



Location study Doetinchem

Address:

Parking at A18 exit, 7004 DM Doetinchem

Simulation for:

4 ultrafast charging points (max power: 150 kW)

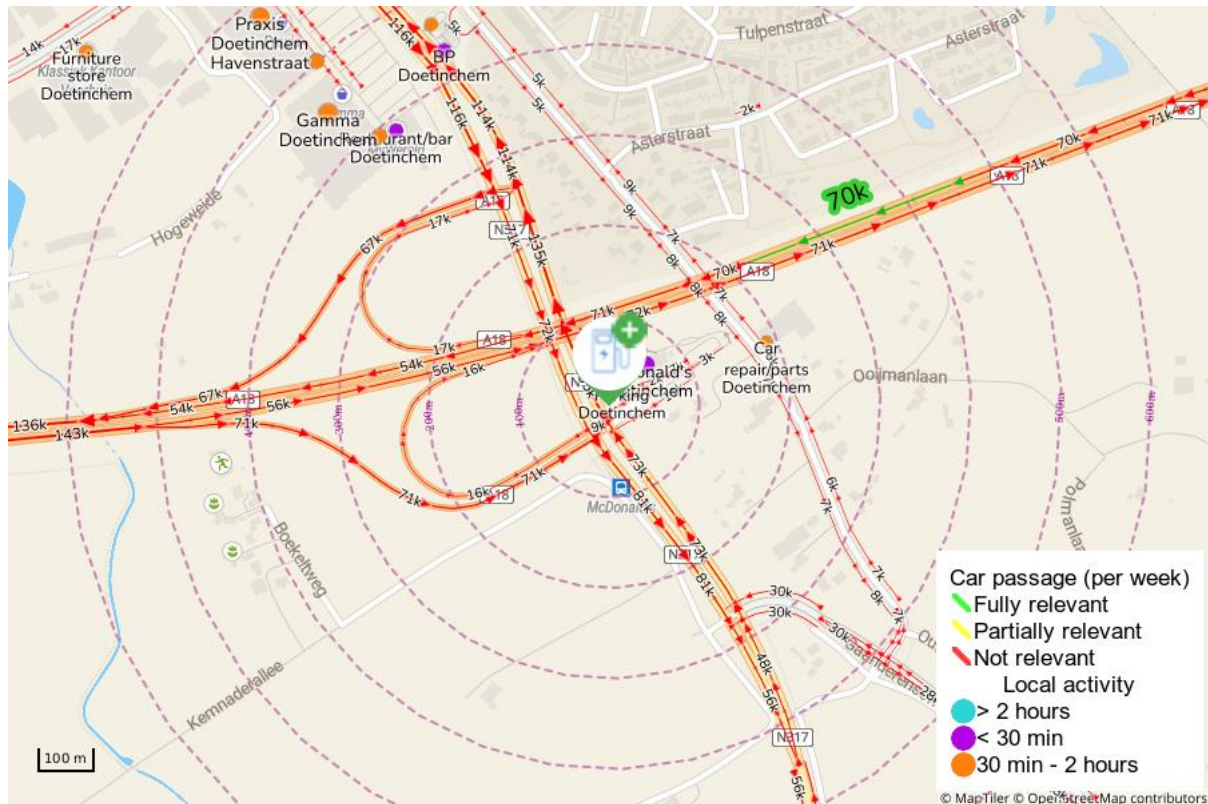
Brand: New brand

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1. Description of the simulation

In this report we show the result of a simulation with 4 ultrafast charging points (>150kW) of a charging station located at : parking at A18 exit, 7004 DM, Doetinchem, NL

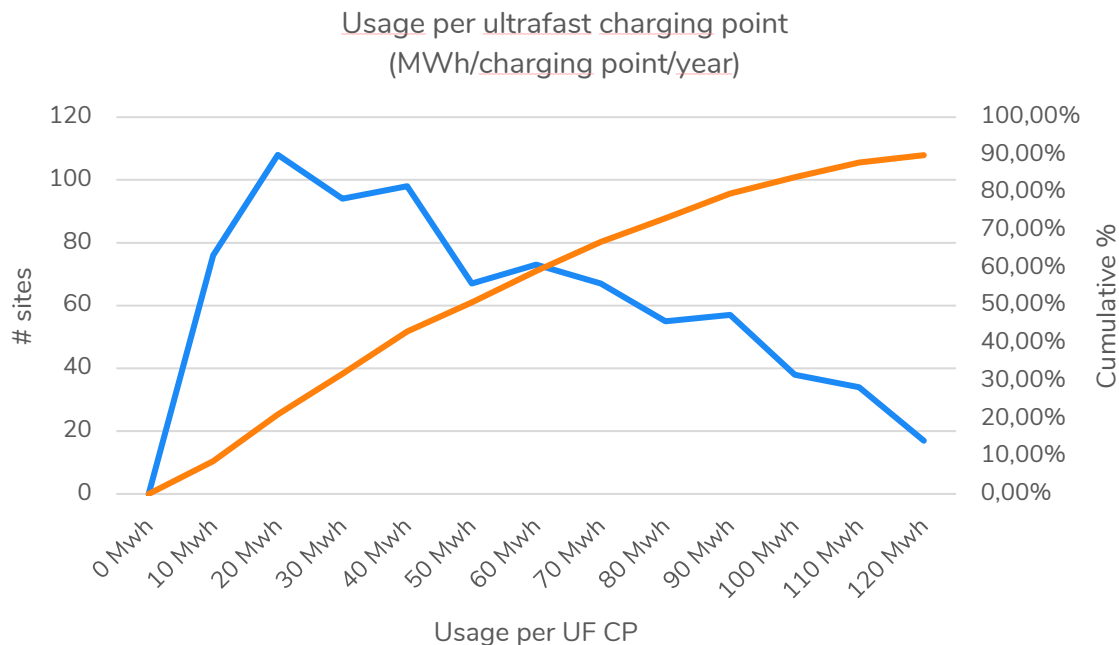


2. Predicted yearly consumption

Based on the market data, the model predicts a theoretical potential of **273.663 kWh/year (being 68.416 kWh/year per ultrafast charging point)** for this location.

In the following graphs, we compare this result with all other sites in the country.

For the 872 existing sites with ultra-fast charging points, the predictive model gives a median consumption of 49 MWh per year and per ultra-fast charging point.

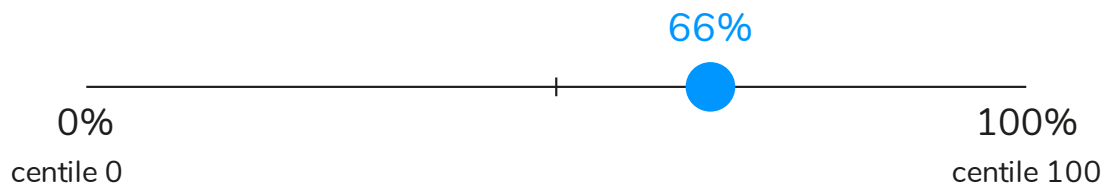


The following graph compares the expected performance (per ultra-fast charging point and per year) of the site under investigation with all existing sites in the country.

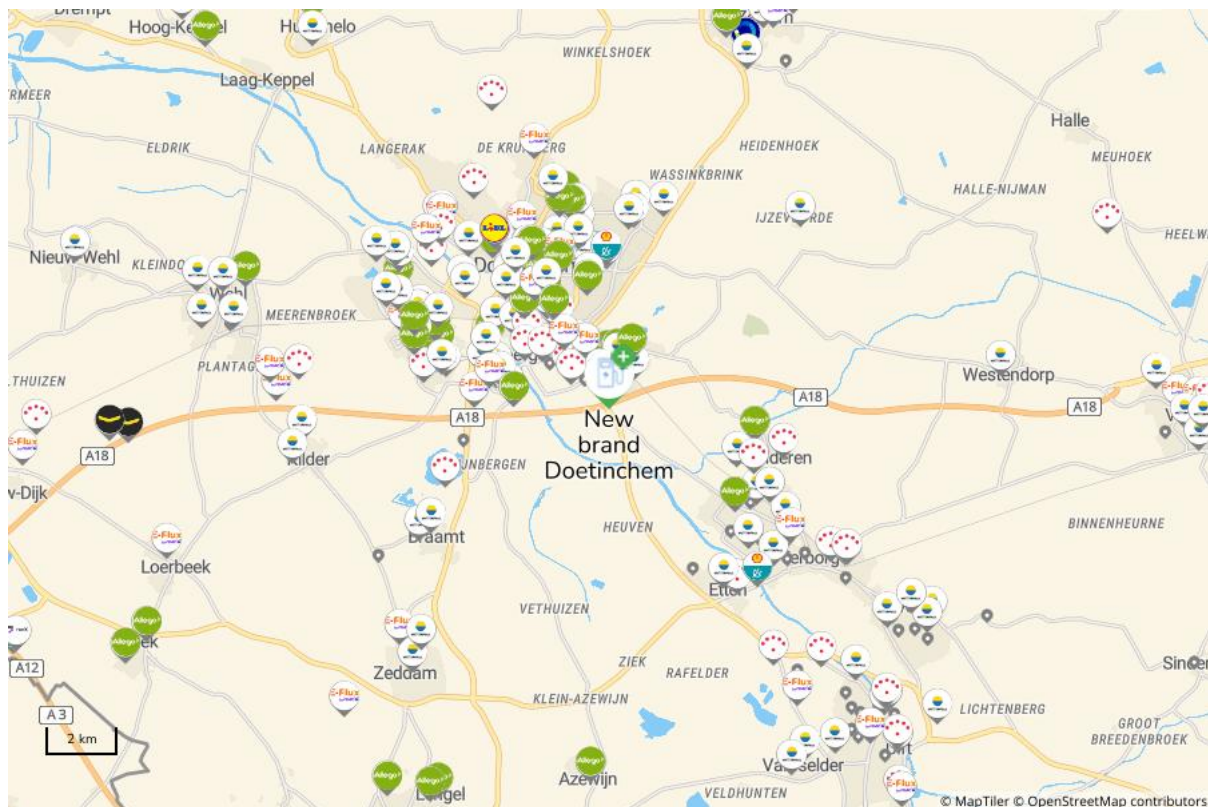
The percentile “0” corresponds to the existing site with the lowest usage, and the percentile “100” to the site with the highest usage. The blue dot corresponds to the performance of the location studied in this report :

This result shows that the studied site is classed within the 34 % best sites of the country in terms of potential.

Potential (kWh/ ultrafast charging point) vs. other stations



The opening of this new location will partially cannibalize surrounding charging locations.



In this table you can find an overview of the competitors within 10 minutes drivetime.

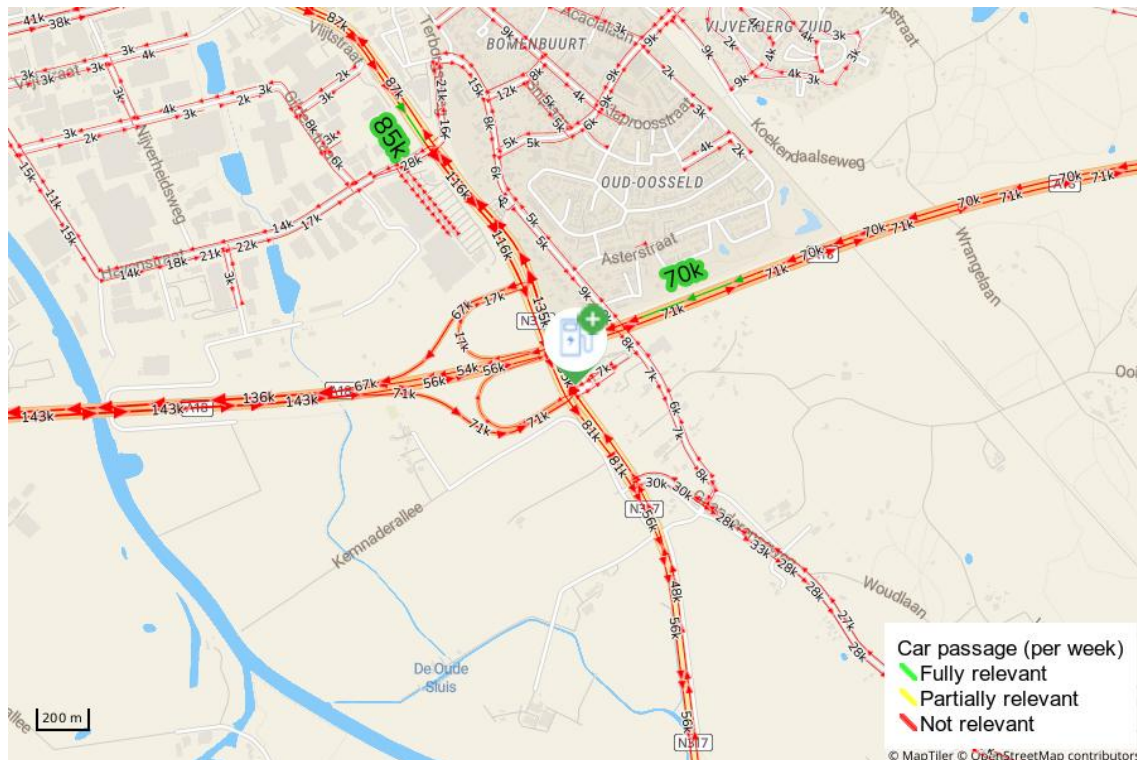
Name of the concurrent station	Address	# Ultrafast charging points (>150kW)	Ultrafast power (kW)	# Fast charging points (49-150kW)	Fast power (kW)	Price (€/kWh)	Drivetime (min)
Shell Recharge Oude IJsselstreek	Zeddamsseweg	2	150 kW	0	N/A	0,63 €/kWh	5
E-Flux Doetinchem - Braamtseweg	Braamtseweg	2	150 kW	0	N/A	0,00 €/kWh	6
JOLT Energy Doetinchem	Varsseveldseweg	2	300 kW	0	N/A	0,00 €/kWh	7
Shell Recharge Doetinchem	Varsseveldseweg	2	300 kW	0	N/A	0,63 €/kWh	8

The calculation of the potential is based on the following indicators (ranked in function of importance) :

2.1. On the road potential within 3 minutes

This potential consists of the car passage (expressed in the average number of vehicles passing by per week). This potential is very important for ultrafast charging points.

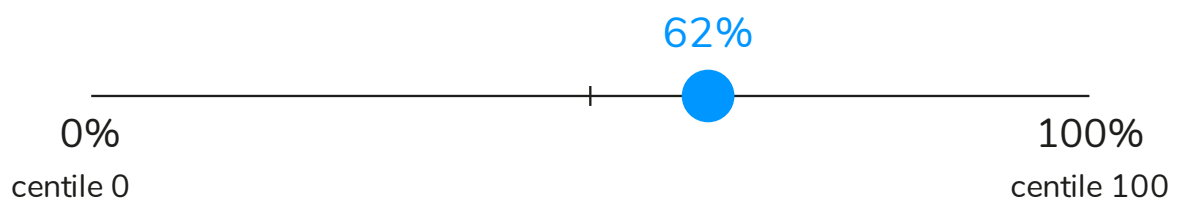
On this map, passage of each road segment is visualized. This gives an indication of the market potential related to passage in the proximity of the charging location.



The charging location has an estimation of **337.265** cars passing by per week. This is based on the 4 incoming roads with the highest passage score at 3 minutes drivetime.

With this result, the site is classed within the 38 % best sites in the country.

Cars passing by per week compared to other stations



2.2. Potential of local activity in a 300m radius

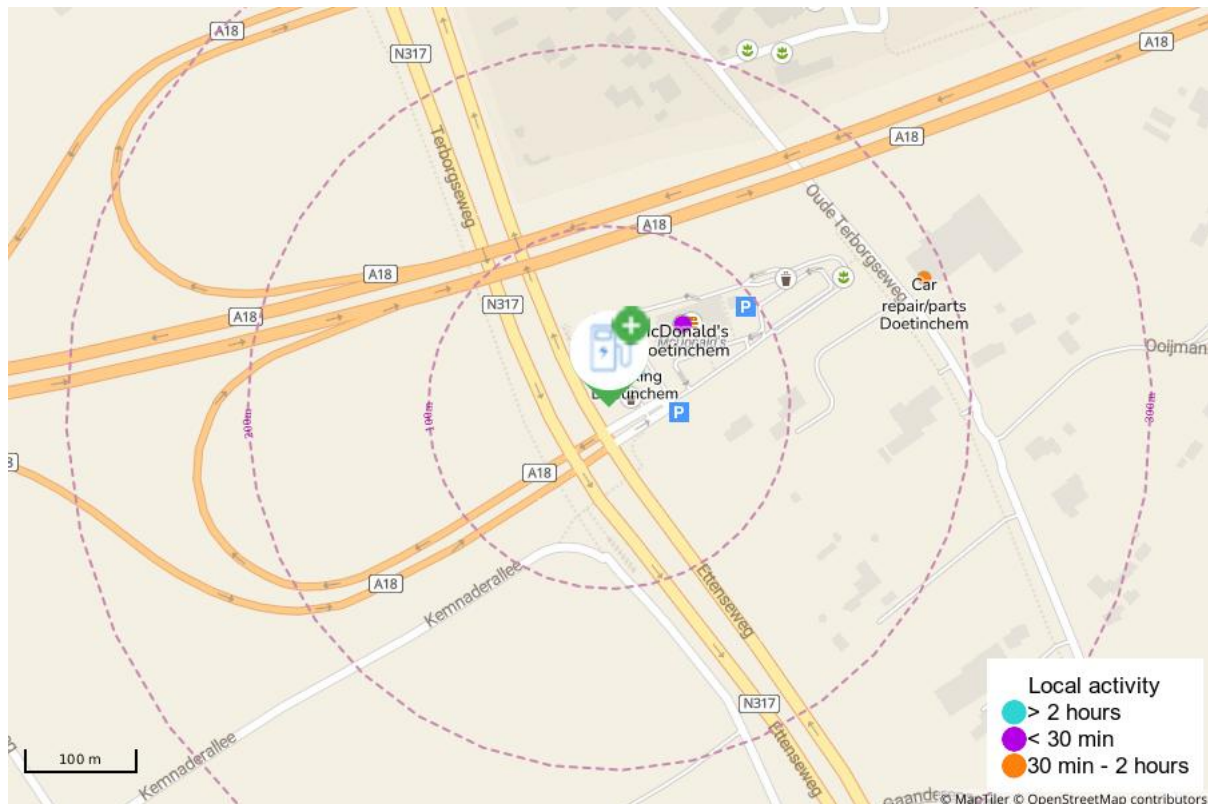
The presence of relevant local activity is important for ultrafast charging points. Mainly activity with a short visit duration (<30min) is important. Also activity with a medium long duration (30min – 2h) is partly relevant. In this study we took into account the following activity:

< 30min : fast food restaurants, shops, destination retail...

30min - 2h : non-destination retail, restaurants, bars, cinemas, sport & cultural spaces.

> 2h : work, schools, touristic places, hotels.

The figure below shows the local environment and the presence of perfect neighbours surrounding the charging location.

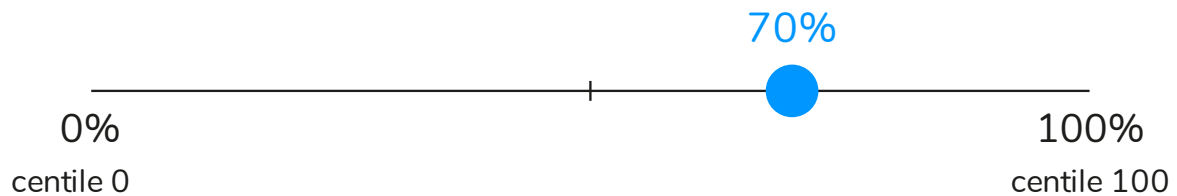


Less than 30min	Address	Number of visitors per year	Distance (m)
McDonald's Doetinchem	Eetenseweg 1	50.000	61 m

In this overview, we compare this result with those observed at other sites in the country.

With this result, the site is classed in the 30 % best sites of the country in terms of local activity potential with a short visit duration (<30min) in a 300m radius.

Local activity potential less than 30min in a 300m radius

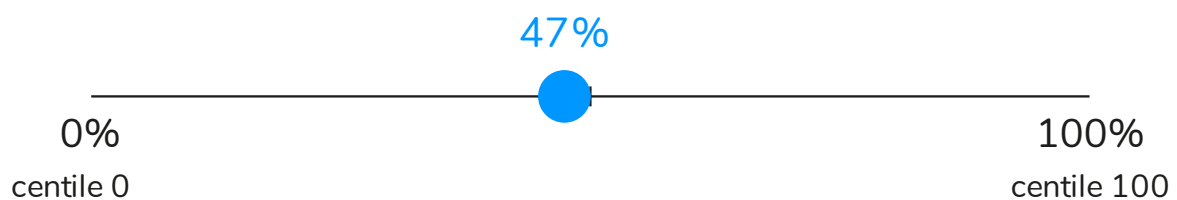


30min - 2h	Address	Number of visitors per year	Distance (m)
Car repair/parts Doetinchem	Oude Terborgseweg 261	5.000	188 m

In this overview, we compare this result with those observed at other sites in the country.

With this result, the site is classed in the 47 % least performing sites of the country in terms of local activity potential with a medium long duration (30min-2h) in a 300m radius.

Local activity potential for visit in 30min-2h in a 300m radius

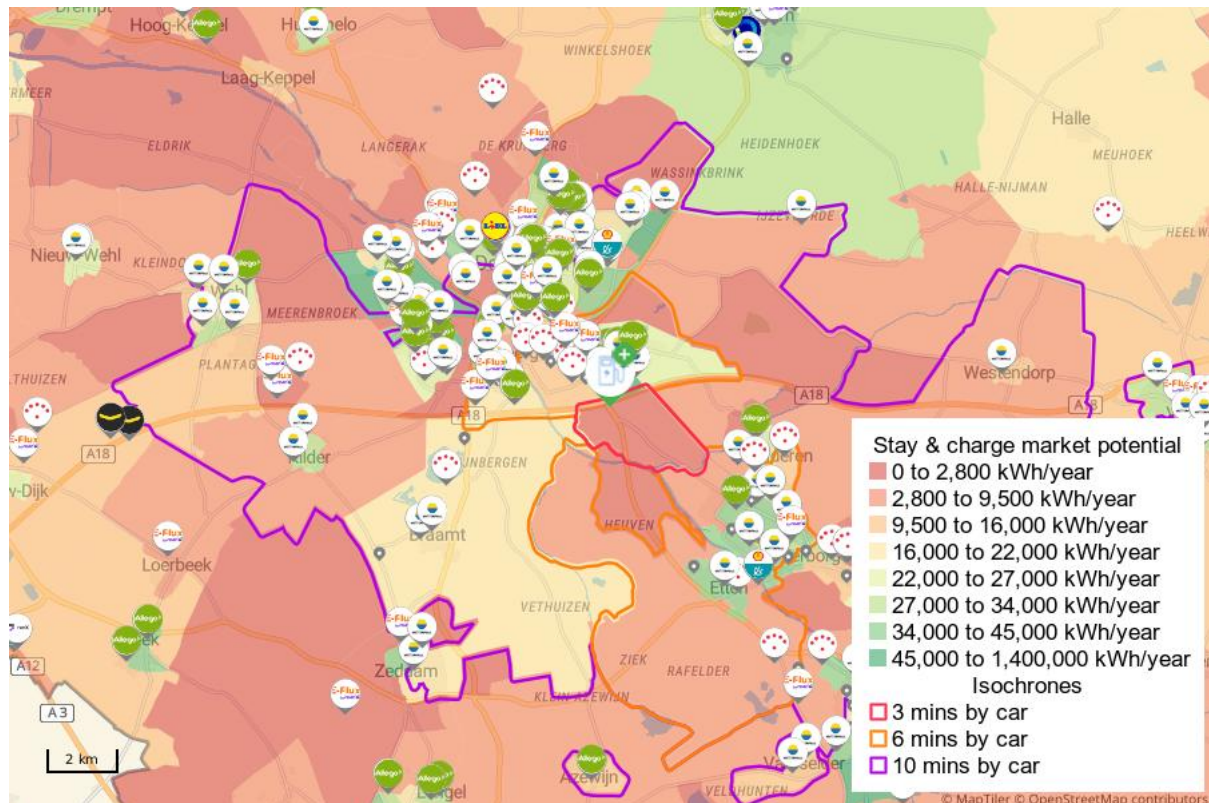


2.3. Residential and local visitor's potential

This is the destination potential that is part of the potential of consumption of residents that charge their vehicles close to their homes, their work and their activities. This is a less important potential for ultrafast charging points.

To calculate the potential per zone, we take into account the number of electrical vehicles, the wealth index, the estimated workers and the commercial activity (number of visits/year) for every zone.

On this map, you can see the stay & charge potential per zone around the charging location.



The table below shows an overview of the potential indicators, within each environment of the site :

Environment analysis	0~3 min by car	0~6 min by car	0~10 min by car
Market potential 'stay & charge'			
Inhabitants	175 inhabitants	11.818 inhabitants	55.811 inhabitants
Households	75 families	5.034 families	25.073 families
Wealth index	99 %	92 %	92 %
Population density	93	1.542	2.211
Cars	99 cars	7.544 cars	32.217 cars
Light commercial vehicles	11 vehicles	854 vehicles	3.646 vehicles
Electric vehicles	6 vehicles	487 vehicles	2.075 vehicles
Employees	90 FTE	8.342 FTE	27.370 FTE
Number of visits > 2 hours in the zone	1.000 visits	881.320 visits	2.339.840 visits
Residential potential	16 kWh/year	1.417 kWh/year	6.250 kWh/year
Market space 'stay & charge'			
Stay & charge market potential	2.317 kWh/year	350.416 kWh/year	1.634.306 kWh/year
Available slow charging power	N/A	978 kW	3.168 kW
Needed slow charging power by 2030	7 kW	1.046 kW	4.878 kW
Developable slow charging power by 2030	7 kW	68 kW	1.710 kW

2.4. Location quality

Visibility, accessibility & price have a significant impact on the success of a charging location.

2.4.1. Visibility : Normal

Each location in the platform can get a visibility score going from very bad to very good. This is not an automatically calculated parameter, but a manual scoring. By default, for all competitors and tested locations, the value is set to neutral unless you explicitly change it. It's useful to fill out this parameter when you are testing a specific case :

Visibility	Definition
Very good	Your location stands out & gets noticed by everyone
Good	Some positive elements, but not the best
Normal	Both positive as negative aspects, location doesn't stand out
Bad	Large part of passing traffic doesn't notice your location
Very bad	Almost nobody notices your location

For this location, the estimation of the visibility is actually set to : "Normal".

2.4.2. Micro-Accessibility : No issues

Each location in the platform can get a micro-accessibility score going from no issues to major issues. This is not an automatically calculated parameter, but a manual scoring. By default for all competitors and tested locations, the value is set to no issues unless you explicitly change it. It's useful to fill out this parameter when you are testing a specific case :

Micro-accessibility	Definition
No issues	Able to smoothly access the location site
Minor issues	Lose time to access the location site
Major issues	Lose lots of time to access the location site

For this location, the estimation of the micro-accessibility is actually set on : "No issues".

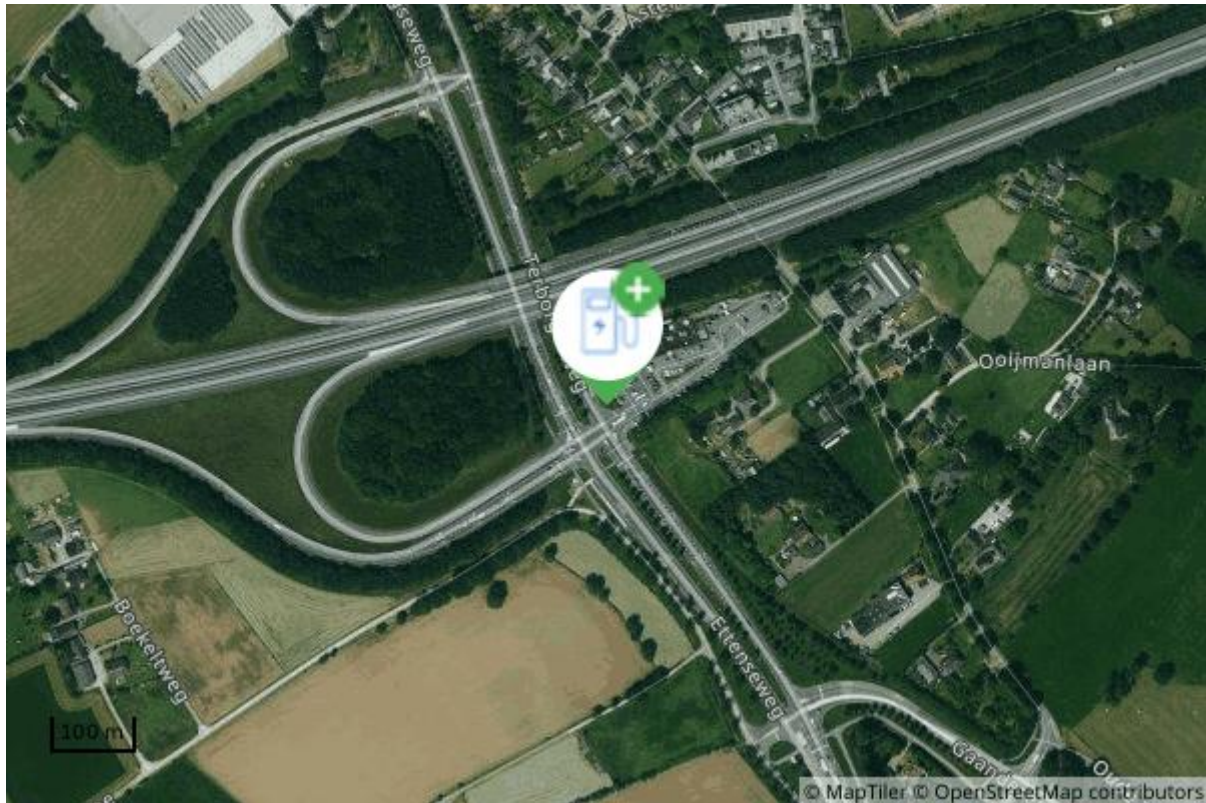
2.4.3. Recharge price : 0,59 €/kWh

Each location present in the platform has a charging price. Which is the average price relating to the station excluding taxes and any additional parking costs (€/connected hour). The indicated price also doesn't take into account flat-rate prices (fixed price per charging session) or the price of time spent (cost per connected hour).

For this location, the ad hoc price is actually set on : 0,59 €/kWh

3. Electrical grid information

The high tension network is located at 1.562 m from the location.



- <1 kV: low voltage grid
- 1-50 kV: medium voltage grid
- 51-150 kV: high voltage grid
- ≥150kV: extra high voltage grid
- undefined

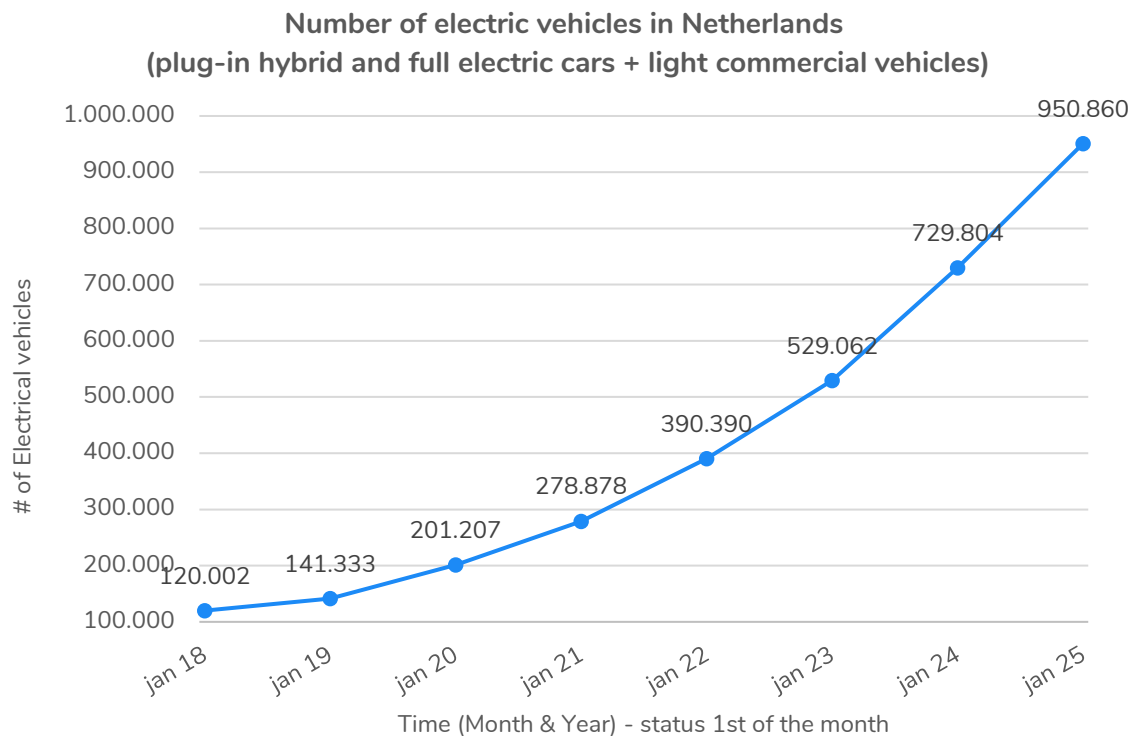
4. Interpretation of the results and market tendencies

This report of the investigation of potential is based on the most recent market data.

In this section, we give a brief overview of the different data sources used and the observed evolutions in the charging electrical vehicles market.

4.1. Number of electric vehicles in the country

The number of electrical vehicles in Netherlands is fixed to 950 860 in ChargePlanner. This corresponds to an estimation of reality at the start of January 2024 and contains the cars as well as the light commercial vehicles. Of these, 63% (599 122) are fully electric vehicles, while 37% (351 737) are plug-in hybrid electric vehicles. Since January 2024, the number of electrical vehicles rose by 30%, which means that the strong growth of the last years continues.



4.2. Competitive pressure of fast and ultra-fast charging points

In Netherlands, there are 1 333 sites with at least one fast or ultrafast charging point.

Brand	January 2025								
	Number of locations (at least 1 F or UF)	Ultrafast		Fast		Slow		Price per kW (€)	
		# Charging points	Average power (kW)	# Charging points	Average power (kW)	# Charging points	Average power (kW)	(Ultra)fast	Slow
Fastned	181	1049	272	28	50			0.57	
Shell Recharge	150	533	196	205	69	135	17	0.65	0.45
Vattenfall									
InCharge	105	6	150	208	50	110	43	0.54	0.46
E-Flux	83	136	276	84	82	137	20	0.63	0.49
Allego	78	206	238	51	56	154	31	0.71	0.59
bp pulse	70	313	151	94	100			0.6	
TotalEnergies	64	126	228	131	94	21	40	0.51	0.35
Tesla Supercharger	52	898	212	2	72				
Lidl	43			86	50	47	25		
PowerGo	36	19	213	69	89	44	22		
AVIA	36	68	240	36	63	95	20	0.63	0.44
Leap24	35	125	200	46	97	12	21	0.54	
Eneco	28	40	171	31	53	348	21	0.52	0.42
Tanx	25	39	268	23	84	9	30	0.58	0.46
Ecotap	24	4	165	40	67	98	21	0.54	0.46
Abel installatie	19			40	53	46	22		
IONITY	19	130	339	4	50	2	43	0.57	0.57
Circle K	18	6	323	36	55				
T-Electric	18	46	225	10	73	8	18	0.59	0.49
Tango electric	17	47	227	15	65	2	22	0.66	0.27
Maxem Energy	16	62	308	12	78	133	21	0.48	0.41
Flooding	16	11	200	26	92	92	14	0.63	0.29
Alva Charging Services	15	6	223	44	71	5	29	0.61	0.63
Other brands	185	350	234	190	75	671	18	0.55	0.44
Total	1 333	4 220	233	1 511	73	2 169	21	0.56	0.44

5. About RetailSonar

From location planning to location performance. RetailSonar is **Europe's leading geomarketing company**. We optimize the location strategy for over 200 retailers in more than 15 countries.

We make the difference thanks to :



The most complete, innovative & up-to-date **retail database** in Europe



Accurate sales forecasts thanks to state of the art of **Artificial Intelligence**



An international **geomarketing platform** for real estate, sales & marketing

RetailSonar offers an unrivalled expertise in providing the right location strategy for all stakeholders in the fast changing EV sector.



The right location strategy for installers and distributors

- Determine the optimal locations for each type of charger
- Simulate business cases in your own data platform
- A professional market report to share with stakeholder



The right location strategy for retailers & real estate

- Determine the profitability of all your available locations
- Simulate business cases in your own data platform
- Clear guidelines to bring your strategy into practice



The right location strategy for governments & cities

- Determine the optimal regional coverage of chargers
- Simulate business case & optimize your strategy
- Realize your policy goals