

Assess energy efficiency potentials with a digital twin



Energieeffizienz und Erneuerbare
Energien für die Industrie in
spanischen Häfen

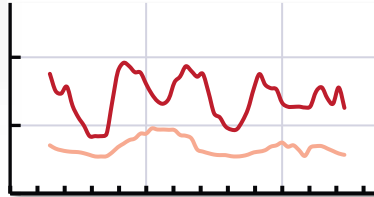
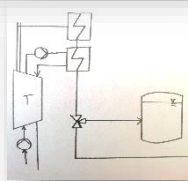
Dr. Johannes Schliesser,
magis consult GmbH

06.10.2020

The path to optimal efficiency measures

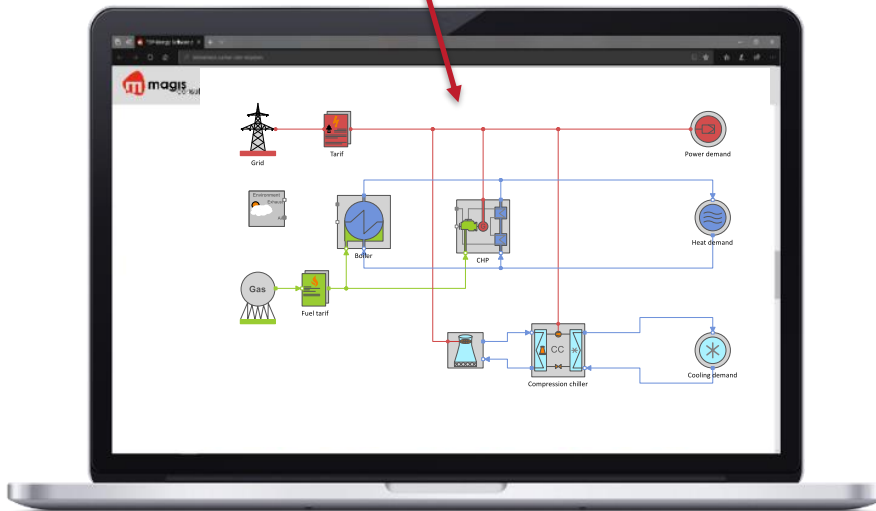


Modelling a digital twin

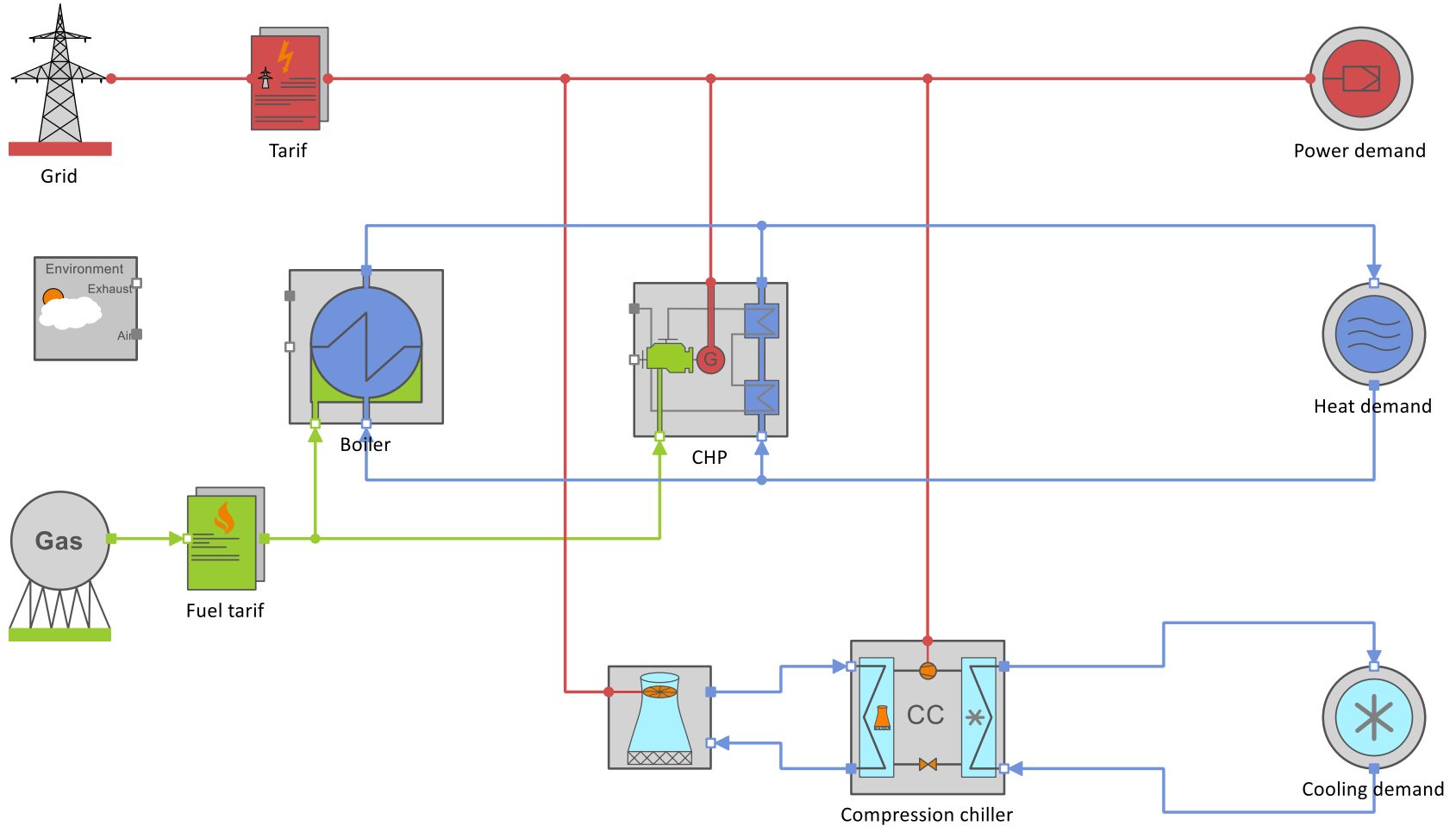


Detailed simulation of the current case including:

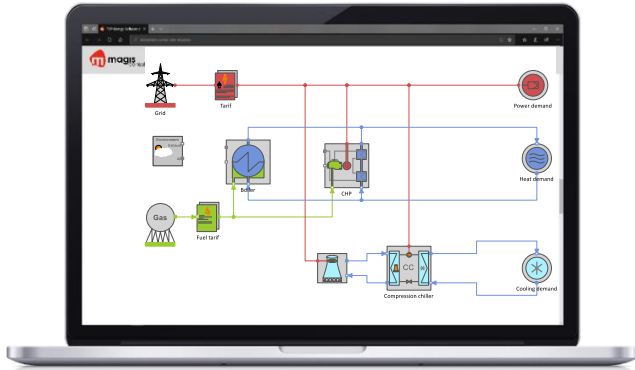
- Electricity, heating, cooling, steam and compressed air
- Technical equipment, energy generation, conversion and storage
- Operating costs and energy prices
- Load profiles



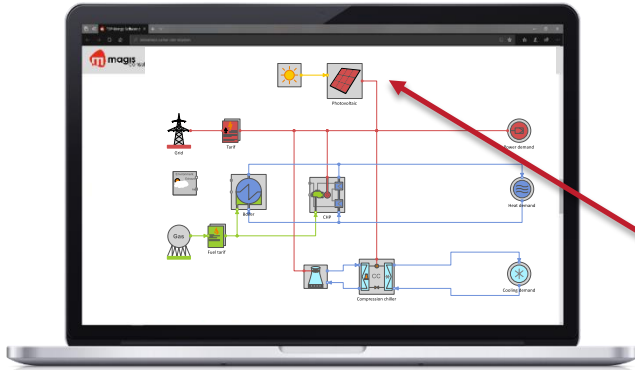
Modelling a digital twin



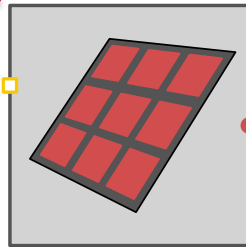
Simulation of optimization measures



Simulation of optimization measures

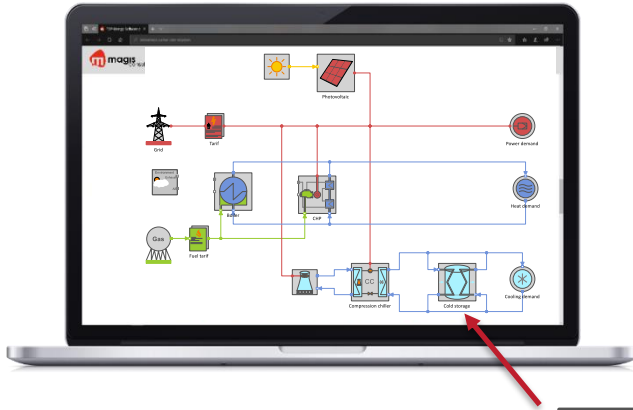


- Renewables such as photovoltaic

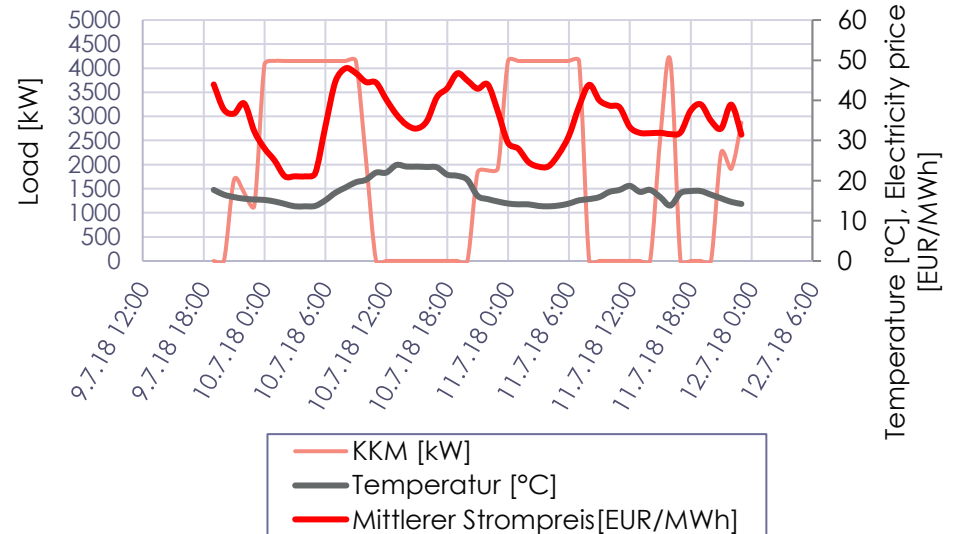
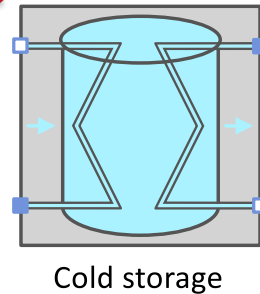


Photovoltaic

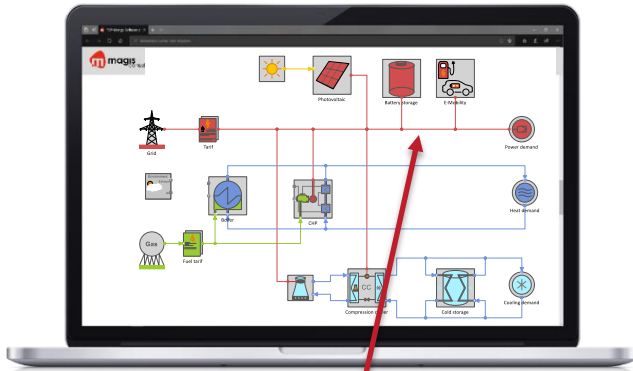
Simulation of optimization measures



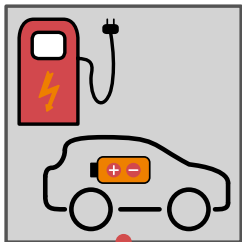
- Renewables such as photovoltaic
- Integration of cold storage with optimized operation



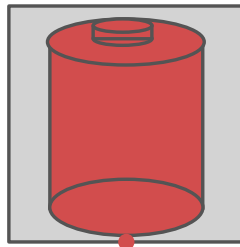
Simulation of optimization measures



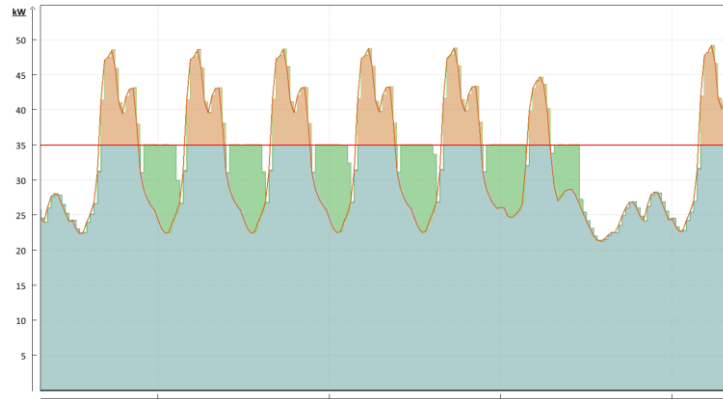
- Renewables such as photovoltaic
- Integration of cold storage with optimized operation
- Peak-shaving/ peak shifting combined with battery storage and E-Mobility



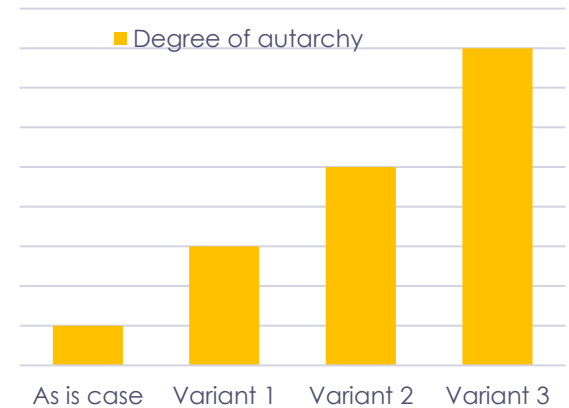
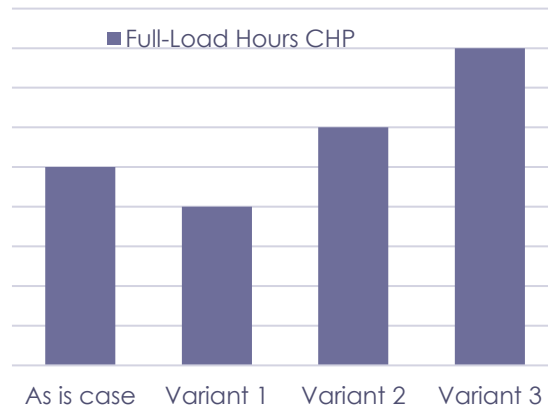
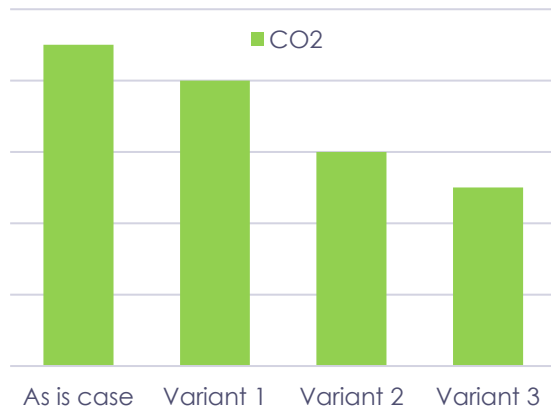
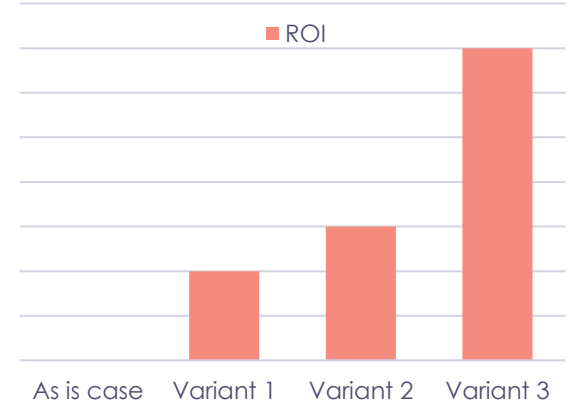
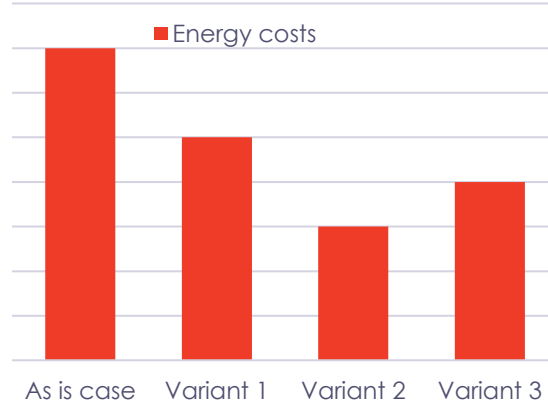
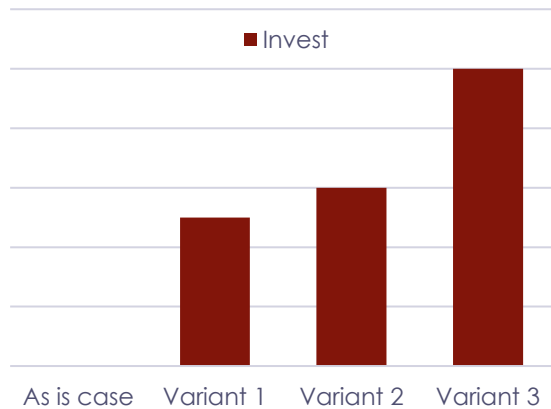
E-Mobility



Battery storage



Evaluation and optimization



References

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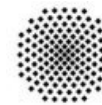
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Thank you for your attention



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