

THE SMARTER ROUTE TOWARDS OIL INDEPENDENCE

Effective and affordable alternatives to fuel tax cuts

Briefing May 2022

CleanCities



**Cycling
Industries
Europe**



EUROPEAN CYCLISTS' FEDERATION

Executive Summary

The war in Ukraine has dramatically highlighted Europe's dependence on fossil fuel imports and has driven fuel prices to the highest level in a decade. In reaction to this price spike, many European governments adopted **fuel tax cuts** (price reductions at the pump) to soften the impacts on citizens. 18 out of the 27 EU governments have taken such measures, at a **total cost of almost €16 billion** that could rise even further if these policies are prolonged or kept permanently.

These additional subsidies for fossil fuels, however, are **not the right policy**, as they are expensive to taxpayers and also increase fuel consumption. In addition they are socially skewed towards (richer) car drivers, and by increasing fuel consumption, they harm the climate and create toxic air pollution. **Better alternatives exist** and should be implemented instead to help citizens while rapidly reducing the continent's reliance on fossil fuels and making it more difficult for Russia to finance the war with oil income. This briefing shows that **at equivalent costs to taxpayers**, EU governments can provide the following alternative support to citizens - with a focus on clean transport.

The main findings are:

- **Up to 194 million bikes** could be sold at the **reduced VAT rate**, which means the equivalent of the combined population of France, Germany, Ireland and Poland could benefit.
- **Up to 302 million public transport passes** could be distributed, which means 2 in 3 EU citizens could ride for free for one month.
- **Up to 2.2 billion car sharing trips** could be provided, equalling 23 trips for every EU citizen at risk of poverty or social exclusion.
- **Up to 5.3 billion free rides on shared bikes** can be funded, equalling 56 free rides for every EU citizen at risk of poverty or social exclusion.

Governments and cities should **reverse fuel tax cuts or replace them** with these alternative offers, and **adopt complementary policies** to curb oil demand such as car-free days, teleworking and new infrastructure for active mobility. In parallel, the **EU should adopt a strategy to support member states** seeking to deal with high fuel prices.

1. Introduction: Why fuel tax cuts for drivers are the wrong response

The war in Ukraine has dramatically highlighted Europe's dependence on fossil fuel imports. In particular the uncomfortable truth is that more than a quarter of the EU's crude oil is supplied by Russia.¹

Perhaps unsurprisingly, the crisis has triggered an intense debate on strengthening the bloc's energy security, one of the direct impacts of which has been a very stark increase in the price of diesel and petrol. Since late 2021, prices have increased due to strong oil demand driven by the post pandemic economic recovery combined with a weak supply due to restraints on oil production by the Organization of the Petroleum Exporting Countries (OPEC). With Russia's invasion of Ukraine further disrupting the oil market, prices have surged even more.

This disruption is particularly acute in the European Union (EU) given its strong dependence on oil and gas imports from Russia and that some EU regions are directly connected to Russian crude oil by pipeline.² In real terms, prices at the pump in most EU countries are at their highest level since 2012 when oil reached \$130 a barrel (in real terms).³ Combined with record high gas and electricity prices, Europeans are feeling the pinch of high energy prices and European Member States are seeking means to reduce the financial burden on their citizens.

Fuel tax cuts worth almost €16 billion have been the main response soften the blow of spiking fuel prices in Europe

Despite the dual challenges of high prices at the pump and an urgent need to reduce oil dependence, many EU Member States have focused on the former to the detriment of the latter. According to Transport & Environment's [fuel duty tracker](#)⁴, 18 of the 27 EU Member States have temporarily reduced fuel taxes to ease financial hardship on drivers and road transport companies. In most cases, Member States have focused their policy reforms on fuel excise duty, but there are also variations on this model such as reimbursing fuel to a maximum amount (Portugal) and cuts to VAT on fuel (Poland). There are also differences in the magnitude (-0.03 €/L in Croatia to -0.25 €/L in Italy) and duration (1 month in Italy and Slovenia to 12 months in Malta) of the policy change.

¹ Transport & Environment. (2022). How Russian oil flows to Europe. Retrieved May 10th 2022, from [Link](#)

² Transport & Environment. (2022). How Russian oil flows to Europe. Retrieved May 10th 2022, from [Link](#)

³ Transport & Environment. (2022). A dereliction of fuel duty: Europe's €9 billion gift to Putin and the rich. Retrieved April 28th, 2022 from [Link](#)

⁴ Transport & Environment. (2022). A dereliction of fuel duty: Europe's €9 billion gift to Putin and the rich. Retrieved April 28th, 2022 from [Link](#)

Why fuel tax cuts are bad policy

Fuel tax reduction is a policy with adverse impacts on the environment, social equity, and public finances. The main downsides are that fuel tax cuts:⁵

- **Provide funding for Putin's war against Ukraine:** Fuel tax cuts do not curb but increase oil use, which also means more revenues for Russia's government to finance its war against Ukraine.
- **Are expensive and unfair:** Blanket fuel price discounts are not targeted towards groups that are vulnerable and unable to rapidly reduce their dependence on oil. On the contrary, only motorists will benefit, and in particular wealthier ones as they drive more and with larger, more polluting vehicles. The richest motorists will receive eight times more public money than the poorest, on average.⁶ But the costs of fuel tax cuts are borne by state budgets and hence all taxpayers. If extended they'll cost €52 billion by the end of 2022.⁷
- **Won't reduce high prices:** Oil companies will likely respond to the tax cuts by adjusting prices to increase their profits in a market that is dominated by a small number of large companies with significant market power.
- **Fail to reduce oil dependence, greenhouse gases and air pollution:** Fuel tax cuts subsidise burning fossil fuels that drive the climate emergency and generate air pollution.⁸ The fuel tax cuts announced to date have already caused 3.3 mega tonnes of oil equivalent (Mtoe) of additional oil consumption.⁹ This comes at high social costs as the price of road transport fuel does not cover the amount of damage it causes, with major oil companies having paid back only 5% of the €13 trillion in health and environmental costs they are historically responsible for.¹⁰

⁵ For details, see Transport & Environment. (2022). A dereliction of fuel duty: Europe's €9 billion gift to Putin and the rich. Retrieved April 28th, 2022 from [Link](#)

⁶ Transport & Environment. (2022). A dereliction of fuel duty: Europe's €9 billion gift to Putin and the rich. Retrieved April 28th, 2022 from [Link](#)

⁷ Transport & Environment. (2022). No more Russian oil. Retrieved May 10th, 2022 from [Link](#)

⁸ Elasticity of transport demand with respect to fuel price. European Environmental Agency, [Link](#)

⁹ Transport & Environment. (2022). No more Russian oil. Retrieved May 10th, 2022 from [Link](#)

¹⁰ Profundo. (2022). European Big Oil – Big liability in carbon, pollution and health care costs. Retrieved May 2nd, 2022 from [Link](#)

2. What better alternatives look like

Instead of subsidising fuel consumption that comes with the aforementioned problems, governments should make better alternative solutions available that help citizens cope with the current energy crisis. One way of doing this would be to provide targeted income support, preferably a monthly cash allowance, to low and middle income families.

If governments provide help specifically in the transport sector, sensible alternatives must address the aforementioned shortcomings of fuel tax cuts and fulfil the following criteria in order to alleviate the consequences of the current energy crisis and reduce oil dependence. They must:

- **Rapidly reduce oil demand to cut funding for Putin's war,**
- **Provide effective support to citizens while making efficient use of public funds,**
- **Be socially fair,**
- **Generate co-benefits for the climate, public health and well-being.**

In this briefing, we look at alternatives to fuel tax cuts that fulfil these criteria and then quantify how many of those could be funded for equivalent amounts of public funding. Table 1 provides an overview of the measures that have been selected based on the International Energy Agency's (IEA) recent '10-Point Plan to Cut Oil Use'¹¹, Greenpeace Germany's analysis of ten measures to make Germany more independent from Russian oil imports¹² as well as upcoming research by the Clean Cities Campaign. Table 2 shows to what extent each of the measures fulfils the criteria listed above.

The tables focus on measures targeting urban populations as distances travelled in cities are smaller - with 50% of all trips shorter than 5 km¹³ - and alternatives to private cars more widely available, which also means that reductions in oil consumption can be achieved more rapidly. However, it must also be noted that cycling, public transport, car sharing and micro mobility options can offer attractive alternatives in many sub-urban and even rural areas, especially given the rise in app-based mobility services and electric bikes that allow people to cycle over larger distances.

¹¹ International Energy Agency. (2022). A 10-Point Plan to Cut Oil Use. Retrieved May 2nd, 2022 from [Link](#)

¹² Greenpeace Germany. (2022). Kein Öl für Krieg. 10 Maßnahmen, wie Deutschland schnell unabhängiger von russischem Öl wird. Retrieved April 25th, 2022 from [Link](#)

¹³ World Health Organization. (undated). Physical activity. Retrieved May 2nd, 2022 from [Link](#)

Table 1: Selected alternatives to fuel tax cuts

Measure	Definition of the intervention	Explanation
Bike purchase premium	Consumers are granted a 25% reduction on the gross purchase price of a bike or electric bike (pedelec)	Cycling holds a strong potential to rapidly reduce car travel and oil demand. Over 30% of car journeys in Europe cover distances of less than 3 km and 50% cover less than 5 km – distances that can be covered within 15–20 minutes by bicycle. ¹⁴ Similar purchase incentives have been introduced during the Covid-19 pandemic, for example in Italy, Greece, Hungary, Lithuania or Cyprus. ¹⁵ Surveys carried out after the introduction of earlier purchase incentive schemes for electric bicycles in France ¹⁶ and in Sweden ¹⁷ have shown that trips with e-bikes bought through these schemes replace car trips in 50-60% of cases.
Bike VAT reduction	The valued added tax (VAT) rate on bikes or electric bikes purchased is reduced from the standard to the reduced rate in the respective Member State	VAT reductions are a simple alternative to bike purchase incentives and can help to make bikes, and especially electric bikes, more affordable. Since April 2022 the revised EU VAT Rates Directive allows Member States to apply a reduced rate to the purchase, repair and hire of both bikes and electric bikes. ¹⁸
Subsidies for rides with shared bikes	Free 15-minutes trips with shared bikes	Bike sharing provides inclusive and affordable access to cycling for everyone, including as a last-mile addition to public transport, completing the sustainable mobility chain. It helps cities move away from private car use, which improves public health and air quality, and reduces CO ₂ emissions, congestion and noise. The societal benefits of cycling far outweigh the costs: They have been estimated at €2.67 for every shared bike trip of 3km because cyclists are healthier, create less pollution and reduce traffic jams. ¹⁹

¹⁴ World Health Organization. (undated). Physical activity. Retrieved May 2nd, 2022 from [Link](#)

¹⁵ European Cyclists' Federation. (2020). Money for bikes: financial incentives give cycling in Europe a boost during COVID recovery. Retrieved May 4th, 2022 from [Link](#)

¹⁶ Razemon, Olivier (2017). Le profil très CSP+ des acquéreurs de vélo à assistance électrique. Retrieved May 3rd, 2022 from [Link](#)

¹⁷ Naturvårdsverket. (2019). Elcykling – vem, hur och varför? En utvärdering med elfordonspremien som utgångspunkt. Retrieved May 3rd, 2022 from [Link](#)

¹⁸ Council Directive (EU) 2022/542 of 5 April 2022 amending Directives 2006/112/EC and (EU) 2020/285 as regards rates of value added tax, retrieved on May 4th, 2022 from [Link](#)

¹⁹ Donkey Republic. (2020). Every ride counts. Retrieved on May 3rd 2022 from [Link](#)

<p>Free public transport passes</p>	<p>Citizens receive a free (or much cheaper) monthly public transport pass for their respective city or region</p>	<p>Public transport is more fuel efficient than private car travel and has spare capacity as the current level of ridership compared to pre-COVID levels is around 60-70% in many European cities.²⁰ Trials have shown that free public transport triggers an increase in demand, at least in the short term. This has been observed, for example, in Dunkirk, France after the launch of free public buses, which resulted in 50% more users, 48% of whom used the buses instead of their private cars.²¹ Reduced rate public transport passes sold at €9 per month in Germany show that temporary fare reductions are complex to implement. The provision of temporary free passes is an easier alternative given the emergency of the current war context given the urgency of the current war context.²²</p>
<p>Car sharing credit</p>	<p>Citizens receive car sharing credit for 1-hour rides of up to 10km</p>	<p>Car sharing is more fuel efficient than private car travel. Users make more conscious decisions and have been found to reduce their vehicle travel by 30-60%.²³ Moreover, shared car fleets are usually more modern, smaller and more often electrified than private car fleets.²⁴</p>
<p>Micro mobility credit</p>	<p>Citizens receive e-scooter credit for 15-minute rides</p>	<p>Electric scooters can provide a viable alternative to car trips on shorter distances. The introduction of e-scooters in Bournemouth and Poole in the UK led to a reduction in car use, with feedback from users showing that 33% of e-scooter journeys replaced road transport journeys.²⁵</p>

²⁰ Lozzi et al. (2022). Relaunching transport and tourism in the EU after COVID-19 – Part VI: Public Transport. Retrieved March 9th, 2022 from [Link](#)

²¹ El Kaladi, I. (2017, November 19). A Dunkerque, c'est l'heure du bilan pour les bus gratuits. Franceinfo. Retrieved from <https://france3-regions.francetvinfo.fr/hauts-de-france/nord-0/dunkerque/dunkerque-c-est-heure-du-bilan-bus-gratuits-1368725.html>

²² Kamann, M. (2022, April 27). Neun-Euro-Ticket? Jetzt wächst die Angst vor „Überlastung des Systems bis Stillstand“. Die Welt. Retrieved from [Link](#).

²³ Littman, T. (2022). Win-Win Transportation Emission Reduction Strategies. Retrieved March 9th, 2022 from [Link](#)

²⁴ Capgemini invent. (2020). The sustainability impact of car sharing. Retrieved May 2nd, 2022, from [Link](#)

²⁵ Ellis, P. (2022). Micro-mobility: The unexpected player in delivering modal shift?. Retrieved March 9th, 2022 from <https://www.intelligenttransport.com/transport-articles/132937/micro-mobility-modal-shift-beryl/>

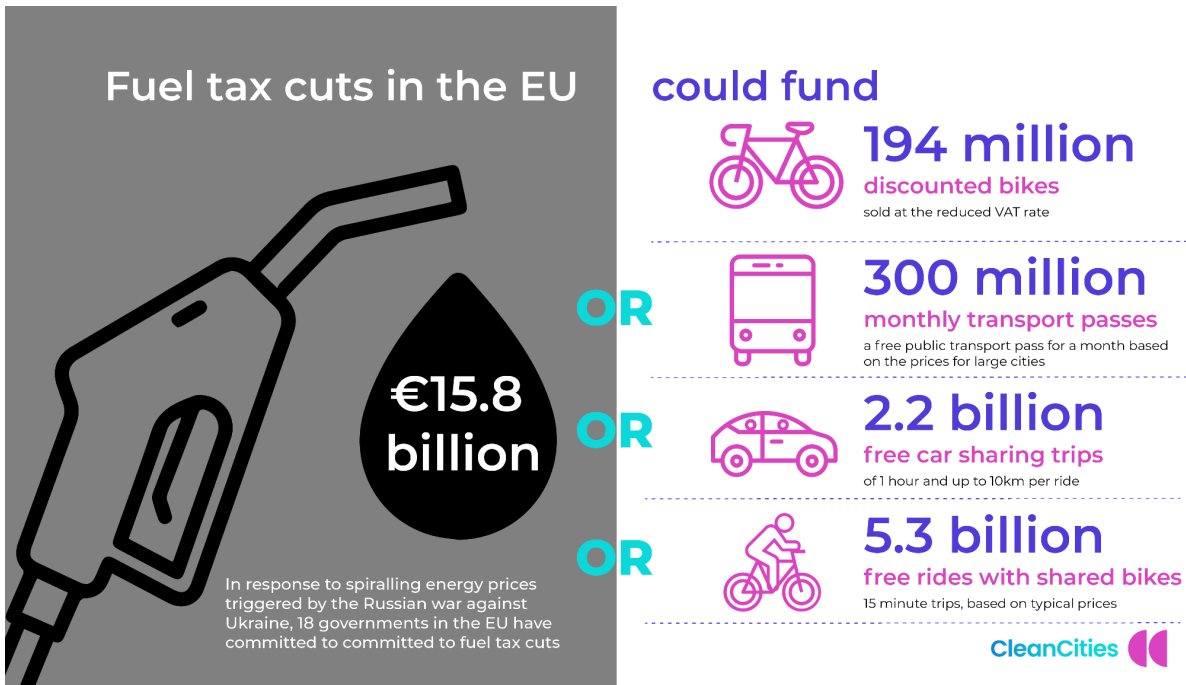
Table 2: Overview and qualitative assessment of alternatives to fuel tax cuts

Legend: +++ = very strongly fulfils the criterion, ++ = strongly fulfils the criterion, + = fulfils the criterion, - = counterproductive for this goal

	Rapidly reduces oil demand	Effectively supports citizens	Socially fair	Co-benefits the climate, health & well-being	Overall assessment
Fuel tax cuts	-	-	-	-	-
Bike purchase premia	++	++	++	+++	++
VAT reduction on bikes	++	+++	++	+++	+++
Free rides with shared bikes	++	+	++	+++	++
Temporarily free public transport passes	++	++	+++	++	++
Car sharing credit	+	++	++	++	++
Micro-mobility credit	+	++	++	++	++

3. Better alternatives can be provided at the same cost

Using data on the estimated costs of fuel tax subsidies and the prices of the alternatives listed in section 2, the number of alternatives that can be made available to citizens at equivalent costs has been calculated. The results indicate the maximum volume of each alternative assuming that the total amount is used for that. The methodology and data sources are explained in the annex. Figure 2 summarises the result



The main observations are:

- For the cost of the current measures that only benefit car drivers, **a variety of more efficient, fair and sustainable solutions could be funded.**
- A **large share of the national and European population could benefit** from these measures.
- The number of people that can benefit from the different alternatives **varies strongly**. For example, 43% of the EU population could purchase a bike at the reduced VAT rate, 68% could be given a free public transport pass for a month or every EU citizen could be granted 4 free car sharing trips.
- If these measures focus **on citizens at risk of poverty or social exclusion²⁶**, the benefits per capita would be considerably higher: For example, each of these 95 million EU citizens could receive 23 free car-sharing trips or 56 free rides with shared bikes.
- These **measures can also be combined with each other** to give citizens a wide range of choices. As table 2 shows, the degree to which different measures fulfil the criteria for successful alternatives varies and governments should take that into account when designing their policies.

²⁶ Ca. 95 million EU citizens are at risk of poverty or social exclusion, see Eurostat. (2022). Persons at risk of poverty or social exclusion by age and sex. Retrieved May 18th, 2022 from [Link](#)

Country	Cost of fuel tax cuts (EUR)	Population size	Duration of policy (months)	Number of bikes with price discount (25%)	Number of bikes at reduced VAT rate	Number of rides with shared bikes (15 min)	Number of free public transport passes (monthly)	Number of free car sharing trips (1h, 10km)	Number of free e-scooter trips (15 min)
Austria	No fuel tax cuts								
Belgium	503.000.000	11.566.041	3	2.000.000	4.100.000	168.000.000	9.400.000	88.000.000	126.000.000
Bulgaria	No fuel tax cuts								
Croatia	40.000.000	4.036.355	3	600.000	900.000	13.000.000	1.100.000	5.000.000	27.000.000
Cyprus	14.000.000	896.005	2,5	200.000	400.000	5.000.000	300.000	2.000.000	4.000.000
Czechia	178.000.000	10.701.777	4	2.000.000	5.500.000	59.000.000	7.900.000	21.000.000	63.000.000
Denmark	No fuel tax cuts								
Estonia	No fuel tax cuts								
Finland	No fuel tax cuts								
France	2.833.000.000	67.439.599	4	15.800.000	32.700.000	944.000.000	46.900.000	378.000.000	659.000.000
Germany	3.618.000.000	83.155.031	3	11.300.000	28.100.000	1.206.000.000	40.300.000	584.000.000	942.000.000
Greece	115.000.000	10.682.547	3	2.300.000	3.900.000	38.000.000	3.000.000	13.000.000	32.000.000
Hungary	122.000.000	9.730.772	4	1.500.000	2.200.000	41.000.000	6.000.000	10.000.000	44.000.000

Ireland	410.000.000	5.006.907	5,5	6.300.000	13.700.000	137.000.000	5.000.000	41.000.000	115.000.000
Italy	2.667.000.000	59.257.566	3	17.600.000	29.900.000	889.000.000	65.200.000	360.000.000	693.000.000
Latvia	No fuel tax cuts								
Lithuania	No fuel tax cuts								
Luxembourg	62.000.000	634.730	3,6	400.000	800.000	21.000.000	*	7.000.000	17.000.000
Malta	54.000.000	516.100	12	900.000	2.000.000	18.000.000	2.100.000	7.000.000	16.000.000
Netherlands	1.525.000.000	17.475.415	9	4.100.000	10.300.000	508.000.000	15.300.000	162.000.000	428.000.000
Poland	1.397.000.000	37.840.001	6	12.100.000	24.800.000	466.000.000	51.900.000	329.000.000	467.000.000
Portugal	480.000.000	10.298.252	3,5	6.900.000	12.500.000	160.000.000	12.000.000	26.000.000	133.000.000
Romania	No fuel tax cuts								
Slovakia	No fuel tax cuts								
Slovenia	11.000.000	2.108.977	1	100.000	400.000	4.000.000	300.000	2.000.000	3.000.000
Spain	1.487.000.000	47.394.223	3	6.900.000	19.100.000	496.000.000	32.800.000	146.000.000	372.000.000
Sweden	300.000.000	10.379.295	4	1.800.000	2.900.000	100.000.000	3.200.000	32.000.000	66.000.000
EU-27 total	15.820.000.000	447.007.596	-	93.000.000	194.000.000	5.272.000.000	302.000.000	2.212.000.000	4.207.000.000

Amounts rounded. * Public transport in Luxembourg can be used for free.

4. Conclusions & policy recommendations

The above calculations show that instead of a costly, environmentally harmful and unfair one-off fossil fuel subsidy that maintains the EU's dangerous dependence on imported oil, governments could boost alternatives that reduce oil demand, make efficient use of taxpayers' money, are socially fairer and provide environmental and health benefits.

The following policy changes are therefore required:

- **Governments must reverse the fuel tax cuts.**
- **Instead, cities and governments should introduce alternative mobility support measures** such as incentives for the purchase of bikes and e-bikes, the use of car-sharing and public transport as well as e-scooters and bike sharing.
- **Vulnerable groups must be the primary targets**, namely low-income households or low-income commuters in order to alleviate the consequences of energy poverty.
- **These policies must be combined with other measures to curb oil demand** such as the measures recommended by the International Energy Agency, including car-free days, teleworking, new infrastructure for walking and cycling as well as speed limits.²⁷
- **The EU should adopt a strategy to support member states seeking to deal with high fuel prices.** This should include guidance on how to best find sustainable alternatives to fuel tax cuts ; and guidance on how to tax the excess profits of oil companies.

²⁷ International Energy Agency. (2022). A 10-Point Plan to Cut Oil Use. Retrieved May 2nd, 2022 from <https://iea.blob.core.windows.net/assets/c5043064-58b7-4066-b1e9-68d7d9203fe9/A10-PointPlanToCutOilUse.pdf>

5. Annex: Methodology and data sources

Using data on the estimated costs of fuel tax cuts to governments and the prices of the alternative mobility offers listed in section 2, the number of these alternatives that can be made available at equivalent costs to taxpayers has been calculated. The numbers indicate the maximum amount for each alternative assuming that the total amount is used just for this mobility offer.

Data sources

Different data sources have been combined for these calculations. Figure 1 summarises the methodology that has been developed. Table 3 provides an overview of the data sources.

Figure 1: Overview of the methodology

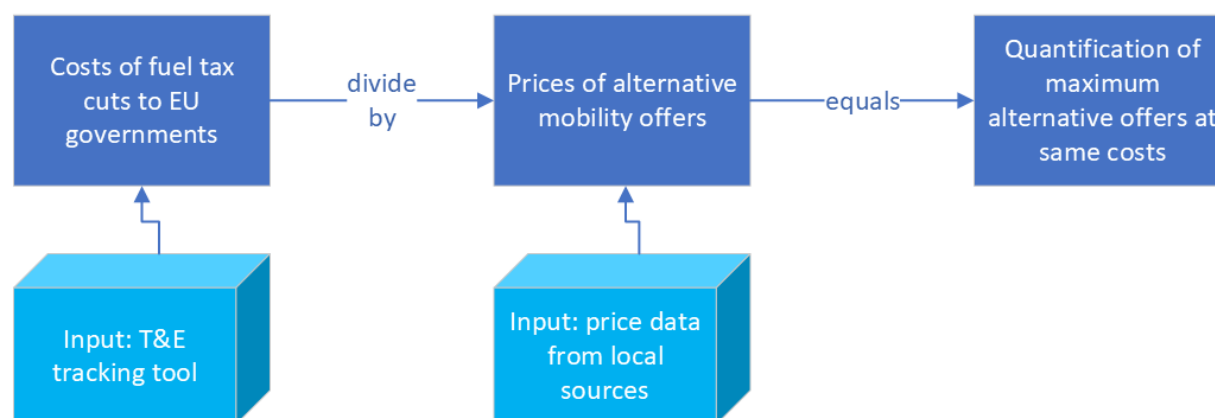


Table 4: Overview of the data sources

Dataset	Source
Costs of fuel mandates	T&E tracking tool
Average price of bikes and e-bikes	CONEBI Bicycle Industry & Market Profile 2021 with 2020 data ²⁸
VAT rates on bikes and e-bikes	CONEBI Bicycle Industry & Market Profile 2021 with 2020 data ²⁹
Costs of monthly public transport passes in selected	CCC City Ranking and Rating , using data sourced locally and verified by the cities. For countries not covered in this analysis, extra research

²⁸ Confederation of the European Bicycle Industry. (2021). CONEBI Bicycle Industry & Market Profile 2021 with 2020 data. Retrieved May 6th, 2022, from [Link](#)

²⁹ Confederation of the European Bicycle Industry. (2021). CONEBI Bicycle Industry & Market Profile 2021 with 2020 data. Retrieved May 6th, 2022, from [Link](#)

cities	on the local prices has been carried out. See the annexes for details.
Costs of car-sharing	CCC research on the costs of the main car sharing providers in selected cities (with a focus on station-based car sharing). See the annexes for details.
Costs of e-scooter rentals	Data provided by micro-mobility operator Voi (a Swedish micromobility company offering e-scooter and e-bike sharing in partnership with towns, cities and local communities) as well as own research on operator websites.
Costs of bike sharing	Data provided by the Cycling Industries Europe Expert Group on Bike Share_(own database) ³⁰
Population data	Eurostat

Assumptions and uncertainties

The results of this analysis provide an estimation of the order of magnitude but should not be understood as a precise calculation. The following uncertainties need to be kept in mind:

- **Costs of fuel duty cuts:** The actual costs will depend on the impact of the policies on the mobility behaviour of consumers and companies (i.e. their price elasticity). The figures provided by T&E's tracking tool provide an estimation using the best available data. In addition, the cost of the fuel duty cuts is calculated based on the currently announced measures. If, as is likely, the measures are extended, then the costs of the fuel duty cuts will grow, as will the potential cost of the alternative policies explored in this briefing.
- **Local data from large cities:** The calculations of the prices of a monthly transport pass and of car sharing services are based on data from the largest cities in each country and from selected operators that are considered representative of the market. Prices can however vary considerably across cities or between cities and the countryside, and these local specificities are not captured by this analysis.
- **Consumer prices instead of wholesale prices:** The consumer prices are used as the basis for the calculations. These do not take into account that governments purchasing large quantities of tickets or credit will probably be able to negotiate more advantageous conditions, which would increase the number of offers that can be made.

³⁰ See <https://cyclingindustries.com/what-we-do/bike-share>

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Find out more

The Clean Cities Campaign is a European coalition of organisations hosted by Transport & Environment. Together, we aim to encourage cities to transition to zero-emission mobility by 2030, pushing European cities to become champions of active, shared and electric mobility for a more liveable and sustainable urban future.

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