



energyPRO



## Use Case: Sector Coupling and PtX

PtX is a concept where (typically green) electricity is used to produce liquid or gaseous fuels.

This makes it possible to decouple power from the electricity sector to be used in other sectors and thus making it possible to utilize surplus electricity production. The increasing complexity makes it difficult to establish the economics of PtX: What is the origin of the electricity used for the electrolysis process? Is the electrolysis operated by wind turbines or from electricity bought on the spot market and what impact does this have on the levies as well as on the CO<sub>2</sub> accounting? What size electrolysis is paying off? What will be the impact of changing hydrogen prices on the economics?

In this training session, you will learn how to model such systems in energyPRO and how to develop the optimal conceptual design.

In addition to the conversion of electricity to fuels, the course also deals with the by-products (such as waste heat) that typically appear in these processes and how these can be integrated into an energy system.

### Focus areas:

- Sizing of units
- Mass balance
- Fuels
- Duration curve
- Utilization

*Please note that the participation in this session requires either participation in the introductory session or experience in working with energyPRO!*