



# Bioenergy4Business “Bioheat Profitability Assessment Tool”

Comparison of heat generation costs for new biomass (pellets, wood chips, straw) and fossil fuel (oil, gas, coal) fired heating plants and amortization of a fuel-switch from fossil fuels for biomass for existing heating plants with mid-scale boiler capacity.

## ABOUT THE TOOL

The Austrian Energy Agency has developed an innovative, free-of-charge Bioheat Profitability Assessment Tool for the examination of investments in (low temperature) bio-heating systems (for space and domestic hot water as well as process heat) within the framework of the EU-funded Horizon 2020 project Bioenergy4Business (B4B: [www.bioenergy4business.eu](http://www.bioenergy4business.eu)).

The Bioheat Profitability Assessment Tool, because of investments from 20,000 to several Mio. EUR, is rather detailed and requires some prior knowledge about mid-scale biomass and fossil fired heating systems with or without heating networks. The Calculation Tool allows a broad range of potential users to carry out a pre-feasibility level study for biomass heating systems in a user-friendly manner, however. By means of a discounted cash flow analysis (discounted payment surpluses from the considered investment project), the tool allows a comparison of a bio-heat system with a qualitatively equivalent fossil fuelled heating system. Application areas of this Excel tool are heating systems for individual in-house heat supply, as well as heating systems with hot water pipes for supplying external heat consumers (i.e. micro-grids or district heating networks).

The Calculation Tool includes plant dimensioning aids and reference values for investments in all required components (of fossil or biomass-fired plants) from 100 kW to 20,000 kW nominal heat output (depending on the relevance of fuels and plant sizes for the country considered). All installation configurations also include reference costs for running, annual expenses. All the reference values contained in the tool were surveyed for 12 European partner countries (by the respective B4B project partners) at cost status 2015. An explanatory manual is integrated into the Excel tool. For all calculation sheets and the manual 10 languages are available.

## DOWNLOAD PROCEDURE

To download the latest version of the Bioenergy4Business “Bioheat Profitability Assessment Tool”, please fill out the [registration form](#) and follow the short registration procedure. With your registration you allow the programmer of the Tool, the Austrian Energy Agency, to send updates of the tool to all persons registered in case.

## DOWNLOAD AREA

In addition to an empty Bioheat Profitability Assessment Tool and the Usage Instruction (please note), you will also find in the download area two pre-feasibility studies (two filled Calculation Tools and project documentations in English, respectively) carried out with the Bioheat Profitability Assessment Tool.

You are going to find an economic comparison for a  
- fuel-switch at a hotel's 400 kW in-house central heating system from fuel oil for wood chips  
- a greenfield centralized 4.9 MW heating system with an 8 km-long heating network; i.e. a wood-chips fired system compared to a natural gas fired system.

Both studies are based on biomass plants in operation in Austria for a few years now. It is analyzed whether these biomass plants could have been realized again on the basis of actual investments and Austrian energy prices of 2016 (i.e. at comparatively low prices for fossil energy compared to those when the plants were realized).

You can use the tool for biomass in-house projects in other sectors of economy also or for other micro-grid and district heating projects.

Particularly recommended areas of application of the tool are the comparison of several professional offers for a new heating system or for a fuel-switch project.



### LEGAL DISCLAIMER

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