



**Asia-Pacific
Economic Cooperation**

2009/SOM2/CD/028a

Agenda Item: 7

Presentation on Innovations for Greenhouse Gas Reductions

Purpose: Information

Submitted by: American Chemistry Council (ACC)



**8th Chemical Dialogue
Singapore
1 August 2009**

Innovations for Greenhouse Gas Reductions

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APEC Chemical Dialogue
August 1, 2009



Greenhouse Gas Emissions and Savings of the Chemical Industry

- Study undertaken to “know our facts” and due to looming climate negotiations
- ICCA study relies on Life Cycle Analyses already prepared by chemical companies or associations or consortia
- Study conducted by McKinsey & Company
- Analysis of LCA studies by Oko Institute
- First global industry to undertake such an initiative.





Business of Chemistry

- Science & technology-based
- Powerful engine of innovation & creativity
- Enabling enterprise & supplier of solutions and products to other industry sectors
- Key role in reducing GHG emissions

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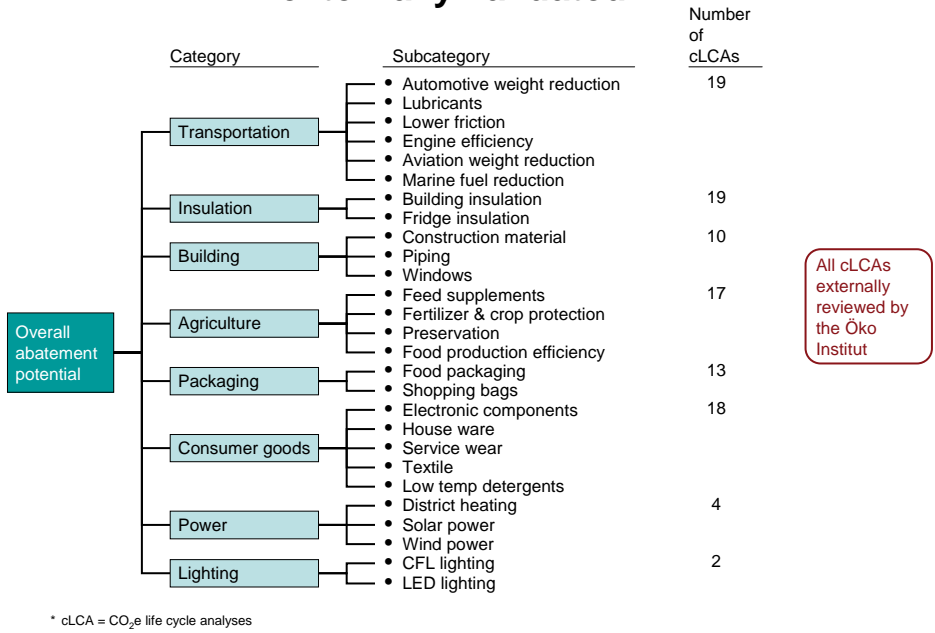


Study's Key Findings

- Chemical industry greenhouse gas savings are more than twice emissions (2005) – a 2.1-2.6:1 ratio.
- The industry's net abatement could improve to more than four times emissions (by 2030)
- The chemical industry is key to the innovations that will reduce greenhouse gas emissions

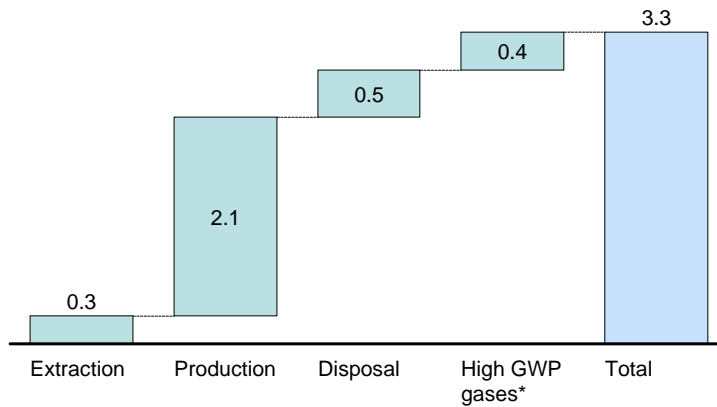


cLCAs* cover 8 broad end-use areas and are all externally validated



Total life cycle CO₂e emissions linked to the chemical industry amount to 3.3 Gt

GHG life cycle emissions of chemical products, 2005
GtCO₂e



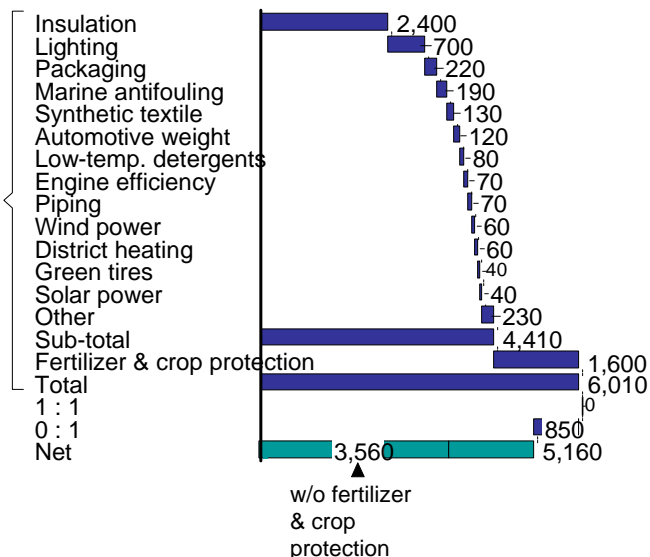
* HFC-23, HFC-32, HFC-125, HFC-134a, HFC-143a, HAFC-1521, HFC-227ea, HFC-236fa, HFC-4310mee, CF₄, C₂F₆, C₄F₁₀, C₆F₁₄, SF₆; GWP factors according to IPCC 1996
Source: IEA, EPA, IPCC, WEF ("Contribution of the chemical industry to greenhouse-gas reduction" December 2007); McKinsey analysis

The main contributors are insulation, fertilizer & crop protection, and lighting

Net abatement 2005
MtCO₂e

Net abatement volume per chemical application

Not explicitly calculated
No realistic alternative available

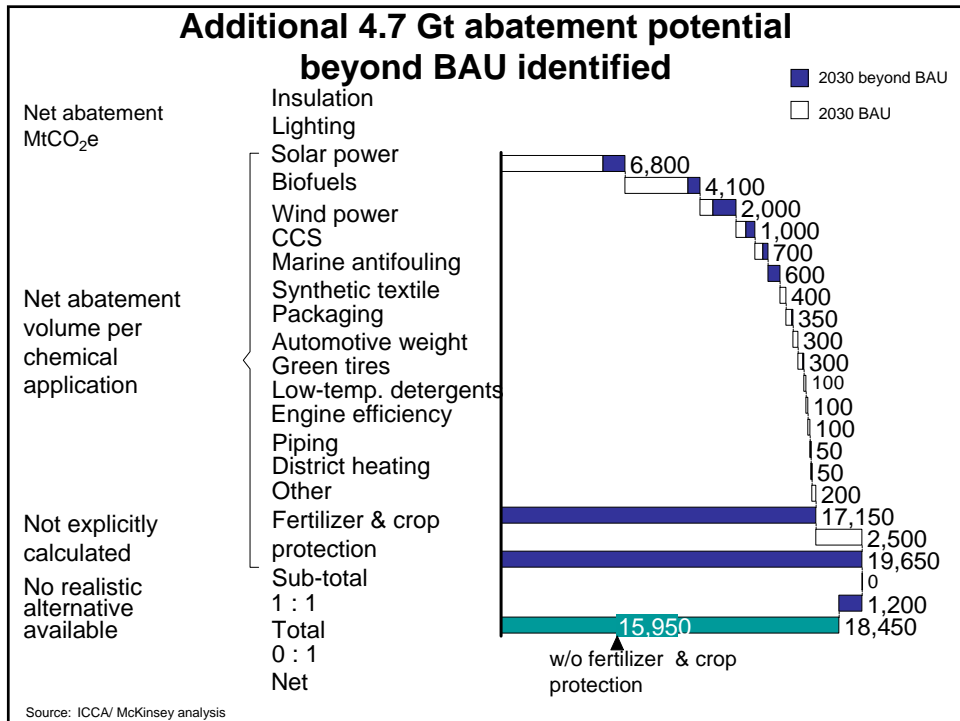
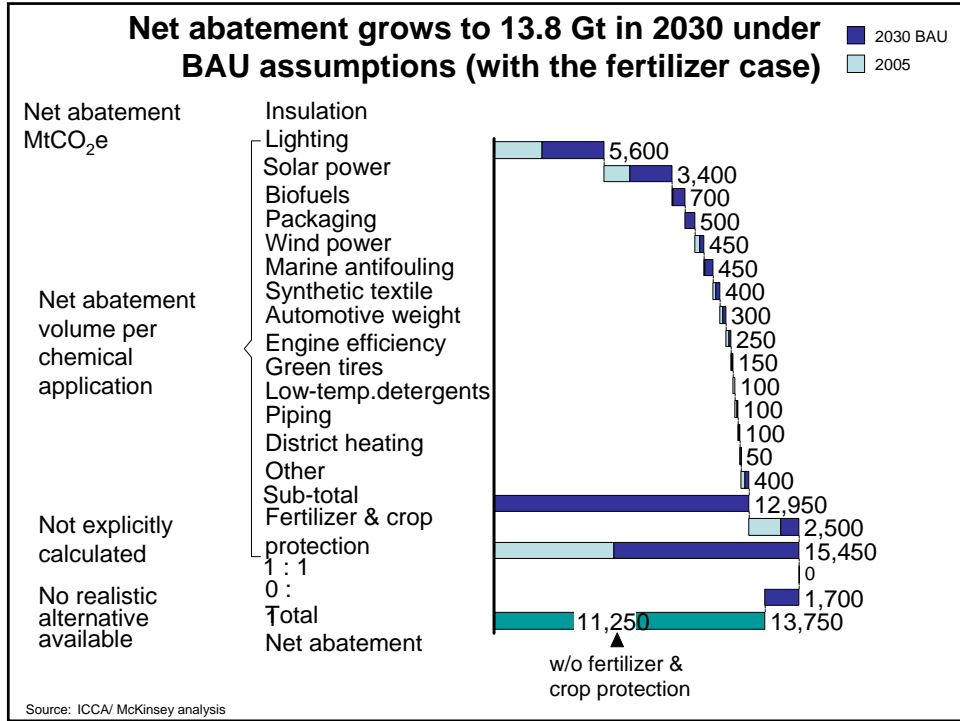


Source: ICCA/ McKinsey analysis



Innovations for Greenhouse Gas Reductions

- The McKinsey analysis also looked ahead to emissions scenarios in 2030, and examined two situations:
- A Business as Usual Scenario (“BAU”), and
- An Abatement Scenario



Greenhouse Gas Emissions and Savings of the Chemical Industry

ICCA Web Site -

<http://www.icca-chem.org>



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