

# RECP Best Practice Catalogue

*Introduction of higher efficiency burner  
Developed within the framework  
of MED TEST II*



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



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# Best practice - Introduction of higher efficiency burner

**SECTOR:** **Food & Beverage**

**SUBSECTOR:** Manufacture of dairy products

**PRODUCTS** Yogurt, sour cream, different types of milk, white cheese, yellow cheese, labaneh, soft drinks, nectar and juice

**CATEGORY** Technology upgrade/Eco-innovation

**APPLICABILITY** Utilities

**COMPANY NAME** ---

**COMPANY SIZE** Employs around 250 workers in different production sections, marketing, distribution and in own cow farms.

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**Description of the problem**  
(Base scenario):

The company has a diesel operated boiler which provides the steam needed for pasteurization process. The boiler burner has an old design with low efficiency and designed to fire only diesel fuel.

**Description of the solution**

Replacing the burner with a new dual fired burner shall increase the efficiency of the burner, thus saving on the fuel consumption. Moreover, the dual fired burner provides the flexibility to operate the burner with LPG and/or diesel fuel. As the LPG is cheaper than the diesel fuel, this modification will contribute to additional reduction of the production cost just through the fuel switching (these additional savings are not quantified here).

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## Economic Benefits

Operational savings due to increased efficiency of pasteurization boiler:  
16,150 l/y (50% of the total diesel consumption of this boiler)

**TOTAL Saving: 21,000 EUR/y**

## Environmental Benefits

- By replacing the burner for the pasteurizers, the company saves energy of appr. 170,000 kwh/an. This energy saving represents 4.5% from the total company energy consumption.
- Reduction of diesel consumption by 50% leads to reduction of CO<sub>2</sub> emissions by 127 ton/y.

## Health and safety impact

Improvement of the working environment and increasing the worker awareness of the health impacts of using diesel or LPG.

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<b>Capital investments &amp; financial indicators</b>	<ul style="list-style-type: none"><li>• 50,000 EUR Capital investment</li><li>• 2.2 year Pay Back period</li></ul>
<b>Suppliers</b>	Imported
<b>Other aspects</b>	Decrease of maintenance costs of the old boiler.
<b>Implementation</b>	Implemented.