White paper

Interest and possibilities for electric vehicle charging facilities in the French hospitality sector

By:

Michel Bayings / E-mobility consulting

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Netherlands Business Support Office / NBSO Lyon

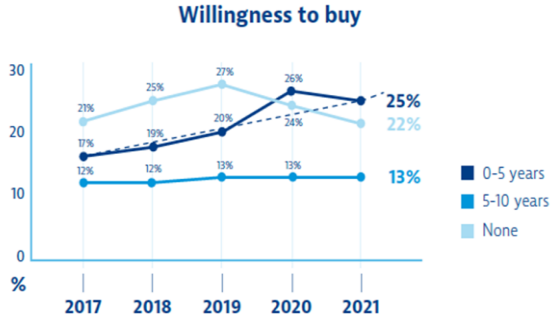
Table of contents

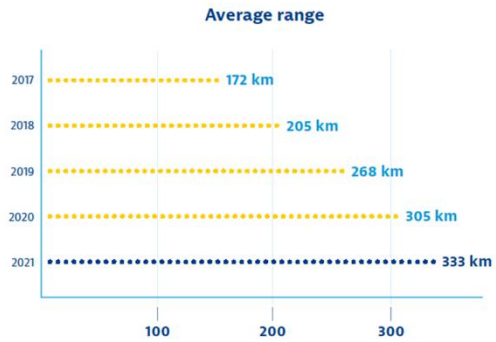
1. Introduction

The number of electric cars is rising. This means that visitors who use hotels, campsites, holiday homes, etc. are increasingly looking for ways to charge their electric car. With the intention of broadening the knowledge on charging infrastructure in France, NBSO Lyon hosted an online workshop together with Michel Bayings from E-mobility consulting. Prior to this, to find out what needs there are in this hospitality/catering sector, a survey was conducted at the end of 2022 targeted at the hospitality sector to get an idea of the current situation around this topic. It gathered around 60 owners of camping's, Bed&Breakfast and Chambre d'Hotes to make an estimation about their interest to install a charging point. The reasoning behind this is to improve destination charging in the holiday sector in France. Many EV drivers experience difficulties when they arrive at their holiday location in France, and there is no possibility for them to charge their vehicle. By means of conducting the survey, we managed to gather some owners of these type of businesses, and hosted an online workshop for them.

The workshop included several speakers: Joannette Polo, from the innovation attaché network at the Dutch Embassy in France, Marco van Eenennaam (ANWB Public Affairs manager) who presented a study done by the ANWB, and Michel Bayings from E-mobility consulting. Multiple topics were discussed, including the results from the survey. We collected all of the information and studies that were presented in the workshop, and processed it into a white paper. It contains all the relevant information about the topic.

2. Interest from EV drivers





Source: ANWB

These graphs from the study conducted by ANWB, show that Dutch citizens are becoming more interested in buying electric vehicles each year. EV's are getting more popular so the need for charging stations is also growing. However, this is not always taken care of and this causes worries among EV drivers.

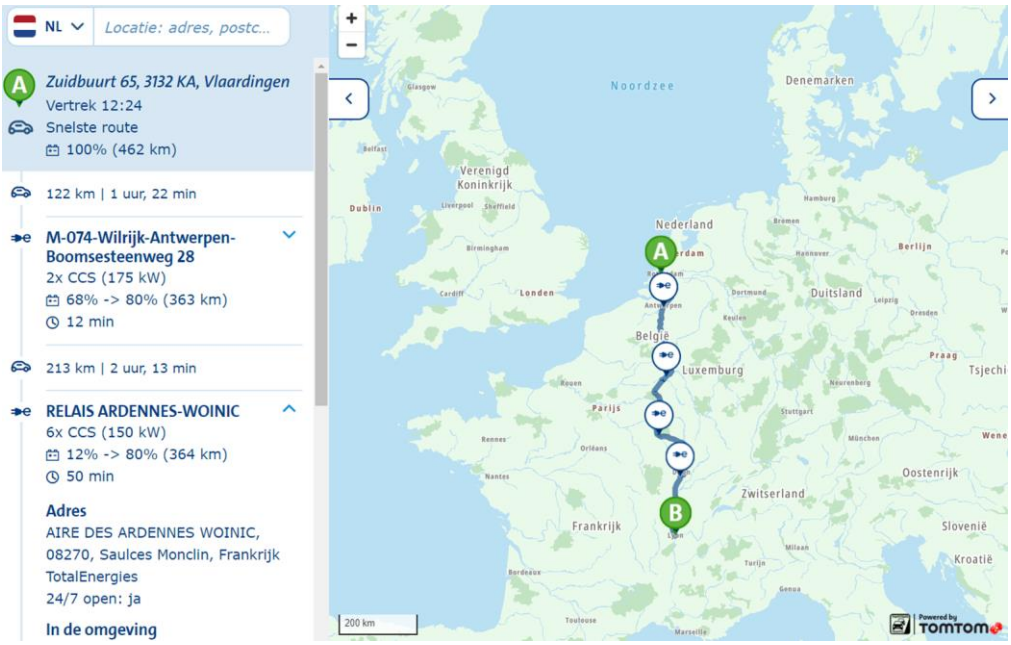
Reasons for travelers not to go to France with an EV

Main reasons not to go on holiday with an EV	
Due to the limited range I have to stop too often to charge	71.90%
I think there are too few charging stations on the route	54.20%
For me it is too difficult to drive and calculate with a limited range	46.40%
I think I can't charge my car at my destination	39.40%
Information on where to charge is insufficient	34.20%
I can't use my caravan with an electric car	18.80%

Source: ANWB

You can see that 39,40% of people driving an electric vehicle are worried that there won't be an opportunity for them to charge their vehicle, which is holding them back from going. This ultimately affects the business owners, since less people are choosing their facility as a destination for holiday. It is valuable for owners to take this into consideration since out of all Dutch EV drivers who went abroad, 25% of them went to France.

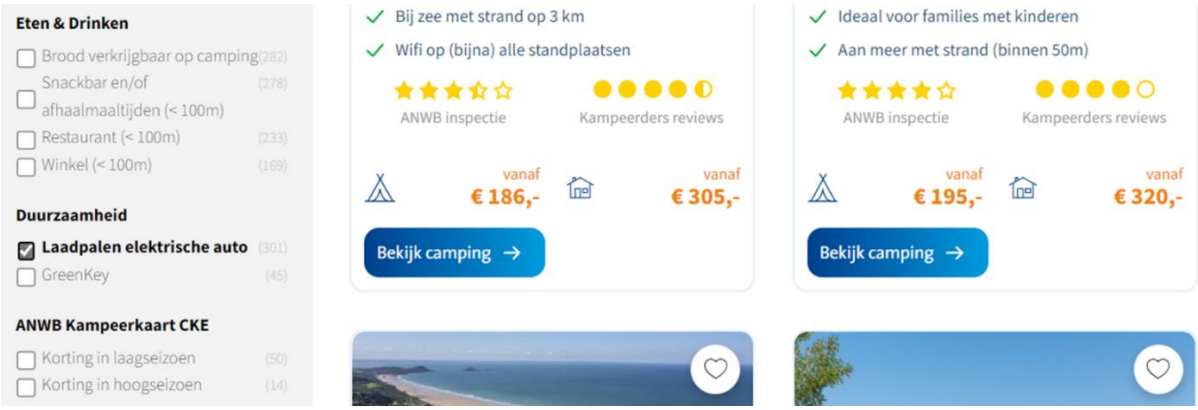
Electric vehicle route with charging stations from Amsterdam to Lyon:



Source: ANWB

The graph above shows the route of an EV driver who travels from Amsterdam to Lyon. Along the route there are four charging stations available for them to charge their car.

The biggest issue remains charging at destination. This issue should be taken seriously since it can be a real stumbling block for people going on holiday. The picture down below shows that websites provide a filter for holiday destinations that says “charge point electric vehicle”. This means that facilities who do not have opportunities to charge, get filtered out.



Source: ANWB

3. Interest Hospitality Sector – survey results

Visitors who use hotels, campsites, vacation homes, etc. are increasingly looking for options for charging their electric car. Via a survey among people active in the hospitality sector in France, we researched the knowledge, possible interest and questions about offering charging infrastructure. The survey was organized by the Netherlands Business Support Office Lyon (NBSO), E-mobility Consulting and a forum for Dutch people in France.

The survey was offered in three languages: Dutch, French and English. 66 people replied: 49 Dutch speaking (74%), 14 French (21%), 3 English (5%).

The survey looked at the following topics:

- Type of business
- Interest in charging infrastructure, possibly combined with solar panels and energy storage systems
- Interest in subsidies and financing possibilities
- What kind of information is still needed

The questions raised interesting differences between the 3 languages.

In Appendix 1 of this paper all questions and answers from the survey are shown. Summary and conclusions are described below.

3.1 Type of business

Location

- 45% of the respondents have a camping
- 35% of the respondents have a Bed & Breakfast /Gite
- 20% has a holiday home for renting.

It is interesting that most of the Dutch people have a Bed & Breakfast, while most of the French persons have a camping. The majority has their business in the regions in the South (Côte d'Azur, Occitanie). Most of the businesses have less than 10 rooms/stands, although 50% of the French respondents have between 50 and 100 rooms/stands. This is probably related to the fact that most of the French people have a camping.

Charging infrastructure

The situation of existing charging infrastructure and question from customers about this, resulted in interesting differences between the countries of the respondents.

- 88% currently has no charging infrastructure installed. From the Dutch respondents 29% has a charging station.
- Over 80% of the Dutch respondents get questions from guests about charging infrastructure, while of the French respondents only 50% gets these questions and the English persons 33%. This is in line with the results from the survey from ANWB in the first chapter of this paper.

3.2 Interest in charging infrastructure, possibly combined with solar panels and energy storage

Interest to offer charging infrastructure and if so, when

The interest to offer charging infrastructure is high for all respondents. Differences between the countries are limited, although the Dutch show a bit more interest than the others. Between 65% and 74% of all respondents are interested to offer charging infrastructure.

A majority of over 55% even wants the first charging infrastructure within the next twelve months. Approximately 10% does not want it within a year and a relative high percentage of approximately 35% is not sure yet. As all of these persons indicated that they are interested in offering charging infrastructure, there still seems to be hesitations and questions at a large group before they invest in in it.

The majority wants to start with 1 to 3 charging points. Only 6% of the Dutch respondents indicate that they are interested in 10 or more.

Combination with solar panels and/or energy storage solar panels

More than 53% are interested in combining charging infrastructure with solar panels and 23% might be. A few of the Dutch respondents already have solar panels, but the majority doesn't. 15% is not interested at all.

Energy storage

Energy storage possibilities also got a lot of interest (40% Is interested and 38% maybe). It is remarkable that the majority of the French respondents answered that they might be interested. This can also be related to the fact that most of them also indicated to have a camping, where possible energy storage might have more impact and better business case then a smaller B&B for example. Only 17% is not interested at all in energy storage.

Important reasons, issues, components to take into account

This question and the answers show what the respondents believe is important, which can help in offerings that have good fit with this sector. It can also be helpful in creating all kinds of additional information for this important market. This question could be answered with multiple answers.

1. *Get more customers by offering charging possibilities*

Almost 50% of the people believe this is an important element for investing in charging infrastructure. The ANWB study showed that it is not only about getting more customers, but also preventing that customers go to other locations, because you don't offer charging facilities. This reason was however not one of the possible answers in our survey.

2. *Make profit / earn money*

For only 5 of the respondents this is important. All others are either neutral or answered that it is not important at all. Neutral might be the logic option since making profit is always convenient.

3. *Customers charges with their own card*

Most used ways to charge a vehicle is either free of charge or via a charge card from the EV driver. If you offer charging for free, the charge station is set in modus that the car start charging when the cable is connected between vehicle and charge station. In this case the cost of charging is either covered by the owner of the charge station or billed to the EV driver in another way e.g. via the renting cost of a mobile home. When the EV driver charges with their own subscription charge card, they are billed directly via the operator of the charge station at their own account. The owner of the charge station gets automatically the energy cost paid back by the operator. Currently charging via charge cards is the most used system in Europe.

For almost 50% of the Dutch respondents this is an important issue. The other respondents are either neutral or mention that it is not important. The difference might be caused by the fact that in The Netherlands using a charge card for charging is very common and many people are aware of it and they might get questions from their visitors if they can charge with their charge card.

4. Subsidy possibilities

77% of the respondents answered that this is important. Information about this regarding the ADVENIR program for charging infrastructure or other subsidies for solar panels and energy storage is important.

5. Independency of the energy company

78% of the French speaking respondents indicated that this is important. For the Dutch and English people, the majority is neutral about this point.

6. Be as sustainable as possible

For 68% it is important to be as sustainable as possible. Offering charging infrastructure, especially when you use sustainable energy for it, plays an important role in this area. Same for investing in solar panels.

3.3 Interest in subsidies and financing possibilities

This part of the survey was investigating the knowledge of the ADVENIR program, possible support from the installer/supplier and the different financing possibilities. The ADVENIR program is the French subsidy program for public accessible charging infrastructure and the related installation effort.

<u>Awareness ADVENIR program and installer/supplier support</u>

55% of the French respondents indicated that they either know the program or at least have heard about it. For the Dutch and English respondents, almost no one knows it or is aware of it.

For over 75% of the respondents support for getting subsidies by the installer/supplier is important. As the ADVENIR program also requires frequent usage reporting, it is also logic that the supplier gives information, request the subsidy and manage the reporting towards the ADVENIR organization.

Financing possibilities

The costs of buying and installing a charge point can be financed in many different ways.

54% of the respondents first wanted more information about the possibilities. 41% of the respondents answered that they prefer a totally self-financed and self-owned system. A very small part of the respondents is currently interested in external financing possibilities. It is clear that next to the subsidy program, also the financing possibilities need additional information presented to the customers.

3.4 Remarks, issues or situations that come to mind

The respondents were asked to mention what they think about within the scope of installing charging infrastructure. This was an open question. Comments are grouped by the following topics:

- Concerns if the local or central grid can handle the charging infrastructure
- Concerns about fire danger and regulations regarding safe installation
- Lifetime of charging stations and what if new generation of chargers enter the market
- How can you get the energy cost paid by the user?
- What does it cost?
- What are the possibilities with combining it with solar panels?

Concerns about the local or central grid

The energy grid in France is strong, and in general it can deal with a lot of demand for energy. However, there are two main challenges:

1.The grid capabilities in France are not always of the same level of quality. This is mainly an issue for the coming years when a lot of electric vehicles need to be charged. France's government and utility companies are investing a lot of money to extend the grid.

2.On individual sites and locations there can be situations where the energy availability is not enough for the desired charging infrastructure. This depends on the local situation and the requirements for the charging infrastructure. In these situations, the grid connection might be upgraded and the total load on the grid can be managed.

Charging in a smart way e.g., and managing the start and stop times of charging is a must in order to ensure that the grid can handle all needed charging stations. This smart charging is managed via the charge point management systems from operators.

To ensure that on local level the desired charging facilities can be installed, a site visit of a qualified installer and good information about the site is crucial.

Concerns about fire danger and regulations regarding safe installation

Fire danger and safety issues are mostly related to bad installation of charge stations and the technical setup in the building and to the grid. Installations with power above 3.7kW - these are normal charge stations - must be installed by an IRVE certified (**I**nstallation de bornes de **R**echarge pour **V**éhicule **É**lectrique). They are qualified and in case of calamity, you are covered by the insurance. If you want to get subsidy for your installation, the use of an IRVE certified installer is also a requirement for the subsidy program.

The risk that an electric vehicle gets on fire is lower than non-electric vehicles. If something happens the electric circuit to the charger will automatically be stopped.

What if a new generation of chargers enter the market

All currently manufactured charging stations have a lifetime of at least 7 to 10 years. Updates and upgrades are normally only software based and these updates are part of subscription fee of the operator. For single charging stations that are not remotely monitored and operated, upgrades can only be done on site and fee will be asked for that. However, it is recommended to use connected charging stations with remote access possibilities for getting funding.

It is possible that in the future because of new legislations/laws/regulations, hardware updates are required. When this would be required, there will be discussions with governments on how to cover this cost, as for normal operations it is not needed.

Charging station manufacturers keep track of developments and possible new upgrades. It is advised to check with the charge point operator and manufacturer how they take the updates and upgrades into account.

If you make use of a full financed charging station, then you are not the owner and updates and upgrades will be taken care of by the owner/finance organization.

How to get the energy cost paid by the user

Almost all EV drivers have RFID cards from a mobility service provider (MSP). These MSPs are all connected to the operators of the charge stations to ensure accessibility. When your charge station is operated / connected to such an operator, the EV driver can charge via his own RFID card and then get billed for it by his MSP. You as owner of the charge station can set your own tariff (kWh based) for charging in the system of the operator. This way the operator makes sure you get the energy costs paid based on your own set tariff. These costs are then billed to the MSP and, as mentioned above, the MSP will invoice it directly to the driver. You pay a fee per charge station connector to the operator to have this all managed.

What does it cost?

A charge station with MID meter, possibilities for smart charging, and connected to an operator cost between €750 and €1600 ex VAT. Difference lies in quality and connectivity possibilities. Cheaper is possible, but then either they are not connected or you cannot use them for external EV driver billing. Operating costs by external operator are average €5.00 per connector per month. Installation costs depend on the distance between main meter, switch board and charge station and whether or not modifications on the electrical system are needed. Of course, installing several charge stations at once

is more beneficial than the installation of a single charge station. Additional cost can be caused by installation of total Energy Controllers, combination with solar panels, etc.

Possibilities of combining with solar panels

If you combine charging stations with solar panels, which can also by a canopy (carport) above the charge stations, you get the ideal combination of own energy production and direct usage for the electric vehicles. It requires a relatively simple Energy Controller, that connects both the charge stations, the solar panels and the home/building energy system. This way you can offer more charging power when there is more generation and the other way around, while it takes care of the energy need in the building. If you ask a kWh fee for charging while the power is generated by the solar panels, you can have maximum benefits. This combination is a real win-win. Via a dashboard you can easily keep track of all energy streams and the cost and revenues.

4. Conclusion

Thank you for reading the executive summary on the online workshop/webinar electric vehicles. We hope to have provided you with enough information about the key subjects regarding installment of charge points. We believe that it is important to stay informed and up to date about the latest developments in the field. The mobility sector is evolving and it is crucial to move along. Therefore, we try to provide you with all the theoretical necessities and support you may need. We thank all of our trusted partners who made this project possible together with us, and our colleagues. The information might still be a bit complex to you. Therefore, we encourage you to contact us at any time. The contact information can be found down below, together with the survey results.

Team NBSO Lyon & Michel Bayings.

5. Contact information

Michel Bayings

Michel.bayings@emobilityconsulting.com

Marco van Eenennaam

Mvaneenennaam@anwb.nl

Joannette Polo

Joannette.polo@minbuza.nl

Joris Houtman

j.houtman@nbso-lyon.fr

NBSO Lyon

info@nbso-lyon.fr

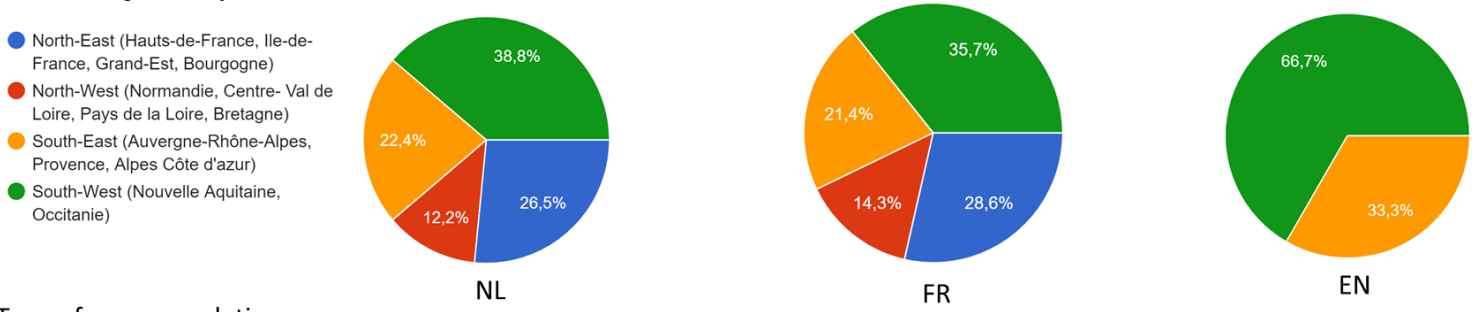
Find ANWB's EV page through this link:

www.anwb.nl/auto/elektrisch-rijden/vakantie/met-een-elektrische-auto-naar-frankrijk

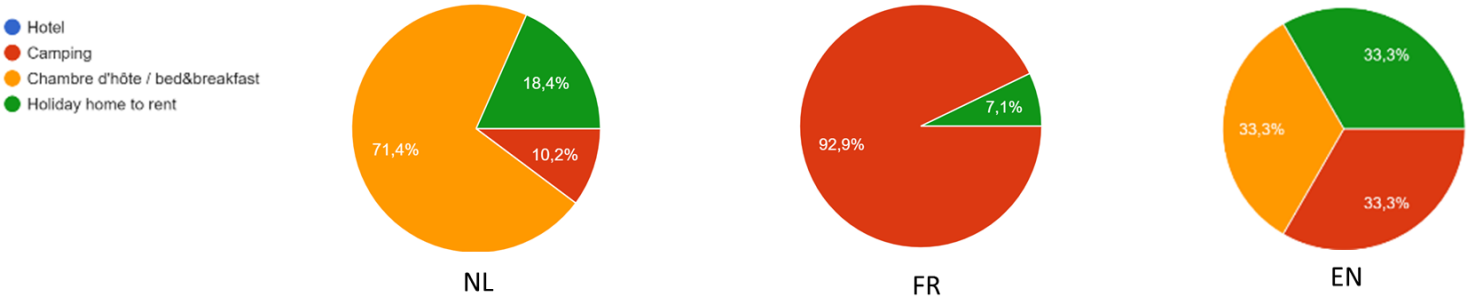
Find all relevant information about the webinar at our LinkedIn

Appendix 1 – Survey results

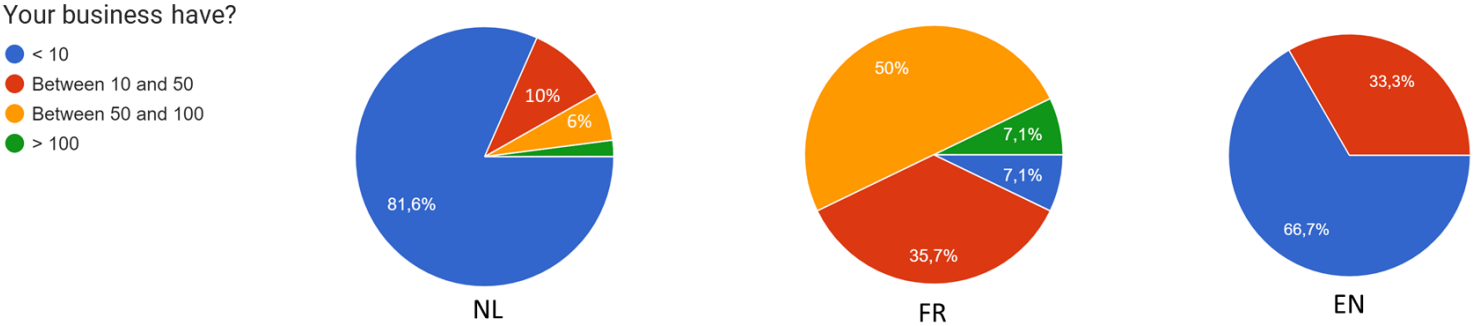
In which region are you located?



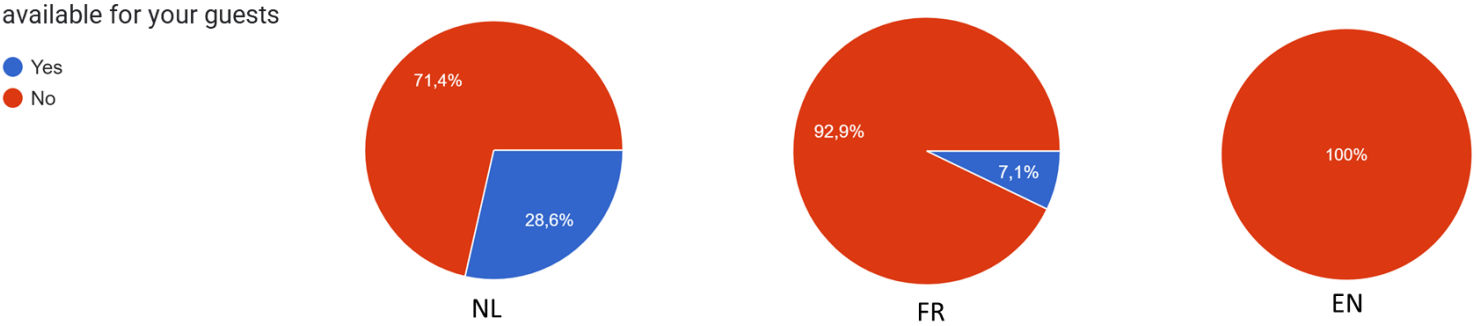
Type of accommodation:



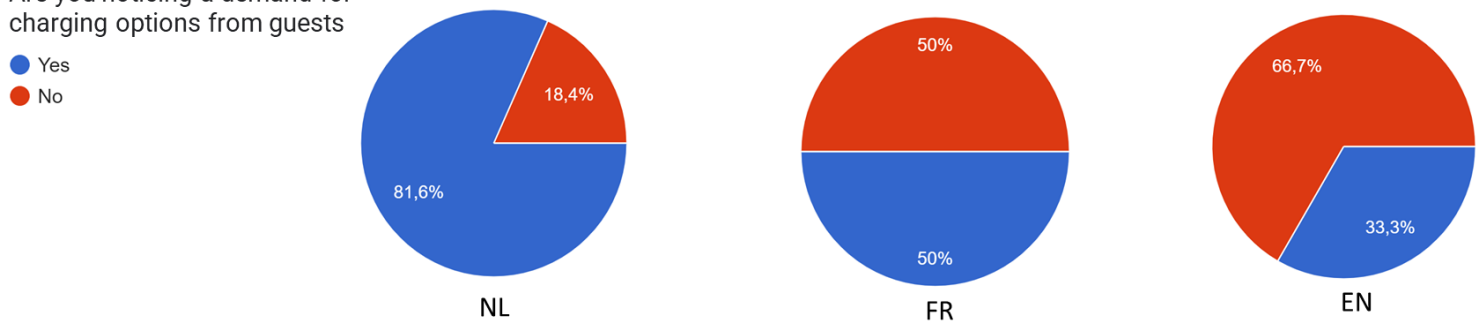
How many rooms/stands does Your business have?



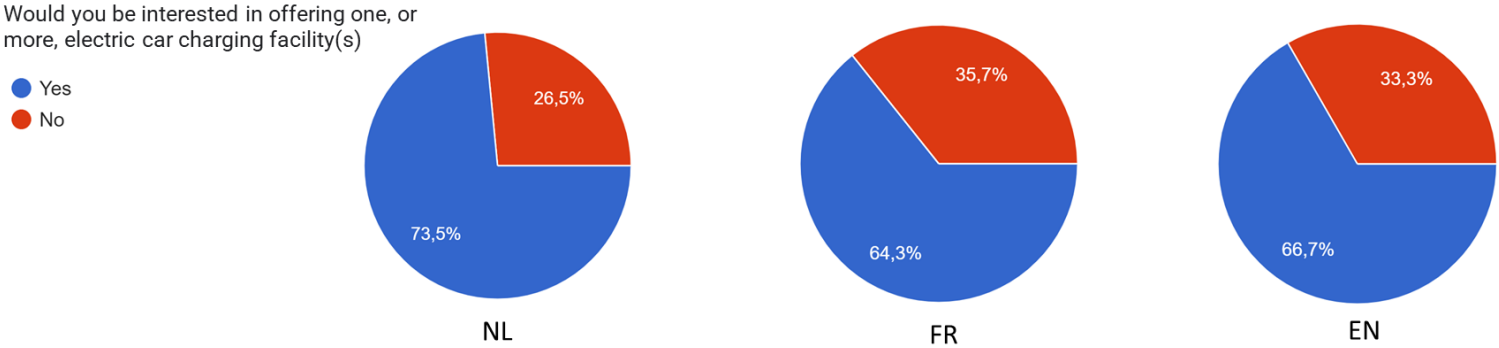
Do you have charging points available for your guests



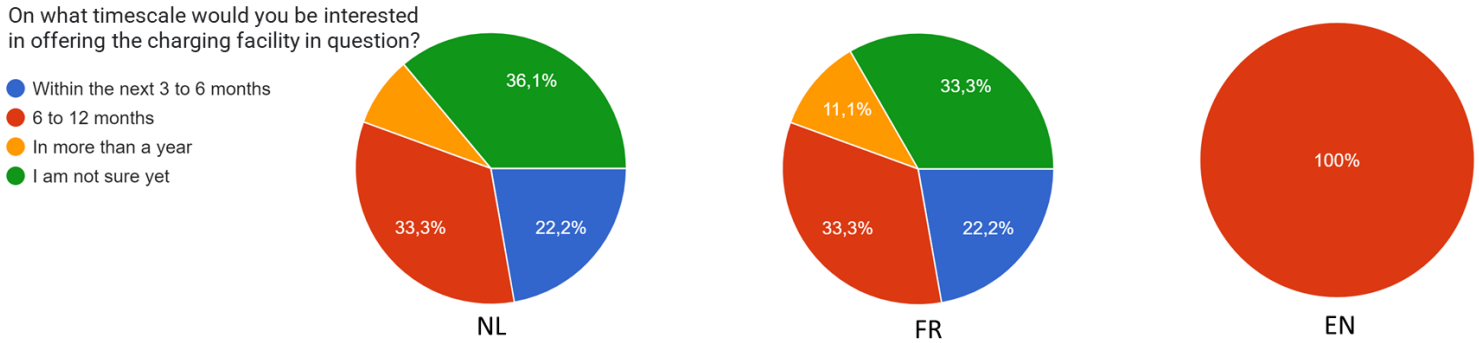
Are you noticing a demand for charging options from guests



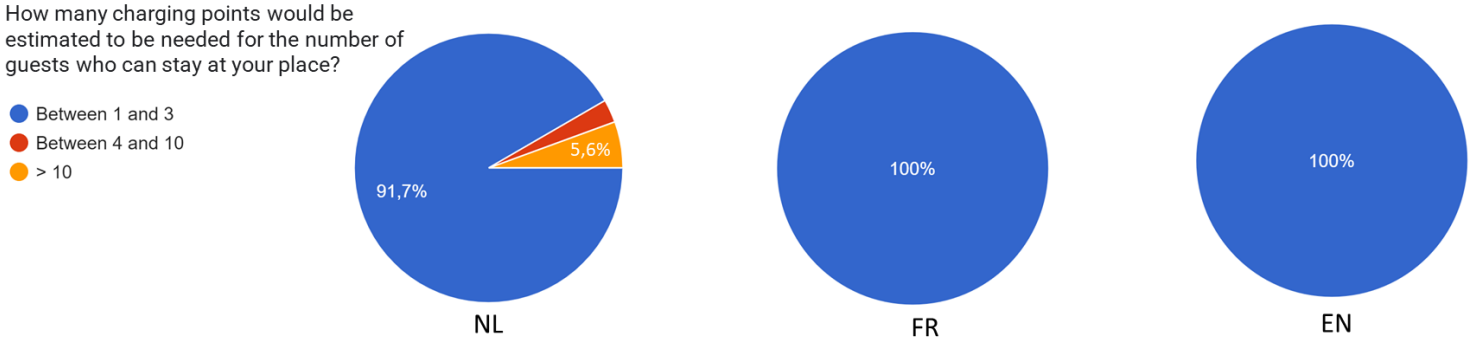
Would you be interested in offering one, or more, electric car charging facility(s)



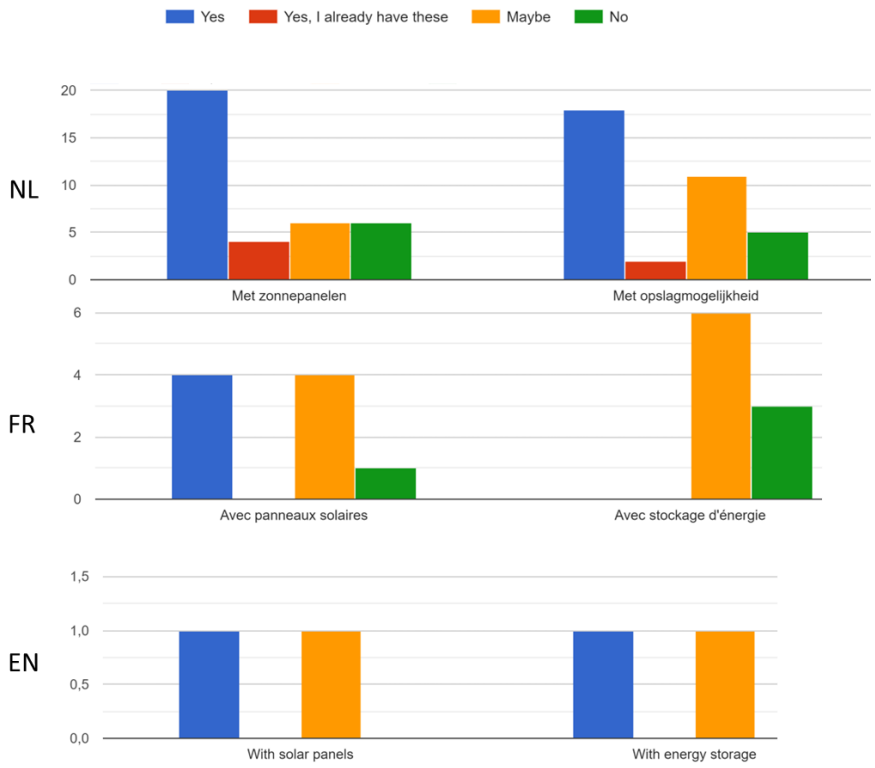
On what timescale would you be interested in offering the charging facility in question?



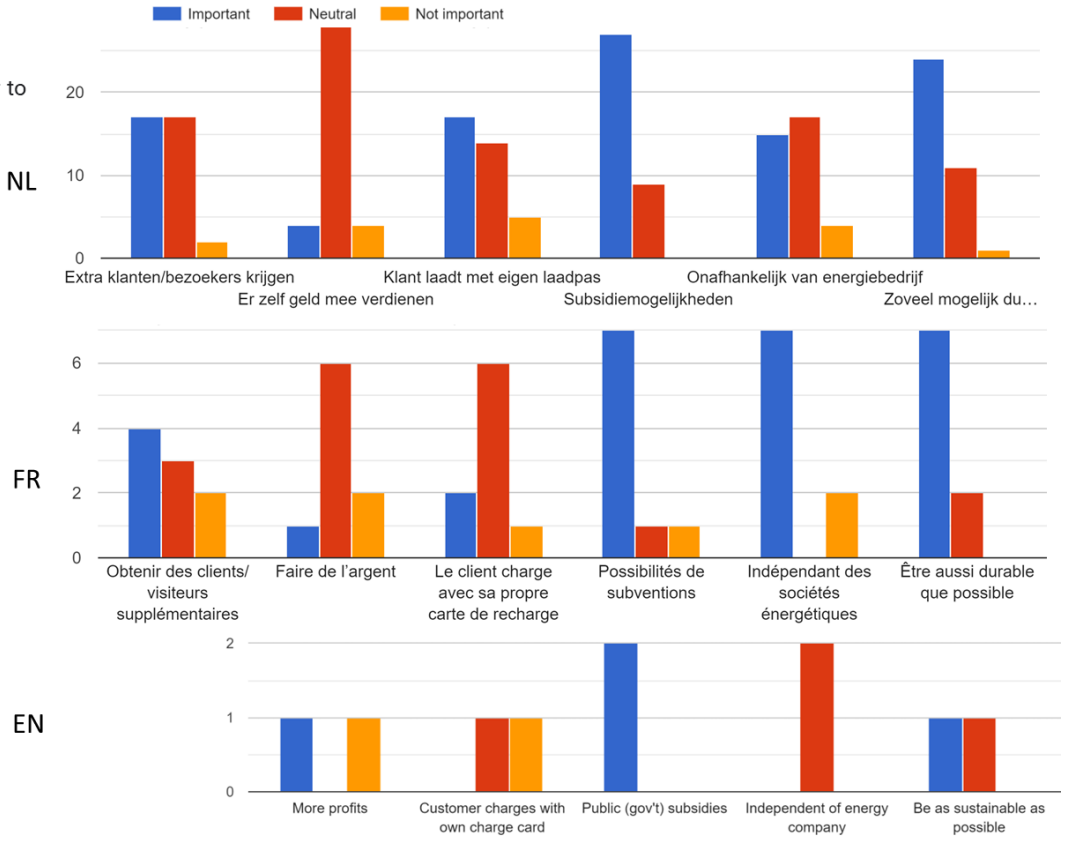
How many charging points would be estimated to be needed for the number of guests who can stay at your place?



Would you like to combine the investment in a charging facility with energy storage and/or solar panels?



What elements do you consider to be important ?



Awareness, knowledge of subsidy program ADVENIR and financing possibilities