

G20 Indonesia
Trade, Investment and Industry Working Group

**PROMOTING SUSTAINABLE INVESTMENT IN RENEWABLE ENERGY FOR
GLOBAL ECONOMIC RECOVERY¹**

1. Development context

On the eve of the adoption of the 2030 Agenda for Sustainable Development, UNCTAD's World Investment Report estimated annual investment needs to achieve the Sustainable Development Goals (SDGs) globally in the order of \$5 to \$7 trillion per year. Out of these, total investment needs in developing countries in key SDG sectors ranged from \$3.3 to \$4.5 trillion per year. Current investment in these sectors is around \$1.4 trillion, implying an annual investment gap of between \$1.9 and \$3.1 trillion.²

When focusing specifically on climate change mitigation, including investment in renewable energy generation, research and deployment of climate-friendly technologies, etc.,³ the annual investment gap ranges between \$380 and \$680 billions, and a similar amount would be required to improve the generation, transmission and distribution of electricity. In 2021, similar analysis from the International Energy Agency (IEA) estimated that annual clean energy investment in developing economies needs to increase by more than seven times – from less than \$150 billion in 2020 to over \$1 trillion by 2030, to put the world on track to reach net-zero emissions by 2050.⁴

According to UNCTAD, sustainability-themed investment in global financial markets amounted to \$5.2 trillion in 2021. It includes sustainable funds and sustainable bonds (green and social bonds). However, in the same year, 94% of the sustainable funds went to Europe and US. This demonstrates that developing economies are mostly absent from the sustainable fund market.⁵

¹ This issues paper was prepared by the G20 Indonesia Presidency in collaboration with UNCTAD.

² https://unctad.org/system/files/official-document/wir2014_en.pdf (UNCTAD, 2014).

³ SDG 13 calls for urgent action to combat climate change and its impacts. This goal is not only linked to SDG number 7, which calls for ensuring access to affordable, reliable, sustainable and modern energy for all, but it is also intrinsically linked to all 15 of the other Goals of the 2030 Agenda for Sustainable Development.

⁴ https://iea.blob.core.windows.net/assets/6756ccd2-0772-4ffd-85e4-b73428ff9c72/FinancingCleanEnergyTransitionsinEMDEs_WorldEnergyInvestment2021SpecialReport.pdf (IEA, 2021).

⁵ UNCTAD World Investment Report 2022, Chapter IV, "Capital Markets and Sustainable Finance.

The low level of renewable energy investments in developing economies is a challenge for all countries as it undermines global mitigation efforts and can engender more dire repercussions around the world.

Unless energy transitions and investment in renewable energy quickly pick up speed, the world will fail to address climate change and reach other sustainable development goals, with catastrophic consequences on the planet and its people. But the investment gap is such that public investment alone will not suffice. It is clear that to avoid what could be unrealistic demands on the public sector, climate change targets must be accompanied by strategic initiatives to increase private sector participation.

As discussed in the sections below, the potential for increasing private sector participation in support of climate mitigation and adaptation is vast, and countries around the world are doubling down on efforts to promote both public and private investment in renewable energy. However, not all investment is equally beneficial, and it will be critical that investment promotion strategies focus on the attraction of sustainable investment that can contribute to economic development by enhancing productive capacities, adding value locally and establishing linkages with domestic firms. Investments that benefit the few while the rest are left at the margin of global value chains are neither desirable nor economically tenable in the long run. Sustainable investments should be directed addressed in bringing a truly equitable, resilient and inclusive development for all.

The urgency of shifting the investment paradigm from conventional to sustainable is more important than ever, since these types of investments have a higher possibility to contribute to the strong economic recovery in the long run and are more resilient to specific challenges that might arise in the future.

In this context, the Indonesian Presidency of the G20 puts the promotion of sustainable investment in the renewable energy at the forefront of the efforts to “Recover Together, Recover Stronger” in the aftermath of the Covid-19 pandemic outbreak, calling for efforts to mitigate the risk of climate change and creating new jobs while rebooting economies.

Indeed, G20 countries have a unique opportunity to lead the way in devising and implementing strategies and initiatives that support the promotion of sustainable investment in renewable energy, through the formulation of a *Policy toolkit on promoting mutually beneficial sustainable investment in renewable energy*. Collaboration between G20 members can also help developing countries to promote sustainable investment in renewable energy and address the related challenges, including financing gaps, limited supply in the market, necessary regulations to create a conducive environment for investment etc.

This issue paper briefly analyses the opportunities and the challenges associated with the promotion of *sustainable investment in renewable energy* and explores the key elements of such a policy toolkit.

2. Opportunities and challenges

Like never before, the world has started moving towards green energy, opening new opportunities to promote sustainable investment in renewables for years to come. In particular, key opportunities arise from:

a) *The sustainability imperative*: The COP26 international climate conference set the goal to secure global net zero by mid-century and keep a maximum of 1.5 C degrees of warming within reach.⁶ Other goals included accelerating the phase-out of coal and mobilizing at least \$100 billion in climate finance per year. Country commitments in this regard provide new impetus for policymakers and investors alike to direct resources to renewable energy.

b) *The energy market transition*: Financial markets are anticipating peak demand for fossil fuels and allocating investment towards renewable energy including through carbon trading. In recent years, investment in clean energy has increased in all regions and renewables were the preferred choice for new generation capacity. Renewables also lead investment attraction among the SDG sectors, particularly in terms of greenfield investment and project finance. And although investment in renewables was affected by COVID-19,⁷ project finance in infrastructure now exceeds pre-pandemic levels across most sectors, while project numbers are up most in renewable energy.⁸ In addition, COP26 approved Article 6 – the Paris Agreement’s rulebook governing global carbon markets which could attract more investment in renewable energy. This makes it urgent to deepen the mutual understanding of carbon markets among all stakeholders across the world so as to scale-up climate investment particularly in developing economies.

c) *The drive towards energy security*: The growing demand for energy linked with population and income growth, climate change, the energy transition and the adoption of new technologies have created new energy-related security challenges which expand the demand for energy investments. Beyond the need to ensure that people have access to adequate, reliable and affordable supplies of modern and clean energy, electricity networks are increasingly vulnerable to natural disasters and cyber-attacks, and the growing share of renewable energy has to be safely integrated without threatening systems stability. If the surge in oil prices associated with the current international situation may lead to a short-term increase in fuel-based energy investment, it is also likely to further accelerate efforts to diversify energy production and promote energy security, which are likely to increase investment in renewables.

d) *The spillover effects*: Beyond their impact on the reduction of Green House Gasses (GHG) emissions as well as the cost and risks associated with climate change, investments in renewable energy can support a range of additional development outcomes. These include the health benefits associated with reduced pollution, but also reduced poverty,⁹ and the creation of value added and employment *opportunities* along the energy sector value chain

⁶ Net zero means total emissions are equal to or less than the emissions removed from the environment.

⁷ https://unctad.org/system/files/official-document/wir2021_en.pdf (UNCTAD, 2021)

⁸ https://unctad.org/system/files/official-document/diaeiainf2021d3_en.pdf (UNCTAD, 2022)

⁹ There is a proven link between many of the markers of poverty, such as illiteracy, infant mortality, lower life expectancy and higher fertility rates, and only having access to inadequate energy services.

(e.g., in at the project development, design, manufacturing, installation, distribution and maintenance stages).¹⁰ These positive development outcomes should not be perceived as secondary to the environmental impacts. Development and environmental objectives are both complementary and equally critical to deliver resilient and inclusive recovery for all.

Despite the great opportunities and potential for investment in renewables, challenges abound. To date, the overwhelming share of investment in renewable energy continues to be located in developed countries, despite significant growth in developing countries.¹¹¹² In fact, developing economies account for two-thirds of the world's population, but represent only one-fifth of global investment in clean energy.¹³ Global energy transition investment has become even more concentrated in high income countries as a result of the COVID-19 pandemic.¹⁴ Moreover, the development of carbon markets is hampered by the absence of common international standards and by the carbon price divide in developed and developing countries. For instance, according to a recent World Bank report, the price of carbon credit from Asia stood at US\$ 2.97 per ton CO₂, whereas the price for such credit in EU is US\$ 87¹⁵. This highlights the need for cooperation and collaboration between developed and developing economies in promoting sustainable investment in renewables to accelerate global recovery and meet the emission targets set for 2030 and 2050/2060.

In particular, international investments in renewable energy projects remain seriously constrained by specific barriers which increase their risk profile. Depending on the level of development of a country's energy sector, as well as its local productive capacities and resource availability, these can include:

a) *Political and institutional barriers*, such as the absence of clear government policies and strategies to achieve emissions reductions targets or access to energy that achieves climate goals or the lack of coordination, cooperation and synergetic collaboration between the various stakeholders, political groups and ministries in energy-related areas at the national and international level;

b) *Regulatory barriers*, including those related to the energy market structures (e.g. vertical integration), the continued reliance on fossil fuel consumption subsidies in many countries to protect consumers and the low implementation of carbon pricing mechanisms, the efficiency of licensing and permitting procedures, access to land issues, rule of law etc.;

c) *Economic and financial barriers*, such as those linked to the high initial capital costs and high-risk perception related to renewable energy, small size of many renewable projects and

¹⁰ IRENA predicts the number of renewable energy jobs worldwide could more than triple or reach 42 million jobs by 2050. In contrast, the fossil fuel industry is expected to lose more than 6 million jobs over the same period (*Please add reference*).

¹¹ Renewable energy projects increased by 62 per cent annually in the five years following the adoption of the SDGs, compared with the five years preceding 2015.

¹² https://unctad.org/system/files/official-document/diaemisc2021d3_en_2.pdf (UNCTAD, 2021)

¹³ https://iea.blob.core.windows.net/assets/6756ccd2-0772-4ffd-85e4-b73428ff9c72/FinancingCleanEnergyTransitionsinEMDEs_WorldEnergyInvestment2021SpecialReport.pdf (IEA, 2021)

¹⁴ UNCTAD World Investment Report 2022, Chapter IV.

¹⁵ State and Trends of Carbon Pricing, World Bank, 2022, page 26 and 45

companies, lack of internal rewards or incentives and limited markets in developing countries; and

d) *Technical barriers*, such as those related to the low infrastructure investment in transmission, distribution and energy storage or the intermittent nature of renewable energies, such as wind and solar power, but also to the quality of operational data and reliability of technical information.

3. Strategies and policies to promote sustainable investment in renewable energy

Several strategies and policies can assist to address the challenges identified in the previous section and promote sustainable investment in renewable energy. Among these:

- a. **Strategies:** a comprehensive multi-year strategy to address in an integrated manner issues like security of supply, efficiency and affordability and environmental sustainability should guide policy and promotional efforts to attract sustainable investment in renewable energy. Such a strategy should be developed through a public and participatory process and be publicly and widely communicated. It should embed investment promotion as a key component and it should enlarge the investment offer to the international community by clearly defining and communicating the Government's priorities in the medium and long run, including in respect to sustainable investment attraction. In parallel, the energy development targets arising from the comprehensive energy strategy should be embedded in the investment promotion strategy to inform the activities of the actors involved in the investment promotion effort (see c. below).
- b. **Policies:** Policies need to provide confidence for investors in their ability to recover investments in renewables, but also promote the sustainable development benefits from such investments. Selected examples of such policy include:
 - *Energy markets regulation:* e.g. allowing independent power producers (IPPs); preparing bankable, standardized power purchase agreement (PPA) templates; adopting transparent and fair rate adjustments and promoting public participation; considering feed-in tariff policies etc.
 - *Investment facilitation and risk mitigation:* e.g., improving permitting processes and access to information, fostering clarity, stability and predictability of the regulatory regime, and adopting other risk-mitigation instruments (e.g., guarantees, currency hedging instruments and liquidity reserve facilities), etc.
 - *Technology upgrading:* including modernizing both transmission and distribution networks to increase connectivity, automation and coordination between suppliers, consumers and networks. This includes introducing smart metering and smart grid technologies to reduce waste and inefficiencies in the power system, fully optimize demand-side resources; etc.
 - *Tax policy support:* e.g., specific clean energy/climate incentives and the establishment of a carbon market or other carbon-pricing mechanism, as well as governance/legislation around carbon removal; support to local R&D and innovation in renewable energy;

- *Access to finance*: e.g., conditioning the cost of financing on achieving decarbonization targets or other mechanisms to mitigate risk, offering additional return potential, or create more investment opportunities;
 - *Development impact*: e.g.: supporting local manufacture of renewable energy products and services; assessing skills needs in the renewable energy sector and designing active labour market and education policies to address them in order to generate decent jobs; promoting local technological upgrade and creating opportunities to localize steps of the renewable energy value chain; boosting domestic capability and promoting business linkages between international investor and the local private sector, particularly in value-added downstream sectors.
- c. Promotion:** efforts to promote sustainable investment attraction in renewable energy projects should be led by a consortium of actors including trade promotion offices and investment promotion agencies, special economic zones, relevant government agencies (e.g., line ministries and sector regulators) and industry associations in a coordinated effort. Governments may leverage the marketing capacities of their IPAs to better compete for that scarce investment and increase the pool of available capital, including FDI. In particular, TPOs and IPAs could particularly help mobilize underexploited sources of finance and expertise, such as multinational enterprises (MNEs) operating in the development of hard and soft infrastructure, development finance institutions and special development programmes, as well as investment guarantee schemes to mitigate investment risks.

4. Initiatives for International Collaboration

As mentioned, collaboration between G20 members and with developing countries can assist in promoting sustainable investment in renewable energy and in addressing the related challenges. In this regard, efforts to promote sustainable investment in renewable energy at the national level could be complemented by concrete collaboration initiatives at bilateral, regional and multilateral level, including:

- *Investment facilitation instruments*: such as information hubs, networking events, and other support services aimed at promoting concrete pipelines of bankable renewable energy projects. This requires the active cooperation between institutions and agencies responsible for outward FDI promotion in the home countries of investment and the IPAs and TPOs of the host countries. It would also assist low-income countries, in particular, to reach relevant home country stakeholders and market their sustainable investment opportunities in renewable energy;
- *Outward FDI promotion schemes*: such as investment guarantees protecting outward investors against certain political and environmental risks in a host country, as well as financial and fiscal support, mostly in the form of loans or direct capital participation by a home state in a renewable energy investment project abroad;
- *Active promotion of renewable energy technology dissemination*: aimed at promoting R&D collaboration and facilitating technology dissemination services to countries that wish to utilise new technology applications, materials or processes for sustainable investment in renewable energy.

- *Greater cooperation through carbon markets*: aimed at reducing the cost of climate change, a more inclusive, fair and just international carbon trading could enable large-scale emissions reductions at much lower cost than at present, based on the carbon mitigation goals spelled out in countries' national climate plans.
- *Technical assistance*: the sharing of policy practices and experiences that will inform the policy toolkit can also provide the basis for a technical assistance programme aimed at supporting G20 countries as well as developing countries in their efforts to put in place strategies, policies and initiatives to promote sustainable investment in renewable energy.

5. The way forward

The G20 Trade, Investment and Industry Working Group could develop a Policy toolkit based on the experiences and lessons learnt of G20 members in promoting mutually beneficial sustainable investment in renewable energy. In order to facilitate the deliberation of the 2nd TIIWG meeting, as well as the development of the toolkit with a specific focus on attracting sustainable investment that supports local economic development, local value addition and domestic productive capacities, the Indonesian presidency would like to invite the TIIWG to address the following questions:

- a. In light of challenges and opportunities described in this issue paper, what forms of collaboration can the G20 take to lead the global efforts in promoting sustainable investment in renewable energy to support global sustainable, resilient and inclusive recovery?
- b. With regard to the aim to develop policy toolkit, what are the best policy practices and lessons learnt in promoting mutually-beneficial sustainable investment from G20 members that could serve as building blocks for such toolkit?

Expectantly, G20 TIIWG will explore areas of collaboration among G20 members and between developed and developing countries in promoting sustainable investment in renewable energy for global recovery and long-term prosperity for all.