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Financing the transition: How to make the money flow for a net-zero economy

New report from ETC quantifies the financial need and identifies policies required to unleash investment on the scale required

21 March 2023 – Investments in clean energy must quadruple within the next two decades according to the Energy Transition Commission (ETC). In its latest report "*Financing the Transition: How to make the money flow for a net-zero economy*" the ETC highlights the critical importance of strong government policies relating both to the real economy and to the financial system if finance is to flow on the scale required. It also identifies "concessional/grant" payments needed to support early coal phase-out, end deforestation and finance carbon removals.

Around \$3.5 trillion a year of capital investment will be needed on average between now and 2050 to build a net-zero global economy, up from \$1 trillion per annum today. Of this, 70% is required for low-carbon power generation, transmission, and distribution, which underpins decarbonisation in almost all sectors of the economy.

Well-designed real-economy policies must create strong incentives for private investment in the energy transition. Examples include setting ambitious targets for renewable generation by 2030, carbon prices and product regulation to drive decarbonisation in heavy industry, aviation and shipping, and specified date bans on the sales of internal combustion engines (e.g., by 2035 at the latest).

Other key actions include various forms of financial regulation, targeted fiscal support for the development and initial deployment of new technologies, and net-zero commitments from financial institutions.

Conceptually separate from investment finance (which will deliver positive economic returns), "concessional/grant" finance will be required to help cover the economic costs of early coal phase-out, to offset the incentives to deforest, and to fund carbon dioxide removals.

"Adequate flows of finance are the key to delivering a net-zero future and limiting the impact of climate change. Private investment, government and philanthropic money are needed to deliver the large-scale funding and international financial flows to ensure we move from targets to action and deliver a low-carbon global economy", Adair Turner, Chair, Energy Transitions Commission.

Accelerated investment but balanced by savings

Part of the investment needed will be offset by reduced investment in fossil fuels, cutting the \$3.5 trillion per annum requirement to a net \$3 trillion. This is equivalent to 1.3% of the likely average annual global GDP over the next 30 years. These investments will also create a lower operating cost energy system than today which could realise savings of \$2-3 trillion a year by 2050 and continue thereafter, depending on how fossil fuel prices evolve. In middle- and low-income countries, much of the investment would be required to support economic growth even in the absence of a climate change challenge.

The true incremental cost of the required investment is therefore far below the gross investment need. But the scale of capital mobilisation and reallocation required will not occur without strong real economy policies in all economies and actions to address financial sector challenges in middle- and low-income countries.

The energy transition is capital intensive, pointing to a peak in investments around 2040 as we build the energy system of the future, before falling to a lower asset replacement rate thereafter.

Global investment – incentives to invest despite the challenges

There is enough capital globally to finance the energy transition. Although there are some short-term challenges to investment in the transition (e.g., high interest rates), renewables are cheaper than new fossil fuels in over 95% of global electricity markets and there is now an impetus to invest in energy security and efficiency savings.

The scale-up of investment required differs by country income group. In high-income economies and China, annual investments to build a net-zero economy will need to reach roughly double today's levels by 2030. In middle- and low-income countries, a four-fold increase is required by 2030.

In all countries, the vast majority of finance will come from private financial institutions and markets if well-designed real economy policies are in place. Yet even in high-income economies, public financial institutions should play a role in financing specific types of investment, such as first-of-a-kind technology deployments, shared infrastructure (e.g., hydrogen and CCUS transport and distribution networks), and residential buildings retrofits.

In some middle- and low-income countries, private financial flows alone cannot ensure adequate investment given the challenges created by high actual or perceived macroeconomic risks, inadequate domestic savings and other factors which increase the cost and reduce the supply of private finance. A significant increase in international financial flows to some lower-income economies is therefore required. As the Songwe-Stern report argued, this requires a major increase in the scale of finance provided by Multilateral Development Banks (MDBs), together with changes in MDB strategy and approach which can help mobilise greatly increased private investment.

Supporting action by financial institutions and financial regulation can accelerate capital reallocation. Financial institutions should develop net-zero transition plans, which can play a role in capital mobilisation and reallocation into low-carbon assets and technologies. Financial regulation should ensure the transparent disclosure and management of climate-related risks and strategies.

Vital role for concessional/grant payments

Provided good policies are in place, capital investment will deliver positive returns to investors. But achieving some emissions reductions will impose an economic cost – in particular, phasing out coal early where it still remains competitive with renewables, halting deforestation which delivers a positive return to landowners and businesses, and scaling up carbon dioxide removals.

Concessional/grant payments to offset these costs in middle- and low-income countries (excluding China) may therefore be essential and could amount to around \$0.3 trillion a year by 2030 if the world is to achieve its 1.5°C objectives. This money could, in theory, come from corporates via voluntary carbon markets, philanthropy, and high-income countries.

By 2030, these payments could amount to:

- Around \$25-50bn per annum to achieve early phase-out of existing coal assets, with the need for these payments to decline to zero by 2040.
- Around \$130bn per annum to end deforestation by 2030 - but potentially far more if red meat consumption continues to increase. The scale of these

payments raises the question of whether available money would be better spent in other ways e.g., directly supporting governments which are willing and able to impose deforestation bans.

- Around \$100bn per annum to fund carbon removals. Initially primarily via nature-based solutions such as reforestation but with an increasing role in the 2030/40s for engineered solutions such as Direct Air Capture of Carbon and Storage (DACCS).

To read the full report, visit: <https://www.energy-transitions.org/publications/financing-the-transition/> [Link will be live from 00:01 GMT on Tuesday 21 March 2023]

ENDS

Notes to editors

This report constitutes a collective view of the Energy Transitions Commission. Members of the ETC endorse the general thrust of the arguments made in this report but should not be taken as agreeing with every finding or recommendation. The institutions with which the Commissioners are affiliated have not been asked to formally endorse the report.

For further information on the ETC please visit: <https://www.energy-transitions.org>

For the link to the report and infographics, please visit: <https://www.energy-transitions.org/publications/financing-the-transition/> [Link will be live from 00:01 GMT on Tuesday 21 March 2023]

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