



Improving Cold Chain Energy Efficiency in food and beverage sector

Non Energy Benefits in ICCEE Project

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The project and the partners





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ICCEE 2 Pillars

CAPACITY BUILDING

PROGRAMME



Allow users to estimate the energy & environmental performances of a

cold chain and its actors and provide:

- suggestions for specific EEM investment
- benchmarking

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what-if analysis

A CAPACITY BUILDING PROGRAMME AND CREATING A COMMUNITY TO ACCELERATE CHANGE IN THE ENERGY CULTURE OF THE FOOD & BEVERAGE SECTOR





- main themes:
 - Supply chain
 - LCA and LCC
 - NEBs and behavioural aspects
 - Financial aspects and funding opportunities



Overall Cold chain perspective



- Additional energy efficiency measures
- Harmonise interventions
- Increased energy efficiency implementation rate due to lower barriers





About: Survey and contents

Online multi-language survey with stakeholders from the food industry operating in different stages of the cold supply chain (survey open from April to June 2020: closed answers)

Four topics

Two perspectives

VS.

Company C

Company D





About: Who participated?

- > In total 175 participants across the EU
- > Majority of participants work in companies, few in associations and other organizations
- > Homogenous distribution amongst small, medium and large companies (about 30% each)
- > Note: "n" indicates number of answers per question (no or missing answers not included unless indicated)









About: Who participated?

In which sector is your organization (mainly) active? (n = 148)





#3: The relevance of non-energy benefits

Please think of recently implemented energy efficiency measures ...

- ... in your individual company
- ... that also affected other companies in the cold supply chain

Did these yield any other positive or negative effects besides lower energy costs and CO_2 emissions? (n = 152)



- Positive effects observed
- Negative effects observed
- Not such effects observed
- No EEMs recently implemented
- No answer/do not know

#3: The relevance of non-energy benefits

What are the positive effects besides lower energy costs and CO2 emissions?

Improving Cold Chain Energy Efficiency





ICCEE-Toolbox: Coverage from 7 angles

Tool #0: Guidance

Do you want to know more about solutions and funding for energy-efficient CSCs?

Tool #6: Multi-criteria analysis tool (MCDA) Did you already take a look at the CSC and LCA tools and do you want to know more?

Tool #5: Non-energy benefit evaluator (NEB) Do you wonder how to analyze non-energy benefits in a structured manner?

Tool #4: Benchmarking non-energy benefits (BEN) Are you interested in other factors relevant for decision making on CSC energy performance?

- Printable and available in 8 languages
- Available for free on project website
- Tutorial on 🕒 YouTube



Tool #1: Cold supply chain tool (CSC) Do you want to analyze your CSC's energy consumption and prevent food quality losses?

> **Tool #2: Life cycle assessment tool (LCA)** *Do you want to understand the environmental impact of your CSC?*

Tool #3: Life cycle costing tool (LCC) Do you wonder about the economic benefit from energy efficiency measures? ICCEEE

Tool #4: Benchmarking non-energy benefits

Key features

- Entry point for deeper reflections on the role of energy efficiency and non-energy benefits
- Comparison with peers in cold supply chains using results from a broader survey on cold supply chains

Target group

• Supply chain & environmental managers

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#4: Benchmarking on non-energy benefits: Input

Below you will find a series of selections. Please choose the size of your company and peer-group first and then go through the questions and answer them. After completing your choices, you can compare your answers to the answers within your peer group in the results.

#0: Choose your peer group for the benchmarking results

What is the size of	your organization
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- Large (> 249 employees)
- Medium (50-249 employees)
- Micro & Small (1 49 employees)

With which organisations would you like to get benchmarked?

Organizations of my size
All organizations

#1: The importance of energy related matters in your company and your cold supply chain

How does your indiviudal company manage energy-related matters?

We have a formal energy management system (e.g. according to ISO 50001)

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Tool #5: Non-energy benefit evaluator

Key features

- Assessment of the strategic value of non-energy benefits of specific energy efficiency measures
- Structured **identification of relevant benefits** using prepared lists along a set of simple steps

Target group

• Supply chain & environmental managers

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#5: NEB Evaluator: Identify relevant non-energy benefits for your energy efficiency measure

Energy efficiency measures (EEMs) can entail, additionally to the evident energy savings, non-energy related benefits (NEBs), such as enhanced competitiveness, reduced maintenance requirements or an improved working environment. A sample cold supply chain consists of several stages from the raw material supplier to the retailer. In the following you are invited to analyze an exemplary EEM implemented in your company or cold chain and consister the positive effects for you and other stages of your chain.

Define your energy efficiency measure

Choose and describe a recently implemented EM in your company If available. If no recent measures have been implemented choose a hypothetical measure on the basis of your experience. Please consider whether there are already implemented or planned energy saving projects in cooperation with other members of your cold supply chain that could be interesting for an evaluation.

Title of EEM	
Description	

elect relevant non-energy benefit

For your chosen EEM: Please go through the three steps below, i.e. identify relevant NEBs and evaluate and analyse their importance for the strategy of your company respectively cold supply chain.

#1: Relevance Relevant NEBs: Please go through the list of NEBs along with suggested indicators and select those relevant for your EEM by an 'X' (column G).





Final event - June 28, 2022, Brussels Towards more energy efficient companies focus on various industry sectors

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).

Our event will bring together multi-sectoral experts and shed light on policy recommendations on energy efficiency for SMEs.

Visit the project and register on www.iccee.eu



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