

## ‘Saving fuel and costs’

Germany

Logistics company

TRL 9

Implementability: 99%

**Main NEBs (other benefits)**

Reducing pollutant emissions

Quality assurance



## Saving costs by fuel monitoring

As part of the implementation of an energy management system, a logistics company uses fuel monitoring as a measure to detect irregularities in order to measure and reduce the fuel consumption. A sudden increase in fuel consumption or a rapid loss of fuel is noticed and the causes can be detected and remedied.

This also leads to a sensitization of the driver, as the fuel display shows which behavior leads to lower or higher fuel consumption. For example, this can motivate drivers not to leave the doors open unnecessarily long during loading and unloading.

A further advantage is that fuel theft is detected early on and damaged goods do not occur due to insufficient cooling.

### Description

When implementing an energy management system (EMS) some measuring points have to be installed and monitored. One goal of the logistics company regarding the EMS is to reduce the fuel consumption of the trucks. Therefore, the fuel consumption must also be monitored to check the extent to which the targets are achieved.

The monitoring system should display various data suitable for the EMS. The fuel consumption for cooling is displayed separately. A reference to the ambient temperature is also provided. For example, fuel consumption per temperature difference to be cooled is seen as a suitable key performance indicator (KPI). The fuel consumption per

kilogram of refrigerated goods is also meaningful, or a combination of both figures, i.e. consumption per temperature difference and kilogram of goods.

### What is the improvement focus?

The key element of fuel monitoring is to control the effectivity of measures which are already implemented and

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to derive new additional energy efficiency measures. This also includes short-term small measures such as correctly closing the doors as soon as possible. In addition, in the long term, a deterioration in the truck's insulation is also evident. In the long term, fuel monitoring can help to make the truck driver more aware of the influences on fuel consumption.

### Benefits

The main advantage is the contribution to energy management. The measurement and monitoring of

fuel helps to continuously improve the transport process. An additional advantage is the precise knowledge of fuel consumption, so that invoicing can be controlled. Interruptions in the cold chain must be avoided under all circumstances. Therefore, fuel level monitoring is urgently required so that even in the event of fuel theft, damage to goods can be prevented at an early stage.

### Opportunities and barriers to implementation

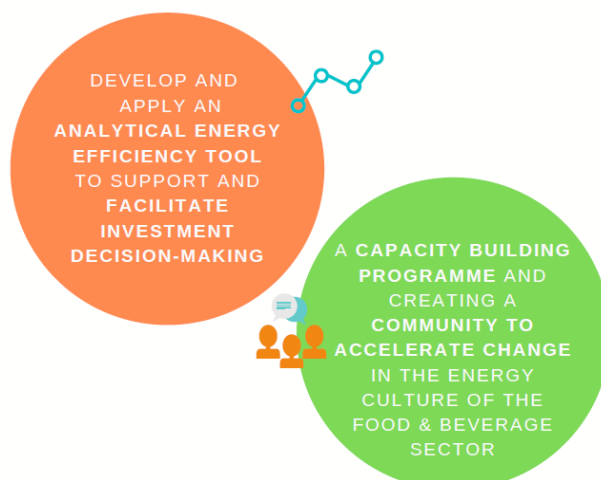
<i>Opportunities</i>	<i>Barriers</i>
Lower fuel consumption and related cost	Additional cost for software upgrade
Negligible maintenance	Additional cost for new vehicles
Available worldwide	Staff training required
Simple handling	
Improved food quality	

### About ICCEE

The project ICCEE, [www.iccee.eu](http://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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