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"We need to boost public transport supply and limit car use in order to reduce our emissions by 60% within 10 years"



Submitted by Forum Vies Mobiles on Thu, 10/22/2020 - 09:51

Chapô

Reducing our CO2 emissions by 60% within 10 years, as the European Parliament aims to do, requires an unprecedented modal shift. Jean Coldefy discusses the implications of such a goal, which requires boosting public transport supply and limiting car use. Funding such a program implies a revolution in mobility pricing. Do politicians realize this and how will they get citizens on board?

Présentation longue

In order to limit global warming to 1.5 degrees Celsius within 10 years, we need to reduce our CO2 emissions by 60%, which is the new target recently set by the European Parliament. Transport is the main source of emissions in France. Cars account for half and of these emissions with trips performed to access urban areas making up the largest share. Over the past 20 years, metropolitan economic dynamics, the decline of industry in other territories and the threefold increase in real estate prices in large cities have created a disjuncture between jobs and housing. The supply of TER's (local regional trains) has unfortunately not kept up with this territorial dynamic, and with scattered urban planning, this has greatly favored the use of cars to access urban jobs. This traffic accounts for half of urban mobility emissions, and while trips within urban centers represent only 2% of the total, the rest is made up of trips within the inner suburbs and periurban areas.

<div class="logo logo-mobile"> [1]</sup> We will need to analyze in the long term what lasting impact Covid-19 has on the frequency and distance of our movements.

History shows that the distances covered in France have been stable for 20 years: 45 km/day/person. If electric cars can only reduce emissions by 20% within 10 years and

<div class="logo logo-mobile"> 2</sup>) and GDP / hab (J Coldefy)

Modal shift at the heart of the strategy to decarbonize mobility

- Developing links between peripheries/cities

A modal shift will therefore be the heart of the energy transition. During the next decade, we must focus our efforts on the links between peripheries and employment zones in cities, and not just city centers.

Will promoting cycling be enough? Cycling ticks all the boxes for good urban mobility: it is faster than cars during peak hours, a bicycle occupies up to 3 times less space and doesn't emit GHGs. And it doesn't cost too much public money. Despite these undeniable advantages, cycling has one main flaw: range. The flow of incoming cars into urban areas accounts for 50% of urban emissions, and these trips can hardly be made by bicycle. In Strasbourg, Copenhagen and Amsterdam, model cities for cycling, the share of cycling is up to 10 times higher than in Lyon. On the other hand, in these cities the share of cars is higher than in Lyon where the share of public transport is higher. Cities where cycling is well developed are also those in which you walk the least. In cities, the effectiveness of cycling on a modal shift isn't as clear-cut or as significant as its supporters would like to claim.

It is therefore mainly in the areas beyond the ring-roads of large cities that bicycle paths should be developed for trips of up to 5-10 km (with electric bikes), for which walking is more difficult due to the greater distances. Reducing car use will require a combination of bicycles + public transport, by massively deploying park-and-ride facilities to access buses, trams and subways.

<div class="logo logo-mobile"> [3]</sup>. These tools must also ensure priority is given to public transport at traffic light intersections and there is optimized traffic management.

With this device, citizens will be able to save time and money - up to 10 hours and 200 euros per month - for those who commute 100 km every day.

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Source J. Coldefy

- Deploying alternatives to cars doesn't work without constraints

History shows that without constraints car use doesn't decrease. Electing environmentalists, who make it a priority to fight global warming, will make the implementation of these constraints more likely. Current constraints are sometimes poorly targeted (in city centers) and implemented before the alternatives, which is likely to undermine social and territorial cohesion and reignite a Yellow Jackets crisis. Therefore, these constraints should target three areas:

- The allocation of public space in dense areas and therefore the speed limits for cars;
- Urbanization, in order to densify suburban towns and promote the use of public transport, for example by prohibiting any further urbanization beyond one to two km from a railway station, as Copenhagen did 50 years ago;
- Pricing. The cost of using a car in large urban areas must increase, especially since, with electrification, it will be brought back on a level with public transport: 0.1 euros/km. Without regulation, the use of cars will increase, and soon we'll have traffic jams of clean cars! When urban planning can only manage mobility through cars, which is the case today in our country, it is in dense areas, through pricing, that we must limit their excessive use.

We need a mobility program that is more ambitious than ever before

- Free up resources to finance the decarbonization of mobility

Achieving such a program within 10 years - not 30 - requires additional resources. Given the current taxation levels of individuals and businesses, road pricing seems necessary for accessing large cities, especially considering that the electrification of vehicles will lead to a tax loss for the TICPE (Internal Consumption Tax on Energy Products). This pricing must be implemented once the alternatives are in place, exempting or compensating low-income households, and with a 100% allocation of revenues to a specific mobility program. It should be low (1 to 2 euros/day) and only on working days, excluding school holidays.

In addition, the deployment of ITS tools (Intelligent Transport Systems) such as MaaS will enable the pricing of mobility based on use, with the aim of recovering a revenue expenditure (commercial revenue/operating expenses) of 50% in public transport (as is the case in Lyon and other European countries), thus twice the current ratio of 25%, in order to have investment capacities. There are many options and they need to be assessed according to geographical areas: switching to a pricing based on family income and introducing a pricing based on distance, maintaining a subscription for home/work commutes and remote payments for other trips, modulating according to rush hours (which generate high additional costs in public transport), pricing according to a given mode's quality of service, including speed,

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[^3]: See the work of the Digital Mobility Observatory.

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Mots clés

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