

Abstract Submission Form

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Presentation Type

Oral presentation

Poster presentation

My preferred session indicated by 1, 2, 3:

Renewable energy technologies (solar, wind, biomass, hydrogen, geothermal, wave and tidal energy, etc;)

CO2 reduction and low carbon technologies

Sustainable energy technologies in the built environment

Renewable energy managements, and environmental impact

Technology transfer, international cooperation and innovation

Title of Paper

CREATIV – Research-based innovation for industry energy efficiency

Abstract (no more than 250 words and five keywords)

Improved energy efficiency is a major measure to curb the greenhouse gas emissions. Efficient use of energy also plays a critical role in addressing energy security and economic challenges. The project CREATIV is a research initiative for industry energy efficiency focusing on utilisation of surplus heat and efficient heating and cooling. In CREATIV, leading international research groups work together with key vendors of energy efficiency equipment and a strong industry consortium including metallurgy, pulp and paper, food and fishery, and super market. The overall budget is 52 MNOK and the project period is 2009-2013. The paper presents the CREATIV project, discusses its scientific achievements so far, and outlines how the project results can contribute to reducing industry energy consumption.

The ambition of CREATIV is to bring forward technology and solutions enabling Norway to reduce both energy consumption and greenhouse gas emissions by 25% within 2020. The main research topics in CREATIV are:

- Electricity production from low-temperature heat sources in super-critical CO₂ cycles
- Energy efficient end-user technology for heating and cooling based on natural working fluids and system optimisation
- Efficient utilisation of low temperature heat by developing new sorption systems and compact compressor-expander units

A defined innovation strategy in the project will ensure exploitation of research results and promote implementation in industry processes. CREATIV will contribute to the recruitment of competent personnel to industry and academia by educating 4 PhD candidates, 2 post doc candidates and several MSc students.

Keywords:

Energy efficiency, surplus heat exploitation, CO₂ technology, heat pump technologies, refrigeration.

Please email to:

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