

# Global Investment and Policy Implications in Low-Carbon, Climate-Resilient Infrastructure



Jin-Young Moon

Ph.D., Research Fellow, Southeast Asia and Oceania Team  
Korea Institute for International Economic Policy 

The adoption of the Sustainable Development Goals (SDGs) and Paris Agreement in 2015 accelerated the transition to a low-carbon climate-resilient economy which requires significant investment for both new and existing infrastructure. Climate-resilient infrastructure refers to low-carbon climate-resilient infrastructure that contributes to the mitigation of greenhouse gas emissions and adaptation efforts to climate change. Investment for low-carbon climate-resilient infrastructure provides new business opportunities and promotes capacity building in developing countries vulnerable to the adverse impacts of climate change. It has been shown that the amount of investment in climate-related infrastructure is steadily increasing, particularly in developing markets.

Our analysis of investment in climate-resilient infrastructure provided by multilateral, bilateral and private actors identified the following current trends. Multilateral development banks and climate funds can bridge recipient countries and private investors. The six major multilateral development banks mobilized an average of \$22.05 billion in investment annually in climate-resilient infrastructure projects for the last six years (2012–17), with the energy sector (renewable and energy efficiency) re-

ceiving the majority of these funds. Meanwhile, from bilateral perspectives, Korea allocates 9.3% of its ODA budget to climate-related projects while members of the OECD Development Assistance Committee (DAC) provide 19.1% of their ODA support for climate projects.

Since infrastructure projects require significant amounts of funds and inevitably entail risks to be shared among investors, most of the projects are conducted as public-private partnership (PPP) projects. According to the World Bank, private participation in infrastructure increased from \$88 billion in 2008 to \$150 billion in 2012. Energy and transportation projects received the majority of investment from private and public partnerships in 2017 and the share of energy projects has consistently increased after 2015. In addition, private climate finance and institutional investors are expected to increase their contribution to expanding investment for climate-related infrastructure. With the aim of understanding the impact of climate change and aligning this with investment decisions, the private sector has introduced numerous initiatives and efforts such as the Equator Principles, recommendations from the Task Force on Climate-related Financial Disclosures (TCFD), ESG principles and the Green Bond.

In light of various previous studies, renewable energy generation, energy storage systems, electric vehicles, BRT, water resource facility and water efficiency programs can be suggested as promising fields of international climate infrastructure. However, prior cases of major climate infrastructure investments promoted by multilateral development banks often revealed complexities stemming from how each sector is linked and integrated. Thus it was also necessary to perform a case analysis of major climate infrastructure projects, identifying how various strategies and means for mitigating project risks have been utilized, including support from various multilateral climate funds, financial safety measures such as exchange rate indexation, participation of experts in the international community, and the adoption of comprehensive capacity building programs.

Meanwhile, in the case of Korea, various overseas investment support systems are in operation for general and climate infrastructures, but certain problems persist such as insufficient mainstreaming of climate change agendas throughout the support system, lack of a dedicated platform for climate infrastructure, biased support for renewable energy, and lack of experts outside of the EPC areas.

The following implications can be derived for government and private initiatives to promote participation in overseas climate infrastructure projects. First, it is necessary to establish a comprehensive support system for the whole project including the planning, construction, operation and financing of overseas climate infrastructure projects. Second, the government

should improve relevant policy measures to effectively support private sector expansion overseas in climate infrastructure. Third, selection and concentration strategies based on promising areas are necessary for efficient utilization of limited investment resources. Fourth, to encourage companies to participate in investment and promote the development of government policies and regulations, it is necessary to first disclose relevant information based on a common understanding of climate change and to mainstream climate change in corporate and government decision making. **KIEP**