

Improving Cold Chain Energy Efficiency in food and beverage sector











Newsletter #3 - February 2021

Editorial

Dear friends,

February 2021 is a significant milestone for the ICCEE project since we are approaching the half of our project life, and even if last year was a very particular year for all around the world and required significant effort to face a struggling pandemic situation, the partners of the project showed a great reaction capacity and the project plan was not significantly affected, even if some of the vis-a-vis activities were shifted online using a variety of platforms, with which all of us have been forced to become familiar.

The main outcomes of the project are the <u>national trainings</u> that have been organized in several countries already and more are to come in the upcoming months.

Moreover, the <u>ICCEE toolbox</u> with 6 tools is now in validation stage, tested by companies involved in ICCEE before wider release.

Finally, an <u>e-learning platform is now available</u> (free for everyone), thus I strongly encourage you to see hereafter the details on how to take this opportunity.

Moreover, in March we plan to release the <u>Industry Informative Network</u> where interested suppliers can enter their offer of technologies in the field of cold chain, while interested users can enter their requests of technology or their challenge to receive technical feedbacks or commercial offers.

Enjoy the rest of our news below!

Simone Zanoni, University of Brescia, Coordinator of ICCEE

TRAININGS AND E-LEARNING

The ICCEE e-learning platform is now available!

The <u>e-learning platform</u>, a Moodle available for free until end of 2021, is available in English, French, Romanian, Italian, Dutch, German, Greek, Spanish and Latvian! Get 5-6h of training on topics such as:

- Energy efficiency in the food and beverage sector
- Energy performance indicators
- Energy Management System based on ISO50001 and Measurement and Verification (IPMVP)
- Energy saving opportunities and best practices
- · Financial analysis and funding opportunities
- LCA and LCC
- Non-Energy Benefits (NEBs) and behavioural aspects
- ICCEE tool introduction (optional, available only for some countries)

ICCEE trainings are in full speed

The trainings organised by ICCEE provide ways to overcome the main barriers, identifying existing funding opportunities and addressing other peculiarities to support the implementation of energy efficiency measures.

First trainings have been organised in 2020 (in Spain, Italy and Latvia), new ones are already planned for 2021. Do not forget to check regularly <u>our website</u> and <u>Twitter</u> <u>account</u> to know about coming dates!

They can be joined for free and are organised on a country basis, though as now most are happening digitally, if you speak the language, you can join by subscribing directly in the events links. Next trainings:

- in Dutch: Workshop over energie-efficiëntie in de koelketen van de voedingsmiddelen en drankensector, March 16 and 25, 2021
- in German: Workshops zu
 Energieeffizienz in der
 Kühlkette, February 17-18 and
 March 17-18, 2021





REPORTS and PAPERS

Report on life cycle assessment and costing

An ICCEE LCA/LCC tool was developed to allow the evaluation of environmental and economic impacts across the cold chain with outputs to be used by various stakeholders: investors, food producers or processors, local communities, supply chain partners, and customers, or eventually LCA practitioners. It offers an overview of a specific cold chain environmental performance in terms of global warming potential, cumulative energy demand and water scarcity, identifying hotspots and the contribution of each stage and the most relevant materials or processes. It can also be used to acknowledge and recognize improvement opportunities for a determined actor in the food industry participating in the supply chain of the evaluated product by creating different scenarios. The data available for the user to create a model range from transport vehicles, distances, fuels to storage and waste scenario activities. This short report presents the tool specificities and characteristics, output indicators, data collection procedures and data processing. Not yet available digitally to all, it is used during the trainings and/or while accompanying SMEs during audits led by the project partners.

Paper - Improving cold chain energy efficiency: EU H2020 project for facilitating energy efficiency improvements in SMEs of the food and beverage cold chains.

A short paper on ICCEE was published in the proceedings of the 6th IIR International Conference on Sustainability and the Cold Chain organised in Nantes, France, August 26-28, 2020 and digitally. The paper is now available against a small fee, ICCEE is investigating open access to publish it on the project website.

Abstract: Industry has a substantial potential to improve its energy efficiency. The food and beverage sector and its cold supply chain are responsible for more than 10% of the total final energy consumption of the EU-28. Accurate refrigeration is required for optimal preservation of perishable goods and can be up to 85% of the food and beverage sector's total final energy consumption. High demand for refrigeration has adverse environmental effects such as direct emissions from refrigerant leakage and indirect emissions related to electricity or fossil fuels consumption. ICCEE aims to support and advice small and medium enterprises from the food and beverage sector's cold chains to implement energy efficiency measures by an energy mapping of the cold supply chain including its transport and storage activities. Shifting from the myopic single company perspective to the chain assessment leads to increased energy savings potentials and reduced implementation gaps of EEMs.

Short article: how ESCAN improves the energy efficiency of cold chains thanks to solar-PV

In the food and beverage sector, there is a high potential to improve energy efficiency in cold chains and reduce its annual demand with low or medium investments by 10 to 35 %. In this context, ESCAN and the Spanish Federation of Food and Beverage Industries (FIAB) are implementing in Spain the ICCEE project, offering technical assistance to manufacturing companies and logistics chains to reduce their energy bill and improve the operations of cold systems.

The article explains the positive side effects (also known as multiple benefits) of renovating old and decentralised industrial refrigeration and freezing systems and why increasing industrial companies are switching to solar PV systems. Solar photovoltaic systems match to a great extent with the power needed to produce the cold for the food and beverage industries. Thanks to the project conducted by ESCAN and FIAB, a meat industry company of Northern Spain improved its refrigeration processes. It produces 1000 tonnes per year of high-quality cured ham. The management's motivation for replacing the refrigeration systems was based on 3 factors: the need to renew the refrigeration equipment which was still using old technology; its high energy consumption; and the desire to innovate and improve the industrial processes. Read more in the article, published in Management's best practices.

VIDEOS

ICCEE lunch seminar: 30 minutes to hear about the latest ICCEE updates.

<u>IEECP organised a short webinar to present</u>
<u>the latest updates of ICCEE</u>: it presented
the progress towards 2021, what was
released, stakeholders involved and
engagement activities, sister projects,
before coming activities: more trainings
and webinars, the e-learning platform as
well as the Industry Informative Network
platform.



ATEE organises the French training and shares presentations and full recording



January 15, ATEE and ANIA organised the workshop "Efficacité énergétique dans la chaîne du froid : revue des leviers d'amélioration": you can now access the half day training material available, in French, 9 presentations on tools and support available for companies implementing energy efficiency measures.

ATEE also shares a **full page of information** about ICCEE in French, check it out!

NEWS FROM OUR SISTER PROJECTS

ICCEE partners with projects sharing objectives and working on similar topics, in order to grow outreach potential and join forces for research activities. In this edition, we focus on the Innoveas project.



The innoveas H2020 project is an initiative promoted by 10 partners from 6 EU countries, to build and deliver a capacity building programme, aiming at addressing the major non-technical barriers that most often hamper the adoption the energy

auditing practice, in particular among those actors, such as Small and Medium Enterprises where such audits are not required by law.

Latest news from the project include:

- <u>Interviews from several small business owners</u> having very different reasons for implementing <u>energy efficiency</u> and shared as videos. Training videos are available in several languages.
- A <u>paper in collaboration with other H2020 projects</u>, "Energy Efficiency Solutions for Small and Medium-Sized Enterprises »
- Meet all ICCEE project partners here: https://iccee.eu/external-links/

EVENTS

- <u>ATEE is joining the SIFA fair (Salon Interprofessionnel du Froid et de ses</u>
Applications) in April 8, Sibylle Brière will present on cold chain energy efficiency.





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