

How do drivers of electric vehicles travel when they are no longer allowed to drive in the bus lane?

TØI Report 2064/2024 • Authors: Gøril Louise Andreassen, Alice Ciccone, Askill Harkjerr Halse, Christian Weber
• Oslo 2024 • 65 pages

The main findings are:

1. A 2 percentage point reduction in car usage, meaning that most kilometer travelled are still made by car (61%).
2. Less driving by electric vehicle drivers occurs during rush hours.
3. A decrease in electric vehicles driving on roads with public transport lanes during rush hours.

What is due to the closure of the public transport area and what is due to seasonal effects or other factors cannot be isolated when we do a before and after analysis.

4. 11% of EV drivers say they changed their travel habits after the public transport lane closed, compared to 4% of ICEV drivers.
5. 55 % of EV drivers say they experience more queues after the public transport lane closed.

The Norwegian Public Roads Administration banned electric vehicles in public transport lanes on national and European highways in Oslo and Akershus starting May 6, 2024. We are examining how electric vehicle drivers in the greater Oslo area are adapting to this ban.

We use detailed travel habits data collected with the app "Spor". The advantage of such data collection is that we can study transport habits without the participants having to remember all their trips, and it requires minimal effort from the respondents. The data covers daily trips from April 9 to November 1. We look at two time periods: in the short term from April until the school holiday starts at the end of June, and in the slightly longer term from the end of the school holiday in August until October 2024. The sample is recruited from a representative population sample and consists of people who drive a car at least two weekdays a week. For the period from April to June, we have a sample of 1,093 electric vehicle drivers and 842 combustion vehicle drivers. For the fall, the sample is smaller, ranging from 220 to 341 electric vehicle drivers and 191-276 combustion vehicle drivers. In addition to the travel habits data, we have two surveys, one in April and one in July.



We investigate how electric vehicle drivers travel after the public transport lane closure compared to before. In the report, we analyze the share of travel distance by car, the proportion of trips taking place during rush hours, and the number of meters driven on roads with public transport lanes. We compare each outcome (e.g., share of kilometers driven by car) per day for each individual before and after the closure and present the average change in outcomes for the entire sample.

There are several unexplored possibilities with this data: We can identify route choices (e.g. to and from work) and examine changes after the closure of the public transport lanes. It is also possible to measure whether driving in densely populated areas increases. Speeds on roads with public transport lanes can be examined. It is also relevant to look at which subgroups of electric car drivers adapt the most, such as those who state that they drive to work, those with flexible working hours and those who report changed travel habits after public transport lane closures. We can also examine how public transport lane closures affect car ownership and car use in the longer term, for instance 1-2 years.