



**iets**

# **Industrial Energy-Related Technologies and Systems**

*A Technology Collaboration Programme  
established under the auspices of the International  
Energy Agency*

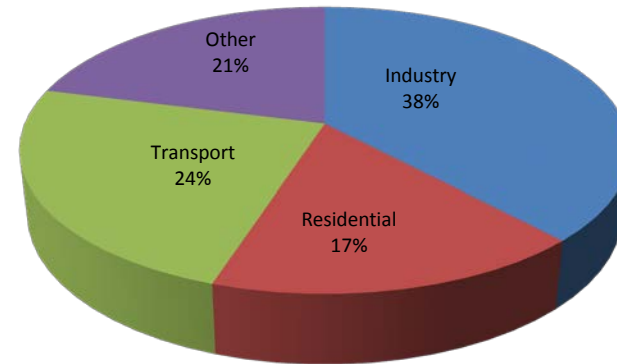
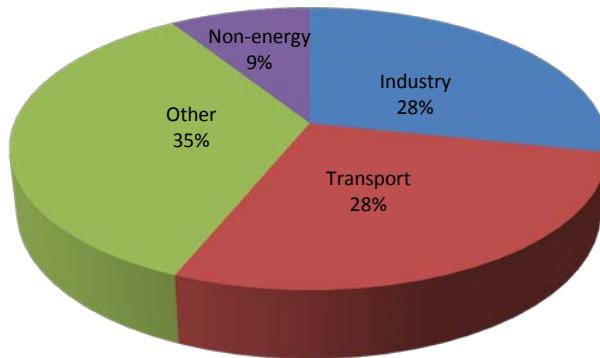
# Countries participating in IETS

The logo for IETS (IEA Industrial Energy-related Technologies and Systems) features the word "iets" in a lowercase, sans-serif font. The letters are white and set against a blue rectangular background. To the right of the text, there is a stylized graphic element consisting of overlapping, curved shapes in shades of green and yellow, suggesting energy or technology.

IEA Industrial Energy-related Technologies and Systems

- **Austria:** The Climate and Energy Fund of the Austrian Federal Government
- **Belgium:** University of Liège and VITO - Flemish Institute for Technological Research NV
- **Denmark:** Danish Energy Agency
- **Germany:** Forschungszentrum Jülich GmbH
- **Korea:** Korea Institute of Energy Technology Evaluation and Planning (KETEP)
- **Netherlands:** RVO Netherlands Enterprise Agency
- **Norway:** ENOVA SF
- **Portugal:** Instituto Superior Técnico, University of Lisbon
- **Sweden:** Swedish Energy Agency
- **United States:** U.S. Department of Energy

# Contribution to environmental protection



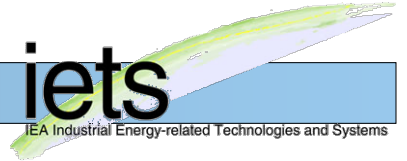
Worldwide energy use for different sectors 2012 (left), and CO2 emissions from different sectors 2012 (right). CO2 emissions from electricity use is included. (Source: IEA Key World Energy Statistics 2014)

# General Gaps and Barriers



- Knowledge, technically, economically, environmentally
- Knowledge transfer to industry
- Capacity in industry for knowledge take-up and strategic thinking
- Policy instruments and their development
- Strategy for e. g. roadmapping in a situation with huge system transitions
- New technologies/innovations not the only solution, also combinations of many existing concepts
- International cooperation on R&D, demo, deployment, knowledge

# The IETS Annexes

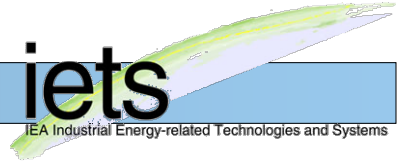


The core of the IETS activities is carried out in so called Annexes. Current on-going Annexes include:

- Annex IX - Energy Efficient Separation Technologies Systems
- Annex XI - Industry-based Biorefineries
- Annex XIII - Industrial Heat Pumps
- Annex XIV - Process integration in the iron and steel industry
- Annex XV - Industrial Excess Heat Recovery
- Annex XVI - Energy Efficiency in SME's
- Annex XVII - Membrane filtration for energy-efficient separation of lignocellulosic biomass components

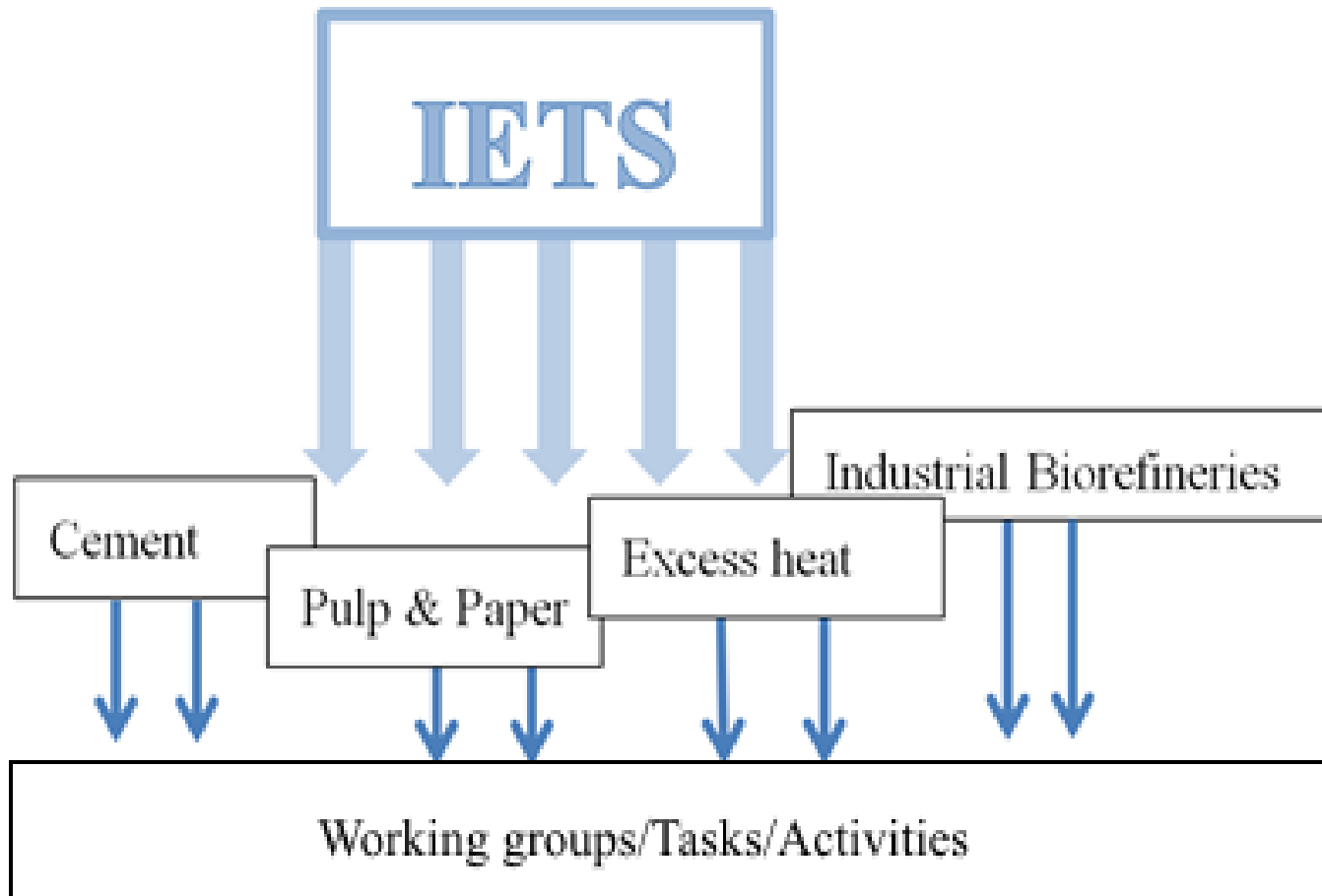
*For more information about IETS: <http://www.iea-industry.org/>*

# Strategy

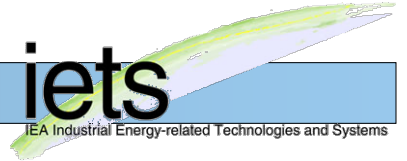


- Develop long-standing annexes in strategic areas
- Develop National Support Groups
- Allow non-IETS organisations as sponsors
- Work more closely with other TCP:s
- Include industry-specific as well as cross-cutting technologies and systems
- Increase the number of workshops/conferences on GHG mitigation opportunities

# New Annex development structure



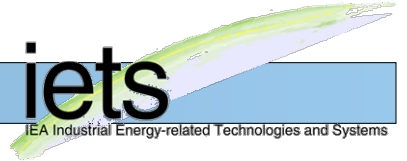
# Industry Involvement



- The interest from industry in IETS is increasing due to higher demands/interests for energy efficiency and GHG mitigation
- The industry interest is on the Annex level and not so much on the TCP level
- Interest from national joint industry-academia projects/consortia to participate in annexes
- A matrix on interest in different technologies in different industry types and countries has been developed

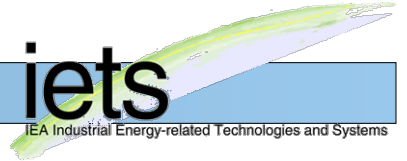


# Planned Annexes



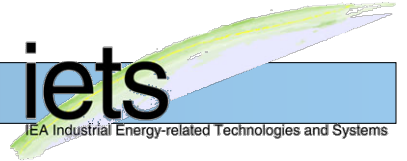
- Industrial automation and digitalization from an energy perspective
- Electrification in industry
- Long-term evaluation of novel industrial processes and systems  
(Ex-ante evaluation)

# Workshops



- International process integration workshop, Berlin April 4-5  
The role of PI for industrial GHG mitigation, by invitation  
International report on opportunities
- Bioenergy week jointly with IEA, Bioenergy, Gothenburg Mai  
15-19  
Joint workshop on large industrial biorefineries  
ExCo meetings  
IEA Bioenergy task activities
- Workshop on Multiple Benefits in process industry
- Workshop on digitalisation and automation for energy  
efficiency

# Conclusions



- IETS deals with all aspects of energy in all types of industry
- Our strategy is to develop long-standing annexes, national support groups and allowing non-IETS sponsors for improved knowledge transfer
- Industry involvement is crucial, sometimes as parts of consortia, i. e. academia, industry, society cooperation important
- New technologies and new system solutions important
- We develop inputs for more strategic thinking
- We develop more cooperation with e. g. other TCP:s

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