Policy Brief #86

Green Financing Guidelines for CPEC Energy Projects

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February 2023
Acknowledgements

The authors would like to thank all the speakers for their inputs at the “Inception Meeting and Launch Event of the Green CPEC Alliance” and the “Workshop on Green Financing Guidelines for CPEC Energy Projects”. The speakers included: Ms Pang Chunxue, Acting Ambassador of China to Pakistan; Senator Mushahid Hussain Syed; Senator Seemee Ezdi, Chairperson of Senate Standing Committee on Climate Change; Mr Gong Dahui, Secretary-General, All Pakistan Chinese Enterprises Association (APCEA); Mr Zhang Jun, Chief Executive Officer, China Three Gorges South Asia Investment Limited (C-SAIL); Mr Muhammad Aurangzeb, President and Chief Executive Officer, Habib Bank Limited (HBL); Ms Najia Ubaid, Additional Director, Securities and Exchange Commission of Pakistan (SECP); Dr Sajid Amin, Deputy Executive Director, Sustainable Development Policy Institute (SDPI); Mr Ali Hasan, Head of Sustainable Initiatives at JS Bank; Mr Irfan Saleem, Assistant Director, State Bank of Pakistan (SBP); Dr Christoph Nedopil Wang, Founding Director, Green Finance and Development Centre (GFDC), Fanhai International School of Finance (FISF), Fudan University.

We would also like to extend our special gratitude to Mr Mustafa Hyder Sayed, Executive Director, Pakistan-China Institute (PCI) and his team for providing valuable feedback and help to prepare the outline and presentation of this report. The authors would also like to thank Ambassador Shafqat Kakakhel, Chairperson, Board of Directors, SDPI; Dr Abid Qaiyum Suleri, Executive Director, SDPI; and Dr Vaqar Ahmed, Joint Executive Director, SDPI, for their valuable contributions without which this report would not have been possible. Finally, we would like to make a special mention of Ms Dilek Nadeem Ghouri for her edits to this policy brief.
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<td>APCEA</td>
<td>All Pakistan Chinese Enterprises Association</td>
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<td>BoI</td>
<td>Board of Investment</td>
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<td>BRI</td>
<td>Belt and Road Initiative</td>
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<td>BRIGC</td>
<td>Belt and Road Initiative International Green Development Coalition</td>
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<td>CO2</td>
<td>Carbon Dioxide</td>
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<td>CPEC</td>
<td>China-Pakistan Economic Corridor</td>
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<td>CSOs</td>
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<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<td>C-SAIL</td>
<td>China Three Gorges South Asia Investment Limited</td>
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<td>DFIs</td>
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<td>EIDs</td>
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<td>EPA</td>
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<td>ESG</td>
<td>Environmental, Social, and Governance</td>
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<td>Environmental and Social Impact Assessment</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>Green Banking Guideline(s)</td>
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<td>GCF</td>
<td>Green Climate Fund</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GHGs</td>
<td>Greenhouse Gases</td>
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<td>GW</td>
<td>Gigawatt</td>
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<td>HBL</td>
<td>Habib Bank Limited</td>
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<td>IFC</td>
<td>International Finance Corporation</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>Joint Cooperation Committee</td>
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<td>JWG</td>
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<td>KWH</td>
<td>Kilowatt/Hour</td>
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<td>MEL</td>
<td>Monitoring, Evaluation, and Learning</td>
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<td>MtCO2e</td>
<td>Megaton(nes) of carbon dioxide equivalent</td>
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<td>NDCs</td>
<td>Nationally Determined Contributions</td>
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<td>National Rural Support Program</td>
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<td>Water and Power Development Authority</td>
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Abstract

Pakistan and China are severely affected by climate change, making them more prone to natural disasters. This underscores the need for taking mitigation and adaptation measures. As per its Nationally Determined Contributions (NDCs), Pakistan is committed to reducing its carbon dioxide (CO2) emissions by 50% by 2030 compared to its business-as-usual scenario, while China has pledged to lower its CO2 emissions per unit of Gross Domestic Product (GDP) by over 65% by 2030 compared to 2005 levels.

To achieve their sustainability goals, both the countries need to promote green financing by focusing on environmental risk management and green investments for energy projects under the China-Pakistan Economic Corridor (CPEC), and the Belt and Road Initiative (BRI). This policy brief provides an overview of the green financing guidelines and tools for CPEC and BRI energy projects.

This policy brief recommends the formation of a ‘Joint Working Group’ (JWG) within the ‘Joint Coordination Committee’ (JCC) to set up an institutional mechanism for greening CPEC energy projects. It would help utilise multiple financing sources for projects to diversify risk, and declare Environmental Information Disclosures (EIDs) mandatory for all projects.
Introduction

Pakistan's vulnerability in terms of climate change is well-known and documented. Pakistan was ranked 8th on the GermanWatch long-term Climate Risk Index (2021) despite the country's total contribution to the global greenhouse gas (GHG) emissions being only 0.9% (439.49 MtCO2e) (Eckstein et al. 2021, p.13; Climate Watch 2020). The Global Climate Risk Index (2021) reported an average number of 502 annual deaths in Pakistan due to climate change from 2000 to 2019. However, Pakistan was only ranked 28th for total GHG emissions in 2018 (The Global Economy 2018).

Figures 1 and 2 show the estimated losses and damage Pakistan suffered due to 2022 floods, totalling around $30 billion (World Bank 2022). Climate change poses a serious threat to vulnerable communities and significantly affects the efforts to adapt to, and mitigate, the climate-induced disasters.

*Figure 1. Losses from 2022 floods in Pakistan (% of total) - (Ministry of Planning, Development & Special Initiatives 2022)*

*Figure 2. Damage from 2022 floods in Pakistan (% of total) - (MoPD&SI 2022)*
Similar to Pakistan, water scarcity in China is worsening, while rainfall patterns have become increasingly variable and unpredictable. Additionally, without adaptation, annual heat-related mortality is expected to increase between 50-100% in 27 major Chinese cities in a 1.5-degree climate warming scenario (Intergovernmental Panel on Climate Change [IPCC] 2022).

Resultantly, China and Pakistan are increasingly focusing on developing greener energy sources in their efforts to mitigate emissions. China has pledged to lower its carbon dioxide emissions per unit of GDP by over 65% in 2030 compared to 2005 levels (CAT Climate Target Update Tracker 2021). Pakistan's announcement in December 2020 to move away from coal-based power production was accompanied by China's commitment to cease the construction of new coal-fired power plants abroad while providing assistance to low and middle-income nations in their quest to transition towards clean energy sources (Ma 2022).


Similarly, Pakistan has also taken active steps and is committed to reducing its carbon footprint. However, substantial investment is required in this regard. As per Pakistan's Nationally Determined Contributions (NDCs), 35% of its projected emissions reduction is contingent on international financial support. It requires $101 billion for its green energy transition alone (Government of Pakistan 2021). Thus, there is an urgent need for scaling up access to green finance.

Studies have shown that to combat climate change and prevent further environmental degradation, global investments of approximately $100 trillion are required to transition towards a low-carbon economy (World Economic Forum [WEF] 2022). In order to mobilise these investments, green financing guidelines are expected to play a pivotal role in the promotion of green and sustainable development.

Green financing could be promoted through a two-pronged approach focusing on environmental risk management, and green investments and financing for energy projects under CPEC in Pakistan. This approach will enable the effective promotion of investments in energy infrastructure and clean energy technologies.
Scope and Objectives

Pakistan is committed to shifting to 60% renewable energy by 2030. As regards the green financing mechanisms for CPEC energy projects, this policy brief aims to:

- identify the key tools, incentives and innovative mechanisms that can be designed to scale up access to green finance for CPEC energy projects;
- review the existing policy landscape and financing regulations with regard to environmental, social and governance (ESG) mechanisms such as voluntary and mandatory reporting and emission disclosure measures for CPEC projects;
- suggest a way forward for Pakistan to develop green asset portfolios and disclosures to access fiscal and non-fiscal tools and resources for CPEC energy projects.
Box 1. Status of investments under CPEC

China’s engagement with Belt and Road Initiative (BRI) countries has been on the decline, with construction falling to around $50 billion in 2021 from a peak of $70 billion (2015 and 2017) and investment falling to slightly under $20 billion in 2021 from a peak of around $50 billion (2015 and 2018) (Green Finance & Development Center (GFDC) 2022). Most of the engagement goes towards energy and transport, both of which are critical for a green transition as they are the greatest contributors to GHG emissions. Figure 3 shows the flow of net foreign direct investment (FDI) from China to Pakistan from 2010-2022. Since the initiation of CPEC, there has been a spike in investments from $90.6 million to $695.8 million in 2013-14. However, 2017-18 was the most promising year with respect to investments under CPEC, with peak investments reaching $1.31 billion. Overall, investments have shown an inconsistent trend, while the net FDI trend has been on the decline over the past few years, with investments reaching $531.6 million in the fiscal year 2021-22 (Board of Investment [BoI] 2022).

So far, China has invested around $23.2 billion in energy projects under CPEC (CPEC Authority 2022). Under the total CPEC energy investments, 21 power projects have been, or are being, developed. The total investment in completed projects, excluding the Matiari transmission line, amounts to $8.2 billion. 17.5% or $1.43 billion of these investments are in completed renewable energy projects (CPEC Authority 2022). For the remaining under-construction projects, total investments are around $13.3 billion. Of these investments, 268MW or around 2% are in solar and wind, while $7.7 billion are in hydro projects, making up around 57.8% of the total (CPEC Authority 2022).
Prospects and opportunities for green financing guidelines to help combat climate change

In the backdrop of the challenges that Pakistan is facing on the climate and economic fronts, it is imperative to address how it can redirect Chinese investments from the earlier coal-based, fossil fuel investments to green, sustainable, and decarbonised alternatives. In 2021, China announced that it would stop investing in coal-fired power projects post-2021 (Volcovici et al. 2021). This step is essential, as a green CPEC would act as a role model for making other BRI investments sustainable. It would further help achieve sustainability goals related to climate change and environmental conservation while promoting economic growth in Pakistan.

Given the number of issues plaguing Pakistan's energy sector of late, it is high time that the government took active steps to diversify the energy mix, reduce dependency on imported fuels and improve energy efficiency. A green CPEC provides the means for realising those goals. To ensure green financing for CPEC projects, financial institutions need to ensure that the process of issuing the financial instrument does not compromise on the environmental integrity of the project.

The Belt and Road Initiative International Green Development Coalition (BRIGC) has released new guidance for the green development of BRI projects to reduce environmental risks and contribute to a green transformation. Under this new guidance system, nine recommendations, labelled as the “traffic light system”, have been recently introduced which address three environmental aspects; climate emissions, biodiversity loss, and pollution. Projects causing a negative environmental impact are labelled “red” whereas projects that are neutral are “yellow” and those having a positive impact are classified as “green” (Nedopil et al. 2020, p.38).

Moreover, there is a two-stage evaluation process prior to the sanctioning of any project. The first stage deals with the project characteristics, while the second one involves the implementation characteristics designed as a safety check on any harmful impacts of the project. Project characteristics indicate the degree of “greenness” of a project. For e.g., hydropower projects are usually classified as red (Nedopil et al. 2020).

In Pakistan, the hydropower plants that have been set up were implemented with International Finance Corporation (IFC) performance standards. Therefore, these would be considered red/yellow projects (red because of the biodiversity risk and
yellow because they meet the IFC standards). The implementation characteristics guide financial institutions on how to integrate the green development guidance in the project finance lifecycle. Financial institutions can ensure the mitigation of environmental risks by utilising the implementation characteristics throughout the entirety of the process (Nedopil et al. 2020, p.55).

**Importance of green financing guidelines for CPEC energy projects**

Prior to 2020, China followed host country rules in its determination of whether or not to invest overseas. Host country rules were lax in many cases and were often not conducive for green financing. Consequently, in 2021, China announced that it would discontinue overseas coal investments and would further ensure that all of its partners adhere to the concept of the Green Silk Road as a pre-condition for any future Chinese engagements or investments in those countries by 2025 at the latest. The Green Silk Road concept aims to incorporate the principles of resource conservation, compliance with international rules and regulations as they relate to ecological and environmental protection, and environmental management of overseas investments (China Council for International Cooperation on Environment and Development [CCICED] 2018, p.10).

Figure 4 shows the investment trend in BRI countries during 2013-2021. While energy investments were the main component of BRI investments in the formative years of BRI, their share has been declining in line with the gross value of investments. Total BRI energy investments declined from approximately $30 billion in 2013 to less than $10 billion by 2021. Transport investments displayed a multi-peaked trend, peaking at around $10 billion in 2015 and 2018. Investments in metals peaked at around $13-14 billion in 2018 before decreasing to under $10 billion by 2021. Overall, the engagement of China under the BRI has declined mainly due to bilateral trust issues and as a result of extraneous factors such as COVID-19 (Nedopil 2022).

CPEC energy projects provide an untapped opportunity to diversify the generation capacity and support the economic development of Pakistan by strengthening mutual trade between China and Pakistan. Nevertheless, it is critical to understand that the pool of financial resources available for expanding the just energy transition is insufficient. As a result, risks are underestimated, and projects do not result in substantial output. Investments that fail to prepare for existing and future risks might not generate expected returns and become stranded assets, opening investors up to legal action (Angen 2015). Such energy infrastructure investments are critical for the development of Pakistan, and therefore, a framework should be in place to minimise the environmental risks under CPEC.
Since greening CPEC is crucial for China and Pakistan, green financing is strategically important for both countries. It seeks an active engagement of the private sector to mobilise green investments, along with the provision of specific guidelines, training, and capacity building for green reporting. However, despite its increasing importance, there is a need for more action to promote green financing as climate change is not taken as a systematic risk by the financial sector. For a transition towards a sustainable and green economy, an enabling regulatory environment needs to be created, making green sectors an attractive opportunity for investors. As a first step, in 2017, the State Bank of Pakistan (SBP) introduced a green banking framework to strengthen the resilience of banks and Development Finance Institutions (DFIs) against the threats and challenges resulting from environmental degradation (State Bank of Pakistan [SBP] 2017).

**Status of green finance developments in Pakistan**

Infrastructure projects are a critical area of investment under CPEC. Such projects require significant investment and have long gestation periods leading to issues of sustainable financing as the risks associated with such projects might not necessarily accrue with the returns. Investors incur risks at the initial stages while the returns are often realised much later. Securities and Exchange Commission of Pakistan (SECP) can play an active role in such projects in terms of equity investments or debt financing to balance the temporal allocation of risks and returns.
SECP has a few tools at its disposal to ensure that the investments and financing correspond to the concept of the Green Silk Road, for example, via the regulation of the Real Estate Investment Trust (REIT) framework. REIT requires unit holders to contribute to real estate infrastructure projects. However, it does not discriminate between greenfield and brownfield projects. Greenfield projects are those where the investments are targeted at constructing a new entity from the ground up, while brownfield investments target existing structures. Generally, greenfield projects are more detrimental for the environment if their financing is not green. With the new updates to the REIT framework, SECP has opened up green financing for greenfield and brownfield projects in diverse areas such as agriculture, healthcare, transportation, power, energy, telecommunication, water and sanitation, etc. (‘REITs: SECP for’ 2022).

Another type of green financing tool that can be used for financing CPEC infrastructure projects is asset fractionalisation, a new concept that the SECP has introduced. It revolves around the conversion of a high-value asset into affordable, smaller denominations. All those assets that can specifically contribute towards the green cause can be fractionalised through this platform (Securities and Exchange Commission of Pakistan [SECP]2022). In addition, SECP has also issued green bond guidelines. These guidelines will help initiate sustainable financing for projects and help diversify sources of financing. To be classified as green bonds, specific terms and conditions must be met, such as financing green projects that improve energy efficiency, ensure environmental protection, use renewable energy, address pollution, etc. (Securities and Exchange Commission of Pakistan [SECP] 2021).

The concept is not limited to green or brown projects. Any project for which the proceeds are used for green financing, i.e. renewable energy, cleaning, sanitation etc., will fall under the definition of green or climate bonds, e.g. the green Indus bond issued by the Water and Power Development Authority (Hasnain 2021).
Box 2. JS Bank- GCF accreditation and Pakistan’s first distributed solar project

Two financial institutions, the JS Bank and the National Rural Support Program (NRSP), have been accredited by the Green Climate Fund (GCF), enabling funding in terms of loans and grants for financing environmentally sustainable projects. The accreditation process was only completed in May 2021, so the USD 10 million “Pakistan distributed solar project” is set to be JS Bank’s first project after the GCF accreditation.

The project is geared towards the growth of distributed solar power, specifically making rooftop solar solutions more easily accessible to the general public. The project aims to create a distributed, inclusive market in order to make solar financing as easy as getting a product loan (an automobile loan, for example). Small investors worth Rs. 0.8-0.9 million would need to pay minimal down payments of around 10-15%, while 88% of the financing would cater to small-scale residential solutions. Another huge positive is that the financial inclusivity aspect of the project will work regardless of the status of the “Renewable Energy 2019” scheme of the SBP.

Adaptation-centric projects are set to be the next area of focus. GCF accreditation has opened up a gateway of funding opportunities for JS Bank, such as traditional oil and gas (O&G) companies aiming to diversify into renewables, while green financing for solar tube wells is another prospective area where JS Bank is looking to delve into. Following the accreditation of JS Bank, some other banks such as HBL have also followed suit and have disregarded financing carbon intensive projects.

Furthermore, SBP has taken developmental and regulatory initiatives to adopt green and sustainable banking practices. A renewable energy scheme was launched in 2016 and is set to run till 2024. In March 2021, more than PKR 81 billion was outstanding in SBP’s renewable energy scheme (State Bank of Pakistan [SBP] 2019). Under the scheme, SBP has helped finance 1,500 projects with a cumulative capacity of 1.4GW at a subsidised rate of 6% interest rate for the end-user.

Apart from the developmental initiative, there is also a regulatory initiative in the form of SBP’s green banking guidelines (GBGs) (SBP 2017). These guidelines, launched in 2017, set out the expectations for integrating environmental, social

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1 This box is based on information provided by Mr. Ali Hasan, Head of Sustainable Initiative at JS Bank during the Capacity Building Workshop on “Green Financing Guidelines for CPEC Energy Projects” held in Islamabad on the 2nd of June, 2022.
and governance (ESG) indicators in the lending activities of banks, and run in parallel with other guidelines such as Corporate Social Responsibility (CSR) guidelines.

The green business facilitation section of the GBGs encourages banks and DFIs to identify green and environment-friendly financing products and markets such as carbon markets, green mortgages, etc. These guidelines also encourage banks and DFIs to explore international funding options. Banks have been instructed regarding financial sanctions over non-compliance. All banks are also required to establish a green banking office under which they can coordinate green banking-related activities (State Bank of Pakistan [SBP] 2017).

Policy Recommendations

Following are the policy recommendations that provide a mechanism for initiating, streamlining, and formalising green financing guidelines for CPEC energy projects.

• There should be a ‘Joint Working Group’ (JWG) within the ‘Joint Coordination Committee’ (JCC) between the National Development Reform Commission (NDRC) and the Ministry of Planning to navigate the green transition of CPEC. This will help Pakistan learn from China by transferring the Chinese experience of executing green infrastructure projects. Furthermore, it will provide an institutional mechanism, which discusses and promotes initiatives for greening projects.

• There is a need to reduce risks around green financing and green products & services. The Pakistan Stock Exchange (PSX) has a crucial role in promoting green financing along with the SECP and the SBP. PSX should be actively engaged in promoting a sustainable stock exchange, green shares, and green trade.

• There is a need to utilise multiple sources of financing for projects to diversify risk. Quantitative analysis of environmental risks and benefits should be strengthened so that cost-benefit assessments are accurate. Standards used for evaluating and accepting projects should also be harmonised.

• SECP should make Environmental Information Disclosures (EIDs) mandatory for all CPEC companies’ financial reporting to ensure that the information related to the potential impact of projects is publicly available and that the public can better assess all the risks associated with the project.

• SBP should incentivise commercial banks to introduce more innovation in green financial products so that investors have more choice, thereby increasing the use of funds for green projects.

• Regulators should introduce the ESG index to step up the flow of FDI to
Pakistan.

- Crash programmes or literacy programmes should be conducted on the green financing market to build the capacity of stakeholders regarding the contours of green financing guidelines and tools.
- PSX, SECP and SBP can combine reporting and trading to provide a conducive environment to help design and implement affordable, acceptable and quality green products and services.
- SECP should bring in foreign leasing companies to provide additional sources of financing for green projects.

**Conclusion**

In September 2021, President Xi Jinping declared an ambitious goal of achieving carbon neutrality by 2060 while speaking at the 76th session of the United Nations General Assembly (United Nations [UN] 2021). Although China already holds the top spot for renewable energy generation and the production of wind turbines and solar panels, it aims to improve and regulate the BRI investments in line with its growing domestic commitment to promoting green development (Chiu 2017).

After the moratorium on coal-based projects by Pakistan in December 2020, and the ban on coal investments by China the following year, green financing guidelines took on paramount importance. These guidelines aim to ensure that overseas investments correspond with the goal of greening CPEC and the BRI, while providing a means for moving towards clean and green energy. For China and Pakistan, such guidelines are expected to play an important role if they are to meet their sustainability goals.
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