Energy concept summary

Title of the energy concept: Biomass boiler is used to replace *a oil* boiler

Topic area choice and topic marking in blue:

( ) **Building** e.g. Insulation, change of windows, Low-energy-buildings

( ) **Electrical energy** e.g. Light, Compressed air, Electrical drives, Cooling machines, Load management

( ) **Heat** e.g. Heating, Process heat, Heat recovery, Air conditioning, Combined heat & power

(x) **Renewable energy** e.g. Solar technology, Wood-fired plants, Biogas, Geothermal energy

( ) **Management** e.g. Energy buying, Contracting, Emission trade, Energy data management systems

Company: KONIMEX HOLDING COMPANY LTD

Branch and NACE-Code(s): 46.39 – Food industry and trading

Products/Services: Food

No of employees: 25

Name of energy concept producer: Goran Tanchevski

Participant in EUREM No.:

Energy concept description:

Main process in the facility is extracting essential oils and drying various herbs. At the moment heat for the production process is from 236 kW steam boiler which work on heating oil. The facility is in the remote location and there is a great risk of stops in production due to the difficulties in oil supply. Since the essential oils are very small fraction of the total mass of used plants, at the end of the production process large quantities of unused biomass is available. This biomass is Juniper (*Juniperus communis*) berries. Biomass have relatively small amount of humidity (27-37% wet w/w), and is possible to be used directly as a boiler fuel. New construction is: Biomass storage, transportation to boiler and new 300 kW biomass boiler. Further benefit for the factory is free fuel: unused biomass instead of expensive heating oil.

Picture(s) of plant, Base situation etc.

Results:

Energy saving potential [kWh/a]: 311.549	Investment costs [Euro]: 104.000
Energy source: Biomass (Juniper berries)	Pay-back time [Years]: 4,6
Cost reduction potential [Euro/year]: 23.651	Chance of implementation:
CO_2- saving potential [t/a]: 24,2	( ) high (x) middle ( ) low
(please fill in conversion factor: 0.0778 kg CO_2 per kWh)	or date of implementation