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# Can heat pumps be accessible for all? Assessing the potential of social leasing and on-bill schemes

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## WHY HEAT PUMP ACCESSIBILITY MATTERS

Heat pumps are one of the most effective technologies for heating and cooling with renewable energy. They can drastically reduce emissions, cut dependence on fossil fuels and lower household energy bills in the long run. Yet, adoption remains slow, and for many Europeans, the price of heat pumps remains prohibitive. Upfront costs, complex installation needs (radiators, hot-water cylinders, boreholes, electrical upgrades, insulation), high electricity prices and the cognitive burden of comparing unfamiliar technologies may deter households. For tenants, the owner-tenant split further blocks adoption. Without action, the gap between those who can benefit from the technology, such as better-off homeowners, could deepen, while low-income families will remain locked into fossil systems with rising costs. Yet, solutions, such as **social leasing and on-bill financing**, could help bridge the affordability gap.

## HOW DO SOCIAL LEASING AND ON-BILL SCHEMES WORK?

In **leasing** models, the supplier retains ownership of the heat pump. The customer pays a monthly fee and may receive additional bundled services such as maintenance, repairs or even the electricity tariff. These more comprehensive packages move towards '**heat as a service**' (**HaaS**), where the household no longer pays for the device or the energy consumed, but for an outcome: the supplier guarantees a warm home at an agreed temperature. Danish and UK pilots have shown that consumers are keen to adopt low-carbon heating if they can buy 'warmth' rather than kilowatt-hours.<sup>i</sup>

With **social leasing**, households lease a heat pump through affordable monthly instalments, usually covering installation, maintenance and insurance. Unlike 'classic' leasing, government guarantees and low-interest public finance de-risk the model for providers, while targeting low-income groups. It already exists in other sectors, like mobility.<sup>1</sup>

With '**on-bill financing**' (**OBF**), a utility or third party pays upfront for the installation of the heat pump, and households repay through their energy bill.<sup>ii</sup> On-bill can be found in the housing renovation sector. In the USA, on-bill is linked to **tariff-based models**, also known as '**pay as you save**' (or **PAYS**<sup>®</sup>), where the obligation to repay is related to the electricity meter, not the individual. It makes energy-efficient technologies accessible to renters and households with poor credit.<sup>2</sup>

1 In France, [social leasing for electric vehicles](#) was launched in 2024.

2 See [World Economic Forum Playbook of Solutions](#).

## HOW COULD THESE MODELS HELP SCALE HEAT PUMPS?

If designed fairly, these models can widen access, simplify adoption and accelerate the shift away from fossil heating.

1. **Affordability.** Leasing and on-bill financing turn a €15–20k upfront cost<sup>3</sup> into monthly instalments. Providers like Thermondo in Germany<sup>4</sup> and Aira in the UK<sup>5</sup> already bundle equipment, installation and maintenance, sometimes with no upfront charge. With public guarantees, social leasing can reach households on low incomes.<sup>iii</sup>
2. **Reduced risk and complexity.** Service contracts often include maintenance, repairs and performance guarantees. Early UK pilots showed that ‘warmth guarantees’ reassure consumers who fear technology failure or hidden costs.<sup>6</sup>
3. **Predictable costs.** Fixed monthly charges allow households to plan ahead. Some providers even reimburse electricity consumption, turning the contract into a fully inclusive service, as in Denmark’s heat as a service model.<sup>iv</sup> When linked to dynamic tariffs and demand-side flexibility, contracts can also reduce the operating costs of the heat pump.<sup>7</sup> Reversible heat pumps add cooling, an essential service in a warming climate.<sup>v</sup>
4. **Adaptability for social and public housing.** Leasing targeted at municipalities and housing associations can deliver large-scale retrofits without rent hikes. EU projects such as HP-SUBSCRIBE will test this model in practice.<sup>vi</sup>
5. **Innovation and energy security.** Long-term service revenues attract investment and enable securitisation. Combined with dynamic tariffs and digital services, they support energy system flexibility. By scaling clean heating, Europe reduces reliance on imported fossil fuels and advances climate neutrality.<sup>vii</sup>

## WHERE POLICY STANDS IN 2025

Whether in the EU or the UK, heat pumps are considered strategic infrastructure for both climate and social objectives. They are anchored in the European Commission’s Green Deal, and the REPowerEU strategy in 2022 targeted 10 million additional heat pumps by 2027 and 30 million by 2030; Commission modelling for the 2040 pathway indicates around 60 million installed heat pumps by 2030 would be consistent with the trajectory.<sup>8</sup> The upcoming EU Emissions Trading System (ETS2) for buildings and transport and the €86.7 billion Social Climate Fund (2026–2032) can channel resources into grants, on-bill financing and leasing schemes to support vulnerable households. Guidance on social leasing announced by the European Commission in February 2025 under the Clean Industrial Deal further signals that these models are now part of mainstream EU policy.<sup>viii</sup> The European Commission’s Heat Pump Accelerator Platform<sup>9</sup> coordinates Member States, industry and financial actors to address cost, financing and deployment bottlenecks. With Social Climate Plans due in the next two years and ETS2 entering into force, scrutiny will focus on whether political commitments translate into affordable mass deployment.<sup>ix</sup>

The outlook is decisive, yet **national progress varies**. Norway and Finland lead with 632 and 524 heat pumps per 1,000 households, compared to the UK’s 19 per 1,000, the lowest among major economies, according to the European Heat Pump Association (EHPA). In 2024, 2.31 million units were sold across 19 European countries, raising the stock to 25.5 million, but sales fell by 22% due to high interest rates and **policy uncertainty**.<sup>x</sup>

<sup>3</sup> The purchase and installation of an 8 kW air-to-water heat pump costs around €28,000 in Germany compared to €14,000 in the UK, according to a study by Octopus Energy and RWTH Aachen University based on real market offers quoted by [PV Magazine \(2025\)](#).

<sup>4</sup> See [Thermondo: Wärmepumpe mieten inkl. Vollkasko](#), October 2025.

<sup>5</sup> <https://www.airahome.com/en-gb>

<sup>6</sup> [Centrica: British gas gives heat pump warmth guarantee](#), May 2023.

<sup>7</sup> For example, Finnish provider Väre presented a ‘Smart Savings Tariff’ in September 2025 in collaboration with Kapacity.io, becoming the first in the country to offer electricity pricing specifically designed for heat pump users.

<sup>8</sup> See [European Commission: REPowerEU at a glance](#), October 2025.

<sup>9</sup> See [European Commission: The Heat Pump Accelerator Platform](#), October 2025.

In Germany, policy turbulence has been particularly damaging. Thermondo trialled leasing offers (€209/month) but withdrew them when subsidies made purchase more attractive.<sup>xi</sup> The previous federal government introduced a tiered grant scheme under the Building Energy Act,<sup>10</sup> covering up to 70% of heat pump investment costs for low-income households. On paper, this was a generous measure, yet it failed to restore public trust after a heated campaign against the so-called ‘heating law’ (Gebäudeenergiegesetz). Confusion about municipal heat planning and fear of higher costs drove consumer scepticism, and heat pump sales fell by nearly half in 2024. The new federal government has since announced plans to slash or fundamentally alter both the law and the support scheme, fuelling fresh uncertainty.<sup>11</sup>

The UK combines grants of up to £7,500 with pilots for leasing and heat as a service models, while also investing in skills training for 18,000 retrofit professionals and local manufacturing.<sup>xii</sup> Other Member States emphasise direct grants: Austria provides up to €7,500 and Belgium between €3,000 and €6,400, while Croatia subsidises up to 60% of costs in less developed regions. Only six EU countries plus the UK apply lower VAT on heat pumps than on gas boilers, and in most countries, electricity remains more than twice as expensive as gas, according to the EHPA.

## WHAT'S MISSING? BENEFITS AND RISKS FOR DIFFERENT CONSUMER GROUPS

Leasing and on-bill financing can make heat pumps more accessible, but structural gaps remain. These challenges affect households directly, while also reflecting wider systemic barriers.

### *Consumer-focused gaps*

1. **Lifetime cost risks.** Leasing spreads high upfront costs, but long contracts can add tens of thousands in interest.<sup>xiii</sup> Bank loans may be cheaper if credit is available. For those excluded from loans, leasing or OBF, may be the only pathway, but risks include being tied to costly tariffs and losing the value of subsidies absorbed by providers.<sup>xvi</sup>
2. **Transparency and consumer rights.** Many social leasing and HaaS contracts fall outside the scope of EU consumer law, including the Consumer Credit Directive. Households may lack safeguards on advertising, termination or alternative dispute resolution (ADR). End-of-contract options are unclear, and hidden costs such as radiator upgrades can add thousands.<sup>xv</sup>
3. **Tenant vulnerabilities.** Renters risk rent hikes if retrofit costs are passed on to them. Social leasing via housing associations can limit this, but safeguards are missing. The ‘split incentive’ problem, where owners pay for upgrades and tenants pay the bills, remains unresolved. Likewise, on-bill loans, if poorly designed, can exacerbate energy affordability issues for low-income customers, increase the risk of disconnection and, in the worst case, contribute to housing evictions if customers permanently fail to pay their bills and rent.<sup>xvi</sup>
4. **Running costs and tariffs.** Heat pump savings depend on fair electricity pricing. Where electricity is taxed more heavily than gas, savings can disappear. The EHPA calls for electricity to be no more than twice the price of gas.<sup>xvii</sup> Yet, the EU’s Energy Taxation Directive (ETD) still fails to apply the polluter-pays principle, and fossil fuels often benefit from exemptions while renewable electricity is taxed more heavily. The revision proposed in 2021 remains blocked, leaving heat pumps at a structural disadvantage.<sup>xviii</sup>
5. **Cooling and summer poverty.** Reversible heat pumps could tackle summer energy poverty, but without targeted financial support, cooling remains unaffordable. Worse still, if poorly managed, it can increase bills, contribute to urban heat islands and increase overall energy demand.<sup>xix</sup>

### *System-focused gaps*

1. **Policy inconsistency and uncertainty.** Thermondo’s rental scheme in Germany collapsed after subsidy delays forced it to pre-finance up to 35% of costs. Without predictable frameworks, providers cannot plan, and households lose trust.<sup>xx</sup>
2. **Bureaucratic barriers.** Complex and lengthy subsidy applications undermine the simplicity of leasing. Aira in the UK reported six-month waits for approvals, burdening contractors with interim financing.<sup>xxi</sup>

<sup>10</sup> Bundesgesetzblatt: [Gesetz zur Änderung des Gebäudeenergiegesetzes](#), 16 October 2023.

<sup>11</sup> Clean Energy Wire: [Germany economy minister warns against rolling back contentious heating law](#), 4 February 2025.

3. **Housing and workforce limits.** Skills shortages mean installers cannot meet demand. At the same time, 75% of EU dwellings are energy inefficient,<sup>xxii</sup> 132 million dwellings have outdated electrical systems<sup>xxiii</sup> and many poor households lack central heating altogether. In such cases, deep renovation is needed before a heat pump can work.<sup>xxiv</sup>

4. **Finance and market immaturity.** Financial institutions are cautious with leasing models. Counterparty risks, limited securitisation and the absence of standardised contracts keep interest rates high. Fragmentation across providers and terminology makes offers difficult to compare.<sup>xxv</sup>

5. **Environmental concerns.** Some heat pump models still rely on F-gases, which are potent greenhouse gases. Without strict management of leaks during installation and disposal, these emissions risk undermining the climate case for heat pumps.<sup>xxvi</sup>

Leasing and on-bill financing can reshape access to heat pumps, but the impacts differ significantly depending on household type. The benefits are real, but so are the risks, particularly for vulnerable groups living in inefficient housing or with outdated infrastructure.

**Table 1: Benefits and risks of various consumer groups**

	Potential benefits	Potential risks
<b>Homeowners</b>	Predictable monthly costs; bundled maintenance and repair services; and access upgrades without significant upfront capital.	Higher lifetime costs compared to direct purchase; unclear terms when moving house; and additional hidden costs (e.g. electrical upgrades, radiators, redecorating).
<b>Tenants</b>	Possible access if owners, housing associations or municipalities contract directly; and potential for large-scale retrofits in social housing.	Rent increases, or even eviction risks; unclear division of maintenance responsibilities; and 'split incentive' remains unresolved without safeguards.
<b>Low-income households</b>	Entry without upfront payment; access to government-backed schemes; and predictable budgeting through fixed payments.	On-bill charges may challenge affordability; and savings are not guaranteed if electricity is priced higher than gas or coal, or if the dwelling is poorly insulated.
<b>All households</b>	Bundled services simplify adoption; potential integration with dynamic tariffs and flexibility tools; and contribution to climate goals and energy security.	Contract rigidity; lock-in to expensive tariffs; lack of ADR/Consumer Credit Directive coverage; high interest over long terms; and risk subsidies benefit providers rather than consumers.

Source: Author. Design: Joan Lanfranco.

## WHAT ARE THE ALTERNATIVES?

Leasing, heat as a service and on-bill repayment models can open the market, but they are not the only pathways. Suppliers and market actors are already testing other options that can drive the adoption of clean heat:

- **Direct grants and rebates.** Many utilities top up national subsidies. EDF in France, for example, offers higher-than-required financial support for heat pump installations through its energy savings certificates scheme.<sup>12</sup>
- **Low-cost or zero-interest loans.** Suppliers can partner with banks or state lenders to provide attractive credit. Scotland's heat pump loans are interest-free, while in Germany, utilities often channel financing through the programmes of the state-owned investment bank KfW.<sup>xxvii</sup>
- **Tax-based incentives.** Suppliers can support reduced value-added tax (VAT) or tax credits. Tax rebates, however, tend to have a regressive effect, so that middle- and high-income groups benefit disproportionately from public support. Great Britain introduced a zero VAT rate for heat pumps from 1 April 2022 to 31 March 2027.<sup>xxviii</sup>
- **Hybrid systems.** To lower entry costs, suppliers market combined boiler–heat pump systems. The Netherlands includes hybrids in its subsidy scheme, enabling a more gradual switch from fossil heating to heat pumps for hesitant households.<sup>13</sup>
- **Dynamic tariff packages.** Linking technology optimisation with dynamic tariffs can cut running costs. Aira's partnership with Octopus Energy showed savings of up to 22% in trials.<sup>14</sup>
- **Energy Services Company (ESCO)–style performance contracts.**<sup>15</sup> Instead of leasing, suppliers can guarantee savings through energy performance agreements, spreading risk and building trust.<sup>xxix</sup>

These supplier-led alternatives show that leasing is not the only model for scaling clean heat. But whichever path is taken, success depends on clear responsibilities across the system.

## ROLES AND RESPONSIBILITIES FOR FAIR DEPLOYMENT

A fair transition requires every actor to adapt. Each has a distinct role:

- **Households.** Shift from 'owners' to 'users', but retain rights to exit contracts, switch providers and seek redress.
- **Suppliers/ESCOs.** Offer transparent contracts with clear buy-out terms, strong performance guarantees and no hidden fees. The British Gas Warm Home Promise guarantees that the heat pumps they install will match gas boiler performance. If not, British Gas will fix the issue or refund the cost. It includes a five-year warranty, free winter check, home survey and price match guarantee. This model illustrates how trust can be established by guaranteeing comfort or offering refunds to households.<sup>16</sup>
- **Installers.** Expand the workforce, uphold quality standards and integrate insulation and efficiency upgrades with installations.
- **Government and regulators (with grid operators).** Reform grid connections and tariffs to enable fair renewable electricity tariffs, for instance, via the introduction of time-of-use network tariffs to send a price signal to grid users and enable demand-side flexibility.<sup>xxx</sup> In that regard, the EHPA stresses electricity should cost no more than twice as much as gas.
- **Governments and regulators.** Establish stable frameworks, regulate contracts, safeguard tenants and provide guarantees to mitigate investment risk.
- **Financial institutions.** Deliver affordable green finance, backed by public guarantees, and develop tools such as securitisation of long-term service revenues.
- **Local authorities, NGOs and consumer associations.** Defend consumer rights, support vulnerable groups and provide independent advice to households.

These roles provide the foundation for fair and scalable models. The next step is for EU institutions to translate them into action.

<sup>12</sup> See [EDF: Prime d'énergie d'EDF](#), October 2025.

<sup>13</sup> Bricknest: [New rules for heat pumps in the Netherlands 2025-2026](#), 11 September 2025.

<sup>14</sup> Aira: [The Aira Heat Pump](#), 11 September 2025.

<sup>15</sup> An Energy Service Company is a business that provides a broad range of energy solutions, including the design and implementation of energy savings projects like retrofitting and energy efficiency. Their compensation is often linked directly to the actual energy cost savings achieved, and they may bear some financial risk if the savings are not met.

<sup>16</sup> Centrica: [British gas gives heat pump warmth guarantee](#), May 2023.

## WHAT CAN THE EU DO?

The EU can position social leasing and related models as a cornerstone of a fair energy transition, aligning affordability, consumer protection and housing renovation. Evidence from UK and German pilots and EU-wide consumer research shows these models work best when they are publicly backed, transparent and integrated with wider reforms, including social safeguards that prevent passing all retrofit and investment costs to tenants.

### *Immediate actions*

- **Prioritise energy efficiency.** Heat pumps perform best in well-insulated homes, resulting in lower running costs and improved comfort. While they can operate in poorly insulated buildings if properly sized, insulation upgrades maximise efficiency and savings. The Energy Efficiency Directive (2023) and the Energy Performance of Buildings Directive (EPBD) both call for the Energy Efficiency First principle to guide renovation policies, supporting one-stop shops and 'heat pump readiness indicators' to help households plan insulation upgrades before installation.
- **Pilot social leasing at scale.** Use the Social Climate Fund to finance schemes for social housing and vulnerable households, backed by guarantees and low-interest loans.
- **Define 'heat as a service'.** Provide a clear legal definition to close gaps in consumer protection.
- **Strengthen consumer rights.** Extend the Consumer Credit Directive to cover long-term leases without purchase options. Guarantee ADR access. Forbid disconnections for on-bill arrears. Mandate disclosure of end-of-contract terms.
- **Transparency in contracts.** Require disclosure of lifetime costs, exit pathways and subsidy allocation. Prevent subsidies from being absorbed by providers rather than households.
- **Fair tariffs.** Rebalance taxes and levies so electricity is consistently cheaper than fossil fuels.<sup>xxxii</sup> Pair leasing with dynamic tariffs that include protections for vulnerable consumers.
- **Tenant protection.** Embed fair rent and maintenance clauses in leasing schemes to prevent evictions due to rent increases.
- **Capacity and trust.** Invest in installer training, lists of certified installers and local one-stop shops. Poor communication and a lack of skilled installers remain major barriers.
- **Structural barriers.** Align leasing schemes with renovation support for the 132 million EU homes with obsolete electrical systems, requiring 'heat pump readiness' upgrades.
- **Fairer tariffication and energy taxation.** Revive the stalled revision of the Energy Taxation Directive to apply the polluter-pays principle: phasing out fossil fuel exemptions and lowering the tax burden on renewable electricity. Combine this with tariff reform so electricity is consistently cheaper than gas, making heat pumps affordable to run.

### *Targeted measures for multi-apartment and collective housing*

- **Whole-building focus.** Support collective leasing for apartment blocks, with clear rules for homeowners associations.<sup>xxxii</sup>
- **Shift decision power.** Empower leaseholders, not just freeholders, to initiate renovations.
- **Community-based leasing.** Encourage replicable models, such as the Net-Zero Terrace Street project, where ambient loops and solar electricity storage cut bills by over 80% in a pilot.<sup>xxxiii</sup>

### *Integration with EU initiatives*

- **Social Climate Fund.** Channel funding into large-scale social leasing pilots.
- **Citizens Energy Package.** Enshrine ADR, switching rights and safeguards for bundled contracts.
- **Heating and Cooling Strategy.** Link leasing finance with renovation policies to make homes 'heat pump ready'.
- **Affordable Housing Plan.** Utilise the forthcoming European Affordable Housing Plan and the Affordable Housing Initiative (100 lighthouse districts) to integrate heat-pump leasing into social and affordable housing programmes. This means ring-fencing retrofit finance, embedding no-renoviction safeguards and supporting block-level collective solutions such as shared ambient loops.
- **Electrification Action Plan.** Align tariff reform, grid integration and flexibility with equity objectives.

## Long-term measures

- **Stable support schemes.** Ensure predictable subsidies, VAT reductions and guarantees. Avoid subsidy delays that destabilise rental models.
- **Fair electricity pricing.** Shift taxes and levies off electricity, recycle ETS2 revenues to lower costs for vulnerable households and embed fairness in tariff design.
- **Equity in flexibility.** Fund pilots to extend demand-side flexibility to low-income households, ensuring they share in the benefits of flexible tariffs.
- **Clear product standards.** Phase down fossil boilers under Ecodesign, introduce real-world efficiency tests and accelerate the removal of f-gases.
- **Integrated renovation.** Introduce 'heat pump readiness' in energy performance certificates (EPCs) and building codes as Member States phase out subsidies for fossil boilers from 2025.

## CONCLUSION

Heat pumps can only succeed if they are both affordable to install and cheap to run. Social leasing offers a promising model for low-income households if backed by public guarantees, clear consumer rights and safeguards for tenants. On-bill schemes, by contrast, are riskier: they must never replace tailored subsidies and should only be considered under strict protections.

Policy stability, implementation of the energy efficiency first principle and renovation programmes, fair tariff design, and consumer safeguards are the cornerstones of fair participation. If governments and regulators get this right, leasing and carefully regulated on-bill schemes can become trusted bridges to renewable heating, not just for the smart and savvy, but for every household in Europe.

## Endnotes

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