

Policy Brief on Renewable Energy Finance

In 2011, the IEA-RETD commissioned and published the report '*Strategies To Finance Large-Scale Deployment Of Renewable Energy Projects: An Economic Development And Infrastructure Approach*'. This FINANCE-RE study addresses the key finance challenges related to the large-scale deployment of renewable energy. It concludes that **new policy approaches are key to attracting massive flows of capital needed to scale up renewable energy**. On April 17th 2012, a group of nearly 30 representatives from the banking and finance sector and government gathered in London to discuss the report's findings as well as existing and possible new finance policy instruments, and their respective roles in mobilising new capital to the renewable energy sector. The workshop was held to complement the key findings from the study. The study and workshop primarily addressed the role for governments in financing the large-scale deployment of renewable energy.

This paper reports on the workshop's main recommendations for governments.

The need for governmental involvement in the topic of finance

- **It is recommended that governments put financing renewable energy on their policy agenda, as large-scale finance of renewables is not likely to take place without active involvement of national governments.**

Deployment of renewable energy not only requires active involvement of governments in the more traditional fields: barrier removal, creating the right enabling environment and developing policies and support mechanisms to overcome market imperfections. Governments also have an important role to play in financing renewable energy, as long as investors are not substantially involved in the renewable energy sector, as long as money is not massively flowing, and as long as banks and investors overrate the risks of renewable energy. As a first step this has to be noted by governments and put on the agenda.

Tapping new financial sources

- **It would help if governments consider engaging institutional investors for large-scale deployment of renewable energy as a top priority.** Although capital is available in the market, it becomes clear that the current investors will not raise enough money for large-scale investments in renewables. There is a need for governments to actively approach (institutional) investors, in particular pension funds. Pension funds are a likely candidate to play an important role in financing future renewable energy projects. The assets of the

Case study on new policy approaches: Green Bonds

1. Bonds are a mechanism to borrow against future economic benefits. This is particularly relevant for the renewable energy deployments in which the assets have high upfront costs.
2. Green bonds or climate bonds are tied to specific climate change mitigation or adaptation investments and allow governments or companies to raise capital to: (a) build renewable energy generation and its enabling infrastructure, and (b) support renewable energy economic development opportunities.
3. Clear delineation of green or climate bonds is seen as a means of collecting a variety of smaller investment sectors (e.g. renewables, energy efficiency) into a larger and more liquid thematic area, and drawing attention to investments aligned with the low-carbon economy governments are trying to build.
4. Some USD 400 billion of bonds outstanding have been assessed to be tied to climate change investments. But the level of transactions in bonds actively labeled green or climate has been so far limited.
5. Although green and climate bonds are relatively novel, the issuing is not completely new. For example, since 2008, the World Bank has issued over USD 3 billion in green bonds (<http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html>) and the EIB has issued over USD 2 billion in Climate Awareness Bonds.
6. There is a need for international consistent standards for green bonds, backed by institutional investors and NGOs. This makes it easier for investors to choose genuine green investments.

world's 12 largest public pension funds amount to USD 3.5 trillion. The current public budget cuts due to

Case study on new policy approaches: The Green Investment Bank, GIB (UK)

- The GIB (100% government owned) has the overall objective of accelerating investments to advance the UK's transition towards a green economy. It aims to achieve this by addressing "risk mitigation" in both the construction phase and the operational phase, by taking a first-loss debt position, or via guarantees or insurance-like products.
- For the period 2012-2015, the UK government has allocated £3bn from the treasury as funding for investments in offshore wind, waste and energy efficiency. In the UK, around £200bn of investment will be needed in the next decade to meet the energy policy targets.
- The bank may increase the leverage factor by shortening the involvement in projects. Instead of a 15-20 year investment, the bank may step out in certain projects after 3 years. This enables the GIB to potentially mobilise 6 times more public-private money.
- One of the proposed mechanisms to attract early private finance to leverage the GIB's initial public debt investment is to raise funds through green bonds.

investing in specific technologies or single projects.

recession and the restricted lending capacity of banks (Basel III) make the need for governments to approach new investors even more urgent.

- **Governments can also actively look at ways to tap other sources of finance for renewable energy.** Examples are sovereign wealth funds (top 10 with USD \$3.8 trillion) and insurance companies.

Risk sharing

- **Governments can share or take up risks from private sector.** A key question in financing renewables is: how to split risks? Governments can scale up investments by taking up risks the private sector cannot easily bear. Instruments like loan guarantees have proven to be successful. Also setting up new institutions like green banks can play an important role in risk mitigation, for example by taking the first-loss debt position. Green bonds could also be a way to attract funding from institutional investors who would not usually take the risk of

Public and corporate acceptance

- **Governments can invest in public awareness to attract finance in an indirect way.** Financing renewables (including paying an extra fee for non-fossil energy) has also to do with public acceptance. If governments focus more on public awareness, make renewables more mainstream, and look for possible ways of local energy generation or other forms of consumer involvement (local FiT, participation in investments), it is expected that investors will step in more easily.
- **Governments can help direct profits from corporations to the renewable energy sector.** Apart from public acceptance, corporate acceptance is also seen as an important driver of renewable energy investments. For example, Google, investing in renewables (making use of tax credit facilities), contributed to a changing mindset and behaviour of multinational corporations and even influenced their competitors, who started investing in renewables as well. Such attitude requires leadership and vision, both from governments as well as the corporate sector, preferably in a dialogue together.

Renewables as economic development strategy

- **It would be beneficial if governments treat renewables as a strategic choice.** Governments are recommended to treat renewable energy as a strategic choice and develop economic policies along the line of the full value chain from innovation to deployment and export.
- **It is recommended to adapt policies to the phase of the innovation chain.** Financing a new technology venture is different compared to financing more mature technology such as wind energy.

Lending policy of investment banks

- **Governments can influence the lending policy of investment or development banks.** National governments can use their position as board members of the investment banks, to shift away from investments in conventional energy sources towards renewables. Market players perceive the current relatively high share of investments in conventional energy as inconsistent government policy.

Awareness and misperceptions

- **Governments can facilitate active learning.** Financing renewables is an area which develops every day. Mistakes are made. New insights are generated. If governments can facilitate an exchange of lessons learned, generate awareness and educate investors, stakeholders can better understand each other and get more consensus. It will also result in less misperceptions, for example on risks and costs, which currently still exist and hamper investments.

Finally: policy stability and coherence

- **Policy stability and coherence remains important.** Although not new, it remains important for governments to be aware of the fact that policy coherence and longer term stability, together with consistency and stability of regulations is of utmost importance for the private sector, especially if they operate in a relatively new market which is not yet mainstream.

Take away messages for immediate action

What immediate actions may policy

makers undertake today or tomorrow, to help accelerate renewable energy finance further?

1. **Get in contact with the investors.** From the report and workshop it became clear that capital is available in the market. There is, however, an active role for governments foreseen in approaching and engaging new (institutional) investors in the renewable energy sector.
2. **Get in contact with the institutional banks.** In developing new public finance instruments, national governments can learn from the experience of the institutional and/or development banks, for example through involvement in the learning networks between the banks. New public finance instruments may be an effective addition to the current policy mix of countries.
3. **Get in contact with targeted public and corporate stakeholders making use of the existing success stories of public and corporate acceptance.** Around the world there are various attractive examples of renewable energy investments by the public and the corporate sector. Governments may think of creative ways to use these examples of the front runners to engage other public and private stakeholders. In addition, policy makers could assess which innovative instruments (local FiTs or other forms of participation, corporate tax credits) could help to commit more public and corporate stakeholders to invest in renewable energy.

More information

Report: <http://iea-rettd.org/wp-content/uploads/2011/12/111205-FINANCE-RE-Final-Report.pdf>

Workshop: <http://iea-rettd.org/archives/events/finance-re>

About IEA-RETD: www.iea-rettd.org

Case study on new policy approaches: learning from others

In setting up new risk mitigating public finance instruments or new institutions, governments can learn from institutions such as the EIB and KfW.

The European Investment Bank (EIB) has played an important role in financing European renewable energy deployments to date. In 2009, EIB's loans to the renewable energy sector reached in excess of € 4 billion, which, by 2011, increased beyond € 6 billion. Twenty percent of the EIB energy financing portfolio is dedicated to renewable energy projects. With financing up to fifty percent of investment costs, the EIB provides significant risk mitigation.

The German KfW offers long-term credit lines to partner lending institutions, at market conditions, to finance investments in energy efficiency and renewable energy. KfW acts on behalf of the German Government and the European Commission, in drawing on public funds and raising funds on the capital market. Unlike the planned GIB, KfW responds to individual investment requests that are made in conjunction with a partner lending institution, the latter taking ultimate full responsibility and credit risk. The GIB and KfW have recently signed a MoU to exchange experience, personnel, and pipeline opportunities.