



energyPRO

Online energyPRO course

Monday April 19th, 12:00-16:00 CET

Introduction to energyPRO

Introduction to the structure of energyPRO and the use of the program.

Setting up a model for a district heating plant in energyPRO - Technical prerequisites

The course participants learn to set up the technical prerequisites for a district heating plant that trades electricity in the spot market. Among other things, the participants learn to set up fuels, energy systems, heat storage, heat demand, electricity market and external conditions such as electricity prices, outdoor temperatures etc.

Setting up a model for a district heating plant in energyPRO - Economic prerequisites

The course participants learn to set up the operational payments in the form of subsidies, purchase of fuel, taxes, tariffs, CO2 quotas, trade of electricity, trading costs etc.

Results and printouts

The course participants learn to retrieve results and printouts such as operation income, cash flow, energyconversion, operating strategy calculation, graphical display of production for the operating period etc.

Tuesday April 20th, 12:00-16:00 CET

Investment in a solar heating system

The course participants learn to create and analyze how an investment in solar collectors affects the annual operation income.

Use of formula expressions in energyPRO

Course participants learn to create and apply customized formula expressions in energyPRO models. As an example, it is examined how customized formulas can be used to calculate an electric boiler's participation in the regulating power market.

Emissions in energyPRO

The course participants learn to create emissions related to the operation of the modeled plants.

Private wire: Modelling a wind turbine behind the meter

A wind turbine is added to the model of a district heating plant and it is investigated how the power from the wind turbine generates the most value.

Wednesday April 21st, 12:00-16:00 CET

Introduction to the calculation methods: Analytical and MILP Solver

Course participants get an overview of both the analytical approach and the new MILP solver, including when it may be an advantage to use one method over the other.

Hybrid Energy Systems

Demonstration of how electrical batteries are modeled in energyPRO and how they can be included in the optimization of PV and the participation of wind turbines in the spot market.

Introduction to multi annual calculations with the modules FINANCE and ACCOUNTS.

Course participants learn to create multi annual calculations with projection of prices, investments, loans, depreciation etc.

Thursday April 22nd, 12:00-16:00 CET

Investment in a heat pump and introduction to the COMPARE module

Course participants learn to create alternatives with the COMPARE module and to model a heat pump. The course participants also learn to navigate between the project's reference and alternatives as well as to change prerequisites and obtain results.

Introduction to automatically repeated calculations with the module INTERFACE

The course participants get an introduction to how the INTERFACE module can be used to perform automatically repeated calculations via XML calls to energyPRO. Using the model with the heat pump from previously, the INTERFACE module is used to perform sensitivity analyzes on selected parameters.