

## USING INTERNATIONAL CLIMATE CHANGE FUNDS TO LEVERAGE PRIVATE INVESTMENT IN CLEAN TECHNOLOGY

### Key messages box:

- **IEA estimates that over \$300 trillion of investment in clean technologies will be needed by 2050**
- **COP16 in Cancun agreed to establish a Transitional Committee to set up a Green Climate Fund to raise \$100bn per year by 2020 for mitigation and adaptation projects in non-Annex 1 countries**
- **The private sector will be critical to achieving these levels of investment but leveraging private finance will require:**
  - **The right policy frameworks, including markets that enable development of competitive tariffs;**
  - **Carbon pricing;**
  - **Capacity building in developing countries; and**
  - **Use of a combination of Public Private Partnerships (PPPs), capital markets and infrastructure funds**

Alstom invests in many different kinds of projects around the world. We have invested significant sums in building manufacturing facilities, export hubs and R&D centres in key locations. This investment in our own facilities typically offers benefits (direct and indirect) to the host community such as jobs, development of local industrial capacity and technology transfer. We are also involved in arranging project finance for some of the major infrastructure (e.g. power plants, grid systems, rail) projects that we deliver

to our customers. This note focuses mainly on leverage of project finance, though some of the issues it raises (especially capacity building) will also be applicable to investment in corporate facilities.

### 'Crowding-in' private finance at scale

Investment will be attracted to projects with the best balance of risk and reward, so governments need to focus on both in order to scale up finance with the speed and volume required.

### **Risk**

Investors will assess projects on the basis of whether the level of risk offered is commensurate with the reward. But they find political and capacity risk difficult to manage because it is hard to forecast and price. These risks may include: policy or regulatory change, inconsistency of regulation or enforcement, nationalization, confiscation or expropriation of assets. These risks are especially problematic because of the mismatch between the long-term nature of investment (typically over decades) and the shorter-term lifetime of policy and regulation. Before investing, the private sector will look to the public sector to offset the worst downside risks.

Governments can reduce **political risk** to low carbon projects by:

- **Committing to long-term, predictable policy frameworks – e.g. market mechanisms to price carbon; Feed-in Tariffs or Power Purchase Agreements; tax incentives to encourage entrepreneurialism and investment (including FDI)**

- Planning and implementing major public infrastructure projects as transparently as possible – e.g. competitive tendering, payment by results
- Setting regulation and standards to support competition and commercial activity – e.g. setting performance standards, supporting transparent reporting and liability regimes, fair public procurement and protection for intellectual property rights.

Multilateral Development Banks, Export Credit Agencies and other International Financial Institutions can help address the **capacity risks** of operating in developing countries by:

- Assisting governments in planning for major infrastructure and helping them assess the potential of newer or transformational technologies
- Support policy development
- Supporting industrial capacity building by funding projects with potential to enhance local construction, manufacturing, supply chains, especially those that may also have R&D elements
- Support capacity building in local and regional financial services in developing countries to enhance finance flows, improve the availability of local finance (reducing currency risk) and supporting local industrial development (e.g. improving access to finance for supply chain partners)

## **Reward**

Incentivising private investment can be based on either lowering the costs of the project or enhancing its profitability.

### Lowering the cost of capital

Cost is directly linked to risk, so measures listed above that reduce risk will also help to lower cost, and especially those that target the cost of debt, through delayed payment of principals or lower interest rates. Now is an exceptionally difficult time to be raising finance, in the wake of the financial and sovereign debt crises in developed countries and the rising cost of commodities fuelling inflation in emerging economies. For sheer scale and for its long term maturities, the international bond market offers a potential source of funding but market participants will be highly sensitive to commercial returns and unwilling to finance loss-making or non viable projects unless there is a tariff or subsidy mechanism to compensate them. Institutional investors, another potential source of long-term investment, will primarily be seeking operational assets that generate reliable cash flow over their lifetime.

For these reasons, additional support may be necessary to lower the cost of financing projects by lowering the risk profile, such as:

- Subordinated debt – by which a public funder would offer finance but with a lower priority than other creditors for repayment
- Guarantees from IFIs for project bonds (another form of subordinated debt) along the lines of the EU's proposal for a Europe 2020 Project Bond Initiative
- Concessional long-term debt financing that deferred interest payments for the first few years to support highly capital-intensive projects
- Government loan guarantees to provide confidence to private sector investors
- Export credit guarantees, as already offered by many national governments to support exports, their use could be expanded regionally, e.g. offered on a European basis by the EIB.

## Supporting profitability

Many low carbon projects involve high up-front capital costs. Investors in major infrastructure projects are highly sensitive to CAPEX and will require the assurance of a viable retail market for their investment. Financial backers similarly will require assurances that projects will move into a required level of profit within a specific timeframe to generate enough cash flow to pay debt and equity investors. This may also require some targeted OPEX support to improve the Net Present Value of newer technologies. Policies that can help enhance the profitability of low carbon projects include:

- Pricing carbon, to create a long term incentive for low carbon investment and generate value from the sale of credits and offsets or from their use as collateral to raise finance
- Building power markets across regions based on transparent, harmonized regulation and standards, to develop a broad consumer retail market
- Advance market commitments to guarantee a viable market for products requiring high capital investment
- Feed-in tariffs (where grid-connected power is supplied through a market) to accelerate investment in low carbon technologies and offer preferential access to the grid.

## **Public-private risk sharing**

Public-Private Partnerships (PPPs) will be essential to attracting private investment in major public infrastructure projects. The PPP structure offers:

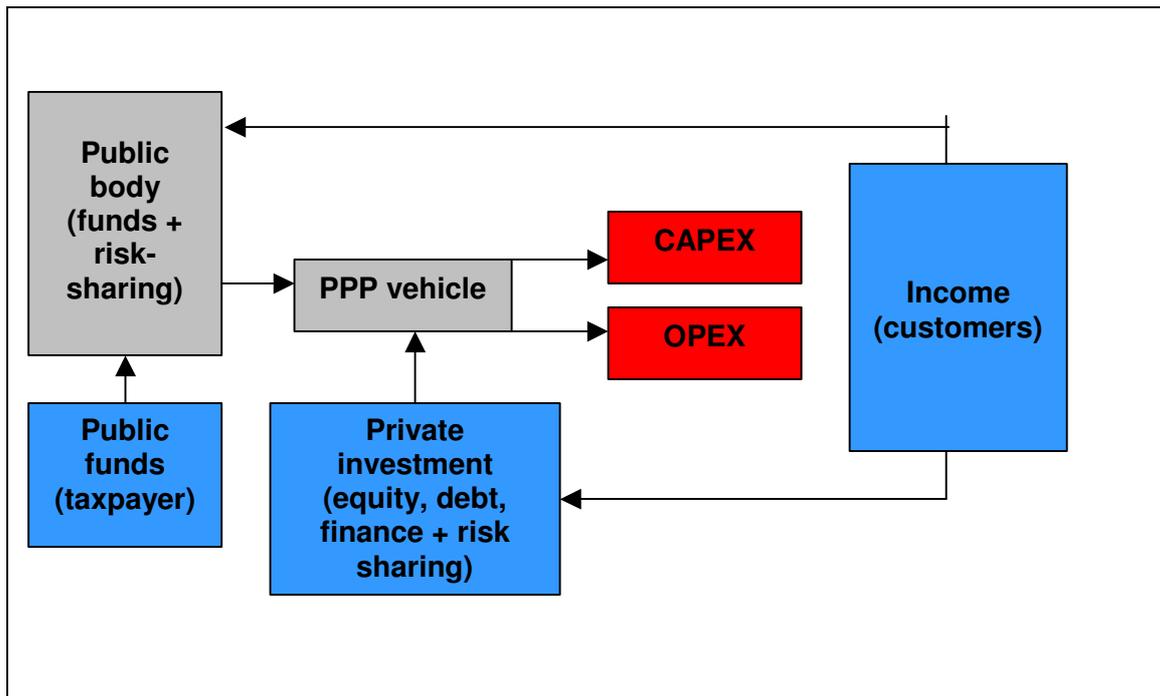
- flexibility of securing diverse sources of up-front finance and funding
- risk mitigation (by sharing it between public and private partners) where levels of risk may erode the Net Present Value of low carbon projects.

Specifically, PPP can help where projects are hard to finance on purely commercial terms, such as where:

- technology is deployed for the first time in a country (even if successfully demonstrated elsewhere)
- a government faces the challenge of simultaneously developing infrastructure, policy frameworks and supply chains.
- pilot or demonstration projects for newer technologies could support capacity building

Where PPP is used, it will be important for governments to be active participants, co-funding projects and ensuring that they are aligned with national development priorities and implementation plans. Early dialogue between governments and potential private sector partners is essential to ensure alignment and adequacy of funding levels. This underlines the importance of engaging business in the process of Technology Needs Assessments, Nationally Appropriate Mitigation Activities and other strategic planning of national infrastructure.

## Basic model of a PPP



## Risk allocation – an example

Risk held by public body	Risk held by private investors	Shared risk
<ul style="list-style-type: none"> <li>• Land acquisition</li> <li>• Modifications to requisition</li> <li>• Relevant changes to regulation/competitive framework for the project</li> <li>• Political risk</li> <li>• Capacity/infrastructure needs</li> </ul>	<ul style="list-style-type: none"> <li>• Design and construction costs</li> <li>• Operation &amp; maintenance costs</li> <li>• Service level</li> </ul>	<ul style="list-style-type: none"> <li>• Exchange rate</li> <li>• Inflation</li> <li>• Interest rates</li> <li>• Pricing of offering</li> <li>• Demand for offering</li> </ul>