

THE FUTURE OF E-CHARGING INFRASTRUCTURE: GERMANY

25 MARCH 2020 • ARTICLE



THIS ARTICLE IS PART OF A SERIES ON THE FUTURE OF E-CHARGING INFRASTRUCTURE IN THE EUROPEAN UNION AND UNITED KINGDOM.

In this piece we will discuss:

1. Overview of German E-mobility market
2. Legal Framework for construction and operating charging stations
3. What different business models do we see in the market

1. OVERVIEW OF GERMAN E-MOBILITY MARKET

The German Federal Ministry of Economics and Energy (*Bundesministerium für Wirtschaft und Energie* – BMWi) regards promoting electric mobility (“e-mobility”) as key to achieving climate-friendly transport.¹ It intends to establish Germany as a leading provider of and market for electric mobility.²

As of 1 October 2019, there were, according to the Federal Motor Vehicle Office (*Kraftfahrtbundesamt*), approximately 162,000 electrically powered and 482,000 hybrid vehicles on the roads in Germany.

As of early 2020, approximately 18,385 charging stations were open to the public in Germany. According to the German government’s “Master Plan for Charging Infrastructure”, an additional 50,000 public charging points are to be built over the next two years, with the long-term goal of a total of 1m by 2030.

To achieve this, significant investment will be required – a challenge that both private and public sector entities have taken up. Different market participants have started to invest in and build charging stations along German motorways, public roads and other publicly accessible places. The German State offers a variety of subsidies to facilitate and kick-start these investment opportunities.

2. LEGAL FRAMEWORK FOR CONSTRUCTING AND OPERATING CHARGING STATIONS

In Germany, the legal framework for constructing charging stations differs depending on where they are built on: (1) publicly accessible locations adjoining publicly owned roads; (2) privately owned land accessible to the public; or (3) privately owned land accessible to specified users.

I. WHAT IS LEGALLY REQUIRED TO CONSTRUCT A CHARGING STATION?

1) Publicly accessible locations adjoining publicly owned roads

If a charging station is being built on a public road, the applicable rules depend on its type. In Germany there are: (a) motorways subject to federal (national) laws and (b) federal state and municipal roads for which each federal state has its own regulatory regime.



a) Motorways

To service motorists' needs, German motorways provide both serviced (*bewirtschaftete Rastanlagen*) and unserved facilities (*unbewirtschaftete Rastanlagen*). Unserved facilities consist of parking spaces and sanitary facilities. In contrast, serviced facilities or so-called motorway service areas ("MSAs") can include petrol stations, restaurants, hotels and other amenities. The operation of charging stations is restricted to such MSAs. The right to construct and operate MSAs requires a public concession. The construction of charging stations may only begin once the formal consent (*Baufreigabe*) of the respective road construction authority (*Straßenbauverwaltung*) has been obtained.

b) Federal State and Municipal Roads

If charging stations are built on publicly accessible locations on federally or municipally owned roads, formal consent by the relevant authority is usually required (*Baufreigabe*). When granting or denying formal consent for building charging stations, relevant authorities consider several factors, such as compliance with zoning laws, ease and safety of traffic, the nature of the location in question, number of parking spaces, urban design principles (*städtebauliche Gestaltungsprinzipien*), accessibility of the charging station, expected frequency of use and environmental protection measures.

In addition, a special use permit (*Sondernutzungserlaubnis*) is usually required and often granted on a “first come – first serve” basis (though some municipalities have opted for a single designated supplier for charging stations in a specified area). Said permits can be limited in time.

Depending on the charging station’s location and how it is being built, other authorities may need to be involved. The Civil Engineering Office (*Tiefbauamt*) might need to approve underground works, while the Public Order Office (*Ordnungsamt*) might need to re-dedicate a specific parking lot and put up specific signs for the charging station. The Monument Protection Authority (*Denkmalschutzbehörde*) might even need to be involved if the charging station is located near a listed historic building.

If charging stations on public land are being built and/or operated by private individuals or companies, a land lease or other usage agreement with the owner (e.g. municipality etc.) is required.

2) Privately owned locations accessible to the public

In publicly accessible locations owned by private individuals or companies, such as supermarkets or parking lots, federal state construction laws usually allow the construction of charging stations without a permit, though local construction standards must still be respected. A special use permit is not required as the location is not public. If the operator of the charging station and the owner of the land on which the charging station is being constructed differ, usage rights for the land will also need to be agreed between both parties.

Owners and operators of charging stations must ensure their safety and that public traffic is not affected by the charging station or its use.³ For example danger to safety and ease of traffic flow may arise from unduly prominent advertising space on the charging station, or if vehicles are poorly positioned during the charging process.

3) Privately owned locations

Charging stations in privately accessible only locations of which the operator is also the owner do not usually require a formal permit under federal state construction laws. In such a case, a special use permit is also not required.

The German government has for some time aimed to create a legal framework for charging stations built on private land, with a draft of such now planned for the near future.⁴ Currently, tenants have no right to build private charging stations without the lessor’s consent while flat owners generally have no right to build a private charging station without the approval of the owners’ association of their building.

"When constructing and operating publicly accessible charging stations, the prerequisites of German and European competition law need to be observed."

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II. WHAT ARE THE LEGAL REQUIREMENTS FOR OPERATING A CHARGING STATION?

1) German Charging Station Regulation (*Ladesäulenverordnung*)

Germany's charging station regulation – the *Ladesäulenverordnung* ("LSV") – transposes into national law the European Directive on the development of infrastructure for alternative fuels (EU Directive 2014/94/EU). In line with the directive, the LSV regulates for minimum technical requirements for the safe and inter-operable construction and operation of publicly accessible charging points, as well as other related matters such as authentication usage and payment.

Under the LSV, all charging station operators are obliged to provide every electric vehicle user with the option of ad-hoc charging outside of an ongoing customer relationship. This applies to all charging stations installed since December 2017. Either payment by cash, online payment or debit/credit cards must be available options if charging is not free.

The LSV also requires that the construction and decommissioning of public charging stations must be notified to the German Federal Network Agency (*Bundesnetzagentur* – BNetzA). In the case of fast charging stations, compliance with the technical requirements stipulated in the LSV must also be proven.

The LSV does not apply to charging stations that are only privately accessible.

2) Tariffs and Metering

As of 1 April 2019, tariff structures that are purely based on charging time are no longer permissible in the opinion of the Federal Ministry for the Economy. This view is based on the Quotation of Prices Ordinance (*Preisangabenverordnung*), which requires prices for electricity to be stated based on kWh. However, pricing models which include a time-based "parking fee" in addition to a fee per kWh remain permissible.

Publicly accessible charging stations must have calibrated metering devices under German metrology and calibration law (*Mess- und Eichrecht*).

3) Energy law

The Energy Industry Act (*Energiewirtschaftsgesetz* – EnWG) states that charging station operators be treated as the final consumers. This means that operators as final consumers must pay grid fees but are not subject to the regulatory duties of grid operators and are free to choose their electricity supplier.

Other regulations however, especially in the Renewable Energy Act (*Erneuerbare-Energien-Gesetz* – “EEG”), require charging station operators to be seen as electricity suppliers, meaning they must pay the statutory EEG surcharge on electricity, as well as comply with certain notification requirements under the Renewable Energy Act.

Changes to the energy law framework for charging stations are expected in 2020. This is especially the case as EU Directive 2019/944 (5 June 2019) on common rules for the internal market for electricity requires that distribution system operators shall in principle not own, develop, manage or operate charging stations for electric vehicles. The relevant provisions of the directive must be transposed into German law by the end of 2020, and these new rules may be expected to create additional opportunities for private developers and investors.

4) Public procurement and competition law

If projects for the development of charging infrastructures are initiated by local authorities or municipal utilities themselves, it can be assumed that the planning, construction and operating services will generally be put out to tender. If the relevant thresholds are exceeded, a Europe-wide tendering procedure is required in accordance with the provisions of the Act against Restraints of Competition (*Gesetz gegen Wettbewerbsbeschränkungen*), the Public Procurement Ordinance (*Vergabeverordnung*) and the Public Procurement and Contract Regulations for Construction Works (*Vergabe- und Vertragsordnung für Bauleistungen*). Otherwise, a selection procedure with only national notification is permissible in accordance with the provisions of the Subthreshold Awarding Regulation (*Unterschwelvenvergabeordnung*) and the Awarding and Contract Regulations for Construction Works (*Vergabe- und Vertragsordnung für Bauleistungen*).

If local authorities or municipal utilities entrust a third party with the construction of charging infrastructure, a works or service concession can be assumed under certain conditions. An award procedure in accordance with the provisions of the Concession Award Regulation (*Konzessionsvergabeverordnung*) is only necessary if the relevant thresholds are reached or exceeded. Below the thresholds, there is no mandatory legal framework, so a competitive selection procedure is generally sufficient.

There is some discussion on whether or not long-term exclusivity regarding suitable spaces for charging stations might infringe German (and possibly EU) competition law, especially where a municipality chooses one provider to develop an entire charging network in its area. One could argue that efficiency gains outweigh any restraints of competition⁵, although as far as we are aware, this has not yet been tested in court.

"charging electric or hybrid electric vehicles free of charge at the place of work is exempt from any taxation, e.g. income tax"

III. ARE THERE ANY SUBSIDIES OR TAX INCENTIVES TO MOTIVATE CONSTRUCTION OR OPERATION OF CHARGING STATIONS?

1) Subsidies

Since 2017, an incentive programme courtesy of the Funding Directive for Charging Infrastructure for Electric Vehicles (*Förderrichtlinie Ladeinfrastruktur für Elektrofahrzeuge in Deutschland*)⁶ has been inaugurated by the German government to help establish a nationwide charging infrastructure. The aim is to set up at least 15,000 charging stations by the end of 2020, for which the German government is

providing €300m between 2017 and 2020.⁷

In addition, some federal states have introduced funding frameworks for the development and operating of charging infrastructure, which supplement the governmental funding programme and can be regarded as co-financing. For example, the Funding programme for charging infrastructure for electric vehicles in Bavaria (*Förderrichtlinie Ladeinfrastruktur für Elektrofahrzeuge in Bayern*)⁸.

The German Federal Bureau for Administrative Services (*Bundesanstalt für Verwaltungsdienstleistungen – “BAV”*), which grants the above subsidy, offers private investors, cities and municipalities subsidies for the expansion of normal and fast charging infrastructure accessible to the public. As part of this, the BAV calls for tenders and grants subsidies to the projects with the lowest subsidy cost per kW charging capacity. Said application is made online.⁹ So far, there have been four calls for tender. In all four tenders there were sufficient applicants to distribute the full amount of tendered subsidies.

Pursuant to the Funding Directive for Charging Infrastructure for Electric Vehicles, charging point operators undertake to run charging stations for a minimum period of six years. The electricity required must – verifiably – be generated from renewable energy sources or from locally generated regenerative electricity. Access to the charging stations should be possible 24 hours a day, seven days a week, otherwise the subsidy will be reduced. And on working days, access must be guaranteed for at least 12 hours. Furthermore, the charging station must comply with the requirements of German Metrology and Calibration Law (*Mess- und Eichrecht*).

The state-owned development bank KfW (*Kreditanstalt für Wiederaufbau*) offers companies credit for financing environmental protection measures of up to €10m per project. Environmental protection measures explicitly include charging projects. Therefore, projects both in Germany and in other countries can receive this support.¹⁰

The European Investment Bank (“EIB”) grants funding for environmental protection projects of more than €30m. As KfW does, the EIB also regards charging projects as environmental protection projects.¹¹

Apart from these national and international funding options, in some Federal States (*Bundesländer*) subsidy programmes have been introduced either directly or through municipal authorities or Federal State banks (*Landesbanken*).¹²

2) Tax incentives

The German government has established tax incentives to motivate the further expansion of electric mobility. These tax incentives are mainly focussed on electric vehicles, e.g. electric vehicles which are newly registered before the end of 2020 are exempt from vehicle tax (*KfZ-Steuer*) for ten years.¹³

Charging infrastructure is also treated favorably from a tax perspective. The main point to note here is that charging electric or hybrid electric vehicles free of charge at one’s place of work is exempt from any taxation, e.g. income tax.¹⁴ This tax incentive was recently extended until 2030.

Under the electricity tax law, the charging point operator is considered to be the end consumer.¹⁵ Customers do not therefore pay electricity tax.¹⁶



3. WHAT DIFFERENT BUSINESS MODELS DO WE SEE IN THE MARKET?

There are three key players in the operation of publicly accessible charging stations: the e-mobility provider (“EMP”), the charge-point operator (“CPO”) and the electricity supplier.

EMPs serve as the service providers for users of the charging station. This includes, for example, issuing charging cards and/or providing mobile applications through which users can identify themselves at the charging stations in order to start the charging process. As contracting parties to the charging station users, EMPs are also responsible for defining pricing models for the use of the charging station and the settlement of charging processes with their customers. Often EMPs are energy suppliers or car manufacturers with an existing e-mobility-related customer base. In principle, however, any other service provider or CPO may act as an EMP.

CPOs are usually responsible for the construction, operation and maintenance of charging stations and ensuring electricity is available once they are operational. There can be instances where the investor who constructed and owns a charging station is not the same person or entity as the CPO, e.g. in cases where the CPO operates a charging station through a lease or similar agreement with the investor.

Electricity suppliers are responsible for providing electricity at charging stations, usually as contracting partners to CPOs.

Each time a vehicle owner uses a charging station for charging their vehicle, they are charged an agreed fee by the EMP as their contracting partner for said charging process. The EMP itself is charged an agreed fee – usually lower than the fee charged to the vehicle user – by the CPO operating the charging station (as contracting partner to the EMP) for said charging process.

Apart from these three key players, there may be several others with differing business models also involved in operating publicly accessible charging stations, e.g:

- providers of (strategically attractive) spaces to CPOs for the construction and operation of charging stations (on the basis of lease or similar agreements); and

- operators for software-based e-mobility services platforms that connect CPOs with EMPs (on the basis of usage agreements with the CPOs and EMPs).

DISCLAIMER

Please note that this briefing is not exhaustive of all legal aspects that may be relevant in this context and cannot replace legal advice in a specific situation.

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¹ <https://www.bmwi.de/Redaktion/DE/Dossier/elektromobilitaet.html>

² <https://www.bmwi.de/Redaktion/DE/Dossier/elektromobilitaet.html>; NPE.

³ C.F. sec. 49 para. 1 Model Building Code (Musterbauordnung – MBO).

⁴ Rodi/Hartwig/Pfeifer, IR 2019, 26 (26).

⁵ Scholtka/Kneuper, IR 2020, 6 (7).

⁶ In conjunction with sec. 23 and 44 German Federal Budget Code (Bundeshaushaltsordnung) as well as the general administrative provisions (Allgemeine Verwaltungsvorschriften) adopted to that.

⁷ <https://www.bmvi.de/SharedDocs/DE/Artikel/G/foerderrichtlinie-ladeinfrastruktur-elektrofahrzeuge.html>

⁸ Förderrichtlinie Ladeinfrastruktur für Elektrofahrzeuge in Bayern, Bekanntmachung des Bayerischen Staatsministeriums für Wirtschaft und Medien, Energie und Technologie vom 14. Juli 2017, Az. 62-3467/2/2

⁹

https://www.bav.bund.de/DE/4_Foerderprogramme/6_Foerderung_Ladeinfrastruktur/2_Antragsverfahren/Antragsverfahren_node.html

¹⁰

[https://www.kfw.de/inlandsfoerderung/Unternehmen/Energie-Umwelt/Finanzierungsangebote/Umweltprogramm-\(240-241\)/](https://www.kfw.de/inlandsfoerderung/Unternehmen/Energie-Umwelt/Finanzierungsangebote/Umweltprogramm-(240-241)/)

¹¹ <https://www.eib.org/de/products/advising/elena/index>

¹² <https://www.stmwi.bayern.de/service/foerderprogramme/ladeinfrastruktur/>;

<https://www.nrwbank.de/de/foerderlotse-produkte/NRWBANKElektromobilitaet/15187/nrwbankproduktdetail.html>

¹³ Act on the Tax Promotion of Electric Mobility in Road Traffic (Gesetz zur steuerlichen Förderung von Elektromobilität im Straßenverkehr)

¹⁴ <https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Steuern/2019-07-31-steuerliche-foerderung-elektromobilitaet.html>;

C.f. sec.3 nr.46 Income Tax Act (EStG)/sec.40 para.2 nr.6 Income Tax Act (EStG).

¹⁵ C.f. sec.1a para.2 Ordinance on the Implementation of the Electricity Tax Act (StromStVO).

¹⁶ Source: VDE Study “Ad-Hoc Laden und spontanes Bezahlen”.

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