

Heat when the power fails

Wood-burning stoves offer a practical advantage for emergency preparedness: they can provide local heat when the usual heating system is out of service.

With natural chimney draught and a supply of dry firewood, households can retain a supplementary heat source. This advantage depends on the specific model and installation. It does not automatically apply to all stoves or mean that a home's entire heating needs can be met.

DAPO works to ensure that the role of wood-burning stoves in emergency preparedness is recognised in energy and emergency preparedness policy.¹



Wood as a renewable energy source

The EU classifies biomass as renewable energy. Trees absorb CO₂ as they grow, and the wood releases CO₂ when burned. The climate impact depends, among other things, on the feedstock, forest management and the time between emissions and renewed uptake. Renewable energy therefore does not automatically mean CO₂ neutrality.²

Suitable residues and by-products from gardens, hedgerows and forestry can be used for heating when the wood has no better use. DAPO supports responsible resource use that takes account of carbon stocks, biodiversity and other uses of wood.

Wood-burning stoves can also supplement heat supply in rural areas. The economics depend on the home, fuel prices and the alternatives. DAPO works to preserve households' heating choices.¹

¹ DAPO position paper, September 2026. See also the DAPO website.

² European Commission, Biomass.



Modernisation can reduce emissions

Newer stoves, properly functioning chimneys and correct operation can reduce pollution from older installations. Technology and user behaviour must go hand in hand if improvements are to be achieved in homes.

The Clean Air Testzone project in Mårslet, Denmark, involved 25 households in 2020-2023. Direct before-and-after flue gas measurements were taken in nine of them. Across the measures implemented, average concentrations fell by 40% for particulate matter, 25% for carbon monoxide and 43% for organic gaseous carbon.³

DAPO wants these findings to inform the replacement of older installations, product development and practical guidance for users.

Results depend on installation and use

In Clean Air Testzone, one household with both a new stove and a new chimney achieved a 79% reduction in particulate matter concentration. In another, a new stove alone produced a 22% reduction.

No single type of measure proved to be the best overall. The effect depended on the installation's initial condition and the user's firing technique.³

When comparing emission figures, the test method, unit and operating conditions must be clearly stated. This provides a sound basis for assessing the technology.



³ Danish Environmental Protection Agency, Clean Air Testzone, February 2025, pp. 6-7 and Annex 4.1.

Air quality has improved

DCE's report Luftkvalitet 2024 (Air Quality 2024) shows that the estimated number of premature deaths attributable to air pollution in Denmark has fallen by around 50% since 1990.

The report found no exceedances of the EU limit and target values it assessed for 2024. The figures describe overall air pollution and do not isolate the contribution from wood-burning stoves.⁴

DAPO wants modernisation and better firing practices to contribute to further improvements.



Good firing practices and indoor air quality

Wood-burning stoves, cooking and candles can all contribute ultrafine particles to indoor air. Comparisons between these activities do not establish that burning wood has no health effects. DAPO recommends correct installation and use, as well as regular ventilation.⁵

Good firing practices help make better use of firewood and reduce pollution. DAPO recommends:⁶

- Light the fire from the top, following the stove's instructions.
- Use clean, dry firewood with a moisture content below 18%.
- Ensure an appropriate air supply and a good chimney draught.
- Maintain the stove and chimney and follow the manufacturer's instructions.

⁴ DCE, Luftkvalitet 2024, report no. 679, summary and chapters 12-13.

⁵ Danish Minister for the Environment's reply to question 445 from Parliament's Environment and Food Committee (MOF), 10 February 2022.

⁶ Danish Environmental Protection Agency, guidance on choosing firewood and correct firing practices. See also the DAPO position paper.



Buying a home: the stove's manufacture date

For home purchases covered by Denmark's change-of-ownership scheme, wood-burning stoves and fireplace inserts manufactured before 1 January 2003 must be replaced or decommissioned within 12 months of the buyer taking possession.

The scheme has applied since 1 August 2021 and includes exemptions for certain installations and ownership transfers. Follow the Danish Environmental Protection Agency's guidance on documentation and reporting.⁷

The scheme helps renew the stock of older stoves. DAPO supports modernisation as a means of reducing emissions.

Municipal requirements for older installations

Danish municipalities may adopt local rules requiring the replacement or decommissioning of wood-burning stoves and fireplace inserts installed on or before 1 June 2008 in areas designated for collective heat supply (district heating or mains gas).

The legal basis took effect on 1 July 2023. The installation date is decisive. A requirement applies only once the municipality has adopted local rules, and exemptions and deadlines apply. Check the municipality's rules.⁸

The scheme targets older installations and is not a general ban on new wood-burning stoves.⁸

Since 1 January 2022, the Ecodesign rules have set requirements for, among other things, efficiency and emissions for new solid fuel local space heaters within their scope, with a nominal heat output of 50 kW or less.⁹

DAPO calls for validated test methods, realistic requirements and adequate transition periods. Regulation should promote modernisation and innovation and preserve the option of heating without electricity. The economics of heating and businesses' adaptation to new requirements must be taken into account.



⁷ Danish Environmental Protection Agency, guidance for homebuyers on the change-of-ownership scheme.

⁸ Danish Executive Order no. 640 of 24 May 2023, sections 2, 5-7 and 12.

⁹ Danish Environmental Protection Agency, rules for combustion installations, referring to Regulation (EU) 2015/1185.