



Department  
of Energy &  
Climate Change

# MISSION INNOVATION

Accelerating the Clean Energy Revolution

[www.mission-innovation.net](http://www.mission-innovation.net)

*Fostering greater multilateral collaboration  
to make clean energy widely affordable*

Dr Paul Durrant

Head of Energy Innovation Policy,  
UK Department of Energy & Climate Change

10<sup>th</sup> December 2015

# The case for action on clean energy RD&D collaboration

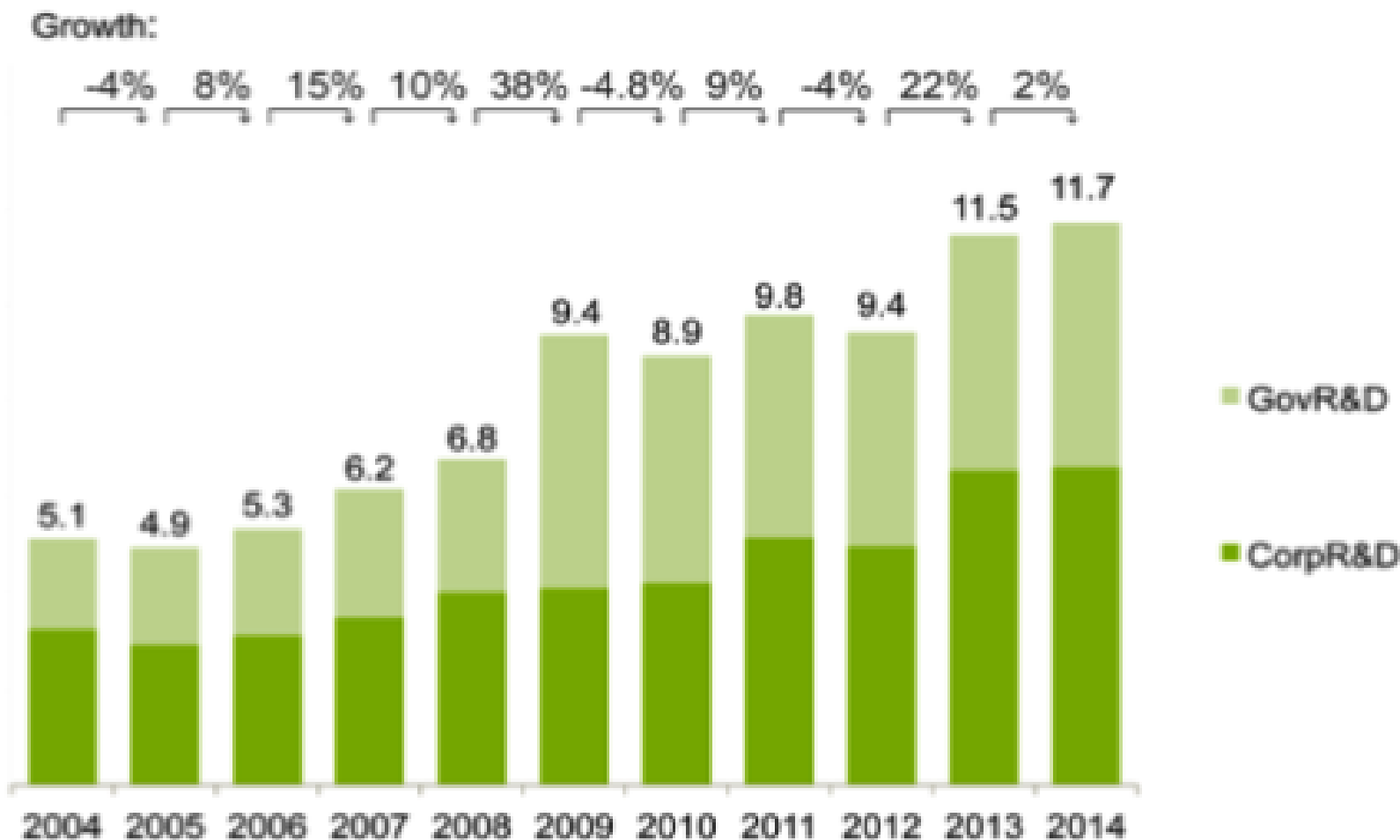
- Innovation in Clean Energy Technologies is critical
- IEA Energy Technology Perspectives 2015 states that:

*“Innovation support for technologies across all energy sectors provides the greatest potential to keep 2 degree climate goal achievable”*

- COP21, Lima Paris Action Agenda, post-2015 focus on delivery.
- Need to accelerate progress to reduce clean energy costs.



# Global R&D Investment in Renewable Energy 2004 – 2014 \$bn



# Building on Existing International Initiatives



Department  
of Energy &  
Climate Change

Lots of good  
work. Scope /  
need to do more.



International  
Energy Agency

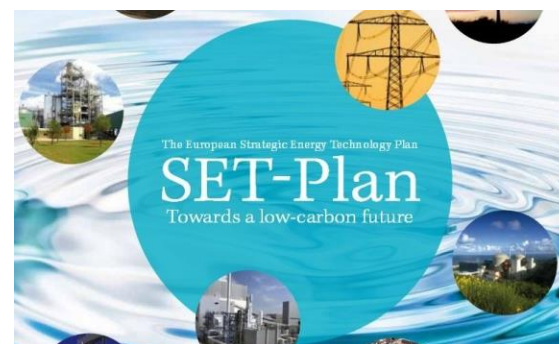


**CLEAN ENERGY**  
MINISTERIAL

Accelerating the Transition to Clean Energy Technologies



**IRENA**  
International Renewable Energy Agency



Strengthen  
initiatives:

- High level strategic direction & support;
- Transparency – be clear on who is doing what;
- Need to follow through and implement roadmaps.

# MISSION INNOVATION

Accelerating the Clean Energy Revolution

[www.mission-innovation.net](http://www.mission-innovation.net)

3 Pillars to Mission Innovation:

## 1. Double Governmental Investment in Clean Energy Innovation

- 20 countries pledging to double public funding for relevant clean energy RD&D
- UK's commitment – doubling relevant RD&D investment to \$600m in 2020/21.



Australia



Brazil



Canada



Chile



China



Denmark



France



Germany



India



Indonesia



Italy



Japan



Mexico



Norway



Saudi Arabia



South Korea



Sweden



United Arab Emirates



United Kingdom



United States

## 2. Private Sector and Business Leadership.

- Close collaboration with private sector investors.
- *Breakthrough Energy Coalition* - to date 29 investors from 10 countries
- Investment of patient capital at unprecedented levels into early-stage technology development. Principles:
  - **Invest Early** – in transformative ideas, getting them out of the lab, on the path to commercialization. Flexible approach to early stage investments.
  - **Invest Broadly** – don't know where the best ideas will come from, so will invest across a number of sectors.
  - **Invest Boldly** – looking for outliers, potential to be dramatically more efficient, scalable, or cheaper.
  - **Invest Wisely** – will work in partnership to ensure in depth technical review and analysis.
  - **Invest Together** – government research pipelines are enablers, will focus investments in Mission Innovation countries.





### 3. Fostering increased transparency and strengthening collaboration.

- Additional funding is important .... but also must invest wisely.
- UK has championed this need (through GAP & ICE).
- UK's view – we need:
  - a. a better, shared, high-level understanding of what we are trying to achieve;
  - b. greater transparency of who is doing what, what progress is being made and what remains to be done;
  - c. increased collaboration between public programmes and between public and private investors in areas of mutual benefit.
  - d. a lean delivery process that utilises and builds on the best of what we have already.



**Global Apollo Program**  
TO COMBAT CLIMATE CHANGE

# How to deliver on the promise of MI?



Department  
of Energy &  
Climate Change

- This is now the focus for the Mission Innovation partners.
- Lots of past experience to draw upon – positive and negative.
- UK been looking closely this.
- Some key insights:
  - Be clear on and get buy-in to objectives up front.
  - Pay attention to the incentives for all parties.
  - Focus – on activities where collaboration can bring maximum impact.
  - Know when to stop.

**Thanks for your attention.**



## Carbon Trust's '**United Innovations**' report

Looks at how to achieve cost-competitive clean energy through global collaboration. Concludes that through innovation:

*“The world could save an estimated US\$550 billion on the cost of deploying clean energy technologies over the next decade”*





Department  
of Energy &  
Climate Change