2022 Van TCO report: UK

1. Electric van market in the UK

Based on Dataforce registration data for the first half of 2021, battery-electric vans make up 2.7% of the British van market (5137 e-vans registered in H1 2021). For reference, the e-van market share in the EU+UK in H1 2021 was 2.3%.
The UK is not included in the ICCT market monitoring [EU average: 3% in 2021, up from 2% in 2020.]

Note that ACEA also publishes full-year data on fuel types of new vans, available here. However data is not disaggregated between kinds of electrically-chargeable vehicles (ECV). For information, "Electrically Chargeable" includes battery-electric vehicles, plug-in hybrids, fuel cell electric vehicles, and extended-range vehicles. "Alternative Fuel" includes natural gas, LPG, biofuels, and ethanol. Based on ACEA data, ECV vans made up 4.2% of all vans in the UK in 2021.

2. Van survey results

2.1. Characteristics of British van users

A survey of 745 vans users in France, Germany, Italy, Poland, Spain and the UK found the following regarding British van users [*data in brackets is for the average for all six countries*]:

- 56% of their vans are large (above 1,800 kg) [54%]
- 71% of their vans are bought new [72%]
- Users own vans for 4 years on average, with 62% users owning vans for 4 years or longer [5, 70%]
- Users drive 189 km/day on average, with an average maximum daily distance of 409 km/day and an average annual distance of 36,292 km [avg: 175 km/day, max: 425 km/day, avg: 37,700 km/year]
- Their vans are parked during the day for 1h30/day on average [1h42/day]
- 80% of van users describe their use as planned, regular, or predictable, and thus easier to electrify [75%]

2.2. Attitudes towards electric vans

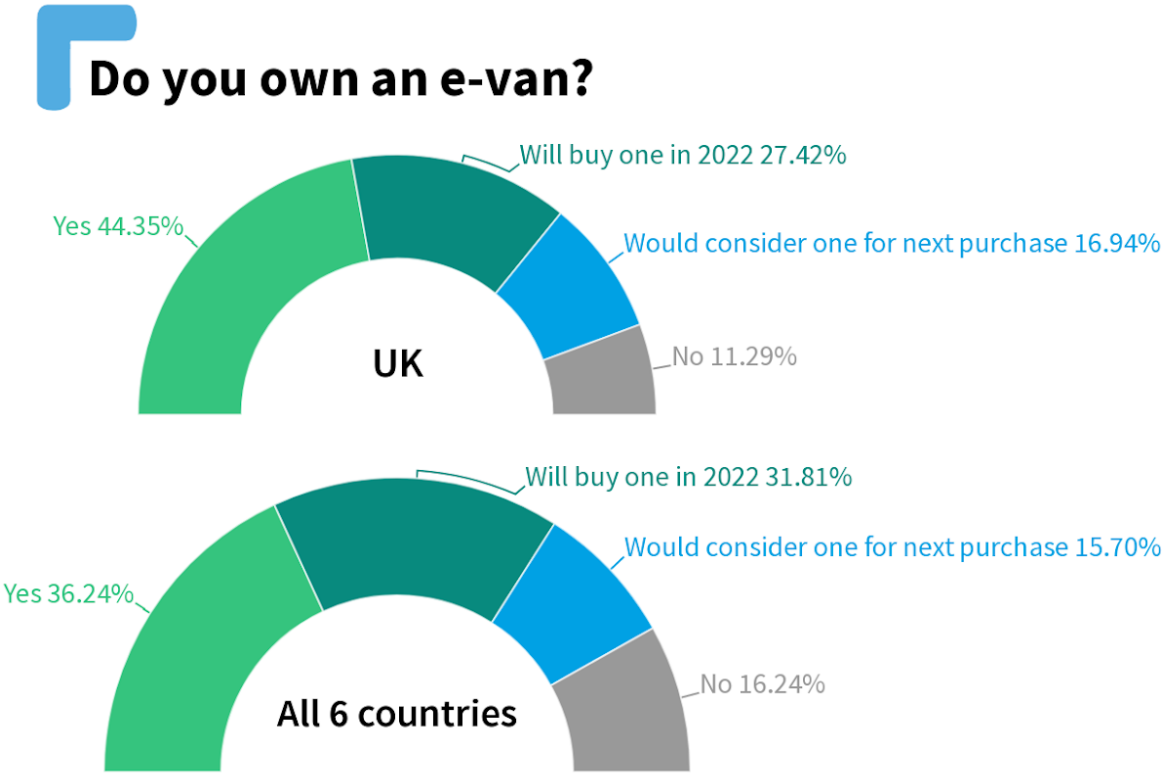


Figure 1: e-van adoption in the survey

In total, 89% of British respondents either already own an e-van, will buy an electric van in 2022, or would consider buying one for their next purchase, compared to 84% for the survey overall. 72% of British respondents would consider a hydrogen fuel cell van for their next purchase, compared to 73% for the survey overall.

2.3. Reasons for/against e-van ownership

The top three reasons for e-van adoption in the UK are CO_2 savings, improving the company's image, and a lower TCO [same ranking as in the survey overall].

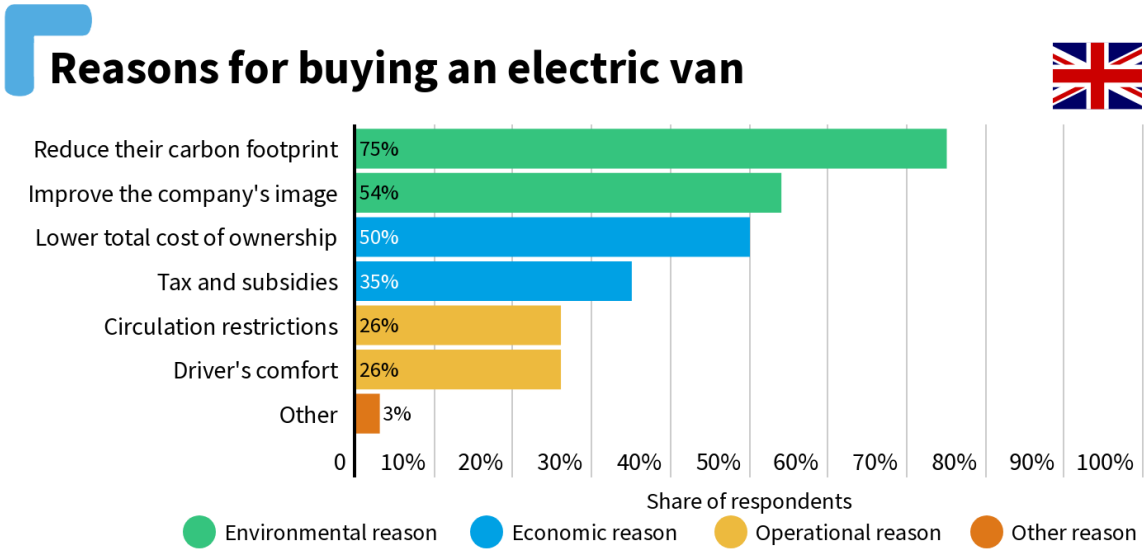


Figure 2: Reasons for e-van adoption in the UK

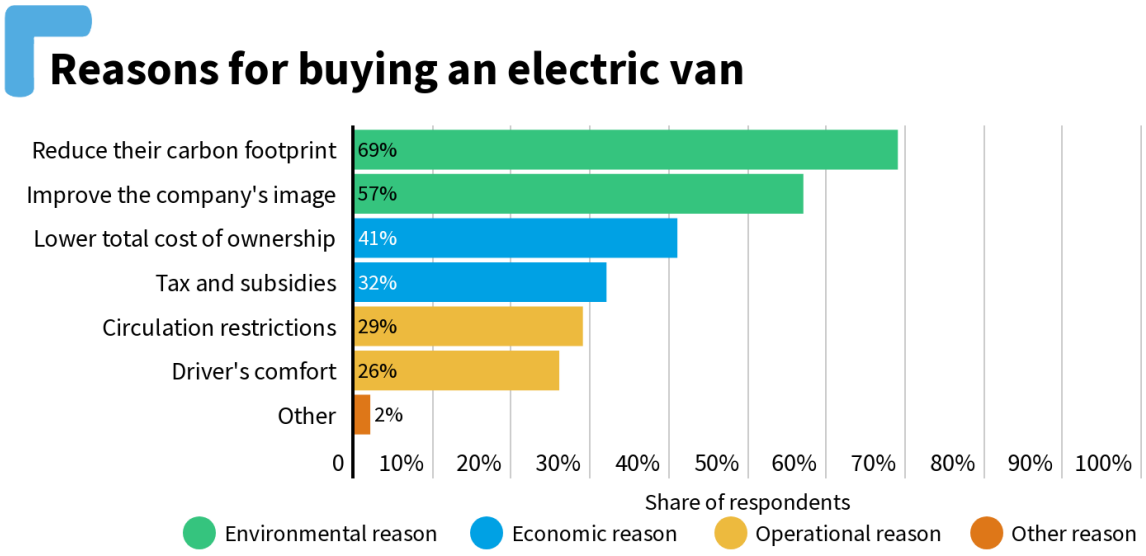


Figure 3: Reasons for e-van adoption in France, Germany, Italy, Poland, Spain, and the UK

The top three reasons against e-van adoption in the UK are purchase price, lack of overnight charging, and lack of public charging [top 3 in the survey overall: lack of range, purchase price, lack of public charging].

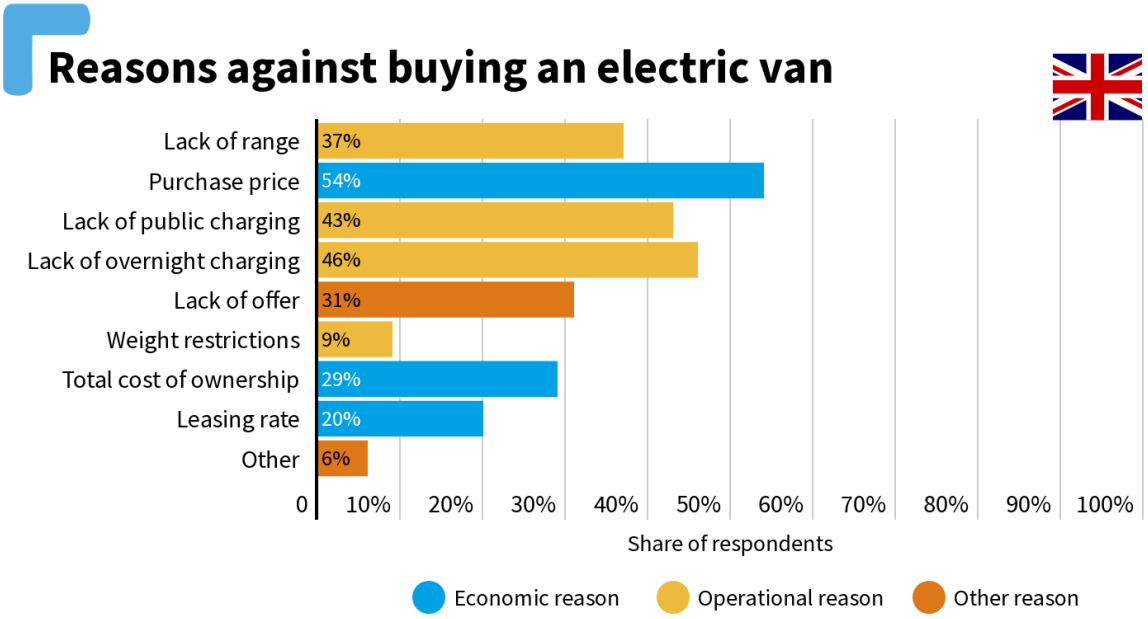


Figure 4: Reasons against e-van adoption in the UK

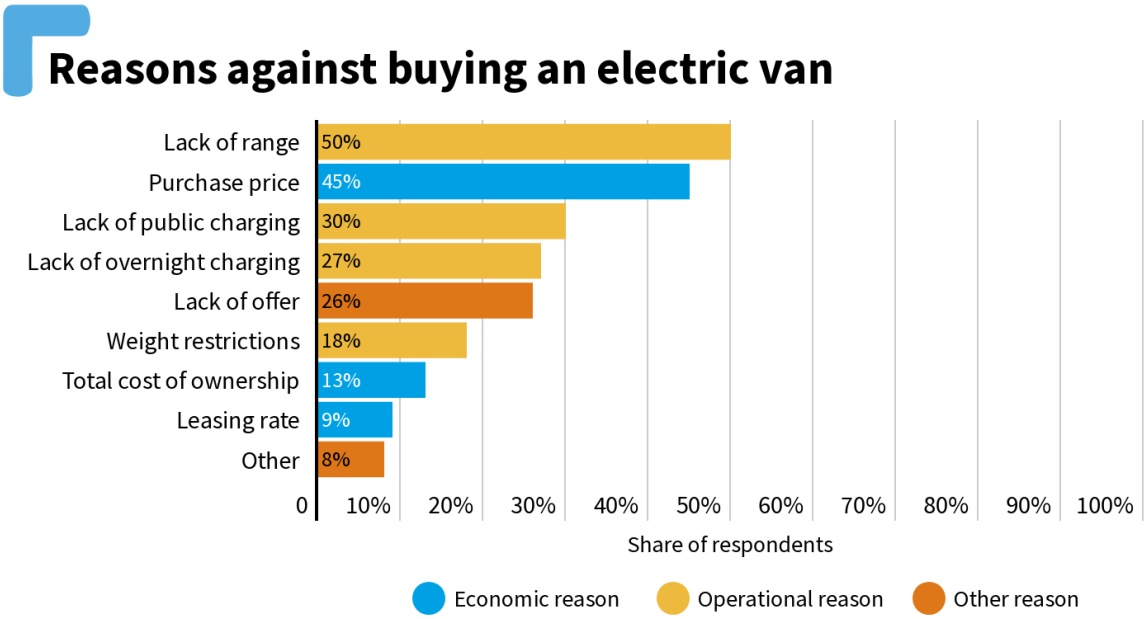


Figure 5: Reasons against e-van adoption in France, Germany, Italy, Poland, Spain, and the UK

3. Total Cost of Ownership

The total cost of ownership (TCO) for light and heavy, diesel and electric vans was estimated for several categories of end users. The main inputs are the average duration of ownership—5 years for all end users except short-term rental services (STR) and lessees—and the annual mileage. These inputs are based on data from all users in the survey, not just British users[1]. As a result, differences in TCO between countries are due to differences in diesel and electricity prices, registration charges, purchases subsidies, etc.

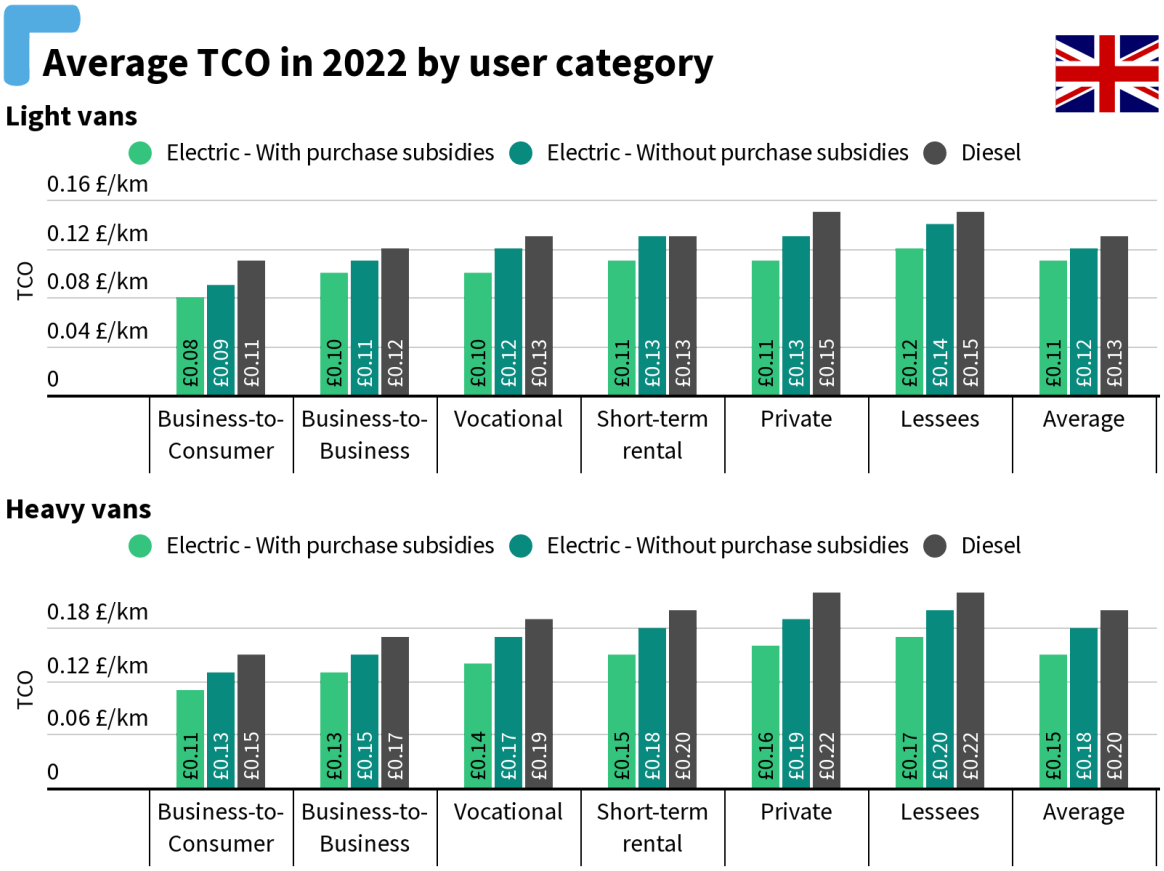
User category	Ownership years	Annual distance (km)
All respondents	5	37,700
Private	5	32,400
Short-term rental (STR)	4	41,800
Lessor / long-term rental	4	41,400
Business-to-Business (B2B)	5	39,500
Business-to-Consumer (B2C)	5	51,300
Vocational (i.e. user other than transport of goods)	5	33,000

Table 1: Van user characteristics used in the TCO model

Based on T&E TCO modelling, electric vans are already cheaper to own than diesel in the UK:

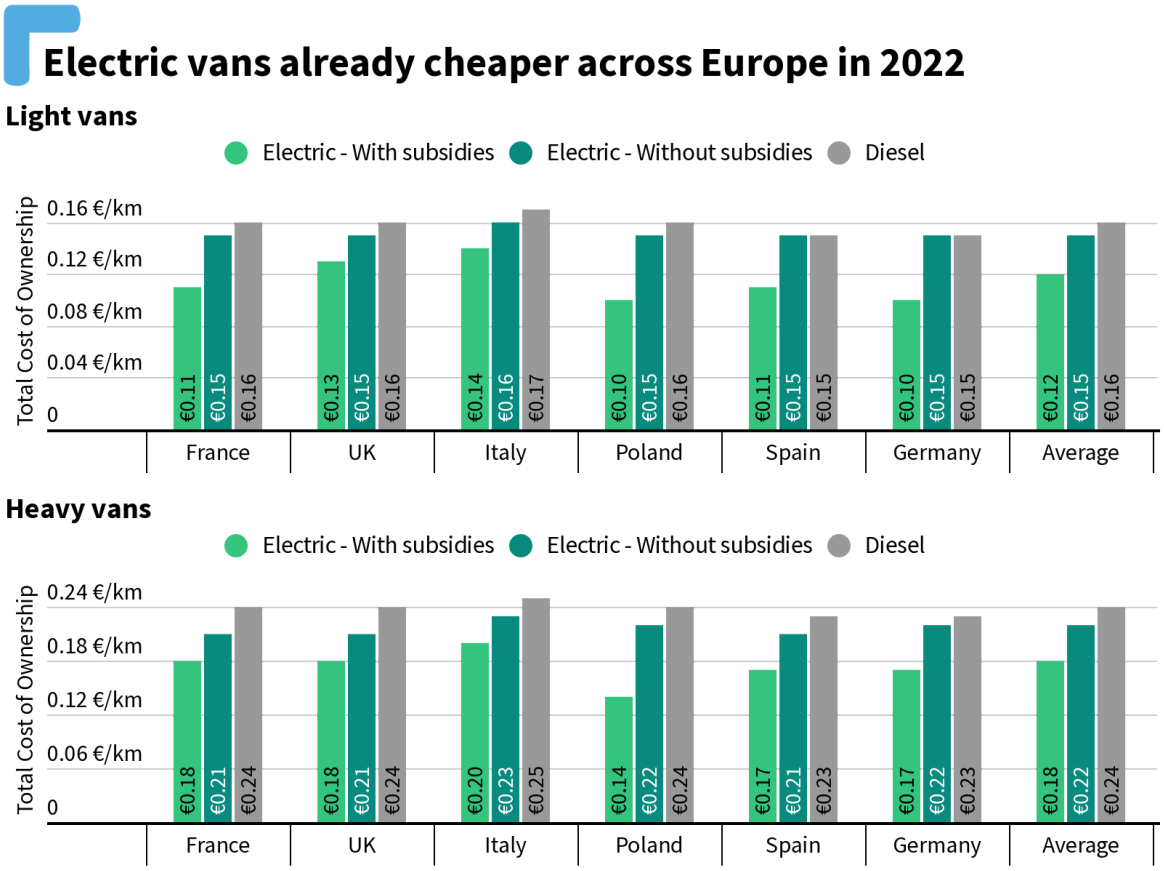
- For both light and heavy models
- For all average users (i.e. average ownership years, average mileage)
- Both with and without subsidies.

[1] This is because there are too few respondents of each user category in each group, so the results would not be reliable statistically speaking.



Notes: Average TCO in 2022. Assuming 4 years ownership for short-term rental services and lessees, and 5 years for other user groups. Includes all taxes and subsidies.

Figure 6: TCO of electric and diesel vans in the UK in 2022



Source: Assuming 4 years ownership for short-term rental services and lessees, and 5 years for other user groups.

Figure 7: Average TCO of electric and diesel vans in all six countries considered in 2022

4. Impacts of higher van CO_2 targets

What adopting T&E targets rather than the EC proposal would mean for the UK [and the EU]:

- E-vans: 0.6 million e-vans missing on UK roads by 2030 [2.4 million]
- TCO savings: 4.4 billion euros or 2.9 billion £ from 2025–2030 [13.1 billion euros]
- Oil savings: 26 million barrels of diesel saved in 2025–2030 [101]
- Emissions savings: 3.4 $MtCO_2$ saved in 2030, 11.1 $MtCO_2$ saved in 2025–2030 [2030: 12.8 $MtCO_2$, 2025–2030: 42.3 $MtCO_2$]

The figure below shows the impact of opting for the EC proposal instead of the T&E targets.

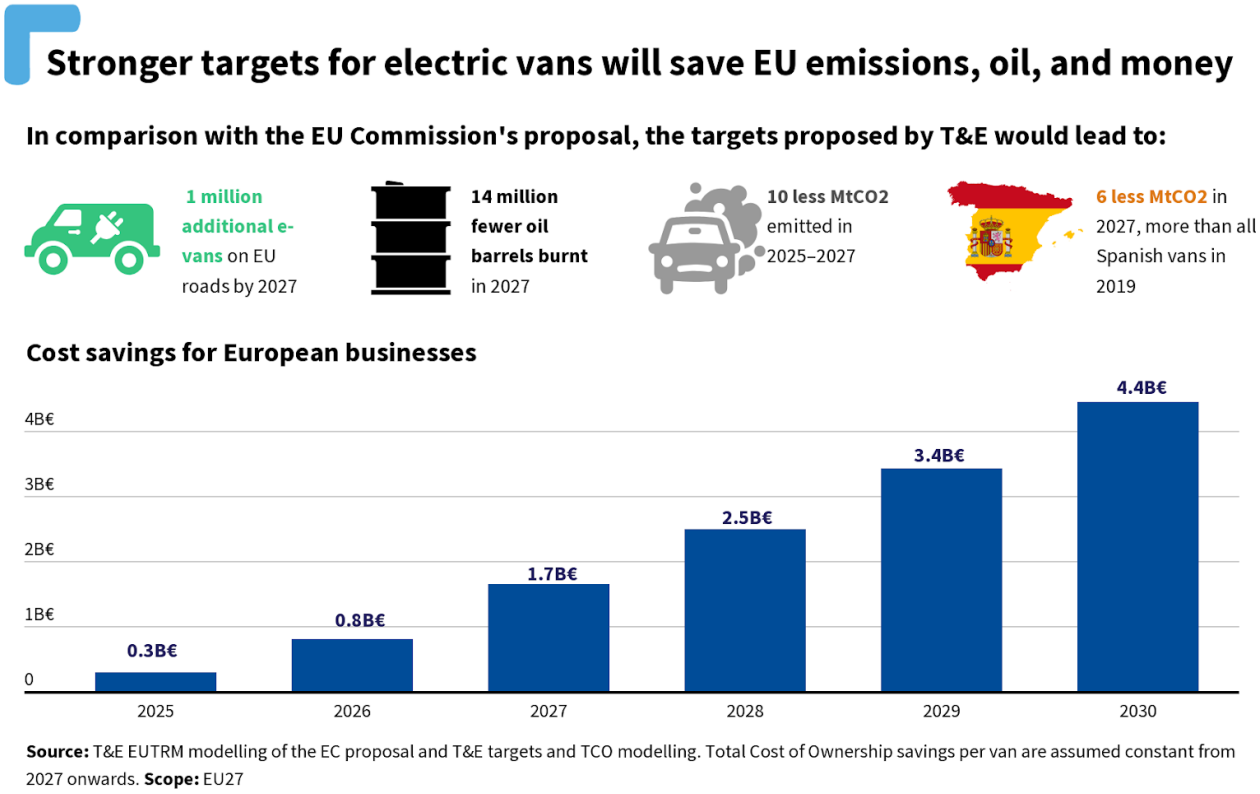


Figure 8: Cost, emissions, and oil savings in the EU from adopting T&E's recommended targets instead of the Commission's proposed targets