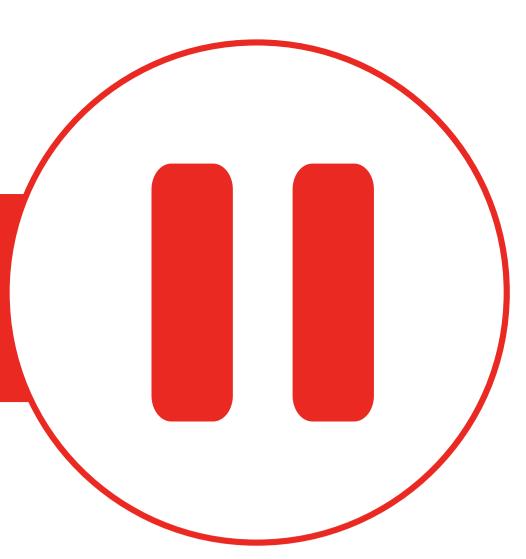
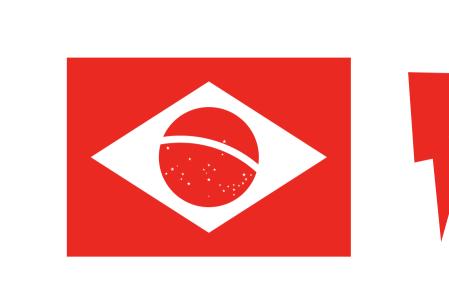
# Where does power come from?

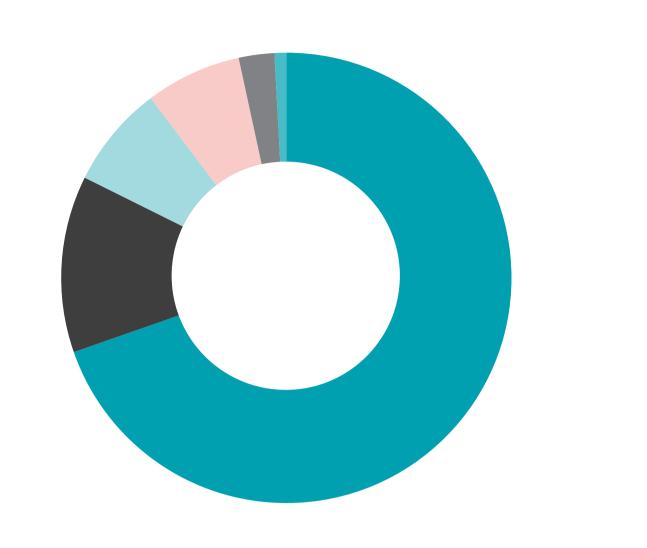


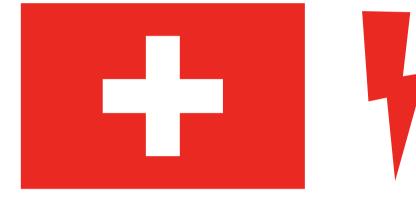
#### HOW GREEN IS AN ELECTRIC CAR?

This largely depends on the electricity mix used to power the car.



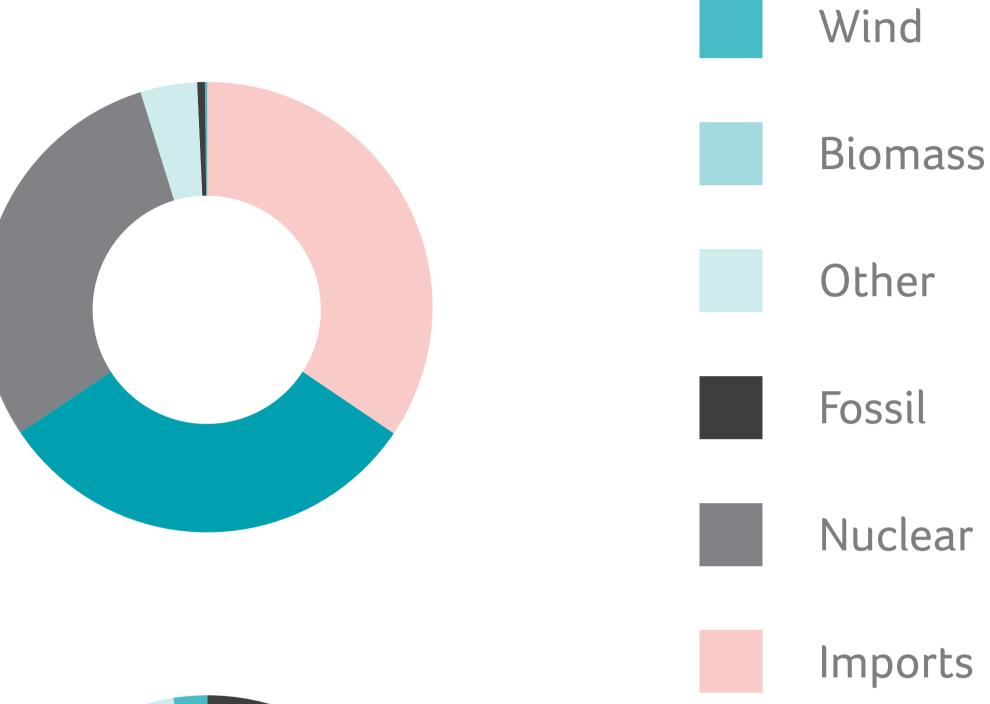
Dominated by hydro, the Brazilian electricity mix is less harmful than the global average.





#### **Swiss Electricity Mix**

Though dominated by hydro and nuclear, imports make up the largest part of the electricity mix.





#### Global Electricity Mix



## TOMORROW

2012-2040

by fuel.

Trillion KWh

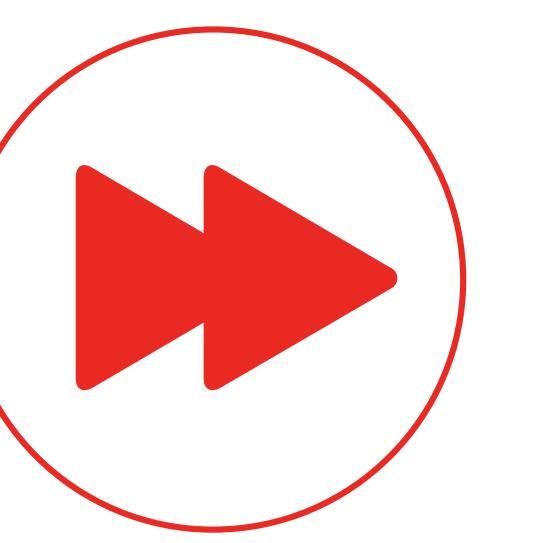
World net electricity generation

2012 2020 2025 2030 2035 2040

Renewables Natural gas Petroleum

Nuclear

# Where will power come from?



# What's in our power?

YOUR PART



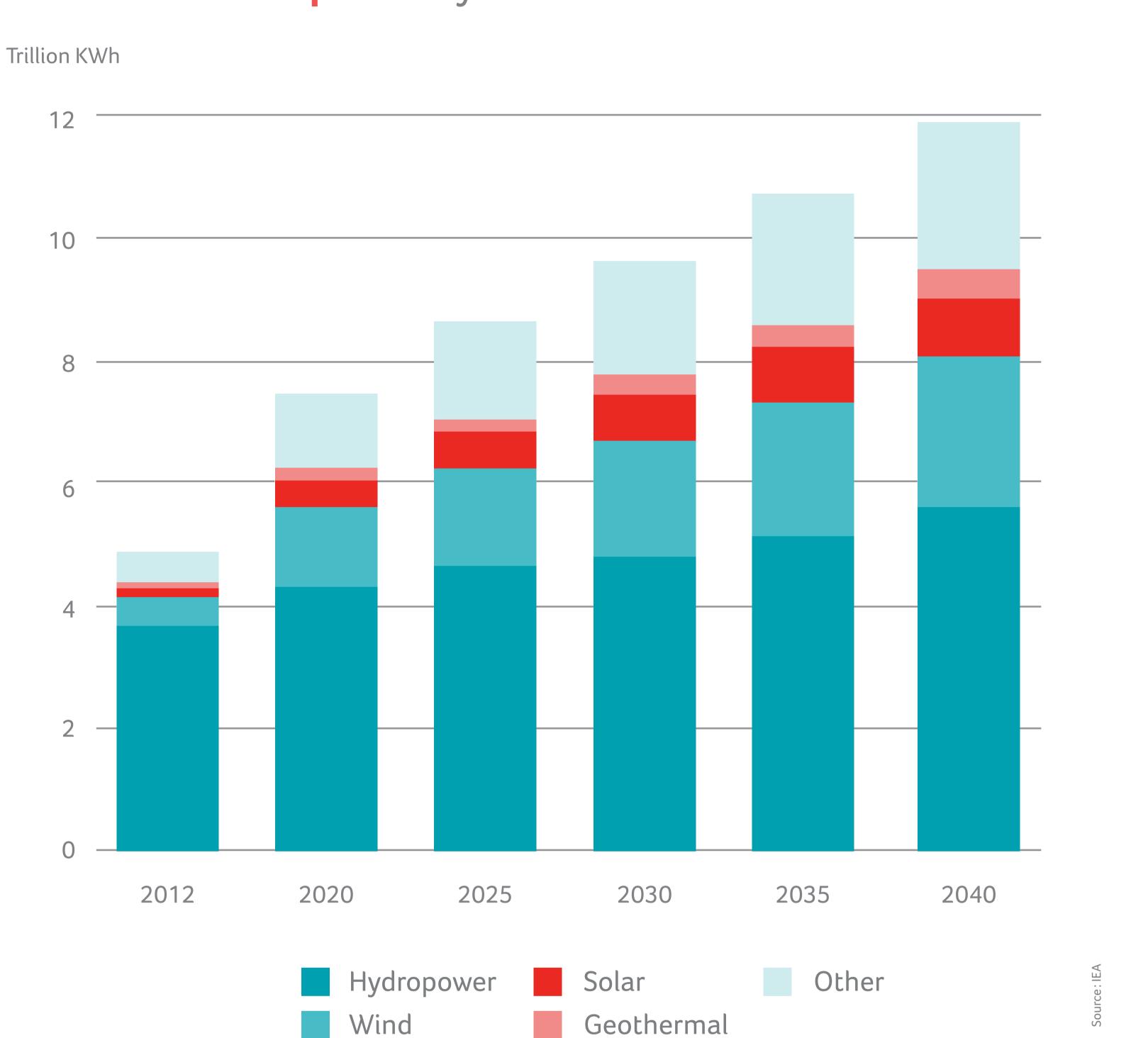
### WHAT DOES THE FUTURE OF ENERGY HOLD?

How can the increasing demand for electricity be covered?

In the future, the grid mix will change as not all the energy carriers have the same potential to expand. Many factors such as costs, social acceptance and physical potential will determine our future mix.



World net electricity generation from renewable power by fuel.



#### LESSONS LEARNED ON ELECTRIC CARS

Electric cars are as green as their fuel. A more sustainable source of electricity means a more sustainable trip.

### Manufacturing emissions matter more for low carbon vehicles.

The importance of the use phase compared to production decreases as the electricity mix becomes more sustainable.

Don't focus on the carbon footprint alone. Also consider other environmental aspects such as water and land use, material requirements and pollution to understand the potential trade-offs.

#### ACTIONS FOR THE FUTURE

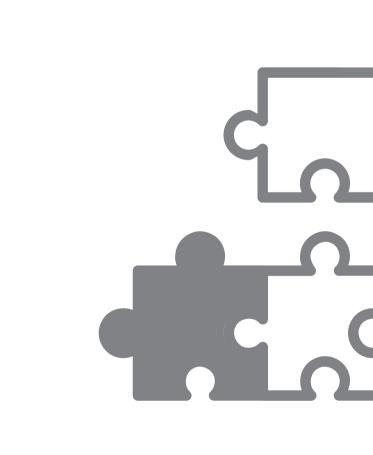


Finding a healthy mix of renewable energies. The type and intensity of environmental impacts vary according to many factors such as the technology used, resource availability and geographic

#### Unleash the full potential of renewable energies. By

understanding the current and potential environmental issues associated with each renewable energy source, we can take steps towards effectively avoiding or minimising their impact as they slowly become a larger portion of our electric supply.

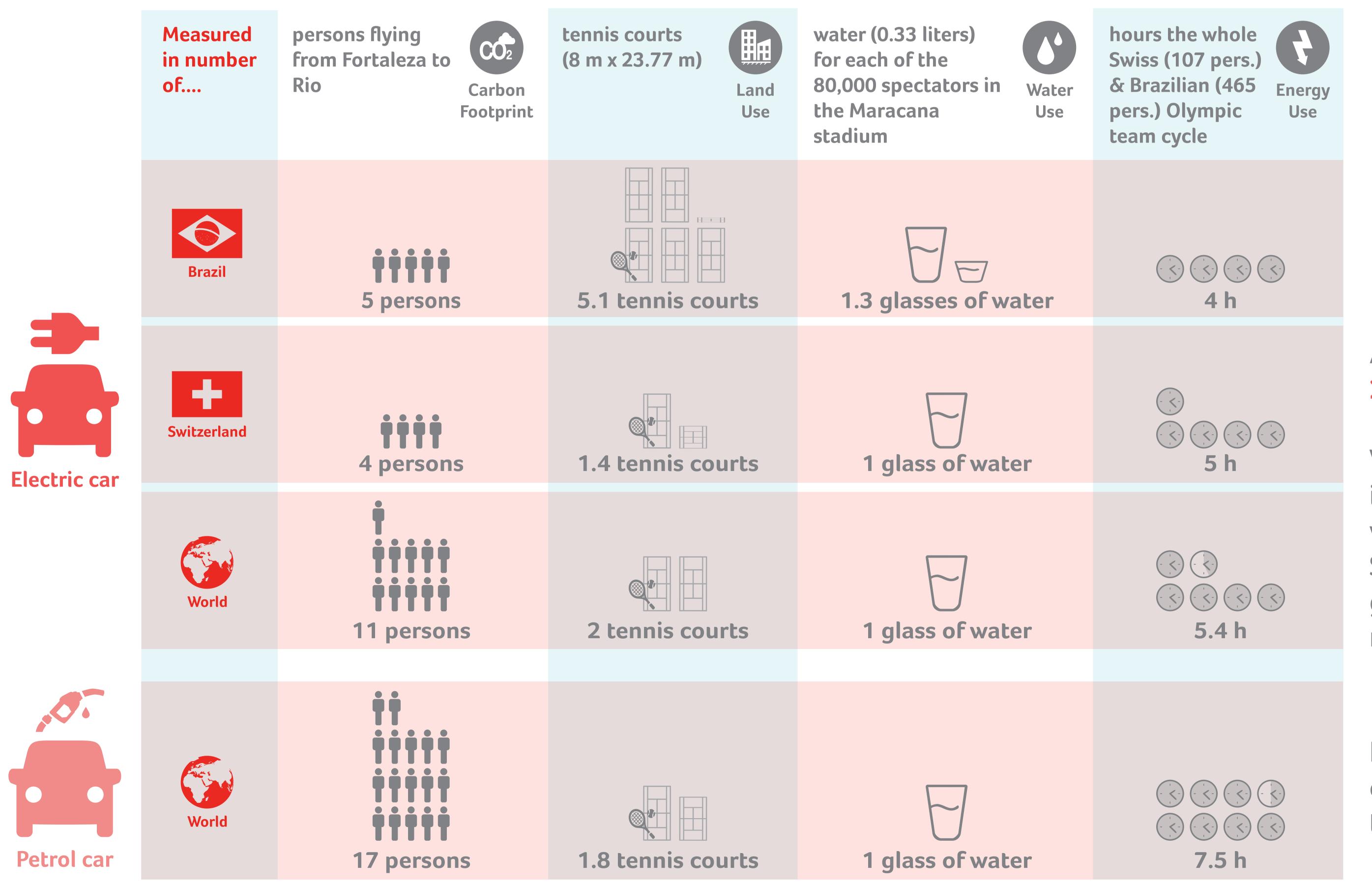
#### EVERYONE CAN CONTRIBUTE

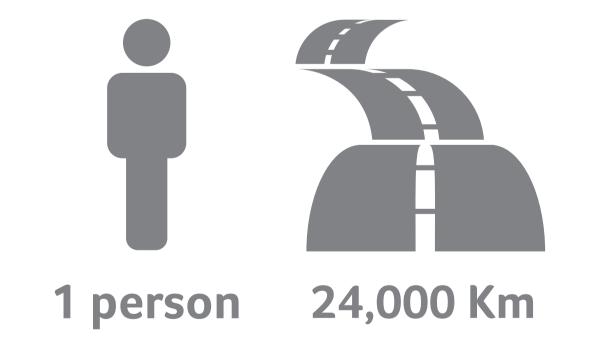


Take matters into your own hands. You may not be able to influence your country's electricity mix, b ut how about installing solar panels on your roof or buying certified electricity?

Small is beautiful. A large electric car is most likely going to be less green than a small conventional petrol car. Also, don't drive alone,

### THE DIFFERENT SHADES OF GREEN OF AN ELECTRIC CAR





#### A person drives on average 24,000 kilometres per year.

What is the environmental impact of driving 24,000 km with an electric car in Brazil, Switzerland or using the global average electricity mix?

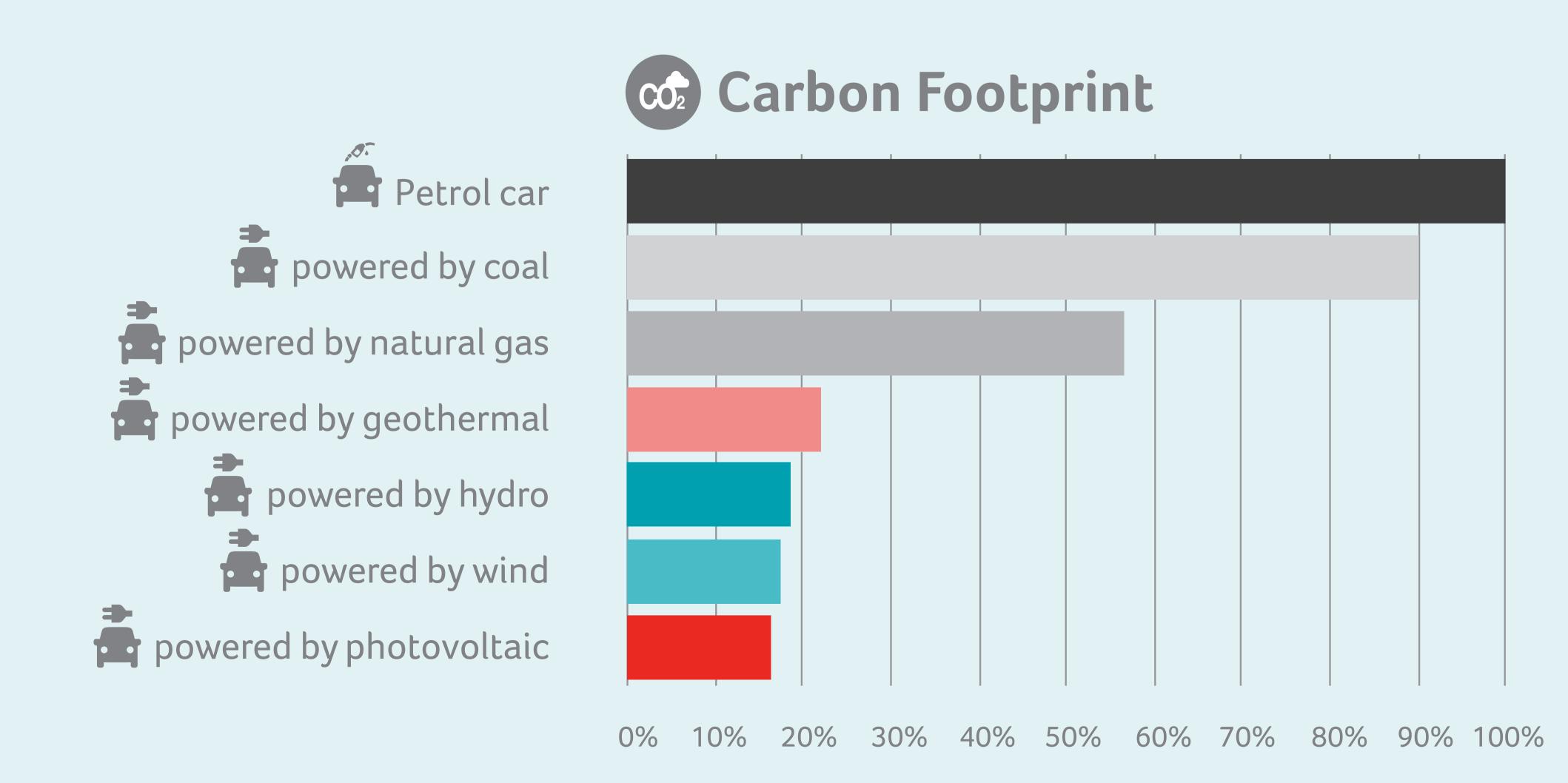
How does it compare to a conventional petrol car of the same size?

### WHAT SHOULD POWER TOMORROW'S ELECTRIC CARS?

Taking the environment into account.

According to IEA, the future electricity mix will still be dominated by coal and natural gas while renewables will also gain in importance.

All energy sources have some impact on our environment. Fossil fuels, coal, oil and natural gas do substantially more harm than renewable energy sources especially in terms of global warming potential.



# THE POWER OF DIFFERENT SOURCES OF RENEWABLE ENERGY

It is still important to understand the environmental impacts associated with producing power from renewable sources such as wind, solar, geothermal, and hydropower.

#### Renewable energies also have a footprint. Even though the carbon

footprint might be lower than fossil fuels, demand for land, water and materials will become more relevant. To make informed decision it is important to understand the trade-

Resource availability and recyclability of materials are important factors when deciding on which are the most viable sources of energy. This is especially true for emerging technologies requiring scarce metals and raw materials.





