## Strategy of Hino towards Carbon Neutrality



## Current social issues (Common tasks)

## Environment & energy

• Environmental management is directly linked to corporate reputation.

ESG/SDGs investment exceeds 200 trillion yen in Japan.

Global Sustainable Investment Review 2018

Accelerate efforts to reduce greenhouse gas emissions (e.g., RE100/EV100 compliance)

> Carbon Neutrality

#### Logistics

 Low wages & long working hours
Expansion of e-commerce, increase in logistics volume
Decrease in loading rates



Trucking Industry: Current Status and Issues

Improved working environment and conditions (e.g., addressing the 2024 issue)

Manpower saving

#### Declining birthrate & aging population

 Ageing of drivers
Responding to diversifying needs(e.g., individual delivery, home delivery, etc.)

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All Japan Trucking Association Excerpts from Japan Trucking Industry: Current Status and Issues

Securing a diverse workforce (Workplaces where everyone can work)

#### Safety & security

#### •Safe operation is a social responsibility



Zero accidents (Guarantee safety of people and cargo)



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### **Concrete steps towards carbon neutrality**



#### Contributed to Japan's first fuel cell heavy-duty truck driving demonstration.









Start of FC heavy-duty truck driving demonstrations (May 2023).





#### Focus points for carbon neutrality in commercial vehicles

#### 'Carbon neutrality' in terms of life cycle.

Reduction of CO<sub>2</sub> emissions in all processes: production, transport, use and disposal.



About 90% of the CO<sub>2</sub> emitted by commercial vehicles is during driving.

#### Way of thinking for Carbon Neutrality (enemy is carbon)

## **Carbon Neutrality in all directions**

\* Commercial vehicles account for 90% of CO<sub>2</sub> emissions while driving.

\* Reducing carbon emissions from diesel oil use is the way to carbon neutrality.

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#### Deal by putting the right prodcuts in the right place



### Sustainable policy towards carbon neutrality

Providing diverse solutions that are close to our various customer needs.



Challenge is "how to achieve it" in commercial vehicles, since the volume is small.

#### For efficient realization of multi-pathways (ICE) Promote fuel efficiency and fuel diversification Through continuous improvement of existing technologies.

#### **Improve fuel efficiency**

Fuel efficiency improvement & emissions near Zero challenge

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#### Improve fuel economy

Aerodynamics reduction
Higher engine efficiency
Low friction technology

#### Fuel diversity

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ICE Platform Concept





#### **Unified Engine structure for fuel diversity**

## For efficient realization of multi-pathways (xEV)

Range Extender (RE-) BEV Platformconcept realizingAll types of next-generation xEV



Integration into motor drive  $\rightarrow$  Different sources of energy usable

HINO



#### **Standard Battery on RE-BEV platform concept**

#### **Battery package standardized** for various uses and energy needs **Universal & all-purpose design** - No barriers on battery cell innovation





### **Hino's vision**

Quick model deployment through modular concept of standard battery





## Further challenges for xEV spread



We will propose the creation of a new system together, across the industry.

# We make a better world and future by helping people and goods get where they need to go.



We will provide products that are the best-fit to fulfill customer needs.

We will also take responsible initiative to realize synergies through ongoing and our 4 companies' collaboration toward the future.



## HINO CARBON NEUTRAL STRATEGY





## We make a better world and future by helping people and goods get where they need to go.





We support a future society by committing to safety

We are committed to acting with integrity and in a compliant manner. and environmental sustainability.

We support the businesses of our customers by committing to quality and professionalism.

<mark>共感</mark> Empathy

We respect diversity and inclusion, and build a safe working environment.