



### Media Information

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## **The BMW X5 xDrive40e launches the next chapter of EfficientDynamics with its first ever Plug-in Hybrid Sports Activity Vehicle.**

**Richmond Hill, ON.** The **BMW X5 xDrive40e**, the company's first plug-in hybrid Sports Activity Vehicle, charts the next chapter of BMW's ongoing Efficient Dynamics initiative. Benefitting from the groundbreaking work by BMW i on electro mobility, the X5 xDrive40e combines the company's award-winning 2.0-liter Twin Power Turbo four-cylinder engine with an electric motor, powered by a lithium-ion battery, integrated into its 8-speed automatic transmission.

This newest BMW SAV can travel approximately 21 kilometers on pure electric power, ideally suited to short commutes and quick trips around town. Working in concert, the gasoline engine and electric motor puts out 308 horsepower and produces 332 lb-ft, enough to propel the X5 xDrive40e from 0-100 km/h in just 6.5 seconds. As the name implies, it features BMW drive, the company's intelligent all-wheel drive system, for optimal stability and traction under all circumstances and road conditions. Early preliminary fuel economy indicates fuel consumption of approximately 4.3 L/100 km (equivalent).

The 2016 BMW X5 xDrive40e will arrive in Canadian BMW showrooms in the fall of 2015. Pricing and full product guides will be available closer to the on-sale date.

The BMW X5 xDrive40e is the first plug-in hybrid production model from the core BMW brand. It combines the versatility and luxurious ambience of a full-sized Sports Activity Vehicle with the superb traction offered by the BMW xDrive intelligent all-wheel-drive system as well as BMW EfficientDynamics eDrive technology for exemplary efficiency.

BMW eDrive technology provides exceptionally efficient performance as well as the potential for all-electric mobility with zero tailpipe emissions, ushering in a whole new form of driving experience in a Sports Activity Vehicle. At the same time, the BMW X5 xDrive40e reaps the benefits of the technology and know-how transferred from the debut of the BMW i cars. The BMW i8 blazes a trail for seamless blending of sustainability and The Ultimate Driving Experience™ driving thanks to plug-in hybrid drive power. These traits can now be enjoyed in a model from the core BMW brand.

**Drive duo and permanent all-wheel drive for trademark driving pleasure and maximum efficiency.**

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Thanks to its duo of drive units, intelligent hybrid powertrain control and permanent all-wheel drive, the BMW X5 xDrive40e promises effortless performance and outstanding efficiency on the road. Its drive system comprises a four-cylinder engine with BMW TwinPower Turbo technology and a synchronous electric motor integrated into the 8-speed Steptronic automatic transmission. The lithium-ion high-voltage battery pack can be topped up from any 120-volt/15 amp electrical outlet or – quickly and conveniently – from the BMW Charging Station, as well as at public charging stations. The high-voltage battery, which also supplies power to the battery for the 12V electrical system via a voltage transformer, is housed underneath the luggage compartment floor, where it is particularly well protected in the event of a crash. The BMW X5 xDrive40e offers a luggage capacity of 968 – 2,053 litres. The plug-in hybrid model thus provides all the versatility associated with a full-sized sports activity vehicle in terms of not just its driving qualities but also its levels of spaciousness.

The BMW X5 xDrive40e furthermore succeeds in fusing its versatility and poise with a level of efficiency that simply places it in a class of its own. Short everyday journeys up to 21 kilometers can be easily completed with zero tailpipe emissions, while actual fuel consumption is reduced substantially when driving for longer distances. Capable of consuming zero fuel in electric mode, according to early preliminary estimates the BMW X5 xDrive40e is rated at 4.3 L/100km (equivalent), setting new benchmarks for efficiency in its segment. On longer journeys, when both engine and motor need to be deployed, the powertrain system which has been systematically geared towards maximizing efficiency keeps the fuel consumption and emissions figures far lower than in comparable models with similar power output. The plug-in hybrid drive system in the BMW X5 xDrive40e produces major efficiency savings in everyday driving situations when compared to conventionally powered models in this segment.

**BMW TwinPower Turbo and BMW eDrive technologies mated to perfection.**

The 2.0-liter four cylinder in the BMW X5 xDrive40e has already won the coveted title of “International Engine of the Year” three times, as well as having been named to Ward’s “10 Best Engines”, and features a TwinScroll turbocharger, High Precision Injection, VALVETRONIC variable valve timing and variable camshaft control on both the intake and exhaust sides (Double-VANOS). It generates a maximum output of 241 hp and 258 lb-ft of peak torque.

The electric motor provides output of 111 hp, while its maximum torque of 184 lb-ft is available from the word go in typical electric drive fashion. This has the effect of boosting the engine’s output for thrilling, instantaneous responsiveness and power build-up with absolutely no delay when



accelerating from stationary, as well as far more dynamic performance whenever a quick burst of speed is required, completing the 0 - 100 km sprint in just 6.5 seconds.

**BMW xDrive permanent all-wheel drive even in all-electric mode.**

The power stemming from the two drive units is transformed into effortless forward motion courtesy of the 8-speed Steptronic transmission and the BMW xDrive intelligent all-wheel-drive system. The BMW X5 xDrive40e can be optionally equipped with shift paddles on the steering wheel, enabling the driver to swiftly make manual gear selections with the greatest of ease. Regardless of the proportion of drive power being sourced from the engine and motor respectively, xDrive ensures optimal traction in all weather and road surface conditions, together with optimized handling stability and increased agility when powering through corners. An electronically controlled multi-plate clutch provides the basis for fully variable distribution of the drive torque between the front and rear wheels. xDrive is linked up to the DSC (Dynamic Stability Control), making it capable of acting in advance to counter vehicle understeer or oversteer and to always direct drive power in such a way as to optimize the handling dynamics.

**Driving Dynamics Control switch and eDrive button allow the vehicle set-up and powertrain control to be configured as desired.**

The eDrive button on the center console lets the driver modify the powertrain control. When the vehicle is first started, the default **AUTO eDrive** setting is activated, with both engine and electric motor working efficiently in tandem. The electric motor alone is used for setting off with normal power requirements, while the engine cuts in at around 70 km/h or when the driver wishes to accelerate very sharply. In this mode, the intelligent operating strategy determines the most efficient drive combination at all times and switches to it automatically. The driver can also switch to the all-electric drive mode setting **MAX eDrive**, in which the vehicle is powered solely by the electric motor. This mode is designed for comfortable driving with zero local emissions without the engine being started, and offers a maximum range of 21 kilometers at a limited top speed of 120 km/h.

The third mode that can be activated is the **SAVE Battery** setting, which allows the driver to save or build up the high-voltage battery's energy reserves for a later point in time. When driving on the highway, for instance, the state of charge can be kept constant or even boosted in order to use the high-voltage battery's power for all-electric driving in urban areas later in the journey. In this way, the stored electrical energy can be selectively deployed exactly when required.



The BMW X5 xDrive40e also comes standard with a Driving Dynamics Control switch, just like the conventionally powered model variants of the sports activity vehicle. This can be used to activate the vehicle set-up modes COMFORT, SPORT and ECO PRO, which each have the effect of altering the throttle mapping, the steering characteristics, the responses of the 8-speed Steptronic transmission, as well as the characteristics of the standard Dynamic Damper Control on the BMW X5 xDrive40e. The ECO PRO mode triggers efficiency-optimized control of electrically powered comfort functions, such as the air conditioning, seat heating and heated mirrors. Besides this, when the driver's foot is off the accelerator, the coasting function shuts off the engine, allowing the vehicle to glide along without burning any fuel.

The modes selectable with the eDrive button and the Driving Dynamics Control switch can be combined with one another at will, allowing the powertrain control and vehicle set-up to be tailored precisely to the prevailing situation and the driver's personal preferences. In this way, comfort, sportiness and efficiency can each be combined with high-intensity hybrid driving as desired.

#### **Instrument cluster and Control Display with hybrid-specific readouts.**

The BMW X5 xDrive40e features a black-panel instrument cluster with enhanced hybrid-specific functions added to its array of readouts. The drive readiness display positioned in the lower part of the tachometer switches from "OFF" to "READY" when the start/stop button is pressed. The high-voltage battery's state of charge is visualized in the form of a battery symbol below the gear display. The Driving Dynamics Control switch setting is also indicated, as is the operating mode selected with the eDrive button. Depending on the selected drive mode, information on the vehicle's electric and total range, current fuel or electricity consumption, recuperation of electrical energy in the high-voltage battery and the progress of vehicle charging can likewise all be shown in the instrument cluster.

Model-specific menu options and readouts are also available in the iDrive operating system's Control Display. An energy flow display can be called up while on the move, illustrating in graphical form the interaction between combustion engine and electric motor as well as how energy is being fed to the high-voltage battery. Charging of the battery from the power grid can also be controlled from the iDrive menu using a **timer function**, which can factor in a planned departure time as entered by the driver. In addition to this, preconditioning of both the interior and the battery can be programmed in the iDrive menu. Timer-controlled cooling or heating ensures a pleasant temperature inside the passenger compartment ready for the start of the journey, while the high-voltage battery can also be cooled so that it is in an optimum operating state at the time of departure. The electrically powered auxiliary heating and ventilation function is also part of the standard specification on the



BMW X5 xDrive40e. It can either run on grid power during vehicle charging or be powered by the high-voltage battery if it has sufficient capacity.

**BMW X5 xDrive40e: a classic sports activity vehicle offering unique hybrid performance.**

Exclusive, bespoke design touches on the model's exterior clearly identify the BMW X5 xDrive40e as a classic sports activity vehicle while also making its unique hybrid capabilities plain to see. The most noticeable feature is the charging connection for the high-voltage battery located in the left front fender. Blue light effects also appear here at the start of the charging process to indicate the flow of energy. The exhaust system on the BMW X5 xDrive40e has a twin-tailpipe design with trapezoidal tips. Besides the model badge at the front of the vehicle's flanks, the "eDrive" logo, already familiar from the BMW i models, graces the tailgate and door sills with their blue background as well as the center console.

Apart from Dynamic Damper Control, the standard specification for the BMW X5 xDrive40e also includes self-levelling rear air suspension. The 2-zone automatic climate control that is standard on all BMW X5 models extended to include an auxiliary heating and ventilation system comprising an electric instantaneous water heater and an electric refrigerant compressor. In addition to this, all of the optional extras from the BMW X5 range are available, with the exception of the third row of seats, the Adaptive M Suspension, Active Steering and comfort seats in the rear. The BMW X5 xDrive40e can, however, be specified with xLine and Luxury Line for the exterior and interior to emphasize either the Sports Activity Vehicle's robust, versatile nature or its exclusive, luxurious character. The plug-in hybrid model can also be ordered with M Sport as well as the Ivory White and Mocha Interior Design Packages.

The BMW Navigation Professional system is another standard feature in the BMW X5 xDrive40e. A wealth of BMW ConnectedDrive options are offered, including Active Cruise Control with Stop & Go, BMW Head-Up Display, the BMW Night Vision system with pedestrian and animal recognition, Lane Active Blind Spot Detection, Parking Assistant, rear view camera, Surround View and Speed Limit Info. All driver assistance systems are also available when driving in all-electric mode. The Adaptive LED Headlights, Comfort Access, as well as the full selection of 19- and 20-inch light-alloy wheels, are available to order for the BMW X5 xDrive40e.

**Highly versatile charging options as well – thanks to pioneering products and services from BMW 360° ELECTRIC.**

The plug-in hybrid design of the BMW X5 xDrive40e provides the ideal basis for



extensive use of the electric drive system for highly efficient mobility, even including urban driving with zero tailpipe emissions. Its high-voltage battery offers a gross energy capacity of 9.0 kilowatt hours (kWh) and can be topped up with energy from a home charging station, like the BMW i Charging Station, as well as at public charging stations. With an occasional use charger, the BMW xDrive40e can be charged from a standard 120-volt outlet.

A tailor-made solution for safe, simple and extra-fast battery charging at home is available for the BMW X5 xDrive40e under the umbrella of **BMW 360° ELECTRIC**. The **BMW Charging Station** is capable of replenishing the high-voltage battery at a charging rate of 3.5 kW (16 A/220 V). As a result, it takes approximately 2 hours and 45 minutes to fully recharge an empty battery pack. Charging progress can be checked on a graphic displayed in the vehicle's instrument cluster or on a smartphone using the BMW Remote app. The data displayed on the monitor includes the quantity of energy supplied and information on preceding charge cycles.

Under the umbrella of **BMW 360° ELECTRIC** customers are offered an all-embracing service concept covering everything from the supply and installation of the charging station to maintenance, support and other services. There is also the **ChargeNow** service, comprising a **ChargeNow** card that grants access to the entire network of ChargePoint public charging stations nationwide. Beyond this, the BMW 360° ELECTRIC portfolio also comprises BMW Solar and ParkNow Long Term programs as well as maintenance, assistance and other customer services that have been specially tailored to this model and eMobility.

Innovative new functions from BMW ConnectedDrive furthermore help to plan journeys in such a way that the vehicle drives on electric power alone as much as possible and at maximum efficiency at all times. The Navigation Professional system fitted in the BMW X5 xDrive40e gives drivers the option of calculating a hybrid-specific ECO PRO route to an entered destination, which makes allowance for factors such as the traffic situation, the route profile and driving style. The intelligent energy management function in the BMW X5 xDrive40e utilizes the available data on the route profile for all navigation-assisted journeys anyway, together with real-time traffic information. This forms the basis for anticipatory and efficiency-optimized powertrain control that keeps fuel consumption as low as possible while making intensive use of electric mobility, for example when nearing the journey's destination. On a longer journey that goes through both rural and built-up areas, for instance, Brake Energy Regeneration can be employed and the engine's load points deliberately raised at higher speeds to ensure there are sufficient power reserves for completing the urban sections in all-electric drive mode. What's more, the locations of public charging stations are





added to the selection of points of interest on the navigation map whenever route guidance is activated.

The BMW Remote app also comes in a hybrid-specific version and lets the driver retrieve information on the high-voltage battery's state of charge even when they are away from the vehicle by using a smartphone. The app also displays the location of public charging stations. Efficiency evaluations for the last journey completed can be viewed on the smartphone as well, along with the total distance driven purely on electric power and the amount of fuel saved by using grid power. The auxiliary heating and ventilation functions of the BMW X5 xDrive40e can similarly be activated to heat or cool the interior prior to departure.

### **Production at the BMW Spartanburg plant: centre of excellence for BMW X models and hybrid technology.**

The BMW X5 xDrive40e is being produced at the BMW Spartanburg plant in South Carolina. This is where all other model variants of the sports activity vehicle are also built along with the BMW X6, BMW X3 and BMW X4 models. It has been over 15 years since the first-generation BMW X5 went into production. Since then, this US plant has evolved into the global center of excellence for BMW X models.

The BMW X5 xDrive40e is assembled in parallel with both the other model variants of the BMW X5 and the BMW X6 on a shared production line. Special assembly steps have been added to the manufacturing process for integrating the hybrid-specific components. The high-voltage battery is manufactured in a newly constructed production hall on the site of the BMW Spartanburg plant. All production processes are subject to the same strict quality and safety standards that the BMW Group applies worldwide. The BMW Spartanburg plant stands out for its resource-efficient system of energy supply. It was here that the intelligent Energy Data Management System (iEDMS) with continuous and comparative power consumption measurement was first implemented. Moreover, a large part of the energy required for vehicle production is obtained from methane gas, sourced from a nearby landfill, with the help of highly efficient turbine generators.

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### **BMW Group in Canada**

BMW Group Canada, based in Richmond Hill, Ontario, is a wholly-owned subsidiary of BMW AG and is responsible for the distribution of BMW luxury performance automobiles, Sports Activity Vehicles, Motorcycles, and MINI. BMW Group Financial Services Canada is a division of BMW Group Canada and offers retail financing and leasing programs and protection products on new and pre-owned



BMW and MINI automobiles, as well as retail financing for new and pre-owned BMW Motorcycles. A total network of 45 BMW automobile retail centres, 20 BMW motorcycle retailers, and 30 MINI retailers represents the BMW Group across the country.

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