# Types of sustainable mobility

Sustainable mobility encompasses a variety of environmentally-friendly alternatives. Each offers specific characteristics for different needs and contexts, so that each individual can find the best form of mobility for each moment. In general, the main types of sustainable mobility can be divided into two broad groups depending on whether they involve the use of an engine for travel or not.



Pedestrians: walking or reduced mobility

Pedestrians represent a form of sustainable mobility, since they don't emit polluting gases and don't depend on fossil fuels. Besides not generating any air or noise pollution, they promote a healthy lifestyle and reduce traffic congestion in cities. This group also includes children, older people and those with reduced mobility, reflecting the need to design cities with wide pavements, safe routes and accessible spaces.



### Cycling: mobility by bicycle

Bicycles don't emit polluting gases, require few resources to manufacture and take up less space than motorised vehicles. They are an environmentally-friendly option that helps improve air quality, reduce traffic and promote a healthy lifestyle. They can be used with infrastructure such as cycle lanes, bike-sharing schemes and measures to improve road safety.

**Electric bikes** are an increasingly popular option in cities, ideal for covering longer distances or going up hills, combining the efficiency of cycling with the convenience of electric assistance. This type of transport offers advantages thanks to technological advances that have meant, for example, the development of lighter batteries with more autonomy and longer lives. At Iberdrola, we are promoting this form of electrified mobility by installing charging stations powered by renewable energy.



#### Sustainable mobility in public transport

Public transport –including buses, trains, subways and trams– is key to sustainable mobility by reducing per capita emissions and optimising the use of energy resources. It also reduces traffic and frees up urban space. The electrification of public transport is one of the most effective ways to reduce emissions in the sector. Electric buses and trams powered by renewable energy minimise CO<sub>2</sub> emissions, and trains powered by electricity are an efficient and clean alternative for medium to long-distance trips.

At Iberdrola, we are driving this transition by providing renewable electricity to power these modes of transport and technological solutions to optimise their operation, such as energy storage systems and smart grids. We also have measures in place such as rolling out charging points for buses and seeking out partnerships with transport companies to electrify urban fleets with this type of vehicle.



#### Sustainable shared vehicles: carpooling and car sharing

Shared vehicles are a sustainable solution as they reduce the number of vehicles on the road, lower overall emissions and promote the efficient use of resources. There are two types of shared vehicles: carpooling, when several people share a car for the same journey, and carsharing, or renting a vehicle for a few hours or even minutes. They usually use digital platforms that provide access to these means of transport.

The electrification of shared vehicles provides a double environmental benefit by ensuring that these vehicles operate with the lowest possible impact. At Iberdrola, we work with shared mobility companies by offering electric charging points powered by green energy and promoting the development of sustainable fleets.



## Private electric vehicles

Electric vehicles are a sustainable alternative to combustion vehicles for private use, because **they don't emit polluting gases during operation and can be charged with renewable energy**, reducing their environmental impact. They are also environmentally-friendly, improving air quality and combating climate change, and their engines are quieter and more efficient than traditional ones. These vehicles run on rechargeable batteries powered by electricity, preferably from renewable sources.

Advances in electric batteries and smart charging technologies are making these vehicles increasingly efficient and accessible. At Iberdrola, we are leading the transition towards this type of mobility by installing a network of charging points, smart charging solutions and supplying renewable energy to users.



## **Electrification** of heavy transport

Road transport, which has been heavily dependent on fossil fuels until now, is one of the main sources of pollution: it accounts for around 24% of all greenhouse gas emissions worldwide according to the IEA. Although there is no precise figure for freight transport, it is estimated to represent a significant proportion. The sustainability of this type of mobility, especially through the **electrification of trucks**, represents a fundamental alternative for the energy transition.

At Iberdrola, we have various initiatives focused on offering charging solutions for this type of electric vehicle in the sector, involving green energy in production.