



How to finance the transition to a low carbon economy – investment requirements for infrastructure development

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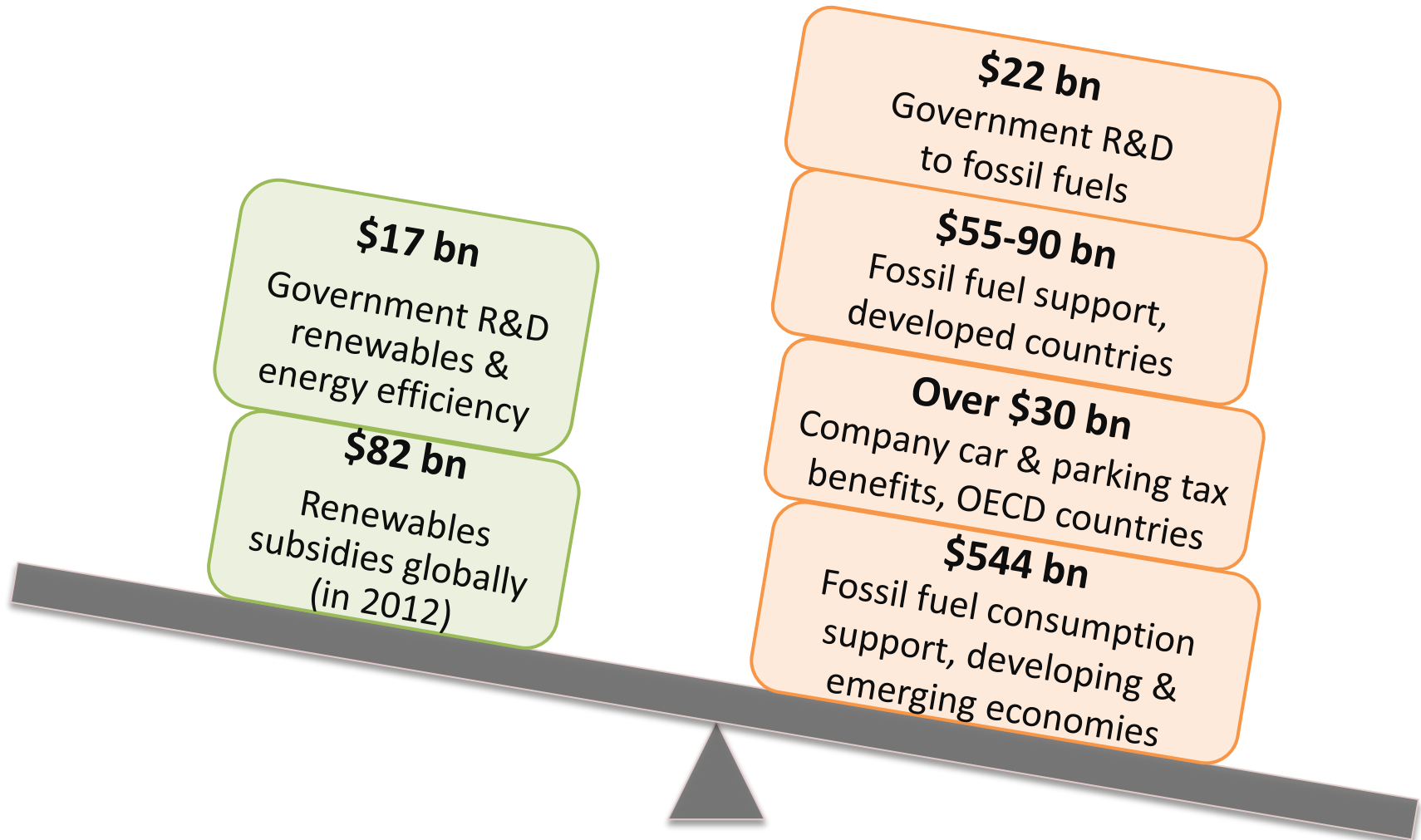
The Ny-Ålesund Symposium 2014

Breaking the Climate Stalemate

May 27, 2014



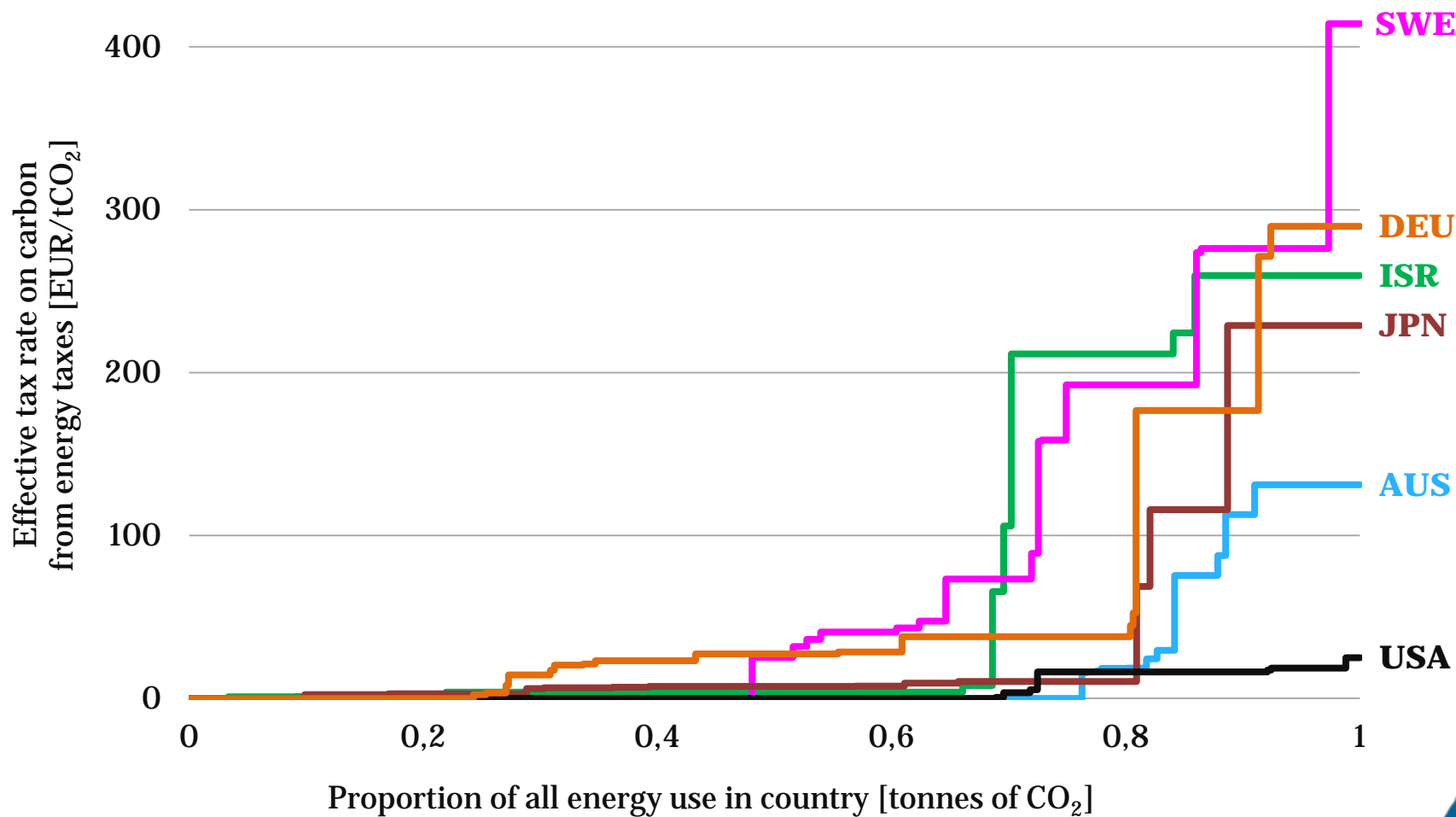
Are Governments sending the right policy signals?



Sources: OECD (2013), Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels; IEA (2013), World Energy Outlook; IEA (2013), Tracking Clean Energy Progress Report; OECD (2013), Effective Carbon Prices.



Effective energy tax rates on a carbon-emissions basis in selected countries

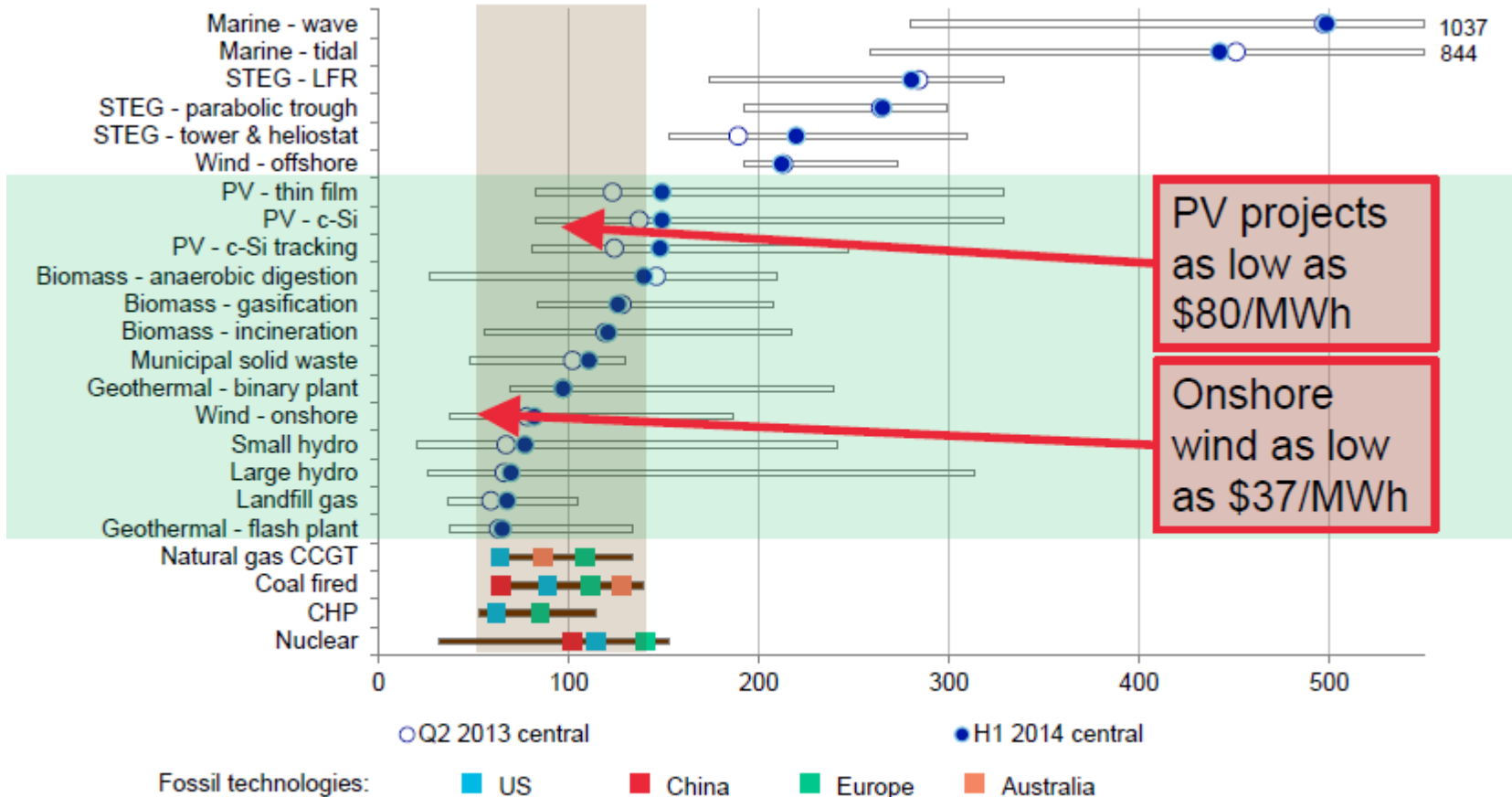


Source: OECD (2013), Taxing Energy Use: A Graphical Analysis.



Steep price declines for solar PV and wind equipment

à PV experience curve shows price declines over 1976-2012 (2012 \$/W)



PV projects
as low as
\$80/MWh

Onshore
wind as low
as \$37/MWh

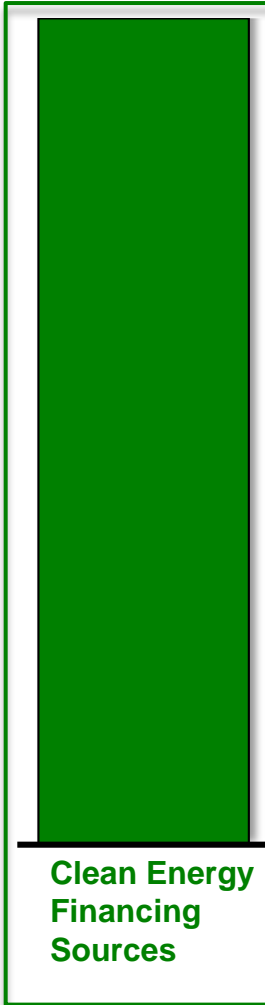
Note: LCOEs for coal and CCGTs in Europe and Australia assume a carbon price of \$20/t. No carbon prices are assumed for China and the US. Source: Bloomberg New Energy Finance

Note: Prices inflation indexed to US PPI

Source: BNEF Database (OECD Subscription), Paul Maycock, International Renewable Energy Agency, IEA (2013)



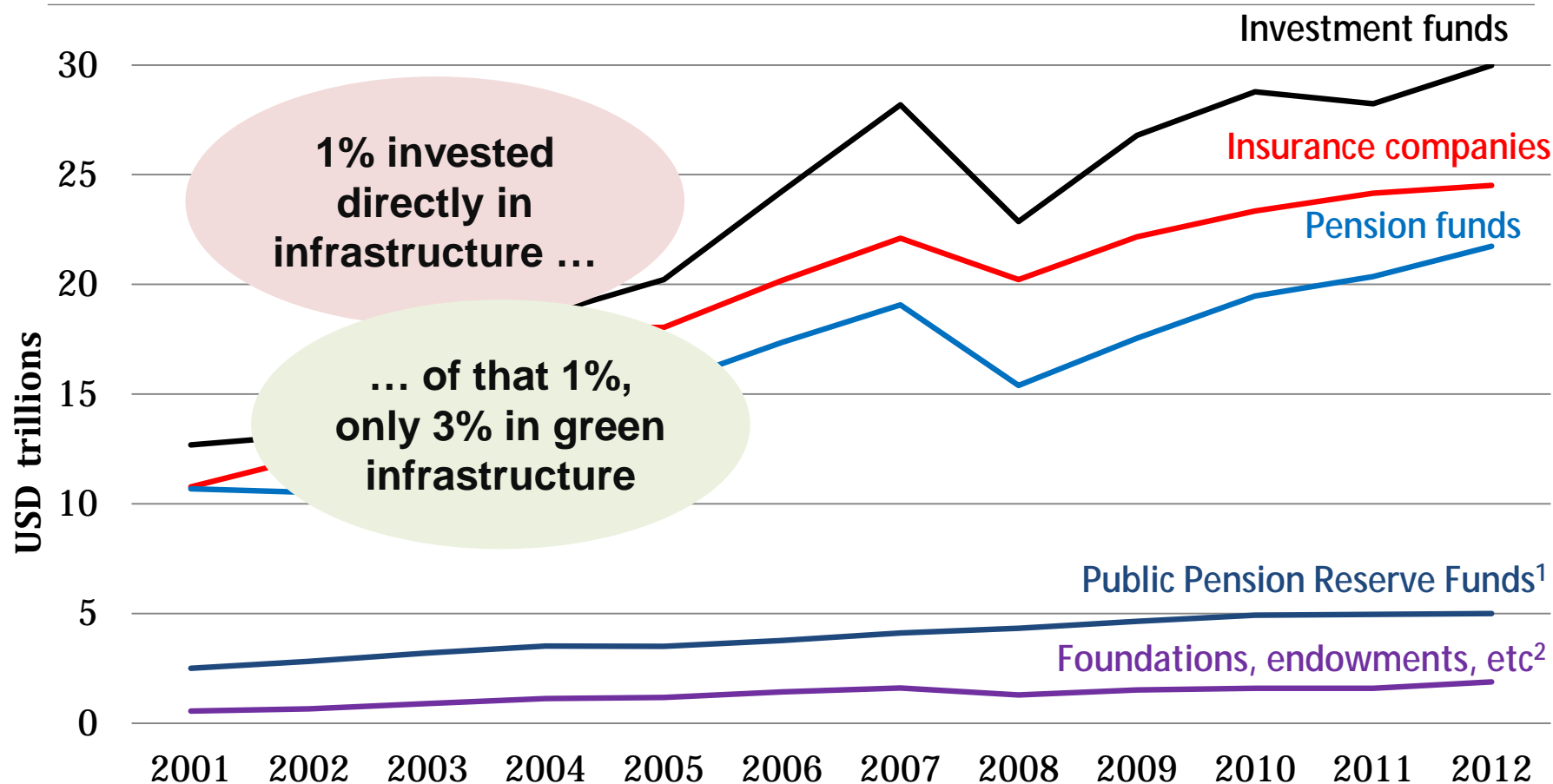
Landscape of investment financing sources for clean energy in the average OECD country (illustrative example, varies by country). In non-OECD countries the public sector typically accounts for 2/3 and private sector 1/3.



Source: OECD Analysis based on OECD (2014, forthcoming); Kaminker et al. (2013) Institutional Investors and Green Infrastructure Investments: Selected Case Studies; OECD (2012) The Role of Institutional Investors in Financing Clean Energy; G20/WB/FSB/OECD (2012) European Bank Deleveraging and Global Credit Conditions; G20/OECD (2012) The Role of Banks, Equity Markets and Institutional Investors in Long-Term Financing for Growth and Development; BNEF database.



... with \$83 trillion (2012) in assets managed by institutional investors in OECD countries



Note: Book reserves not included. Pension and insurance companies' assets include assets invested in mutual funds, which may be also counted in investment funds.

Source: OECD Global Pension Statistics, Global Insurance Statistics and Institutional Investors databases, and OECD estimates.



Key barriers to scaling up institutional investor participation

1

Issues with infrastructure investments

- à Direct investing challenges
- à Regulatory and policy issues
- à Lack of project pipeline and quality historical data

2

Issues particular to green investments

- à Risk/return imbalance
- à Unpredictable, fragmented, complex and short duration policy support
- à Special species of risk

3

Lack of suitable investment vehicles

- à Fund and vehicle design
- à Nascent green bond markets
- à Challenges with securitisation
- à Credit and ratings issues



Policy options for addressing the investment challenges

Weak & uncertain environmental, energy and climate policies

Lack of suitable financial vehicles

Regulatory policies with unintended consequences

Lack of information and data to assess transactions and underlying risks

Ensure a stable and integrated policy environment

Address market failures (incl. lack of carbon pricing)

Provide a national infrastructure road map

Facilitate the development of appropriate financing vehicles or de-risking instruments

Promote public-private dialogue on green investments

Promote market transparency and improve data on infrastructure investment

Reduce the transaction costs of green investment

OECD, MCM 2014:

OECD countries commit to work towards a climate deal for 2015

“While policies adopted by different countries will need to reflect their individual circumstances, we recognise the importance of aligning policies across all relevant areas”.¹

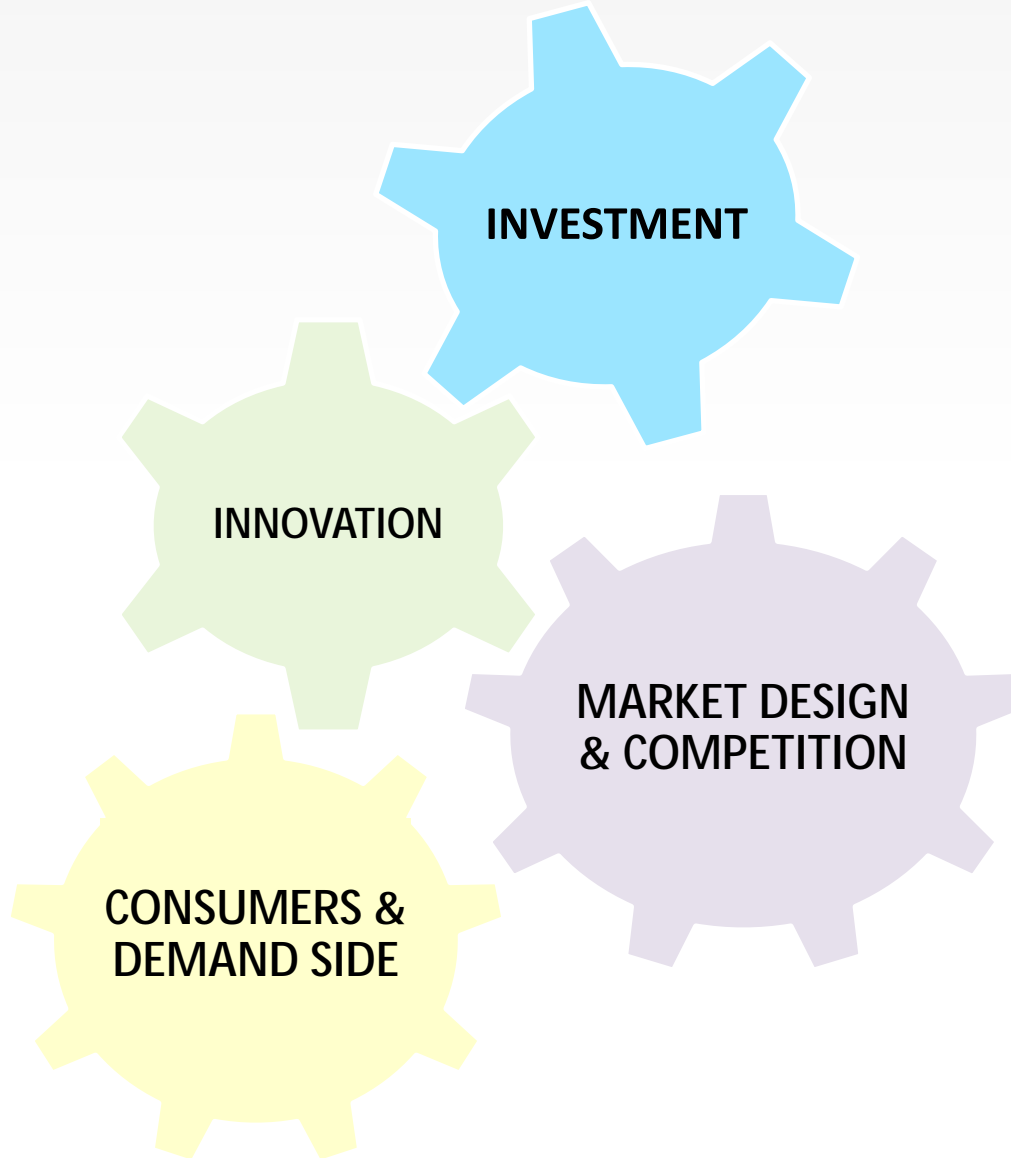
¹ These areas include economic, fiscal, financial, competition, employment, social, environmental, energy, investment, trade, development co-operation, innovation, agriculture and sustainable food production, regional as well as urban, and transport policies.

OECD, MCM 2014:

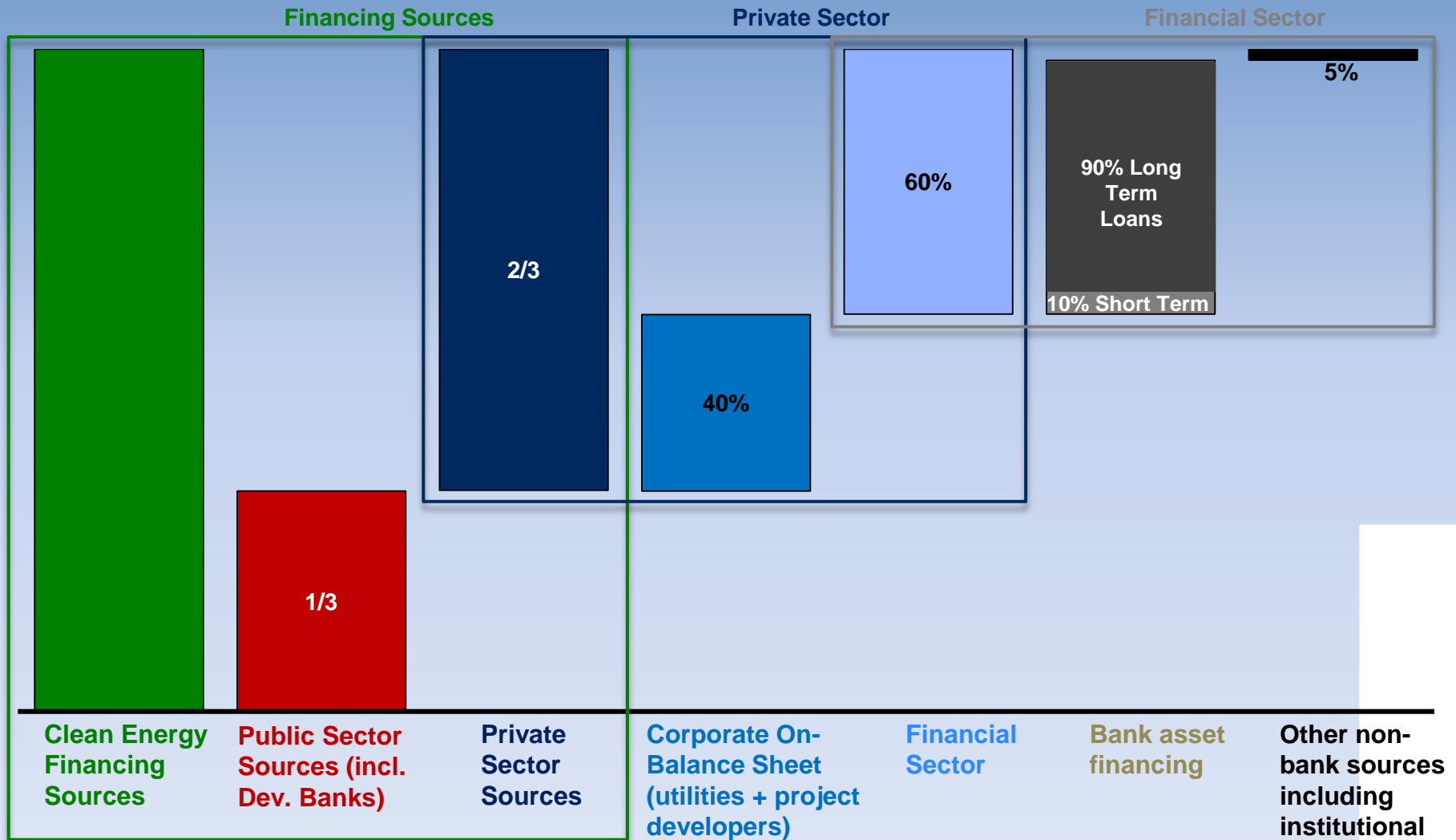
OECD countries commit to work towards a climate deal for 2015

“ ... we invite the OECD, in cooperation with the IEA, the NEA and the ITF, to ... examine how to better align policies across different areas for a successful economic transition of all countries to sustainable low-carbon and climate-resilient economies and report to the 2015 OECD Ministerial Council Meeting.”

Not about the environment but transforming the economy



Landscape of investment financing sources for clean energy in the average OECD country 2004-2014 (illustrative example, varies by country). In non-OECD the public sector typically accounts for 2/3 and private sector 1/3.



Source: OECD Analysis based on OECD (2014, forthcoming); Kaminker et al. (2013) Institutional Investors and Green Infrastructure Investments: Selected Case Studies; OECD (2012) The Role of Institutional Investors in Financing Clean Energy; G20/WB/FSB/OECD (2012) European Bank Deleveraging and Global Credit Conditions; G20/OECD (2012) The Role of Banks, Equity Markets and Institutional Investors in Long-Term Financing for Growth and Development; BNEF database.