



The G8 Plan of Action and the Ammonia Sector

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Industry Task

- Part of a package of 14 tasks, requested by the G8 and IEA countries
- Identify promising areas for industrial energy efficiency improvement and CO₂ reduction
- Advice regarding alternative scenarios
- Advice on policies and measures

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Analysis Structure

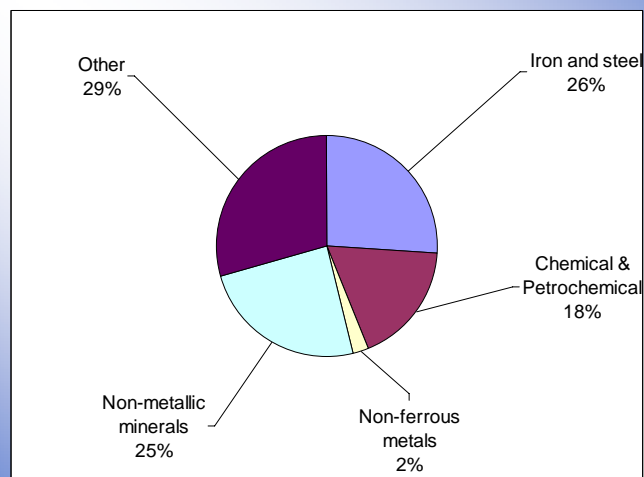
- *Energy Technology Perspectives 2006* contains a detailed industry chapter & scenario analysis
- *Indicators for Industrial Energy Efficiency and CO₂ Emissions* – May 2007
 - ◆ Ammonia section reviewed by IFA
- Efficiency potential analysis (new technologies) – End 2007
- *Energy Technology Perspectives 2008* will contain more detailed scenario analysis results
- Section in the IEA progress reports for German (2007) + Japanese (2008) G8 summit

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Industrial Direct CO₂ Emissions

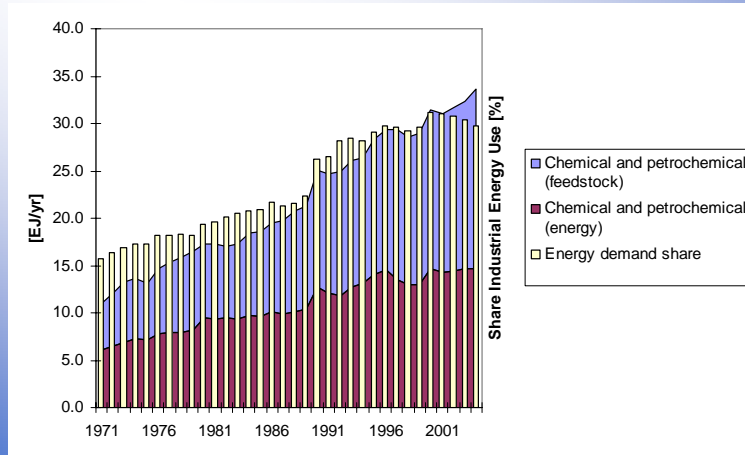


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World Chemical & Petrochemical Industry Energy Use According to IEA statistics



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Energy Use for Ammonia, 2005

Region	Production Mt NH ₃	Energy intensity GJ/t NH ₃	Fuel use use PJ/yr
Western Europe	12.2	35	427
North America	14.4	37.9	546
Former Soviet Union	20.9	39.9	834
Central Europe	6.2	43.6	270
China	43.7	48.8	2 133
India	12.2	40	488
Other Asia	13.3	37	492
Latin America	9	36	324
Africa	4	36	144
Middle East	8.5	36	306
Oceania	1.2	36	43
World	145.4	41.6	6007

Ammonia accounts for 5% of total manufacturing industry energy use

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Special Issues for Ammonia

- The industry is gas dependent and very energy intensive
- This affects the industry prospects (location choice, profitability)
- A lot of industry in developing countries
- A lot of CO₂ is captured and used for urea production
- Adequate ammonia fertilizer use can increase world bioenergy potentials substantially

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Proposed Cooperation Themes

- Energy efficiency & CO₂ emission indicators on a country level
 - ◆ Data & analysis validation
- Explanation of differences on a country level
 - ◆ Feedstock mix
 - ◆ Technological characteristics of the capital stock
 - ◆ Process integration
- Advice on what can be done realistically
 - ◆ Cost & competitiveness
 - ◆ Time path
 - ◆ Technology & resource issues
- Advice on a transition path
 - ◆ Who should be involved
 - ◆ What is the role of various actors

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Dialogue Workshops with Industry

- Motor systems, 15-16 May 2006
- Cement, 4-5 September 2006
- Paper and Pulp:
 - ◆ Technical workshop, 9 October 2006, Paris
 - ◆ International Seminar, 30-31 October 2006, Rome
- Iron and Steel – 7 November 2006
- Petrochemicals- 12-13 December 2006
- Ammonia – 13 March 2007
- Aluminium – May 2007
- Cooperation with: CEPI, CEFIC, IAI, IETS, IFA, IISI, ICFPA, FAO, WBCSD,...



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Thank you

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