

IEA CCS Legal & Regulatory Activity

UCL – NYU Global CCS Regulatory Symposium
New York, 16 March 2010

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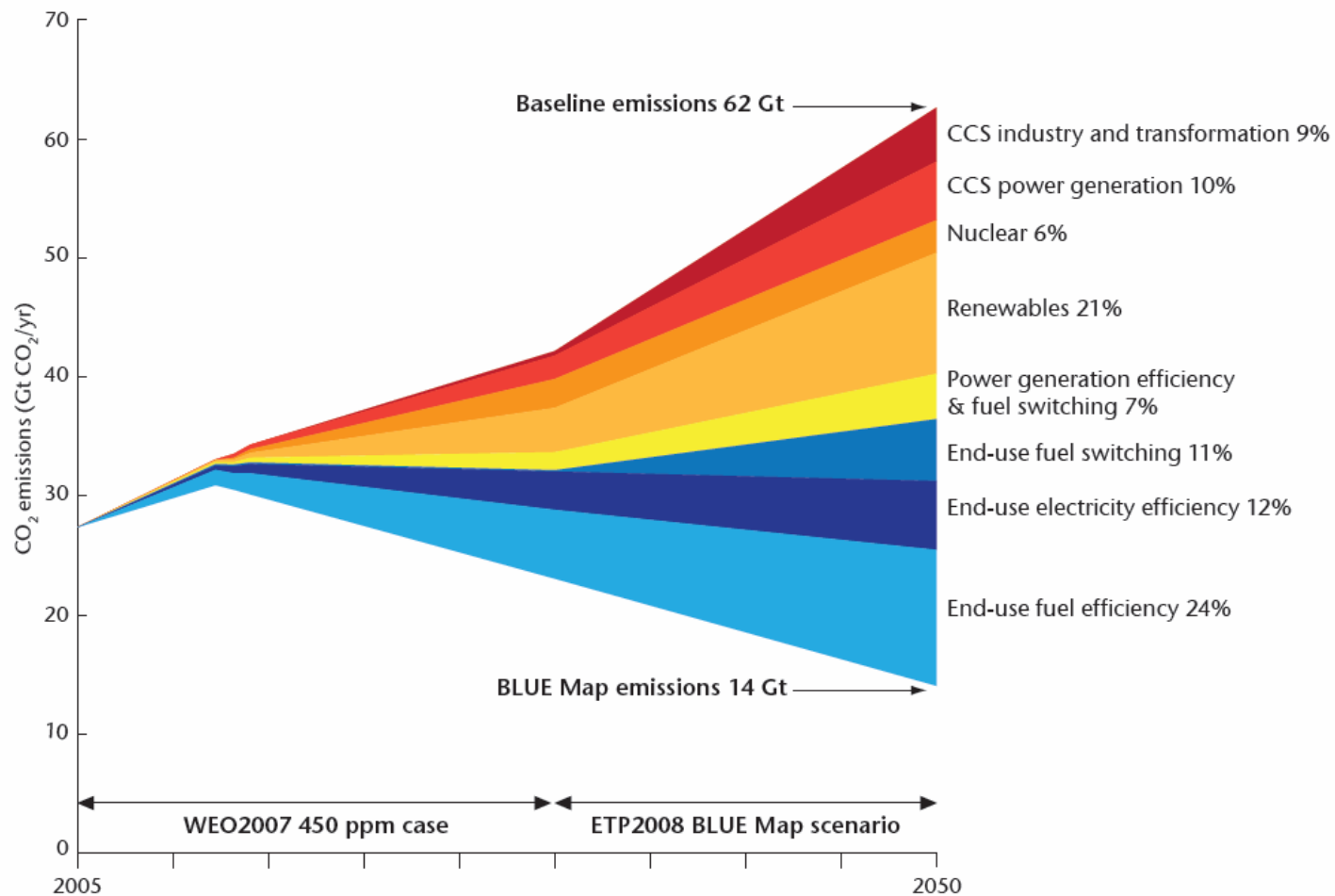
IEA CCS Activities

- World Energy Outlook
- Energy Technology Perspectives
- IEA CCS Books
 - Prospects for CCS (2004)
 - Legal Aspects of Storing CO₂ (2005)
 - Legal Aspects of Storing CO₂: Update and Recommendations (2007)
 - CCS: A Key Abatement Option (2008)
- IEA CCS Regulators' Network
- IEA CCS Roadmap
- IEA CCS Roundtables
- IEA/CSLF G8 Recommendations
- IEA CCS Model Legal & Regulatory Framework
- IEA CCS Unit

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The ETP BLUE Map Scenario



The Rationale for CCS

- Without new policies, global emissions increase by 130% by 2050, leading to a 4-7°C temperature rise
- CCS provides one-fifth of the needed CO₂ reductions in 2050
- Without CCS, cost of stabilization rises by 70%
- CCS is the only low-carbon solution for gas/coal power, cement, and iron & steel sectors

The IEA CCS Regulators' Network

- Launched in May 2008
- Aim: to provide a neutral forum for CCS regulators/policy makers and others to share updates and views
- Two primary activities:
 - (1) Series of meetings and web conferences
 - (2) Create a public IEA website - case studies and regulatory developments (link to UCL website)
- Participation:
 - Regulators and policy makers at all levels
 - Industry, non-government and other stakeholders can participate upon invitation

The IEA CCS Regulators' Network

■ Meetings

- Launch Meeting (Paris, May 2008)
- 2nd Meeting (Paris, January 2010)

■ Webinars

■ Website

- Meeting & Webinar material available on website

The IEA CCS Regulators' Network

■ Webinars

- CO₂ pipeline regulation (July 2008)
- Regulation for early demo projects (October 2008)
- Long-term liability (January 2009)
- Financing/Integration with ETS (March 2009)
- Public consultation (July 2009)
- Site handover (September 2009)
- CCS outcomes from Copenhagen (January 2010)

The IEA CCS Regulators' Network: Participation

■ Over 750 members

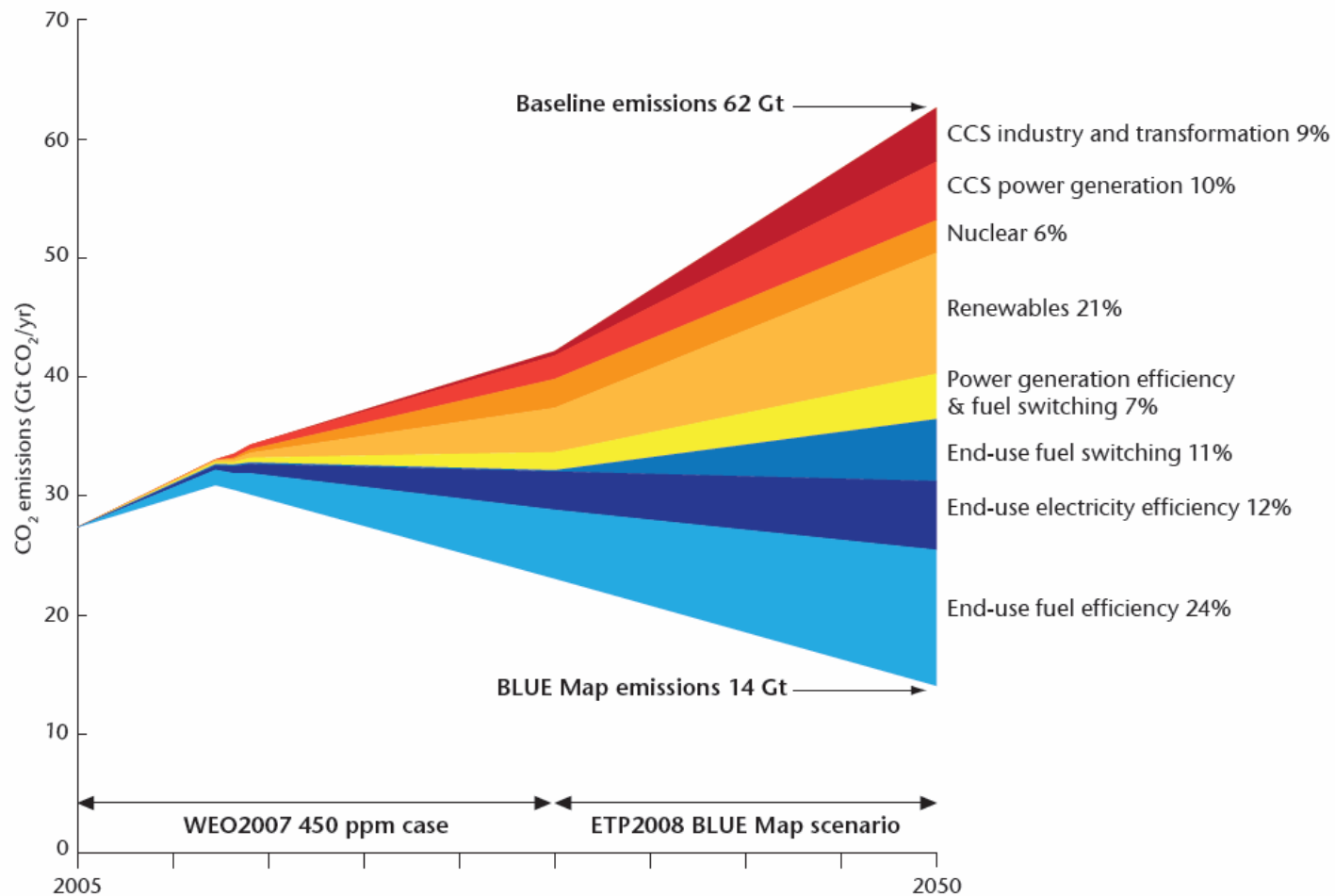
- 40% Government
- 40% Industry
- 20% NGO, Academic, Legal, Finance, Media

■ Over 35 countries

- 14 Developing/Emerging Economies
(20% of members)



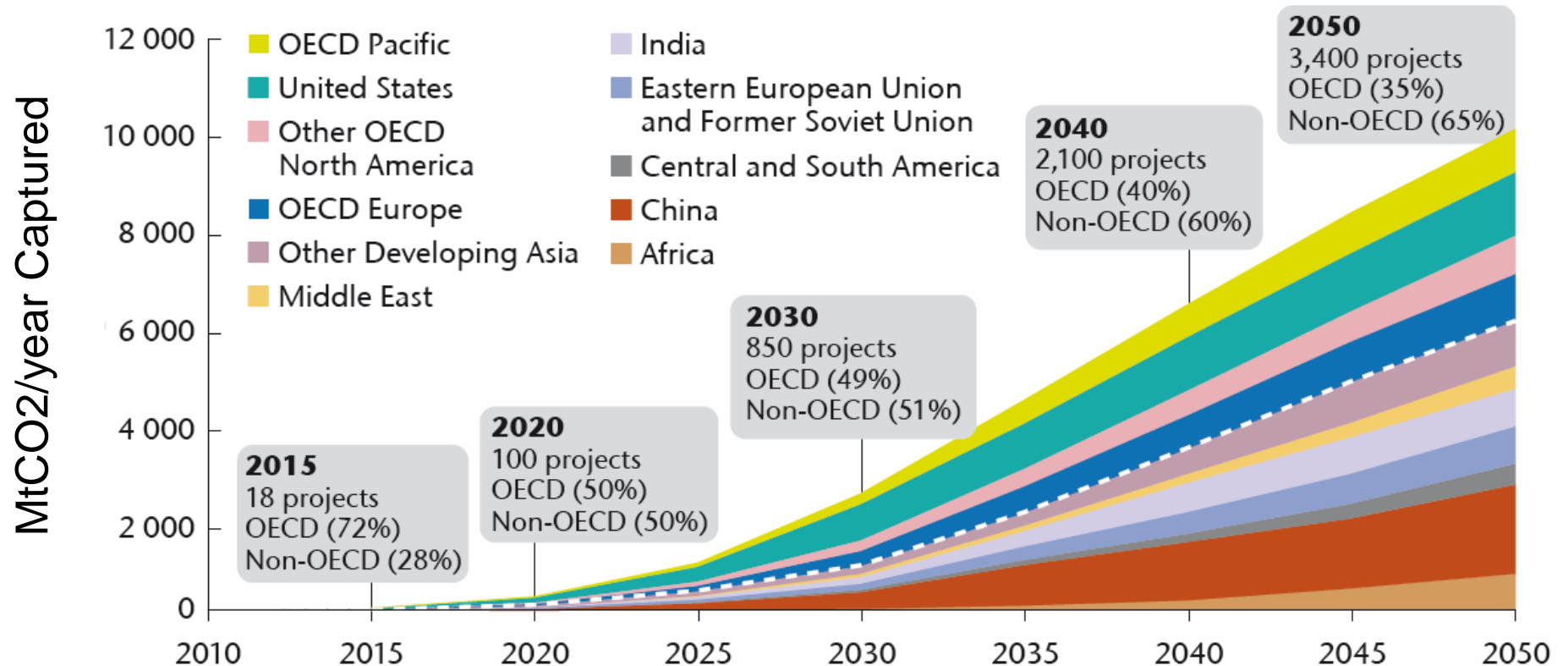
The IEA CCS Roadmap



The IEA CCS Roadmap

- Requested by the G8
- IEA is developing technology roadmaps for key low-carbon energy technologies
- Process begins by convening experts to establish the current technology baseline
- Assume a 50% reduction in energy-related CO₂ by 2050
 - Use BLUE Map scenario to map growth pathway
- Create technical, policy, legal, financial, and public acceptance milestones to achieve 2050 targets
- Identify priority near-term actions
- Create a process for enhanced collaboration
- Implement actions and track progress

The IEA CCS Roadmap



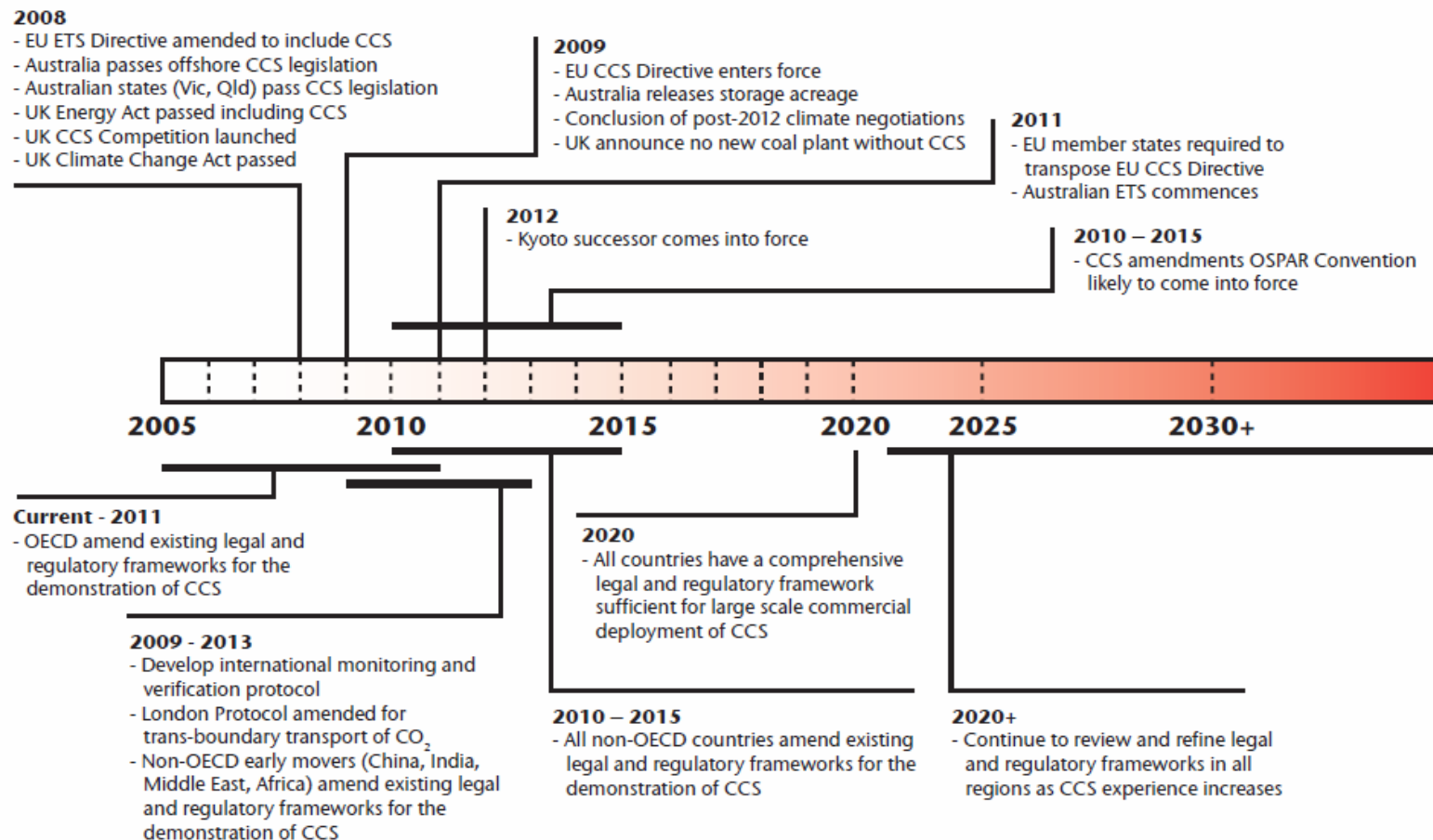
Actions and Milestones

- Technology
- Financing
- Legal and regulatory
- Public education and engagement
- International collaboration

Legal and Regulatory Actions and Milestones

- The roadmap recommends
 - Existing legal and regulatory frameworks should be reviewed and adapted for CCS demonstration by 2011 in OECD countries and by 2015 in all countries
 - All countries should have a legal and regulatory framework suitable for large-scale CCS deployment by 2020
 - International legal issues need to be resolved by 2012

Legal and Regulatory Actions and Milestones



IEA CCS Model Legal & Regulatory Framework

■ Aim:

- To support the rapid deployment of CCS
- Used as a tool to assist governments in the development of national legal and regulatory framework
- Drawn from current CCS legal and regulatory developments in Europe, Australia, the USA, and elsewhere
- Legal and regulatory knowledge sharing
- Non-prescriptive

Drafting team

- IEA
- UCL – CCLP
- Carbon Counts
- ReedSmith

Advisory Committee

- UK
- Europe
- USA
- Australia
- China
- Brazil
- South Africa
- Japan
- Canada
- Germany
- Netherlands
- Norway
- IEA GHG
- GCCSI
- CSLF
- ZEP
- WRI
- CCSA
- Shell
- BP
- Chevron
- Schlumberger
- Vattenfall

Structure

- 30 key issues
- Description (1-2 Paragraphs)
 - A description will be given to introduce the key issue
- Model text (Varied)
 - Attempt to follow that of existing regulation where possible.
- Explanation (1-3 pages)
 - Provide the background information about the example text discussing why it is formed the way it is.
 - Provide alternative options and make recommendations as to the types of situation in which they may be applied if there is lack of consensus amongst the reviewed frameworks.

Key Issues

- Definitions and terminology
- Project boundaries
 - Defining the primary store
 - Defining the complete “the storage complex”
- Exploration permit
- Site selection
- Permitting of storage operations
- Environmental impact assessment
- Monitoring and verification
- Inspections
- Liability for leakage during operation
- Closure / post-closure obligations
- Transfer of responsibility
- Long-term liability
- Corrective measures in case of leakage (including threshold that triggers corrective measures)
 - Pre-closure
 - Post-closure
- Transportation of CO₂
- Third part access to storage site and to transport infrastructure
- Composition of CO₂ stream (operator’s duties, non conformity to acceptance criteria)
- Health and safety
- CO₂ classification (waste, hazard, commodity etc.)
- CCS incentives (may or may not fall in CCS policy and regulation framework)
- Financial security of operator
- Property rights
- Public engagement
- Transboundary cooperation (across different jurisdictions)
- Marine legislation
- Demonstration framework
- Competition with other resources and preferential right issues
- CCS and biomass
- CCS and EOR
- Interaction with other types of legislation

Documents

- Legislation & Regulation
 - Local
 - National
 - International
- Guidance documents
- Legislation & Regulation input documents
 - WRI
 - IOGCC
 - CCSA
 - ZEP

Timeline

- Advisory committee set up – November 2009
- Identification of key issues – November 2009
- Call for documents – November 2009
- Review of documents – November 2009 to January 2010
- *IEA CCS Regulator Network - Paris*
- “Straw-man” draft for comment – mid-March 2010
- *UCL – NYU Global Carbon Capture Symposium*
- First draft for comment – mid-April 2010
- Final draft completed – May 2010

Next Steps

- Framework Revision
- Framework Tailoring
- Framework testing through case study
- Legal and regulatory roundtables
- Developing country legal and regulatory working groups

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