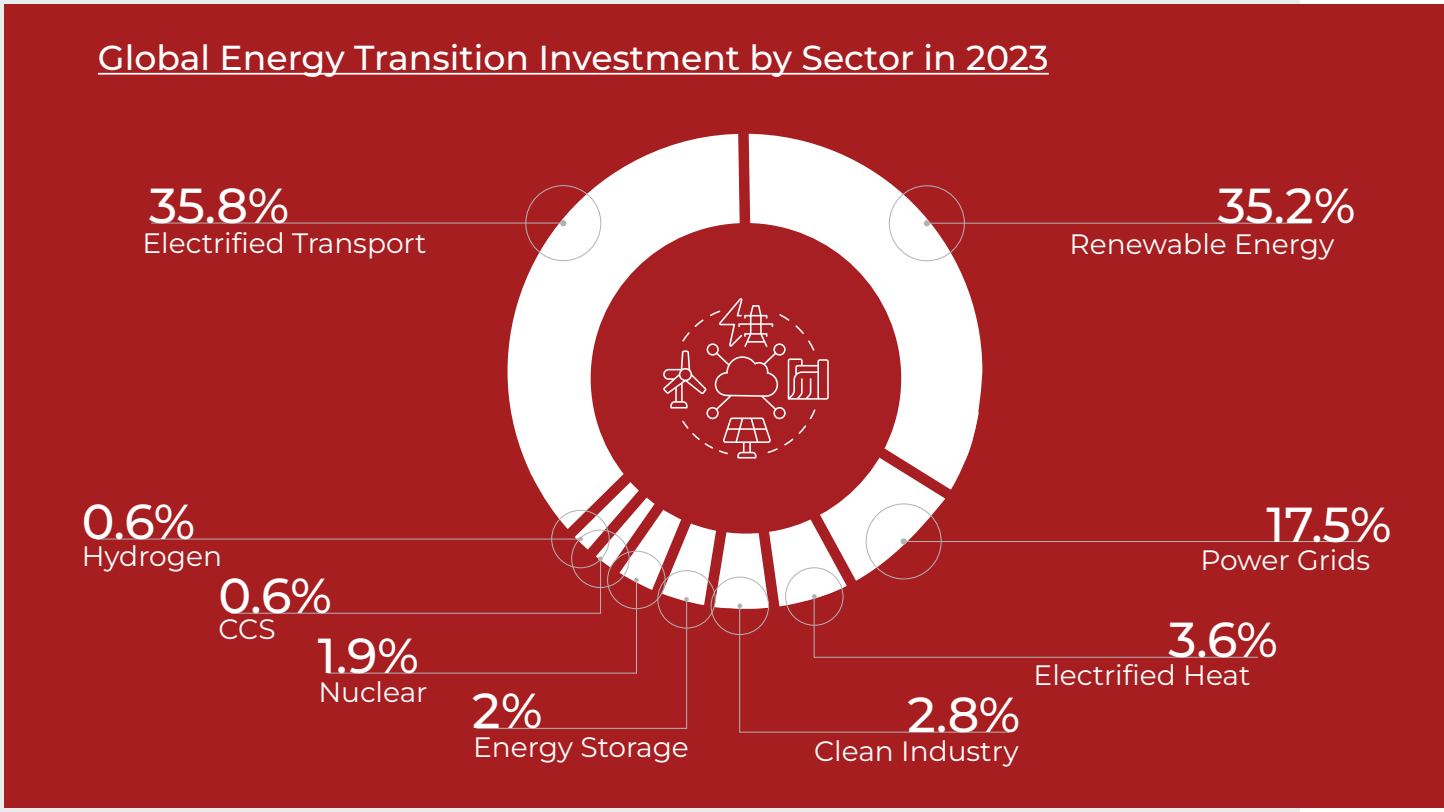
17%

Global energy investment is set to exceed $3 trillion for the first time in 2024, with $2 trillion going to clean energy technologies and infrastructure. Investment in clean energy has accelerated since 2020, and spending on renewable power, grids, and storage is now higher than total spending on oil, gas, and coal, according to the IEA.

Clean Energy Technologies & Infrastructure Investments in 2024

~67% of Total Global Energy Investments

In 2023, electrified transport, focusing on EVs and charging infrastructure, surpassed renewable energy as the largest sector for spending, with a 36% increase YoY. The absolute gain in electrified transport was the highest among all sectors, indicating a continuous rise in global EV adoption. Investment in new renewable energy projects, such as wind, solar, biofuels, and other sources, experienced an 8% growth. On the other hand, nuclear, electrified heat, and clean shipping saw slight decreases compared to the previous year. However, all other sectors showed robust investment growth, with hydrogen tripling, CCS almost doubling, energy storage increasing by 76%, and Clean industry growing by 7%, as reported by BloombergNEF.



Energy FDI Trends in Egypt

Egypt has significant potential to accelerate energy transition, with substantial untapped potential for expanding renewable energy from solar, wind, and hydrogen, according to the National Renewable Energy Authority (NREA).

The state aims to achieve energy transition by raising low-carbon and renewable energy utilization rates. In this regard the Egyptian government developed a comprehensive strategy built on three main pillars; establishing a strong political framework, strengthening the collaborative ecosystem, and investing in infrastructure and human capital.

Egypt aims to raise the share of renewable energy in the national electricity grid to 42% by 2030, through allocating large spaces to establish solar and wind stations amounting to 40 km2 and accommodating about 1,000 gigawatts (GW), NREA said.

Egypt is actively encouraging foreign and local investment in renewable energy projects. Egypt's renewable energy capacity is seen to increase by 65% by 2027 and provide more than 25% of total renewable energy capacity in the Middle East and North Africa (MENA) region as expected by the IEA.

Egypt topped the list of the most important Arab countries as the largest recipient of FDI costs during 2023, with an investment cost exceeding $40 billion. Egypt's FDI costs were concentrated in the renewable energy sector, representing 22% of the total cost of FDI in the region, which amounted to $181 billion, according to fDi Markets.

In the same context, Egypt is among the leading African nations in adopting green hydrogen projects. Since 2021, Egypt has attracted a surge of green hydrogen investments with an estimated $215.5 billion.

Green hydrogen is a renewable energy source produced through the process of water electrolysis. Its importance stems from applying it in industries such as fertilizer manufacturing and transportation. Egypt secured three major green hydrogen projects in 2023, with a value of $17.4 billion. Many of the green hydrogen ventures are slated for the Suez Canal Economic Zone (SCZONE), a strategic area established in 2015 as part of Egypt's Vision 2030, fDi Markets stated.

In 2024, Egypt achieved significant milestones by signing 12 agreements were dedicated to green fuel and renewable energy projects, showcasing the country's dedication to sustainable development and environmental stewardship.

Future Goals

In early 2024, Egypt received requests from international and Gulf investors, expressing their interest in obtaining new licenses to invest in renewable energy projects. These requests involve several alliances, including a European-Gulf alliance, a Chinese alliance, and an Indian alliance, all vying for these licenses, with each project valued at $2 billion, according to the General Authority of Investment and Free Zones (GAFI).

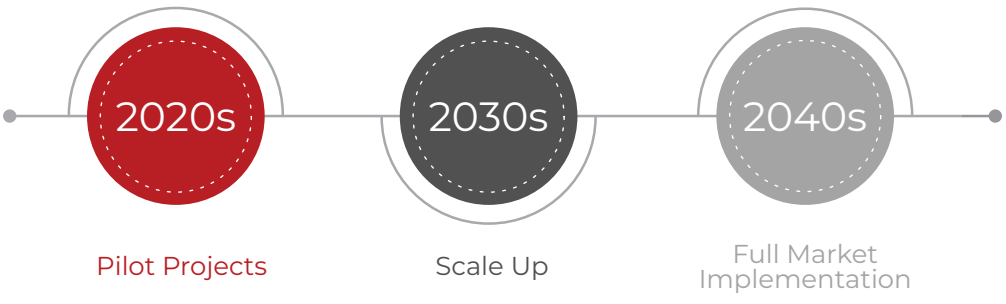
Total Offered Renewable Investments

+$6 billion

Egypt's National Low Carbon Hydrogen Strategy

In mid-August 2024, Egypt officially launched its National Low Carbon Hydrogen Strategy in cooperation with the European Bank for Reconstruction and Development (EBRD). The strategy states that Egypt will play a leading role in supplying hydrogen and its derivatives to develop a low-carbon hydrogen economy. Egypt plans to leverage its competitive advantages to achieve ambitious goals for its hydrogen sector, aiming to capture up to 8% of the tradable market, which translates to approximately 5.6 million tons per year (mmt/y) by 2040. This initiative will require around $60 billion in investment and is expected to significantly increase the share of renewable energy in electricity production to 42%. By focusing on these targets, Egypt is positioning itself as a key player in the global hydrogen market, according to the Egyptian Cabinet.

Egypt will cement its position as a world leader through a phased approach



In the 2020s, Egypt's pilot projects will leverage the country's hydrogen experience to lay the groundwork for a developing low-carbon hydrogen economy and export market. These projects will receive close support to ensure their success and will establish a governance structure tailored to the sector's specific needs.

As we move into the 2030s, the focus will shift toward scaling up hydrogen production to GW levels and beyond, securing Egypt's position in the growing hydrogen economy.

This will involve using lower-cost hydrogen to facilitate the broader decarbonization of the country, effectively replacing grey hydrogen.

By the 2040s, the goal will be to maintain Egypt's market position in the low-carbon hydrogen sector. Hydrogen will be integrated across society, supporting decarbonization efforts and securing a sustainable, low-carbon future for the nation's industries and transportation systems, the cabinet stated.

Egypt's Plan for Developing a Hydrogen Economy

To facilitate the rapid development of the hydrogen economy during the pilot phase and prepare for scale-up, Egypt will undertake key initiatives. First, the country will build on its successful track record of attracting overseas investment in renewables. Egypt plans to utilize hydrogen diplomacy to secure international support for launching low-carbon hydrogen projects and accelerating the deployment of hydrogen technologies.

Strategically, Egypt aims to support the establishment of hydrogen projects in locations that are geographically close to Europe and have access to global maritime traffic via the Suez Canal. This approach will build on the country's existing infrastructure, including ports and export facilities, to create a favorable environment for development.

In addition to these strategic initiatives, Egypt will establish a governance structure and legislative framework designed to minimize barriers to progress. This includes ensuring access to necessary land, infrastructure, and utilities, as well as implementing a clear governance system that streamlines decision-making. By doing so, the country aims to accelerate the initiation of hydrogen projects, encourage investment, and facilitate regular monitoring and updates of the strategy.

Furthermore, Egypt will prioritize reviews of its legislative and regulatory frameworks to reduce potential barriers and administrative burdens. This will provide both certainty and flexibility to investors and project developers, fostering a more inviting investment climate.
Collaboration with investors will also be crucial, as Egypt will explore diverse financing mechanisms to de-risk low-carbon hydrogen initiatives and improve their profitability. This, in turn, is expected to stimulate market uptake within the country.

Lastly, the country will work with international bodies to ensure that hydrogen production complies with low-carbon standards, complete with a "guarantee of origin," thereby promoting transparency and credibility in its hydrogen initiatives, the cabinet added.

Powering Egypt's Future with Low-Carbon Hydrogen



Achieving the vision of a low-carbon hydrogen economy presents significant benefits for Egypt. Economically, the demand for low-carbon hydrogen is expected to at least double, with some forecasts predicting an increase of nearly seven times. A substantial portion of this hydrogen is anticipated to be traded on the international market, which could contribute a major boost to Egypt's GDP, estimated between $10 billion and $18 billion by 2040. To maximize these benefits, Egypt should aim to capture a larger share of the value chain, particularly by increasing the domestic assembly of hydrogen-related products. Additionally, Egypt's expertise in Direct Reduced Iron (DRI) could facilitate a faster transition to low-carbon steel, opening up further lucrative market opportunities.

The anticipated growth in this sector is also expected to create over 100,000 jobs, with a significant proportion of these positions being highly skilled. By investing in the right training programs, Egypt can ensure that much of the workforce is drawn from the domestic labor pool. Furthermore, contracts with international companies should emphasize the importance of maximizing the use of local resources and workforce. For instance, a facility generating 1,000 megawatts (MW) would typically require around 750 personnel. In Addition to promote exports, by becoming a regional hub for the production and export of green hydrogen and its derivatives in the region.

In terms of energy security, increasing local hydrogen production will significantly enhance Egypt's energy security by reducing reliance on petroleum imports, thereby fostering national energy independence. Additionally, this initiative aims to promote exports by establishing Egypt as a regional hub for the production and export of green hydrogen and its derivatives. Ultimately, the development of the hydrogen economy will not only support Egypt's decarbonization efforts but also position the country to play a crucial role in global decarbonization initiatives, as noted by the cabinet.

Spotting the Gap

As the global energy landscape undergoes transformative shifts driven by technological advancements and evolving market dynamics, attracting FDI in the energy sector has become both a critical objective and a complex challenge for nations around the world. The pursuit of FDI in energy not only promises enhanced infrastructure, technological innovation, and economic growth but also exposes countries to a myriad of risks and obstacles, according to the World Bank (WB).

Globally, these challenges include regulatory risks resulting from government actions. These risks include sudden and unpredictable changes in regulations and policies, taking over assets, breaking contracts, and uneven legal protections. Along with these, issues like changing market conditions, financing, geopolitical tensions, and environmental concerns add to the complexity. In developing countries, these regulatory risks can slow down promising investments needed for energy transition, WB added.

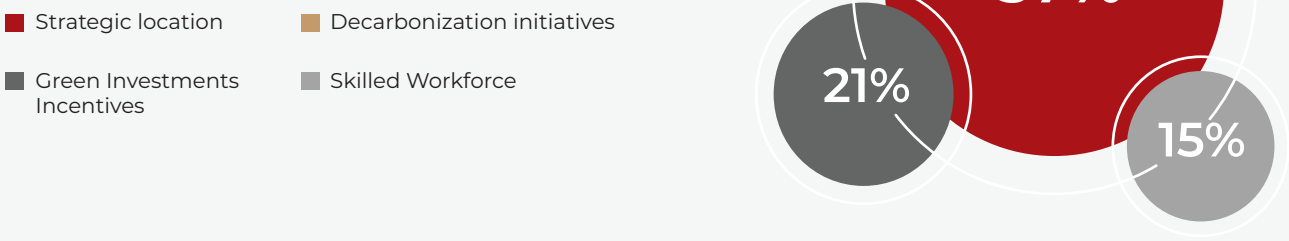
Over the past decade, the cost of renewable energy sources, especially wind and solar power, has significantly decreased. However, investing in these technologies still presents substantial risks and obstacles, particularly in emerging and developing economies. Although renewable energy technologies generally require higher initial capital compared to fossil fuels, this cost is exacerbated by the unique economic and financial challenges faced by these countries, according to the UN Trade and Development (UNCTAD).

In the context of Egypt, the country has great potential for expanding the deployment of renewable energy sources, particularly solar, wind, and low-carbon hydrogen. Despite significant investment, the potential of renewables remains largely underexploited. However, green investment in renewable energy sources is set to grow massively in the coming years, according to the Organization for Economic Cooperation and Development (OECD) Green Growth Policy Review of Egypt 2024.

PUBLIC OPINION

Based on Polling Egypt Oil & Gas Audience

What is the most crucial factor for Egypt's attractiveness as an energy investment destination?



Egypt's Resilience

As Egypt positions itself as a key player in the global energy sector, it presents a wealth of opportunities and incentives designed to attract FDI. With its strategic location, rich natural resources, and ongoing energy sector reforms, Egypt offers significant potential for investors looking to capitalize on emerging markets. The Egyptian government and its institutions are primarily focused on attracting investment and fostering partnership opportunities that serve the mutual interests of all parties. They emphasize that Egypt stands out as a promising destination for both local and foreign private investment, according to the State Information Service (SIS).

Concerning the business and investment environment in Egypt, the country offers a robust business environment with a domestic market of 105 million consumers and access to over 1.5 billion through trade agreements. It is expected to be a leading economy in new and renewable energy, thanks to its strategic location, competitive labor costs, skilled workforce, and recent reforms boosting FDIs, the SIS added.

Egypt's FDI inflows within the oil and energy sector showed significant progress from July to March of the fiscal year (FY) 2023/24. The FDI inflows into the oil sector experienced an increase, reaching a total of $4.4 billion, representing the greenfield investments made by foreign oil companies. In comparison, the previous period recorded $4.2 billion. The rise in investment reflects a growing interest and confidence from international investors in the oil sector, highlighting the sector's ongoing appeal and potential for future growth, according to the Central Bank of Egypt.

As for the green investment, Egypt has issued the Green Hydrogen Incentives Law (Law No. 2 of 2024) which provides tax incentives for green hydrogen projects, aligning with the Cabinet's 2023 decisions, according to the SIS. Moreover, Egypt plans to increase green investments to 75% of public investments by 2030 and boost the green economy's GDP contribution to 5%. By 2026, it aims to become a regional green hydrogen hub, targeting 5.8 million tons (mmt) of green hydrogen output by 2040. The country also seeks to improve its Environmental Performance Index ranking significantly, according to a research project titled "The Most Prominent Strategic Direction of the Egyptian Economy for the New Presidential Period (2024–2030)".

FDI is a powerful tool for bridging the gap between the current energy system and a suitable future. By aligning investment strategies with the goals of the energy transition, both globally and in Egypt, stakeholders can drive meaningful progress toward a low-carbon economy.

What is the biggest opportunity in attracting FDI for the energy transition?



BRIDGING FDI AND ENERGY TRANSITION

Pathways to a Sustainable Future



EGYPT OIL&GAS
RESEARCH & ANALYSIS

WWW.EGYPTOIL-GAS.COM