

Option 8 – EU Market Exclusively Supplied with CNF

Description of Technology

This option explores the potential of a full CO2 neutral fuel (CNF) market after 2035 in EU-27. This option assumes that CNF availability would be sufficient to meet the entire vehicle demand, and therefore CNF is the only available product in the fuel market. This is potentially the result of the new CNF vehicle class. All other monitoring methodologies are just a transition to this option.

Customer & Retail Perspectives

Advantages:

- Full Transition to Sustainable Fuels
- Simplified Fuel Options for Consumers
- Compatibility with Current Infrastructure
- Potential to Use Conventional Fuel Outside the EU
- No Additional Inspection Requirements
- Eliminates long-term compliance and monitoring costs by standardizing fuel supply to CNF only

Disadvantages:

- Many decades away for it to happen
- Lack of Incentive During the Transition Phase
- Potential Supply Challenges for Non-EU Travel
- Dependence on Successful CNF Ramp-Up

Regulatory Assessment

The share of renewable energy carriers in the transport sector is regulated in the Renewable Energy Directive (RED). The current goal of the RED III is an energetic share of renewable energy of 29% in 2030, which includes multipliers for different compliance options, or a greenhouse gas (GHG) reduction of 14.5%. Currently, less than 7% CNFs are in the European fuel mix. Targets beyond 2030 are not available and will be discussed in the next review in 2027. EU Member States are currently implementing the RED III. Based on current EU climate goals, the EU wants to achieve -55% GHG emissions in 2030 and is currently debating -90% in 2040. Provided the availability of CNF is dedicated to the supply of all new cars, vans and trucks, this could be a more realistic approach. Once 100% CNF in the European fuel market is achieved, all new vehicles would run exclusively on CNF. If the revision of the RED leads to 100% CNF in the future, it automatically limits the necessity of a CNF monitoring methodologies. Also the ETS2, which includes the road sector, will ensure a clear phase-out of fossil fuels as emission allowances will get more expensive over time. Once an economic break-even in comparison to fossil fuels is achieved, the switch to CNFs can be quite rapid.