



‘Employees awareness, training and energy management system’

Latvia
Freezing industry
TRL 9

Consumption and emissions savings

Company “Teikas Saldētava” offers storage facilities, freezer warehouse and office spaces. Mainly working with frozen meat and fish suppliers, as well other kind of suppliers mainly in food and retail sectors.

Company considers energy costs and efficient use of resources as an important objective. From August till November 2017 company carried out an energy audit in accordance with the requirements of the Latvian Energy Efficiency law. It served as the basis for energy management system and introduction of trainings for workers, in particular on the logistics, loading and unloading the warehouse.

Investment (real or estimated)

2 400 €

Savings

7 838.4 €/year

78.6 MWh/year

Main NEBs (other benefits)

Employees awareness and engagement

Reduced greenhouse gas emissions

Description

Employees awareness, training and energy management system started within the framework of energy audit which took place from August and November 2017. During the analyses of potential energy efficacy measures the total electricity consumption as well as electricity consumption for the tenants was analysed. Analyses also included the calculation of energy costs, the distribution of energy consumption by consumer groups, the amount of energy consumed by energy sources and an analysis of a

number of energy efficiency measures.

After energy audit, energy management system was developed and implemented. One of the challenges was to coordinate delivery time at warehouse to minimize waiting time for trucks, unloading/loading and checking what are the required minimum storage temperatures for products.

Based on the energy data analyses and main findings worker trainings regarding unloading/loading process

and safety were carried out as it was acknowledged that the trucks were waiting too long at the loading ramps and it was taking too much time for unloading/loading the warehouse. One of the biggest obstacles for energy efficiency measure implementation for the cold supply chain that the company focuses on their own facility and are not involved in decisions taking on the whole cold supply chain.

One of the challenges faced to improve loading and unloading process was to coordinate delivery time at warehouse to minimize

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waiting time for tracks, unloading/loading and checking what are the required minimum storage temperatures for products.

But because each involved company has their own priorities, it makes it hard to negotiate between different companies that are involved. As some clients/ other companies can't agree on different delivery times to warehouse they waste energy waiting to unload or load the tracks.

Company "Teikas Saldētava" implemented measures to improve energy efficiency in cold supply chain regarding their responsibilities. They carried out regular training of workers regarding logistics, delivery and unloading to minimize waiting times

for tracks. Also focusing on worker safety, including fire safety and the safety of ammonia system.

Benefits

Energy savings from the implemented energy management system and worker trainings were estimated as 78,6 MWh/year.

Employee trainings helped to achieve not only energy savings but also helped to increase working environment safety.

Opportunities and barriers to implementation

Opportunities	Barriers
Employees awareness and engagement	
	Lack of human resources for implementation
Reduced energy consumption and energy costs	Lack of experience in providing trainings and setting up new procedures

Calculations

Even it is hard to estimate benefits of employees training and energy management system the calculations shows that energy savings are approximately 78.6 MWh/year.

	Initial situation	Final situation
Productive capacity [t/year]	n/a	n/a
Annual energy consumption [kWh/year]	1 572 000	1 493 400
Annual energy cooling consumption [kWh/year]	1078	980
Annual economic energy expenditure [thousand €/year]	128	80

	Energy management system
Total investment (€)	2400
Electricity savings for freezing [kWh/year]	78 600
Average electricity price [€/kWh]	0.097
Average emission price [€/tCO ₂]	25
Emission reduction [tCO ₂ /year]	8.567
Energy economic saving (€/year)	7 624.2
Emission economic savings (€)	214.2
Total economic savings (€)	7 838.4
Return period (years)	0.3

References

[1] Company internal energy audit according to Latvian Regulation No. 487 Regarding Energy Audit of Enterprises

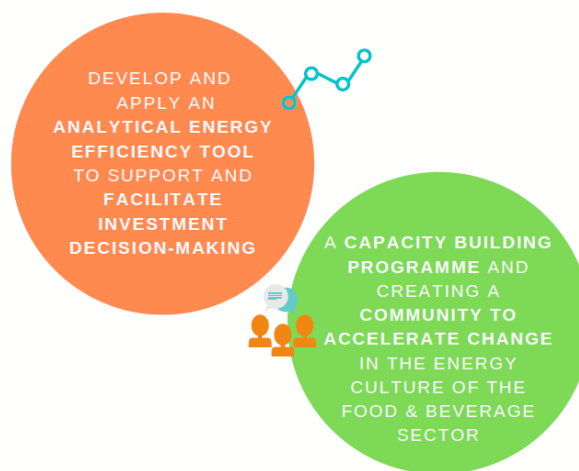
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About ICCEE

The project ICCEE, www.iccee.eu, funded by the EU programme Horizon 2020, aims at improving energy efficiency in the cold chain of the food & beverage sector and making it easier for the sector to:

- undertake energy efficiency measures across the entire supply chain and
- accelerate the implementation of energy audit results.

ICCEE follows a holistic approach that moves from a single company perspective to the assessment of the entire cold supply chain. Existing financing schemes for SMEs will be assessed: the optimal ones will support the implementation of energy efficiency measures. ICCEE objectives build on 2 pillars:



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