

European Market Developments

Austria and Germany new biomass boiler sales

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- Politics much debate over renewable status of Biomass
- RED III classifying woody biomass as renewable, but debate will continue
- Ban of fossil fuel heating, how to get away from fossil fuel heating?
 big public debate!

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European Markets

Fossil fuel phase-out regulations in place or announced in the European Union Germany Ban on installation of mono-Ireland fuel oil/coal boilers from 2026 De facto ban of oil (2022) (new and existing buildings) and gas (2025) boilers for Min. 65% renewable energy in Denmark new buildings newly installed heating Use obligation for systems from 2024 **Netherlands** renewable heating De facto ban of connection Different zones with to the gas grid for new exemption regulations buildings from 2018 Slovenia De facto ban on installation of (pure) fossil gas boilers Ban on installation and sale of from 2026 coal/oil boilers from 2023 Ban on installation of fossil Belgium boilers (including gas) in new National ban of sale of fossil oil buildings from 2023 boilers by 2035 Further regional regulations, for Greece example: Flanders - Ban on Ban on sale and installation of installation of oil (2022) and gas oil boilers from 2025 Austria (2025) boilers in new buildings Ban on sale of (pure) fossil Ban on installation of coal/oil heating oil from 2030 France boilers from 2020 (new buildings) De facto ban of coal/oil Ban on installation of gas boilers from 2023 (new buildings) boilers in new and existing Decommissioning rule for coal, oil builings from 2022

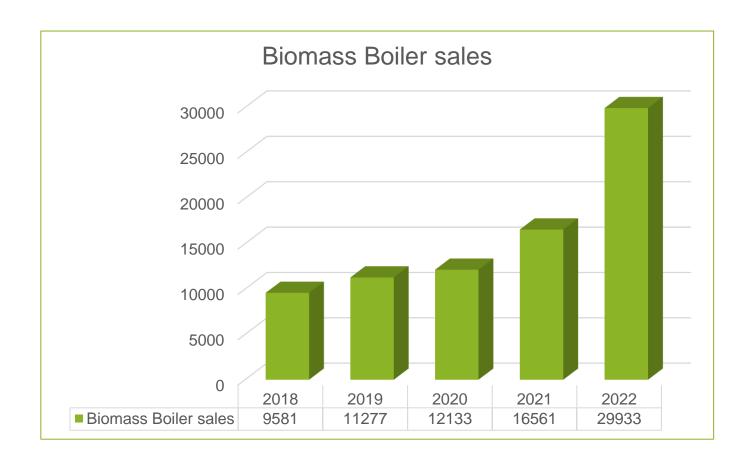
and gas boilers

European Markets Austria & Germany

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- ➤ 2021 and 2022 have seen exceptionally strong demand for renewable heating systems particularly domestic
- ➤ Biomass and heat pumps installers were fully booked for 12 months and more, long lead times from manufacturers
- 2023 shows some slow-down of biomass boiler sales on a high level
- Main Market Drivers
 - Carbon reduction targets and incentive programs
 - Strong ambition to get away from Russian oil and gas
 - Energy security and independence
 - Lower bills

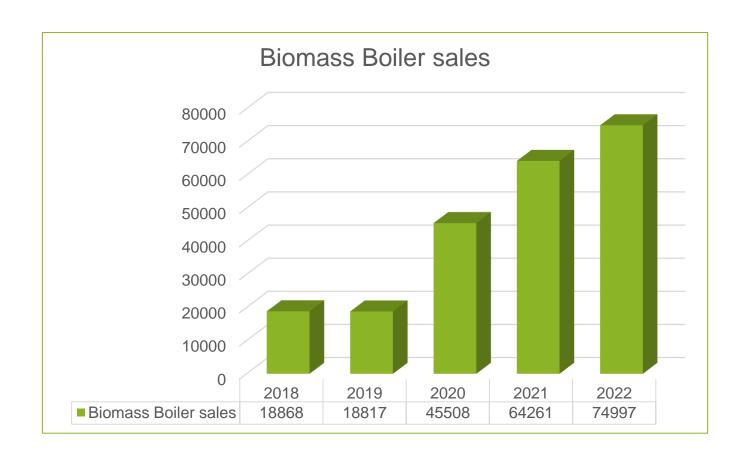
Biomass Boiler Market AUSTRIA 9mn population



Biomass Boiler Market AUSTRIA 9mn population

- High dependence on Russian gas, high energy costs
- ➤ Incentive to replace fossil fuel heating:
 - €10,000 to €16.000 grant
 - max. 50% of installation cost
 - This shall be increased in 2024!
- Ban of fossil fuel heating
 - Ban of oil and coal heating in new buildings from 2020
 - Ban of gas heating in new buildings from 2024
 - But no ban of fossil fuel heating for existing heating installations. This was announced but has been withdrawn now
- ➤ Market cooling down now in 2023 → minus 36.9% in Q1/Q2

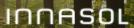
Biomass Boiler Market GERMANY 80mn population



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Biomass Boiler Market GERMANY 80mn population

- Incentive to replace fossil fuel heating:
 - Up to 45% of installation cost, max. €27,000 grant of max. €60,000 investment
 - Then biomass was reduced to max. 20% from 08/2022
 - New regime planned from 2024: up to 50%, max. €30,000
- > High dependence on Russian gas, high energy costs
- ➤ Ban of fossil fuel heating announced, then withdrawn; ideology driven debate
 - New heating systems must have a 65% renewable share
 - Existing heating systems can run until 2045
 - Only oil and gas heating older than 30yrs. must be replaced
- ➤ Market cooling down in 2023 → -12.6% in Q1/Q2



European Markets



Please note: hybrid heat pumps figures are included in boilers and heat pumps figures, hence they are also included in the total market

Germany 1st half 2023

Total Market:	+ 44,3 %	666.500	Pieces
➤ Gas condensing:	+ 31,8 %	344.000	Pieces
➤ Oil condensing:	+ 102,2 %	46.500	Pieces
➤ Gas non-condensing:	+ 6,5 %	41.000	Pieces
➤ Biomass:	- 12,6 %	38.000	Pieces
➤ Heat pumps total:	+ 105,2 %	197.000	Pieces
- Air-to-water monobloc HPs:- Air-to-water split HPs:- Ground-to-water HPs:- Other HPs:	+ 132,7 % + 79,2 % + 27,3 % + 100,0 %	131.500 47.500 14.000 4.000	Pieces Pieces Pieces Pieces
> Hybrid heat pumps:	+ 133,3 %	7.000	Pieces
Solar thermal systems:	- 30,9 %	240.000	m²



Impact on Biomass Boiler Sales

What helps:

- Political leadership, strong commitment
- Positive communication
- Energy security and independence
- Government incentives
- Ban of fossil fuel heating

What does not help:

- Ideology driven public debates
- ➤ No or unattractive Government incentives
- Ignoring end customer's concerns
- Low fossil fuel prices carbon tax?

