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Bridging the Financing Gap to Triple Renewable Energy Capacity

- *Meeting the goal of tripling renewable energy capacity by 2030 faces an investment gap of up to US\$400 billion annually between 2024-30. Banks, which channelled a whopping US\$967 billion to the fossil fuel sector, can bridge the gap by reorienting capital to the renewable energy sector.*
- *While banks need to integrate climate change risks in their lending decision to reduce their exposure to fossil fuels, they also require credit enhancement support to accelerate fund flows to renewable energy projects that are not commercially viable. Governments, Multilateral Development Banks (MDBs), and bilateral financial institutions can provide risky and concessional capital for credit enhancement support.*
- *Since climate change is already recognised as a material risk to the financial system, central banks and regulatory bodies are issuing guidelines and formulating regulations to nudge commercial banks to integrate climate change risks into lending and risk management practices.*

Executive Summary

The global renewable energy investment continues to surge, demonstrating the sector's attractiveness to investors. Under various estimates, the annual renewable energy investment reached between US\$570 billion and US\$735 billion in 2023. However, to meet the goal of tripling renewable energy capacity by 2030, as set out at the 28th Conference of the Parties (COP28), the global annual renewable energy investment should increase between US\$377 billion and US\$930 billion per annum, under various estimates, and remain consistent from 2024 to 2030. The International Energy Agency's (IEA) assessment shows that the world will likely face an average annual investment shortfall of US\$400 billion in this sector during 2024-2030, a key barrier to triple the renewable energy capacity. Despite the growing demand for



cutting lending for the fossil fuel sector, banks still provided a whopping US\$967 billion to the fossil fuel sector in 2022. On the flip side, low-carbon development projects, including renewable energy, received US\$708 billion in the same year. This note identifies that if banks reduce their exposure to fossil fuels and reorient this capital towards renewable energy, they can help bridge the funding gap.

All stakeholders have a part to play in bringing about such a shift in banking practices. Banks should adopt stringent credit policies to address climate risks and limit their exposure to fossil fuels. Parallely, they also need credit enhancement support from governments, Multilateral Development Banks (MDBs), and bilateral institutions to accelerate credit flows to the renewable energy sector. In addition, financial regulators can use monetary and regulatory policy instruments and make it mandatory for banks to disclose financed emissions, reinforcing them to reduce their exposure to the fossil fuel sector and propelling credit growth to the renewable energy sector. Interoperability of green taxonomies and prioritising renewable energy lending in developing countries can also boost bank financing to the sector.

Besides, governments and other institutions should take initiatives to improve their grids to accommodate the growing share of renewable energy. They should work on reducing delays in allowing grid integration permits for renewable energy projects and making them ready for investment. Additionally, policy and regulatory certainty in the renewable energy sector and countries' future energy will send a positive signal to banks.

COP29, the biggest stage for the negotiation to stave off the worst impacts of climate change, could deliver concrete recommendations on financing renewable energy and garner support from policymakers, regulators, banks, and MDBs in accelerating lending to low-carbon-emitting sectors, paving the way for the desired energy transition in the foreseeable future.

Renewable Energy is Surging in the Energy Mix but Remains Inadequate

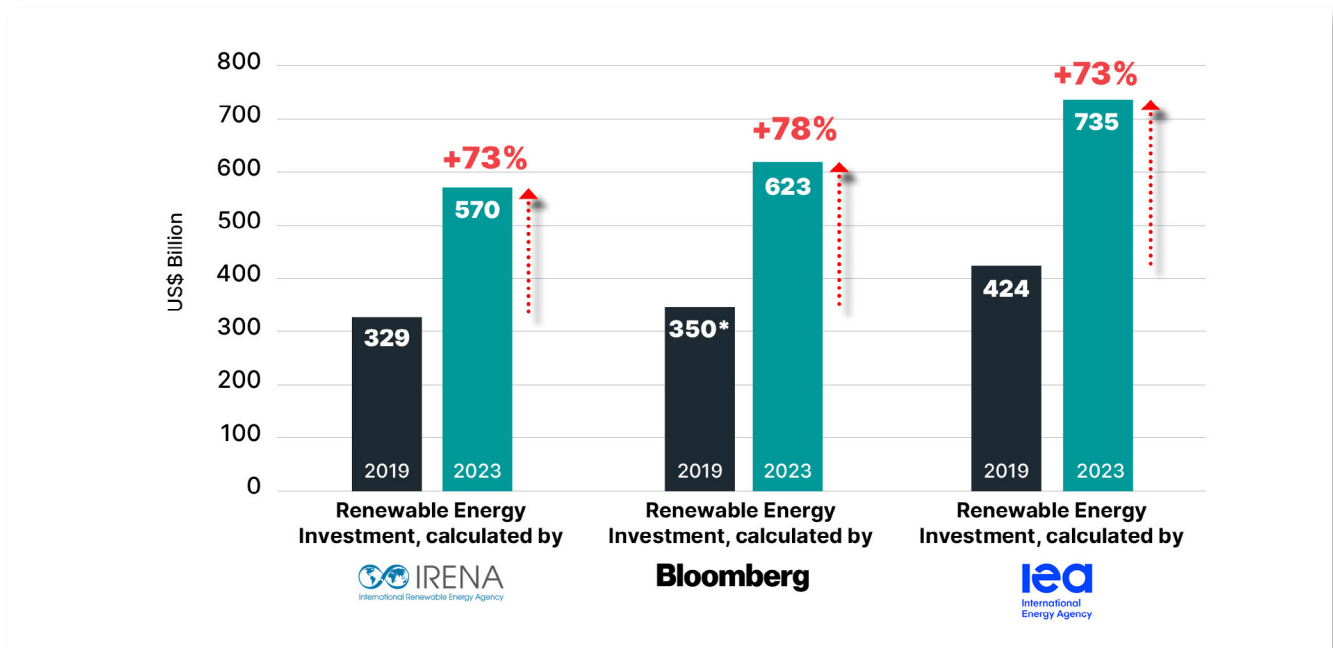
Several factors have shaped the global energy transition as we stand today ([13% share of renewable energy to the final consumption](#)). The rapid fall in the cost of clean energy technology, country-level favourable clean energy policies, risks emanating from geopolitics-driven fragility in the fossil-fuel supply chain, and public finance support have propelled the adoption of renewable energy in recent years. Under the current market conditions, the share of renewable energy in the final energy consumption may reach 20% by 2030. However, this is far from nearly 100% by 2050 to meet the global goal of achieving net zero by 2050. This calls for, among other things, making climate policies and regulatory measures more conducive and enhancing funding flow to the renewable energy sector.

Investments in Renewable Energy are Growing, but a Gap Persists

Under different estimates, global investment in renewable energy has been growing, highlighting the attractiveness of renewable energy among investors. It rose from the range of US\$329 billion - US\$424 billion (see Figure 1) in 2019 to US\$570 billion - US\$735 billion in 2023, implying a jump of 73% - 78% during this period.



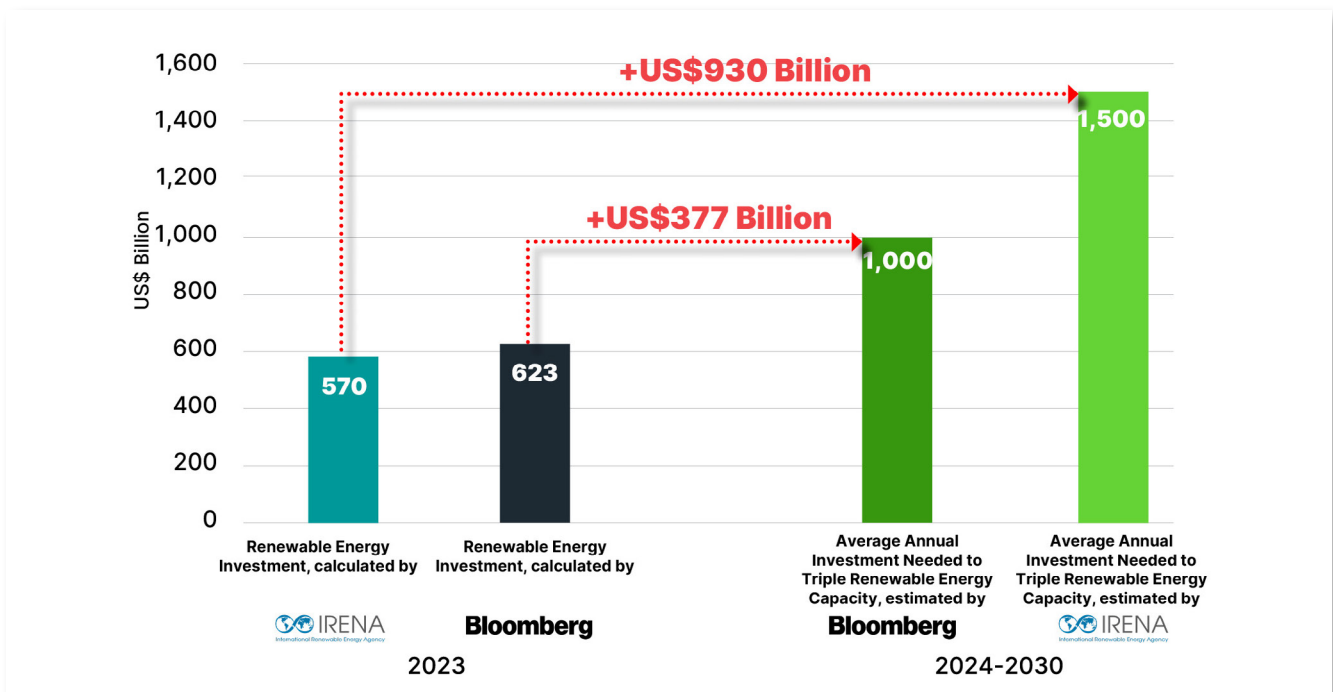
Figure 1: Growing Investment in Renewable Energy, 2019-23



Sources: [BloombergNEF, 2024](#), [IRENA, 2023](#), [IRENA, 2024](#) & [IEA, 2024](#). * Estimated from Bloomberg's Report

The enhanced commitment to triple renewable energy capacity by the end of this decade, as decided at COP28, necessitates ramping up renewable energy capacity [to 11.2 terawatts \(TW\) in 2030 from 3.9TW in 2023](#). This also means to ensure incremental investments in the renewable energy ecosystem. The average annual investment to attain the goal of tripling renewable energy will require between [US\\$1 trillion](#) and [US\\$1.5 trillion](#) from 2024 through 2030. This would posit the need for additional finance ranging from US\$377 billion annually to US\$930 billion annually (see Figure 2).

Figure 2: Incremental Funding Need to Triple Renewable Energy by 2030



Sources: [IRENA, 2024](#), [BloombergNEF, 2024a](#) & [BloombergNEF, 2024b](#);



The IEA calculates that the investment in renewable energy from 2024 to 2030, under the current conditions, could cover [two-thirds of the required spending](#) to meet the target of tripling renewable energy. As such, the average funding gap between 2024 and 2030 will reach [US\\$400 billion per annum](#).

Regional Disparities in Renewable Energy Investment

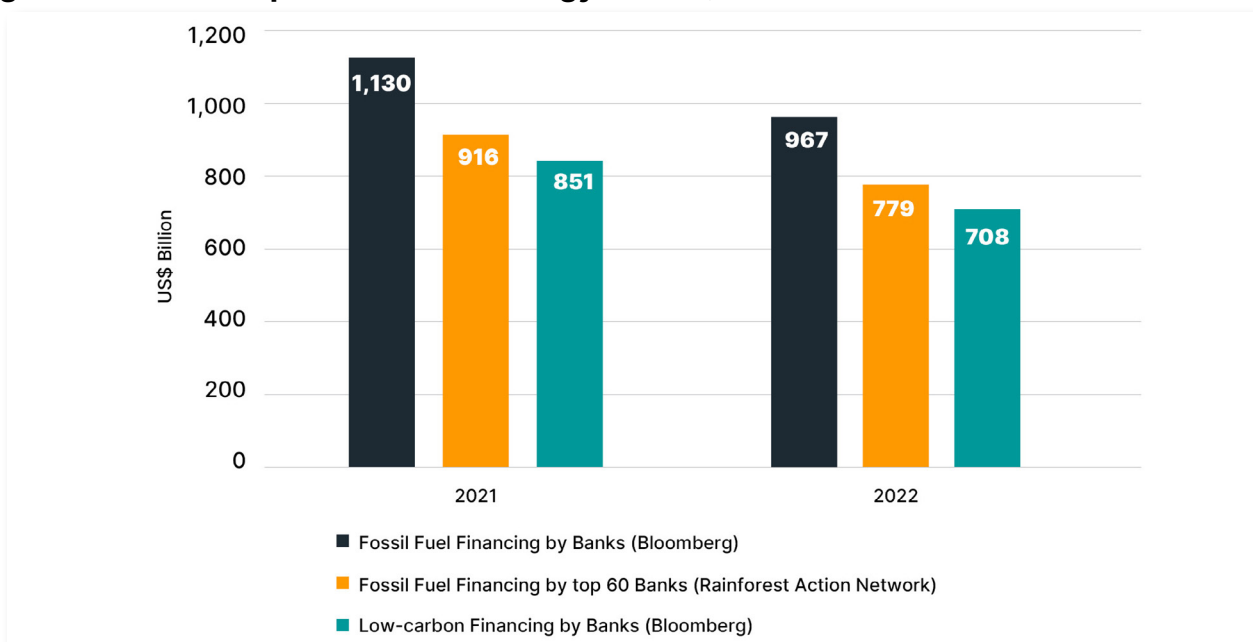
Although the investment in renewable energy is growing, regional disparity is widespread. For instance, China, the European Union, and the United States attracted [84%](#) of the total renewable energy investments in 2023. Brazil and India, combined, received over [6%](#) of the total renewable energy investment in the same year. Investments in most other regions remained below the desired levels. The investment in Africa declined by [47%](#) in 2023 relative to the previous year. Sub-Saharan Africa, which accounts for [more than 500 million people](#) with no electricity, saw less investment. Moreover, Bangladesh, which reels from highly fragile fossil fuel imports, did not receive any significant renewable energy investment in 2023.

How Banks can Help Narrow the Renewable Energy Funding Gap

One of the key objectives of banks is to mobilise resources for investment in productive sectors to propel economic growth, particularly in developing countries where they primarily intermediate domestic financial savings for productive usage. As key debt financiers, they allocate debt capital among various energy technologies, including renewable energy. Following their prudential norms, they can further reorient capital from carbon-intensive fossil-fuel-based energy to renewable energy.

On a positive note, banks’ exposure to the fossil fuel sector is decreasing. [Bloomberg’s assessment](#) of 1,100 banks’ data points to a reduction in finance volume from US\$1,130 billion in 2021 to US\$967 billion in 2022. Likewise, the top 60 banks downsized their fossil fuel finance from [US\\$916 billion to US\\$779 billion](#) over the same period. However, they also reduced the finance flows to the low-carbon sector, including renewable energy (see Figure 3).

Figure 3: Banks’ Exposure to the Energy Sector, 2021-22



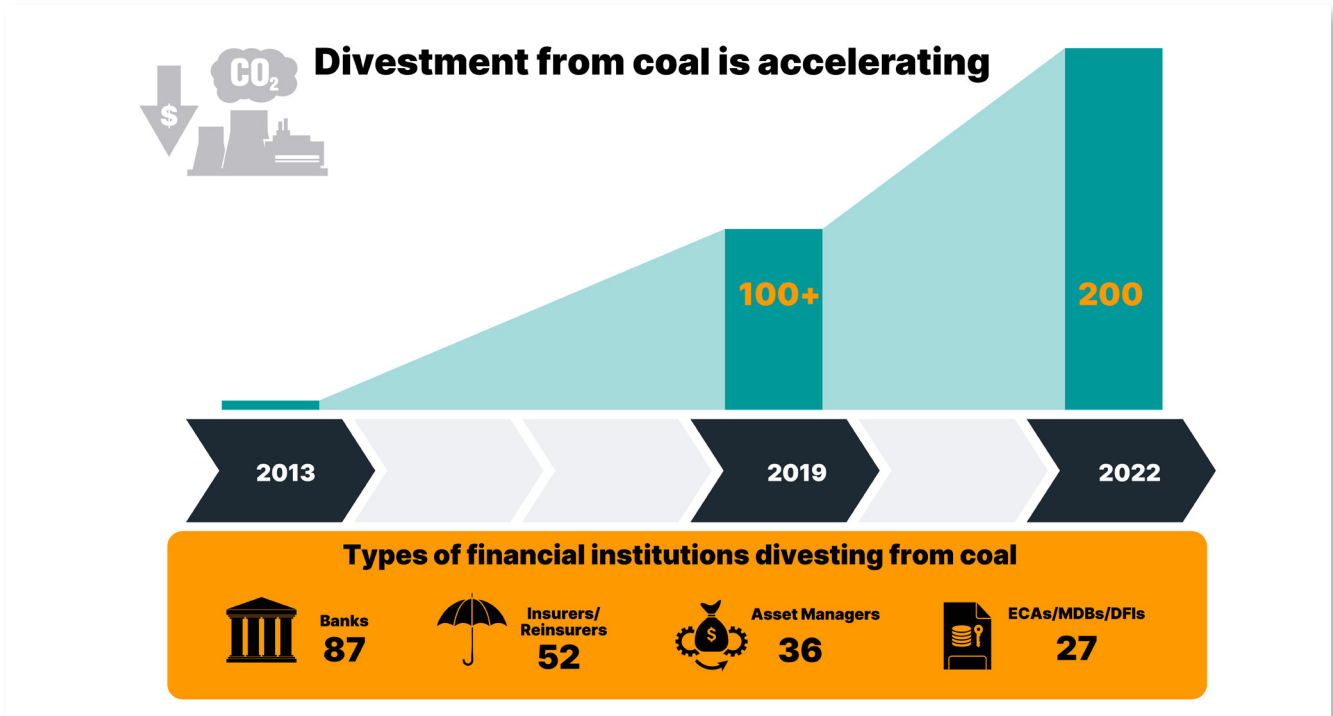
Sources: [BloombergNEF, 2023](#) & [Rainforest Action Network, 2023](#);

* The [low-carbon sector](#) includes a low-carbon power supply, hydrogen, carbon capture and storage, and fossil fuel-based electricity generation with abatement technology.



IEEFA's [assessment](#) also shows that more than 200 financial institutions, including 87 banks, adopted coal exit policies by the end of 2022 (see Figure 4). While this is an important step in the right direction, a [study](#) finds that energy policies of the majority of the top 60 fossil fuel financing banks restricted financing thermal coal projects, excluding metallurgical coal. Therefore, metallurgical coal projects may still receive funding when thermal coal may not. Similarly, another [study](#) evaluating the progress of 26 major international banks, 10 US super-regional banks, and two US custodian banks on low carbon transition concludes that many support coal projects.

Figure 4: Financial Institutions Adopting Coal Divestment Policies



Source: [IEEFA, 2023](#);

Banks' credit flows to the fossil fuel industry are still very high, and on the other side, they have not increased credit flows to the renewable energy sector. This is not encouraging as they need to mobilise additional finance from the current levels to help triple the renewable energy capacity.

As renewable energy is increasingly becoming commercially viable across the world, attributed to the drop in the cost of technologies, this is an opportunity for global banks to step up their credit towards the sector. Further, the strong clean energy momentum will likely result in a [peak in demand for all fossil fuels in 2030](#), which points to potential stranded asset risks of fossil fuel projects. As geopolitics continues to make fossil-fuel-based energy systems of different countries fragile, increasing lending to renewable energy projects is safer for banks. With the IEA's projection indicating an annual deficit in renewable energy investment of US\$400 billion, banks can bridge this gap by limiting their exposure to the fossil fuel sector and reorienting this capital to the renewable energy sector.



Policy, Regulatory, and Institutional Support for Helping Banks Meet Climate Goals

Despite the rising installed capacity of renewable energy globally, several factors still affect banks' lending decisions. For instance, high upfront capital requirements, longer payback and limited historical performance record of renewable energy (particularly solar and battery), high energy storage cost, and policy preference for fossil fuels in the energy mix in several countries often limit banks in increasing exposure to renewable energy. Moreover, compared with thermal power plants, smaller project sizes, such as rooftop solar and solar irrigation, and inherent financial risks discourage commercial banks. However, the right financial policies and regulations, and institutional support can encourage banks to increase lending to renewable energy projects.

Prioritise Lending to Renewable Energy

While the renewable energy sector is part of the priority lending of banks in many developing countries, it competes with other sectors in the same bracket. To address this, policymakers can create a dedicated lending bucket for the renewable energy sector to ensure minimum credit flows from banks to the sector.

Moreover, central banks of developing countries should increase the lending cap to renewable energy projects. This is because the current lending cap to renewable energy projects is insufficient to meet the demand. In Bangladesh, the limit under the green refinancing scheme is [Bangladeshi Taka \(Tk\) 0.3 billion](#) (US\$2.5 million).

Credit Enhancement Support

As the renewable energy sector still has credit risks, governments can create partial credit risk guarantee instruments to reduce credit risk, encouraging banks to accelerate credit flows to the sector. MDBs and bilateral financial institutions, with support from local governments, can provide risky and concessional capital to local banks and help create partial risk guarantee instruments. A reasonable credit guarantee fee (paid by lenders to guarantors) will encourage lenders to use this financial instrument.

Integrate Climate Change into Banks' Credit Policies

Since climate change is already recognised as a material risk to the financial system, central banks and regulatory bodies are issuing guidelines and formulating regulations to nudge commercial banks to integrate climate change risks into lending and risk management practices. Banks should design stringent climate-related credit policies and integrate their financed emissions into their risk management practices. This will make the credit risks of the carbon-intensive fossil fuel sector soar while lessening the risks for renewable energy. Credit policies that properly integrate climate risks will likely accelerate capital flows to the renewable energy sector and shrink the same to the fossil fuel sector.

Interoperability of Green Taxonomies

Countries are designing new instruments like green taxonomy to define sustainable investments and help investors make more informed decisions. Currently, more than 52 taxonomies are [reported](#) worldwide, of which 24 are already developed while another 24 are under development. The remaining taxonomies are at the planning stage. However, these taxonomies have variations in frameworks, limiting their compatibility and interoperability. Different jurisdictions should work on ensuring their interoperability to avoid information gaps and ambiguity on the precise definition of green investment.



Make Financed Emissions Disclosure Mandatory

While financial regulators are mandating entities, such as banks, to disclose and report the material risk of climate change, these disclosures are [mostly limited to Scope 1 and Scope 2 emissions that cover direct emissions of the sources they own and indirect emissions due to sources like purchased electricity](#). However, banks' disclosure practices do not account for their financed emissions, one of the Scope 3 categories. With [more than 95% of banks' carbon emissions](#) being their financed emissions, mandatory disclosure of banks' Scope 3 emissions can limit their exposure to fossil fuels and enhance their financing to low-carbon businesses, like renewable energy.

Monetary Policy Tools

Central banks can use selective credit control tools such as liquidity ratio, repo and reverse rate, open market operation, and collateral framework, which can alter the volume and cost of credit flows to incentivise renewable energy technologies while penalising the fossil fuel energy sector. Central Banks of China, Japan, Malaysia, and Thailand use selective credit control to support green projects; the same tool can be applied to the energy sector. [The People's Bank of China \(PBoC\)](#) provides loans to financial institutions at a lower rate for on-lending to clean energy projects. While the Bangladesh Bank's green refinancing scheme offers loans to green projects at a lower rate, the funding size is only Tk10 billion (US\$84 million).

Besides, the central bank can use moral suasion to nudge commercial banks to increase capital flows toward the clean energy sector while moving away from thermal power plants.

Way Forward

Globally, banks can scale up financing to meet the goal of tripling renewable energy capacity by 2030 from 2023. They need to change their existing credit policies and integrate climate change risk into their lending and risk management policies. Central banks can mandate banks to disclose financed emissions. Alongside these, conducive monetary and financial regulations designed by central banks will likely encourage banks to increase lending to the renewable energy sector and limit credit flows to thermal power plants. Governments must streamline taxonomies to clearly define green investment, minimise information gaps, and ensure interoperability. Furthermore, prioritising lending to renewable energy at lower interest rates and credit enhancement support can foster renewable energy deployment.

Governments should also address regulatory and technical issues. There are examples of [delays](#) in securing grid connections for renewable energy projects, which affect their bankability. Governments' support to minimise such delays will enhance banks' confidence in the sector. As renewable energy capacity grows across different regions, countries must invest in grids simultaneously. Furthermore, different countries should give banks a strong signal of the certainty of their renewable energy policies.

With policymakers and representatives of different countries meeting at the COP29 from 11 to 22 November 2024, where finance will likely be the most important topic of discussion, they should deliver key decisions to design policies and regulations and offer institutional support that can encourage banks to accelerate credit flows to the renewable energy sector. MDBs and bilateral agencies may provide catalytic capital to attract bank financing for renewable energy in developing countries. Credit risk guarantee schemes, first loss capital and other credit-enhancing instruments supported by MDBs and bilateral agencies have the potential to



crowd in massive bank finance in developing countries. Negotiators should back their ambition to triple renewable energy up with a consensus on additional climate finance, supported by the developed countries, to fill the gap of catalytic funds in the developing and least-developed countries. With only six years remaining, the 2030 goal for renewable energy seems a stretch too far, but enhanced cooperation between developed and developing countries and conducive local policies may bridge the gap.



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The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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