Audi Q5 55 TFSI e quattro – PHEV with predictive operating strategy

Audi is expanding its selection of plug-in hybrid models by launching sales of the Q5 Sportback 55 TFSI e quattro on European markets. The elegant SUV coupé (combined fuel consumption in l/100 km (US mpg)*: 2.0–1.8 (117.6–130.7); combined electric power consumption in kWh/100 km (62.1 mi)*: 19.6– 19.3; combined CO_2 emissions in g/km (g/mi)*: 45–42 (72.4–67.6)) delivers 270 kW (367 PS). The lithium-ion battery can store 14.4 kWh of net power – enough for an electric range of up to 61 kilometers (37.9 mi) according to the WLTP (71 kilometers (44.1 mi) under the NEDC).

Drive modes and the predictive efficiency assist

Quiet and with zero local emissions in the city, with long ranges on long-distance trips, or sporty and dynamic with the combined power of the TFSI and the electric motor: The driving modes for the Audi Q5 Sportback 55 TFSI e quattro** are versatile and intelligent. The concept is designed so that the driver can cover the majority of their daily routes on electric power. They can decide freely whether and how they wish to intervene in the interaction between the two motors; to do so, they can choose between four operating modes.

The hybrid mode is activated automatically with the route guidance in the navigation system but can also be selected manually via the operating mode button. In this mode, the battery charge is distributed optimally across the route in order to keep power consumption to a minimum. Downtown and in stop-and-go traffic, the Audi Q5 Sportback 55 TFSI e quattro** runs mainly on battery power.

The control function for the drive of the plug-in hybrid is based on a large amount of data. This incorporates online traffic information, distance to the destination, the route profile of the chosen route, precise information about immediate surroundings from the navigation data, such as speed limits, types of roads, uphill and downhill slopes and the latest data from the on-board sensors. If route guidance is active in the MMI navigation system, the predictive operating strategy attempts to drive the last urban segment of the route all-electrically and arrive at the destination or charging station with the drive battery nearly empty.

With an eye toward efficiency: recharge or coast

When drivers takes their foot off the gas pedal of an Audi Q5 Sportback 55 TFSI e quattro**, the drive management system decides, depending on the situation, between

coasting with the engine shut off and power recuperation, that is the recovery of kinetic energy and its conversion into electrical energy. The electric motor performs all light decelerations up to 0.1 g and can generate an output of up to 25 kW. Brake recuperation extends up to 0.2 g and can recover up to 80 kW of electric power. The hydraulic disk brakes are activated only during heavier decelerations.

The predictive efficiency assist (PEA) adjusts the behavior of the coasting recuperation to the situation at hand. It uses the predictive route data from the navigation database and monitors the distance to the vehicle ahead using signals from the camera and radar. When the adaptive cruise control (ACC) is active, the PEA supports the driver by braking and accelerating automatically in order to further enhance efficiency and comfort.

When the driver is not using ACC, they receive hints indicating the right time to take their foot off the right-hand pedal. These hints take the form of a haptic impulse from the active accelerator pedal as well as visual displays in the cockpit and the optional head-up display. At the same time, symbols indicate the reason for the reduction in speed. Speed limits, town signs, curves and downhill slopes, roundabouts, intersections, highway exits, and traffic ahead are displayed.

Aside from the hybrid operating mode, the driver can choose between three further modes. In EV mode – the basic setting every time the vehicle is started – the car is driven exclusively electrically as long as the driver does not depress the accelerator past a variably perceptible pressure point. In Hold mode, battery capacity is held at the current level. In Charge mode, the drive management system increases the amount of energy in the battery with the aid of the internal combustion engine. As it does during recuperation, the electric engine then works as a generator, charging the drive battery.

*Fuel consumption and CO_2 emission figures given in ranges depend on the tires/wheels used as well as the selected equipment.

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

Q5 Sportback 55 TFSI e quattro

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