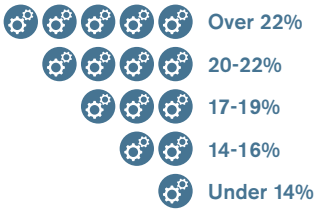
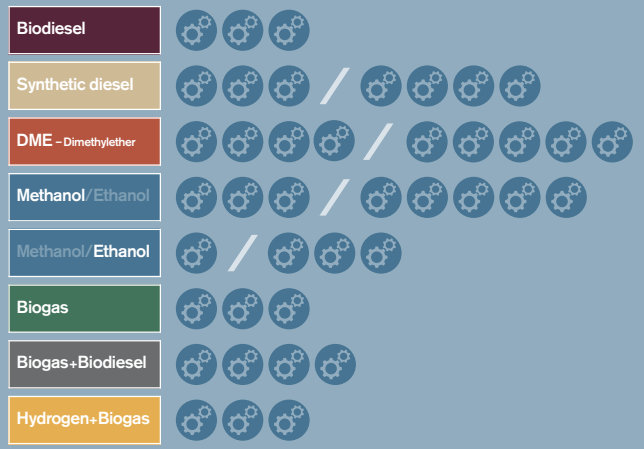
In this instance, energy efficiency is rated on a decreasing scale and is expressed as a percentage indicating the proportion of energy reaching the vehicle's driven wheels.

For purposes of comparison, it may be noted that the fossil diesel oil used today delivers an overall efficiency of approximately 35 percent. This relatively high value is due to the fact that crude oil may be regarded as a 'semi-finished' product, making the production of diesel very energy-efficient.

The results for the same fuel may vary depending on the production process used.





DME and methanol are rated highest when produced from black liquor from the wood pulp industry. The higher rating for synthetic diesel is also based on the gasification of black liquor.

The ratings for biogas, biogas+biodiesel and hydrogen+biogas are based on production by gasification and anaerobic digestion. However, the production of biogas by black liquor gasification is not included.

The low rating of ethanol is due to the high energy utilisation in the cultivation and fuel production processes.

Source: EUCAR/CONCAWE/JRC and AB VOLVO