Policy Event- ReUseHeat

Policy Event 20191002, Brussels

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ReUseHeat
the demonstrators
ReUseHeat- policy event

What does demonstration tell us?

- ReUseHeat demonstrators
  - Islington (metro)
  - COOL DH demonstrators
The ReUseHeat demonstrators
Data center (Brunswick, DE)

- Residential and commercial consumers in LTDH network
- Energy supply: (i) city-wide CHP-based DHN and (ii) HP capturing/upgrading excess heat from the data center
- Waste heat source temperature: 18C - 25C
- HP double simultaneous useful effect: (i) DC cooling, (ii) heating supply

www.reuseheat.eu
Sewage water (Nice, FR)

- Heat source: Cleansed water downstream WWTP
- LTDH network + reversible HP at substation level
- Waste heat source temperature: ~26°C (summer); ~12°C (winter)
- Enabler of high-efficiency heating/cooling operation at network level
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Sewage water (Nice, FR)- the energy citizen demonstrator
Metro system (Berlin, DE)

- Heat sources: energy dissipation from train brakes + electric equipment (traction, lighting, HVAC, etc.)
- Fancoils in technical rooms and waiting platforms
- Booster HP injecting upgraded heat recovery into DHN / local thermal plant

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Service sector: hospital (Madrid, ESP)

- Offices, commercial, hospitals, supermarkets, etc.
- Heat source: rejection of heat from cooling plants
Demonstrator impact

- Waste heat recovered 4229 MWh/yr
- Primary energy savings 4353 MWh/yr
- GHG emissions savings 876 Tonnes CO2/yr

- Technology validation
- Business case adaptation
- Contractual arrangements
- Unlocking finance

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ReUseHeat- policy event

What does demonstration tell us?

ReUseHeat demonstrators

- Large potential
- Feasible technology
- 15 year pay back (comparable to other infrastructure)
- Capacity building needed to trigger demand

....Islington and COOL DH