

# HOW GREEN IS CYCLING?

Cycling is an extremely efficient mode of transport. From an environmental standpoint it is roughly twice as efficient as walking and thirteen times more efficient than driving!

## How do you estimate the emissions of cycling?

Estimating the emissions of cycling is a bit different from calculating the emissions of other forms of transport. While the principles for estimating the environmental impact of production and maintenance are the same for both cars and bicycles, the operation of a bicycle burns calories while a car or a bus burn fuel.

affect how many calories we burn. Different diets have vastly different impacts on the environment, we also assume that every calorie burned results in an extra calorie consumed.

By estimating an average persons diet and energy use we can form a reasonable estimate of emissions, but there are many factors that will vary on an individual level.

Every human is different and there are numerous factors that

It should also be noted that this comparison does not take into account the impact of external factors such as construction and maintenance of infrastructure, parking and road accidents. Including these factors would likely tip the comparison even more in favour of cycling.

Bike: 21g CO2e/km <sup>1</sup>



Ebike: 22g CO2e/km <sup>2</sup>



Walking: 41g CO2e/km <sup>3</sup>



Bus: 101g CO2e/km <sup>4</sup>



EV: 108g CO2e/km <sup>5</sup>



CAR: 271g CO2e/km <sup>6</sup>



1X

3X

5X

7X

9X

11X

13X

<sup>1</sup> Adult 70kg. Calorie burn rate at rest 105 kcal/h. Average EU diet 1,44g CO2e/kcal. Calorie burn 16 km/h 280 kcal/h. Production and maintenance 5g Co2e/km. (ECF,2011)

<sup>2</sup> Adult 70kg. Calorie burn rate at rest 105 kcal/h. Average EU diet 1,44g CO2e/kcal. Calorie burn 16 km/h 175 kcal/h. Production and maintenance 7g Co2e/km. Electricity 9g Co2e/km. (ECF,2011)

<sup>3</sup> Adult 70kg. Calorie burn rate at rest 105 kcal/h. Average EU diet 1,44g CO2e/kcal. (ECF,2011) Calorie burn rate walking 5,6 km/h 266 kcal/h. (Harward Health Publishing, 2021)

<sup>4</sup> Production 6g CO2e/km. Operation 70% urban, 30% regional, average 10 passengers 95g CO2/km. (ECF,2011)

<sup>5</sup> Tesla Model 3, EU average electricity production. (Hausfather, 2019)

<sup>6</sup> Production 42g CO2e/km. Operation 70% urban, 25% road, 5% highway 229g CO2/km (ECF,2011)

## SOURCES:

European Cyclist Federation (ECF). "Cycle more often 2 cool down the planet!—Quantifying CO2 savings of Cycling." Brussels: ECF, 2011.

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