Ban on the Use of Fossil Gas for Building Heating

Impact Assessment

Summary

The Norwegian Environment Agency, commissioned by the Ministry of Climate and Environment (KLD), has assessed the consequences of banning the use of fossil gas for building heating. This proposal stems from a request in the 2023 state budget: "The Parliament asks the government to assess and propose a ban on the use of fossil gas for building heating, aiming for implementation in 2025." The assessment was conducted in collaboration with the Norwegian Water Resources and Energy Directorate and the Energy Regulatory Authority.

In 2020, the use of mineral oil for heating buildings was banned. From 2022, this ban was extended to include the use of mineral oil for temporary heating in buildings under construction and renovation, also known as building heating. This assessment examines the consequences of extending the ban to include the use of fossil gas for building heating.

Emissions from the use of fossil gas (also referred to as LPG or propane) for building heating are estimated to be around 30,000–40,000 tons of CO_2 per year, according to Statistics Norway and previous gas consumption surveys. This accounts for approximately 4-5 percent of the total emissions from energy use at construction sites. Existing measures have very uncertain effects on emissions from the use of fossil gas for building heating, and the Environment Agency believes that emissions are unlikely to be significantly reduced with current measures. Implementing a ban would be an effective way to phase out fossil gas for building heating, and together with other proposed measures targeting the industry, such a ban could be a step towards emission-free construction sites. The Environment Agency also believes that a ban on fossil gas for building heating would work well in combination with adopted and proposed measures for construction sites that are under assessment.

For most uses within building heating, there are well-known alternatives to fossil gas, such as district heating, direct electricity, heat pumps, or biofuels. These alternatives have various advantages and disadvantages, and the consequences of a ban depend on which alternative is chosen. It is very difficult to estimate how much of the fossil gas will be replaced by different alternatives.

The assessment examines barriers and costs associated with the various alternatives. Overall, there will likely be some increased costs for stakeholders, as energy costs for the most relevant alternatives are higher than for propane. However, in most construction projects, increased costs related to the choice of building heating solution will constitute a very small proportion of the total construction costs. In smaller construction projects, such as homes and cabins, electricity is already widely used for building heating, so the ban will not change the costs for these buildings.

Biodiesel has higher energy costs than alternatives such as district heating and electricity, but there are few technical and behavioral barriers to using biodiesel.

There are more barriers to transitioning to alternatives such as district heating and electricity. These solutions can be somewhat more time-consuming to set up. In some cases, there may also be challenges in delivering sufficient power for the most demanding heating processes at a construction site with only electricity and district heating.

Using electricity and district heating may also require mapping available infrastructure and planning which building heating solution to use earlier in the process. For example, early contact with the grid company or district heating provider may be necessary, or the most power-demanding processes may need to be scheduled outside the coldest periods when heating demand is highest. Increased planning needs can lead to increased costs.

Liquid, advanced biofuels can also be used to meet the sales requirement for non-road machinery, which was introduced in 2023. The sales requirement ensures that fossil diesel is blended with a certain amount of biodiesel. Unlike other alternatives to fossil gas, the use of liquid biofuels reported in the sales requirement will not have any net national climate effect. The use of biofuels not included in the sales requirement has a national emission effect since this is zero-counted, but there are no regulatory sustainability criteria for the use of biofuels beyond the sales requirement. This entails a risk that the biofuels are not sustainably produced, and thus, in the worst case, could lead to increased global emissions. Since there is a risk that the gas will be replaced by biofuels that either do not have a national climate effect or meet sustainability criteria, the ban could be supplemented with other measures that encourage stakeholders to choose the most climate- and energy-efficient solutions, such as requirements or incentives for emission-free solutions in public procurement.

The assignment text asks KLD to assess how a ban on the use of fossil gas for building heating will affect the availability of biogas in the market. The use of biogas is currently not a viable alternative to propane used for building heating, partly because it has different properties. Biopropane can replace propane in existing heating equipment, but it is currently not an available product in the Norwegian market. Therefore, a ban on the use of fossil gas for building heating will have little impact on the biogas market.

A ban on fossil gas for building heating is an effective measure to phase out the use of fossil fuels in the construction industry. We propose that any ban be established through regulations, specifically by amending the regulation on the prohibition of the use of mineral oil for heating buildings. This is an effective way to implement the ban, and the regulation in which the ban is implemented is well known to the industry. We propose essentially the same administrative regime as the ban on mineral oil when it comes to authority, exemptions, etc. No need for legislative changes has been identified, and the Ministry of Climate and Environment has the authority to establish the change in regulation. A proposal for an amendment regulation is attached.

The request that forms the basis for the assignment proposes implementation in 2025. We recommend that the industry be given about a year to transition after the ban is adopted, partly because several alternatives to fossil gas for building heating may require more planning time. If a ban is adopted by the end of 2024, July 1, 2025, could be a possible implementation date, in line with the request.

The assessment instruction points out that new regulations should be introduced from January 1. If this recommendation is followed, January 1, 2026, is an alternative implementation date.