

## Transport: Light Vehicles – Biofuel

*This lever controls the sub-levers listed in the table, and ambition levels are for the end year shown on the right-hand side.*

Biofuels have the potential to reduce greenhouse gas (GHG) emissions as the CO<sub>2</sub> produced at the tail pipe has been absorbed during the growth of the biomass used. The net GHG emissions impact of biofuel is therefore generally low being just those incurred in the supply chain, although for some crops (such as oil seeds) the impact can be much higher, hence the interest in biofuel production from wastes such as used cooking oil.

Biofuels can simply be mixed with fossil fuels and used in existing engine technologies. However, shares of the fuel mix beyond 10% for bioethanol and 7% for biodiesel require modifications to the engine or development of types of advanced biofuels.

### Key interactions

Increasing the use of biofuels in transport has implications for how that increased demand for biofuels will be satisfied. Biofuels can be created from waste and biomass grown in Kenya. Kenya's bioenergy production can be controlled through the Land Use & Biofuels levers.

### Level 1

The amount of biofuel blended with fossil fuels remains at current levels.

### Level 2

Biofuel blend increases to 20% to match the current levels seen in more 'biofuel progressive' countries such as Brazil where the ethanol use mandate for gasoline was raised to 27% in 2015. This might require engine modifications depending on the type of biofuel.

### Level 3

Technological advances in biofuels improve their compatibility with current vehicles allowing 30% of fossil fuel to be substituted.

### Level 4

Big advances in biofuels with strong public engagement and policy leading to all fossil fuels used in light vehicles being replaced by biofuels.

**Default Timing** Start year: 2020, End year: 2050

Sub-Lever	Units	2015	Level 1	Level 2	Level 3	Level 4
Car	share	0.0	0	0.2	0.3	0.5
LGV	share	0.0	0	0.2	0.3	0.5
HGV Rigid	share	0.0	0	0.01	0.1	0.5

Biofuel Share of Liquid Fuel in Cars

