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Joint Research Centre
Industrial waste heat in H&C strategy and in EU Directives

J Carlsson
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Introduction

• Waste heat in H&C strategy
• Waste heat in energy efficiency and renewable energy directives
EU H&C strategy - overview

• Published in 2016
• Objectives were to make sector smarter, more efficient and sustainable, reduce emissions etc.
  • Make renovating buildings easier
  • Replace old equipment
  • Increase share of renewables
  • Reuse of energy waste from industry
  • Involve consumers
EU H&C strategy – waste heat from industry

• A lot of waste energy is dissipated unused in air and water. Possible solutions:
  • Direct feed via district heating system
  • Cooling via cogeneration and absorption chillers that transform heat into cold
Example sectors

Iron and steel (HT)
Glass (HT)
Cement, lime (HT)
Chemical plants (MT, HT)
Textile (LT, MT, HT)
Pulp and paper (LT, MT)
Food, drink and milk (LT, MT)
Etc.
Other: IT server halls, commercial centers
Directives – Energy Efficiency Directive

• Article 14 – assess energy efficiency potential in heating and cooling sector
  • map sources and demand
  • CHP, heat pumps, other renewables, etc.
• industrial installations with thermal input exceeding 20 MW generating
Directives – Renewable energy directive

• Link to EED in RED II
• 1.3% of renewable heating and cooling should be added annually in most MSs from 2020 to 2030
• In district heating systems MSs should endeavor 1% increase of renewable sources
• Waste heat may be counted to this target up to 40% of the average annual increase
• Internal processes should be optimised before option to send waste heat to district heating network is explored
Examples of barriers

Structural – e.g. long distance between source and demand, or temporal mismatch
Financial – large investment cost; long-term commitment needed
Waste heat supply not core business of industries
Any questions?
You can find me at @jopcarlsson and johan.carlsson@ec.europa.eu