

The Green Parking Index in Stockholm

A trial in Stockholm has been conducted in 2018, associating a Green Parking Index with a public electrical car-sharing service. By offering membership in a car pool, property owners have been able to reduce substantially the cost and number of parking spaces attached to the buildings (green parking index).

Objectives

The goal of the Green Parking Index associated to car sharing and EV is to reduce the amount of space that cars occupy in Stockholm. By reducing the demand for private parking places, this helps to encourage alternative forms of transport.

The objectives of the trial were to:

- A. Reduce traffic volumes
- B. Promote the transition to more energy/emission-efficient transport alternatives
- C. Promote the transition to renewable fuels
- D. Improve traffic flows

Description

As a measure tested in the project Grow Smarter¹, a public electrical car-sharing service has been introduced in Stockholm at Valla torg location. Tenants at Valla torg got free membership access to a car sharing service stationed close to their homes. Other members of the car sharing service also had access to the cars stationed at Valla torg.

The private company Move About has managed the car sharing service. There were two vehicles stationed at Valla torg. All tenants in the buildings that were part of the Grow Smarter project got the membership for free and only pay a fee while using the service.

The car sharing service was launched in February 2018. It has been operational for over one year and it has been frequently used, showing good appreciation among residents.

By reducing the available parking space, this solution made less attractive to own a car, favouring the use of other modes of transportation such as public transports or bike.

Furthermore, EV car pool service was part of the trial. In such a way, it was then easier for people to drop the idea of owning a car because they had the option to share one and use it when they need to.

Impact & outcomes

The tenants and residents at Valla torg shared their experiences of the car sharing service and their travel behaviours in a survey. The survey was executed in June 2019.

¹ <https://grow-smarter.eu/lighthouse-cities/stockholm/>

Since the launch of the car sharing service in February 2018 until 31st March 2019, the vehicles at Valla torg have been used for a total of 43 809 km. Assuming that this distance have been done in an electric car instead of a medium size petrol car, the CO₂ emissions have been reduced by 8 336 kg²⁶. Under the same assumption, the CO₂ emissions per kilometre has been reduced by 90%.

Information about the car sharing service demonstrate that it was spreading, members living in other parts of Sweden have started using the car sharing service at Valla torg when travelling to Stockholm using public transportation. It is likely that access to cars in different parts of Sweden in combination with good public transport between these spots may have reduced long distance travelling by car.

The expected cost for Stockholmshem when producing parking spaces is approximately 400 000 SEK in a garage (more common in new construction) and 75 000 SEK outdoors per spot.

It was estimated that car-pool combined with a subsidized public transport-card have improved facilities for bikes and an electric and/or cargo bike-pool, giving a landlord a 15% discount on required parking spaces in new construction of houses. Therefore, the measure can be economically feasible in areas with newly constructed housing.

Barriers / constraints and how they have been overcome

The sustainability of car sharing business models may be problematic, at least in Stockholm. However, the market is changing rapidly and in the central parts of the city there is now an established market for car sharing. Most of the companies are not offering electric vehicles, but are contributing to reducing the number of cars in the city center. Outside the city center, there has been less interest in car sharing. Valla torg, which is situated south of the city center is however an example of a potentially broadened market for car sharing. However, the car sharing service at Valla torg was subsidised, as the tenants get their membership for free and the electric charging as well as parking space is free for the company.

It should be stressed that in order to reach an even better result, the social composition (young, motorised, etc) of the target areas demographics should be analysed, so that the target group better match the measure.

Concerning social barriers, the majority of tenants in the trial are older and this may have had an effect on usage. A better result is possible in newly produced houses with higher rent and younger residents who are keener on using digital solutions and can financially benefit even more from the measure.

From the technical point of view, the trial showed that green parking index associated to EV car pool is technically feasible, however securing the necessary electric grid capacity can be a local challenge.

Time for planning and implementation

Three years for planning and implementation 2016-2019

Good Practise

Rough costs and resources

The overall Grow-Smarter project received €25 million in funding from the European Union's Horizon 2020 research and innovation programme.

Further information available at / from

Information on the measure can be found at https://grow-smarter.eu/fileadmin/editor-upload/Smart/Factsheet_40_green_parking_and_car_pool_Stockholm.pdf

