Fostering International Collaboration to Bring Forth Energy Technology's Potential in a Low-Carbon Future

COP-19 Side Event : Enhance Mitigation Globally Through Development, Diffusion and Deployment of Low-Carbon Technologies

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Relationship between Energy Technology and Energy Policy

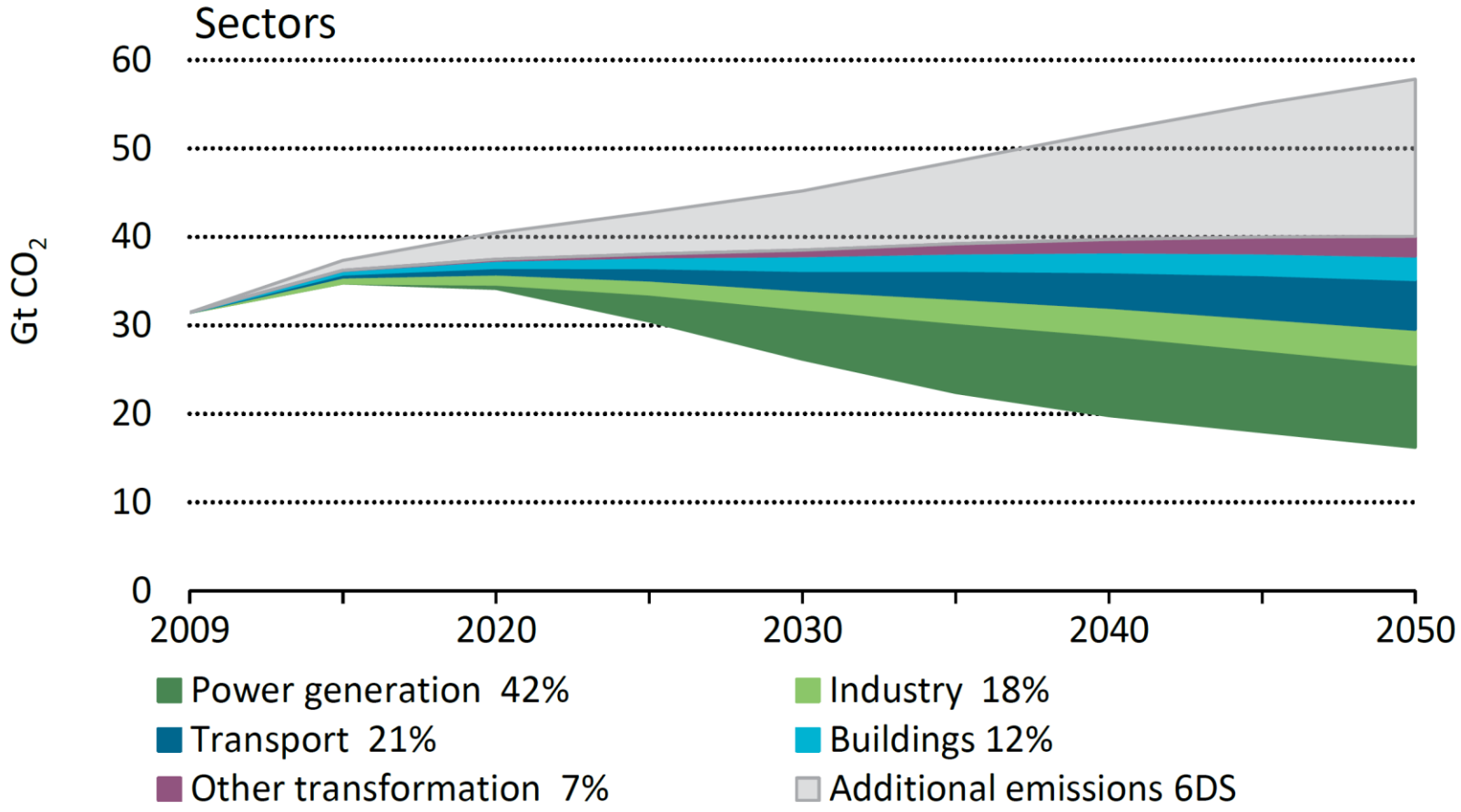
- Technology R&D supports policy
  - Focus development efforts on areas with the highest potential contribution priority policy objectives
  - Provide key information on technology impact to enable successful policy development and implementation
- Policy supports Technology R&D
  - Channel resources to achieve R&D objectives
  - Address non-technical barriers to technology deployment
- Communication between policy and technical experts is key
  - Science can highlight policy opportunities and risks
  - Policy direction must prioritise R&D efforts

IEA's programme of work in energy technology

- Where do we need to go?
- Where are we today?
- How do we get there?

Energy Technology Scenarios:
Providing a vision for a sustainable future

ETP 2012



The core of a clean energy system is low-carbon electricity that diffuses into all end-use sectors.

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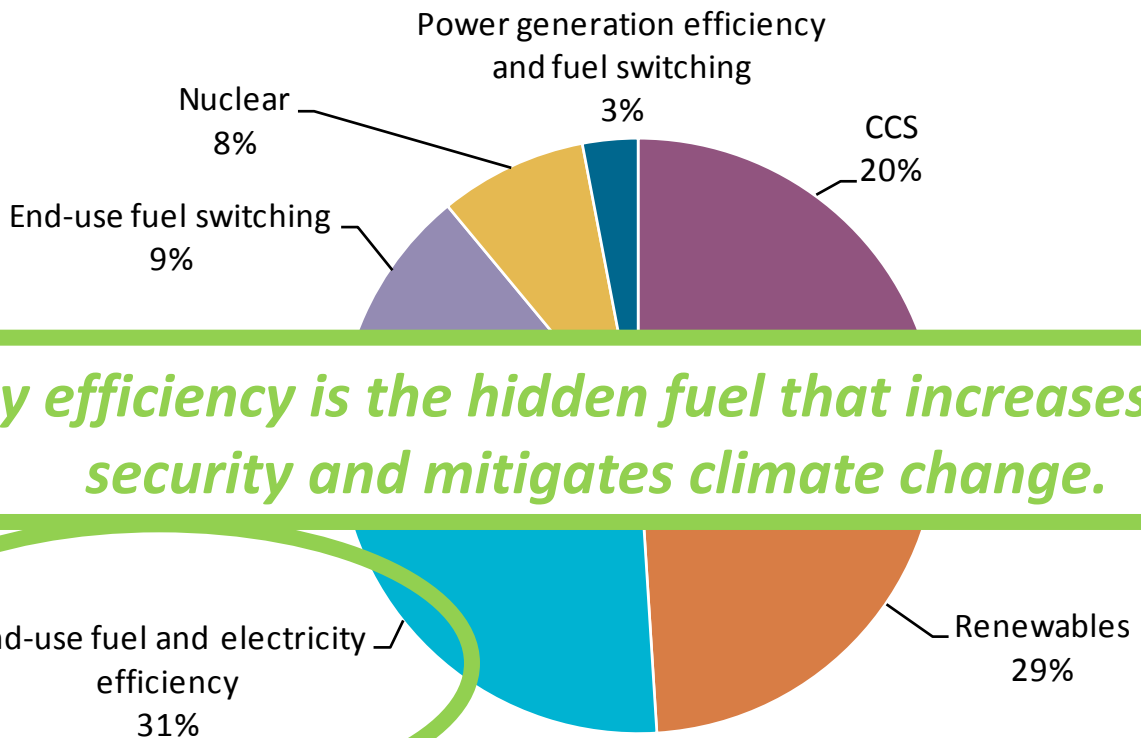
A portfolio of technologies is required…

ETP 2012

Contributions to emissions reductions in the ETP 2012 2DS vs the 4DS



Energy efficiency is the hidden fuel that increases energy security and mitigates climate change.

If any part of the portfolio is missing, other parts will need to increase their burden

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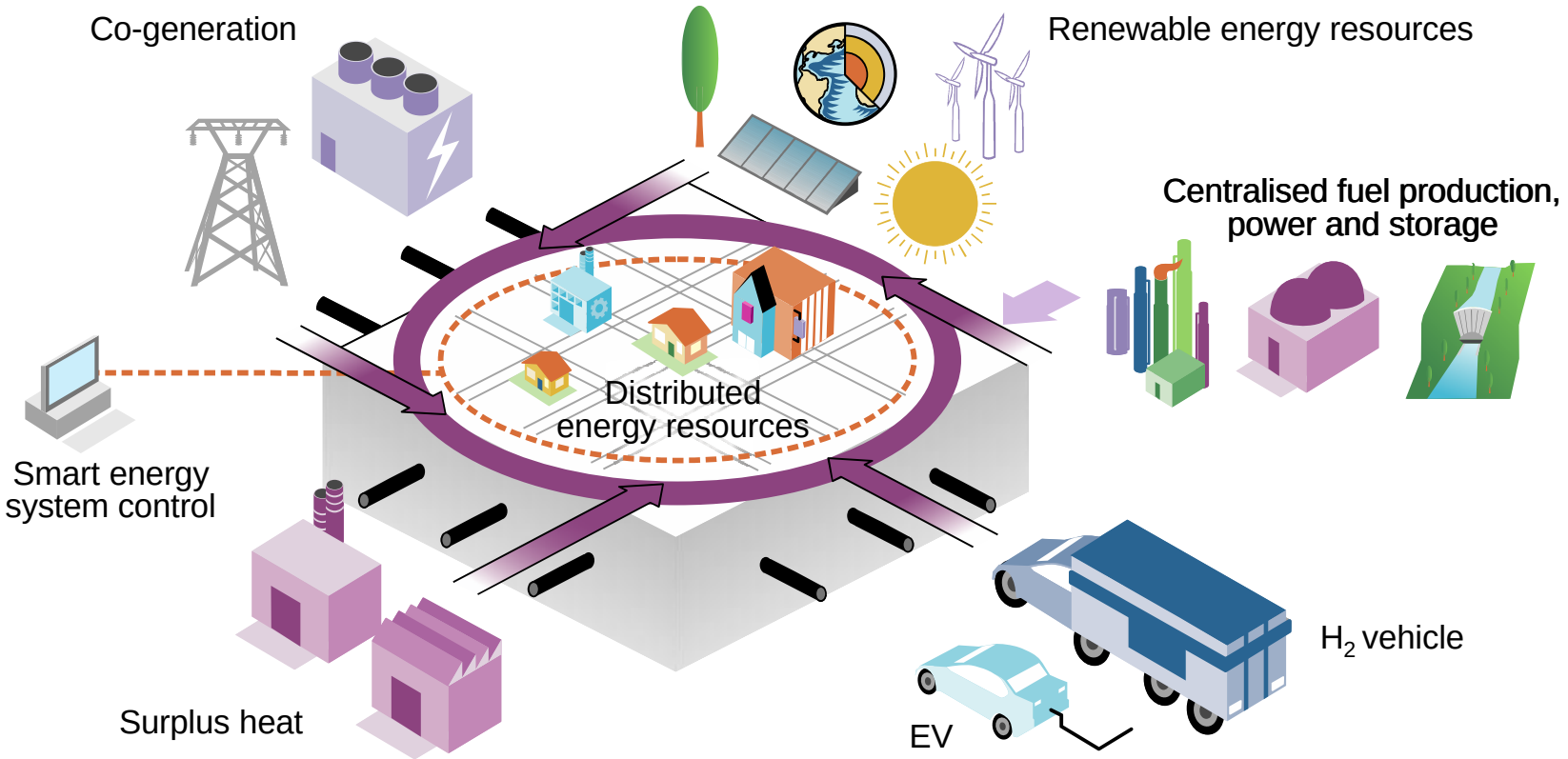
… into a smart, integrated system

ETP 2012



A sustainable energy system is a smarter, more unified and integrated energy system

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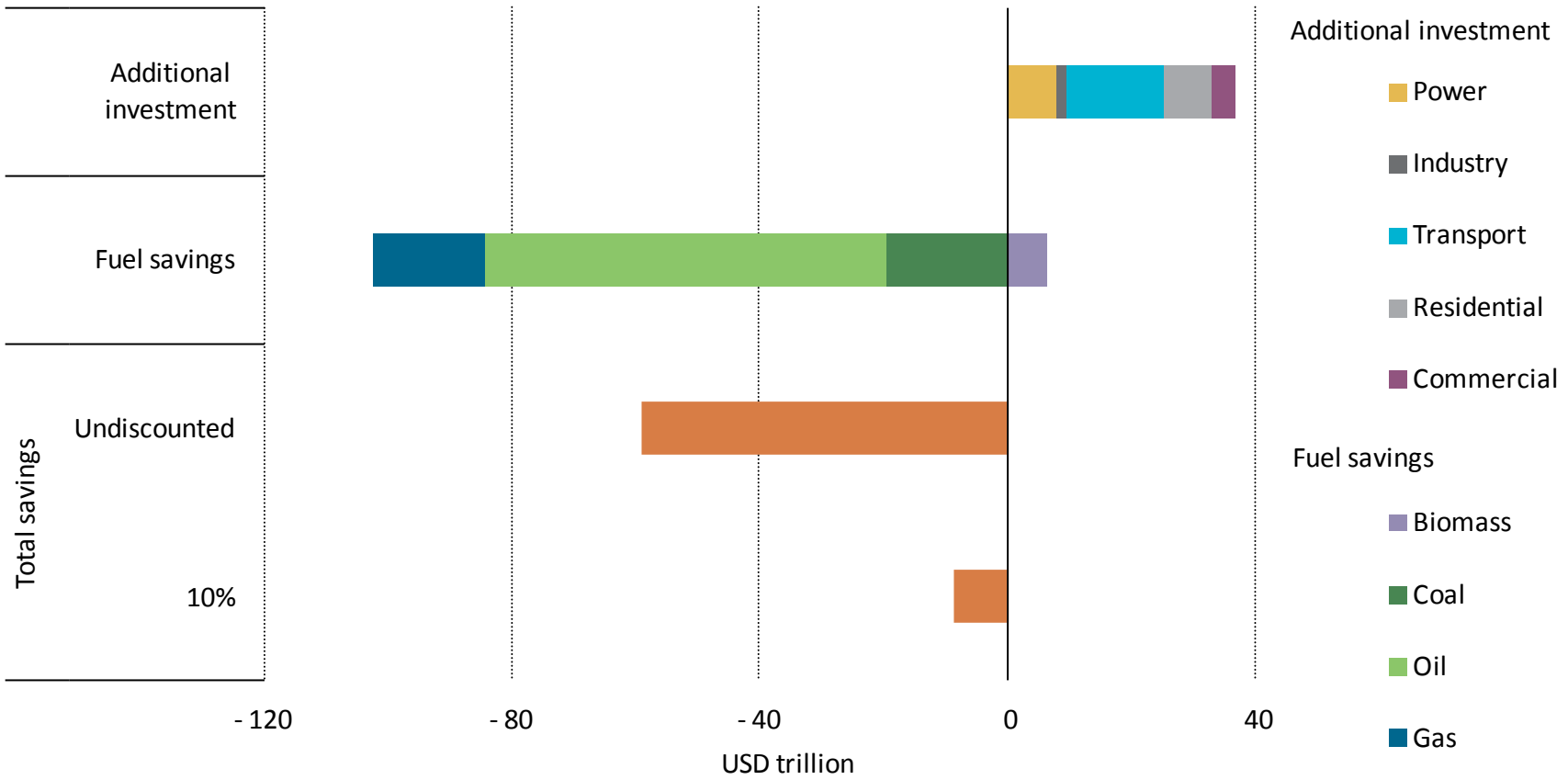
Clean energy investment pays off

ETP 2012



Every additional dollar invested in clean energy can generate 3 dollars in return.

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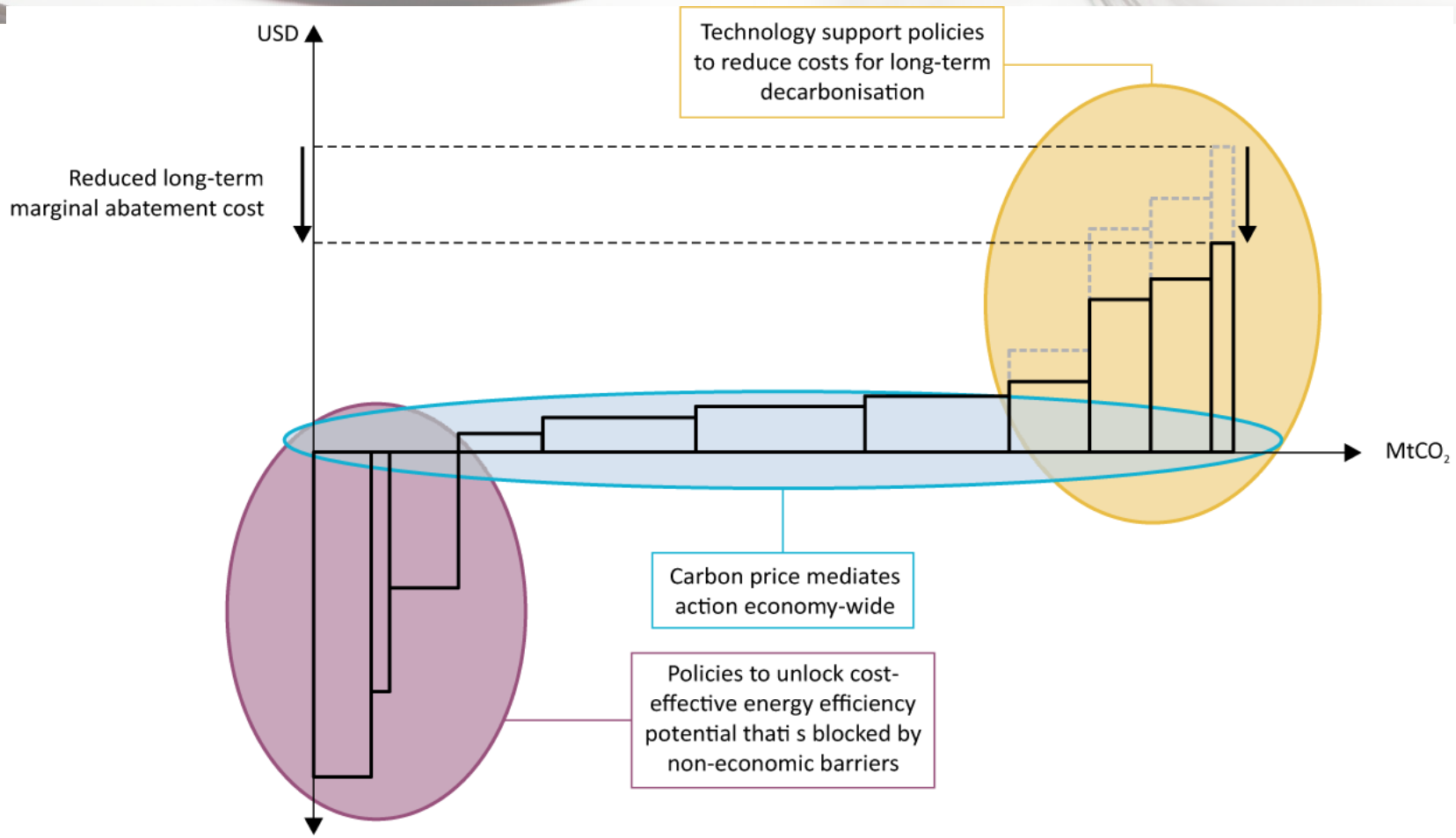
The core policy mix

ETP 2012



- Carbon price, energy efficiency policy and technology support are the backbone of a least-cost package to achieve a sustainable energy system.

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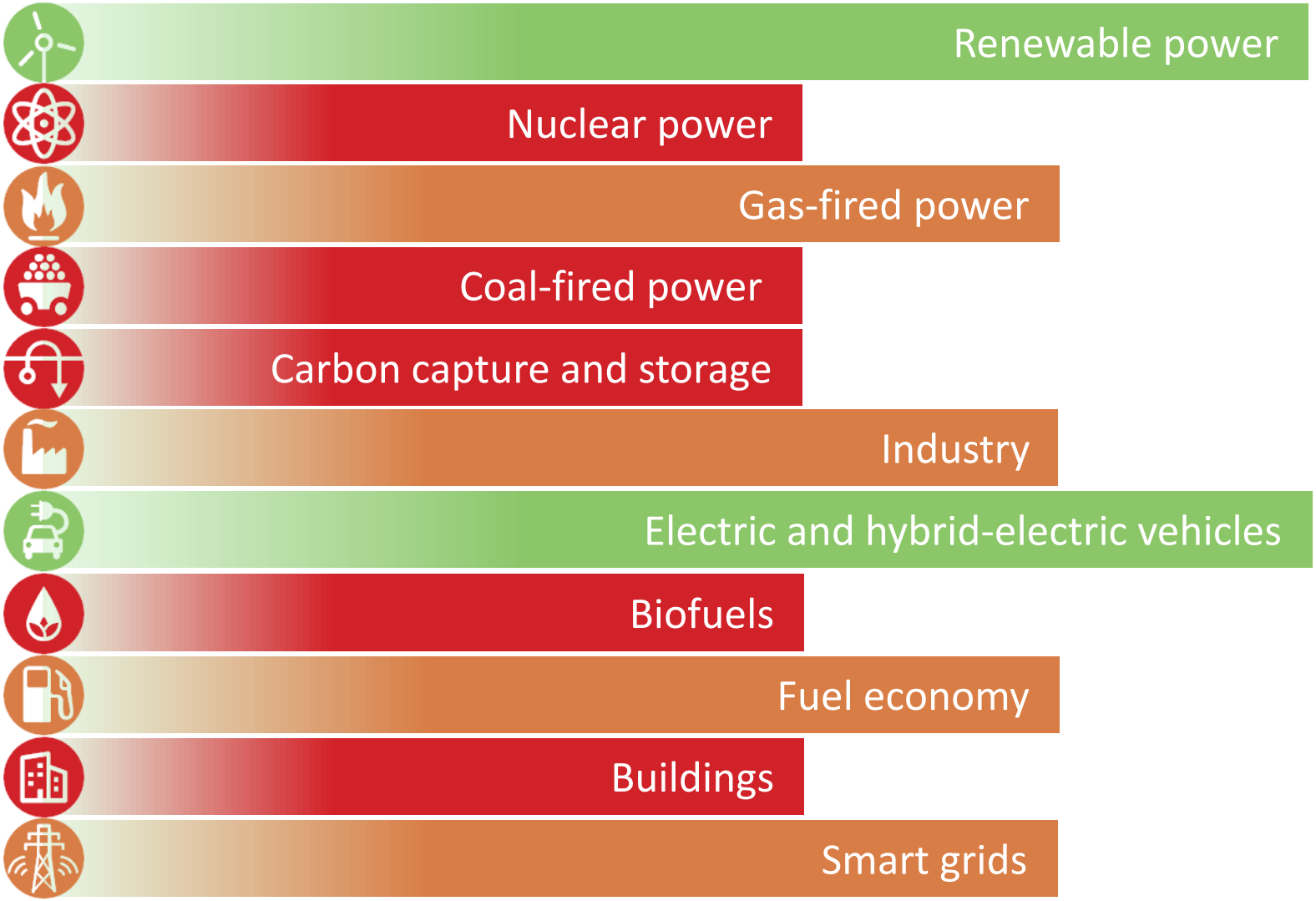
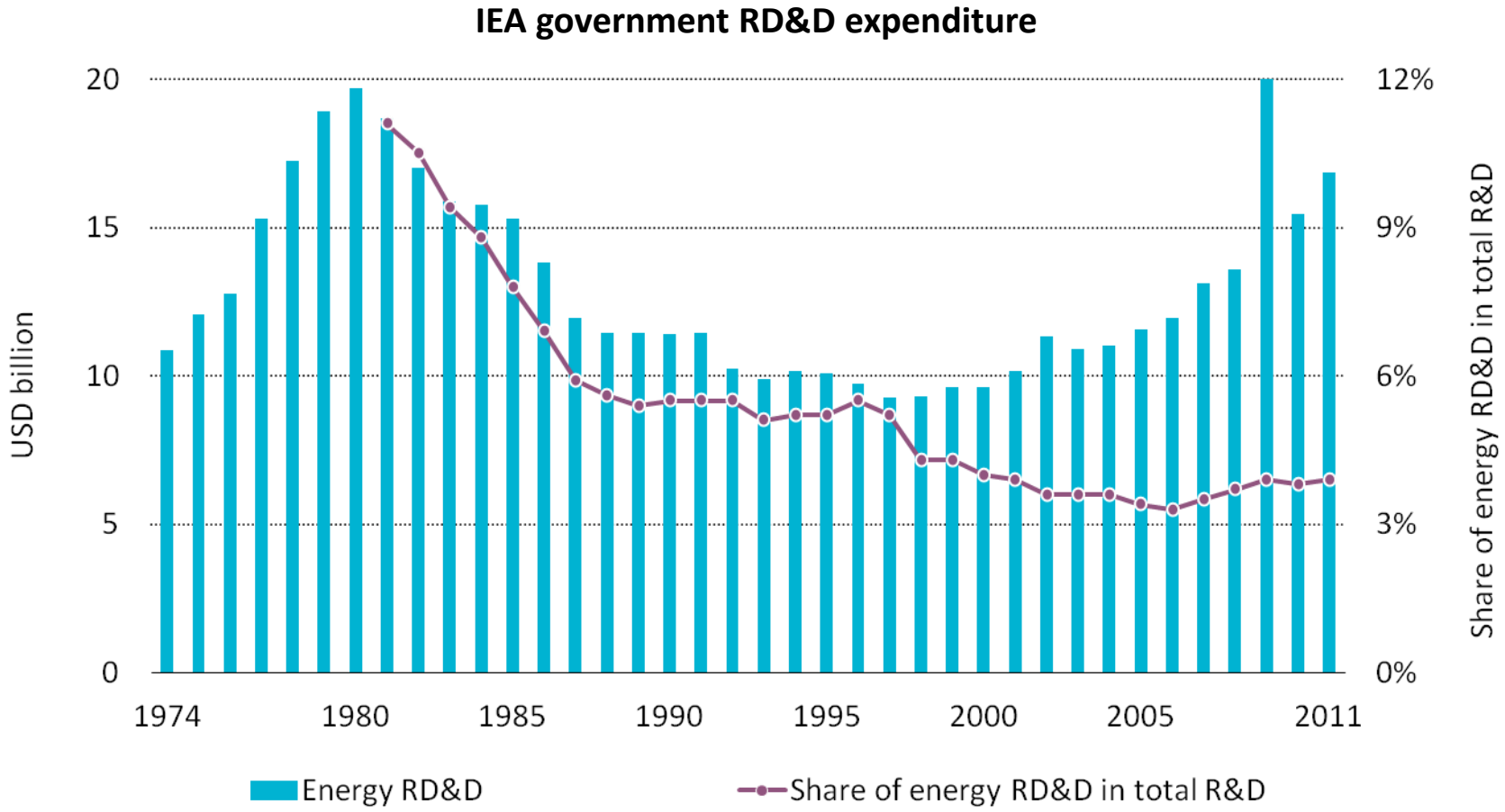
Tracking Clean Energy Progress



Energy RD&D: declining share but more wisely spent

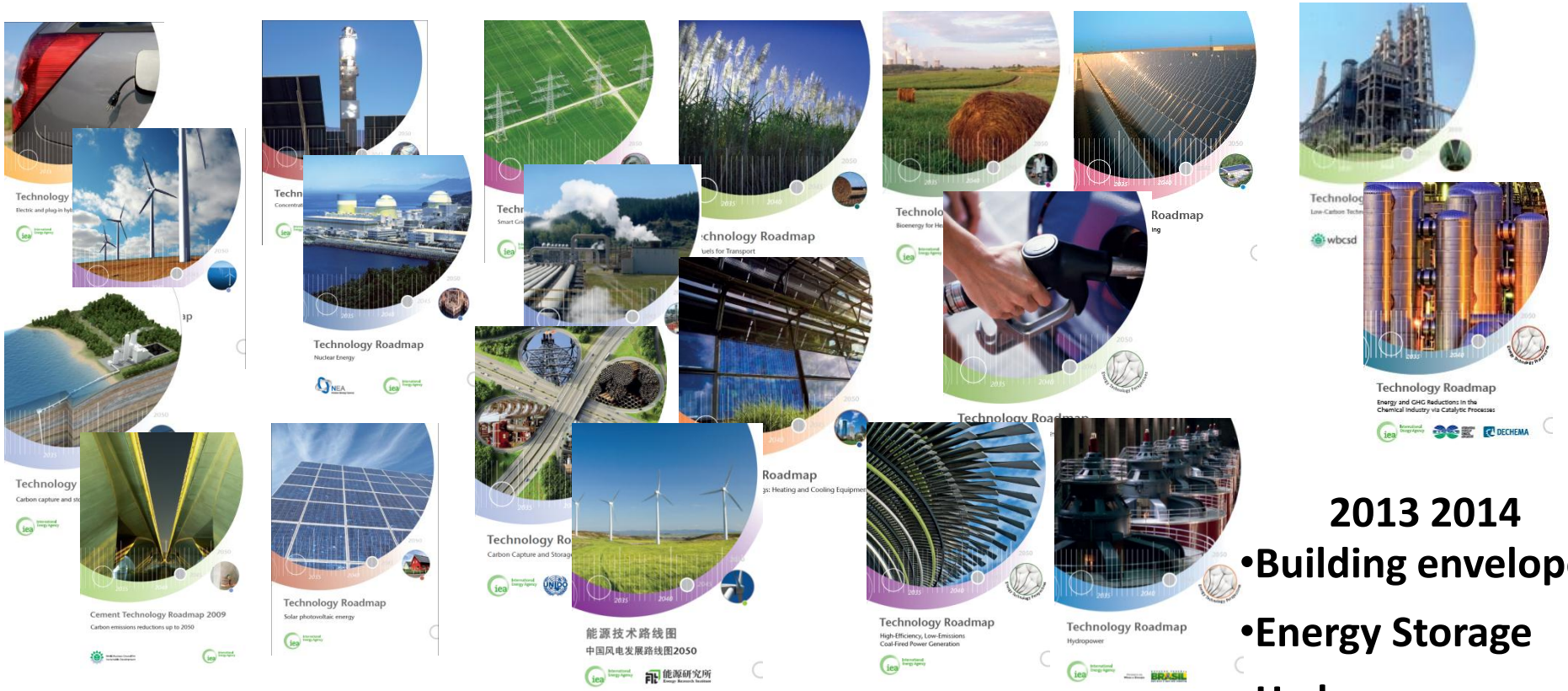


Energy RD&D has slipped in priority in IEA member countries.

IEA Technology Roadmaps

Deploying Technologies…

2009 2010 2011 2012 2013



2013 2014

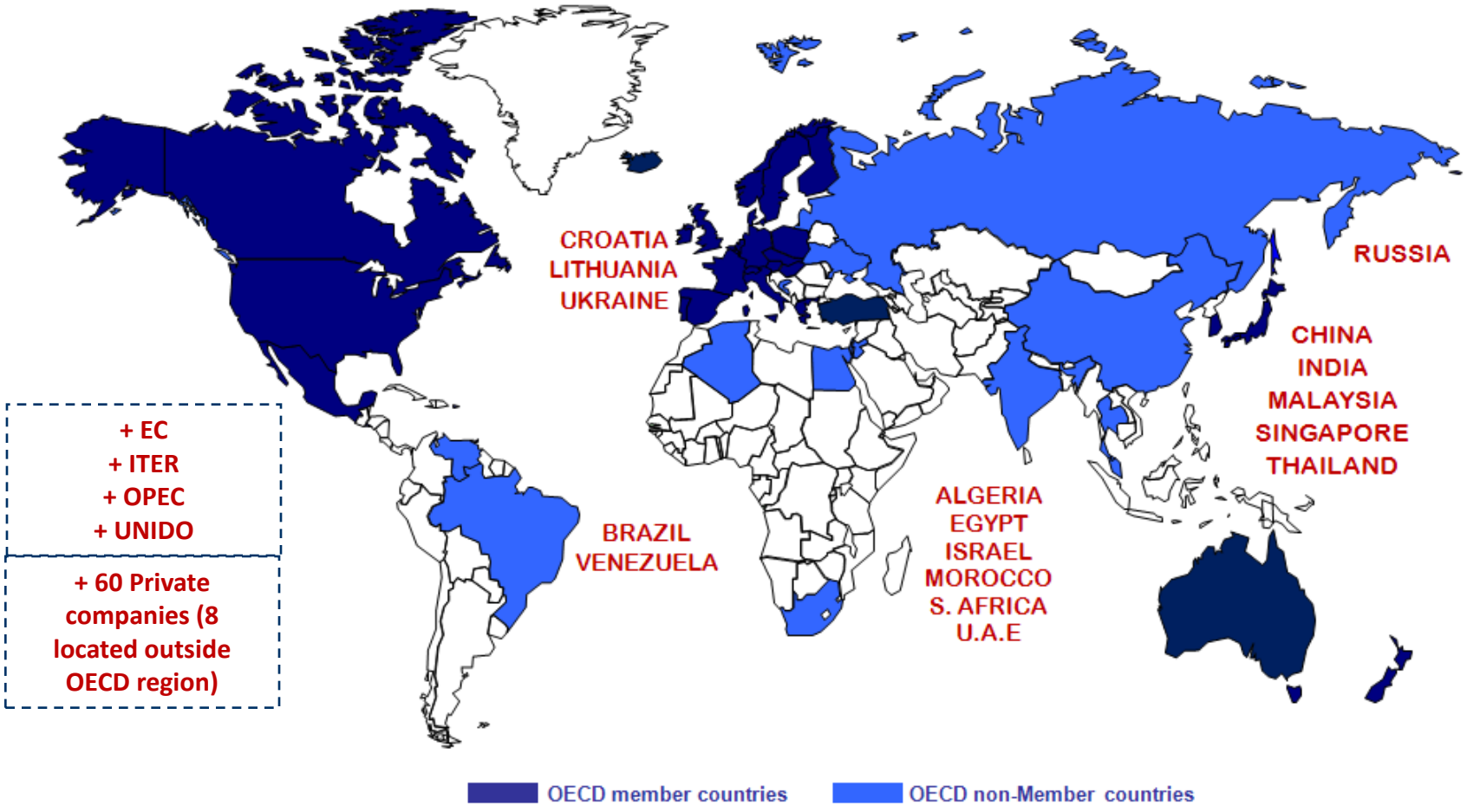
- **Building envelope**
- **Energy Storage**
- **Hydrogen**

…by building consensus among stakeholders

- Goal to achieve
- Milestones to be met
- Gaps to be filled
- Actions to overcome gaps and barriers
- What and when things need to be achieved

Global co-operation and outreach

- Fundamental global shifts in energy demand
- Common challenges – energy security and climate change
- Sharing and transparency – increasing demand for "know how" and best practices



More than 1,300 research projects to date
Linking public and private – IEA Members and Partners
6,000 scientists and experts
Nearly 500 government agencies, research organisations, universities, energy companies, consultants