CIVITAS
Sustainable and smart mobility for all
2030

CIVITAS indicators

Share of electric/hydrogen buses (ENV_DC_ABV)

DOMAIN

Transport	**Environment**	Energy	Society	Economy

TOPIC	**Decarbonisation**	
IMPACT	**Zero-emission vehicles** *Increasing the share of zero-emissions buses*	**ENV_DC**

Category

Key indicator	Supplementary indicator	State indicator

CONTEXT AND RELEVANCE

Transport activity is a major contributor to pollution, significantly impacting air quality, human health, and climate change. The reliance on motorized vehicles powered by fossil fuels exacerbates climate change by emitting greenhouse gases, such as CO2. By addressing urban transport emissions, cities can enhance air quality and reduce carbon footprints.

This indicator is an estimation of the share of zero-emissions (electric and hydrogen) buses in use in the pilot city. **It is a relevant indicator when the policy action is aimed at reducing the impact of urban mobility and transport on climate. A successful action is reflected in a HIGHER value of the indicator.**

DESCRIPTION

The indicator is the share of buses powered by electricity and hydrogen, i.e., Battery Electric Vehicles (BEV) and Fuel Cells Vehicles (FCEV). Being a share, the indicator is **dimensionless**. The indicator accounts for buses in service with public transport providers operating in the pilot city.

METHOD OF CALCULATION AND INPUTS

The indicator should be computed exogenously, by applying the method described and then coded in the supporting tool.

Method

Calculation of the share of zero-emission buses using information from transport operators

Significance: **1.00**

The following information is needed to compute the indicator:

a) **The number of buses** operated by public transport providers in the pilot city **by fuel technology**

The experiment would result in a modification of the share of fuel technologies in the operators' bus fleets.

METHOD OF CALCULATION

The indicator should be computed **exogenously** according to the following steps:

- **Retrieval of the number of buses** classified according to fuel technology**.**
- **Estimation of the indicator** (see the following equation).

EQUATIONS

The value of the indicator should be computed as:

$$ZrEmBusSh = \frac{\sum_p Bus_p^{<BEV>} + \sum_p Bus_p^{<FCEV>}}{\sum_p \sum_f Bus_p^f}$$

Where:

Bus_p^f = Number of buses operated by transport provider *p* with fuel technology *f*

$Bus_p^{<BEV>}$= Number of Battery Electric buses operated by transport provider *p*

$Bus_p^{<FCEV>}$= Number of Fuel Cells buses operated by transport provider *p*