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Financing a low-carbon economy: framing the policy response

Achieving the goals defined at Paris will require trillions of dollars of investment over the next few years. What policies must governments enact to make this happen?

By **Rory Sullivan**, Visiting Senior Research Fellow, Centre for Climate Change Economics and Policy, University of Leeds

In its flagship annual report, *Global Landscape of Climate Finance 2015*, the Climate Policy Initiative estimated that \$391 billion was invested in low-carbon and climate-resilient actions in 2014. The same report also noted that the International

Energy Agency has estimated that around \$16.5 trillion will be required from 2015 to 2030 to align the global energy system with one that is consistent with the goal of keeping global temperature rise to less than 2°C above pre-industrial levels. In other words, the current rate of investment is running at about one third of what is required if we are to avoid dangerous climate change.

It is very clear that this gap cannot be filled by governments alone. Much of the capital will need to come from the private sector: from corporations, pension funds, insurance companies and investment managers, among others. Delivering investment on the scale

▲ A Maasai herds cattle past wind turbines near Nairobi, Kenya. Developing-world climate projects can present private-sector investors with a complex array of risks

required will demand governments to adopt game-changing interventions in relation to both climate change policy and climate finance policy.

The needs for climate change policy are well understood. Private investors – individually and through initiatives such as the Institutional Investors Group on Climate Change – have been very clear that climate change policy should:

- provide appropriate incentives to invest;
- recognise that scale is critical to addressing risk – scale allows unit costs to be reduced and allows expertise in the development and deployment of new technologies to be gained;
- be of appropriate duration – investors, in particular those making large investments in areas such as infrastructure and power generation, need long-term policy certainty;
- be effectively overseen – the relevant regulatory or oversight bodies should have the ability and authority to ensure that climate change and related energy policies are effectively implemented.

The needs for climate finance policy divide into two. The first relates to the general issues around investing in emerging markets, which is where much of the capital investment will be required.

Investors in these markets are concerned about issues such as currency risk and local market capacity and expertise on, for example, the practicalities of deal structuring and financing. Fortunately, many of the tools required to manage these risks are already available, well understood and widely applied.

Examples include export credit guarantees and currency hedging instruments. Furthermore, development finance institutions have a long record of working with local financial institutions to build skills and capacities, and can provide a range of practical support measures (such as dedicated credit lines) that can accelerate the development of climate finance industries in these countries.

But addressing market risks is only part of the picture. The other important issue for climate finance policy relates to the

characteristics of the specific projects that need to be funded. Different categories of climate change projects present very different issues and challenges when trying to attract private-sector investment.

Policy interventions therefore need to be tailored to the specific projects in question, and to account for factors such as the amount of capital required, the financial risk–return characteristics of the investment, project duration and technology involved.

When looking to encourage private finance to invest in climate change-related mitigation or adaptation, policymakers need to start by acknowledging the need to provide appropriate risk-adjusted returns for the providers of these funds. They then need to understand:

- which type(s) of private investors are likely to be interested in investing, and what returns are likely to be sought by these investors;
- what risks these private investors are likely to see, and how these risks might best be managed – within this, it is particularly important that policymakers understand that the greater the risk (or the perceptions of risk), the greater the returns that will be expected.

Are transaction costs significant?

The examples of renewable energy and energy efficiency illustrate the issues that remain with regard to private-sector investment.

Despite rapid gains in competitiveness in recent years, the reality is that renewable energy electricity generation is often uncompetitive compared with conventional power plants – a situation that is frequently exacerbated by fossil-fuel subsidies. Even where regulatory mechanisms exist that might level the playing field, they tend to be discounted by private-sector actors and financiers who often consider the incentives provided as insufficient to compensate for the risks that investors face, or see these regulatory mechanisms as lacking dependability.

This perceived lack of dependability is particularly important in the case of large renewable energy projects, since they tend to involve relatively large up-front capital

investment and have project lifetimes of 20 years or more.

Renewable energy projects also face other challenges. Financial markets in many developing countries lack the maturity and depth needed to provide project finance at the required scale and tenor. There may be a lack of refinancing vehicles, making it difficult for project developers to exit their investment.

Another issue is novelty. This relates both to the technologies themselves (they may not have sufficiently long track records, for example) and to the countries in which they are deployed (where policymakers may be reluctant to support what they see as new technologies, or where there is uncertainty about issues such as operating costs). Finally, renewable energy projects often require significant investment in transmission and distribution infrastructure.

These challenges faced by developers and financiers promoting large-scale renewable energy infrastructures require policymakers to consider:

- i) adopting policy measures that ‘level the playing field’ between renewable and other energy sources. These do not have to involve public subsidy but could include measures such as feed-in tariffs for electricity from renewable sources or renewable energy quotas;
- ii) actively supporting the development of renewable energy until it gets to the point where concerns about technology risk and reliability have been addressed;
- iii) supporting the development of a domestic financial system that is able to provide services at the required scale and tenor.

Energy efficiency presents quite different challenges from a policy perspective. Projects generally require much less capital investment, with finance usually provided by banks, providing either corporate or project lending, and the project sponsors themselves as providers of equity capital.

These investments face four common challenges. First, the costs and benefits are often not clear. While there is often a theoretical case for investment, the actual savings that are achieved depend on factors



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▲ Men rest after salvaging metal in the derelict 'Tower of David' skyscraper in Caracas, Venezuela, under former President Hugo Chávez, epitomised country risk through its prolific expropriation of foreign investments

such as management time, disruptions to production, staff training and information gathering and analysis. Second, companies tend to favour projects that lead to business expansion, continuity and increased revenues rather than investments (such as energy efficiency improvements) that primarily lead to cost savings. Third, banks may be unwilling to provide finance, because energy efficiency equipment often has a low collateral asset value, and such equipment is often difficult or uneconomic to remove and use elsewhere. Fourth, there can be significant upfront transaction costs associated with researching and analysing energy efficiency opportunities.

Therefore, the developers and financiers of energy efficiency improvement projects need a different set of public interventions to those required for renewable energy. Policymakers need to consider:

- i) encouraging electricity utilities to provide incentives that encourage improvements in efficiency;

- ii) raising awareness of the business case for energy efficiency;
- iii) reducing interest rates for energy efficiency-related loans and increasing the availability of loans for this purpose (through, for example, extending zero or low-interest public credit lines to commercial banks);
- iv) providing technical assistance such as energy audits and assistance with the development of project proposals.

Governments that want to deliver low-carbon investment at scale – whether at the domestic or international level – therefore need to:

- ensure that they have an effective and credible climate change policy framework, including overarching goals and targets, credible policy frameworks for specific sectors, and effective institutions;
- ensure that the skills, tools and expertise used to finance other forms of infrastructure are available to support low-

- carbon investments in emerging markets;
- adopt policy measures and financing instruments that are relevant to the specific types of low-carbon investment that are being made – different types of low-carbon investment have different financial and risk–return characteristics, and policy needs to be tailored to these characteristics.

Well-designed policy on climate change and climate finance can be hugely effective at attracting private-sector investment – as we see most spectacularly in the case of the global deployment of renewable energy.

The challenge now is to replicate this success in other areas – energy efficiency, climate change adaptation, the REDD+ forest initiative – and in less-developed countries. ●