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# CCS: Achieving Full-Scale Demonstration

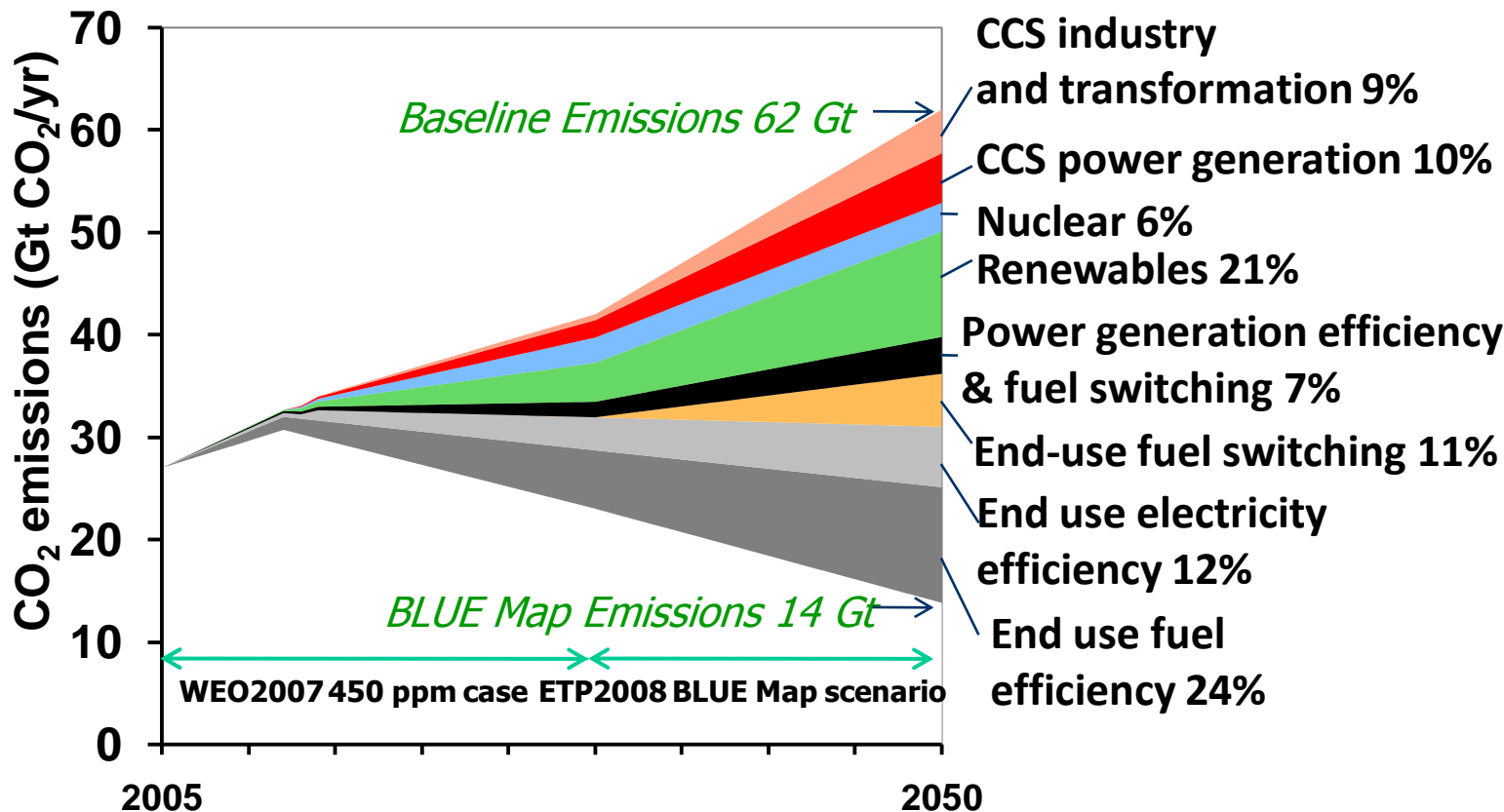
Proposed G8 Tracking Criteria

27 May 2009

Tom Kerr, Keith Burnard

*Bergen IEA WPF Peer Review Event*

# Achieving Global GHG Stabilisation Requires a Technology Revolution



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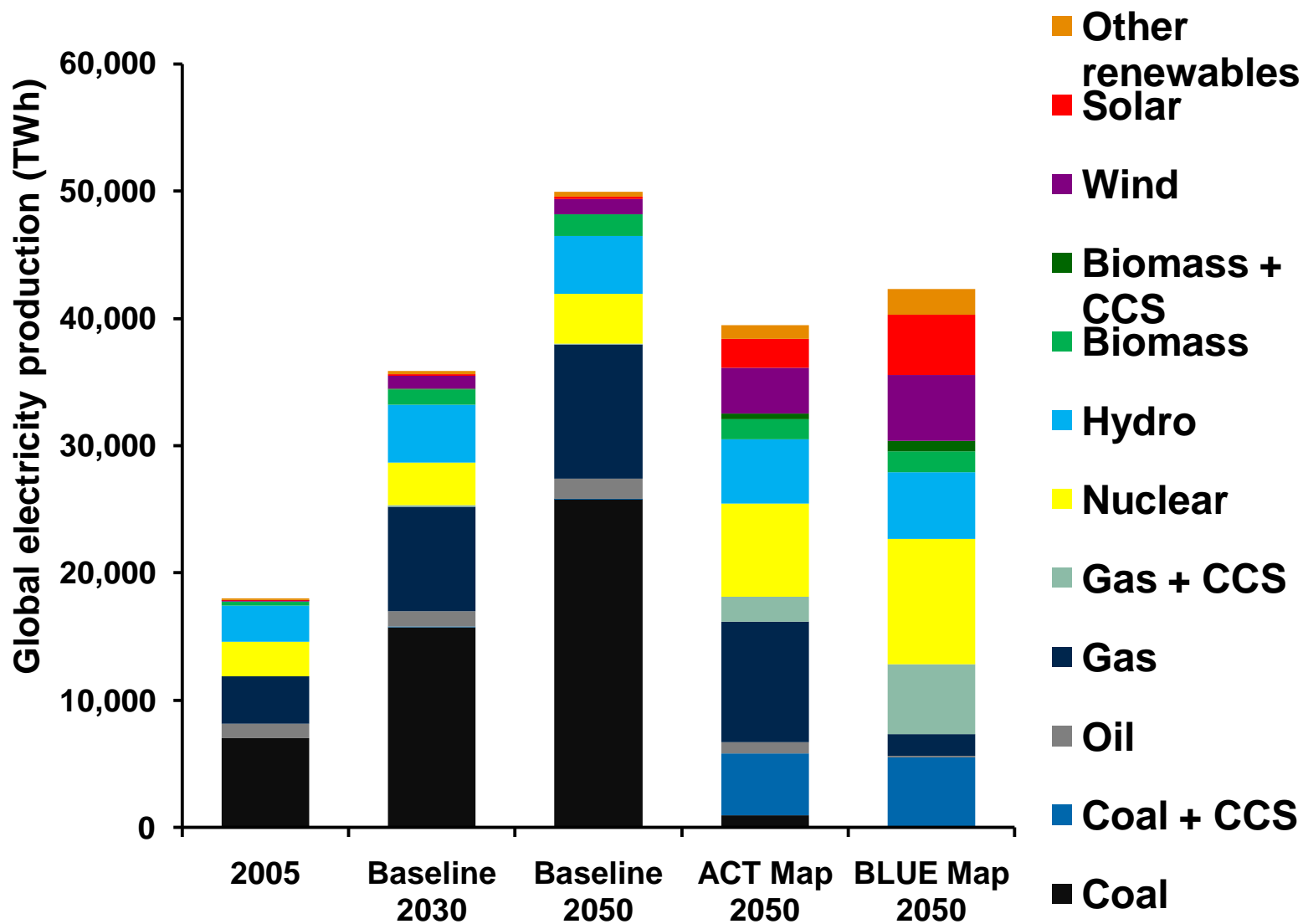
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# Global Power Generation Mix



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# CCS Is a Key Part of a Low-Cost GHG Solution...

- 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 CO<sub>2</sub> reductions in 2050
- Without CCS, cost of stabilisation rises by 70%
- CCS the *only* low-carbon solution for gas/coal, cement, and iron & steel sectors

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# G8 Goal

- **At their Toyako Summit in Japan in 2008, G8 leaders committed to:**
  - ***Announce 20 large-scale CCS demonstration projects globally by 2010, with a view toward beginning broad deployment by 2020;***
  - ***Establish an international initiative with the support of the IEA to develop CCS technology roadmaps and enhance global cooperation;***
  - ***Take various regulatory and policy measures to provide incentives for commercializing CCS technologies***

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# Proposed Tracking Criteria

- Projects must be **large enough scale** to demonstrate the technical and operational viability of future CCS projects (**at least 1 Mt CO2 storage** per annum);
- Projects must have **identified the location of the storage site**;
- Projects must **integrate CO2 capture, transport and storage**;
- Projects must be designed to **begin full-scale operation by 2020**; and
- Projects must have **established governmental and private sector support**, as evidenced by financing in place.

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# Guiding Principles for CCS Demonstration and Development

- **CO2 capture** needs to be demonstrated at a **variety of point sources**, including coal/gas power production, as well as cement, iron & steel, refining and other industrial sectors;
- **CO2 capture retrofits must urgently be demonstrated** at coal-fired power plants;
- **CO2 transport networks need to be designed and regulated**;
- **CO2 storage needs to be demonstrated in a wider set of geologic settings**; and
- CCS projects need to be demonstrated at scale in **all major fossil-based economies**, including emerging economies

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# Proposed Process for Tracking

- **June 2009:** Finalise criteria and principles
- **July 2009:** G8 Leaders approve at Italy G8 summit
- **September 2009:** complete GCCSI review of global CCS project portfolio
- **September 2009 – July 2010:** work with GCCSI and CSLF to contact government/industry project sponsors to develop a list of demonstration projects which meet the criteria
- **July 2010:** publish status update and list at Canada G8 Leaders' Summit

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# Next Steps

- **Discussion today on criteria, principles, process**
- **Send final comments to IEA by 1 June**
- **IEA sends final memo to Italian G8 delegation for review & approval**
- **Ongoing work on CCS Roadmaps, CCS Regulators' Network, other G8 programme of work items**

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