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PRESS INFORMATION

# A wide range of charging solutions: Audi makes it easy to experience e-mobility

- Charging at home: information, advice, and installation services for Audi charging solutions
- Charging on the road: Audi charging will launch on January 1, 2023, and is set to replace the e-tron charging service in the future
- Brand with the four rings actively supporting the expansion of green power

Ingolstadt, November 22, 2022 – Whether it's charging options at home, route and range planning, or the multitude of different providers and access to charging stations on the road, e-mobility raises questions that confront newcomers to the world of electric vehicles. As a premium supplier, Audi takes a holistic approach and has had its customers' needs in the field of electric-powered mobility in mind since the launch of the Audi e-tron\* in 2019. For example, when it comes to home charging solutions, Audi advises customers and even arranges an installation service upon request. In addition, Audi has access to more than 400,000 charging points across Europe through its forthcoming Audi charging, which will be launched in 2023, and is committed to expanding the use of green power. Furthermore, IONITY – in which Volkswagen, with its Porsche and Audi brands, has a stake – continues to expand its charging network in Europe. An overview.

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The equipment, data and prices specified in this document refer to the model range offered in Germany. Subject to change without notice; errors and omissions excepted.

<sup>\*</sup>The collective fuel/electric power consumption values of all models named and available on the German market can be found in the list provided at the end of this press information.



## 

## 1. Good-to-go service

Is my home suitable for a wall box? What kind of power supply does the system require? And who will install the charging station for me? Newcomers to the world of electric cars inevitably face these questions. Since the introduction of the Audi e-tron\* in 2019, the company has offered customers a comprehensive range of related services – starting with the question of the right charging solution, followed by an on-site assessment by an Audi-authorized electrician, and ending with the system's professional installation.

#### **Audi Mobility Check**

The <u>Audi Mobility Check</u> allows prospective customers to quickly and easily determine online how well their home with a parking space is equipped for e-mobility. The process only requires them to enter a few pieces of information – relating to the Audi model they own, the available parking space, and the existing power supply, for example. The online assistant then suggests suitable charging services and solutions. Audi also recommends having the home's electrical system individually reviewed by a professional electrician – a service known as the Home Check.

#### **Home Check**

The Home Check involves a professional inspection of a home's electrical systems with respect to their suitability for charging an EV at home. In Germany, Audi's partner "The Mobility House" makes it quick and easy to find a local Audi-authorized electrician. The experts advise potential customers on existing charging options, but also provide qualified information on the best possible charging solution with the ideal charging time and costs. It is normally also possible to integrate existing solar panels into the system. If the contractor recommends modifications to the home's electrical system, they will prepare an individual quote for this service upon request.

#### **Installation Service**

As part of the installation service, electrical specialists review the options available on site with regard to the placement of the Audi wall box and, in consultation with Audi customers, select a suitable installation location. The service also includes registering the wall box with the local utility company, professional installation, bringing the system into operation, and testing it.

## Comprehensive information on all of these services can be found here:

https://www.audi.co.uk/uk/web/en/electric/charging.html

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#### 2. Charging at home

Connect the charging cable, charge your electric car overnight, and start the day with a full battery in the morning – this is both convenient and hassle-free with Audi's comprehensive charging solutions. The range of solutions extends from mobile charging systems for charging via wall sockets to permanently installed Audi wall boxes from VW subsidiary Elli to complete home energy management systems from SMA Solar Technology AG or the Hagar Group that intelligently control the communication between all of a home's energy-relevant devices. All this is, of course, available on request with green power from Elli.

#### Three Audi wall box models

Available with different functionalities, the Audi wall box models deliver up to 11 kW of charging power, making them the perfect charging solution for a wide range of applications at home. The entry-level model – the Audi wall box – comes with a built-in charging cable. The Audi wall box plus can be controlled and monitored via an app. Other features include a built-in charging cable and a security function to prevent unauthorized charging.

The Audi wall box pro, which can also be controlled via app and is equipped with a MID-certified (MID: Measuring Instruments Directive), calibrated power meter, is particularly recommended for people who drive a company car. The Audi wall box pro and Audi wall box plus allow customers in Germany to benefit from a subsidy of 900 euros from a KfW subsidy program. The exact requirements of the subsidy program can be found on the KfW website. The Home Check and installation service for all wall box models include a professional inspection of the home's electrical system as well as the installation and initial setup of the wall box.

#### e-tron charging system compact

The mobile e-tron charging system compact consists of a control unit including a power cable that plugs into the vehicle and two power cables that plug into the wall – one with a standard household plug and one with an industrial plug. For a fast charging experience, Audi generally recommends using an industrial socket. The e-tron charging system compact charges all-electric vehicles with up to 11 kW and plug-in hybrids with up to 7.4 kW. Users can manually switch between 100 and 50 percent charging power on the control unit to avoid potentially overloading the home's electrical system. Users can see the status of the charging system and the charging process at a glance via the LEDs on the e-tron charging system compact's control unit.

Comprehensive information on the wall boxes and the e-tron charging system compact can be found here: <a href="https://www.audi.co.uk/uk/web/en/electric/charging.html">https://www.audi.co.uk/uk/web/en/electric/charging.html</a>

#### e-tron charging system connect

The e-tron charging system connect is designed to deliver up to 22 kW of power (depending on the vehicle). Designed for use with standard power outlets, it can also be used as a mobile unit. The e-tron charging system connect includes a control unit with a 5-inch touch display and comes with a wall mount.

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Thanks to online connectivity via Wi-Fi, the system can be conveniently controlled from a mobile device via the myAudi app. In addition, feature updates are also possible. In conjunction with a compatible Home Energy Management System (HEMS, see below), the e-tron charging system connect offers additional intelligent features. For example, it is possible to take the power requirements of other appliances in the home into account and charge the vehicle with the best possible use of the remaining power to avoid overloading the electrical system. This process is dynamic and is carried out on the basis of the power drawn by other electrical devices. In addition, users can set their own priorities using the control system in the myAudi app – for example, charging at low-cost times with a variable-rate electricity plan. If the home is equipped with solar panels, users can opt to prioritize charging the car with self-generated power. Forecast periods of sunshine are taken into account when planning the charging process. Other features include the ability to track the use of charging power and a PIN code to protect against unauthorized use.

## Please visit the following links for more information:

https://www.audi-mediacenter.com/en/press-releases/audi-further-improves-the-e-tron-product-lineac-charging-with-22-kw-of-power-greater-driving-convenience-13361 https://www.audi.co.uk/uk/web/en/electric/charging.html

## **Home Energy Management System**

To take full advantage of the e-tron charging system connect, Audi recommends using a compatible Home Energy Management System (HEMS). The system connects an all-electric Audi model with the owner's smart home and all of the data flows into the control center, allowing every energy-relevant device to communicate with each other about its current power requirements. To guarantee compatibility, Audi relies on the universal EEBUS protocol and has teamed up with two strong partners – Audi customers can choose between a HEMS from the Hager Group and a HEMS from SMA Solar Technology.

#### Please visit the following links for more information:

https://www.audi-mediacenter.com/en/press-releases/audi-promotes-eebus-standard-for-intelligent-connection-of-electric-cars-and-buildings-11256
https://www.audi.co.uk/uk/web/en/electric/charging.html

#### Green electricity plans from Elli

Audi customers can take advantage of the attractive green electricity plans offered by the provider Elli to charge their cars at home. For more information, see the "Green power" section.

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#### 3. Charging on the road

Countless different providers with a variety of card-based or app-based billing models make public charging confusing and inconvenient for consumers.

Audi has created simple solutions and attractive options to provide its customers a premium emobility experience – such as Audi charging. In this case, a large number of charging point operators are bundled into a single contract.

#### e-tron Charging Service

Audi's e-tron Charging Service is a premium offering that makes charging simple and straightforward. Through its charging service, the brand with the four rings unlocks access to 300,000 charging points from over 500 providers in 26 EU countries. Whether AC or DC charging, eleven or up to 350 kW – users can start the charging process with a single card. Many charging points can also be activated simply by using a smartphone to scan a QR code with the myAudi app. All that users need to do ahead of time is complete the one-time sign-up process for the e-tron Charging Service in the myAudi portal and select the charging plan that best suits their individual needs. All charging sessions are then automatically billed collectively at the end of the month. Users can view their current charging history and invoices and manage their plan at any time via the myAudi portal. Other benefits of the e-tron Charging Service include the preferential terms when using the IONITY network's high-power charging (HPC) points with up to 350 kW - charging only costs 31 cents per kilowatt-hour on the Transit plan, which is equivalent to the cost of charging at home in Germany. Customers with an all-electric e-tron model can even charge for the first year without paying a monthly account maintenance fee. This makes the e-tron Charging Service a real alternative for customers who are either unable or cannot charge quickly enough at home. In addition, the local rates also apply abroad without any extra charges.

#### Please visit the following link for more information:

https://www.audi-mediacenter.com/en/press-releases/mobility-without-boundaries-audi-e-tron-charging-service-completes-range-of-charging-options-10689

## e-tron route planner

In the battery electric models, the Audi e-tron route planner complements the Audi MMI's familiar navigation features and helps to optimally manage the demands of e-mobility, especially when driving medium and longer distances. It calculates the fastest route, takes traffic and route data into account, considers the driver's driving style, calculates how long it will take to charge the vehicle, and includes it in the total driving time. Users are also shown basic information such as the charging power or charging connections and the plug type of the respective charging points. The system also dynamically displays availability, such as whether charging stations are available or occupied. The focus is always on reaching your destination quickly. For example, two short stops to charge at a station with high-power charging points can save time compared to one long stop at a charging station with lower power charging points. Alternative routes with better charging infrastructure are also considered when calculating the ideal total travel time.

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The Audi e-tron route planner gives preference to the high-performance HPC charging stations. In the Audi e-tron GT quattro\*, battery preconditioning is activated automatically. Thanks to this feature, the battery is always at its ideal temperature at the start of the charging session in order to fully utilize the available charging power. HPC charging stations can charge the high-voltage battery in the car with up to 270 kW of direct current (DC). Under ideal conditions, charging from five to 80 percent takes only a little longer than a coffee break; in the case of an Audi e-tron GT quattro\*, for example, it takes around 23 minutes. After charging is complete, a push notification via the myAudi app reminds the driver when the ideal target charge level has been reached so that they can continue their journey.

## Please visit the following link for more information:

https://www.audi-mediacenter.com/en/press-releases/intelligent-assistant-for-electric-driving-the-audi-e-tron-route-planner-13302

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## Plug & Charge

"Plug & Charge" (PnC) refers to the ability to easily and securely charge an EV without an RFID (radio frequency identification) card, a contactless chip card, or even an app. The authentication process takes place automatically at compatible charging stations via encrypted communication as soon as the charging cable is connected to the vehicle. Charging begins a few seconds later and billing is handled automatically on the basis of the Audi charging contract – or, until the end of 2023, the Audi e-tron Charging service contract – on file. Audi will be offering this particularly premium form of charging exclusively on the IONITY network starting in December 2021. To use this system, drivers must have an Audi e-tron\* model capable of Plug & Charge (a new model with production date after calendar week 48/2021) and an active Audi charging contract. Simply activate the Plug & Charge feature in the myAudi app as well as in the MMI of the e-tron model and you are good to go – charging begins automatically after a brief authentication process as soon as the charging cable is plugged in and ends again when unplugged.

#### IONITY

IONITY, Europe's largest open HPC network spanning 26 countries, is investing 700 million euros in its fast-charging network. The joint venture in which Volkswagen, with its Porsche and Audi brands, has a stake will increase the number of high-performance 350 kW charging points from more than 1,500 at present to around 7,000 by 2025. In addition, they are no longer being built only along freeways, but also near major cities and along busy main roads. As a result, the number of charging locations is also increasing from just under 400 at present to more than 1,000. In addition, IONITY plans to expand many of the existing locations – depending on their utilization levels. New sites will be designed with six to twelve charging points right from the beginning. This significantly reduces charging and waiting times for Audi customers. In addition, the company plans to acquire more of its own land in order to build and operate service stations. Through covered charging stations or complete charging facilities including dining options and stores, IONITY wants to significantly enhance the customer experience.

For the first time, IONITY shareholders include a company from outside the automotive sector, the financial investor BlackRock.

BlackRock, headquartered in New York, operates globally and, through its Global Renewable Power platform, invests specifically in sustainable industries and companies with the highest possible growth potential.

### Please visit the following link for more information:

https://www.audi-mediacenter.com/en/press-releases/more-than-5000-new-fast-charging-points-by-2025-massive-expansion-by-ionity-strengthens-audis-charging-offering-14388

#### Audi charging hub

A welcome break instead of a burdensome chore – with reservable HPC charging points and a directly adjacent lounge area with snacks, drinks, and non-food items, the Audi charging hub transforms the time spent charging into a premium experience. Thanks to the use of what are known as second-life modules – battery cells taken from dismantled development vehicles – the

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Audi charging hub is not only extremely sustainable. Another major advantage lies, above all, in their capacity as buffer storage for direct current. This eliminates the need for a complex infrastructure with high-voltage power lines and expensive transformers. A supply of 220 kW of power from the grid is sufficient for the 2.45 MWh battery storage system and its six charging points in Nuremberg, each with a capacity of up to 300 kW. Solar panels on the roof provide additional green energy. The technology and modular design of the buildings not only make it easier to select possible locations, but also reduce the time required for planning, thereby cutting costs and conserving resources. The pilot site for the first Audi charging hub opened at the end of 2021 in Nuremberg at the NürnbergMesse exhibition center.

A second Audi charging hub has been in operation at the entrance to the Messe Zürich parking garage since November 2022. The compact version has four covered charging points at two power cubes. The smaller footprint is designed specifically for urban locations. An essential component of the adaptable, compact concept is the reworked swivel arm that ensures barrier-free charging of all the cars across the entire width of the individual charging points with up to 320 kW of power. The operating displays at the charging points are height adjustable and clearance between cubes and cars has been designed to accommodate wheelchair users. In addition, two 55-inch screens draw attention to, among other things, the extensive service landscape around the hub – including numerous food and fitness offerings as well as an e-bike sharing service in the immediate vicinity. The Audi charging hub in Zürich also features a modular design that makes it possible to install different sizes of charging hubs with and without lounges. After Zürich, Audi plans to open further locations. Three compact versions like the site in Zürich will be installed in Berlin, Munich, and Salzburg. Additional sites in large German cities will help meet the increased charging demands in urban spaces starting in 2023. Audi also plans to open eight more locations in German cities by mid-2024.

#### Supercharging stations in China

In China, the first series of 20 stations with a total of 60 charging points will be installed in Beijing, Shanghai, Guangzhou, and Shenzhen by the end of 2022. The stations support fast charging with a capacity of up to 480 kW, a maximum voltage of 1,000 volts, and a maximum amperage of 500 amps. More cities and locations will follow. The stations are branded in the Audi brand design and integrated into the Audi MMI navigation system. The introduction of Audi supercharging stations coincides with the launch of the Audi RS e-tron GT\* in China. Using their advanced technologies, Audi is aiming to have the supercharging stations meet the charging needs of all models in the Audi e-tron family by 2025.

#### Please visit the following links for more information:

https://www.audi-mediacenter.com/en/press-releases/audi-pilots-concept-for-quick-charging-13977

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## 4. Green power

Electric cars do not emit carbon on the road, but the generation of electricity also produces carbon emissions – far more when the power is generated from fossil fuels than from renewable energy sources. As a result, Audi will be directly working to expand the use of green power in the future. Elli and IONITY already supply green power for charging at home and on the road.

#### Audi partnership with electricity providers for more green power

Audi aims to become a provider of carbon-neutral mobility and reduce the carbon footprint of its fleet by 30 percent over its life cycle by the year 2025. As such, not only has the use of green power been a mandatory component of supplier contracts with HV battery cell manufacturers since 2018, but all of Audi's European production sites exclusively source green power. In addition, the company has partnered with electricity suppliers to drive the expansion of renewable energy sources for the power needs of the Audi e-tron fleet during the utilization stage. In this context, Audi has joined forces with several partners to build new wind and solar farms in various European countries by 2025, which together will generate around five terawatt hours of additional green electricity. This corresponds to an installed capacity of about 250 new wind turbines. The objective is to increase the share of electricity our partners generate from renewable sources in conjunction with an additional increase in the share of electric cars on the road. The partnership with energy suppliers is also intended to cover charging processes that aren't yet carried out with green power today.

## Please visit the following links for more information:

https://www.audi-mediacenter.com/en/press-releases/partnership-with-energy-providers-audi-funding-expansion-of-renewable-energy-to-increase-the-number-of-charging-stations-in-europe-that-use-green-power-14025

https://www.audi-mediacenter.com/en/press-releases/audi-at-the-2021-greentech-festival-2021-sustainability-along-the-product-life-cycle-14038

#### Green power solutions by Audi

Audi customers can use the green power solutions offered by Volkswagen subsidiary Elli. For charging on the road, the IONITY charging network and many other charging point operators already rely on green power.

#### Please visit the following link for more information:

https://www.elli.eco/de/naturstrom https://www.elli.eco/en/home

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## 5. Charging tips

As the heart of the electric car, Audi's high-voltage batteries are designed for premium quality, safety, and a long service life. Normal aging processes, however, reduce the battery's capacity over this service life. Charging and usage behavior can have a significant impact on battery life. That's why Audi provides tips on how to properly operate electric cars.

#### Long and short distances

Regularly charging to 100 percent puts more stress on the battery and can accelerate the aging process. This causes the available battery capacity to decrease at a comparatively faster rate. This is why the brand with the four rings recommends charging up to a maximum of 80 percent if the electric Audi is mainly used for short trips. When going on longer trips, on the other hand, the maximum battery capacity should be fully utilized to extend the car's range – but only shortly before the start of the journey to prevent a gradual loss of power. Audi also recommends fast charging (high power charging with over 100 kW) primarily when traveling long distances. If the car frequently goes unused over the course of the day, the battery's charge level should ideally be kept between 30 and 80 percent – not too full to accelerate the aging process, but not too low to have too little range or even be forced to stop unintentionally.

#### Features of an electric Audi that can be tailored to individual needs

An upper limit for the maximum battery charge can be configured in the myAudi app and in the vehicle. When used primarily for short trips, Audi recommends setting this to 80 percent. For longer distances, it should be set to 100 percent in order to achieve the greatest possible range.

Using the charging timer, users can set the exact time of departure – directly in the vehicle or via the myAudi app. This will ensure that the automatic charging process charges the battery to the preset level as close as possible to the departure time. In addition, preconditioning adjust the temperature of the vehicle interior to the desired level prior to departure. While the charging timer is primarily for convenience during short trips, Audi recommends setting the departure time during long trips to avoid idle times with a full battery.

The "efficiency" driving mode results in lower energy consumption and a longer range via a particularly efficient driving style and with the air conditioning and heating switched off. This reduces the electrical and thermal load on the battery, which increases the operating range for both short and long distances.

A sophisticated thermal management system serves as the foundation for fast charging. Liquid cooling, for example, ensures that the battery temperature remains within the ideal range of 25 to 35 degrees Celsius, even under high loads or at low temperatures. This technical design maximizes charging and driving performance while preventing excessive stress on the cells. Two buffers also protect the high-voltage battery against unintentional, harmful overcharging and deep discharges.

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All high-voltage batteries for plug-in hybrids and all-electric models from Audi are designed for a long service life. The brand with the four rings provides a warranty that covers either the first eight years after the vehicle's initial delivery or the first 160,000 kilometers – whichever comes first.

## Comprehensive information on all of the aforementioned topics can be found here:

https://www.audi.co.uk/uk/web/en/electric/fags.html

https://www.audi-mediacenter.com/en/technology-lexicon-7180/charging-technologies-10999

https://www.audi.co.uk/uk/web/en/electric/range.html

https://www.audi-mediacenter.com/en/press-releases/benchmark-for-long-distance-journeys-the-charging-power-of-the-audi-e-tron-11632

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#### Fuel/electric power consumption and emissions values\*\* of the models named above

#### Audi e-tron GT quattro

Combined electric power consumption in kWh/100 km (62.1 mi): - (NEDC); 21.6–19.9 (WLTP); combined CO<sub>2</sub> emissions in g/km (g/mi): 0

#### Audi RS e-tron GT

Combined electric power consumption in kWh/100 km (62.1 mi): - (NEDC); 22.1–19.8 (WLTP); Combined CO<sub>2</sub> emissions in g/km (g/mi): 0

#### Audi Q8 e-tron

Combined electric power consumption in kWh/100 km (62.1 mi): - (NEDC); 24.4–19.5 (WLTP); combined CO<sub>2</sub> emissions in g/km (g/mi): 0

#### Audi 04 e-tron

Combined electric power consumption in kWh/100 km (62.1 mi): - (NEDC); 20.2–16.1 (WLTP); Combined CO<sub>2</sub> emissions in g/km (g/mi): 0

Only consumption and emissions values are only available according to WLTP and not according to NEFZ for this vehicle. Information on fuel consumption and CO2 emissions in ranges are dependent on the chosen vehicle specification.

\*\*The indicated consumption and emissions values were determined according to the legally specified measuring methods. The WLTP test cycle completely replaced the NEDC on January 1, 2022, which means that no NEDC figures are available for vehicles with new type approvals from after this date.

The figures do not refer to a single, specific vehicle and are not part of the offering but are instead provided solely to allow comparisons of the different vehicle types. Additional equipment and accessories (add-on parts, different tire formats, etc.) may change relevant vehicle parameters, such as weight, rolling resistance and aerodynamics, and, in conjunction with weather and traffic conditions and individual driving style, may affect fuel consumption, electrical power consumption, CO2 emissions and the performance figures for the vehicle.

Due to the more realistic test conditions, the consumption and CO2 emission values measured are in many cases higher than the values measured according to the NEDC. This may result in corresponding changes in vehicle taxation since September 1, 2018. Additional information about the differences between WLTP and NEDC is available at www.audi.de/wltp

Further information on official fuel consumption figures and the official specific CO2 emissions of new passenger cars can be found in the "Guide on the fuel economy, CO2 emissions and power consumption of all new passenger car models", which is available free of charge at all sales dealerships and from DAT Deutsche Automobil Treuhand GmbH, Helmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, Germany (www.dat.de).



The Audi Group, with its brands Audi, Ducati and Lamborghini, is one of the most successful manufacturers of automobiles and motorcycles in the premium segment. It is present in more than 100 markets worldwide and produces at 20 locations in 12 countries. 100 percent subsidiaries of AUDI AG include Audi Sport GmbH (Neckarsulm, Germany), Automobili Lamborghini S.p.A. (Sant'Agata Bolognese, Italy), and Ducati Motor Holding S.p.A. (Bologna/Italy).

In 2020, the Audi Group delivered to customers about 1.693 million automobiles of the Audi brand, 7,430 sports cars of the Lamborghini brand and 48,042 motorcycles of the Ducati brand. In the 2020 fiscal year, AUDI AG achieved total revenue of  $\in$ 50.0 billion and an operating profit before special items of  $\in$ 2.7 billion. At present, around 87,000 people work for the company all over the world, 60,000 of them in Germany. With new models, innovative mobility offerings and other attractive services, Audi is becoming a provider of sustainable, individual premium mobility.