Financing Italy's clean heat transition

With a clean heat transition, Italy ends up €97 billion better off by 2050 compared to sticking with fossil-based heating. Italy is well placed to close its €6.5 billion annual financing gap: existing fossil fuel subsidies are roughly twice the additional public finance needed, which would help unlock the remaining private investment.

The Superbonus renovation incentive proved households are ready to act. District heating remains underdeveloped despite real potential.

Italy could realise a complete clean heat transition by

- Simplifying overlapping schemes
- Giving district heating serious, sustained investment
- Reintroducing credit transfer options for low-income households and tenants
- Redirecting fossil fuel subsidies to narrow the cost gap

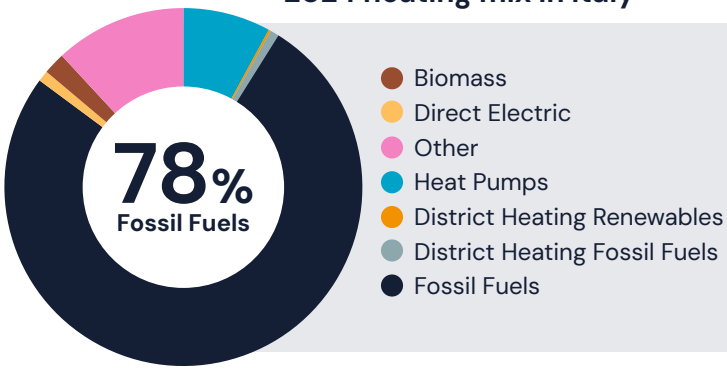
What was the Superbonus?

Italy's flagship renovation incentive, launched in 2020, offered up to a 110% tax deduction on energy-efficiency upgrades, more than the cost of the work itself. It drove strong household uptake but its high fiscal cost led to the scheme being scaled back.

From gas boilers to a decarbonised system

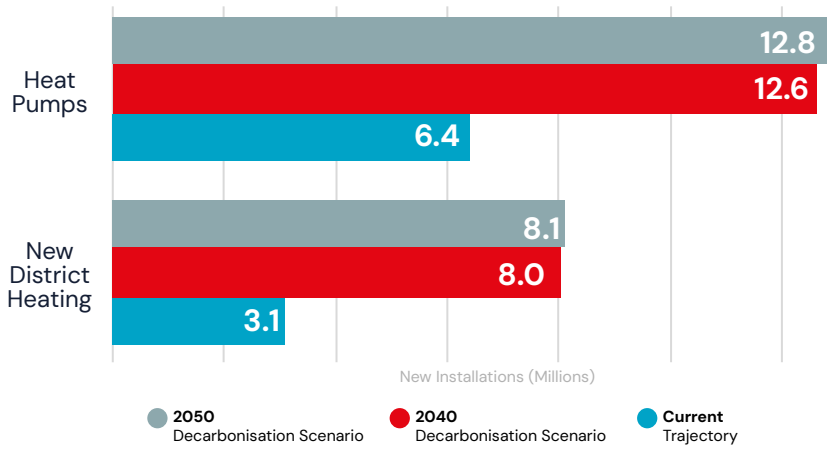
- Fossil fuels heat 78% of Italian homes today.
- Left unaddressed, Italy would still get nearly half its heat from fossil fuels in 2050.

2024 heating mix in Italy



The scale of opportunity in Italy

Heat pump and district heating installations needed to hit 2040 and 2050 targets

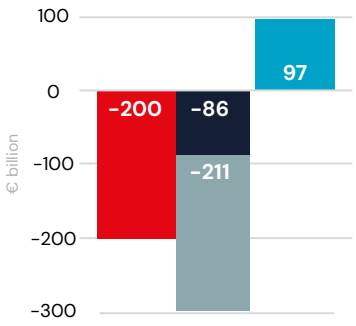


Increasing annual heat pump growth from 5.8% on the current trajectory to 8.2% would put Italy on track for full heating decarbonisation by 2050.

District heating still has a small share, but Milan's case study proved how public-private collaboration can scale district heating and unlock its potential.

The switch to clean heat unlocks €97 billion by 2050

- Italy's transition will cost €350 billion by 2050, or roughly €13 billion a year.
- Once running-cost savings are counted, Italy ends up **€97 billion net ahead** of sticking with fossil fuels by 2050 - a payoff that could grow further if today's high electricity prices come down.



Clean heat savings for Italy versus business as usual (BAU) to 2050*

- Transition cost
- Net savings from the transition
- BAU: Cost of boiler replacement
- BAU: Higher running costs

*Chart values are shown in present-value terms; the total investment figure in the text is not discounted. BAU means sticking with fossil fuel heating.

A financing gap Italy is well placed to close

Additional public funding needed:
€ 2.9 billion

Italian fossil fuel subsidies spent in 2023:
€ 6.1 billion

Italy doesn't need new money to close its €6.5 billion annual funding gap - just a fraction of what it already spends.

Redirecting Italy's fossil fuel subsidies would cover the public share roughly twice over, unlocking the remaining private finance to close the rest of the gap.

Recommendations for Italy

- **Simplify overlapping schemes,** taking a cue from private-sector products like ENI's fixed monthly heat pump payment.
- **Give district heating serious, sustained investment;** Milan shows what's possible, but the network remains small.
- **Reintroduce credit transfer options for low-income households and tenants,** removing the upfront-cost barrier that excludes those who need support most.
- **Redirect fossil fuel subsidies to narrow the cost gap:** these subsidies would cover the public share of the funding gap twice over.

Decarbonising residential heating and cooling (H&C) is vital to achieve EU energy security and climate goals. The financing of upfront costs is key to its success. Right now, there is a financing gap. At the EU level, an additional €78bn of annual funding is required for Europe to decarbonise its H&C by 2050. At the same time, Europe continues to subsidise fossil fuels. In 2023 alone, this amounted to €111bn. Europe can afford to reprioritise and support clean heating.

The Cool Heating Coalition commissioned the study 'How to finance Europe's heating and cooling transition', carried out by LCP Delta, to map how Czechia, France, Germany, Italy, the Netherlands, Poland, and Spain can decarbonise residential heating and cooling by 2050. Modelled transition costs use 2025 prices, while fossil-fuel subsidy figures use 2023 prices.

Cool Heating Coalition

LCP Delta

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