ICCEE

Event Briefing

Towards more energy efficient companies

Focus on various industry sectors

The ICCEE project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 847040.

Keynote on cold chain, emissions and EU mitigation strategy

Ina Colombo-Youla,
The International Institute of Refrigeration

The cold chain supply is crucial: the lack of refrigeration creates food losses, which could feed up to **90 million people!** An effective cold chain supply could avoid up to 15% of global losses through better food security and reduction of GHG emissions.

We can have an efficient cold chain by reducing energy consumption, improving system **efficiency**, applying low global warming potential on natural refrigerants and use **renewables**.

Example of the ENOUGH Project with the European Food Chain Supply: it will identify how to make the food industry become net zero by 2050.

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ICCEE: Energy efficiency and strategies in logistics and storage companies

Simone Zanoni, University of Brescia

ICCEE consists of a series interrelated activities, which serve to develop a **tailor-made tool** and **training courses** to increase cold supply chain energy efficiency. The project is facilitating the food and beverage sector cold chains to undertake **energy efficiency** measures after carrying out supply chain energy assessments.

Read ICCEE's peer reviewed and scientific papers here!

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ICCEE Pillars

ICCEE Toolbox

7 tools supporting:

- **Energy flows**
- **Benchmarking**
- **Life cycle impacts**

Capacity building programme

- **E-learning platform**
- **National trainings + Workshops**

ICCEE Goals

Facilitation

Promote energy efficiency measures with a focus on SMEs

Holistic Perspective

Going beyond individual company perspective

Accelerate Investments

Using developed formats to accelerate energy efficiency opportunities investment

Easy to replicate - Energy Efficiency Measures in cold supply chains

Daniele Forni, FIRE

- Energy efficiency measures best practice factsheets

Multi-stage refrigerant systems

Smart Monitoring **Free-cooling**

Refrigeration System Improvement

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- Industrial Informative Network, an online platform meeting market offer and demand.

The other countable benefits

Lisa Neusel, Fraunhofer Institute for Systems and Innovation Research ISI

Increased productivity and automation

May be 2.5 times higher than the perceived energy value related to energy efficiency measures

Positive effects in supply chain and individual organisation for companies

Waste reduction

NEBs (non energy benefits)

- Play a central role bringing value to energy efficiency by adding positive side effects of energy efficiency measures (EEMs) besides reduced energy costs and CO2 emissions.
- Improvements in production, operation and maintenance, working environment, public image, reduced emissions.
- Not traditionally included in energy efficiency implementation but could lead to higher acceptance and implementation.

ICCEE Tool#5 on NEBS

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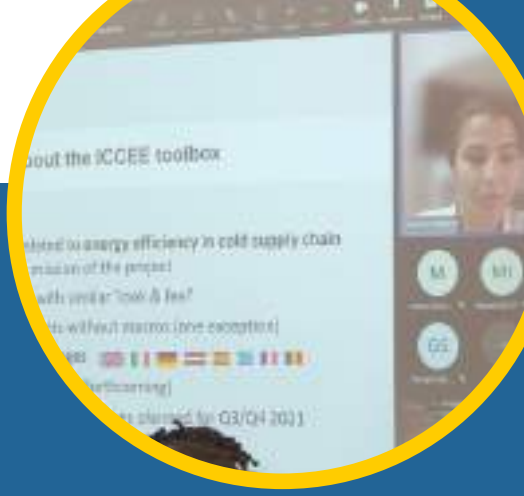
A tour of the ICCEE toolbox

Beatrice Marchi, Brescia University



7 tools, covering various topics related to energy efficiency in cold supply chain performance supporting the mission of the project. Discover the tools here.

Cold supply chain model

Life cycle assessment

Life cycle costing

Benchmarking non-energy benefits

Non-energy benefit evaluator

Mutil-criteria analysis tool

Guidance tool

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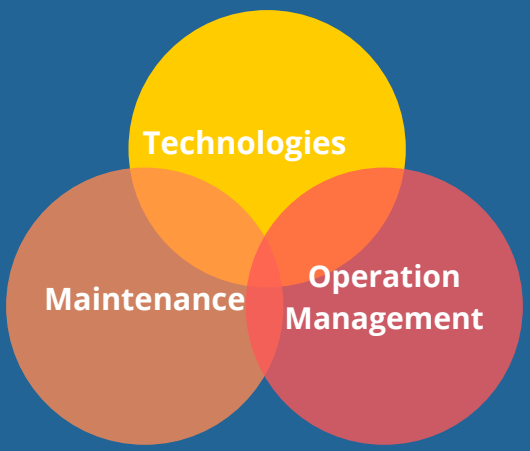
Innovation and energy efficiency in the cold chain: lessons learnt and perspectives of the food & beverage industry

Maurizio Notarfonso,
Federalimentare Servizi



Lessons learnt

- The cold supply chain is one of the most energy-intensive systems within the food and beverage sector whilst there is a limited understanding of its large energy efficiency potential and economic advantages that can be obtained from energy savings measures.
- Energy costs can be reduced by **50%** if refrigeration plants are maintained and well operated.
- Multiple benefits should be taken into consideration by producers.
- A holistic approach is needed to increase decarbonisation and maximise efficiency of the food industry.

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Capacity building, would you like to skill-up?

Ignacio Macías, Escan Energy Consulting

National trainings

Energy outlook in the food and beverage sector

Energy Performance Indicators (EnPIs)

IPMVP - Measurement and Verification Protocol

Supply chain management and industrial symbiosis

Free E-learning platform, to get training on energy efficiency in food and beverage cold supply chains for experts and non-experts.

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EU Workshops

Provide the principles of the tools and how to extract valuable information that interferes with the cold chain activities.

Cooperation between different stages of the cold chain to reduce energy consumption.

Panel 1

with Marine Perrio, IEECP

Christine Weiker, ECSLA

Lisa Neusel, Fraunhofer ISI

Karina Veum, TNO

Recommendations from various project and sector perspectives

- Comprehensive approach to barriers.
- Engagement and accessibility are key, need for constant dialogue and involvement.
- Challenge of not having enough capacity to monitor data.
- Trainings and flexibility are crucial to gain trust, have several meetings with other companies from similar industries helps the process.
- Activating SMEs and organising them together with best practices and training materials, there is still a lack of culture to work together.
- Adding renewables is key for a bigger change, pushing only for energy efficiency is not enough.
- No "one-size fits all" solutions, we need targeted and tailored trainings.

Access sister projects presentation // ECSLA presentation

Panel 2

Ivana Rogulj, IEECP

Filippo Gasparin, European Commission

Antonio Pantaleo, European Innovation Council

Marco Matteini, United Nations Industrial Development Organization

Main conclusions

- Peer to peer learning is a boost for SMEs (findings from DEESME project)
- Solutions already exist for national authorities and need to be targeted and replicated
- Many countires have limited measures for transposition
- Adding a focus on non-energy benefits is crucial
- Question on how to oblige, monitor and make savings for all companies when they do not always have enough resources and do not implement meaures after audits
- Importance of segmenting groups
- Energy managment systems and how maintenance has a key role to play in energy efficiency
- Policy goals: integration of energy efficiency in daily business practices and decsion making in link with operation and strategy
- Push for EMS within SMEs to close the gap of communication barriers and have a common language
- Solutions need to be tailored for SMEs

Access the EIC presentation

Through expert analytical tools and dedicated stakeholder capacity building programmes, ICCEE accelerated turning energy efficiency opportunities into actual investments, with a special focus on supply chains of the food and beverage sector, involving European small and medium sized enterprises (SMEs).

Visit the project on www.iccee.eu