## Audi

## MediaCenter



## **Communications Product and Technology**

Susanne Mellinghoff Spokeswoman Audi Q8 Phone: +49 152 58811859

E-mail: susanne.mellinghoff@audi.de

www.audi-mediacenter.com

# **Communications Product and Technology**

Tobias Söllner

Spokesman Audi A3, Audi Q3 Phone: +49 841 89 36188 E-mail: tobias.soellner@audi.de www.audi-mediacenter.com

# **Communications Product and Technology**

Julia Winkler

Spokeswoman Audi A3
Phone: +49 841 89 44904
E-mail: julia.winkler@audi.de
www.audi-mediacenter.com

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# The plug-in hybrid models from Audi

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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.



Basic facts of the PHEV technology

# Efficiency – charging comfort – everyday usability: the plug-in hybrids from Audi

Audi is rapidly expanding its range of plug-in hybrid models. The latest models of the A3 Sportback, Q3, and Q3 Sportback, as well as the Q8 complement the portfolio in the compact segment and full-size class. Their common strengths are a confident driving experience, straightforward charging management, and great everyday usability. These three strengths make up the fundamental target triangle in the development work for the plug-in hybrid models at Audi.

Audi is now offering its PHEV models (PHEV = plug-in hybrid vehicle) in seven product lines. After the large A6, A7 Sportback, A8, and Q7 models, the offering became available to the compact class with the new A3 Sportback in the summer of 2020. The Audi Q8 followed in the fall. The Q3 and Q3 Sportback are the most recent plug-in hybrid models. The compact SUVs constitute the new entry into the world of electrified Q models. All current plug-in hybrid models from Audi carry the "TFSI e" abbreviation.

## Intelligent drive management system: driving modes and recuperation

The first aspect of the target triangle in the development work for the PHEV models stands for a confident driving experience. The drive concept of the PHEVs provides great efficiency and high recuperation power. As a result, a large portion of everyday journeys can be covered on purely electric power and with zero local emissions. At low speeds, what is known as the Acoustic Vehicle Alert System generates the legally prescribed e-sound.

In "Auto Hybrid" mode, which is the main operating mode, the TFSI and the electric motor divide up the work intelligently and with maximum efficiency, using fully electric power at low speeds, predominantly the TFSI engine at higher speeds, and often a combination of the two. The electric motor provides support when accelerating or wherever there is a high load requirement. When the driver depresses the accelerator firmly, the interplay between the electric motor and the gasoline engine creates a powerful boost. When accelerating from low rotational speeds, for example, the electric motor bridges the tenths of a second that the turbocharger needs to build up pressure. When driving at consistent rotational speeds, it sometimes functions as an alternator, thereby shifting the load point of the TFSI to operating ranges with higher efficiency.

The predictive operating strategy helps with consumption reduction and recuperation in driving operation. In hybrid mode and when route guidance is activated, it controls the powertrain in such a way that the battery charge is distributed intelligently across the entire driving route. It evaluates data from the navigation system, sensors, and assist systems continuously. The predictive operating strategy takes real-time events such as traffic jams or dense city traffic into account and adapts its calculations to the driver's style. Based on this information, it calculates a rough plan for the journey.



At the same time, it prepares a fine plan for short distances, working together closely with the predictive efficiency assist (PEA). The PEA uses the data of the on-board sensors to identify upcoming town signs, intersections, speed limits, and vehicles driving in front.

Hybrid mode integrates two further modes that the driver can activate in the MMI operating system. If the driver selects "Battery hold," the current state of charge of the battery is maintained in order to save energy for driving with purely electric power in an urban environment later on, for example. In "Battery charge" mode, the battery is charged while driving so that more energy is ultimately available for driving with purely electric power later on, for example in urban areas. Drivers can use the EV button to prioritize driving with fully electric power.

As soon as the driver takes their foot off the accelerator pedal, the hybrid management system and the predictive efficiency assist jointly decide between the two possibilities of letting the models coast with deactivated drive or decelerating them – like in the case of the A3 and Q8 – via the electric motor and recuperating. When the automatic transmission is in S gear, all models go into distinctive coasting recuperation.

The electric motor performs brake operations up to around 0.3 g alone – i.e. the vast majority of decelerations in everyday driving – and recovers energy. Only when the driver depresses the brake pedal more heavily do the hydraulic wheel brakes come into play as well, activated by an electric brake booster. The transition is almost unnoticeable and is referred to as brake blending. The brake pedal always provides excellent feedback and can be modulated precisely. Recuperation remains active. While braking, the A3 TFSI e and the Q3 TFSI e recover up to 40 kW of energy; the Q8 TFSI e quattro recovers up to 80 kW.

Special displays inform the driver about the activity of the drive. Aside from the current system output being demanded, the digital instrument cluster displays the Audi drive select mode and drive mode, as well as the state of charge of the battery. It also shows the electric range and total range. The central MMI display visualizes the flow of energy as well as the portion of the distance driven using the combustion engine and the electric motor.

#### Convenient charging management at home and on the road

The second aspect of the target triangle of Audi development is charging management. The PHEVs in the compact class charge with 2.9 kW and 3.6 kW, respectively, while the medium-size class and full-size class models charge with up to 7.4 kW. For example, it takes between two-and-a-half and four-and-a-half hours to charge the battery using an industrial power socket. Due to their greater electric consumption, the larger classes have a bigger battery and consequently a higher charging capacity.



Most PHEV customers charge their vehicles once or twice a day, usually in their own garage in the evenings or at work. If desired, they can use certified Volkswagen Naturstrom at home, which is generated from 100-percent-renewable energy sources.

According to a study conducted by the German Federal Ministry of Transport and Digital Infrastructure, 95 percent of all private journeys in Germany are less than 50 kilometers (31.1 mi) long, and 99 percent are less than 100 kilometers (62.1 mi) long. This means that the Audi plug-in hybrid models cover the common customer profile. The Q8 55 TFSI e\*\* covers up to 59 kilometers (36.7 mi) on fully electric power in the NEDC, and the Q3 and Q3 Sportback 45 TFSI e\*\* cover up to 61 kilometers (37.9 mi). The compact A3 Sportback 40 TFSI e\*\* can drive up to 78 kilometers (48.5 mi) with zero local emissions.

The e-tron Charging Service from Audi ensures convenient charging while on the road. With just one card, it grants access to around 155,000 AC charging points in 26 European countries. All plug-in hybrid models from Audi come with two cables as standard: the compact charging system with a cable for domestic and industrial power sockets and a mode 3 cable with a type 2 plug for public charging terminals.

The myAudi app makes everyday life even more convenient by allowing customers to use the Audi connect services on their smartphones. Customers can check the battery and range status remotely, start charging processes, program the charge timer, and access the charge and consumption statistics. The app and the car display the charging stations at the current location as well as the destination. The app can also be used to heat or cool the car before setting off. Customers can preserve the vehicle's electric range by using electricity from an electric outlet for this. Depending on the how they are equipped, they can also activate heating of the steering wheel, seats, mirror, windshield, and rear window as well as the seat ventilation via the preentry climate control.

## Make room: high everyday usability

The third aspect in the target triangle is everyday usability. This initially arises from the first two matters of frequent electric operation and straightforward charging management. However, a decent amount of space for passengers and luggage as well as a high level of variability for everyday and leisure-related tasks are equally important. The lithium-ion battery of the plug-in hybrid models features a space-saving and compact design and is integrated in the vehicle structure. Its installation position is based on the technology platform: In the PHEV models with a longitudinally mounted engine (MLB), it is located below the luggage compartment. In the models with a transverse engine (MQB), it is positioned in front of the rear axle, and the fuel tank is located below the trunk. Although the loading floor is raised slightly as compared to the conventional models, it does not feature a step. This creates an even surface with no restrictions when it comes to loading the vehicle. A trailer hitch – usually with the same towing capacity as the conventional counterpart – is continuously available, with the exception of the A8 TFSI e.

<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 MediaInfo



## Suitable for every model: the technology components

Audi has designed its PHEV models, with both longitudinally and transverse mounted engines, as parallel hybrids. A gasoline engine always serves as the combustion engine. In the compact A3 Sportback\*\*, Q3\*\*, and Q3 Sportback\*\* models, it is a 1.4 TFSI with an output of 110 kW (150 PS). The plug-in hybrids from the A6\*\* and A7 Sportback\*\* product lines use the 2.0 TFSI with 185 kW (252 PS). The Q8\*\*, A8\*\* and Q7\*\* are powered by the 3.0 TFSI, which outputs 250 kW (340 PS).

The electric motor is a permanently excited synchronous machine (PSM) that outputs between 80 and 100 kW depending on the model. It is integrated in the housing of the automatic transmission, where it forms what is known as the hybrid module together with the separating clutch, which connects the TFSI engine with the drivetrain. An electric oil pump in the automatic transmission ensures oil supply and therefore gear changes even when the TFSI is deactivated.

In terms of power transmission, the plug-in hybrids demonstrate the technological bandwidth of Audi. In the compact models, a six-speed S tronic sends the drive force to the front wheels. The full-size and luxury class models, which have longitudinally mounted engines, are equipped with either a seven-speed S tronic or an eight-speed tiptronic, and quattro drive comes as standard. The A6 and A7 Sportback feature the quattro with ultra technology, i.e. automatically engaging rear-axle drive. The A8, Q7, and Q8 have a permanent quattro drive with a purely mechanical center differential.

Depending on the model, the lithium-ion battery stores between 13.0 and 17.9 kWh of energy. In the compact models and the Q8 TFSI e quattro, it integrates prismatic cells in a fixed housing. The cooling circuit of the battery is connected to the low-temperature circuit, which supplies the electric motor and the power electronics. This improves the efficiency of the electric motor and ensures longer battery availability at high loads and high outside temperatures.

## Up to seven driving profiles: Audi drive select as standard

The Audi drive select system comes as standard in all PHEV models with the four rings. Depending on the model, it offers up to seven driving profiles that the driver can select in the MMI system: comfort, efficiency, auto, dynamic, individual, offroad, and allroad. Audi drive select influences the setup of the drive, automatic transmission, steering, and suspension, as well as various optional systems, such as the air suspension. Depending on the setting, the interaction between the systems also changes, for example the thresholds from which both drives work together or the electric motor supplies the boost and thus the maximum torque.

## Attractive: subsidy for the technology

In addition to all these technological strengths, these models are also made economically attractive to customers in Germany. When purchasing a new car, they are entitled to a subsidy of EUR 5,625 or EUR 6,750 (depending on the base price) for most models. As company cars, the PHEV models are taxed at a flat rate of 0.5% of the gross list price.

<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 MediaInfo.



#### <u>In detail</u>

# The new plug-in hybrid models: Audi A3, Audi Q3 and Audi Q3 Sportback, Audi Q8

From the compact class to the full-size class: The Audi A3 Sportback TFSI e and the Audi Q8 TFSI e frame the plug-in hybrid range of the brand with the four rings. The new Q3 45 TFSI e\*\* and Q3 Sportback 45 TFSI e\*\* have also joined the ranks. They mark the first step into the world of electrified Q models. The sporty 45 TFSI e\*\* model will be added to the diverse portfolio of the A3 Sportback.

# Entry into the world of PHEV: the Audi A3 Sportback TFSI e

The new A3 Sportback TFSI e continues the concept of its successful predecessor, the A3 Sportback e-tron, which was introduced on the market back in 2014 – with improved electric range and a new lithium-ion battery.

#### Optimized drive package

A 1.4 TFSI serves as the combustion engine. The four-cylinder gasoline engine outputs 110 kW (150 PS) and produces 250 Nm (184.4 lb-ft) of torque. The electric drive is powered by a permanently excited synchronous machine (PSM). It features an increased power density as compared to its predecessor but is still lighter and more compact. The electric motor produces 80 kW and 330 Nm (243.4 lb-ft) of torque. In the "dynamic" drive select mode and when the S tronic is set to S gear and kickdown is engaged, the hybrid drive shows off its sporty potential. In this case, the electric motor releases the full boost torque for up to ten seconds. As soon as the driver takes their foot off the accelerator, it switches to recuperation. While braking, the electric motor can function as an alternator and recover up to 40 kW of power.

The lithium-ion battery of the compact plug-in hybrid integrates 96 prismatic cells. They store 13.0 kWh of energy, almost 48 percent more than the predecessor model. No changes were made to the high-voltage battery in the package; the progress results from the improved cell chemistry. The A3 Sportback TFSI e charges with a maximum power of 2.9 kW. An empty battery can be fully recharged at an industrial power socket in around four-and-a-half hours.

## Two output levels in the range

The A3 PHEV as a 40 TFSI e (combined fuel consumption in  $l/100 \text{ km } (US \text{ mpg})^*: 1.5-1.4 (156.8-168.0)$ ; combined electric power consumption in kWh/100 km (62.1 mi)\*: 13.8-13.0; combined CO<sub>2</sub> emissions in g/km (g/mi)\*: 34-30 (54.7-48.3)) has already been introduced on the market. It offers 150 kW (204 PS) of system power and 350 Nm (258.1 lb-ft) of system torque Now the sporty 45 TFSI e\*\* with a system output of 180 kW (245 PS) and a system torque of 400 Nm (295.0 lb-ft) is being launched.

\*Fuel/electric power consumption and CO<sub>2</sub> emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

<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 MediaInfo



The added output and higher torque are generated by control software. It regulates the optimum interplay between the two drives under maximum power requirements. The electric motor complements the combustion engine in the corresponding engine speed ranges. The A3 45 TFSI e\*\* takes 6.8 seconds to accelerate from zero to 100 km/h (62.1 mph) on its way to a top speed of 232 km/h (144.2 mph). In the NEDC cycle, it consumes between 1.5 and 1.4 liters of fuel per 100 kilometers (156.8-168 US mpg), which corresponds to 34 to 31 grams of CO<sub>2</sub> per kilometer (54.7-49.9 g/mi).

The A3 40 TFSI e (combined fuel consumption in l/100 km (US mpg)\*: 1.5–1.4 (156.8–168.0); combined electric power consumption in kWh/100 km (62.1 mi)\*: 13.8–13.0; combined CO<sub>2</sub> emissions in g/km (g/mi)\*: 34–30 (54.7–48.3)) accelerates to 62.1 mph in 7.6 seconds and reaches a top speed of 227 km/h (141.1 mph). In the NEDC cycle, it consumes between 1.5 and 1.4 liters of fuel per 100 kilometers (156.8–168.0 US mpg), which corresponds to 34 to 30 grams of CO<sub>2</sub> per kilometer (54.7–48.3 g/mi).

With the A3 Sportback 40 TFSI e\*\*, the driver can cover up to 78 kilometers (48.5 mi) according to the NEDC (67 kilometers (41.6 mi) in the WLTP) under electric power alone, that is the majority of everyday journeys. This is almost 30 kilometers (18.6 mi) more in the NEDC cycle than the predecessor model. The A3 Sportback 45 TFSI e\*\* provides an electric range of up to 74 kilometers (46.0 mi) in the NEDC and up to 63 kilometers (39.1 mi) in the WLTP. The top speed that both models can achieve on fully electric power is 140 km/h (87.0 mph).

Audi A3 Sportback	40 TFSI e S tronic	45 TFSI e S tronic
Displacement in cc	1,395	1,395
Max. power output of TFSI	110 (150)	110 (150)
in kW (PS) at rpm	at 5,000-6,000	at 5,000-6,000
Max. torque of TFSI in Nm (lb-ft)	250 (184.4)	250 <i>(184.4)</i>
at rpm	at 1,550-3,500	at 1,550-3,500
Max. power output of electric motor in	80	80
Max. torque of electric motor in Nm (lb-	330 (243.4)	330 (243.4)
System power output in kW (PS)	150 (204)	180 (245)
System torque in Nm (lb-ft)	350 <i>(258.1)</i>	400 (295.0)
Top speed in km/h (mph)	227 (141.1)	232 (144.2)
Electric top speed in km/h (mph)	140 <i>(87.0)</i>	140 <i>(87.0)</i>
<b>Acceleration</b> 0–100 km/h (0–62.1 mph)	7.6	6.8
Drive	Front-wheel drive	Front-wheel drive
Transmission	Six-speed S tronic	Six-speed S tronic
Max. battery energy content in kWh	13.0	13.0
Max. charging capacity in kW	2.9	2.9

<sup>\*</sup>Fuel/electric power consumption and CO<sub>2</sub> emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

<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 MediaInfo



## **Equipment and prices**

The A3 Sportback TFSI e offers outstanding driving pleasure and great everyday usability, as is typical for all models of this product line. Its exterior features a sporty and expressive design. Upon request, Audi will equip the premium compact car with Matrix LED headlights. Their digital daytime running lights, a pixel array consisting of 15 LED segments, generate an E-shaped light signature as a symbol of the plug-in hybrid drive. Matt black grained attachments, including the Singleframe and the diffuser insert, add further highlights. Specific 16-inch wheels with a five-arm aero design come as standard. The brake disks measure 312 millimeters (12.3 in) in diameter on the front axle, and 272 millimeters (10.7 in) on the rear axle. The A3 Sportback 45 TFSI e\*\* rides on 17-inch wheels with larger brake disks that measure 340 millimeters (13.4 in) in diameter at the front and 310 millimeters (12.2 in) at the rear. All brake calipers are painted red. The black styling package and a specially designed radiator protective grille with high-gloss inlays underline the sporty character of the more powerful model. As compared to the variants with conventional drive systems, the body of the A3 TFSI e is ten millimeters (0.4 in) higher. This ensures that the ground clearance and therefore the damper behavior remain the same despite the cover plate for the battery.

The progressive design is continued in the interior with the new compact shifter, extravagant door handles, and the high-gloss black surface in the instrument panel. Contrasting stitching adds accents to the sustainable seat upholstery made of recycled PET bottles. Depending on the position of the rear seat backs, the luggage compartment has a volume of 280 to 1,100 liters (9.9 to 38.8 cu ft). An electric tailgate that can be opened and closed with a foot motion is available upon request. With the optional trailer hitch, both TFSI e models have a towing capacity of up to 1,400 kg (3,086.5 lb) (braked, at a 12 percent incline).

In Germany, the base price for the A3 Sportback 40 TFSI e\*\* is EUR 37,470.92 (EUR 38,440 with 19% VAT), the 45 TFSI e\*\* is available from EUR 40,395.29 (EUR 41,440 with 19% VAT). With each model, customers are entitled to a subsidy of EUR 6,750\*\*\*. In addition to the features already mentioned, the standard equipment includes headlights with LED technology, two-zone automatic air conditioning, the convenience key, as well as sport seats and tinted windows in the A3 Sportback 45 TFSI e\*\*.

<sup>\*</sup>Fuel/electric power consumption and CO<sub>2</sub> emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

<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 MediaInfo\*\*\*Subsidy is subject to the inclusion of the A3 Sportback 45 TFSI e in the BAFA list



# Electrification in the compact SUV segment: the Audi Q3 45 TFSI e and the Q3 Sportback 45 TFSI e

The Q3 45 TFSI e and the Q3 Sportback 45 TFSI e (combined fuel consumption in l/100 km  $(US mpg)^*$ : 1.7–1.4 (138.4–168.0); combined electric power consumption in kWh/100 km  $(62.1 \, mi)^*$ : 16.0–14.4; combined CO<sub>2</sub> emissions in g/km  $(g/mi)^*$ : 39–32 (62.8–51.5)) mark the first step into the world of electrified Q models from Audi. Their technology package is very similar to the A3 45 TFSI e\*\*: The 1.4 TFSI cooperates with a permanently excited synchronous machine (PSM) that outputs 85 kW of power and 330 Nm  $(243.4 \, lb$ -ft) of torque. Together, the two motors generate 180 kW  $(245 \, PS)$  of system output and 400 Nm  $(295.02 \, lb$ -ft) of system torque. Both the Q3 45 TFSI e\*\* and the Sportback take 7.6 seconds to sprint from 0 to 100 km/h  $(62.1 \, mph)$ , and both models reach a top speed of 210 km/h  $(130.5 \, mph)$ . In the NEDC cycle, the Q3 45 TFSI e\*\* consumes 1.7 to 1.4 liters of fuel per 100 km  $(138.4 \, to \, 168.0 \, US \, mpg)$  (39 to 32 grams of CO<sub>2</sub>  $(62.8 \, to \, 51.5 \, g/mi)$ ). The Q3 Sportback 45 TFSI e\*\* records the same values of 1.7 to 1.4 liters of fuel per 100 km  $(138.4 \, to \, 168.0 \, US \, mpg)$  (38 to 33 grams of CO<sub>2</sub>  $(61.2 \, to \, 53.1 \, g/mi)$ ). Both compact SUVs can cover up to 61 km  $(37.9 \, mi)$  in the NEDC powered purely by electricity. In the WLTP, the distance is 51 km  $(31.7 \, mi)$  for the Q3 45 TFSI e\*\* and 50 km  $(31.07 \, mi)$  for the Q3 Sportback 45 TFSI e\*\*.

Like with the Audi A3 TFSI e, the 96 prismatic cells of the compact and light high-voltage battery store 13.0 kWh of energy. This great value is achieved thanks to a new generation of prismatic cells. The Audi Q3 45 TFSI e\*\* and the Q3 Sportback 45 TFSI e\*\* can be charged using alternating current (AC) with an output of 3.6 kW, allowing an empty battery to recharge in slightly more than three hours.

Audi Q3 / Q3 Sportback	45 TFSI e S tronic
Displacement in cc	1,395
Max. power output of TFSI	110 (150)
in kW (PS) at rpm	at 5,000-6,000
Max. torque of TFSI in Nm (lb-ft) at rpm	250 (184.4)
	at 1,550-3,500
Max. power output of electric motor in	85
Max. torque of electric motor in Nm (lb-	330 (243.4)
System power output in kW (PS)	180 (245)
System torque in Nm (lb-ft)	400 (295.0)
Top speed in km/h (mph)	210 <i>(130.5)</i>
Electric top speed in km/h (mph)	140 <i>(87.0)</i>
Acceleration 0-100 km/h (62.1 mph) in	7.3
Drive	Front-wheel drive
Transmission	Six-speed S tronic
Max. battery energy content in kWh	13.0
Max. charging capacity in kW	3.6

#### **Equipment and prices**

<sup>\*</sup>Fuel/electric power consumption and CO<sub>2</sub> emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

<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 MediaInfo9/15



Audi equips the two compact plug-in hybrids with 17-inch alloy wheels as standard. Wheels up to 20 inches in diameter are available upon request. Due to the cover plate for the battery, the body is ten millimeters (0.4 in) higher than that of the base model to ensure the same comfortable suspension and damper behavior. Both PHEVs feature a spacious and variable interior. The luggage compartment provides a basic volume of 380 liters (13.4 cu ft), which increases to 1,375 liters (48.6 cu ft) in the Q3 45 TFSI e\*\* and 1,250 liters (44.1 cu ft) in the Q3 Sportback 45 TFSI e\*\* when the seats are folded down. An electric tailgate, which can also be opened and closed with a kicking motion, is also available as an option. Both body variants will be available for order in Germany from mid-January. The price for the Audi Q3 45 TFSI e\*\* starts at EUR 46,000, and the Q3 Sportback 45 TFSI e\*\* starts at EUR 47,400 (both prices include 19% VAT). In addition to the features already mentioned, their extensive standard equipment includes headlights with LED technology, two-zone automatic air conditioning, and auxiliary air conditioning.

## Full-size class efficiency: the Audi Q8 TFSI e quattro

The Q8 with plug-in hybrid drive is an important addition to the Q8 range. The SUV coupé is available for sale in two output levels that differ in terms of their boost strategy. The Q8 55 TFSI e quattro (combined fuel consumption in l/100 km (US mpg)\*: 2.8-2.6 (84.0-90.5); combined electric power consumption in kWh/100 km (62.1 mi)\*: 22.9-21.9; combined CO<sub>2</sub> emissions in q/km (q/mi)\*: 63-59 (101.4-95.0)) delivers a system output of 280 kW (381 PS) and 600 Nm (442.5 lb-ft) of system torque, and the Q8 60 TFSI e quattro (combined fuel consumption in l/100 km (US mpq)\*: 2.8-2.7 (84.0-87.1); combined electric power consumption in kWh/100 km (62.1 mi)\*: 22.9-22.6; combined CO<sub>2</sub> emissions in q/km (q/mi)\*: 63-62 (101.4-99.8)) even delivers 340 kW (462 PS) and 700 Nm (516.3 lb-ft) of system torque that is generated by the software. The V6 combustion engine, a 3.0 TFSI, outputs 250 kW (340 PS) and 450 Nm (331.9 lb-ft) of torque in both models. A PSM with 100 kW of power and 400 Nm (295.0 lb-ft) of torque serves as the electric motor. The Q8 55 TFSI e quattro (combined fuel consumption in l/100 km (US mpq)\*: 2.8-2.6 (84.0-90.5); combined electric power consumption in kWh/100 km (62.1 mi)\*: 22.9-21.9; combined CO<sub>2</sub> emissions in g/km (g/mi)\*: 63-59 (101.4-95.0)) accelerates from a standstill to 100 km/h (62.1 mph) in 5.8 seconds and reaches an electronically limited top speed of 240 km/h (149.1 mph). The Q8 60 TFSI e quattro combined fuel consumption in l/100 km (US mpg)\*: 2.8-2.7 (84.0-87.1); combined electric power consumption in kWh/100 km (62.1 mi)\*: 22.9-22.6; combined CO<sub>2</sub> emissions in g/km (g/mi)\*: 63-62 (101.4-99.8)) completes the standard sprint in just 5.4 seconds, and its top speed is also 240 km/h (149.1 mph).

The lithium-ion battery contains 104 prismatic cells of the latest generation that are distributed across 13 modules. The battery system provides 17.9 kWh of energy and can be fully recharged

<sup>\*</sup>Fuel/electric power consumption and CO<sub>2</sub> emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

<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 MediaInfo10/15



with the maximum possible capacity of 7.4 kW in around two-and-a-half hours. The new battery is now also installed in the sister model, the Q7 TFSI e.

The Q8 55 TFSI e quattro\*\* covers up to 59 kilometers (36.7 mi) on electricity alone in the NEDC. In the WLTP measuring procedure, which determines to which tax category the vehicle is assigned, it covers up to 47 kilometers (29.2 mi). The Q8 60 TFSI e quattro\*\* achieves an electric range of up to 56 kilometers (34.8 mi) in the NEDC (45 kilometers (28.0 mi) in the WLTP). Up to speeds of 135 km/h (83.9 mph) the electric motor can generate the drive alone; while braking, it generates up to 80 kW of recuperation power.

The power of the two engines flows through a quickly and smoothly shifting eight-speed tiptronic to the quattro permanent all-wheel drive. Its core is a center differential that works entirely mechanically. During normal driving operation, it distributes 40 percent of the torque to the front axle and 60 percent to the rear; if needed, it can direct the larger share of power to the axle with better traction. Up to 85 percent can be distributed to the front axle and up to 70 percent to the rear axle.

Like all plug-in hybrid models from Audi, the Audi Q8 55 TFSI e quattro\*\* and the 60 TFSI e quattro\*\* offer a high level of everyday usability. They offer a generous amount of space for five persons, and their luggage compartments provide a volume of 505 liters (17.8 cu ft) even in the base configuration, which increases to 1,625 liters (57.4 cu ft) when the rear bench seat is folded down. Depending on the how they are equipped, they can pull trailers weighing up to 3.5 metric tons (7,716.2 lb) (braked, 12 percent incline). Their quattro drive guarantees decisive advantages in terms of traction, both with and without a trailer.

Audi Q8 quattro	55 TFSI e tiptronic	60 TFSI e tiptronic
Displacement in cc	2,995	2,995
Max. power output of TFSI	250 (340)	250 (340)
in kW (PS) at rpm	at 5,300-6,400	at 5,300-6,400
Max. torque of TFSI in Nm (lb-ft) at rpm	450 (331.9) at 1,340-5,3	450 (331.9) at 1,340-5,3
Max. power output of electric motor in	100	100
Max. torque of electric motor in Nm (lb-	400 (295.0)	400 (295.0)
System power output in kW (PS)	280 (380)	340 (462)
System torque in Nm (lb-ft)	600 (442.5)	700 (516.3)
Top speed in km/h (mph)	240 (149.1)	240 (149.1)
Electric top speed in km/h (mph)	135 (83.9)	135 (83.9)
Acceleration 0-100 km/h (62.1 mph) in	5.8	5.4
Drive	quattro drive	quattro drive
Transmission	Eight-speed tiptronic	Eight-speed tiptronic
Max. battery energy content in kWh	17.9	17.9
Max. charging capacity in kW	7.4	7.4

#### **Equipment and prices**

In Germany, the Q8 55 TFSI e quattro\*\* is available from EUR 75,351.26 (EUR 77,300 with 19% VAT); customers can claim a subsidy of EUR 5,625. The Q8 60 TFSI e quattro\*\* is available \*Fuel/electric power consumption and CO<sub>2</sub> emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

<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 MediaInfo11/15



from EUR 92,800 (EUR 95,200 with 19% VAT) and shows off its sporty performance in no uncertain terms. The S line exterior package sharpens its appearance with special design details. The black styling package contrasts with the S line exterior attachments in the body color. Matrix LED headlights come as standard, as does the air suspension. Size 285/45 tires are mounted on the 21-inch wheels, and the brake calipers are painted red. With the S line sport package, the interior is either black or partially rotor gray. It includes sport seats with S embossing, pedals and footrests made of stainless steel, and inlays made of matt brushed aluminum.

<sup>\*</sup>Fuel/electric power consumption and CO<sub>2</sub> emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

<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 MediaInfo12/15



## Facts and figures

# The plug-in hybrid models from Audi

## The model range

- > Seven PHEV models in the following product lines: A3, A6, A7 Sportback, A8, Q3, Q7, and Q8
- New additions:
  - A3 Sportback TFSI e in two output levels: 40 TFSI e with 150 kW (204 PS) and 45 TFSI e with 180 kW (245 PS)
  - o Q3 45 TFSI e and Q3 Sportback 45 TFSI e, each with 180 kW (245 PS)
  - $\circ~$  Q8 TFSI e in two output levels: 55 TFSI e with 280 kW (380 PS) and 60 TFSI e with 340 kW (462 PS)

## The technology components

- > Three TFSI engines in the entire PHEV range:
  - o 1.4 TFSI with 110 kW (150 PS): A3 Sportback, Q3, Q3 Sportback
  - o 2.0 TFSI with 185 kW (252 PS): A6, A7 Sportback
  - o 3.0 TFSI with 250 kW (340 PS): A8, Q7, Q8
  - o Each combined with a PSM electric motor with an output of between 80 and 105 kW
- > Compact models with S tronic and front-wheel drive
- Large models with S tronic or tiptronic as well as two versions of the quattro drive
- Lithium-ion battery upstream or downstream of the rear axle that stores between 13.0 and 17.9 kWh of energy depending on the model
- > Electric range of up to 78 kilometers (48.5 mi) (NEDC) for the A3 Sportback 40 TFSI e
- > Special hybrid displays for the driver, such as the powermeter and energy flow diagram

## The driving modes

- Always starts up in electric mode, electric top speed is 135 (83.9 mph) or 140 km/h (87.0 mph), respectively; driver can use EV button to prioritize purely electric driving
- > Hybrid mode with special profiles: maintain or increase battery charge; controlled by the driver via the MMI operating system
- Electric motor and combustion engine work together to create powerful boost
- ➤ Coasting or recuperating in overrun mode; brake recuperation of up to 85 kW of power, hydraulic wheel brakes are engaged in addition as from 0.3 g of deceleration
- Predictive operating strategy for efficient drive control with activated route guidance; creates a rough plan and fine plan using navigation data and the predictive efficiency assist
- Audi drive select dynamic handling system comes as standard; influences boost and recuperation behavior

#### The charging options

- > Charging at home using the compact charging system, mobile charging with a mode 3 cable
- ➤ Charging capacity of up to 7.4 kW depending on the model; two-and-a-half hours to fully charge an empty battery at an industrial power socket
- > Certified Volkswagen Naturstrom available for globally emissions-free driving
- > e-tron Charging Service allows convenient use of around 155,000 AC charging points in Europe
- myAudi app for remote charging and pre-heating/cooling via the smartphone; shows charging stations

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## Fuel/electric power consumption of the models named above

Fuel consumption, CO<sub>2</sub> emission figures, and efficiency classes given in ranges depend on the tire/wheel sets used

#### A3 Sportback 40 TFSI e S tronic

Combined fuel consumption in l/100 km (US mpg): 1.5-1.4 (156.8-168.0); combined electric power consumption in kWh/100 km (62.1 mi): 13.8-13.0; combined  $CO_2$  emissions in g/km (g/mi): 34-30 (54.7-48.3)

## A3 Sportback 45 TFSI e S tronic

Combined fuel consumption in l/100 km (US mpg): 1.5-1.4 (156.8–168); combined electric power consumption in kWh/100 km (62.1 mi): 14.1-13.6; combined  $CO_2$  emissions in g/km (g/mi): 34-31 (54.7–49.9)

### A6 50 TFSI e quattro S tronic

Combined fuel consumption in l/100 km (US mpg): 2.0–1.7 (117.6–138.4); combined electric power consumption in kWh/100 km (62.1 mi): 17.7–16.6; combined CO<sub>2</sub> emissions in g/km (g/mi): 46–39 (74.0–62.8)

#### A6 55 TFSI e quattro S tronic

Combined fuel consumption in l/100 km (US mpg): 2.1-1.9 (112.0-123.8); combined electric power consumption in kWh/100 km (62.1 mi): 17.9-17.4; combined  $CO_2$  emissions in g/km (g/mi): 47-43 (75.6-69.2)

## A6 Avant 55 TFSI e quattro S tronic

Combined fuel consumption in l/100 km (US mpg): 2.1-1.9 (112.0-123.8); combined electric power consumption in kWh/100 km (62.1 mi): 18.1-17.6; combined  $CO_2$  emissions in g/km (g/mi): 48-44 (77.2-70.8)

## A7 Sportback 50 TFSI e quattro S tronic

Combined fuel consumption in l/100 km (US mpg): 2.1–1.8 (112.0–130.7); combined electric power consumption in kWh/100 km (62.1 mi): 18.0–16.6; combined CO<sub>2</sub> emissions in g/km (g/mi): 48–40 (77.2–64.4)

#### A7 Sportback 50 TFSI e quattro S tronic

Combined fuel consumption in l/100 km (US mpg): 2.1-1.9 (112.0-123.8); combined electric power consumption in kWh/100 km (62.1 mi): 18.1-17.5; combined  $CO_2$  emissions in g/km (g/mi): 48-44 (77.2-70.8)

## A8 60 TFSI e quattro tiptronic

Combined fuel consumption in l/100 km (*US mpg*): 2.7-2.5 (*87.1-94.1*); combined electric power consumption in kWh/100 km (*62.1 mi*): 21.3-20.8; combined  $CO_2$  emissions in g/km (g/mi): 61-57 (98.2-91.7)

#### A8 L 60 TFSI e quattro tiptronic

Combined fuel consumption in l/100 km (US mpg): 2.6–2.5 (90.5–94.1); combined electric power consumption in kWh/100 km (62.1 mi): 21.1–20.8; combined CO<sub>2</sub> emissions in g/km (g/mi): 60–57 (96.6–91.7)

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#### Q3 45 TFSI e S tronic

Combined fuel consumption in l/100 km (US mpg): 1.7-1.4 (138.4-168.0); combined electric power consumption in kWh/100 km (62.1 mi): 16.0-14.4; combined  $CO_2$  emissions in g/km (g/mi): 39-32 (62.8-51.5)

## Q3 Sportback 45 TFSI e S tronic

Combined fuel consumption in l/100 km (US mpg): 1.7-1.4 (138.4-168.0); combined electric power consumption in kWh/100 km (62.1 mi): 15.9-14.6; combined  $CO_2$  emissions in g/km (g/mi): 38-33 (61.2-53.1)

#### Q7 55 TFSI e quattro tiptronic

Combined fuel consumption in l/100 km (US mpg): 2.7-2.6 (87.1-90.5); combined electric power consumption in kWh/100 km (62.1 mi): 22.6-21.7; combined  $CO_2$  emissions in g/km (g/mi): 62-59 (99.8-95.0)

#### Q7 60 TFSI e 60 quattro tiptronic

Combined fuel consumption in l/100 km (*US mpg*): 2.7-2.6 (*87.1-90.5*); combined electric power consumption in kWh/100 km (*62.1 mi*): 22.6-21.7; combined  $CO_2$  emissions in g/km (g/mi): 62-59 (99.8-95.0)

## Q8 55 TFSI e 55 quattro tiptronic

Combined fuel consumption in l/100 km (US mpg): 2.8-2.6 (84.0-90.5); combined electric power consumption in kWh/100 km (62.1 mi): 22.9-21.9; combined  $CO_2$  emissions in g/km (g/mi): 63-59 (101.4-95.0)

## Q8 60 TFSI e quattro tiptronic

Combined fuel consumption in l/100 km (US mpg): 2.8-2.7 (84.0-87.1); combined electric power consumption in kWh/100 km (62.1 mi): 22.9-22.6; combined  $CO_2$  emissions in g/km (g/mi): 63-62 (101.4-99.8)