EU policy framework on Heating & Cooling

REHVA Policy Conference

Session II — The policy side: EED & the EU Heating & Cooling policies

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Margot Pinault,
European Commission - DG ENER B2

H&C in the EU

50%

of EU energy consumption is heating & cooling

70%

of H&C still comes from fossil fuels, dominated by gas

26% VS 80%

26% renewable heat, of which 80% is biomass

10%

of H&C is district heating

100%

wasted heat equals the EU's entire heating demand

25%

of H&C that geothermal energy could supply

20–60%

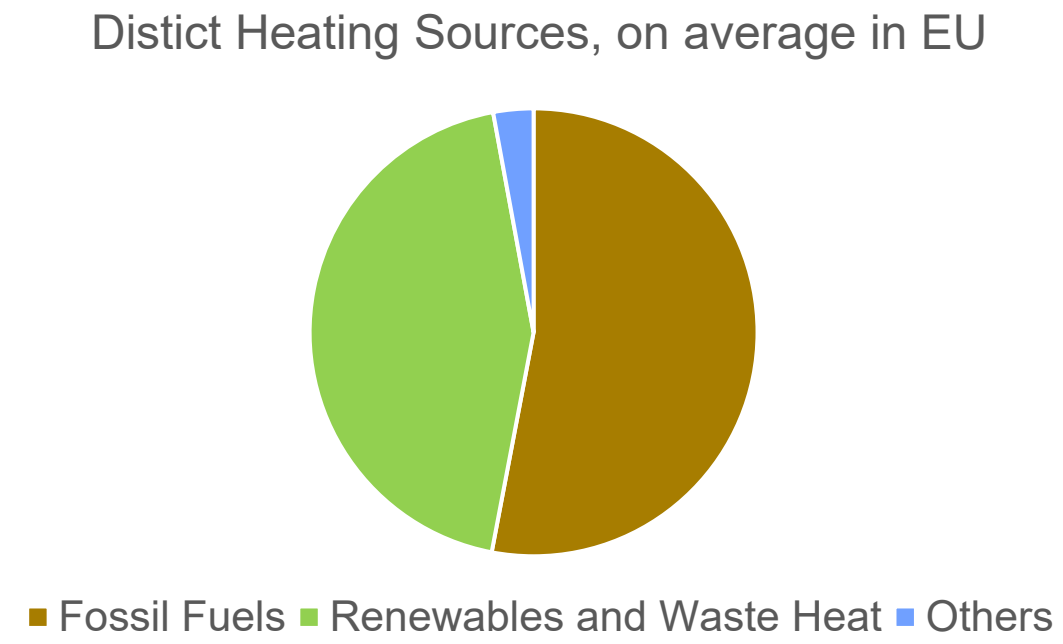
lower heating bills when installing a heat pump

European Commission

District heating systems decarbonise steadily

On average in the EU:

- Fossil fuels declined in DH supply over 10 years from **70%** to **53%**
- Renewables and waste heat rose to **close to 50%** in DH supply



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EU rules for the H&C transition

Energy Efficiency Directive, Energy Performance of Buildings Directive, Energy Efficiency of Products legislation, and Renewable Energy Directive are key for the H&C transition

EED

Energy Efficiency Directive

- Sets the **H&C planning** framework at national and local level
- Sets the transition path for **efficient district heating and cooling**
- Requires identification of **waste heat** recovery potential

RED

Renewable Energy Directive

- **Defines** renewable energy and waste heat
- Sets binding national **target for renewable energy in heating and cooling**,(indicative in DHC)

EPBD

Energy Performance of Buildings Directive

- Sets the ambition for a **zero-emission building** stock by 2050
- Provides planning framework for **buildings renovation** and **phase out of fossil fuel** boilers

Products

Ecodesign and Energy Labelling

- Sets **minimum requirements** on energy performance
- **Label energy performance** and other features, including energy **smart appliances**

H&C in the Electrification Action Plan

46%	€260bn/yr	~4M/yr
electrification target by 2040	cut in EU fossil-fuel import bill by 2040	heat pump installations targeted by 2030

H&C electrification with heat pumps	Bring down heat-pump ownership costs and raise installation rates
Waste heat recovery	EU Waste Heat Initiative targets 11% of EU heat demand from recovered waste heat (KPI)
District heating & cooling	6–7%/yr network growth targeted, reaching 15% of H&C demand by 2030
Financing of H&C transition	Energy Efficiency Financing Coalition workstream on H&C to finance and de-risk investment
Integrated local planning of heating and cooling transition	Guidance on the local heating and cooling plans & European City Facility to bridge to investments

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Electrification of H&C in buildings – heat pumps



- Complementary to building renovation
- Switch to HP can cut H&C energy bill by 20-60%
- HPs can also cover cooling needs

KPI: increase heat pump installation rate to 4 million/y in 2030

Main actions:

- **Cost transparency** and national comparison tools of HP installation costs
- Promote **innovative financing, derisking** and **business models** such as **Better Home Partnerships**
- Creating **demand** through **public procurement**
- Develop **Cooling** and **Heating Action Plan (or Strategy)**
- Explore **Clean Heat Market Mechanism**

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EU waste heat initiative

- Heat is wasted in inefficient buildings, processes, and across sectors and systems
- To prevent waste heat, the first step is to improve energy performance of buildings or processes (Energy Efficiency First Principle)
- The heat stream that cannot be reused on-site is the unavoidable **waste heat**

<u>The EU waste heat initiative :</u>

Why?

Market barriers remain for waste heat recovery projects

What?

Objective I: organising local collaboration on waste heat recovery

- between heat provider (industry), off-taker (DHC) and facilitator (local authority)

Objective II: de-risking waste heat recovery projects

- to cover the risk of waste heat availability in the long term

How? :

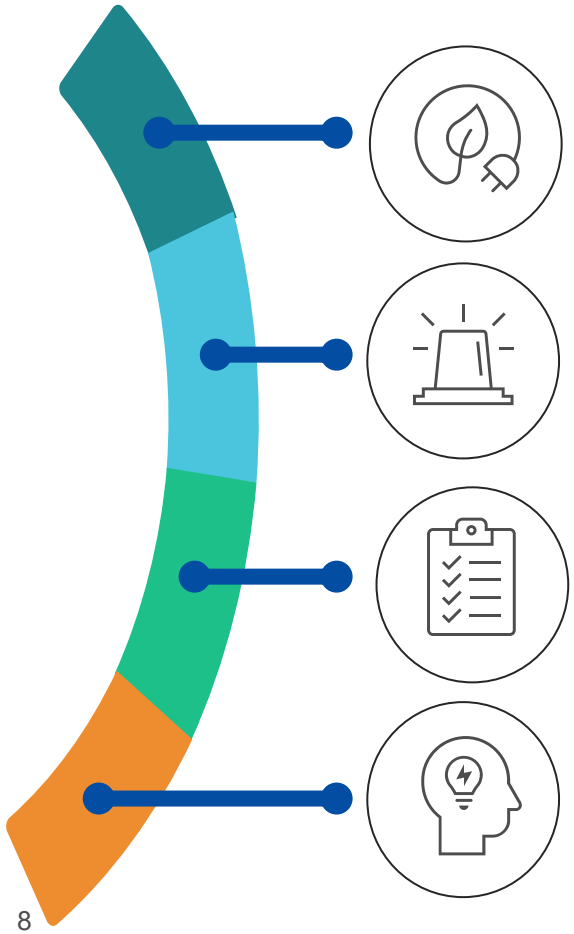
Commission Guidance on the Local Heating and Cooling Plans (Q4 2027)

Energy Efficiency Financing Coalition - de-risking instruments (2027)



Post-2030 framework :

Timeline: Q1 2027 (February)
Scope : energy & climate governance, renewable energy and energy efficiency



Ensure continuous progress
Increasingly decarbonized, electrified and integrated energy mix

Reinforce resilience
Against emerging risks, e.g. climate change or cyber-attacks

Draw lessons from the crises
Covid-19 pandemic, 2021-2023 energy crisis

Strive for simplification
Build a streamlined reporting process

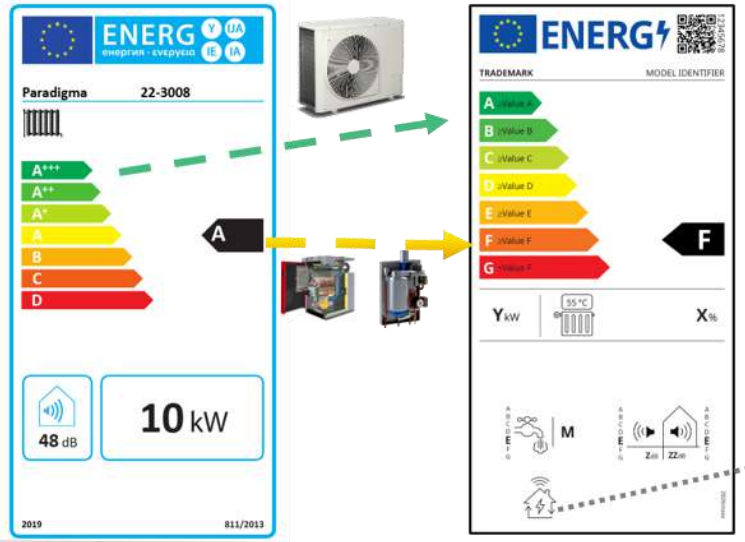
- ✓ **Coherent architecture design for long-term decarbonization**
- ✓ **Strategic investments: mobilising capital at scale**
- ✓ **Simplification: build on the Governance Regulation streamlining of planning, reporting and investment tracking**

Ecodesign & labelling

Boilers and heat pumps

Water heaters and tanks

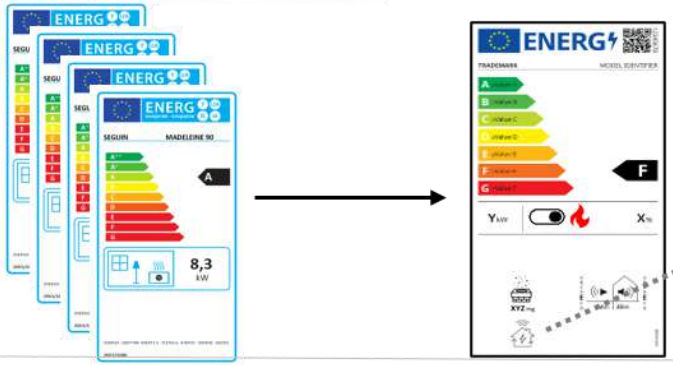




Stoves and electric radiators

Air conditioners





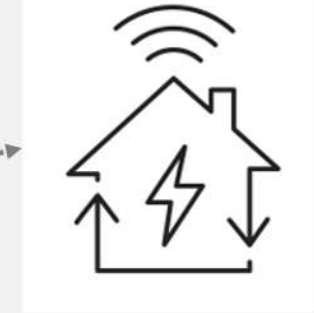
Low temperature radiators (Label only)



Air heating and cooling products (Ecodesign only)[1]



Energy smart appliance icon: JRC CoC V1



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Thank you!



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