

MONITORING PROGRESS TOWARDS A CLEAN ENERGY ECONOMY

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International
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IEA Tools and Analysis to Accelerate the Clean Energy Technology Revolution: *Energy Technology Perspectives 2012 and related activities*

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IEA Energy Technology Policy Division

- Range of short and longer-term analyses related to technology and policy

- Energy Technology Perspectives is our analytical “anchor”

- Have built a range of supporting and follow-on analysis
 - Sectoral work
 - Technology Roadmaps
 - RD&D Assessments
 - Indicators tracking and progress reporting
 - Technology network (e.g. Implementing Agreements)

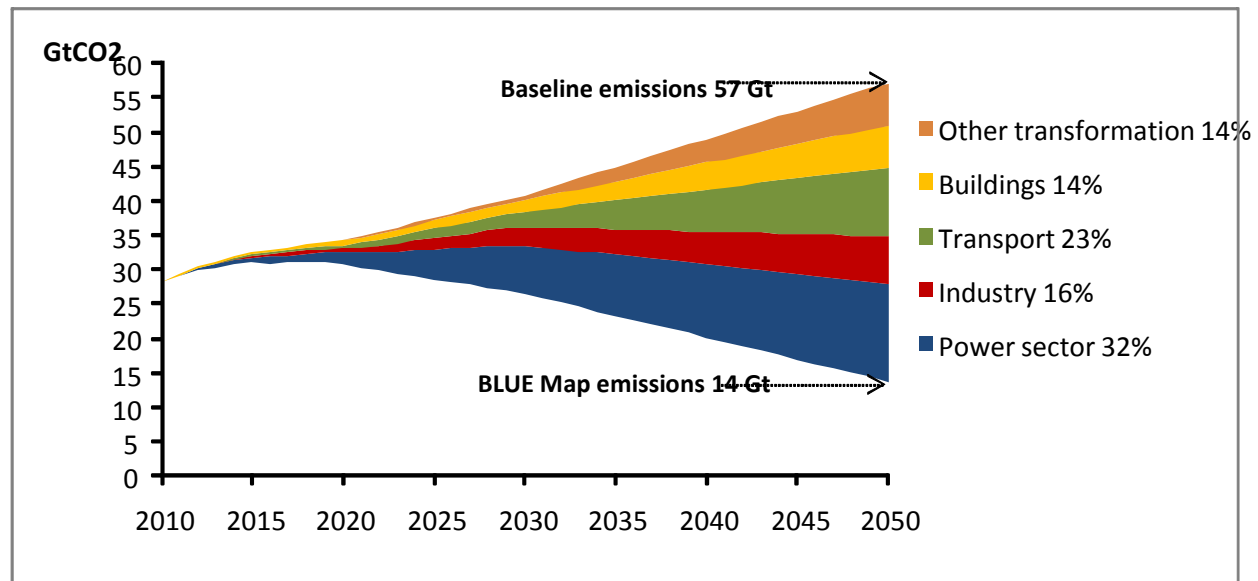
Energy Technology Perspectives

- our most ambitious project on technology

Identify efficient pathways to a low carbon energy system.

Identify and assess policy options that can bring about the necessary changes.

Provide near term guidance, based on long term analysis.



Priorities in ETP 2012

- **More detailed look at next decade**
 - tracking progress and breaking out of carbon lock-in?
- **Energy systems – what are the synergies?**
- **Can renewables make up for low nuclear/slow CCS?**
- **Extended outlook – can we reach zero energy-related emissions?**
- **The changing role of fossil technologies**
- **More regional results – technology projections for 10 key countries and regions**

- **Launch June 2012**

The Book in 2012

- Scenarios
- Status, vision and tools
 - ◆ progress tracking
 - ◆ technology policy
 - ◆ finance
- Energy Systems feature
 - ◆ heating and cooling
 - ◆ flexible electricity
 - ◆ hydrogen
- Technology spotlights
 - ◆ coal, gas, Carbon Capture & Storage
- Regional detail
 - ◆ BRICs, EU 27, US, ASEAN, Mexico

Technology roadmaps

2009

2010

2011

2012

- Vehicle Fuel Economy
- High efficiency, low emissions coal
- Hydropower
- Bioenergy
- Solar heating & cooling
- Energy efficient building envelopes
- Chemical catalysis

Low-carbon energy technology roadmaps



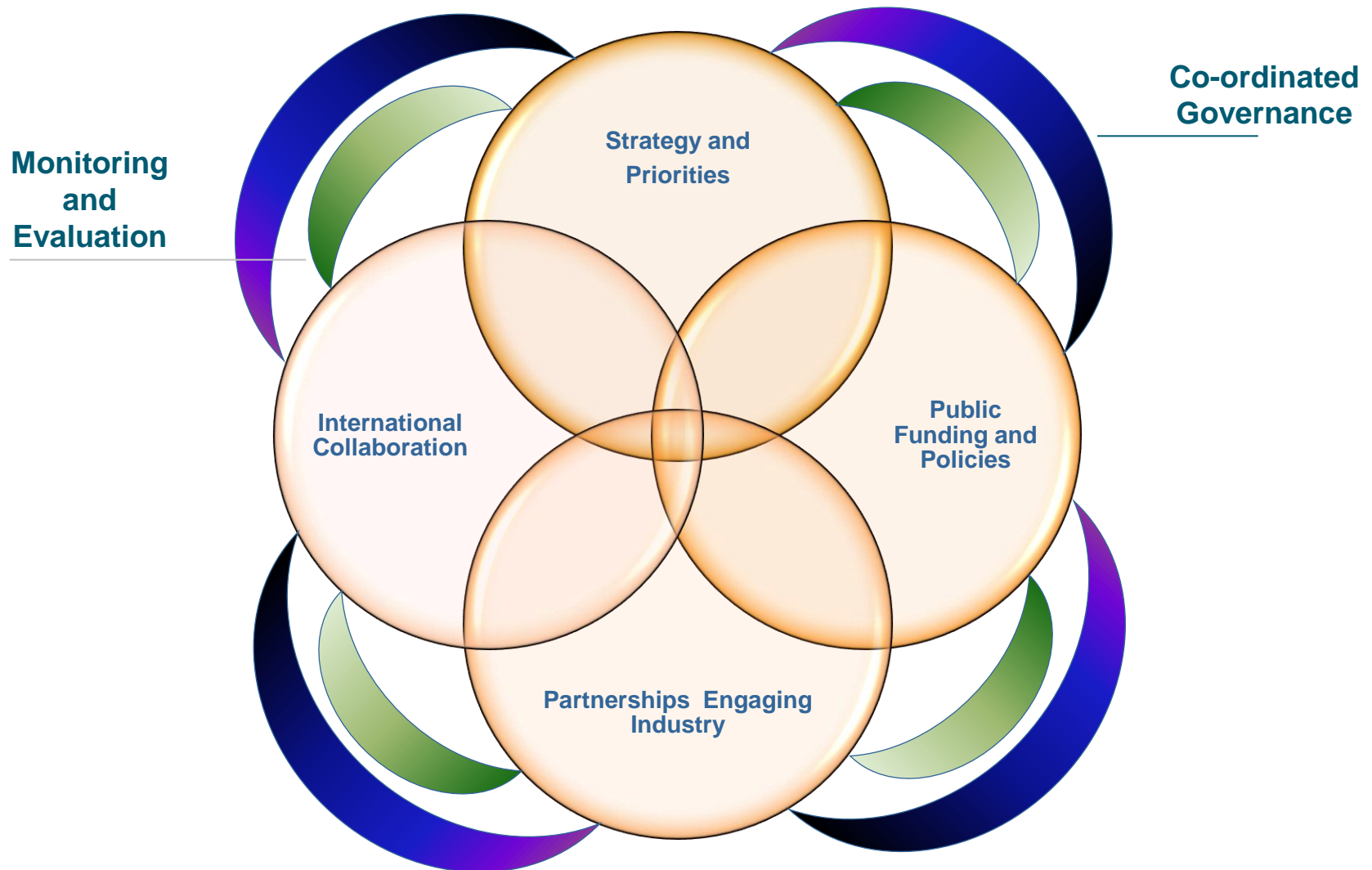
Lessons learned

- IEA roadmaps having a clear impact
 - Informing initiatives, policies, debate
- Implementation requires further effort
 - Partnering with industry organisations, CEM initiatives, others
- National roadmaps can support implementation
- Strong interest from developing countries to use IEA roadmap methodology



1. To provide guidance to policy makers as they attempt to identify:
 - The mechanisms used by governments to develop comprehensive national strategies for low-carbon energy technology RDD&D
 - A “toolkit of policy instruments” supporting RDD&D that would work best in different circumstances, for selected technology categories
 - Indicators and evaluation tools to measure the impact of national investment in energy technology RDD&D
2. To synthesize lessons learned in energy technology planning, policies, institutions and evaluation methodologies, through the analysis of country experiences via case studies

Good Practice Policy Framework for Energy Technology RD&D



- Focus of the analysis was on the **energy RD&D strategy and priorities** in various countries
- While countries have been favouring certain technologies over others, clear priorities are not always determined through structured analysis and documented processes
- Important **deviations** are noted between stated energy RD&D priorities (based on announced technology programmes and strategies) and **recent spending trends**
- As AEI project advances:
 - performance assessment of countries should be made against other 5 criteria
 - interventions required for technology deployment and the linkages with RD&D will be further addressed

- How can we use various metrics to measure progress toward ETP long-term targets?
 - Relating short to long term
 - Issues of data availability and reliability

- How can we leverage the roadmaps process to help with progress tracking?

- How do we handle some of the quite special issues around RD&D?
 - Best measures of effectiveness
 - Private sector RD&D