CIVITAS
Sustainable and smart mobility for all
2030

CIVITAS indicators

Share of electric vehicles in the shared fleet (ENV_DC_SF2)

DOMAIN

Transport	**Environment**	Energy	Society	Economy

TOPIC	**Decarbonization**	
IMPACT	**Zero-emission vehicles** *Increasing the share of zero-emission vehicles in shared fleets*	**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. A substantial portion of transport activity takes place in urban areas, where high population density and concentrated economic activity lead to high transport demand. 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 electric vehicles in the shared fleet of the pilot city. **It is a relevant indicator when the policy action is aimed at reducing the impact of urban mobility and transport on air pollution. A successful action is reflected in a LOWER value of the indicator.**

DESCRIPTION

The indicator is the proportion of Battery Electric Vehicles (BEV) in the fleet of shared vehicles in the pilot city. The indicator accounts for cars, mopeds, and light goods vehicles (i.e., carrier vehicles with a gross vehicle weight of no more than 3.5 metric tons, such as vans and three-wheelers).

Being a share, the indicator is **dimensionless**.

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 proportion of shared electric vehicles based on data from service providers	Significance: **0.50** 

The following information is needed to compute the indicator:

a) **The number of shared vehicles by fuel technology** in the pilot city. **This should include cars, light goods vehicles, and mopeds.** Shared bikes and e-scooters should be excluded, as only zero-emission versions of these vehicles exist.

The experiment would result in a modification of the share of Battery Electric shared vehicles in the pilot city.

METHOD OF CALCULATION

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

- **Retrieval of the number of shared vehicles by fuel technology** in the pilot. These values can be obtained from the shared mobility providers operating in the pilot city.
- **Estimation of the indicator** (see the following equation).

EQUATIONS

The value of the indicator should be computed as:

$$\boldsymbol{ElShVehSh} = \frac{\sum_p \boldsymbol{ShVeh_p^{<BEV>}}}{\sum_p \sum_f \boldsymbol{ShVeh_p^f}}$$

Where:

$ShVeh_p^f$ = Number of shared vehicles with fuel technology *f* in the fleet of shared mobility provider *p*

$ShVeh_p^{<BEV>}$= Number of Battery Electric shared vehicles in the fleet of shared mobility provider *p*

ALTERNATIVE INDICATORS

This indicator measures the percentage of electric vehicles within shared fleets, while indicator **ENV_DC_SF1** focuses exclusively on shared cars. The latter may be preferable if the objective is to assess the electrification of shared cars specifically or if the shared fleet in the pilot city consists solely of shared cars, with no other vehicle types.