



Press release

Case study on the barriers to topping up electric vehicles

Service desert e-mobility: Conventional card payment mostly impossible

Berlin, 08.09.2022: Topping up electric vehicles in Europe is a game of chance. At more than nine in ten charging stations, customers are unable to pay using their own debit or credit card. This is one of the findings of a case study conducted by KANTAR on behalf of the "Initiative Deutsche Zahlungssysteme" (IDZ). More than two-thirds of future electric vehicle drivers in selected European countries would prefer to pay for charging spontaneously and without data collection using their own bank card¹. In practice, however, consumers at public electric charging stations in Europe are forced to use closed-loop payment systems that often involve proprietary charging cards, apps or websites requiring prior registration. The IDZ and other players are joining forces to demand a consumer-friendly solution at a European level.

In many European countries, topping up spontaneously is impossible or is not customer-friendly. The payment process in many places is complicated and involves various barriers. This is one of the findings of a survey of the payment options offered by 61 charging station operators with a total of almost 30,000 publicly accessible charging stations in twelve European countries (Germany, the Netherlands, Italy, France, Austria, Sweden, Portugal, Spain, Poland, Slovenia, the Czech Republic and Greece). The survey covered operators in urban (40) and rural (21) regions.

Closed-loop payment systems dominant in Europe

55 of the charging station operators surveyed only offer closed-loop payment methods, such as proprietary charging cards, apps or websites that require prior registration. To receive a charging card, customers typically have to conclude a contract with the operator. Of the 59 charging station operators that offer payment using a charging card issued by them or one of their roaming partners, only 32 also include a static QR code on their charging stations to guide customers' smartphones to a website where they can pay once they have entered their payment details. This well-meaning service is susceptible to abuse because fake QR codes can be stuck over the original codes, allowing fraudsters to guide consumers to bogus websites and gather sensitive data or even intercept payments.

50 charging station operators also offer a proprietary charging app, although some of these require prior registration or a corresponding login before customers can begin the charging and payment process. Regardless of whether they use an app or a website, these payment processes are complicated and involve effort and barriers for consumers; drivers of electric vehicles need to have a smartphone and a stable Internet connection. The market research also found that apps and websites are often only provided in the respective national language and are rarely available in English, making it even harder for consumers to access the charging infrastructure. Furthermore, it was found that, in the vast majority of cases, the price per kilowatt-hour or per charge is significantly higher when paying by debit or credit card via an app or a website than when topping up with a proprietary charging card. This makes spontaneous charging especially unattractive for drivers of electric vehicles.

¹ Representative online survey of car owners conducted by infas quo on behalf of IDZ in Germany, France, Greece, the Netherlands, Poland, Sweden and Slovenia between September and November 2021. ([Source](#))



Only six of the charging stations surveyed – two in France and one in each of Germany, Austria, Sweden and Poland – allowed spontaneous payment by inserting a debit or credit card into a card terminal or using contactless payment.

Simple, standardised payment methods throughout Europe are crucial to acceptance of e-mobility

Broad-based acceptance of e-mobility in society depends on electric charging stations offering standardised, easily understandable and, above all, easy-to-use payment solutions. When it comes to topping up their electric vehicles, consumers need a reliable, well-developed charging infrastructure with conventional payment options like the ones they use at traditional filling stations or when paying for their everyday shopping – whenever their battery level requires it, and without having to search, book in advance, or make a detour. The results of the survey underline the familiar demands made by various players, including the German banking industry associations, leading municipal organisations in Germany, the ADAC, the German Federal Association of Electronic Cash Network Operators (BecN) and IDZ. Together, they are calling for spontaneous payment by debit and credit card via a payment terminal to be established as a minimum requirement for electric charging stations throughout Europe as part of the legislative process on the “Alternative Fuels Infrastructure Regulation” (AFIR).

More insights into the case study can be found [here](#).

About the survey

The results are based on a survey conducted by KANTAR on behalf of IDZ in May and June 2022. The countries included in the survey were Germany (10 charging station operators), Austria (9), France (8), Italy (6), Sweden (5), the Netherlands (4), Portugal (4), Spain (4), Poland (4), Slovenia (3), the Czech Republic (2) and Greece (2). The charging stations surveyed were located in cities (40) and rural regions (21). The selected countries include popular holiday destinations in Europe with different payment cultures and variations in terms of the maturity of their charging infrastructure. In all, the 61 operators have around 30,000 charging stations throughout Europe, most of which have 2 or 3 charging points per station. Information on the total number of charging stations was not available for four of the charging station operators included in the survey.

Data from the European Alternative Fuels Observatory (EAFO)

The number of publicly accessible charging points in the countries surveyed can be seen on the website of the European Alternative Fuels Observatory (EAFO). The EAFO is the European Commission’s key reference portal for alternative fuels, infrastructure and vehicles in Europe. The reference values for this case study are the figures for 2021.

Working together for mandatory acceptance of card payments at charging stations in Europe

The Initiative Deutsche Zahlungssysteme e.V. together with the associations of the German Banking Industry Committee, specifically the National Association of German Cooperative Banks (BVR), the Association of German Banks (BdB), the Association of German Public Banks (VÖB), and the German Savings Banks Association (DSGV), as well as the leading municipal associations – the Association of German Cities (DST), the German County Association (DLT) and the German Association of Towns and Municipalities (DStGB) –, the German General Automobile Club (ADAC) and the German Association of Electronic Cash Network Operators (BecN) call on the European legislator to establish spontaneous payment by debit and credit card via a terminal as a minimum standard at all e-charging stations throughout Europe as part of the revision of the Alternative Fuels Infrastructure Regulation (AFIR). A detailed position on the common demands within the framework of the AFIR can be found [here](#).

About the Initiative Deutsche Zahlungssysteme e.V.

The Initiative Deutsche Zahlungssysteme e.V. (German Payment Systems Initiative) based in Berlin, sees itself as a network for companies and institutions that accept cashless payment methods of the German credit industry or provide the necessary infrastructure. It bundles the interests of its members and represents them in relation to politics and the media. The association researches new application possibilities, initiates pilot projects, and supports existing activities of its members, especially in the areas of marketing, public relations, and public affairs. The German Payment Systems Initiative has been dealing with payments in Germany for fifteen years. More information can be found at www.Initiative-DZ.de.

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