

A Sawmill-Adapted Energy Management System

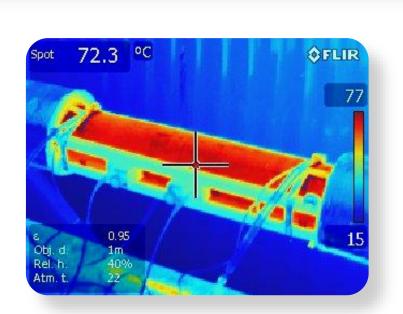


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7. Internal communication

What to do: Involve all employees by communicating the energy policy, the energy targets and the efficiency efforts.

Expected outcome: A staff working together towards the specified energy targets.

2. Energy policy

What to do: Develop an Energy policy and have it approved by the top management.

Expected outcome: Your company has a policy that clearly states your commitment to work with energy efficiency.

3. Energy review

What to do: Map your current energy use and identify potential opportunities for energy savings.

Expected outcome: Knowledge about your current energy use and potential saving measures, to use as a base line for setting targets.

Kiln driers

356 kWh/m³

6. Daily routines

What to do: Include energy efficiency in your daily routines for operation & maintenance, procurement, and design of processes and products.

Expected outcome: Everyday energy savings without thinking.

1. Energy management team



What to do: The top management appoints an Energy management team with the required competence, authority and resources.



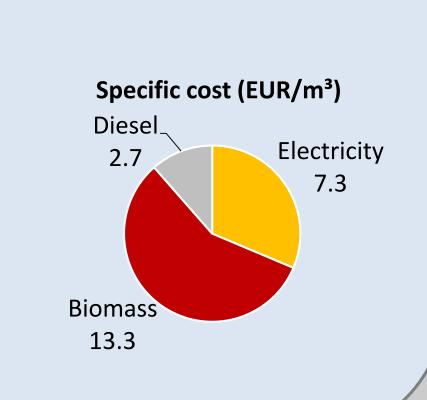
Measuring

4 kWh/m³

Specific energy use (kWh/m³) Diesel Electricity 73.0 Biomass

Saw line

66 kWh/m³



Final sorting

11 kWh/m³

5. Energy action plan

What to do: Make a plan for how to reach the targets you have set up.

Expected outcome: A road map with planned actions that will make you reach your Energy targets.

4. Energy targets

What to do: Set targets for your energy efficiency work that are quantified, measurable and achievable.

Expected outcome: Clearly expressed goals to aim your efforts at. Without targets you do not know if you succeed or fail.

Action/Measure	Responsible person	Start date	End date	Energy sav	vings (MWh, Biofuel	/year) Diesel	Economic savings (EUR/year)	Investment (EUR)	Payback time (years)	Current status
Isolate kiln dryers 6–8	Marcus Olsson	2014-05-01	2014-05-20	10	1,000		34,000	15,000	0.4	Under investigation
Install frequency converters	Anders Lycken	2014-06-15	2014-07-21	100			10,000	20,000	2.0	Planned - decision taken
Eco-driving, educate truck drivers	Henning Horn	2014-07-01	2014-08-31			100	16,700	3,000	0.2	In progress
Automatic stop of conveyors	Daniel Nilsson	2014-07-01	2014-08-31	3			300	600	2.0	Finished
Pipe insulation	Marcus Olsson	2014-07-01	2014-08-31		100		3,300	3,000	0.9	Rejected

Participants in the European project Ecoinflow

- Norwegian Institute of Wood Technology (Treteknisk), NO
- SP Technical Research Institute of Sweden (SP), SE
 Thünen Institute (TI), DE
- L'Institut Technologique Forêt Cellulose Bois-construction Ameublement (FCBA), FR
- The Norwegian Sawmill Industries Association (Treindustrien), NO
- InnovaWood, BE
- Der Bundesverband der Säge- und Holzindustrie, DE



- Fédération Nationale du Bois (FNB), FR
- BSW Timber, UK
- Mühlböck, AT
- Bergkvist-Insjön AB, SE
- Amber Wood LTD, LV
- Around 50 sawmills in Europe

