

# District Heating and Cooling as a key element of a smart power grid

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# DHC and Power Grid Flexibility

- DHC provides a means to limit the peak power demand.
- DHC provides a means to use or store excess renewable energy.
- DHC can provide power grid stabilization.
- CHP provides a means to cover backup power demand.



# DHC status

- DHC development is not on track to fulfill it's potential for power grid stabilization.
- Improved policy measures are needed in many countries.
- DHC education needs a wider distribution.

# IEA DHC programme

- IEA DHC investigates issues that lead to a deployment of more DHC.
  - Connections with the power system are at the heat generator level.
- Annex XII
  - Annex TS3: Hybrid energy networks
  - Added value of large-scale storage and heat pumps in DH systems

# DHC and synergies

- PV and heat pumps
- Industrial waste heat
- Storage
- many more...

# DHC challenges

- short-sighted power-only vision for the heat sector
  - extreme increase of peak power demand
  - **can lead to increased CO2 emissions!**
- awareness of DHC as key infrastructure towards carbon neutrality
- sufficient support by policy to allow wide deployment



**Thank you for your attention!**

**If your country is not yet an IEA DHC member, please consider joining!**

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