

Heat Highway: Using decarbonised heat sources via supra-regional heat networks



Organised in the context of the NEFI project Heat Highway



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Chairperson:

Christine Öhlinger

OÖ Energiesparverband/NEFI

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PROGRAMME

Welcome and introduction

Christine Öhlinger,
OÖ Energiesparverband/NEFI, Austria

Heat Highway: supra-regional district heating networks connecting multiple actors

Simon Moser, Energieinstitut, Austria

Update on research and innovation in district heating and cooling (DHC+ Platform)

Aksana Krasatsenka, Euroheat and Power

EU definition of waste heat: Is it really efficiency-first?

Marie-Theres Holzleitner, Energieinstitut, Austria

Copenhagen - an example for interregional heat exchange

Lars Gullev, VEKS, Denmark

Lessons learnt from European examples

Nicolas Marx, Austrian Institute of Technology (AIT), Austria

16.30 **Discussion**, end of workshop

Chair: Christine Öhlinger,
OÖ Energiesparverband/NEFI

World
Sustainable
Energy
Days 2023



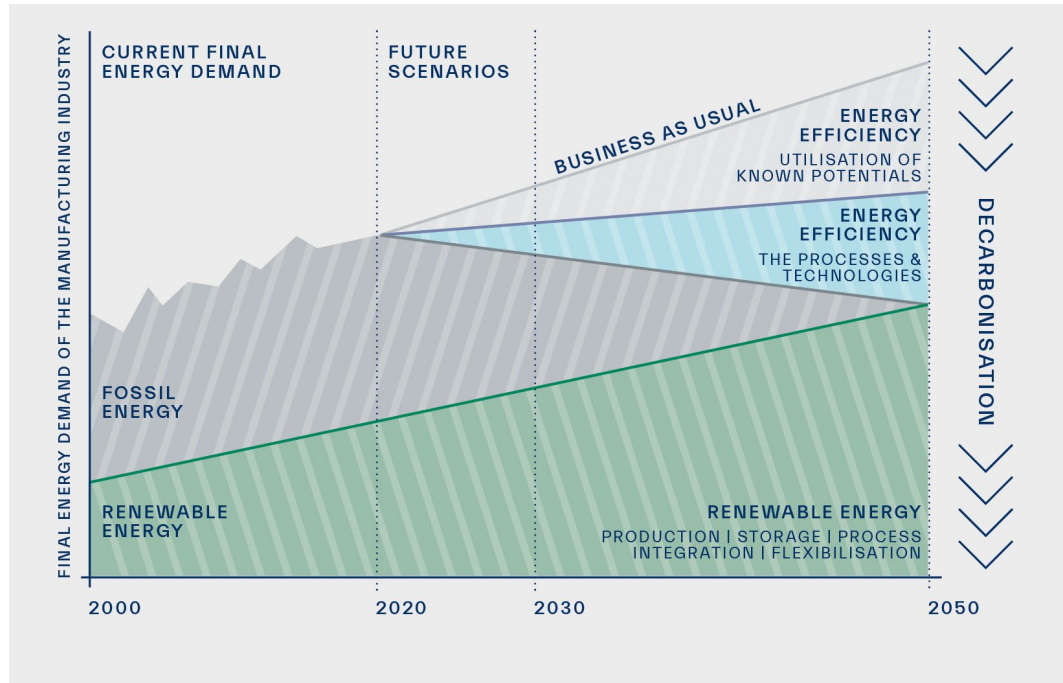
R&D PLATFORM NEFI NEW ENERGY FOR INDUSTRY

- Innovation network of science, technology providers and companies and national hub for industrial energy systems
- 8 years programme
- Focus: technologies for the decarbonisation of industrial energy systems
- Geographic focus on the 2 industrial regions (Upper Austria and Styria)



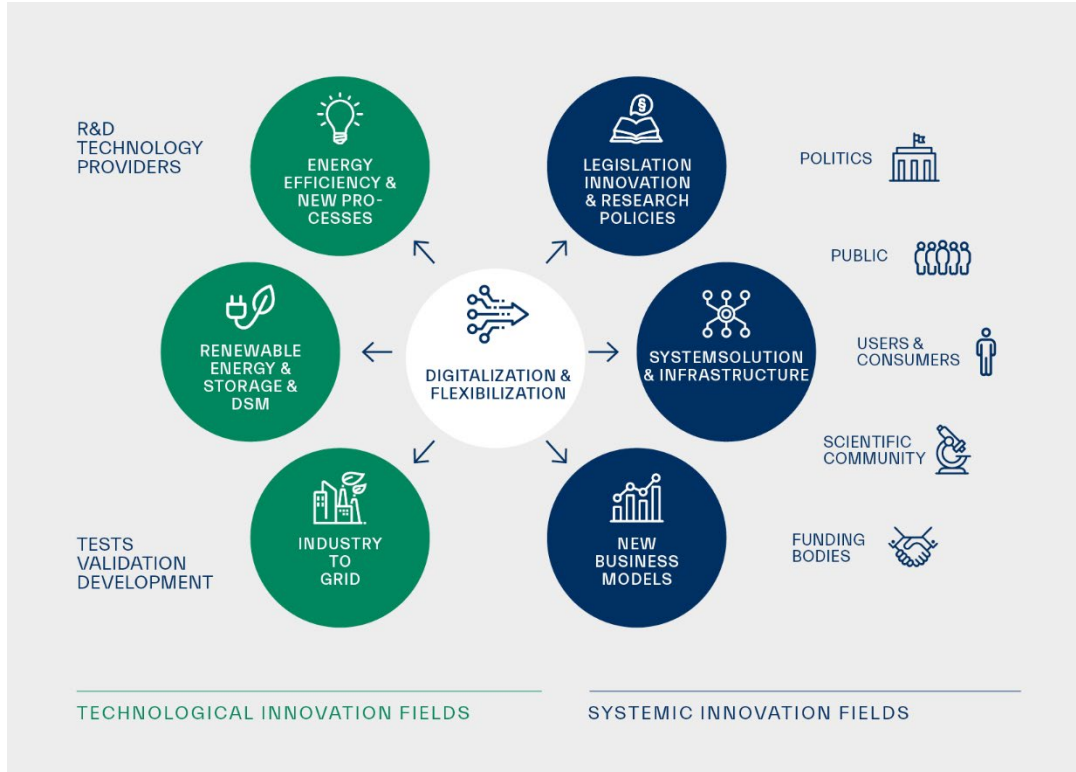
NEFI VISION

Decarbonisation of industry by technology "Made in Austria"



- NEFI key technologies "Made in Austria" enable the decarbonisation of industrial energy systems and help to secure Austria's position as an industrial location.
- Approx. 125 partners from industry, RTOs and public institutions
- 24 NEFI projects
- Volume: up to 100 Mill. EUR

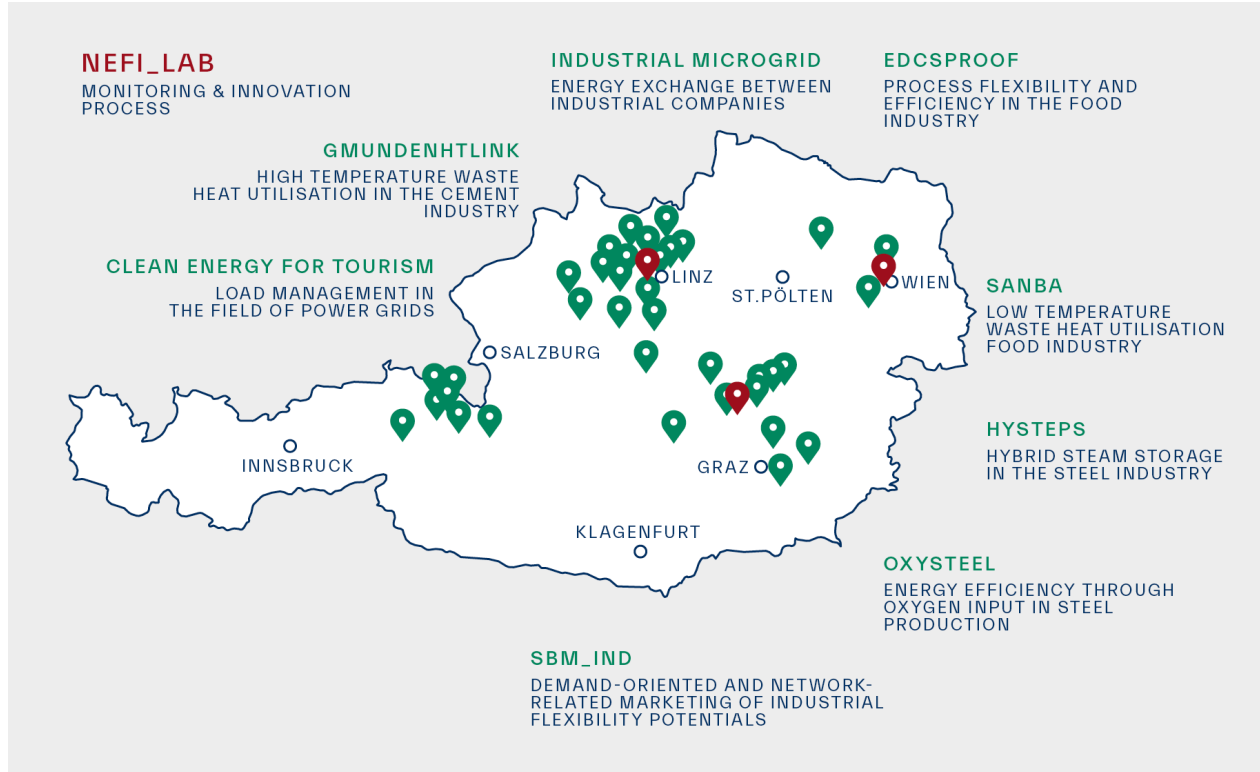
NEFI – FIELDS OF INNOVATION



KEY TECHNOLOGIES:

- Storage technologies
- Increased oxygen usage in the iron & steel sector
- Micro-grids
- Cross-company energy communities
- Load management in power networks
- Heat pump technologies
- Industrial waste heat solutions
- ...

NEFI PROJECT MAP



FURTHER INFORMATION:

www.nefi.at/projects

MORE PROJECTS.

DSM_OPT: Operation optimisation of industrial energy systems with DSM

LEAP: Low pressure steam heat pump

HEAT HIGHWAY: Optimising heat transmission networks

TCP_to_Industry: Thermal cracking process for Energy Recovery

ENVIOTCAST: Environmentally-friendly casting

EDDY: Drying processes with optical infrared sensor technology

BC4I: Biochar for industry

Industry4redispatch: Enable redispatch from industrial customers

HEAT HIGHWAY

MAIN GOALS

- Develop a multi-level toolbox for optimizing the operation and implementation of heat transmission networks.
- Anticipate industrial waste heat potentials from current and breakthrough (decarbonized) processes.
- Develop a prototype of a cost-effective pipe system to significantly reduce investment costs.
- Setting up a 3D simulation based “virtual demonstrator” for showcasing the feasibility despite high complexity.



KEY FACTS

Expected duration: 03/21 – 02/24

Project volume: € 2,500,000

INDUGRID – INDUSTRIAL MICROGRIDS

PROJECT GOALS

- Creation of a platform for mapping energy consumption and generation in a spatial context with energy flow optimisation.
- Establishment of 3 test beds for industrial energy communities to validate the platform

PRACTICAL TESTING AND DEMONSTRATION OF ENERGY EXCHANGE AT 3 SITES:

- **Wels:** electric and thermal energy among industrial companies
- **Hagenberg:** electric and thermal energy exchange
- **Ennschafen:** heat exchange in an industrial and commercial park



ENHANCED EXPLOITATION STRATEGY

REFLECTING THE PROGRESS OF THE INNOVATION NETWORK

Systemic decarbonisation concepts

- NEFI Technology Talk
- Distinct services for decarbonization concepts for industrial users provided by NEFI core partners
- Dissemination

New projects with further innovation potential

- Technology and funding radar
- Various stakeholder and community engagement formats



Technology market deployment

- Factsheets
- Sub-project exploitation process
- NEFI conference
- Dissemination

Open innovation process

- Technology and funding radar
- Gap analysis via NEFI Technology Talk
- Exchange with Industrial Board



THANK YOU!

Christine Öhlinger
OÖ Energiesparverband

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