



Supply-Side Optimisation and P2H Sizing for a 2040 Net-Zero District Heating System: The Kapfenberg Case

Transformation Planning with Industrial Waste Heat and Sector Coupling

Hakan Ibrahim Tol, Stefan Retschitzegger, Ingo Leusbrock, Elke Wieland

Project Aim and Case Scope



Overall Objective: SUPPORT DHC project is to facilitate and support DHC operators in drawing-up of transformation plans and concrete **investment plans for a fast implementation of decarbonization for the existing DHC**.



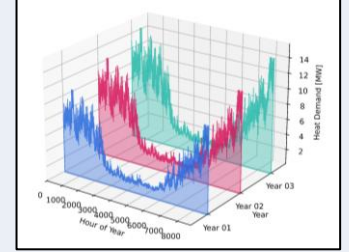
Our role as AEE INTEC is to support Kapfenberg with **decision-grade modelling** (energyPRO) and EED-aligned portfolio options.



Technology Framing: Industrial WH; Biomass, P2H as an enabler under price-triggered rules;



Future Planning



Gas heating plants
- to be closed

Steel manufacturing
„voestalpine“
- 6,5 MW
- Mo-Fr

Paper mill
„Norske Skog“
- 10 MW
- 24/7



- District heating network "City" – Existing
 - Construction Phase 1 (End of 2027)
 - Construction Phase 2 (2028 and beyond)
 - Transport line Norske Skog
 - Ring pipeline I (End of 2025)
 - Ring pipeline II (End of 2026)
- (1) Gas heating plant "Walfersam"
 - (2) Gas heating plant "Schinitz"
 - (3) Transfer station for waste heat vaBEG
 - (4) Transfer station for waste heat Norske Skog
 - (5) Heating plant IV Biomass
 - (6) Gas heating plant Lönstraße (Existing)

Central heating station

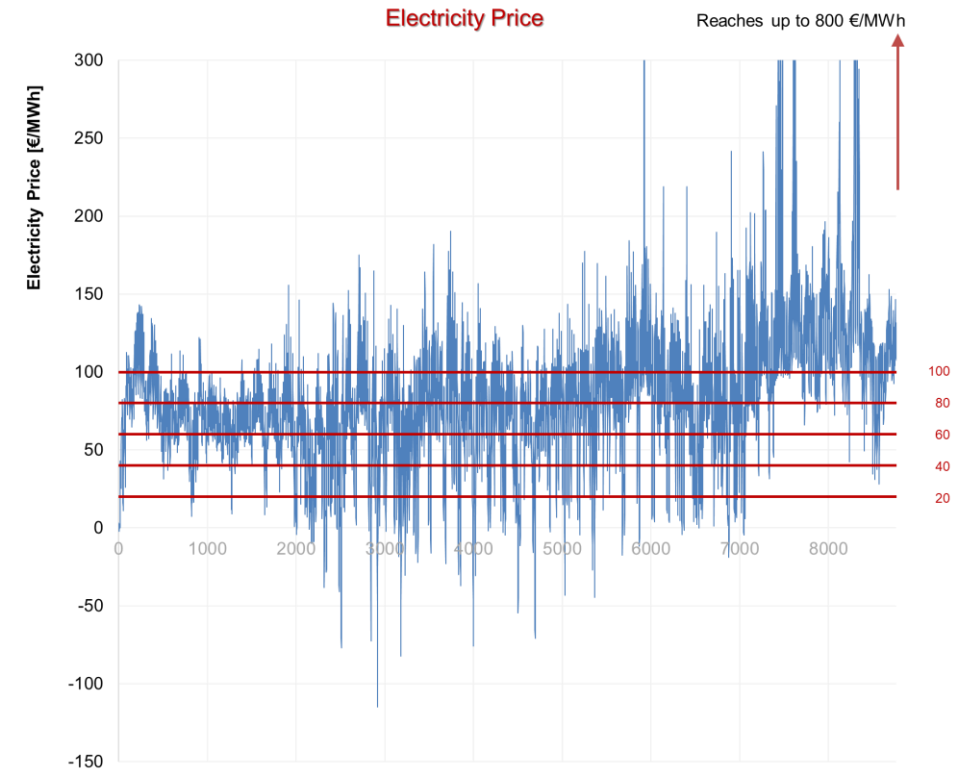
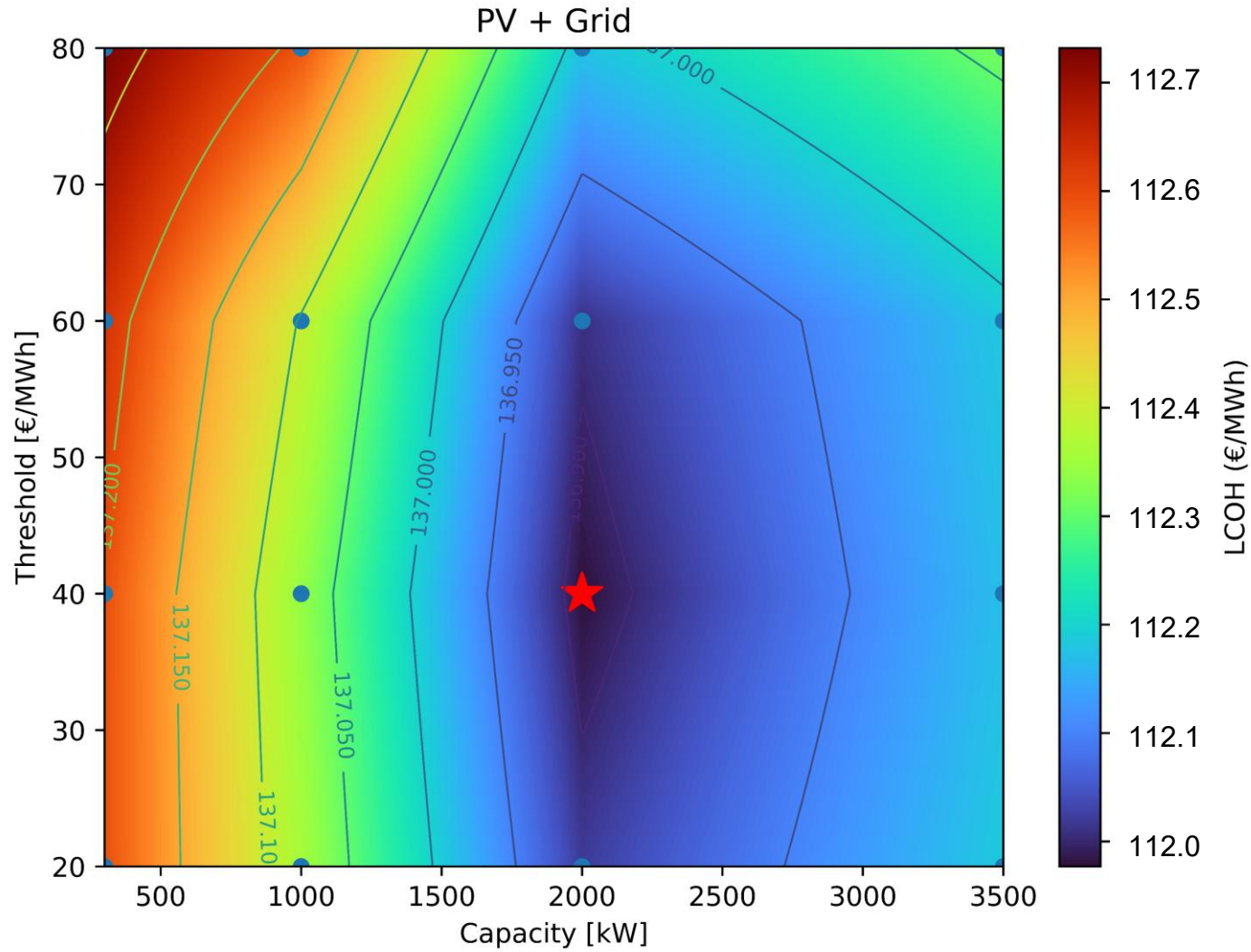
Biomass boiler
- 5 MW
- on demand

Power-to-Heat
- 1-5 MW
- to be defined

Gas boiler
- 5 MW
- backup only

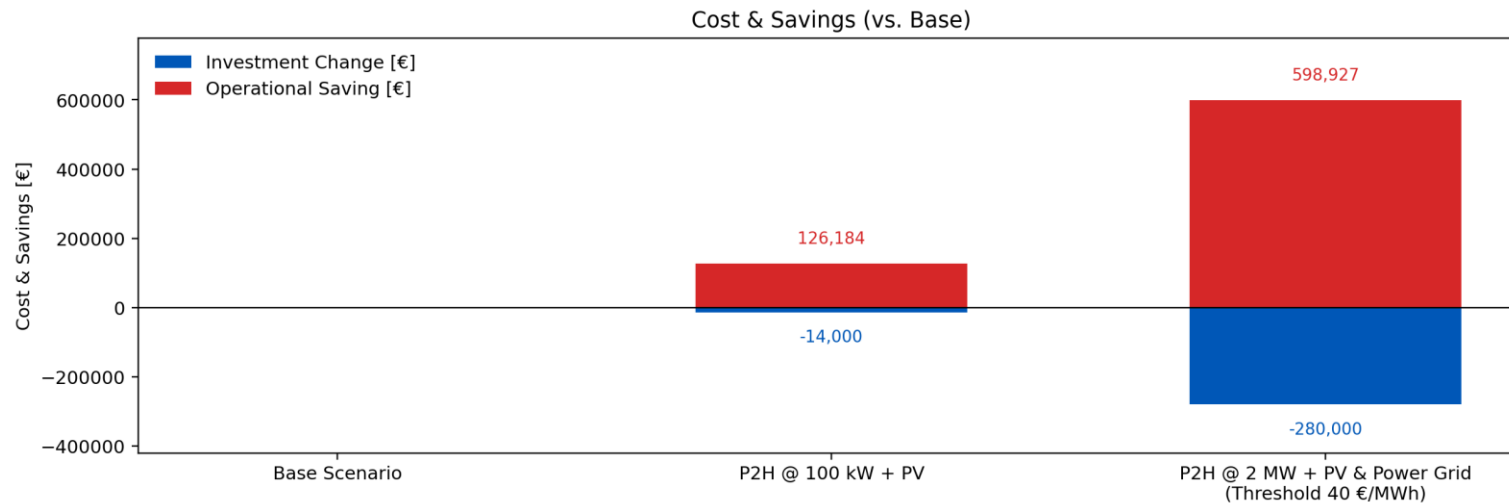
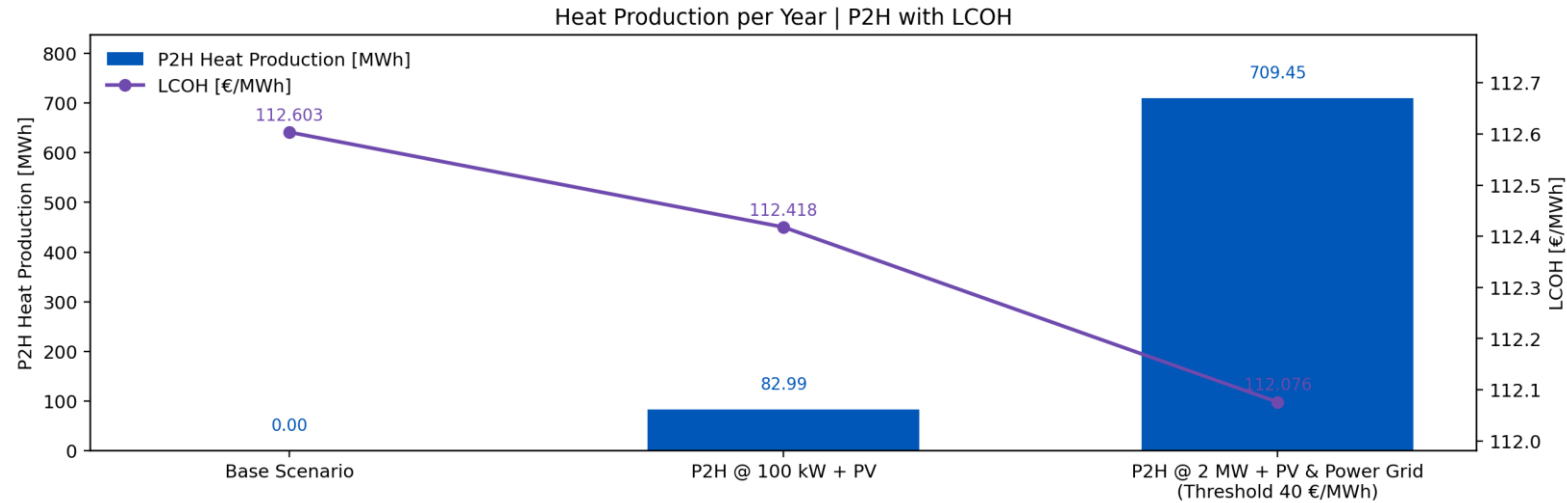
Storage
- 1,000 m³

Power-to-Heat: PV and electricity from grid



- LCOH minimum at
 - capacity ~2 MW and
 - threshold ~40 €/MWh

Power-to-Heat: costs and savings





AEE INTEC

IDEA TO ACTION

AEE – Institute for Sustainable Technologies (AEE INTEC)
8200 Gleisdorf, Feldgasse 19, Austria

Website: www.aee-intec.at
Twitter: [@AEE_INTEC](https://twitter.com/AEE_INTEC)



Stefan Retschitzegger
s.retschitzegger@aee.at
43 (0)3112 5886-217

Hakan İbrahim Tol
h.tol@aee.at
43 (0)3112 5886-215

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SUPPORT
DHC

www.supportdhc.eu