

Media Information

5 July 2021

“10 questions to...” Wieland Bruch, Spokesperson and Expert for Electro-mobility, BMW Group. Getting to know the first-ever BMW iX3.

Singapore. BMW Asia is prepared to electrify the Lion City with a wave of full-electric models in the second half of 2021 and early 2022, starting with the first-ever BMW iX3 in the coming weeks. This full-electric Sports Activity Vehicle (SAV) combines locally emission-free driving pleasure with the sporting ability of a BMW X model.

We speak to Wieland Bruch, Spokesperson and Expert for Electro-mobility at the BMW Group, about the first-ever BMW iX3 and what customers can expect in this full-electric SAV.



WHY IS THE BMW iX3 THE SECOND FULLY ELECTRIC MODEL FROM BMW?



The sports activity vehicle segment is the fastest growing in the world, and the X3 is one of the best-selling cars for BMW worldwide. Drivers enjoy everything from the high seating position, to the ample luggage space, to the comfort and driving agility the X3 provides.

To accelerate the adoption of electromobility for more people, it only made sense for the next full-electric BMW to come from the BMW X3 range. The good news is, the iX3 is just the beginning! We'll be rolling out more exciting electrified products soon.

WHY DIDN'T BMW PRODUCE ANOTHER FULLY ELECTRIC MODEL WITH THE SAME “STAND OUT” DESIGN LIKE THE BMW i3?

The i3 and the iX3 are answers to different questions in time. In 2013, electricity as a power source for vehicles was a novel idea, so the i3 was born to catch the world's attention and introduce electromobility as a concept. From a technology point of view, the i3 played an important role as an enabler for the BMW Group – it created new dimensions in lightweight design, holistic sustainability, and digitalisation – all of which have influenced subsequent BMW Group products. We are very proud of the i3 as it stands out and there's nothing else like it.

Fast forward to 2021, eight years after the launch of the BMW i range. We are now in a time where electromobility is gaining momentum across the globe, people are familiar with the idea, and customers can see how electric vehicles can seamlessly integrate into their lives. We needed to provide customers with a vehicle that had the look and feel they knew and loved, and this is where the BMW iX3 comes in.

IS THE iX3 JUST A BIGGER i3? WILL IT DRIVE THE SAME?

The iX3 will handle like a typical BMW. It has a rear-wheel drive nature, and we have a latest generation BMW eDrive motor put on the rear axle.

One innovation on the iX3 is the adaptive recuperation feature. Artificial intelligence analyses the driving conditions (independent of the navigation system) and decides between battery recuperation and coasting. For example, imagine the road ahead is free of obstacles, or there's a vehicle in front, or the car is approaching a stoplight – the iX3 will analyse these factors, and either engage the coasting function, or increase the recuperation to slow down or bring the vehicle to a halt respectively.



This adaptive recuperation is automatically engaged when the gear lever is in 'D' mode. For a higher level of battery recuperation, the driver just needs to shift the gear lever to 'B' mode – this would allow for the one-pedal operation that is familiar from the i3.

This function hence allows for a new balance between high recuperation and driving comfort. In fact, 25% of the energy needed for the excellent results during WLTP testing comes from adaptive recuperation!

WHAT WAS THE INSPIRATION BEHIND THE UNIQUE WHEEL DESIGN OF THE iX3?



This is the new BMW Aerodynamic Wheel, which makes its debut with the iX3. It will also be fitted onto the upcoming iX and i4. We've used an aluminium-based wheel and fitted it with low rolling resistance tyres and individually designed inserts. This allows us to blend lightweight construction and reduced air resistance, while keeping the elegant look of a V-spoke aluminium wheel. It has a unique look, which is

befitting of a unique model.

Customers will be pleased to know that these wheels have been made 15% lighter than previous versions of BMW aerodynamic wheels. Also, when compared to a conventionally powered BMW X3, the new Aerodynamic Wheels reduce drag by about 5%. This has an overall effect of lowering the power consumption in the iX3 by 2% in the WLTP test cycle, extending vehicle range by 10 km.

WHAT'S SPECIAL ABOUT THE ELECTRIC DRIVETRAIN OF THE iX3?

The electric drivetrain consists of three main components – the electric motor, power electronics, and battery. All three are developed and manufactured by the BMW Group. Over the course of eight years, we have consistently refined and improved on the technology to result in today's fifth-generation electric drive system.

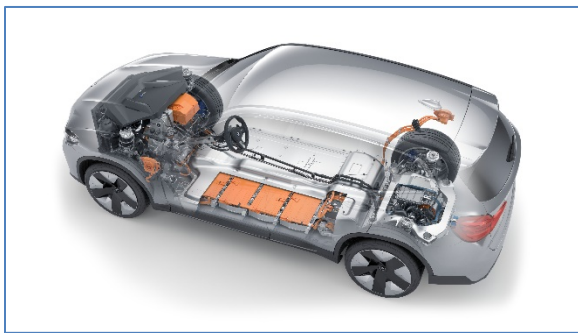


One highlight is the electric motor – it is sustainably produced without the use of magnets or rare earth materials and reduces the use of cobalt by two thirds. For the first time in the >100 kW segment, we are using ESM (electrically excited synchronous machine) technology – it allows an exceptional balance of high peak power and stable torque even when the engine is operating at high rpm. The

electric motor operates silently and is integrated with the power electronics and transmission into a compact package with a common housing. This ensures we have the most efficient packaging and minimise the use of resources.

The iX3 also features the most advanced battery cell technology from the BMW Group yet. Compared to the i3, there is a 30% improvement in the power density (based on mass) – as such, we are getting more out of every battery cell and achieving a longer range without having to fit a larger, heavier battery pack.

THE SUSTAINABLE PRODUCTION OF ELECTRIC VEHICLES IS A BIG TOPIC THESE DAYS, SPECIFICALLY WITH REGARD TO EV BATTERIES. HOW IS THE BMW iX3 BATTERY PRODUCED?



In the iX3, we have a 400V lithium-ion battery – this consists of 188 prismatic battery cells in 10 modules. This modular concept means that each cell is individually housed and controlled for longevity and the highest possible level of safety.

Most importantly, the batteries are produced in a CO₂-neutral manner, and the BMW Group is working towards CO₂-free production soon. In a further step to ensure the socially responsible production of batteries, the BMW Group sources its own cobalt and lithium from certified mines in Morocco and Australia, which is then supplied to the battery cell manufacturer. This way, we ensure a full perspective on and responsibility over the entire production process.

BUILDING ON THE TOPIC OF BATTERIES, THERE HAVE BEEN STATEMENTS MADE THAT CHARGING AN EV IS SIMILAR TO CHARGING A SMARTPHONE. CAN FAST CHARGING DAMAGE THE EV BATTERY?

First, EVs are more complicated devices than smartphones and work with a different charging technology. As such, they are similar in certain usage aspects, but ultimately work on different levels.

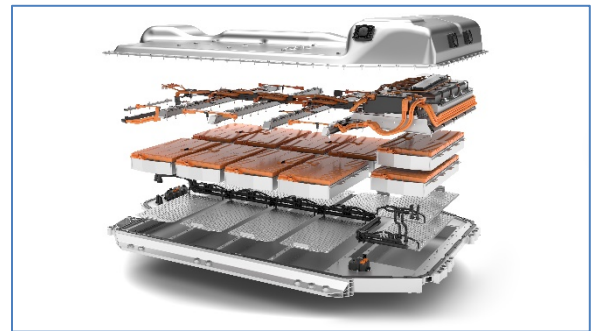
The iX3 has a Combined Charging System (CCS) that can take up to 150 kW of DC charging power. While fast charging can impact the lifetime of the battery when done frequently, BMW has designed

a new DC charging profile to give the best balance between fast charging and preserving longevity of the battery. During the development of the fifth-generation battery technology, we created a control methodology to significantly reduce cell aging in every state of the high-voltage battery – whether the battery is cold or warm, fully charged or drained, and whether it is new or used.

Our experience from more than 10 years with battery electric vehicles used by our customers indicates that our concept for battery longevity works.

IS IT POSSIBLE TO UPGRADE THE BATTERY WHEN NEWER OR MORE EFFICIENT BATTERIES ARE DEVELOPED? WHAT KIND OF COSTS DOES THIS ENTAIL?

The battery is designed to have the same lifetime as a conventional petrol model. As such, it is not meant to be changed during the vehicle's lifetime. We also do not have a spare part pricing for the battery at this time, as it is made up of modular components and the individual components can be replaced if they are worn out. This saves resources and keeps the cost low for the customer.



We took a lot of learnings from the BMW i3 in the development of this fifth-generation battery technology. For example, in 2016, BMW developed a higher capacity battery pack and we offered our existing i3 customers the option to swap their existing battery pack to the new one. Interestingly, we found that majority of our customers decided to purchase a new i3 with enhanced features instead of merely upgrading their battery. This became one of our guiding principles when further developing our electric vehicle technology.

We don't just stop there, though. The chief objective for the BMW Group is to ensure the battery cells are sustainably produced and used in a closed lifecycle loop. At the end of the vehicle's life, the battery has a second life in stationary purposes, such as serving as energy storage units. The battery is also up to 96% recyclable (including graphite and electrolytes) for future production of other batteries in a responsible manner.

HOW WILL THE iX3 BE PRICED COMPARED TO ITS PETROL SIBLINGS?

This is dependent on each market's individual pricing and tax structure, as well as the prevailing government rebates. But generally speaking, it will be close to the price of the plug-in hybrid X3.

IN 10 WORDS OR LESS, WHY SHOULD I GET AN iX3?

Emissions-free motoring in a great BMW Sports Activity Vehicle!

-End-

For media enquiries, please contact:

BMW Group Asia

Corporate Affairs Department

BMWAsiaCorpAffairs@bmw.com

Tel: (+65) 6838 9600

Media Website: www.press.bmwgroup.com

LinkedIn: <https://www.linkedin.com/company/bmw-asia>

The BMW Group

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 31 production and assembly facilities in 15 countries; the company has a global sales network in more than 140 countries.

In 2020, the BMW Group sold over 2.3 million passenger vehicles and more than 169,000 motorcycles worldwide. The profit before tax in the financial year 2020 was € 5.222 billion on revenues amounting to € 98.990 billion. As of 31 December 2020, the BMW Group had a workforce of 120,726 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company set the course for the future at an early stage and consistently makes sustainability and efficient resource management central to its strategic direction, from the supply chain through production to the end of the use phase of all products.

www.bmwgroup.com

Facebook: <http://www.facebook.com/BMWGroup>

Twitter: <http://twitter.com/BMWGroup>

YouTube: <http://www.youtube.com/BMWGroupView>

Instagram: <https://www.instagram.com/bmwgroup>

LinkedIn: <https://www.linkedin.com/company/bmwgroup/>