



Summary

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Greenhouse gas reduction mandate – implementation and effectiveness risks

Summary

The greenhouse gas reduction mandate was introduced in 2018 and requires fuel suppliers to reduce greenhouse gas emissions by adding biofuels to petrol and diesel. The greenhouse gas reduction mandate rewards biofuels with low greenhouse gas emissions and allows some flexibility in how the reduction mandate is fulfilled. The assessment of the Swedish National Audit Office (Swedish NAO) is that the greenhouse gas reduction mandate can, in part, effectively contribute to climate policy objectives. We consider that a policy instrument such as the greenhouse gas reduction mandate has the potential to contribute, above all, to the target for domestic transport by 2030 at a reasonable cost, compared with other ways of reaching this goal. However, the audit shows that the current design of the greenhouse gas reduction mandate is not feasible and that, in addition, there are several risks that affect the implementation and effectiveness that have not been taken into account to a sufficient degree in decisions on the design of the greenhouse gas reduction mandate. This applies, for example, to the decision on reduction levels. The reduction levels proposed by the Government and decided by the Riksdag are based on inadequate impact assessments by the Swedish Energy Agency and were aligned with what would be required by the greenhouse gas reduction mandate to meet the climate objective for domestic transport by 2030. The audit shows that there are major risks involved in relying to such a large extent on the greenhouse gas reduction mandate to achieve Sweden's climate policy objectives.

Extensive biofuel use entails risks

The greenhouse gas reduction mandate involves gradually increasing the blend of biofuel, which means gradually increasing risks of implementation and consequences of the greenhouse gas reduction mandate up to 2030, as well as risks for long-term climate objectives.

It is partly a matter of costs. So far, the greenhouse gas reduction mandate has affected the price of diesel at the pump more than the Government had anticipated. This is mainly because the price of biofuels has increased sharply. The price increase on biofuels has decreased the cost advantage of the greenhouse gas reduction mandate compared with other ways of achieving the climate objectives and has also led to larger distribution effects than the Government predicted. For example, households in rural areas are generally more affected by fuel price increases than households in cities. It also increases the risk of fuel companies choosing to pay a reduction mandate fee instead of meeting the requirements of the greenhouse gas reduction mandate to reduce greenhouse gas emissions. In order to achieve long-term climate objectives, there may also be measures available outside the transport sector that are more cost efficient. This could, for example, involve implementing measures to increase the net uptake in Swedish forests.

There are also risks concerning the sustainability of biofuels, in the form of direct and indirect climate and environmental effects in Sweden and other countries. Since the amount of biomass is limited, there is, among others, a risk that raw materials used for biofuel production in their alternative areas of use might be replaced with fossil raw materials. Some risks are covered by the Swedish Energy Agency's supervision of biofuel sustainability. The audit shows that the Swedish Energy Agency conducts supervision using suitable methods, although not sufficiently extensive nor regularly enough to minimise risks of misstatement or fraud in the reporting of the biofuels' greenhouse gas emissions. However, not all risks regarding the sustainability of biofuels lie within the Energy Authority's control, since a large proportion of biofuels are covered by certification systems approved by the EU Commission and have therefore been reviewed further upstream. According to the Swedish NAO, it is unclear whether the Government has taken into account the sustainability risks in the design of the greenhouse gas reduction mandate.

The decision support documents one step after the decisions

The greenhouse gas reduction mandate is reviewed at 'checkpoints', where the design of the greenhouse gas reduction mandate can be adjusted if, for example, external conditions change. Although the first checkpoint review was carried out in 2019–2021, it wasn't until the 2022 checkpoint that the Energy Agency carried out an impact assessment of the previously decided design of the reduction

mandate, on matters such as the relationship to fuel quality requirements, the impact on fuel prices and the availability of sustainable biofuels. The assessment should have been made at least in connection with the 2019 checkpoint, when the Riksdag decided on reduction levels until 2030. In the 2022 checkpoint, the Swedish Energy Agency has submitted new proposals for the design of the greenhouse gas reduction mandate that include new reduction levels. Complete impact assessments are missing for the new proposals and the Swedish Energy Agency's report therefore does not constitute an adequate basis for a new design for the reduction mandate.

Recommendations

In terms of Sweden's opportunities to meet the climate objectives, above all the objective for domestic transport by 2030, the reduction mandate has been assigned a key role. The audit shows that a policy instrument such as the reduction mandate can contribute in a cost-effective way to the target for domestic transport, but that the existing design of the reduction mandate is not feasible and that, in addition, there are several risks associated with the reduction mandate that have not been sufficiently taken into account in decisions on its design. The risks are already relevant today, but will become increasingly important until 2030, since the legislated reduction levels until 2030 involve a large increase in the use of biofuels. Therefore, it is important that future decisions on the design of the reduction mandate are based on supporting documents that sufficiently highlight the risks and their possible consequences for the implementation and effectiveness of the reduction mandate as a policy instrument. If the large expectations of the reduction mandate are not fulfilled, a large proportion of Swedish climate policy is at risk, above all the objective for domestic transport by 2030. Additional measures may then be needed. These measures will also entail risks, and may be difficult and costly to implement, but they will be needed in order to reach the climate objectives.

The Swedish NAO makes the following recommendations to the Government:

- Task the Swedish Energy Agency with producing complete impact assessments for the new design options for the greenhouse gas reduction mandate that the agency proposed. The assessments should be prepared with other relevant agencies.
- Change the design of the reduction mandate, using elements such as these assessments as a basis, so that it contributes to the climate objectives as efficiently as possible, taking into account the risks that exist and their possible consequences. At the same time, ensure that other necessary measures are taken to achieve the climate objectives as efficiently as

possible. Special consideration should also be given to the upcoming changes in EU regulations.

The Swedish NAO makes the following recommendations to the Swedish Energy Agency:

- Continue the development work on supervision begun within the agency and ensure that in-depth supervision is carried out to a sufficient extent and regularly enough to minimise the risk of misstatement or fraud in the reporting of biofuels' greenhouse gas emissions.
- Continue to develop the work on socio-economic analyses to be able to carry out high-quality impact assessments.