



FINANCE FOR SUSTAINABLE CARBON POWER PROJECTS

The 2015 Paris Agreement provides the international framework for a net zero emissions pathway and clean energy transition, within which climate finance for greenhouse gas (GHG) emissions mitigation will play a critical role. While there is agreement that levels of climate finance should increase, there is less clarity around the type of projects and activities that are eligible for such finance. A wide range of varying standards, criteria and principles relating to ‘climate’ or ‘green’ investment exist, in part reflecting ongoing debates about the type of projects that should be prioritised. Key sustainable carbon technologies such as carbon capture and storage (CCS) – which can be applied to a wide range of global emissions sources and are considered by the International Energy Agency (IEA) and others to be critical to achieving net zero – have been included in such debates around their eligibility as low carbon investments.

These considerations are playing out within broader discussions around the role of fossil fuels within the global energy transition, in particular the funding of new coal-fired power and coal mine projects. For example, the run-up to the Glasgow climate conference in 2021 (COP26) saw a raft of important new announcements and commitments on the phasing out of funding for fossil fuel projects including by many of the world’s largest commercial banks, investors and insurers under the global Glasgow Financial Alliance for Net Zero (GFANZ). Also in 2021, China joined Japan and South Korea in ending overseas coal investments, leaving many planned projects worldwide unlikely to find alternative lenders. With grassroots action and pressure groups continuing to keep up the pressure on coal, a growing number of financial institutions are ratcheting up their coal lending policies.

However, whilst coal-fired power is in decline within much of the OECD, several large emerging economies including China, India and Indonesia are seeing a continued expansion coal-fired power. Significantly, new coal projects in these countries are typically being financed domestically by state-owned enterprises and banks not signed up to international climate finance initiatives such as GFANZ. Against this backdrop, there is an urgent need to reconcile the ongoing expansion of new unabated coal-fired power with a Paris Agreement-aligned energy transition. CCS, alongside other solutions such as biomass and ammonia cofiring, offers the potential to achieve deep cuts in emissions within these coal-dependent economies while allowing them to manage the transition to a lower carbon economy. However, while some international initiatives relating to new energy investments recognise the role of CCS, most large international funding programmes such as Just Energy Transition Partnerships (JETPs) are focused on early coal retirements combined with an expansion of new renewable capacity.

There is a gulf between current levels of CCS deployment and what is needed to reach net zero under scenarios such as the IEA’s Net Zero Emissions (NZE) by 2050 assessment. A range of funding sources, financial instruments and models will be needed to scale-up CCS worldwide. Specialised finance from a range of public and private sources will be needed to help overcome project and investment risks. Development finance will be needed to help close the funding gap for deployment in developing countries which face higher-risk lending environments. Although the technology is eligible for funding under the development sector’s common lending rules, important existing initiatives such as the World Bank and Asian Development Bank (ADB) CCS Trust Funds are coming to an end with no clear plans to replace them.

Furthermore, despite its inclusion within the scope of the UN-level Green Climate Fund (GCF), the world's largest mitigation fund, support for CCS has been successively overlooked.

An alternative source of potential finance is emerging in the form of green and 'transition' bonds, which are seeing rapid growth, particularly within Asian countries such as China and Japan. Several jurisdictions including the EU and China have developed 'green taxonomies' prescribing which activities can be eligible for finance within these bond products. These have a mixed outlook for investing in CCS applied to coal plants. Although the EU green taxonomy recognises CCS and does not explicitly rule out its application to coal-fired power, the technology is unlikely to meet an emissions threshold which is applied. Although China's recently revised Green Bond Endorsed Project Catalogue does include fossil fuel power with CCS, the country currently lacks incentives for widespread deployment of CCS technology.

Working alongside policies and regulations designed to support CCS, carbon markets may offer an important source of finance for the technology over the coming decades. These continue to grow worldwide as countries develop carbon pricing policies, and companies purchase carbon credits to deliver on their corporate climate pledges. Although only a few crediting schemes worldwide include methodologies for developing CCS projects as carbon offsets, several new standards are emerging within the voluntary carbon market to encourage the uptake of the technology. Perhaps more significantly, several developments at the international level could help to drive deployment over the medium term. These include the UN-level aviation offsetting scheme and the so-called 'Article 6' of the Paris Agreement which foresees a new international carbon market to replace the Kyoto Protocol's Clean Development Mechanism (CDM). Both are likely to accommodate CCS-based credits. Several new concepts for establishing CCS cooperation under Article 6 are also attracting interest from industry and policymakers, offering the potential to scale up the technology as part of the global clean energy transition and helping to achieve net zero. These include models for establishing international cooperation and trading of storage credits, involving supply-side offsetting with geological storage quotas for participating entities – either energy companies, countries, or both. These so-called 'CCS clubs' could work alongside and support existing carbon pricing policies and offer a way to overcome some of the challenges seen with the deployment of the technology to date.

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Each executive summary is based on a detailed study which is available separately from: www.sustainable-carbon.org. This is a summary of the report: Finance for sustainable carbon projects by Gregory Cook and Dr Paul Zakkour, ICSC/327, ISBN 978-92-9029-650-8, 80 pp, August 2023.