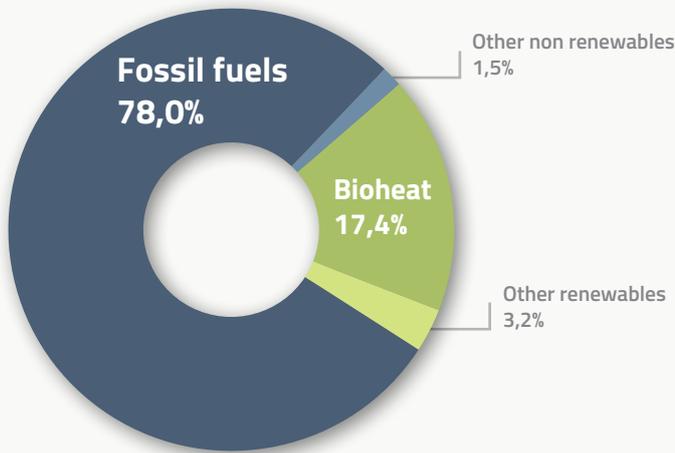


Bioheat, a Key Contributor to Our Energy Security

Contribution of the different energy sources in heating and cooling in EU27 in 2020* (in %)



Note: Other non-renewables are mainly non-renewable waste.
 *Article 5 of Directive 2009/28/EC establishes the guidelines for Member States on calculating renewable energy from heat pumps from different heat pump technologies. Only renewable energy from heat pumps with a Seasonal Performance Factor (SPF) greater than 2.5 should be considered towards the target.

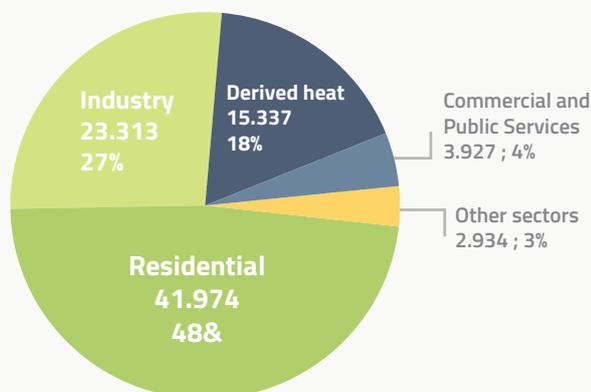
Source: Eurostat, SHARES 2020, Bioenergy Europe's calculation

Now more than ever the heating sector is at the centre of our political debate, not only regarding our climate ambition but also considering the unprecedented times we are living in. Heat represents almost half of the EU energy consumption and still mostly relies on fossil energy. To end its external dependence and make the ambition for 2050 a reality, the EU must give heat decarbonisation a prominent role in its future policies.

Renewables in Heating and Cooling (H&C) have been growing at a slower pace than in electricity generation, reaching an annual average increase of 0,71 percentage points (pp), compared to 1,17pp for electricity. However, this gap is shrinking compared to the previous years and, in absolute terms, the share of renewable heat (RES-H) sources is significantly higher (104.598 ktoe) than renewable electricity (89.082 ktoe). This trend can be strengthened even more if the new provisions calling for an indicative annual increase of 2,3pp in RES-H in the Renewable Energy Directive (REDIII) proposal are included in the final legislation.

The heating sector faces several challenges including decentralised decision making, dangerous dependence on fossil fuels and the obsolescence of aging appliances. Bioenergy accounts for 85% of RES-H in the total consumption and saved approximately 160MtCO_{2eq}. This represents more than the annual GHG emissions of Belgium and Slovakia together and shows how bioheat can actively contribute to the REPowerEU's objectives.

Total bioheat consumption in the different sectors in EU27 in 2020 (in ktoe, %)



Note: Other sectors include agriculture, fishing and not elsewhere specified
 Source: Eurostat

The bioheat consumption has increased in several countries, with Poland showing the highest growth followed by Sweden. Overall, the market has been growing by an annual 3% since 2000, showing a 70% increase from 2000 to 2019. Although the residential segment is the largest bioheat consumer, industrial processes and derived heat are responsible for driving the expansion of the sector.

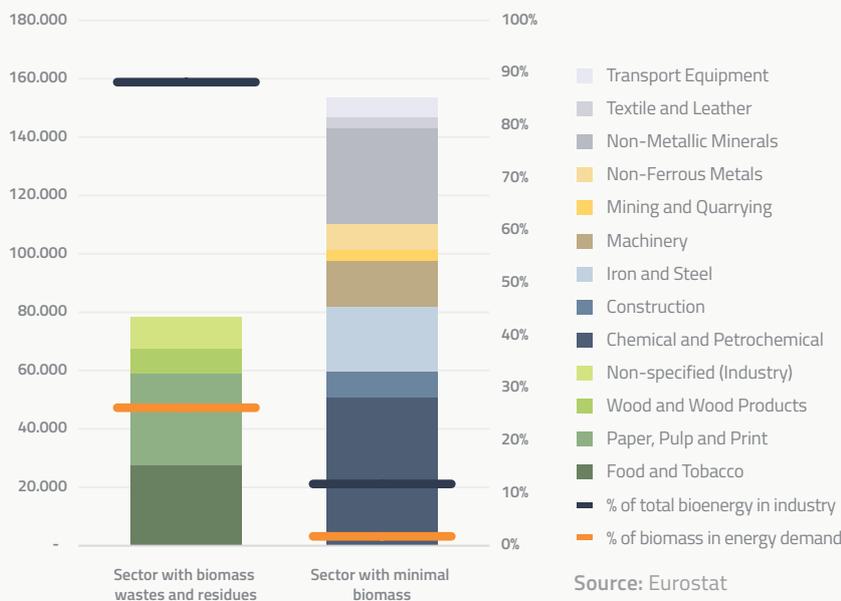
Today, a quarter of heating installations are over 30 years old, and the slow rate of substitution is a barrier to reaching net zero by 2050 as well as to meeting higher air quality objectives by 2030. An old open fire emits almost the same amount of fine particles as 300 modern bioheat appliances. Hence replacing old and fossil systems with modern bioheat installations will increase efficiency and GHG emission savings, whilst reducing pollution and improving air quality.

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Buildings account for 40% of the energy consumed in the EU and 36% of its GHG emissions, most of it coming from heating needs. Renewables account for almost 27% of the total space heating consumption, with bioheat supplying the vast majority (84%). A lot still needs to be done to achieve full decarbonisation and to meet the new higher target for 2030, CO₂ emissions from buildings will need to be reduced by 60% compared to 2015 levels, thus requiring immediate action.

Energy demand by industry and share of bioenergy for sectors dealing with biomass wastes and residues and for other sectors in EU27 in 2020 (ktoe and %)



80% of the energy consumption in industry is used for heating purposes and fossil fuels are still the main energy source, with the few exceptions of Latvia, Finland, and Sweden. Bioenergy is clearly the predominant renewable solution covering 10% of the total industrial heat consumption. Most of bioenergy consumption comes from wood and paper related industries, showing well-established synergies among these sectors. The symbiosis of industrial processes, such as a sawmill or a pulp mill combined with bioenergy production, can increase resource efficiency, because residues are being used instead of ending up as waste without maximising the energy potential they hold.

In 2020, renewables in district heating represented 27%, with bioenergy (97%) more than tripling since 2000. This trend would be encouraged to continue if the new 2,3pp indicative annual increase of renewables in district networks is approved in the revised REDIII.

Bioheat is a sustainable, reliable, and affordable solution which is more important than ever considering the critical period households and businesses are facing and the time constraints to achieving our climate goals; therefore, bioheat must have a prominent role in the EU energy mix.

Recommendations

1. Avoid new and cumbersome restrictions at a time we need more renewables to meet a higher 45% renewable energy target and deal with the current energy and geopolitical crisis.
2. End fossil fuel subsidies and put a price on all fossil carbon: only 30% of buildings are covered under the EU ETS, a strong carbon signal is needed to support the deployment of renewables including bioheat.
3. Support the replacement of old heating systems whilst shielding vulnerable consumers through the Social Climate Fund. This will increase efficiency whilst reducing air pollutions and emissions.
4. Promote EU energy independence and industrial competitiveness by relying more on local, sustainable, and affordable solutions like bioheat.
5. Approve REDIII targets which would establish a 2,3pp increase in both renewable heating and also district heating networks providing a clear signal to markets to invest in renewable heating.