

Industry Agenda

# Green Investment Report 2013

## Executive Summary



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# Executive Summary

**Greening global economic growth is the only way to satisfy the needs of today's population and up to 9 billion people by 2050**, driving development and well-being while reducing greenhouse gas emissions and increasing natural resource productivity.

**Considerable progress has been made in transitioning to green growth.**

Global investment in renewable energy in 2011 hit another record; up 17% on 2010 to US\$ 257 billion. This represented a six-fold increase from 2004 and was 93% higher than in 2007, the year before the global financial crisis. Global agricultural productivity growth rates are exceeding overall population growth rates, and since 1990, more than 2 billion people have gained access to improved drinking water sources. Energy efficiency is widely recognized as providing economic opportunities and improved environmental security, while the fuel efficiency of vehicles has more than doubled since the 1970s.

**Developing countries are playing a growing role in scaling up green investment.**

Cross-border and domestic investment originating from non-OECD countries grew 15-fold between 2004 and 2011 at a rate of 47% per year (compared with 27% per year for OECD-originating investment), albeit from a low base. Clean-energy asset financing originating from developing countries in 2012 is on track for the first time to exceed those originating from developed countries. This investment is due in part to the creation of green growth strategies by a number of developing country governments—to advance water resources, sustainable agriculture, and clean energy. Developing country public finance agencies can accelerate this trend by targeting more of their funds to leverage private finance.

**Such progress, however, remains inadequate.**

Progress in green investment continues to be outpaced by investment in fossil-fuel intensive, inefficient infrastructure. As a result, greenhouse gas levels are rising amid growing concerns that the world is moving beyond the point at which global warming can be contained within safe limits. A recently published World Bank report warns that the world is on track for a global average temperature increase of at least 4°C above pre-industrial levels, bringing further extreme heat-waves, hurricanes and life-threatening rises in sea levels. Natural resource productivity is not increasing quickly enough to stem the depletion of critical resources, notably water and forests. Soil erosion is accelerating and fish stocks are declining precipitously. Such trends, combined with growing climatic instability, are driving up commodity prices, threatening food security in a growing number of communities.

**Significant barriers exist to securing the required scale and pace of progress.**

The continuing global economic crisis has dimmed longer-term outlooks by business and governments. Financing for much-needed infrastructure is constrained by limits in public finance, policy and market uncertainty and the unintended consequences of financial market reform. Legacy fiscal measures such as fossil-fuel subsidies combine with the slow progress of international climate negotiations to weaken market signals that might otherwise incentivize green investment. Lack of awareness of private finance providers of green growth opportunities and continued investment in fossil-based resources are restricting progress.

**Greening investment at scale is a precondition for achieving sustainable growth.**

The investment required for the water, agriculture, telecoms, power, transport, buildings, industrial and forestry sectors, according to current growth projections, stands at about US\$ 5 trillion per year to 2020. Such business as usual investment will not deliver stable growth and prosperity. New kinds of investments are needed that also achieve sustainability goals. Beyond the known infrastructure investment barriers and constraints, the challenge will be to enable an unprecedented shift in long-term investment from conventional to green alternatives to avoid locking in less efficient, emissions-intensive technologies for decades to come.

Taking the power sector as an example, investment in fossil-fuel intensive infrastructure is increasing annually and is higher than clean-energy investment. The International Energy Agency (IEA) predicts that an unprecedented long-term shift in investment over the next few decades from fossil fuels towards a cleaner energy portfolio is needed to avoid dangerous climate change. This is achievable by re-evaluating investment priorities, shifting incentives, building capacity, investment-grade policies and improving governance.

Figure i: The evolution of global new asset finance flows for clean energy (\$ billions)

Note: Data includes new-build asset finance only. Source: Bloomberg New Energy Finance.

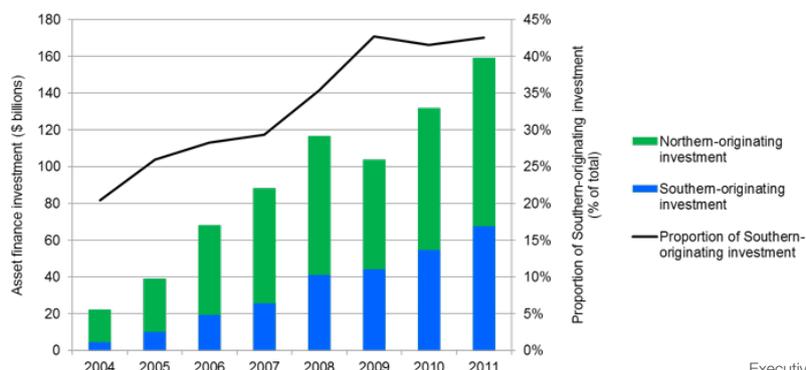
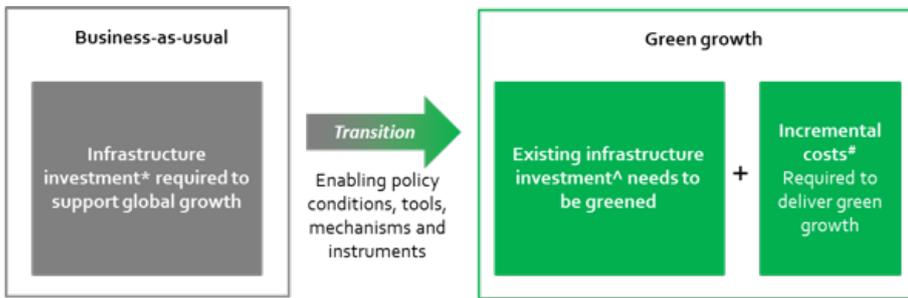


Figure ii: Conceptual assessment framework

Notes: \*Sectors assessed include water, agriculture, forestry, telecommunications, transport, power, buildings and industry.  
 Quantity of business-as-usual investment that needs to be 'greened' is not assessed.  
 #Sectors assessed limited to transport vehicles, power, industry, buildings and forestry.



There are additional, incremental investment needs of at least US\$ 0.7 trillion per year to meet the climate-change challenge. This investment is needed for clean energy infrastructure, low-carbon transport, energy efficiency and forestry to limit the global average temperature increase to 2°C above pre-industrial levels. While the IEA predicts that corresponding fuel savings will more than compensate for these investment needs, there are significant policy, market and financial barriers preventing business from taking advantage of these profitable investments. Additional costs needed to support green growth, beyond business-as-usual spending, in other sectors such as agriculture and water are also not well known; further analysis is needed to better understand the full set of green investments needs across these areas.

Closing the green investment gap is affordable but needs to be supported by effective public policy. Public resources are limited, especially during the current period of austerity measures across much of the OECD. Therefore, reliance on public-sector investment must be minimised, and more attention paid to attracting private finance, which is at the core of the green growth transition. Global assets being managed in the OECD amount to US\$ 71 trillion; but deploying these assets toward green infrastructure is limited by policy distortions and uncertainties, market and technology risks, and reinforced by the reluctance of investors to take a longer-term view.

Experience demonstrates the potential for closing the green investment gap by mobilizing private finance through the smart use of limited public finance. Evidence from climate-specific investment illustrate that the targeted use of public finance can scale up private financial flows into green investment through measures such as guarantees, insurance products and incentives, combined with the right policy support.

While leverage ratios are difficult to compare across projects, countries and instruments, ratios of 1:5 and above are not uncommon, and there are some cases of instruments—such as grants—delivering much higher ratios. There is strong potential for increased lending, advancing and rolling out de-risking instruments, using carbon credit revenues, and targeting grant money combined with technical assistance to attract much greater private investment.

The green investment gap can be addressed through the use of such instruments. If public-sector investment can be increased to US\$ 130 billion and be more effectively targeted, it could mobilize private capital in the range of US\$ 570 billion. This would come close to achieving the US \$0.7 trillion of incremental investment required to move the world onto a green growth pathway. However, greening the remaining US\$ 5 trillion in infrastructure investment will remain a major challenge requiring policy reform, a stronger push toward investment-grade policy.

Figure iii: Total estimated investment requirements under business as usual and estimated additional costs under a 2°C scenario

Sources: OECD<sup>i</sup>, IEA<sup>iv</sup>, Food and Agriculture Organization of the United Nations (FAO)<sup>v</sup>, United Nations Environment Programme (UNEP)<sup>vi</sup>

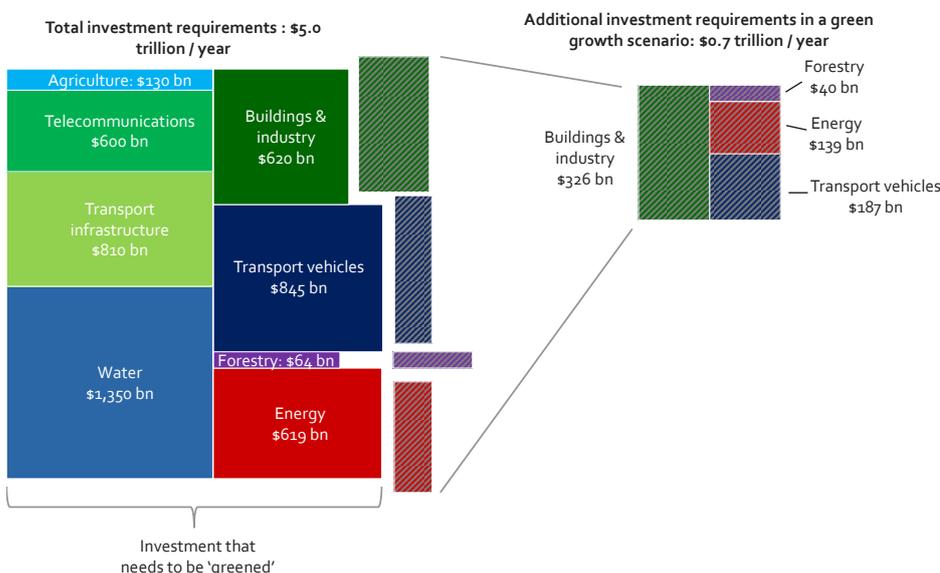
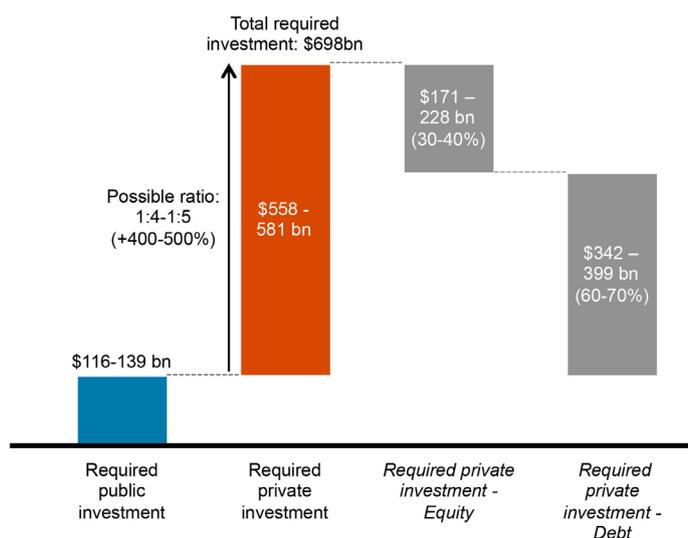


Figure iv: Potential public-private finance mobilization to close the cost gap for climate-specific investment



**Leadership by governments, international financial institutions and private investors is needed to address the green investment gap.** This first Green Investment report includes four recommendations that, if understood and acted on, could address the gap in green investment:

1. **Greening investment, and thereby the economy, is the only option.** Building from the 2012 G20 Summit, G20 leaders should reaffirm that greening the economy is the only route to sustained growth and development.
2. **The transition is financially viable.** The incremental costs of greening growth are insignificant compared with the costs of inaction, with fuel savings compensating in large part for the investment requirements. To accelerate and guide the green growth transformation, governments, investors and international organizations must improve efforts to overcome barriers and improve global tracking, analysis and promotion of green investment.
3. **The public interest and the long-term state of public finances require both investment-grade policy frameworks and targeted public finance.** The G20 governments must accelerate the phasing-out of fossil-fuel subsidies, enact long-term carbon price signals, enable greater free trade in green technologies, and expand investment in climate adaptation. Investment-grade public policy is an important prerequisite to engage the private sector. Public financial institutions need to more actively engage private investors through scaling up proven instruments and mechanisms, while also designing new funds and tools to attract private finance for new investment opportunities.

4. **Private investors need to take a new approach to benefit from green investment opportunities.** Green infrastructure investment provides attractive long-term, risk-adjusted returns. Private investors should not wait for perfect public policies to remove any reasonable risk. They can enhance comparative risk analysis of green investment by making greater use of investor forums and engagement with public finance agencies to advance new financing solutions that open up an attractive, sustainable market.

<sup>i</sup> Bloomberg New Energy Finance Asset Finance Database, 2012.

<sup>ii</sup> OECD (2006), Infrastructure to 2030: Telecom, Land Transport, Water and Electricity, OECD Publishing.

<sup>iii</sup> OECD (2012), Strategic Transport Infrastructure Needs to 2030, OECD Publishing.

<sup>iv</sup> Energy Technology Perspectives, 2012, IEA.

<sup>v</sup> Capital Requirements for Agriculture in Developing Countries to 2050, 2009, FAO; [http://www.fao.org/fileadmin/templates/esa/Global\\_persepectives/Long\\_term\\_papers/Capital-requirements-agriculture.pdf](http://www.fao.org/fileadmin/templates/esa/Global_persepectives/Long_term_papers/Capital-requirements-agriculture.pdf).

<sup>vi</sup> Forests in a Green Economy: A Synthesis, 2011, UNEP; [http://www.unep.org/pdf/PressReleases/UNEP-ForestsGreenEco-basse\\_def\\_version\\_normale.pdf](http://www.unep.org/pdf/PressReleases/UNEP-ForestsGreenEco-basse_def_version_normale.pdf).



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