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# **Initiatives for the Sustainable Society Toward 2050 Carbon Neutrality**

**February 2, 2021**



**Aisin Seiki Co., Ltd.**

## Vision for FY2031

※Adopted at Sustainability Conference in Feb.2020



### ■ To reduce CO2 from manufacturing to use and disposal of products for a low-carbon society

Manufacturing

	KPI	Mar.2020 Result	Mar.2021 Target	Mar.2031 Target
 9 産業と技術革新の基盤をつくろう	Life cycle CO2 emissions reduction rate	17,333,000 t-CO2 / year	Improvement of accuracy in understanding of results for the purpose of setting targets	<b>Reduction of 25% or greater</b> Compared to 2013
	 12 つくる責任 つかう責任	Production CO2 emissions reduction rate (total)	2,819,000 t-CO2 / year	2,738,000 t-CO2 / year

### ■ To expand products toward substantially zero GHG emissions in 2050

Products

 13 気候変動に具体的な対策を	Sales ratio of electrification products that contribute to reducing CO2 emissions	10%	13%	<b>50% or higher</b>
	 7 エネルギーをみんなにそしてクリーンに	Contribution amount of CO2 reduction by energy-related products (sales)	480,000 t-CO2 / year	530,000 t-CO2 / year

Established "Energy Strategy Council", a group-wide meeting to plan and promote carbon-neutral strategies for the entire Aisin Group (2020/3~)

## Energy Strategy Council

- Carbon-neutral strategy planning / promotion and progress confirmation from a medium- to long-term perspective

### ① Carbon-neutral business scenario WG (overall)

- Drawing big pictures and coordinating with each WGs (Including renewable energy promoting scenario)

### ② Production CO2 neutral technology WG(Scope 1,2)

- Developing and Utilizing carbon neutral technology (Recovery and reuse of CO2, utilizing of hydrogen) ⇒ CO2 recovering at casting process and methane gas utilization in production by synthesis with hydrogen

### ③ Material CO2 reduction WG (Scope3)

- Promoting CO2 reducing activity for procured materials(measures for supply chain, reviewing materials)

- From FY2022, EDU\* lineups will be production CO2-free products
- From FY2031, expand production CO2-free products to all electrification products

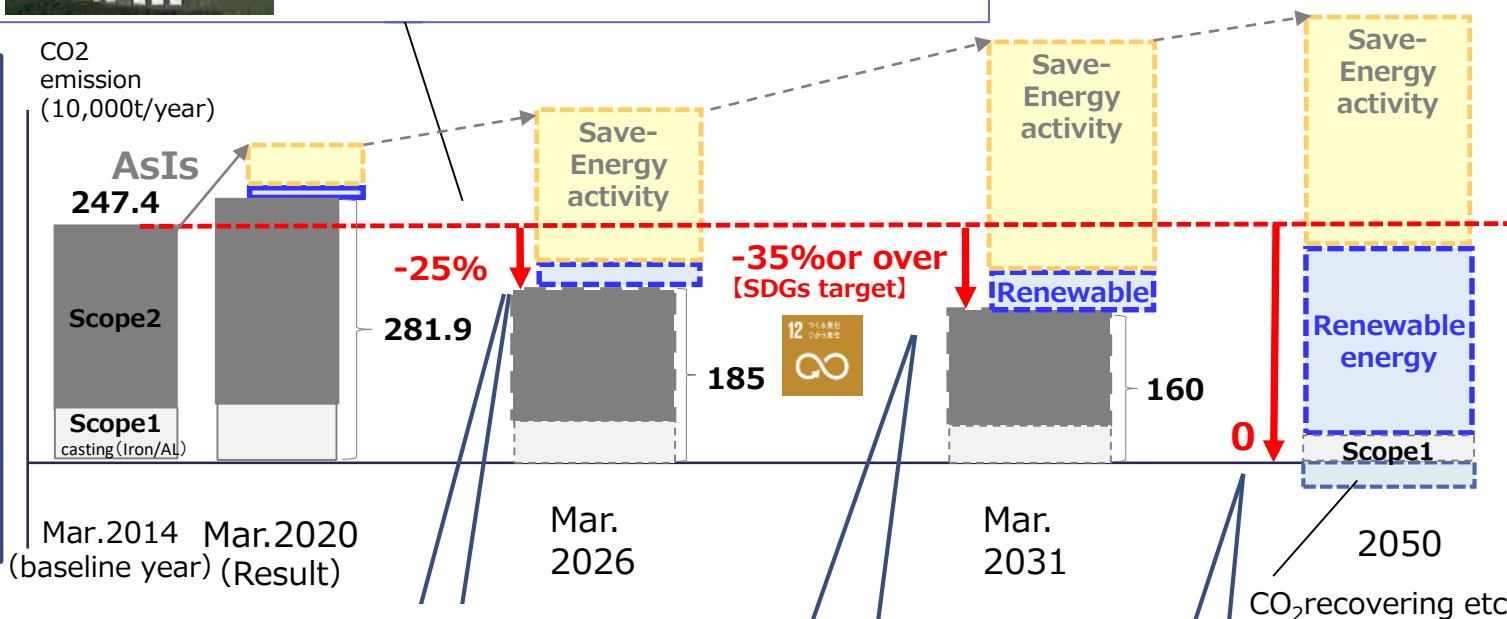
## ■ Solar-powered plant at AISIN TOHOKU



- Start production of electric products in expanded area
- Set up solar panel on the expanded area

\*EDU: electrification drivetrain unit

Plan for production CO2 reducing (Scope1+2)



## ■ Plan for expansion of target products

Production CO2-free Products



Electrification drivetrain unit  
(eAxle/ HEV transmission)

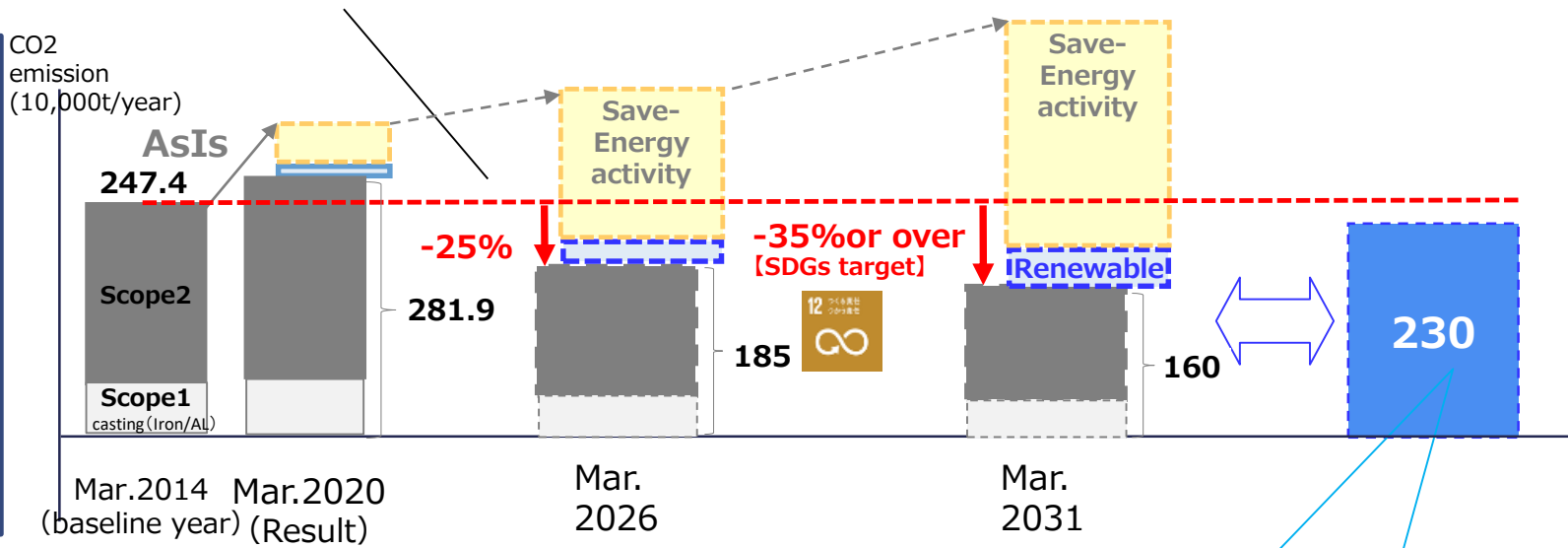
All electrification products

All products

Achieving carbon neutrality

- Contributing CO2 reduction in society by energy-related products(sales)
- Expanding the contribution amount to the equivalent of production CO2 of the entire Aisin Group

**Plan for production CO2 reducing (Scope1+2)**



**Contribution amount of CO2 reduction by products (sales)**



**1.5t-CO<sub>2</sub>/Unit/Y**



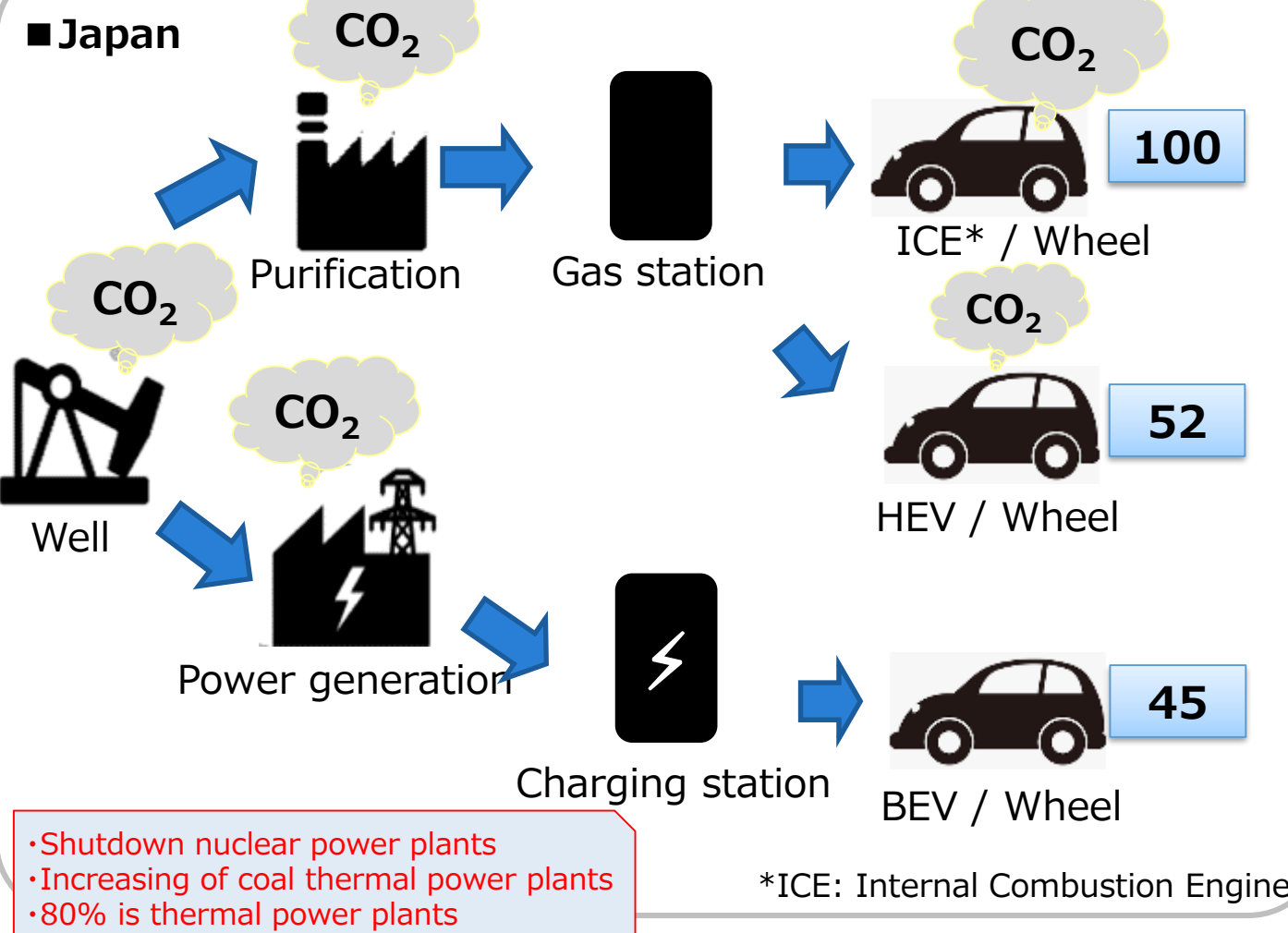
**1.5t-CO<sub>2</sub>/Unit/Y**







**1.7t-CO<sub>2</sub>/Unit/Y**

**Contributing CO2 reduction by sales of cumulative 2 Mil. units of energy products by Mar.2031 (equal to 2.3Mil ton CO2 reducing contribution)**

## CO2 emissions by "Well-to-Wheel" approach (Ministry of Economy, Trade and Industry, 2015)



- Shutdown nuclear power plants
- Increasing of coal thermal power plants
- 80% is thermal power plants

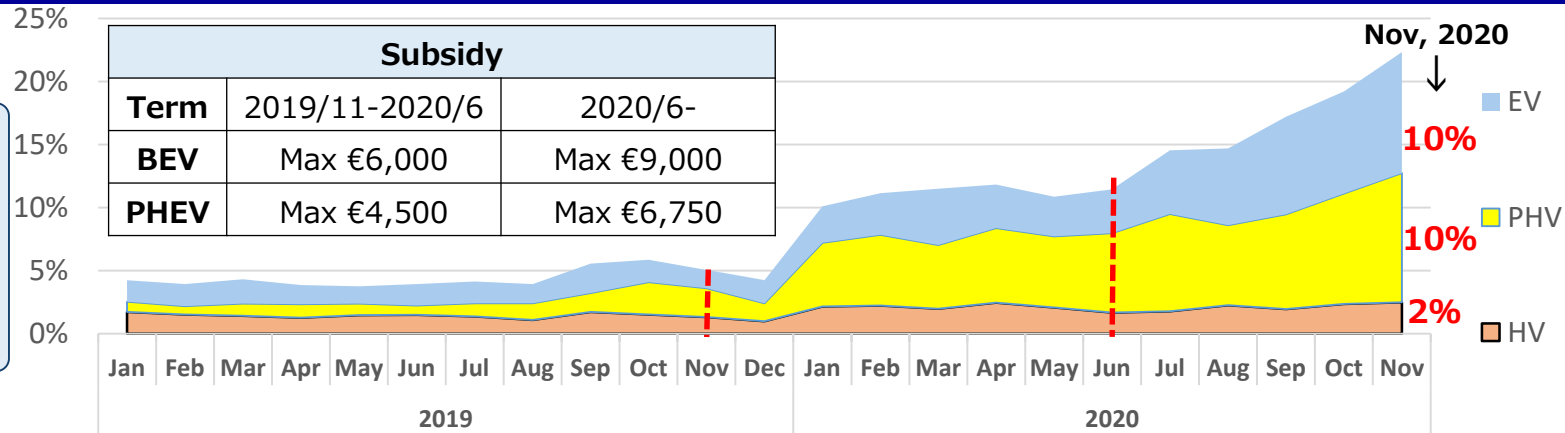
<p>■ <b>USA</b></p>  <p>BEV</p> <p><b>37</b></p>
<p>■ <b>France</b></p> <p>Many nuclear power plants</p>  <p>BEV</p> <p><b>4</b></p>
<p>■ <b>Germany</b></p> <p>BEV is treated as zero emission in European CAFE</p>  <p>BEV</p> <p><b>37</b></p>
<p>■ <b>China</b></p> <p>Many coal thermal power plants</p>  <p>BEV</p> <p><b>62</b></p>

### 【Challenges of BEV】

- Short cruising range
- Taking long time to charge
- Early deterioration of battery
- Expensive vehicle price

# Reference : Electrification vehicle ratio in Europe

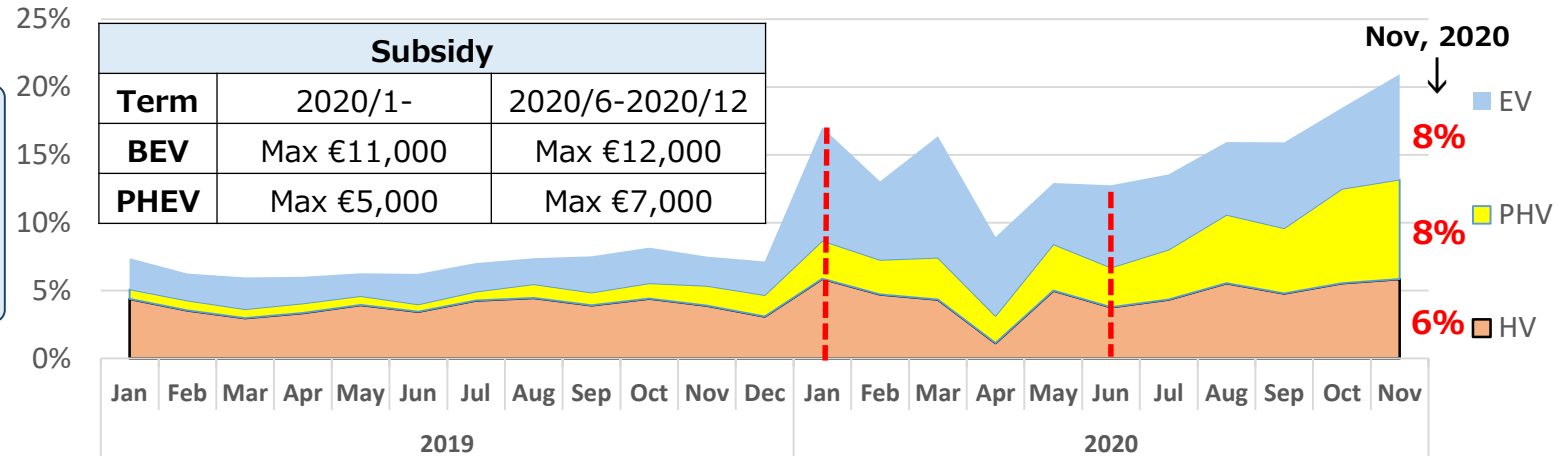
Germany



■ Growth of electrification vehicle ratio in the last year

Total 4.4 times  
BEV 10 times  
PHEV 5 times

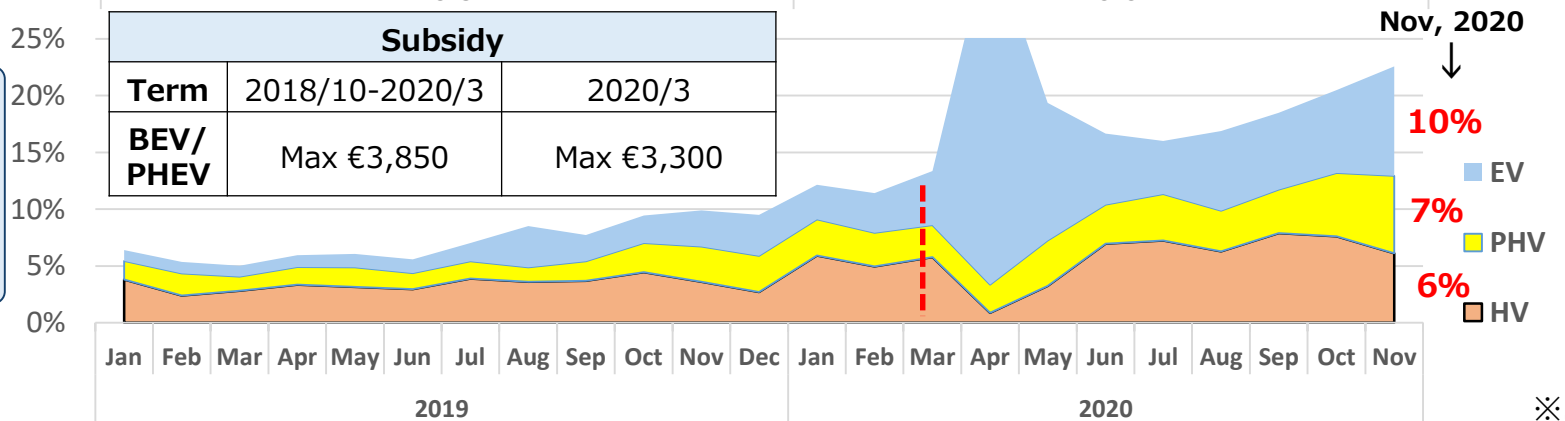
France



■ Growth of electrification vehicle ratio in the last year

Total 3 times  
BEV 4 times  
PHEV 7 times




UK



■ Growth of electrification vehicle ratio in the last year

Total 2.3 times  
BEV 3.3 times  
PHEV 2.3 times

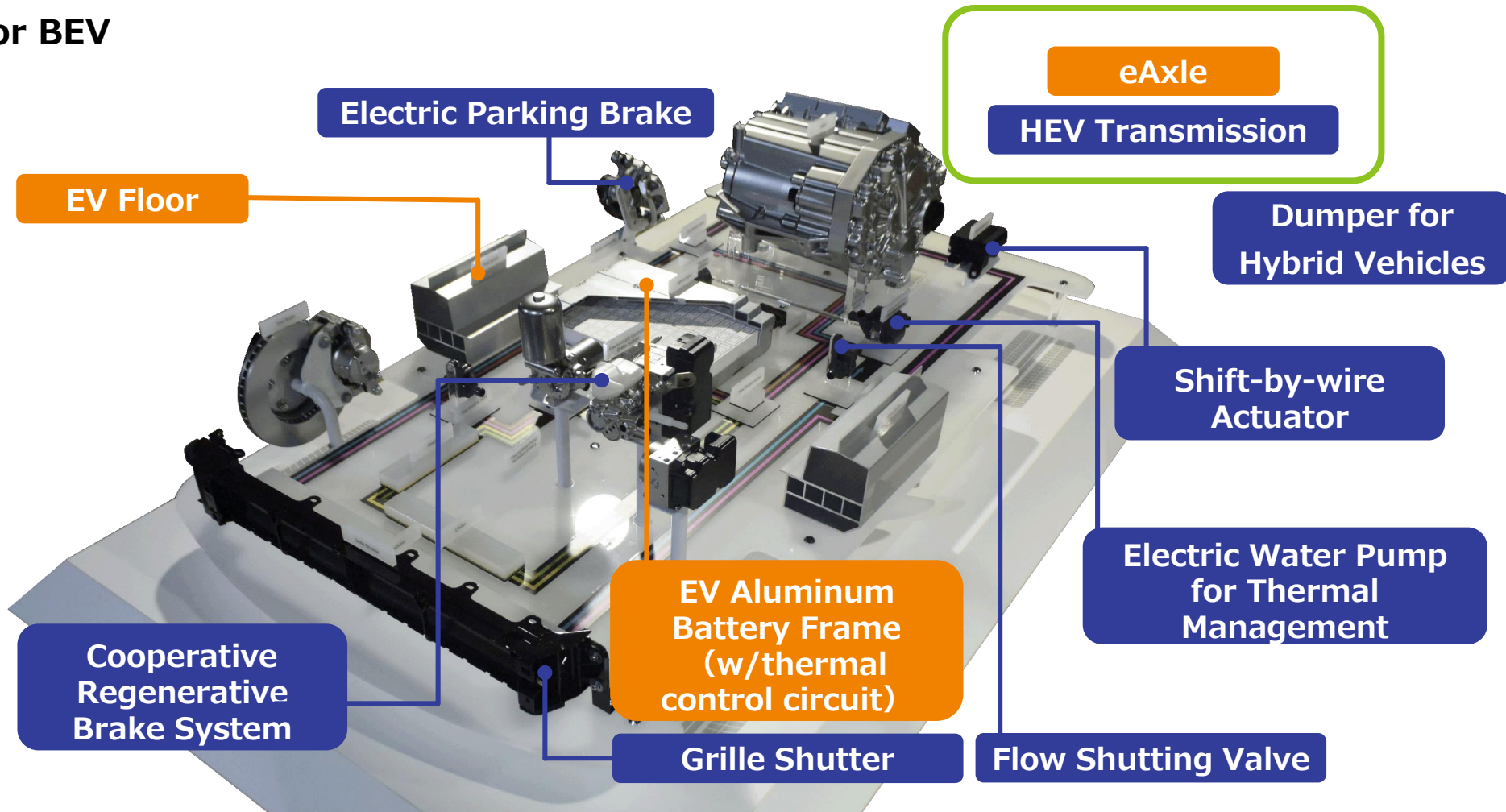
Promoting **all-around** product development, using technological strength of AT and 2-motor HEV

		Products	Installed Vehicle
Electrification Vehicle	BEV/ FCEV	eAxle 	<ul style="list-style-type: none"> <li>• TOYOTA C-HR·IZOA(China)</li> <li>• LEXUS UX300e</li> <li>• TOYOTA new-MIRAI</li> </ul>
	PHEV		
	PHEV •HEV	2-motor HEV Transmission 	<ul style="list-style-type: none"> <li>• TOYOTA PRIUS·RAV4·C-HR</li> <li>• LEXUS LS500h·LC500h etc.</li> </ul>
	1-motor HEV Transmission 	<ul style="list-style-type: none"> <li>• DS 7 CROSSBACK E-TENSE</li> <li>• PEUGEOT 3008 Hybrid etc.</li> </ul>	



## Lineup for various products for xEV other than electrification drivetrain unit

■ for BEV



Expanding supply structure for electrification products such as electrification drivetrain unit, Electric Control Brake and Electric Pump

