



Accerelating the low-carbon energy technology revolution

IEA Day at COP16

7 December 2010, Cancún, Mexico

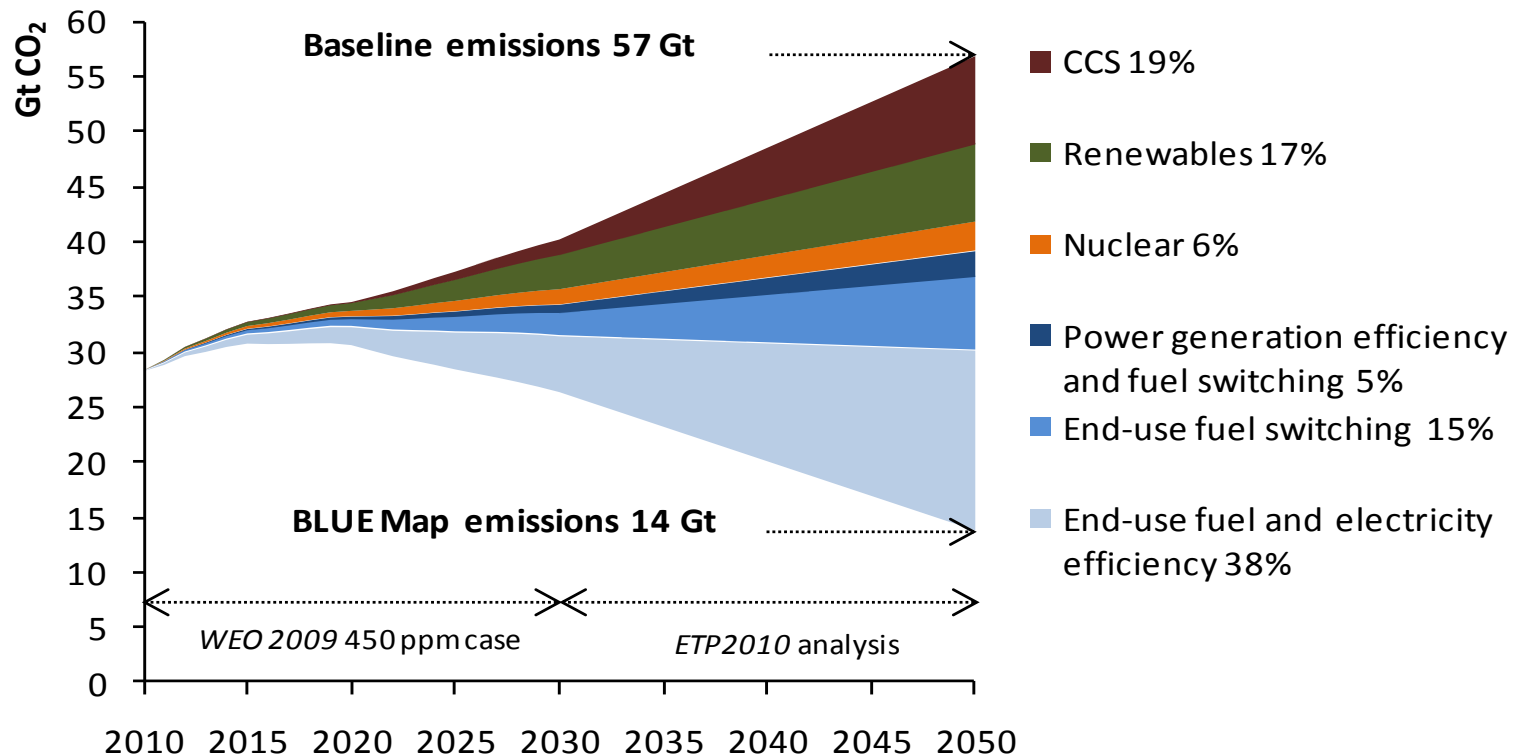
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Overview

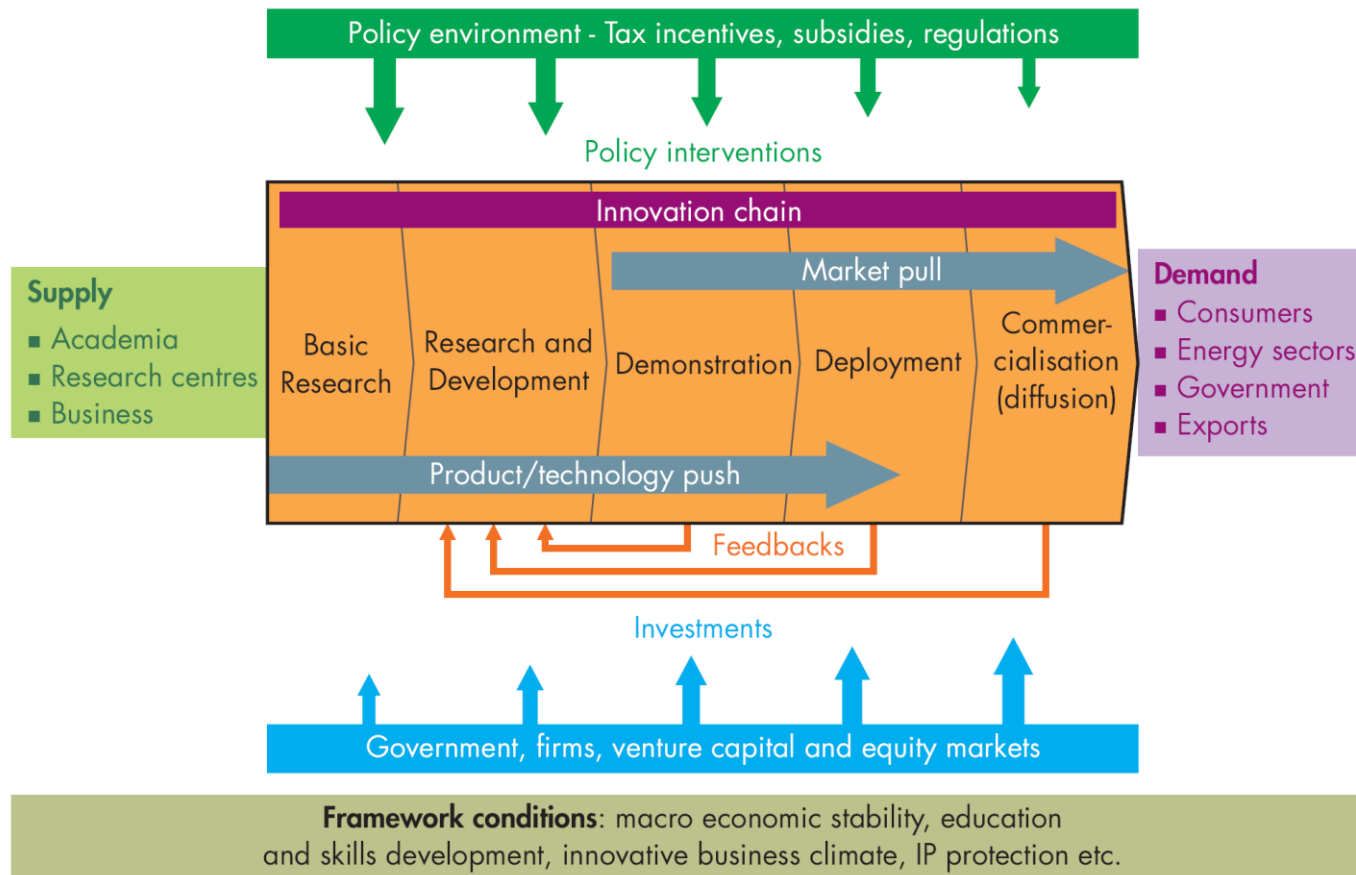
- Key low carbon technologies
- Policies for development and deployment
- The role of technology roadmaps
- Enhancing international collaboration
- Conclusions

Key technologies for halving CO₂ emissions

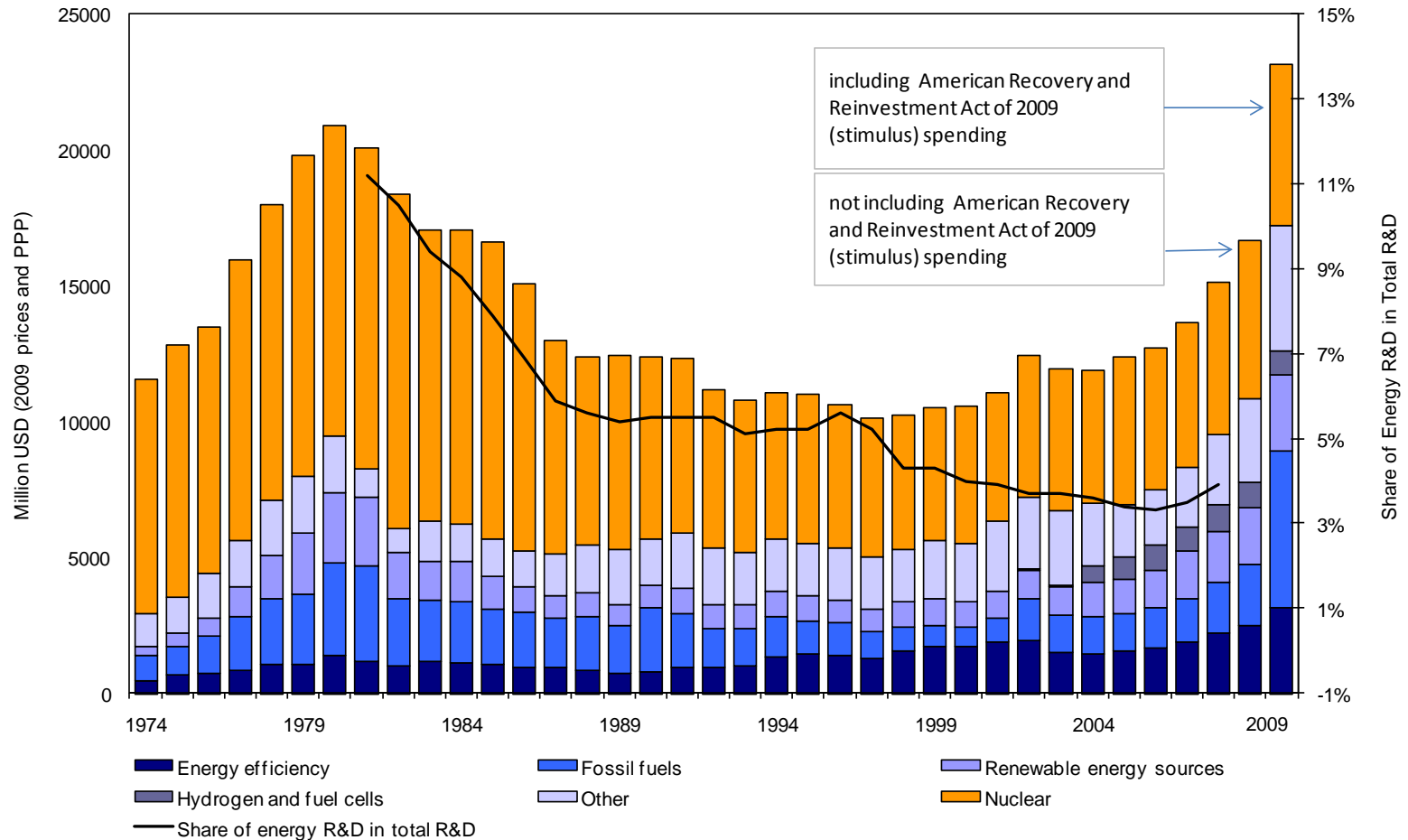


A wide range of technologies will be necessary to reduce energy-related CO₂ emissions substantially.

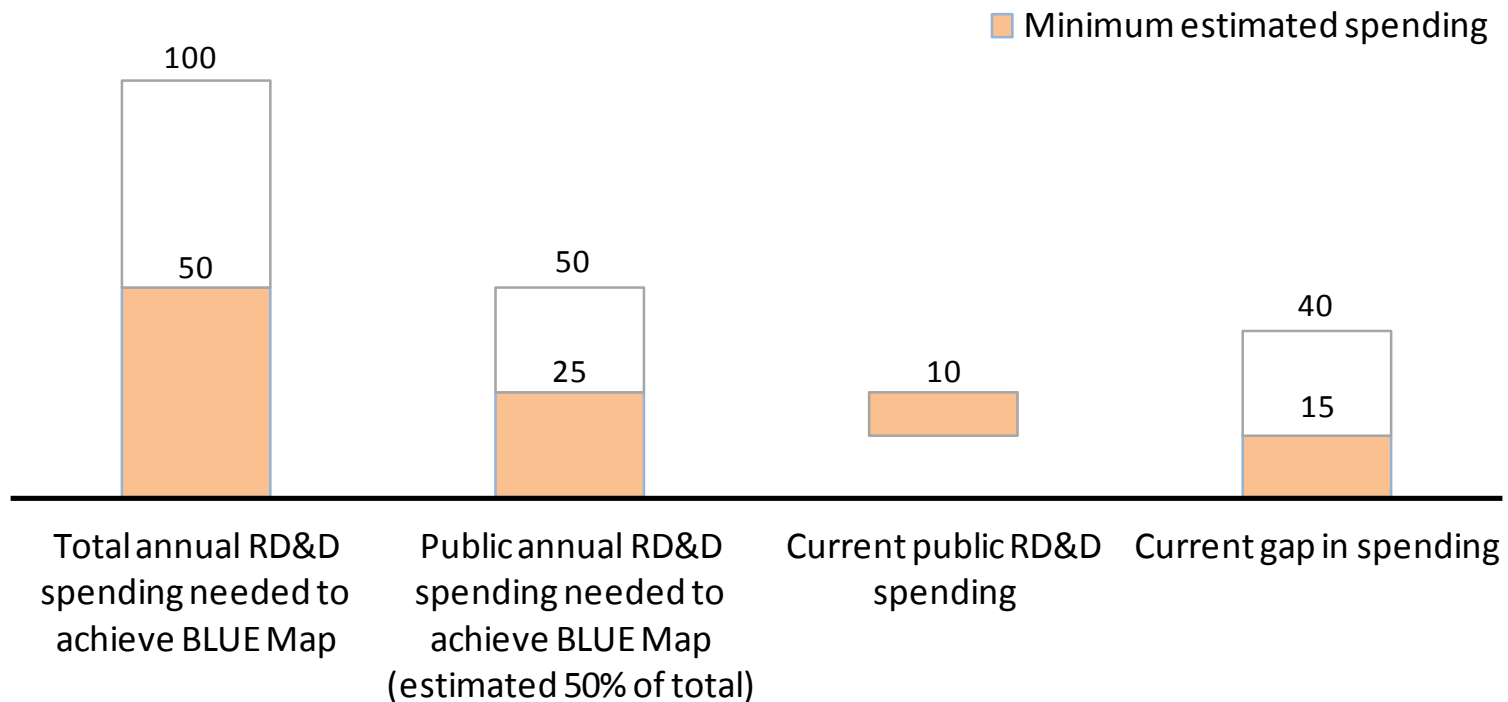
Developing and deploying energy technologies



Spending on RD&D

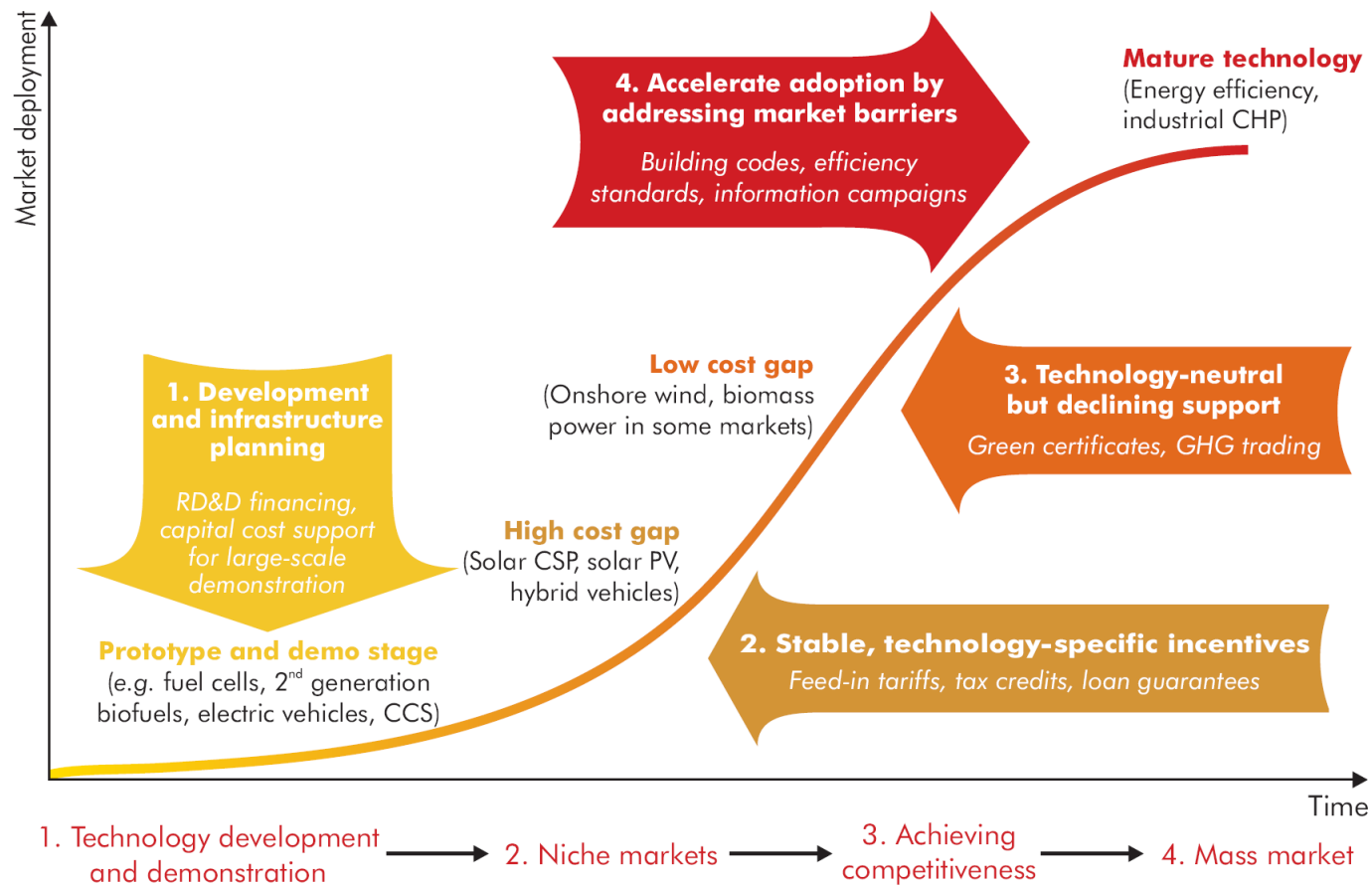


Low carbon energy RD&D spending gap



Private investment in RD&D has also recently declined

Policies need to be tailored



Principles for effective policies

- Policies should be transparent, stable and predictable to minimise uncertainty.
- Incentives and mandates should reflect the maturity of technologies and markets. Levels of support should decrease over time.
- Technology push and market pull incentives should be part of a coherent, strategic framework and be supported by measures that address non-economic barriers.
- Policies should be easy to implement, monitor and enforce, with appropriate penalties for non-compliance.

IEA technology roadmaps

Roadmaps help develop a common vision and identify actions to be implemented at international and national levels

- Engage cross-section of stakeholders
- Identify a baseline – where is technology today?
- Establish accelerated deployment pathway to 2050
- Identify barriers – technical, regulatory, policy, financial, public acceptance
- Develop near-term action items for all stakeholders

IEA roadmap status

Published

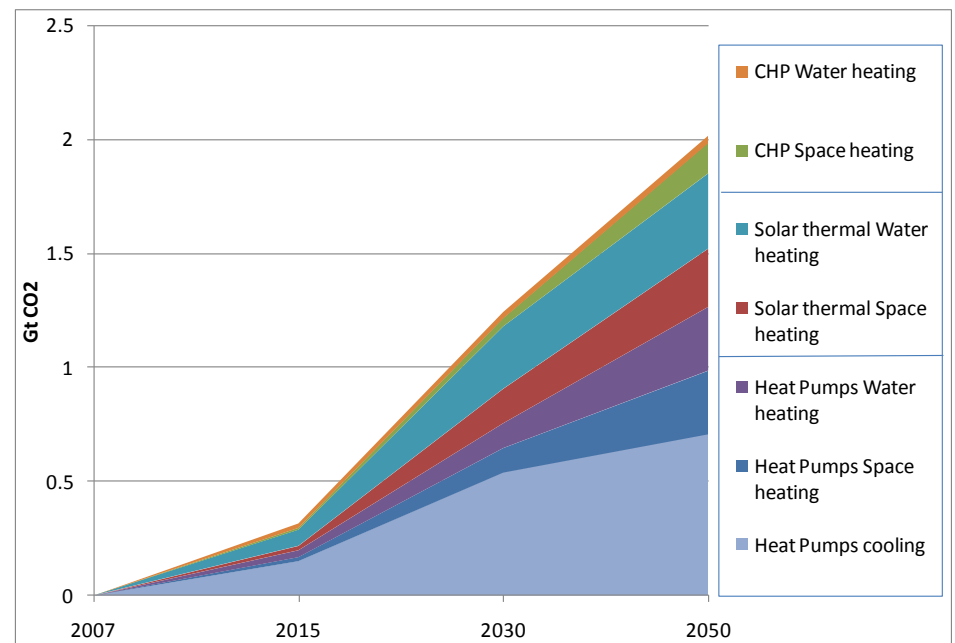
- Carbon capture & storage, electric vehicles, cement sector, wind energy, solar PV, concentrating solar power, nuclear power

In development

- *Publication early 2011*: Energy efficient buildings: heating and cooling, geothermal energy, smart grids, biofuels
- *Publication late 2011/early 2012*: Vehicle efficiency, bioenergy for heat & power, clean/high-efficiency coal, chemical sector, hydropower

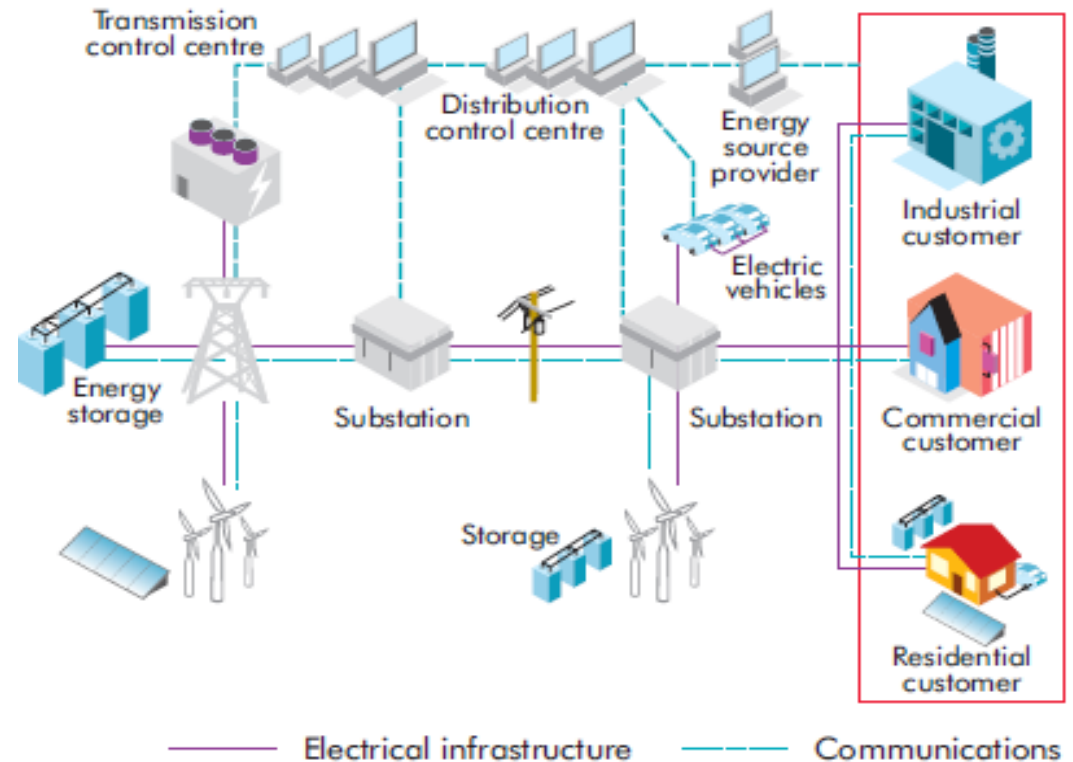
Energy efficient buildings: heating and cooling

- Active solar thermal
- Combined heat and power
- Heat pumps
- Thermal storage



Smart Grids

- Technology
- Electricity markets and regulation
- Consumer policy



Bioenergy for Heat and Power

- Sustainable feedstock supply
- Technology
- Economics
- Routes to market



Proposal for a Technology Platform

Accelerate development, deployment and dissemination of existing and new low-carbon energy technologies suited to national circumstances through strengthened international collaboration

Proposal development

Implementation

Experts' Planning Meeting

Planning & Presentation

High-Level Meeting

Refine and launch proposal

1. Catalyse technology collaboration initiatives

2. Share experience on best-practice technologies and policies

3. Review progress on the low-carbon energy technology transition

31 May-1 June




15 October

2011+

Overview of Platform Activities

Action

Outcome

- | | | |
|--|--|---|
| 1. Catalyse technology collaboration initiatives |  | Technology strategy and roadmap implementation |
| 2. Share experience on best-practice technologies and policies |  | Efficient dissemination of best-practice technology, policy and tools analysis; body of expertise |
| 3. Review process of the low-carbon energy technology transition |  | Identification of gaps, accelerated and prioritised action |

Examples of Technology Platform Events

- Clean Energy Technologies Symposium
 - Singapore, 2-3 November 2010
 - Engage SE Asian countries
 - Regional roadmaps for ASEAN

- Sustainable Hydropower Conference
 - Brazil, 26 November 2010
 - Share expertise, best practice
 - IEA roadmap on hydropower



Conclusions

- Aftermath of the global economic crisis must not make us lose focus on the long-term goal of a more secure and sustainable energy future
- Energy technology is key to this future
- An integrated and strategic policy approach is required that bridges the short to the long-term
 - Roadmaps and international co-operation
 - Increasing RD&D funding for new technologies
 - Tailored deployment policies reflecting good design principles



Thank you

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