



Summary of the Review of DG CLIMA study 'Determining the environmental impacts of conventional and alternatively fuels vehicles through LCA'

INTRODUCTION

The ART Fuels Forum (AFF) has conducted a critical review of the study 'Determining the environmental impacts of conventional and alternatively fuels vehicles through LCA' that was commissioned by the European Commission's DG Climate Action to provide a life cycle analysis of transport sector options.

The review was completed in December 2020 and can be found [here](#).

The main points of the analysis are provided below.

SUMMARY OF THE REVIEW

The study covered 60 current and potential fuel supply chains. It considered not only GHG emissions but a full range of emissions and covered a broader range of environmental impacts than found in

¹ <https://op.europa.eu/en/publication-detail/-/publication/1f494180-bc0e-11ea-811c-01aa75ed71a1>

SUMMARY OF THE REVIEW

other similar studies. The Study considered emissions from the years 2020 to 2050 and attempted to incorporate a number of novel methodological aspects.

The authors issued a number of caveats concerning the robustness of some of the data and cautioned against comparing their results to those of other studies.

This review found a number of very concerning issues with the Study:

- The **data quality** issues are much broader than acknowledged by the authors. Many of the datasets employed in the study are very old and don't represent current practices across a broad range of industries from agricultural crop production to fuel production through processing the feedstocks. Examples were found where the emissions used in the study could be more than double the emissions from current practices.
- The attempt at **forecasting future emissions** is very narrowly focused on changes in the carbon intensity of electricity. Likely changes in the adoption of innovations or the continual changes due to the gaining of experience in other sectors are ignored in the Study. This further skew the relative values that the new model produces for liquid and gaseous fuels compared to electric vehicles at the end of the forecast period in 2050.
- One of the novel aspects of the Study was the incorporation of a single **counterfactual case** for the use of secondary biogenic feedstocks. The Study assumed that all of the feedstocks are currently utilized to produce electricity and diverting them from electricity production to fuel production would require their replacement in the power generation sector with power from higher emission sources. However only a very small fraction of the resource is currently used for power production, leaving ample feedstock availability for fuel production. So, the applied counterfactual is highly questionable.
- The inclusion of the option to include **indirect land use change emissions** in the model is very basic. The study used the results from the 2015 Globiom study, even though more recent data from the Globiom model and other models is available. The results from all of these other reports have generally lower values than those used in the Study. Moreover, the Study continues the scientifically unjustified approach of simply adding the direct emissions from an attributional LCA to those from a consequential LCA (indirect land use emissions). The results are from two different modelling frameworks and it is not appropriate to just add them together.

It is clear that the GHG emission data for alternative and renewable fuels in the report are not sound enough to serve as input for a roadmap for policy makers considering options to reduce the environmental impacts of transports systems over the next 30 to 50 years.

ABOUT ART FUELS FORUM

The Alternative and Renewable Transportation (ART) Fuels Forum, financed by the European Commission, brings together more than 100 high-profile experts representing leading demand and

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supply Industries in the area of ART Fuels. It is a single policy and proven technology forum aiming at producing evidence-based opinions and conveying the collective interest of the ART Fuels industry towards informing European decision-makers and officials. The Forum supports the production and the utilization of sustainable advanced liquid and gaseous fuels towards decarbonization of key transport sectors: automotive, aviation and maritime and promotes the widespread market deployment of these fuels.


www.artfuelsforum.eu

DISCLAIMER - The above position paper/recommendation/statement has been drafted by the assigned working group of the Alternative & Renewable Transport Fuels Forum (ART Fuels Forum) after exchange of opinions and internal consultation among the Forum members. The content of the statement does not necessarily reflect the views of all members of the ART Fuels Forum, but is a synthesis of the main positions. The positions, recommendations and statements listed above are those of the members of the ART Fuels Forum and do not necessarily reflect either the official position of the Commission or the complete position of the members of the ART Fuels Forum.

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