



***Addressing Gaps and Barriers to Lowering Carbon Emissions in Electric Power and Transportation***

**Workshop Scene Set**

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**Carbon Management Workshop  
Addressing Gaps and Barriers to Lowering Carbon Emissions in Electric Power and Transportation**

*Baltimore, 21-22 October 2009*



Funded by the United Engineering Foundation

# Welcome from the Workshop Planning Committee

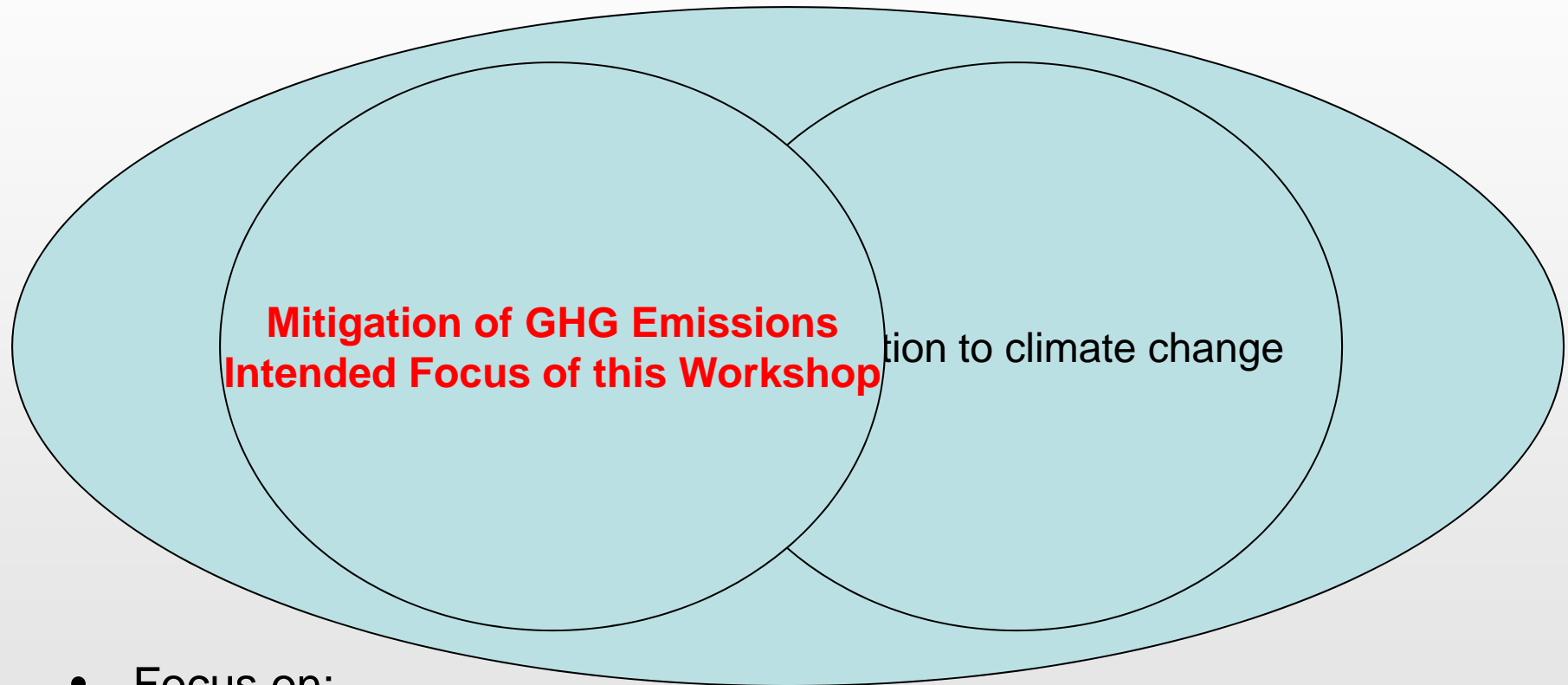
- Arnold Feldman, ASME
- Dale Keairns, AIChE
- Haroon Khashgi, AIME (chair)
- Karen Person, IfS/AIChE
- Veronika Rabl, IEEE
- Darlene Schuster, IfS/AIChE
- Richard Wright, ASCE

# Workshop Objective

- For the most promising options in electric power and transportation, the workshop objectives are to:
  - Identify the principal knowledge and technology gaps and implementation barriers
  - Define approaches to the resolution of these gaps and barriers
  - Define what roles Engineering Societies may take in resolving the principal gaps and barriers

# Electric Power and Transportation Options

- Options on the scale of demand for energy...with low GHG emissions



- Focus on:
  - Transportation sector
  - Electric Power: generation and distribution

# Gaps and Barriers?

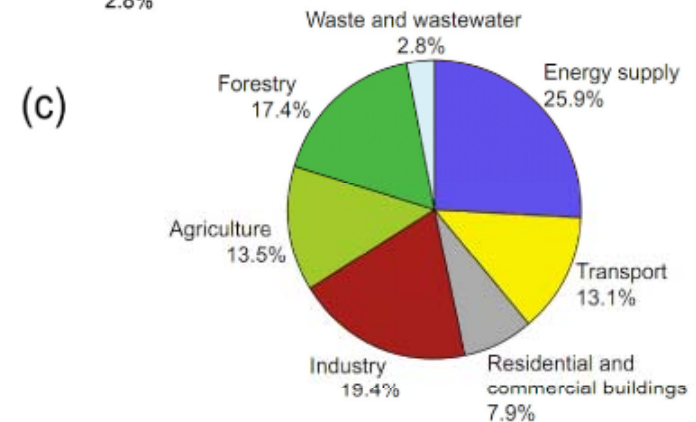
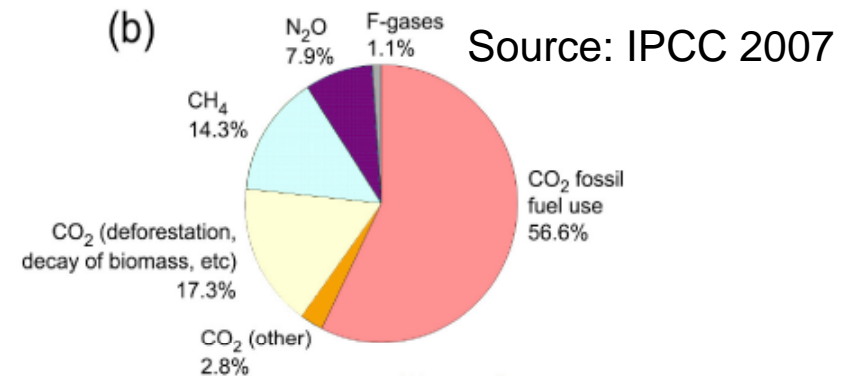
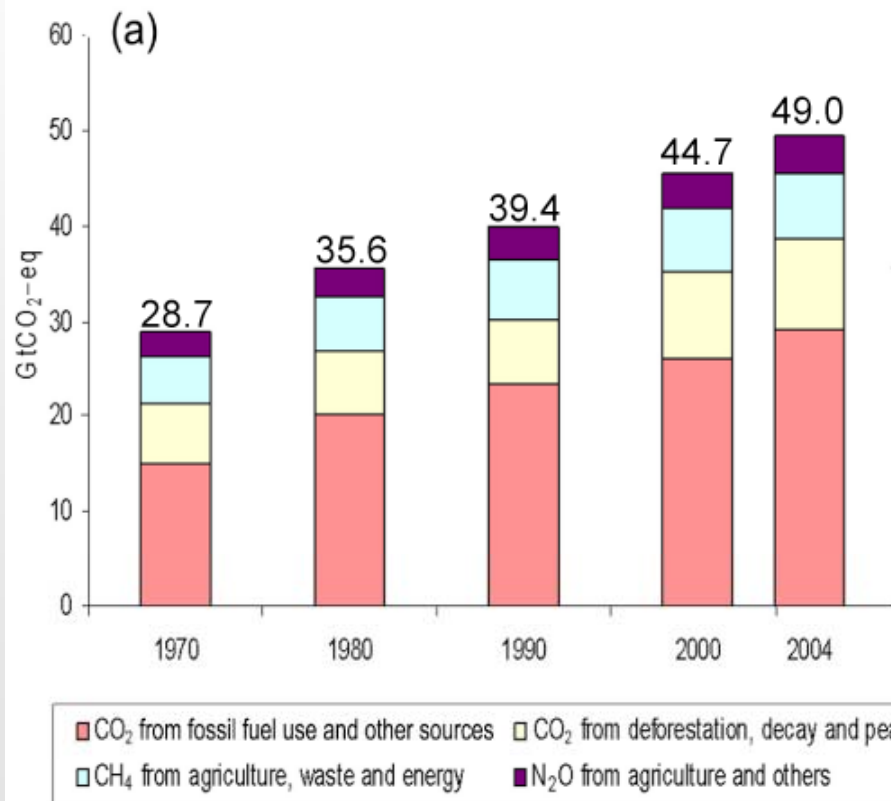
- Gaps in technologies and understanding of the systems that make up each *option*
- Barriers to each option's global deployment *at a pace and scale that may prove appropriate to manage the risks of climate change*

Addressing the risk of global climate change

Technology development to deployment. mainstay of engineering practice

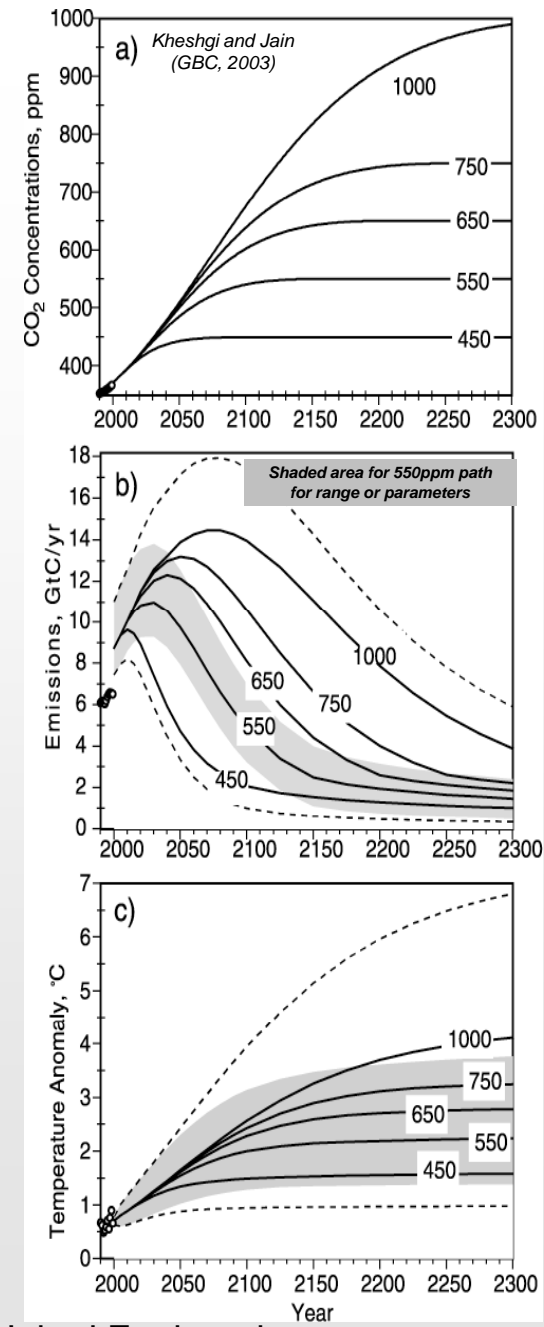
# Appropriate Pace and Scale of Deployment?

- G8 stated a goal of 50% reduction in worldwide greenhouse gas emissions by 2050



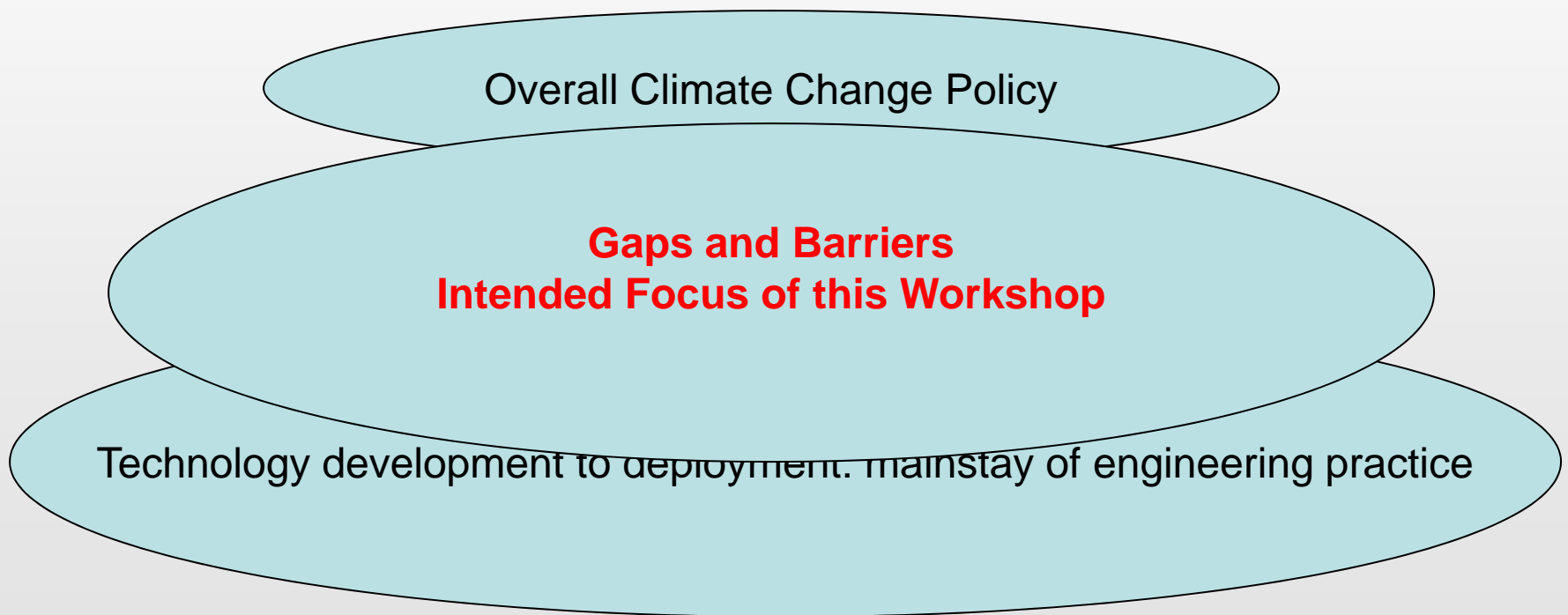
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# Gaps and Barriers?

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# Workshop Agenda

- Scorecards for Electric Power and Transportation--Day 1 AM
  - What are the Attributes of the different Electric Power and Transportation options? → Identify what are the most promising options
- Breakout session: What are the Principal Gaps and Barriers?--Day 1 PM
  - Focus on most promising options
  - Focusing on the most significant gaps and barriers
- Breakout session: Addressing Gaps and Barriers—Day 2 AM
  - What are the appropriate ways for society in general to address gaps and barriers as part of an overall strategy for climate change risk management?
  - What roles engineering societies could have in addressing gaps and barriers?