

I4CE

INSTITUTE FOR
CLIMATE
ECONOMICS

11th International Conference on Mobility Challenges

Electric cars, public transport, bicycles ... How accessible are these solutions to households?

Sirine Ousaci

07-02-2025

Institute for Climate Economics (I4CE)

#OurMission

The Institute for Climate Economics (I4CE) is a non-profit research institute whose analyses contribute to the debate on public policies for mitigating and adapting to climate change.

We promote effective, efficient and fair policies. Our 40 experts work with governments, local authorities, the European Union, international financial institutions, civil society organizations and the media. Our work covers three transitions - energy, agriculture, forestry - and six economic challenges: investment, public financing, development financing, financial regulation, carbon pricing and carbon certification.

Access to solutions for all: an essential condition for the transition to happen

- The ecological transition can only be achieved if all households have access to transition solutions - public transport, electric cars, home insulation, heating changes, etc. -
- Work on accessibility of the transition started at the end of 2022:
 - A first report, to be published in October 2023, focusing on **solutions requiring investment by households** (deep energy retrofit and electric mobility) + and an analysis of public aid.
 - A second report, published in October 2024, to extend these analyses, **assess the conditions of access to the transition** for households and continue to challenge public decision-makers on the subject



Where are we now? Is the transition accessible to all households?

- An « Observatory of access conditions to the ecological transition » to:
 - **Document changes** in conditions of access to transition solutions **for low and middle-income households**
 - Identify households that should receive special attention from public policies
 - Challenge public decision-makers on the subject
- Scope: **deep energy retrofit** and **mobility**
- On each sector:
 - 1. An assessment of the economic capacity of households to make investments**
 - How much are the investments?
 - How much aid can households receive?
 - What solutions can households use to finance the out-of-pocket cost?
 - How does their housing and mobility budget evolve after investment?
 - 2. An assessment of other conditions of access to the transition :**
 - Availability of infrastructure (heating networks, bicycle paths, recharging stations, public transport)
 - Skilled jobs to match needs (retrofit tradespeople, retrofit advisors, etc.)
 - Decision-making that does not depend solely on the household (condominiums, rented accommodation).

6 main messages from the Observatory on low-carbon mobility

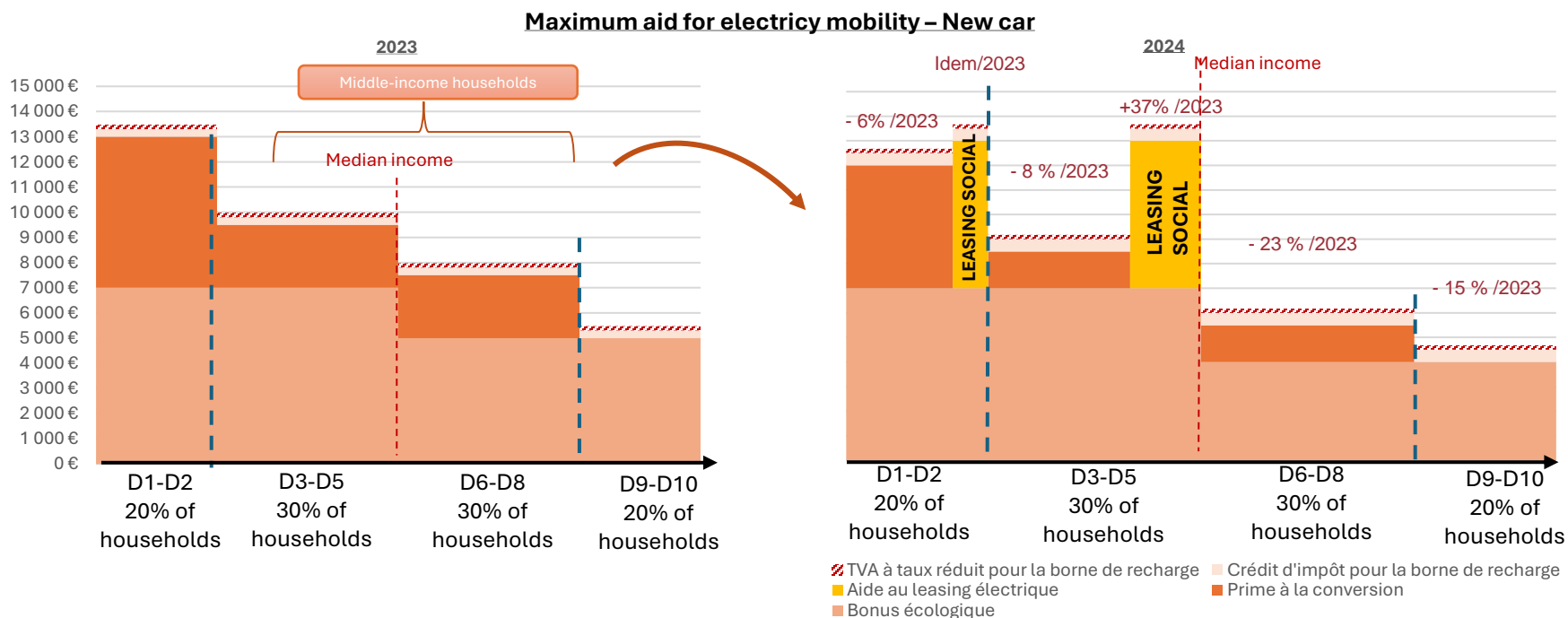
1. The aid for the purchase of an electric car fell between 2023 and 2024 - but the introduction of social leasing has improved access to a vehicle for eligible households
2. The out-of-pocket cost remains high and can be difficult to finance for low- and middle-income households
3. The energy savings achieved are significant and can offset the additional cost compared with a combustion-powered vehicle in certain situations.
4. There are territorial disparities in access to electric mobility
5. The Ile-de-France region is well served by public transport but access to jobs with public transport is heterogeneous in the region
6. Cycling is on the rise and more accessible in large urban areas

1. The aid for the purchase of an electric car fell between 2023 and 2024 - but the introduction of social leasing has improved access to a vehicle for some households



The aid for the purchase of an electric car fell between 2023 and 2024 - but the introduction of social leasing has improved access to a vehicle for eligible households

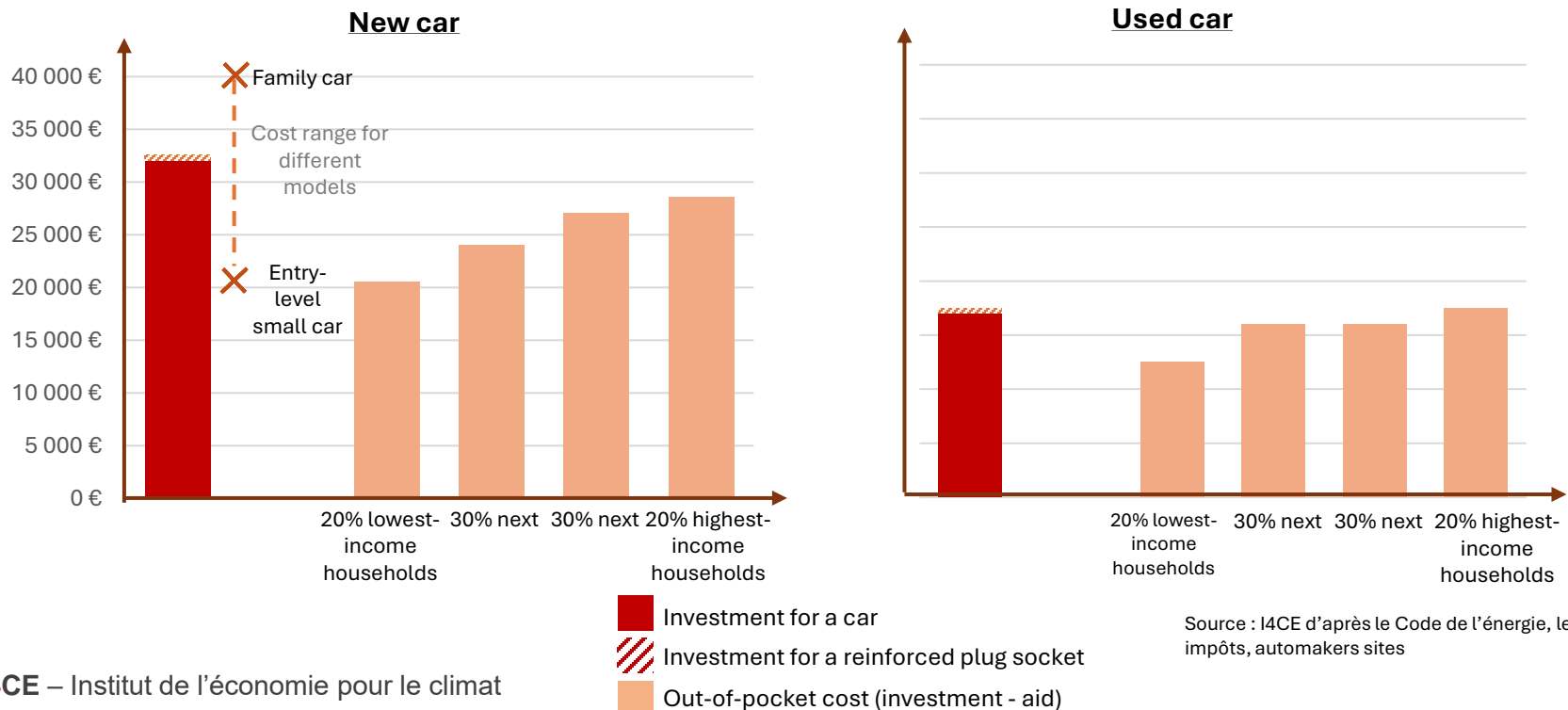
- **Aid schemes** for the purchase of an electric car and a charging point had **globally increased for low- and middle-income households since 2008** and become **more targeted** at these households.
- But the aid amounts **declined between 2023 and 2024** (and **even more in 2025!**) both for new and used cars.
- However, **social leasing**, that benefitted to **50 000 low- and middle-income households in 2024** helped to remove the barrier to investing in electric vehicles for these households



The out-of-pocket cost remains high for low and middle-income households

- The **out-of-pocket cost** for the **purchase of an electric car** is **high**:
 - For a middle-income household : €16 000 for a used standard small car ; more than €24 000 for a new standard small car.
- The **additional cost** compared to a combustion engine equivalent is **between €5 000 and €10 000** for a standard small car.

Additional cost of an electric car and charging point compared to its combustion engine equivalent



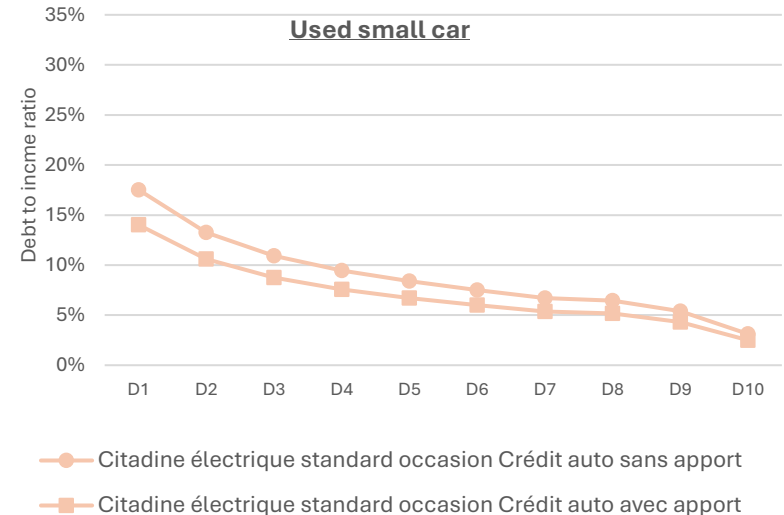
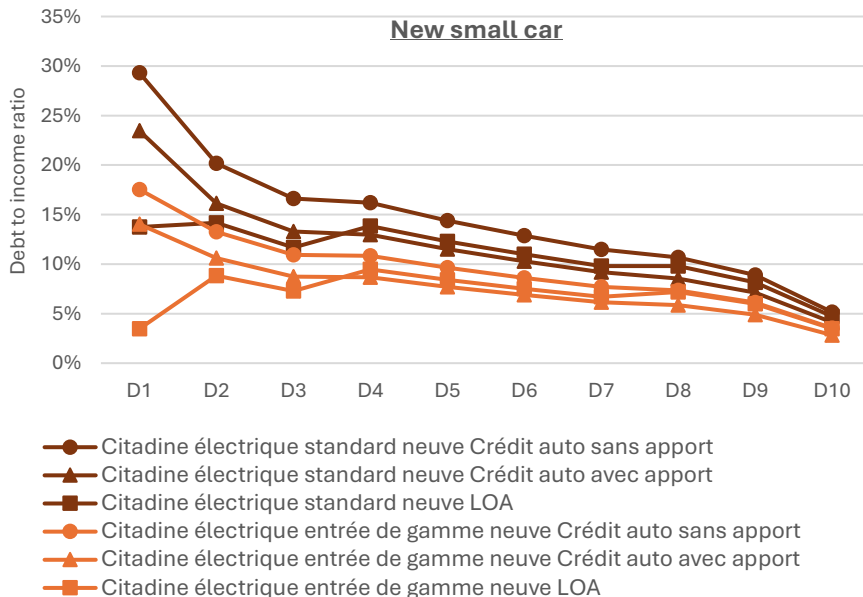
2. The out-of-pocket cost remains high and can be difficult to finance for low- and middle-income households



The out-of-pocket cost can be difficult to finance for some households

- **Different options to finance the out-of-pocket cost** : savings; traditional car loan, leasing contracts etc.
- Financing the purchase of an electric car results in a **high debt load** for **low- and middle-income households**
 - More than **10%** for a new standard small car
 - More than **5%** for an entry-level small car or a used car
- Financing an electric car can be even more difficult for households that are **already indebted**

Debt-to-income ratio for the purchase or lease of an electric car according to the financing option, by living standard decile



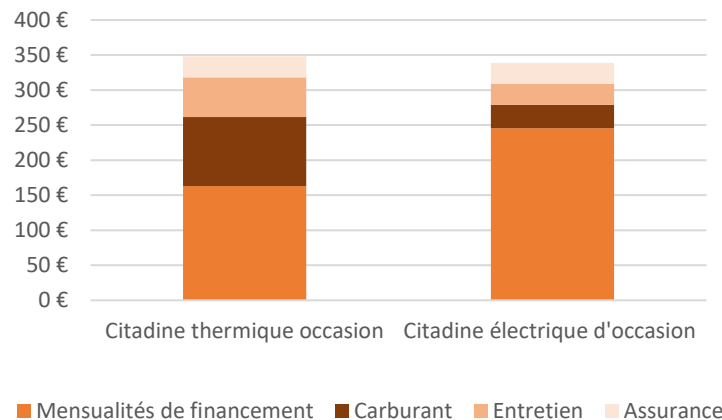
3. The energy savings achieved are significant and can offset the additional cost compared with a combustion-powered vehicle in certain situations



The energy savings achieved are significant and can offset the additional cost compared with a combustion-powered vehicle in certain situations

- **Switching to electric** results in **fuel savings of around €80 per month** for households that drive 10 000 km per year
- For a **used small car** and a **new entry-level small car**, the **financing of the additional cost can be covered by energy savings**, and thus not increase the mobility budget.

Monthly mobility budget for a used car



Assumptions : 10 000 km/year, credit over 6 years, not eligible to the scrappage bonus

- **In certain situations, energy savings are not always sufficient** to cover the financing of an electric car compared to a combustion engine equivalent (e.g. low annual mileage, new standard electric car, when some of the car combustion engine maintenance is handled by the household himself etc).

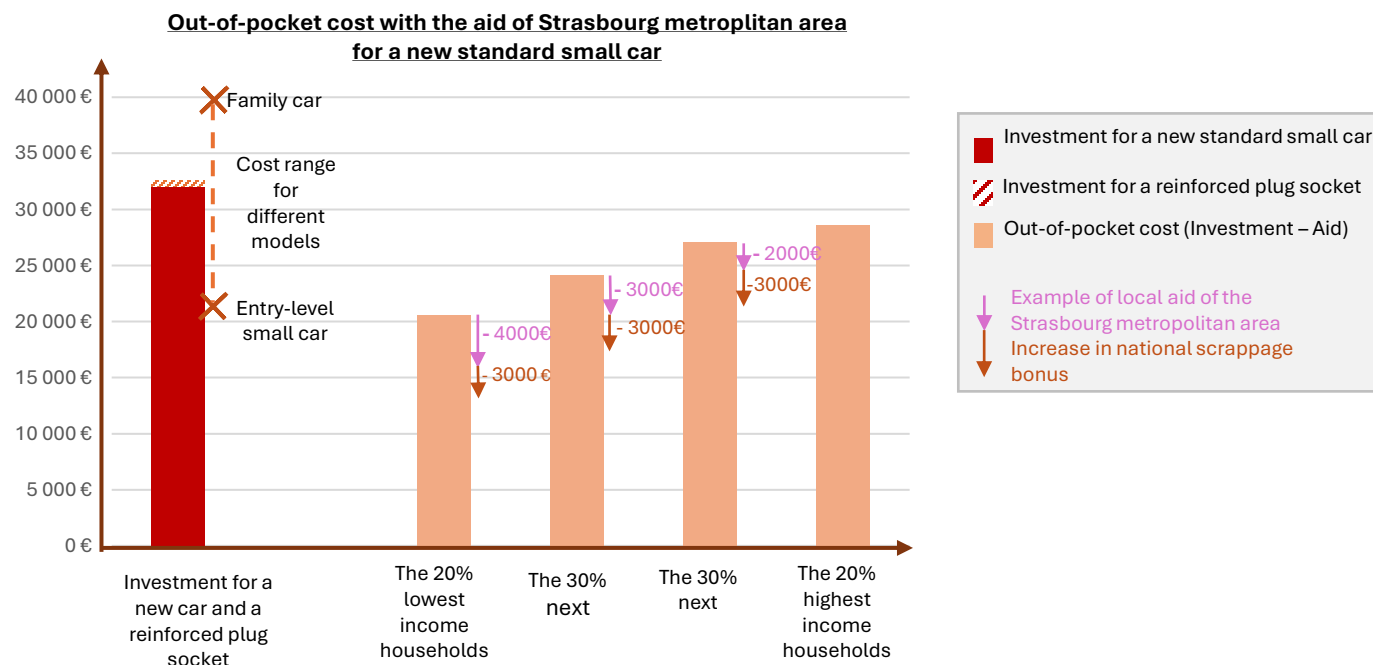
4. There are territorial disparities in access to electric mobility



The aid distributed by certain local authorities can significantly reduce the out-of-pocket cost

- About **half of the metropolitan areas** located in low-emission mobility zones (**ZFE-m**) offer **local scrappage bonuses** ranging from €3 000 to €6 000.
- In 2024, the state increased the national scrappage bonus by €1 000 for households living or working in a ZFE-m, and by up to €3 000 if a local authority offered a similar aid.

Data gaps : no comprehensive overview of local aid schemes (number of local authorities offering mobility aid, number of households concerned, aid amounts, eligibility criteria, or actual recipient).

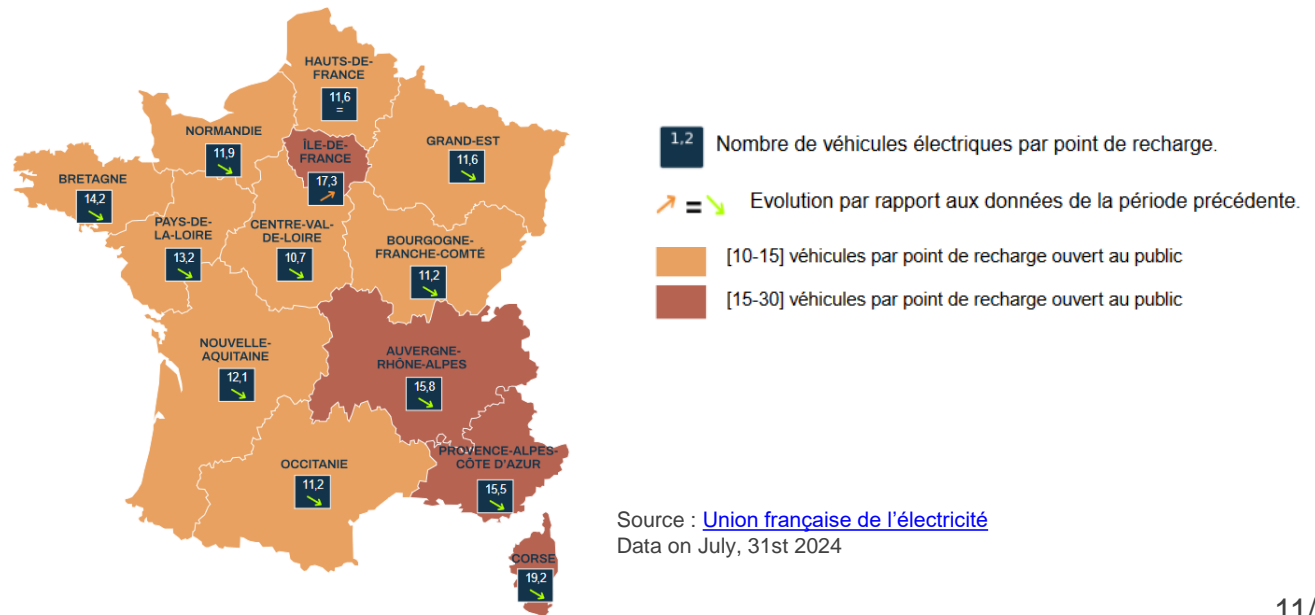


4. There are territorial disparities in access to electric mobility

Access to public charging points depends on location

- The **deployment of accessible public charging points is crucial**, especially for households who cannot install one at home or have long journeys.
- The number of **public charging points** has **risen** but **not as quickly as the number of electric vehicles on the road**.
- The **ratio** between the **number of electric vehicles** and the **number of public charging points varies according to the location**.

Ratio between the number of electric vehicles and the number of public charging points by region

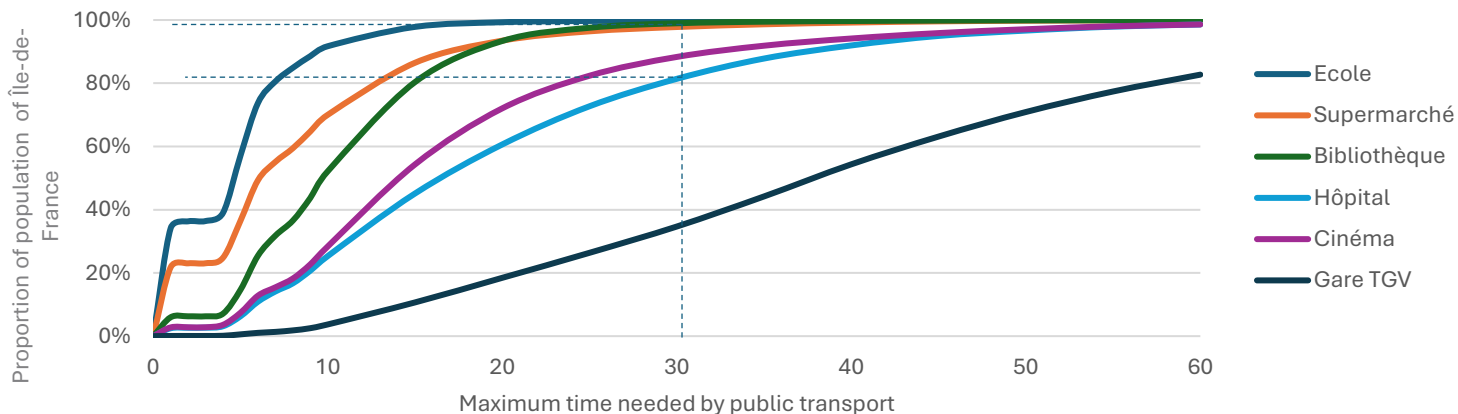




The Ile-de-France region is well served by public transport but a third of residents still have little access to jobs

- The **Ile-de-France region** is **well served** by public transport :
 - Almost all residents live less than 10 minutes on foot from a public transport stop with an average access time of 3 minutes.
 - In 30 minutes by public transport, the vast majority of Ile-de-France residents have access to most of the services
- The assessment of **access to employment areas** is **less positive** :
 - 35% of residents have access to less than 10% of the jobs in the region in one hour of public transport
 - The Grand Paris Express will improve this situation

Time needed to reach a range of points of interest by public transport



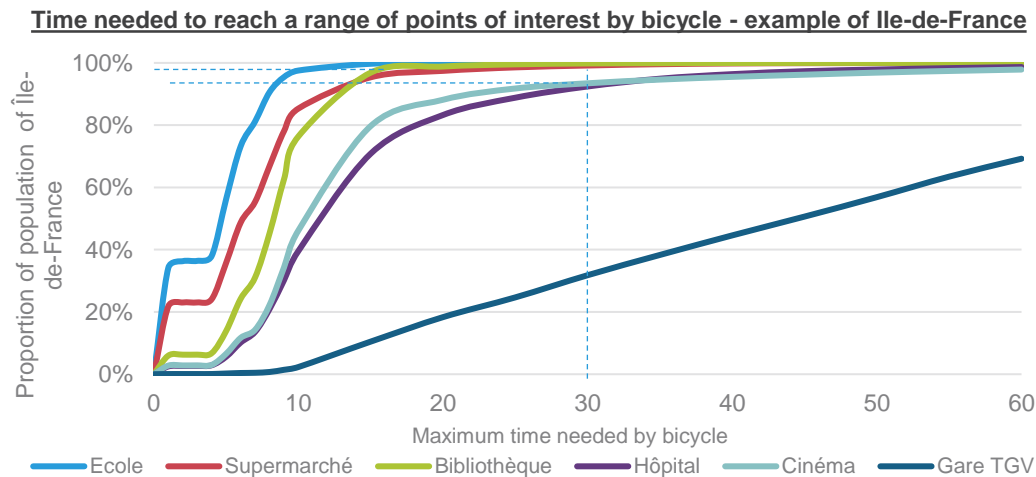
Note :80% of Ile-de-France residents have access to a library within 15 minutes or less by public transport; 45% have access to a hospital within 15 minutes or less.

Source : Modality Data



Cycling is on the rise and more accessible in large urban areas

- Cycling is **on the rise**, but its **modal share remains low**
- The **bicycle ownership** rate **increases with income**
- The **length of cycle paths** is **increasing**, and the **proportion of dedicated lanes** is **higher in large urban centres**.
- **Other conditions** are necessary for the **deployment of cycling** (availability of parking spots, proximity to points of interests).

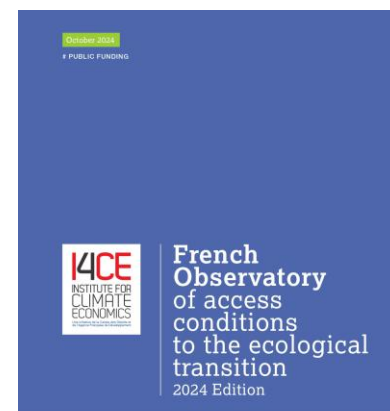


Note: 97% of Ile-de-France residents have access to a library within 15 minutes or less by bicycle; 71% have access to a hospital within 15 minutes or less..
Source : Modality data

Conclusion

- **After rising overall** and being **increasingly targeted at low- and middle-income households**, **subsidies for the purchase** of an **electric car** finally **fell between 2023 and 2024**. However, the introduction of the **social leasing** scheme had helped to make electric car more accessible to modest households.
- The **out-of-pocket cost** for investing in an electric car remains **high**, and the financing solutions available to households often lead to a **high level of debt**.
- Nonetheless, switching to electric means **significant energy savings**, which **can sometimes cover the monthly loan payments**.
- There are **territorial disparities in access to electric mobility** (local aid, public charging points)
- The **Ile-de-France region** is **well served by public transport** but **access to jobs** with public transport is **heterogeneous in the region**
- **Cycling** is **on the rise** and **more accessible in large urban areas**

For more information, read the full report, available in French and in English!





Thank you!
Any questions?

Sirine.Ousaci@i4ce.org