

December 2010

PROJECT CATALYST BRIEF: **From Climate Finance to Financing Green Growth**

This brief summarises the December 2010 Project Catalyst report on the benefits of green growth and the importance of developing the right policies to support a transition towards the low carbon economy, looking at financing needs of green growth in developing countries, the role of the AGF report and how the climate finance system should develop over the next decade.

Key messages:

- **The transition to a green economy is already under way – driven by countries’ interest in economic development, energy security and climate.**
- **The green economy’s needs for climate related investment are relatively modest compared to global infrastructure investment activities with domestic policy being one of the major drivers.**
- **Roughly \$60 billion per annum by 2020 in incremental cost financing would be required to support policies and catalyse green growth that delivers a 2°C pathway.**
- **The required finance differs by sector.**
- **The \$100 billion in climate finance per annum by 2020 committed to in Copenhagen Accord could make a significant contribution towards the required financing.**
- **The climate finance system needs to be scaled up in the coming decade. This will require creating confidence on short term (2013-15) financing and building a strong pipeline of programmes in developing nations while improving the effectiveness of finance delivery.**

Financing green growth for a 2°C target

Independent of green growth, there will be major investment in infrastructure over the coming 10 years. Total infrastructure investment worldwide is estimated at about \$7 trillion per annum by 2020 of which \$1.5 trillion is energy related. To move to a low carbon pathway consistent with 2°C warming, Project Catalyst estimates that about \$290 billion per annum by 2020 of this total capital investment will be needed for low carbon infrastructure in developing countries (these include all middle income, rapidly industrialising countries as well as least developed countries).

Effective policy will be critical to shift investment towards green growth. Shifting these flows towards a green economy will require (i) the right policy choices and (ii) financial support where appropriate. Policy is critical to shift investment from high carbon to low carbon. Market failures often prevent low carbon investment, for example, agency problems¹ can prevent energy efficiency measures in buildings, and policy is often the only way to deliver the desired changes. These policies can also create significant value: building codes or vehicle standards that improve energy efficiency can lead to energy savings that far outweigh the investment required. Cleverly designed policies can reduce risk and hence financing cost of investments, and help to identify incremental cost financing needs. Using government guarantees and reverse auctions with feed-in tariff policies are examples of such policy design.

While many countries have embarked on the transition to green growth, their actions are unlikely to deliver all the mitigation measures needed for a 2°C pathway, nor will all countries be able to finance adaptation measures without support. To incentivise additional mitigation and adaptation measures incremental cost financing is needed, covering the additional cost of those measures over high carbon alternatives. Project Catalyst estimates that \$60 billion per annum in incremental cost financing by 2020 would help to catalyse the mitigation measures in developing countries that are needed to move to a 2°C pathway (assuming the low end of the Copenhagen pledges and other planned climate policies are implemented effectively and unconditionally) – not adjusting for the economic and energy security benefits of those measures. This amount of finance is far less than fossil fuel subsidies which totalled \$312 billion in 2009 and is small compared to the global spend on energy, estimated to be \$5 trillion per annum on fossil fuels by 2020.

Financing needs differ by sector:

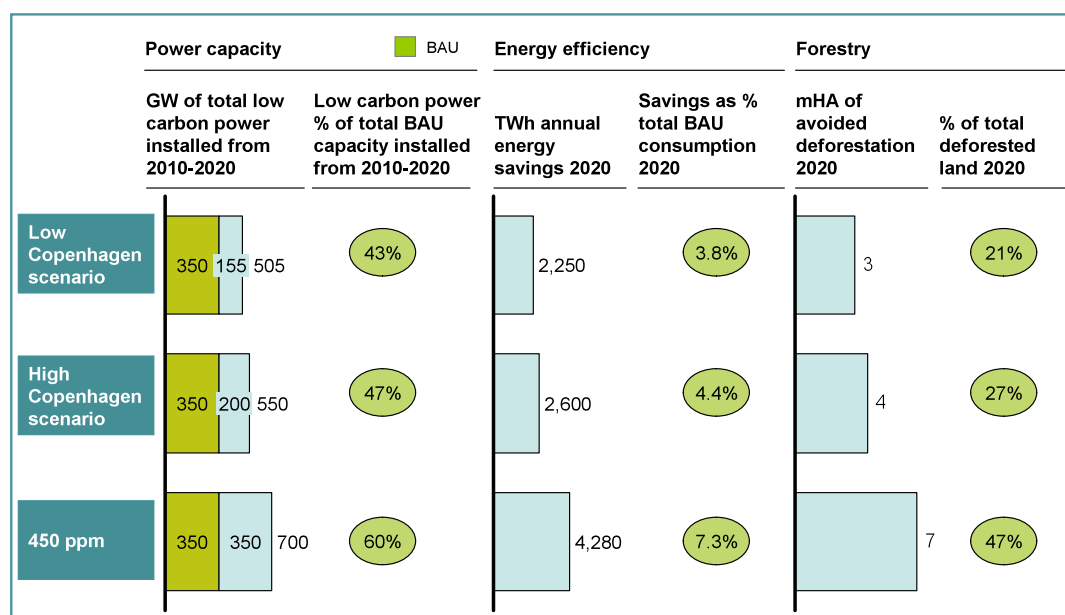
- Low carbon power: Project Catalyst estimates 700 GW of additional low carbon power generation capacity needs to be built in developing countries by 2020 to move towards a 2°C pathway², requiring an estimated total investment of \$155 billion per annum between 2010 and 2020.
- Energy efficiency and other mitigation measures: Project Catalyst estimates energy consumption in developing countries needs to be reduced by 4,300 TWh (or 7 percent of business-as-usual consumption) to reach a 2°C pathway. This will require \$123 billion in investment capital per annum by 2020.
- Land use: Some countries like Brazil have taken major steps in reducing deforestation without international financial support. Other developing countries would require support to implement reduction measures and alternative economic development. Project Catalyst analysis suggests that deforestation in developing countries needs to be halved by 2020 (equivalent to 7 mHA of avoided deforestation) to be consistent with a 2°C pathway; this and other land use measures could require about \$25 billion per annum by 2020.

¹ Agency problems are market failures where projects are not undertaken because the benefits do not occur to the party that would make the investment. That is the case for rented buildings where the owner would need to make energy efficiency investments, but the tenant benefits from lower electricity bills

² ,Compared to a total new built generation capacity of ~1,200 GW

- **Adaptation:** Adaptation finance will be critical to enable the poorest countries to adjust to a changing climate and to make their economies climate resilient. Adaptation is often very closely linked to green growth, broader development, and mitigation. Estimates for financing needs range from \$10s of billions to \$100 billion per annum.

Exhibit 6: Changes required by a sector



SOURCE: McKinsey Global GHG Abatement Cost Curve v2.1; Project Catalyst analysis

The \$100 billion in climate finance per annum by 2020 committed to in Copenhagen Accord could make a significant contribution towards the required financing.

The recently released UN High Level Advisory group on Climate Change Financing (AGF) report concludes it is “challenging but feasible” to deliver this \$100 billion through innovative sources like transport levies, capital increases to the multilateral development banks (MDBs), redirection of fossil fuel subsidies or royalties, and financial transaction taxes. Sources that raise finance by pricing the carbon externality are particularly attractive, (e.g., through carbon markets or taxes). Carbon prices of \$20–25 per tonne and international coordination will be instrumental if these potential sources are to generate the \$100 billion. Project Catalyst analysis suggests that the AGF contribution would almost halve the incremental cost financing gap, while potentially covering most of the investment capital needs.

The climate finance system needs to be scaled up in the coming decade. This will require creating confidence on short term (2013-15) financing and building a strong pipeline of programmes in developing nations while improving the effectiveness of finance delivery

Credible financing sources in the short term are key to build the confidence required to create a pipeline of investment programme. Developed countries could commit to specific 2013-15 targets, based on mobilising new domestic and international sources, including carbon taxes, revenues from ETS auctions, redirection of fossil fuels and royalties, as well as laying the foundation for innovative international sources like revenues from international transport. A 2013–2015 commitment should also include lending for green growth through the MDBs either through dedicated capital increases or by shifting existing lending towards green growth. Carbon pricing also needs to be extended e.g. through reform of existing carbon markets and introduction of new markets. Concurrently, new mechanisms should be developed and tested that maximise the amount of private financing made available for low carbon investments.

In parallel, developing countries need to develop a credible investment pipeline based on domestic growth strategies and policy frameworks that show that effective delivery of climate measures is possible. This pipeline could be created through bilateral and multilateral partnerships and should drive a close integration of adaptation and mitigation with development measures and should be embedded in sound policy.

Last, action is needed to build a better understanding of system-wide performance and to increase leverage of climate finance, i.e., to direct the wider financial flows towards green growth. Currently, climate finance flows are very intransparent and their impact is very poorly understood. However, given the constraints on finance and perceived lack of effectiveness of international climate finance, it is critical that effectiveness be improved. This includes whether investment has been transformational to an economy, how many tonnes of emissions have been mitigated, whether long term lock-in effects have been avoided and whether an economy has been made more climate resilient.

It is clear that many countries have seen the benefits of green growth and that increasing momentum towards green growth is moving the world in the right direction. Action now needs to be focused on sustaining and accelerating this momentum.

Project Catalyst is an initiative of the ClimateWorks Foundation and the European Climate Foundation. For more information see www.project-catalyst.info.