



Представлення прототипу електронного калькулятора, розробленого в рамках проекту В4В, для розрахунку техніко-економічних показників типових тепlobіоенергетичних проектів

Тетяна Желєзна

зав. відділом НТЦ «Біомаса», к.т.н.

Перший тернінг-семінар
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об'єктів бюджетної сфери»
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Розрахунок основних параметрів проектів теплопостачання на біомасі (електронна таблиця, прототип)

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WELCOME!

The purpose of this tool is to assist the user in conducting an economic feasibility analysis for biomass heating systems, and enable a general comparison with an adequate fossil fuel heating system, with the method of a discounted cash flow analysis. Scope of this tool was biomass heating plants with and without district heating networks, in a capacity range from 0.1 to 20 MW.

The tool consists of a data input sheet and a data output sheet (Results). To start the calculation procedure, fill in the spreadsheet from left to right in the given order. Input sheets are organized on tabs, each parameter has one tab. At the left bottom there are the most parameters used and they are linked to the corresponding responsibility. In the column "Value Input", you will find start values with the correct values for your analysis need to be input. To provide some guidance on available parameter values, you will find appropriate reference values, or based on changes in the column "Reference Value". These values are based on a national survey conducted in the year 2013 by the bioenergy/business project partners. All cost-related reference values are corrected by means of the inflation rate only. This cost increase is calculated automatically, based on the year you chose to be the start year of your project (see below). In some cases you will also find reference values for electricity, industrial processes etc. Please note that these reference values were not made for possible re-processor values only. The tool values, which you should take as the reference values for your specific project can deviate substantially from the reference values, based on local conditions.

Please note that this tool and the related reference survey for reference parameter values have been prepared with meticulous care and to the best of our knowledge. For the sake of convenience, calculations concerning heat to be generated and fuel requirements (input) are based on gross energy results. Furthermore the cost of the heat delivered through an user network, such as heat demand assumptions and plant sizing parameters. Please note that an in-depth demand analysis is essential for the scope of the project preparation and operation and consequently has a strong impact on the feasibility of biomass heat systems.

Using the data sheets - cell colour legend

Parameter	Input Value	Reference Value
Input Value	Blue cells -> user data input used for intermediate calculations	Blue cells -> user data input used for final output calculation
Reference Value	White cells -> informative data / intermediate result	White cells -> informative data / intermediate result

GENERAL PROJECT INFORMATION

Parameter	Input Value	Reference Value
Language	Language	Language

LEGAL DISCLAIMER

This tool does not replace site specific planning by professionals and collecting general offers from manufacturing companies. Hence investment decisions can not be based on the output of this tool.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101017744. Any communication activity related to the author reflects only the author's view. The European Union and its institutions and networks (except agency staff) are not responsible for any use that may be made of the information any communication activity contains.

The cooperation and data provided by the tool partners were used together with the consent of the bioenergy/business project partners (listed below). Nevertheless, the involved partners can accept no liability for the correctness, completeness and use of the data as a basis of model results. In addition, liability for all damages, especially for direct or indirect as well as consequential damages, arising from the use of this tool or other bioenergy.com related services, is excluded.

The Austrian Energy Agency is responsible for the development, programming, design and metadata content and functionality, as well as for the English text content of this tool.

The user responsibility for the quality and consistency of the country specific default values, as well as the decision from Results into their national legislation, lies with the project partners of the member country. The following list shows the principal members of the steering committee which advised, edited and provided for this tool.

Partner organization name	Country
AEA - Austrian Energy Agency	AT
KAFC - KEE - Centre for Renewable Energy Sources and Saving	EL
QEP - Qualitative Energieeffizienzprogramm (energy efficiency center)	DE
NAEC - The Polish National Energy Conservation Agency	PL
IBEWG - German Association of Biomass and Biogas	DE
ISA - Slovak Innovation and Energy Agency	SK
IBBWP - National Biomass Association	HR
IBCB - Scientific Engineering Centre "Biomass" Ltd	HR
IBP - Energy Institute Vitoz Pisto	HR
RVO - Rijksvrijwillige voor Onderzoek Nederland, Ministry of Economic Affairs	NL
MOTIVA - Motiva Oy	FI
DTU - Danish Technological Institute	DK

B4B Bioheat Cost Calculator - Pre-feasibility check of mid-scale, solid biomass fired (district & in-house) heat-only plants

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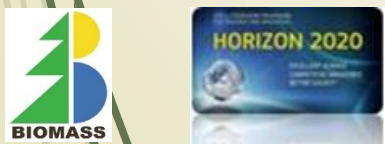
RESULTS

This sheet is divided into three parts: In the top part you find a summary of the key assumptions that were made on the previous sheets. The middle part gives you the key results from the dynamic cash flow analysis for a calculated service life of 25 years. The last section allows you to change the calculated service life between 15 and 25 years in order to evaluate the influence of the calculated service life on the results.

7004 Summary of input parameters

Biomass Heating System		Fossil Fuelled Reference System	
7006 Fuel type	#N/A	Fuel type	#N/A
7008 Technical Parameters			
7009 Total nominal biomass boiler capacity	4,0 MW	Total nominal fossil fuelled boiler capacity	8,1 MW
7010 Fossil fuelled peak/back-up boiler capacity	5,0 MW	Heat Grid - Trass/trench length	7 899 m
7011 Heat Grid - Trass/trench length	7 899 m	Annual heat sold	11 528 MWh/a
7012 Annual heat sold	11 528 MWh/a		
7013 Investment			
Total initial investment	4 660 438 UAH	Total initial investment	#N/A UAH
Thereof investment subsidy (if any)	1 392 126 UAH		

7018 Figure(s): Shares of initial investment components



Фінальна версія електронного інструменту у вигляді Ексел-файлу може бути отримана по запиту в НТЦ «Біомаса» пізніше.

Дякую за увагу!

Тетяна Желєзна

НТЦ «Біомаса»

т. (+380 44) 223-55-86, ф. (+380 44) 456-94-62

zhelyezna@biomass.kiev.ua

<http://biomass.kiev.ua>