



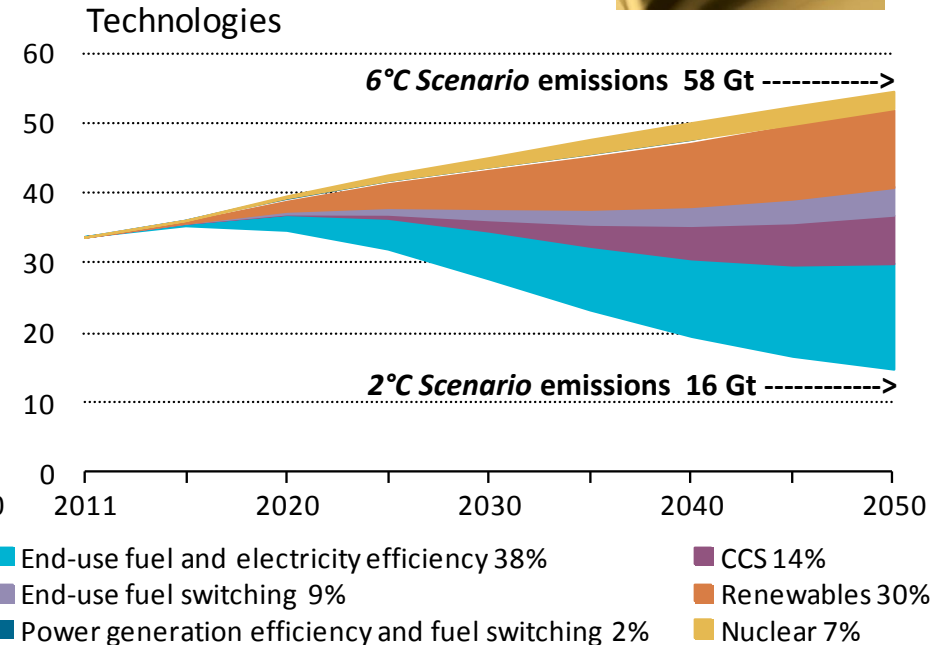
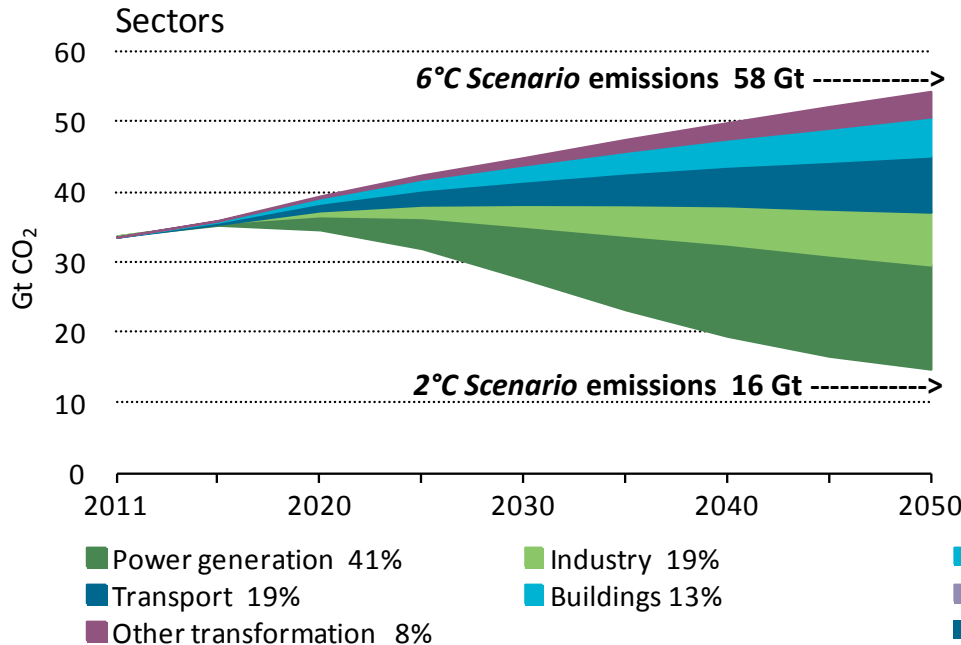
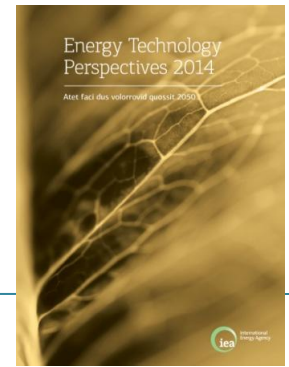
Technology Roadmaps:

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26 June 2014

Low-carbon energy technology roadmaps

Key technologies for reducing global CO₂ emissions



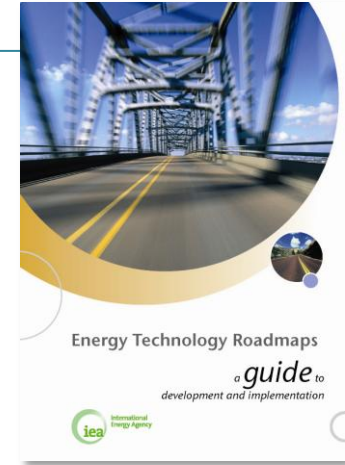
- **6°C Scenario – business-as-usual; no adoption of new energy and climate policies**
- **2°C Scenario - energy-related CO₂-emissions halved by 2050 through CO₂-price and strong policies**



Low-carbon energy technology roadmaps

Overview of IEA roadmap process

- Engage cross-section of stakeholders
- Identify a baseline:
 - Where is technology today?
- Establish a vision:
 - What is the deployment path needed to achieve 2050 goals?
- Identify technical, regulatory, policy, financial, public acceptance barriers
 - What are the near term action items?
- Develop implementation action items for stakeholders



Roadmap logic

- **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**



Technology roadmaps status

2009

2010

2011

2012

2013

2014



2015
•Hydrogen

Low-carbon energy technology roadmaps

Hydrogen Roadmap Status

- **July 2013 Roadmap Kickoff and European workshop**
 - **Scope, Technology Status and Development Needs**
 - **Hydrogen in Europe**
- **Transport model assumptions circulated for comment**
- **January 2014 North America Workshop in US**
- **June 2014 Asia Workshop in Japan**
- **Carry out missing analysis and refine roadmap**
- **Circulate final draft for stakeholder review (Q4 2014)**

