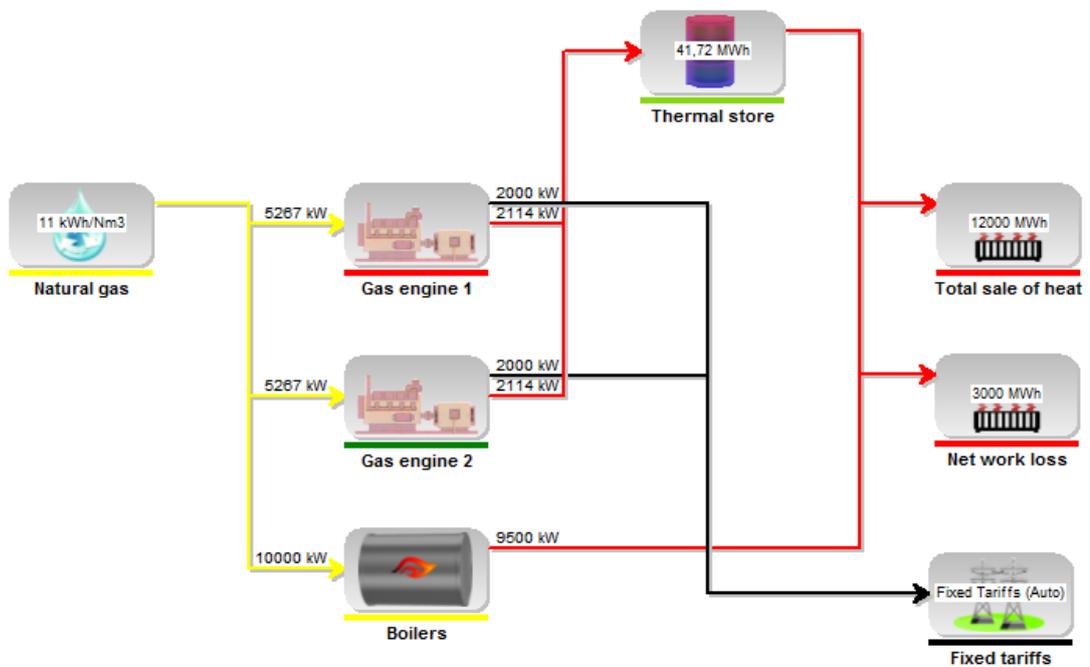




Getting Started

Introduction to energyPRO



Preface

energyPRO is a Windows-based modeling software package for combined techno-economic analysis and optimisation of complex energy projects with a combined supply of electricity and thermal energy from multiple different energy producing units.

The unique programming in energyPRO optimises the operations of the plant including energy storage (heat, fuel, cold and electrical storages) against technical and financial parameters to provide a detailed specification for the provision of the defined energy demands, including heating, cooling and electricity use.

energyPRO also provides the user with a detailed financial plan in a standard format accepted by international banks and funding institutions. The software enables the user to calculate and produce a report for the emissions by the proposed project.

energyPRO is very user-friendly and is the most advanced and flexible software package for making a combined technical and economic analysis of multi-dimensional energy projects.

For further information concerning the applications of energyPRO please visit www.emd.dk.

Terms of application

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1. Start energyPRO

When installing energyPRO it is as default installed in the program folder e.g. with a path similar to C:\Program Files\EMD\energyPRO 4\energyPRO4.exe

Upon installation a shortcut is automatically generated and placed on the desktop looking like the one shown on Figure 1.



Figure 1. energyPRO-logo

2. Study energyPRO projects

The best way to get familiar with energyPRO is to load one of the existing examples, which is included in the energyPRO software package. The examples are as default placed in the following folder:

C:\energyPRO data\English\Project examples

‘English\Project examples’ is country specific depending on the Windows language of the computer. The first time energyPRO is started it suggests finding the files in this folder. Choose ‘File’, ‘Open’ and select the example you want opened. The graphical user mode makes it easy to edit the data and maintain an overview. The setup of the energyPRO-window can be seen on Figure 2.

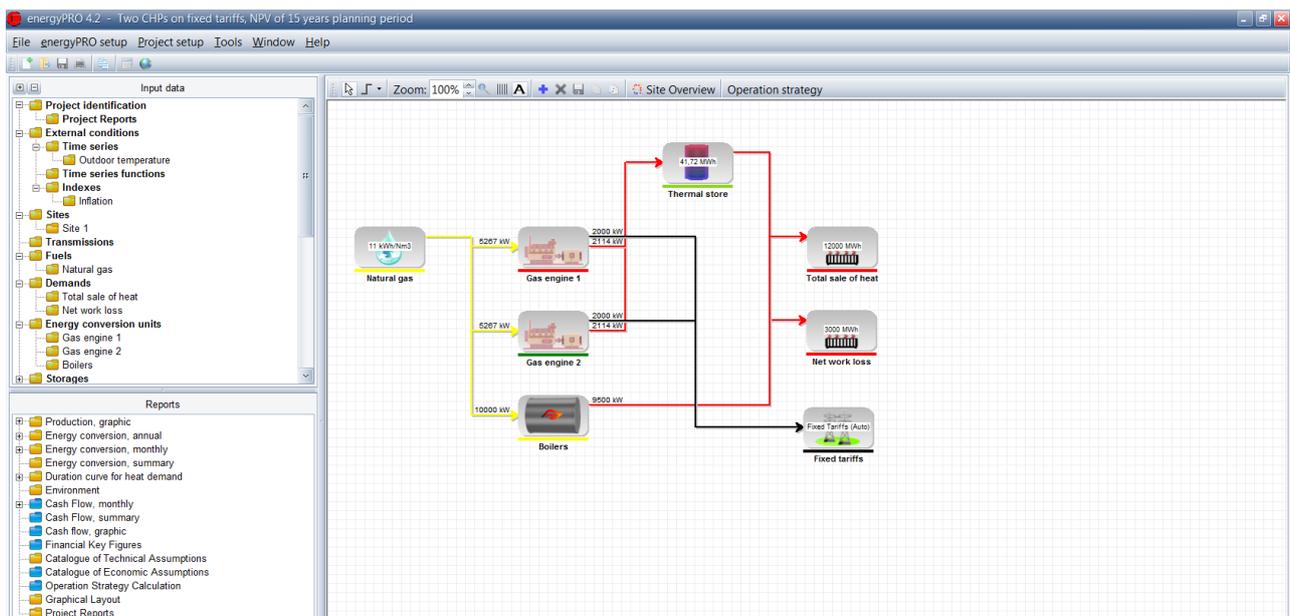


Figure 2. The energyPRO-window

When an example has been opened look into the first input window (called 'Project identification' in English) for a short description of the examples. Here it is also possible to see what module the calculations are being made in based on the following options: DESIGN, FINANCE, ACCOUNTS or OPERATION.

The Modules are used for different tasks.

DESIGN is used for making energy conversions and calculating the operation income for a single year by including revenues and operational expenditures.

FINANCE is used for economic key figure analysis and generation of cash flow reports when including the investments and financing costs for the energy project.

ACCOUNTS is used to include depreciation and taxation into your project calculations and generates detailed income statements and balance sheets for each year in the defined project period for long term budget for heat, cooling and power Plants. The FINANCE and ACCOUNTS calculations can include more than 20 years of cash flows on a monthly basis, income statements and balance sheets.

The OPERATION module can be used for optimization analyses of the operation of an energy plant for a short term period.

For most users it would be advisable to start studying DESIGN examples, then FINANCE, ACCOUNTS and finally the OPERATION examples. For more information about the content of and differences between the modules please see the on-line help, the manual or the module descriptions found on www.emd.dk.

When you have loaded an example take a tour round the desktop and take a look in all the different input folders defining the project. E.g. in 'Reports' choose the print out 'Productions graphical' which gives a graphically overview of the whole year. In the printout is shown in which periods the energy units are producing and how e.g. a heat accumulator is used.

3. Creating a new energyPRO-project

Often it is wise to create a new project simply by loading an existing project, modifying it and saving it with a new name.

If you want to create a new project from scratch choose 'File' and 'New'. The first thing to do in a new project is to choose the project type in the 'Project identification'. When you have chosen either DESIGN, FINANCE or ACCOUNTS, the relevant folders in the input data folder structure will appear and you can start filling in the data.

4. Help

It is recommended to use the HELP-system for detailed information throughout the program. Use the F1-key to start the HELP and you will get an explanation related to the window you are working in.

Alternatively, choose Help in the top menu. See especially the chapter 'Operating in energyPRO', which gives you the necessary instructions for navigating in the program.

5. DEMO-version

If you are working with the demo version of energyPRO, you will find some restrictions using the program, but you should still get a good opportunity to see the facilities in energyPRO.

If you open a project file in DEMO-version, the project will be in READ-ONLY mode. This means you can see all input data and print out all reports, but you cannot alter any of the input data.

If you want to switch the program into DEMO-mode, just choose 'Setup' and 'DEMO mode'. Now you can alter the input data, but you cannot save your editions and the reports are overwritten with the text 'DEMOversion'.

6. Language

The program will start with the same language as used by the Windows version as installed on your computer (if the language is available for energyPRO - otherwise in English). If you want to change the language, choose 'energyPRO setup' and go to 'Language' and select the wanted language and restart the program. If you do not have license to the selected language, energyPRO will start in DEMO-version.

EnergyPRO is currently available in English, German, Danish, Polish and Lithuanian.

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