

Feedback from the Swedish Gas Association on the proposal on revised CO₂ emission performance standards for cars and vans

Summary

The Swedish Gas Association – Energigas Sverige – welcomes “Fit for 55” and stricter requirements in the EU’s CO₂ emission performance standards, but believes that European legislation should be built around research-based well-to-wheel or life-cycle perspectives on climate emissions.

The Swedish Gas Association is extremely critical of the Commission’s proposal to continue to calculate climate emissions via tailpipe estimates. This is an outdated and misguided approach that steers towards specific technologies rather than towards reduced climate impact and improved energy efficiency. The proposal is competition-distorting and is far from technology neutral. It also misses its primary objective: to guide towards reduced climate emissions and away from fossil fuels. One consequence of the proposal is that renewable, sustainable alternatives, such as biomethane, are excluded from the market and denied the opportunity to contribute to the mitigation of climate change.

The Swedish Gas Association believes that the Commission's approach should move from tailpipe to well-to-wheel. In this document, we emphasise the reasons for this and develop our main arguments:

- Tailpipe approach guide towards specific technologies, not towards reduced emissions
- Research demonstrates that well-to-wheel (WTW) or life-cycle analysis (LCA) should be used
- The EU has a stated ambition to move to a WTW perspective on emissions
- The Commission's proposal does not integrate well with other parts of the “Fit for 55” framework
- The Commission has dismissed CCF and crediting schemes too readily
- There are evident weaknesses in the Commission’s impact assessment
- The proposal would have negative consequences for biogas investments in EU

The EU must stop basing emissions control on tailpipe calculations

The Swedish Gas Association welcomes the fact that the EU is now taking an ambitious, holistic approach to climate policy. The new climate package “Fit for 55” is an important step in reducing emissions by at least 55% by 2030 and achieving climate neutrality by 2050 – two urgent goals that we fully support and stand behind.

We also welcome stricter requirements in the EU’s CO₂ emission performance standards, but believe that European legislation should be built around research-based well-to-wheel or life-cycle perspectives on climate emissions.

The Swedish Gas Association therefore focuses its response on the fact that the Commission's proposal for a revised regulation continues to assess vehicles' climate emissions via tailpipe estimates. This is an outdated and misguided approach that guides towards specific technologies rather than reduced climate impact and improved energy efficiency. We are extremely critical of this entire approach.

The consequence will be an uneven, non-technology-neutral promotion of battery and fuel cell technology – irrespective of the climate impact of vehicles powered in this way. At the same time,

sustainable renewable biofuels, such as biomethane, will be excluded from the market and denied the opportunity to contribute to emission reduction.

The Swedish Gas Association, and many other actors and politicians around Europe, have long wanted to change the regulation's focus from the tailpipe perspective to the modern and research-based well-to-wheel approach to measuring climate emissions. That the Commission has, with this proposal, chosen to continue with a tailpipe perspective is a great disappointment to many, and a possibly fatal error in the EU's fight against climate change.

Tailpipe approach guide towards specific technology, not towards reduced emissions

That the proposal continues with a tailpipe perspective, is competition-distorting and far from technology-neutral. The Commission's proposal one-sidedly guides the market towards battery and fuel cell technology, and away from sustainable, renewable biofuels such as biomethane for gas-powered vehicles.

At the Swedish Gas Association, we are convinced that all renewable alternatives are needed to cope with the immense challenge of climate change and to reach our common environmental goals. There is *not* a single solution that can replace petrol and diesel as used today. Biomethane, renewable hydrogen, renewable electricity, and other renewable and sustainable liquid alternatives are all necessary. We are, therefore, extremely critical of a key premise of the Commission's proposal; unilaterally promoting a specific technology.

The Commission's proposal misses its primary function: to guide towards reduced climate emissions and away from fossil-based alternatives. This can be illustrated with the example below:

Example:

The first scenario involves using sustainable, renewable biomethane (for example, biomethane derived from manure that, according to the Renewable Energy Directive¹, offers even negative climate emissions due to avoided methane emissions). The Commission's proposal means that from 2035 onwards cars with internal combustion engines fuelled by this type of biomethane cannot be sold on the European market. Realistically, sales will stop before 2035. This would happen despite the fact that the European Commission's Joint Research Centre (JRC), to give one example, state that biomethane-powered vehicles achieve the top level of climate performance – at the same level as (or even above) renewable electricity in battery-powered vehicles.

The second scenario involves natural gas, reforming it to produce hydrogen, then using the fossil hydrogen to power a fuel cell car. Contrary to the renewable biomethane scenario mentioned above, this fossil-based natural gas scenario is encouraged by the Commission's current proposal.

The Commission's proposal, therefore, risks creating a situation where fossil-fuels are promoted, while renewable, sustainable alternatives – such as biomethane – are excluded from the market and denied the opportunity to contribute to mitigating climate change. We cannot accept such an absurd situation in the EU's policy for the 2020s.

Research shows that well-to-wheel or life-cycle analyses should be used

Research shows, unequivocally, that well-to-wheel or life-cycle analyses (WTW/LCA) give an accurate picture of the climate impact of different technology choices for vehicles and fuels. Basing

¹ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources

policy objectives and instruments on tank-to-wheel analysis of climate emissions, as the Commission proposes, is contrary to research recommendations.

The European Commission's own science and knowledge service, the Joint Research Centre (JRC), which supports EU policy making process through independent and evidence-based scientific enquiry, asserts that WTW analysis is required to properly assess the climate impact of different technologies. This is evident, for example, in the following quotes taken from "[JRC Science for Policy Report: JEC Well-To-Wheels report v5](#)", published by the JRC in 2020:

"Energy use and GHG emissions are associated with both fuel production and vehicle use; hence it is only by considering the whole pathway that the overall impact of fuel and vehicle choices can be seen. Well-To-Wheels analysis is essential to assess the GHG and energy impact of future fuel and powertrain options [...]"

The EU has a stated ambition to move to a WTW perspective on emissions

As recently as 2019, several directives/proposals were published by the EU which expressed the aim of employing life-cycle and well-to-wheel CO₂ emissions calculations for vehicles in future reviews and revisions:

- Directive on the promotion of clean and energy-efficient road transport vehicles, [Directive \(EU\) 2019/1161](#)
- CO₂ emission performance standards for new heavy-duty vehicles, [Regulation \(EU\) 2019/1242](#)
- CO₂ emission performance standards for new passenger cars and for new light commercial vehicles, [Regulation \(EU\) 2019/631](#)
- TEG final report on the EU taxonomy, [Taxonomy Report: Technical Annex](#)

The Commission has therefore opted not to fulfil its ambition, as stated, discussed and formulated in earlier revisions.

The Commission's proposal does not integrate well with other parts of the "Fit for 55" framework

Even though the Commission adopts a sound approach in the "Fit for 55" framework – by emphasising that different regulations and directives should work better together – we must point out that the CO₂ emission performance standards cannot integrate with other parts of the policy package.

In the current revision of the EU ETS – which intends to include emissions from both maritime and road traffic – the Commission proposes that the burning of biofuels be assigned an emission factor of zero and thus not be affected by emission allowance costs. This incentivises fuel suppliers to sell biofuel, thus increasing its market share and reducing that of fossil fuels. The Swedish Gas Association supports this development. But we can not simultaneously accept CO₂ emission performance standards that classify biofuel and biomethane as *fossil fuels*, and thus imply that their use should be phased out. These positions are clearly incompatible.

Gas-powered cars are an instructive example. As early as 2019, 17% of gas-powered cars ran on renewable biomethane (average across the EU).² That figure is rising rapidly at present, with increasing demand for higher shares of renewable fuels. The EU ETS and the Renewable Energy Directive both encourage the continued use of biomethane as a fuel for road vehicles, but for use of biomethane to continue, gas-powered cars obviously need to be developed, manufactured and made available for purchase. The Commission's proposal for CO₂ emission performance standards

² The figure is 95% for Sweden.

would prevent this from happening: gas-powered cars would gradually be phased out of the market with a definitive stop date set for 2035.

We would also emphasise that the new initiatives within “Fit for 55” – FuelEU Maritime and RefuelEU Aviation – propose GHG intensity and well-to-wake calculations, which are synonymous with well-to-wheel. It is a positive development that the Commission has, in these cases, chosen to adopt a modern systems approach to climate emissions from shipping and aviation. At the same time, however, it highlights the illogicality of persisting with a tailpipe approach to CO₂ emission performance standards for cars and vans. Why would the EU assess transport sector climate emissions differently depending on whether they relate to transport on land, water or air? They are, essentially, the same. A fuel – fossil or renewable – is used in an engine that generates kinetic energy.

The Commission has dismissed CCF and crediting schemes too readily

The Commission states that it has considered introducing a mechanism to take into account the potential contribution of renewable and low carbon fuels to emissions reduction. Such a mechanism could be a way to apply, at least in part, a WTW or LCA emissions calculation to internal combustion engines.

Two alternatives have been considered: a carbon correction factor (CCF) or a so-called crediting scheme. The Commission has, however, concluded that systems of this nature should *not* be included and justified this position with a number of reasons, without presenting any credible analysis behind these reasons.

The Commission has also chosen to oppose the majority of contributions from the consultation process, that have argued for the inclusion of a mechanism for capturing the climate benefits of biofuels in CO₂ emission performance standards.

It is interesting to note that the revision of the Renewable Energy Directive allows for the possibility of fuel producers using renewable electricity in vehicles to help meet the Directive’s targets. Why not, then, allow the reverse? That is, allow a renewable fuel that meets the requirements of the Renewable Energy Directive help car manufacturers to reach their CO₂ emission performance targets.

The Swedish Gas Association believes that CCF and crediting schemes have been dismissed far too lightly by the Commission. We believe that it is absolutely vital that such a mechanism be introduced so that a more accurate and technology neutral assessment of climate impact can be incorporated in the CO₂ emission performance standards.

There are evident weaknesses in the Commission’s impact assessment

The Swedish Gas Association also asserts that there are numerous weaknesses and question marks in the assumptions and cost estimates underlying the impact assessment presented alongside the proposed revisions.

For example, the impact assessment does not consider even the possibility of implementing tougher requirements for emissions reductions for 2025 or 2030 while also including renewable biofuels and biomethane. The Commission is content to assert that a mechanism for biofuels would entail less stringent requirements.

In terms of environmental impact, the Commission ascertains that CO₂ emissions (when measured under WLTP) increase with the FUEL1 (CCF correction factor) option. This is hardly surprising, since WLTP is based on a tailpipe measurement of emissions and thus does not capture many of

the positive effects of renewable fuels. This is remarkably careless; in fact, it means that the entire impact assessment is founded on completely unsound and unscientific premises.

The proposal would have negative consequences for biogas investments in the EU

Replacing petrol and diesel with biomethane would not only benefit the environment and mitigate climate change directly. It would also stimulate vital investment and encourage environmental improvement in other industrial sectors – such as agriculture and waste handling – as a result of the additional benefits it delivers: the recycling of plant and soil nutrients, reduced eutrophication, and improved biodiversity. Furthermore, production of biogas and biofertiliser leads to socio-economic benefits such as improved security of supply, increased rural development, job creation, promotion of innovation, and the creation of export opportunities. Among alternative fuels, only biogas has demonstrated, to date, such a deep and wide range of benefits to society.

Biogas is vital if Europe is to reach its ambitious environmental and climate goals, and should be valued accordingly. Our food waste, wastewater, manure and other residual materials have the potential to become renewable energy; thus producing energy, while resolving waste disposal problems and producing biofertilizer for organic food. The demands of both rural and urban areas can be met through a cycle that delivers unique societal benefits and potential for further development. Biogas is the circular economy in practice.

Europe needs to find a way to use biogas as a fuel, so that its unique societal benefits can be realised. Many of the benefits of biogas arise in its production, but production cannot happen without the possibility of sales, and road transport is a key market in which biogas sales can take place. To maintain viable domestic production of biogas, there needs to be a stable and competitive marketplace. In Sweden, there has been an evident willingness to pay for biogas in the road transport industry and, although there is increased interest from other sectors (including shipping and industry), it will continue to be the primary market for years to come. Any expectation that biogas can make an equivalent impact on industrial sectors other than road transport by 2030 is unrealistic, according to prevailing market conditions.

Biogas production is also localised and often demands sales in proximate areas. In Sweden, there has been investment in fuel stations on account of local production of biomethane. These sales cannot be easily shifted to large industrial facilities or international shipping because of the small scale nature of production as it exists today. Directing production towards these markets would demand large-scale liquefaction facilities or a massive expansion of network infrastructure. This would not be feasible for those smaller plants not located near a gas network, as the cost of small-scale liquefaction is too high.

There is a significant need for sustainable biofuels in the transport sector. Biogas can help meet this need, so it should play a key role – alongside electrification – in the decarbonisation of the road transport sector, while increasingly serving other markets. Closing the door to biogas in light duty transport does not benefit this maturation process. On the contrary, it risks bringing investment in biogas – a development that has been explicitly supported by the EU – to a crashing halt.