



Results survey driving electric cars, Municipality of Zaanstad

The Municipality of Zaanstad has stated a firm climate ambition for the year 2020. Zaanstad promotes electric transport because it is clean, quiet and energy-efficient. In that way, Zaanstad creates a nice and clean environment for her citizens and businesses. To set an example, the municipality invested in its own fleet of 16 electric cars. Being a frontrunner, Zaanstad encounters new problems. What are the experiences of the civil servants that use the electric cars, what can be improved? It's time for a mid term evaluation.

Introduction

Since November, 2011 the Municipality employs sixteen electric vehicles, based in Q-park 'De Hermitage'. After half a year, a survey was issued to evaluate the experiences of the users. A group of heavy users has been questioned about the usability of the cars. In this flyer we present the results.



Electric transport is one of the components of the Smart Grid that the Municipality of Zaanstad is developing in the e-harbours project. What difference will that make for the end-user of the electric cars? The Smart Grid makes it possible to see real time, up to what percentage the car has been charged. This information can be retrieved from any computer in the network of the Municipality. Furthermore, it is possible to verify what the working range of the electric car is at a given moment (in km), and how much of the electricity used is generated by the PV-panels and wind turbines of the Municipality.

General observations

The general impression that we distil from the survey fits an organization that is introducing new ways of working with the accompanying systems and technologies. The respondents came forward with questions like: "Will I reach my destination with the electric car?", "Is the car charging now?" and "Is it dangerous that the car is so quiet?"

Nevertheless, the survey shows that 38% like driving the electric car and 31% even like it very much. This compares to 8% that does not like driving the electric car, and 16% that does not like it at all.

"The car is so quiet. Often, I do not notice how fast I am driving because it is so silent. I am afraid that passers-by in the parking lot don't hear me approaching."



What can be improved?

Three quarters of the respondents use the electric car once a week or more. Seventy percent makes trips of 30 kilometers or less. Knowing that the working range of the cars is 120 kilometers or more, this should not be a problem at all. Still, a large number of respondents do not like the restrictions on the working range.

"The batteries get depleted soon. A few times already I have been driving a car that was not completely charged."

The uncertainty, whether the car that you want to use is completely charged, produces a very negative user experience. Once, a user was confronted with an 'empty' car, because the last user had not connected the car properly to the charging point. By making the charging process visible (real time), that sort of incidents will hopefully be prevented.

Of course it is important that an electric car is taken care of properly after a trip. Make sure that the plug is connected, the charging pole is activated and the car is recharging. Then the next user can start his or her journey without problems.

What do you prefer?

Half of the respondents states 'ease of use' as an argument to prefer the electric car. A quarter of the respondents specifically name the Nissan Leaf. The Survey makes clear this is the most valued electric car.



A Nissan Leaf with logo of Zaanstad.

"A lovely, fast and soundless car. It is flexible in use and manoeuvrable. I would like to own this car."

Other advantages that are identified: "quiet and comfortable", "supple driving", "it feels good to drive a hundred percent electric car". The acceleration power of the Nissan Leaf is mentioned several times.

"Ensure reliability, that the car is always fully charged."

Conclusion

The Survey shows that electric driving is evaluated positively by the greater part of the users. Nevertheless, a lot can be improved. Two improvements are paramount: most of the respondents are very interested in up to date information about the *state of charge* (how many kilometers can you drive), or simply demand a much larger working range. E-harbours will try to remedy a number of these problems with the new built *smart grid*.

"I like driving an electric car very much. When I had to travel longer distances I would be afraid that the working range was insufficient."

The Municipality of Zaanstad is one of the first cities in the Netherlands that can boast a fleet of more than ten electric cars. Zaanstad is considered by other municipalities to be a frontrunner in this field. Of course, that also means we tread on unknown ground, and not everything is going well. By thinking about solutions together with the users and facility services we keep on improving the experience of electric driving. In this way we hope to win the last quarter of the civil servants in our survey; because driving electric cars is above all a pleasure!



More information:

www.e-harbours.eu

www.zaanstad.nl/klimaat (Dutch)

<http://eharbours.eu/showcases/showcase-zaanstad>

Remarks and/or questions?

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Short overview of the most important results of the Survey:

1. What do you like about driving the electric car?

Quiet and comfortable	42%
Accelerates fast	26%
The car drives smoothly	26%
Green, friendly for the environment	6%

2. What do you not like about driving the electric car?

Limited working range	42%
Is the car fully charged?	30%
The car is so quiet, it can be dangerous	16%
Every car has a different user manual	12%

3. What would you like to change?

Working range	54%
Faster charging	24%
Guarantee that car is charged at departure	20%
Force users to leave the car in good order for the next trip	4%

4. What is your experience with driving electric cars?

Do not like it at all	16%
Do not like it	8%
Neutral	7%
Do like it	38%
Do like it very much	31%