BMW i – E-MOBILITY PIONEER.

Fleet Hero Award
World Car Design of the Year
Green Car of the Year
UK Car of the Year
i Mobility Awards
Innovation of the year
Auto Trophy
E car award
Design-Neuheit des Jahres
Grünes Lenkrad
Trophées de l'argus
Schweizer Auto des Jahres
German Design Award
iF gold product design award
Next Green Car
Green Mobility Trophy
Engine Of The Year 2015 & 2016
International Paul Pietsch Award
Top 100 Cars of UK
Winner Ward’s “10 Best Engines 2015”
BMW i TECHNOLOGY IS TRANSFERRED INTO OTHER MODEL LINES.

BMW i technologies such as eDrive, lightweight material and laser light have been successfully transferred to other BMW model series.

Since March 2016, all BMW brand plug-in hybrids are branded “BMW iPerformance” as a result of the technology transfer from BMW i to the BMW core brand.
MORE THAN 145,000 ELECTRIFIED BMW VEHICLES SOLD BY MAY 2017.

- **i3 60 Ah**
- **i8**
- **BMW & MINI PHEV accumulated**
- **BMW X1 xDrive25Le iPerformance**
- **i3 94 Ah**
- **i3 60 Ah**
- **i8 accumulated**
- **BMW X5 xDrive40e iPerformance**
- **225xe iPerformance**
- **330e iPerformance**
- **530Le**

*Only available in China **Figures are for cumulative sales of BEV and PHEV vehicles*
SUPERIOR LONG-TERM POTENTIAL DRIVES THE CHANGE TOWARDS E-MOBILITY.

<table>
<thead>
<tr>
<th>Efficiency [%]</th>
<th>Combustion engine</th>
<th>Electric powertrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>33%</td>
<td>Movement &gt; 90 %</td>
</tr>
<tr>
<td>Emission</td>
<td>33%</td>
<td>Loss &lt; 10%</td>
</tr>
<tr>
<td>Loss</td>
<td>33%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy density [Wh/l]</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>~10000</td>
<td>~ 9000</td>
</tr>
<tr>
<td>Petrol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy density [Wh/l]</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 500</td>
<td>cell</td>
</tr>
</tbody>
</table>
HOW DO WE TRANSFER THESE CHANGES INTO OUR FUTURE PRODUCT PORTFOLIO?
CUSTOMERS BECOME MORE ATTRACTED TO E-MOBILITY. EXISTING OWNERS OF BEV AND PHEV ARE CONVINCED.

**Favored powertrain next car: 2014 vs. 2016 (Driver conventional car, 1st choice)**

<table>
<thead>
<tr>
<th></th>
<th>PHEV</th>
<th>BEV (+REX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHEV</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>BEV (+REX)</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

**Re-Purchasing Interest EV: 2014 vs. 2016 (BEV and PHEV driver)**

<table>
<thead>
<tr>
<th></th>
<th>PHEV owner</th>
<th>BEV owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHEV</td>
<td>34</td>
<td>57</td>
</tr>
<tr>
<td>BEV</td>
<td>25</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: Powertrain Study 2014/16 | June 2016
VARIED REGIONAL REGULATIONS REQUIRE A TARGETED SOLUTION.

Emission standards for NOx+NMOG (US EPA) and NOx (EU, Japan, China Peking) CO₂ standard 2008/ Emission standard 2012 for illustration of regional regulatory requirements.

-26% 2016
156(g/km)

-41% 2021
124(g/km)

-52% 2025
102(g/km)

-70% 2025

-16% 2015
130(g/km)

Scope extension (indirect stronger limits) 202x

-38% 2020-21
95(g/km)

> 2020

2012 = 2015

Up to -60% (EU6) 2015

2012

-12% 2015
164(g/km)

2012

-12% 2015
146(g/km)

2012 = 2015

-36% 2020
119(g/km)

202x

-30% 2020
117(g/km)

202x

> 2020

ca. -50%

> 2020

ca.

> 2020

In force
Forecast
Prognosis
FURTHER PORTFOLIO POSITIONS FOCUS ON RELEVANT CONCEPTS AND SEGMENTS ENSURING REGULATIVE REQUIREMENTS IN CHINA, USA AND EU.

Worldwide growing concepts in all segments

Technical advantages of integration in SAV Concept

BEV rollout in SAV segment

Worldwide still largest segment with opportunities in emotional concepts

Emotional sedan concepts with strong customer appeal

BEV selective rollout in sedan segment
SCALABILITY AND FLEXIBILITY – FUTURE ELECTRIFICATION BASED ON A MODULAR ARCHITECTURE.

BEV Integration into the BMW Group vehicle architecture

PHEV Integration into the BMW Group vehicle architecture

PHEV

BEV

2013 2020

BEV

PHEV

BMW BEV

BMW PHEV

MINI BEV

MINI PHEV
SCALABILITY AND FLEXIBILITY – FUTURE ELECTRIFICATION BASED ON MODULAR E-COMPONENTS.

Our modular approach is complemented by flexible production processes.

The key to exchange flexibility is the maturity in module manufacturing technology.
BMW GROUP ELECTRIFICATION SUCCESS STORY AND MORE TO COME.

BATTERY ELECTRIC VEHICLES (BEV)

- BMW i3 60 Ah
- BMW i3 94 Ah

PLUG-IN HYBRIDS (PHEV)

- BMW i8
- BMW 530Le*
- BMW 225xe iPerformance
- BMW X1 xDrive25Le iPerformance*
- BMW i8 Roadster
- BMW X5 xDrive40e iPerformance
- BMW 330e iPerformance
- BMW 740e iPerformance
- MINI Cooper S E Countryman ALL4
- MINI BEV
- BMW X3 BEV
- BMW iNEXT

Every BMW model series will have a model with eDrive!
FLEXIBILITY IS KEY FOR E-MOBILITY.

Share of BEV/ PHEV

2016 2025

↑ 25%

↓ 15%
BMW GROUP’S ELECTRIFICATION PATHWAY.

I. Pioneering
- Building-up expertise
- Technology innovation
- Project i

II. Electrification of core portfolio
- Roll-out i Performance
- Upgrade BMW i3
- MINI BEV
- BMW X3 BEV

III. Scalability and flexibility
- iNEXT
BMW GROUP REMAINS WELL POSITIONED FOR FUTURE OPPORTUNITIES.

1. Our conviction has been for years: The future will be electric

We acted upon the conviction early and pioneered in the field of e-mobility.

2. As a result, we developed a full portfolio of BMW i and iPerformance products.

We are now flexibly enabling our architectures and will roll out BEVs to all relevant concepts and segments.

3. We will keep our leadership with a robust and comprehensive electrified portfolio from 2020 onwards.