Automobile Business Strategy

Business Overview/ Revenue Highlights

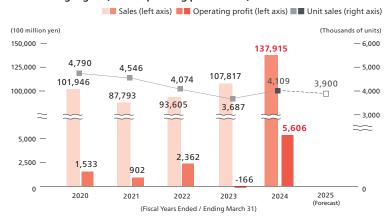
Vision and Challenges for Zero Environmental Impact in the Automobile Business

Honda is aiming to achieve zero environmental impact and has set a goal to have 100% of its global sales consist of Battery Electric Vehicles (EVs) and Fuel Cell Electric Vehicles (FCEVs) by 2040. While there is a perception that EV adoption has temporarily stalled in North America and Europe, Honda considers that, in the medium to long term, small mobility vehicles, including automobiles, will steadily shift to EVs. As a front-runner in electrification, we are committed to advancing our efforts towards electrification without any slack.

On the other hand, emerging EV manufacturers, primarily from China, are expanding globally, intensifying competition. To achieve its electrification goals amidst this turbulent environment, Honda considers it crucial not just to promote electric vehicles but also to address the entire lifecycle. This includes focusing on building a comprehensive value chain centered around core components like batteries, introducing EV models with Honda's distinctive appeal, advancing production technologies, and expanding charging infrastructure.

For the EV shift, Honda plans rapid product launches by 2026 and aims to establish a strong EV brand and business structure by 2030. Strengthening its internal combustion engine (ICE) business is essential to fund future electrification investments. Honda is making thorough preparations with a midium- to long-term perspective, anticipating the widespread adoption of EVs after the late 2020s.

Revenue Highlights (Sales/Operating profit/Units)

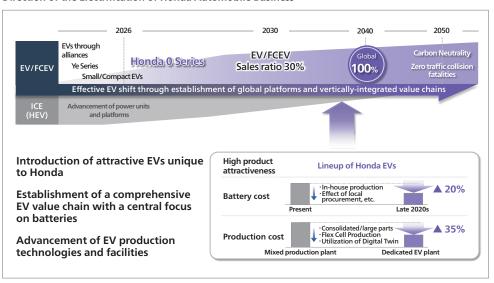


Electrification Roadmap

A Global Strategy for the Future EV Market

Given the current significant regional differences in the progress of electrification, we will actively introduce EVs tailored to regional characteristics and steadily build the foundation for future EV products and production systems by leveraging insights gained through alliances. Looking ahead to the global EV proliferation period starting in the late 2020s, we plan to launch a new global EV series, the "Honda 0 Series," starting in 2026 and roll it out worldwide. By the Fiscal Year Ending March 31, 2031, we aim to achieve a global EV/FCEV sales ratio of 30% or higher. To realize these goals, we will focus on: 1) introducing attractive EVs unique to Honda, 2) building a comprehensive EV value chain centered around batteries, and 3) advancing production technology and factory evolution.

Direction of the Electrification of Honda Automobile Business

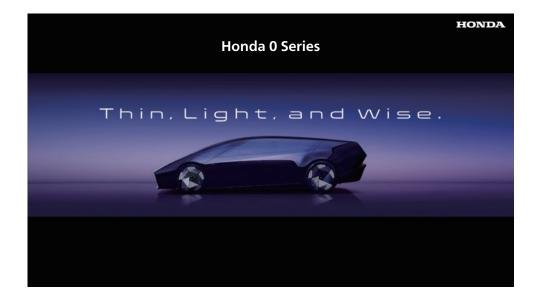


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Offering Attractive EVs

The Vision for Honda 0 Series

The Honda O Series is a completely new EV series created from scratch based on the new EV development approach of "Thin, Light, and Wise." This series aims to further enhance the joys of "driving pleasure" and joy and freedom of mobility," principles guided by Honda's "M/M principle," which has been fundamental to our approach to vehicle manufacturing. Additionally, the Honda 0 Series will continuously update the customer experience by adopting an optimal architecture designed with the evolution of software in mind.



Development Approach: "Thin, Light, and Wise."

Thin: M/M Space for the EV Era

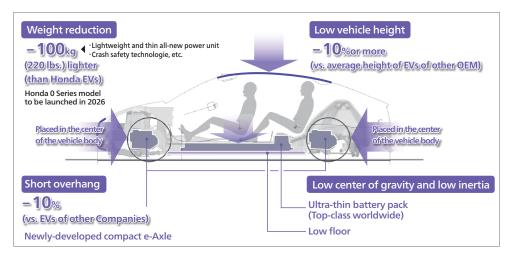
By integrating a newly adopted medium-to-large EV-specific platform with an evolved power unit, this EV model achieves an unprecedentedly low overall height and a short overhang design, setting it apart from other EVs. The motor room and floor utilize a newly developed compact "e-Axle" and a top-class ultra-thin battery pack to achieve extreme thinness. At the same time, through optimized component layout, reduced component count, and Honda's unique collision control technology, it achieves over a 10% reduction in overall height compared to previous models while maximizing interior space.

Topics

* e-Axle: A system which converses energy from power to motion, consisting of a motor, inverter, and gearbox.

Light: Agile Performance

In addition to weight reduction of the body structure, Honda will achieve approximately 100 kg of weight reduction compared to conventional models by adopting a new, lightweight, and slim power unit that leverages the technology developed through its F1 and hybrid system development. Furthermore, by positioning heavy components such as the battery and power unit low and centrally within the vehicle, Honda aims to lower the center of gravity, stabilize vehicle behavior, and achieve agile performance.



Wise: New Mobility Experience

By integrating our proprietary vehicle OS with advanced connected technologies, we provide a digital UX optimized for each individual customer. We develop the foundational E&E architecture, the vehicle OS layer above it, and all the applications on top of it independently.

The functions based on Honda's unique vehicle OS work together to deliver new and exciting experiences that were previously impossible. The vehicle will understand the driver's intentions and the environment's condition, autonomously anticipating and suggesting actions, thus providing a uniquely Honda experience. Additionally, by complementing the driver's abilities, we eliminate driving anxiety and make operation easier by recognizing environmental factors and voice commands.

Honda, based on its development approach called Wise, aims to enhance vehicle autonomy and intelligence to protect and support occupants while providing safety and peace of mind.

By tailoring to each customer's preferences and needs with advanced intelligence, we aim to provide a new and exhilarating experience.



To achieve this, we will consolidate the roles traditionally managed by numerous Electronic Control Units (ECUs) into a core ECU, adopting a central architecture where the entire vehicle operates as a single brain. This core ECU will incorporate System on Chip (SoC) semiconductors equipped with essential AI for automation and intelligence evolution, while also being customized by Honda to optimize power consumption. This approach will enable mobility that perceives and judges like a human.

Value Proposition of the Honda 0 Series

The Honda 0 Series, developed under the "Thin, Light, and Wise." approach, offers five core values:

1. Safety and Confidence through AD/ADAS

In 2021, we launched the Honda SENSING Elite-equipped LEGEND (for the Japanese market), which features advanced technology compliant with Level 3 automated driving: conditional automated driving in limited areas, marking the practical implementation of Level 3 automated driving. To deliver this technology to customers worldwide, the Honda 0 Series will be equipped with the latest ADAS technology. Furthermore, by the late 2020s, it is expected to feature even more advanced next-generation autonomous driving technology.

This autonomous driving technology is based on Honda's safety philosophy of "human-centered," further advancing intelligent technologies such as AI, sensing, recognition, judgment, and driver monitoring. This will offer a seamless mobility experience from the moment you get in the car to the moment you get out, providing a safe and secure autonomous driving space with AD/ADAS that closely aligns with human sensibilities.

We will also expand the areas where the hands-off feature can be used. Currently, it is available only on highways, but we are developing it to be safely used on regular roads as well. These features will be continuously updated via Over-The-Air (OTA) updates, which will enhance and evolve them into even more appealing products with Honda's unique touch.

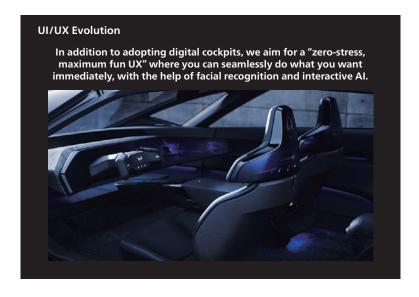
Realizing AD/ADAS that is closely aligned with human sensibilities from the moment of getting on the vehicle until getting out



Automobile Business Strategy

2. New Spatial Value Brought by IoT and Connected Technology

Honda provides value through connected technology with the aim of making driving enjoyable, usage fun, and connectivity engaging. By leveraging AI and big data, the car learns the user's preferences and driving habits, offering personalized suggestions. As the car and user become more familiar over time, the vehicle evolves to support personal growth, satisfy curiosity, and transform everyday life with "connected fun." The goal is to achieve a seamless user experience with zero stress, where users can immediately do what they want through an intuitive UX and UI.

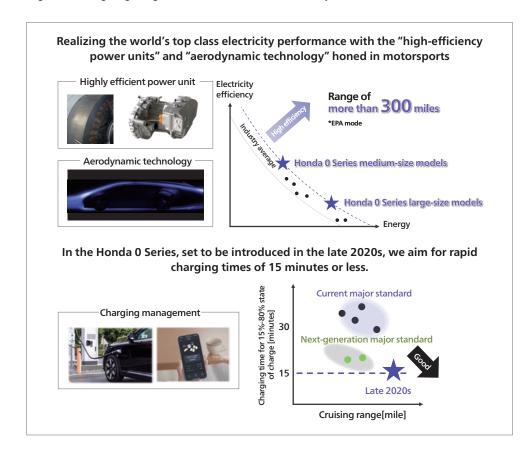


3. High Energy Efficiency

Honda has provided electric vehicles (include HEV) to over 5 million customers worldwide. Building on this extensive experience and technology, the new Honda 0 Series will achieve even higher energy efficiency. We will use high-efficiency e-Axles and high-density battery packs. Additionally, improvements in aerodynamics will reduce battery volume while achieving a sufficient range of over 300 miles for each model.

Topics

To address concerns about charging times and battery degradation for EVs, the Honda 0 Series models, to be released in the late 2020s, will aim to reduce rapid charging times from 15% to 80% to around 15 minutes. At the same time, we will implement battery system control technologies to minimize degradation, targeting a degradation rate of 10% or less after 10 years of normal use.

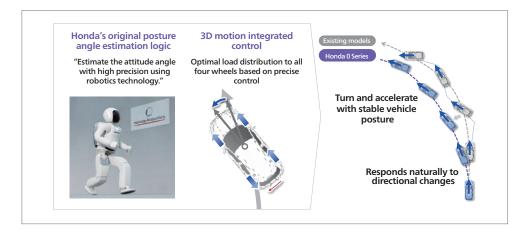


Automobile Business Strategy

4. The Joy of Driving in Perfect Harmony with the Vehicle

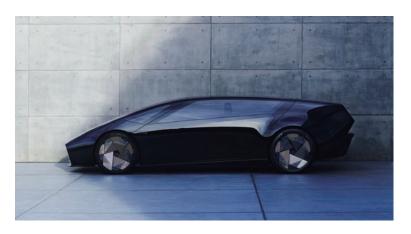
"The Joy of Driving" is Honda's timeless philosophy that remains unchanged through the ages. By leveraging Honda's unique electric and dynamics technologies within a EV-specific architecture defined as "Thin, Light, and Wise." we aim to deliver a next-generation driving experience that is both exhilarating and integrative, uniting the driver and the car physically and emotionally.

The flagship concept model "SALOON" of the Honda 0 Series embodies "Thin, Light, and Wise." In addition to adopting steer-by-wire technology, it further advances Honda's proprietary motion management systems, such as posture control developed through its robotics technology, to achieve precise control for the driver across various driving scenarios. Additionally, the Honda 0 Series' low overall height style incorporates aerodynamics technology developed in motorsports, seamlessly blending dynamics performance, aerodynamic efficiency, and design at a high level.



5. Artistic Design That Evokes Resonance

The design of the Honda 0 Series embodies "The Art of Resonance," a concept that resonates with individual sensibilities and fosters creativity. The bold and pure shape of the vehicle, which stands out distinctively at first glance, awaken new perspectives in the viewer. With exhilarating visibility and intuitive controls, the Honda 0 Series creates a driving experience that resonates with the driver's senses, elevating the car from merely a mode of transportation to a companion that aligns with individual sensibilities.



Automobile Business Strategy

Establishment of a Value Chain

Establishment of a Comprehensive Value Chain

Since the early 2020s, Honda has been sourcing batteries from the most suitable partners in regions such as North America, China, and Japan, ensuring reliable procurement while minimizing costs.

By the mid-2020s, we will begin battery production through joint ventures with partner companies. In the U.S., a battery plant in joint venture with LG Energy Solution is scheduled to start operations in 2025, producing 40 GWh of batteries annually. This will help establish the largest value chain in North America and achieve competitive battery costs. Additionally, we will enhance product's appeal by equipping the Honda 0 Series with lightweight, compact battery packs produced using high-density packaging technology.

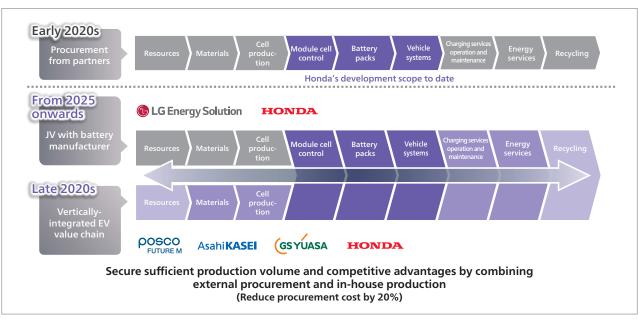
Through the establishment of the new company ALTNA Co. Ltd* and other initiatives, we will expand into lifecycle business beyond vehicle production, covering charging services, energy services, and reuse/recycling to establish a stable business foundation.

In the late 2020s, we aim to further expand our scope by building a comprehensive, vertically integrated EV value chain, encompassing raw material procurement centered around batteries to vehicle production, battery reuse, and recycling. In Canada, we will commence in-house production of batteries co-developed with GS Yuasa Corporation. For major components, we will produce cathode materials for automotive batteries in a joint venture with POSCO Future M Co., Ltd., and separators for automotive batteries in a joint venture with Asahi Kasei Corporation, advancing our in-house production capabilities.

Regarding solid-state batteries, Honda plans to establish a pilot production line in the fall of 2024, aiming for integration into models released in late 2020s. Honda's goal is to optimize battery costs and secure stable procurement, ensuring competitive advantage across the entire value chain, from upstream to downstream, and achieving more than a 20% reduction compared to current levels in battery costs in North America by 2030.

* ALTNA Co. Ltd: A new company established by Honda and Mitsubishi Corporation in July 2024. It focuses on battery leasing and smart charging businesses, among other activities.

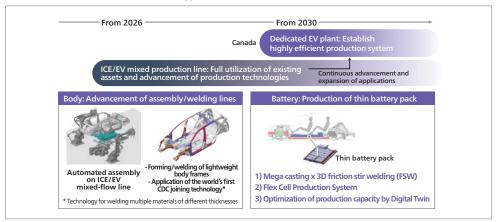
Establishment of a Comprehensive EV Value Chain with a Central Focus on Batteries



Advancement of Production Technologies and Facilities to Realize "Thin, Light, and Wise." Optimal Production Technology Deployment According to EV Adoption Speed

During the transition period from ICE to EV, we will make full use of existing production facilities while proactively introducing and evolving advanced technologies required for EV production, such as mega-casting.

Advancement in Production Technology and Facilities



Mid-2020s

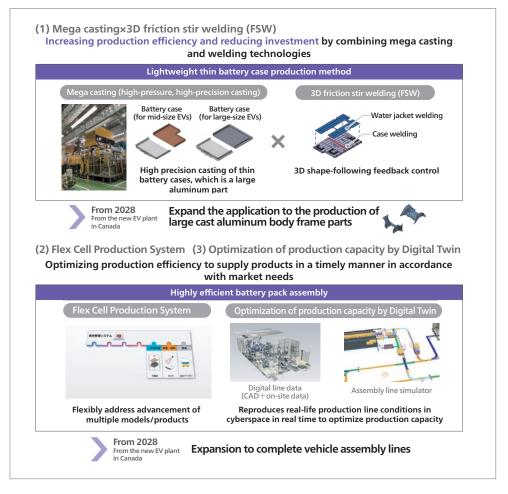
In the production of thin battery packs, which is crucial for EV manufacturing, we will accelerate the evolution of some advanced technologies by integrating them into existing equipment. The technologies developed and refined here will be later applied to EV-specific factories to build even more efficient production systems.

At the new battery case production line being set up at the Anna plant in Ohio, we will introduce a 6,000 metric ton class high-pressure die-casting machine known as a mega-cast. This will significantly reduce the number of components in battery cases and related parts from over 60 to just five. Additionally, by combining this with Friction Stir Welding (FSW) technology, we aim to balance investment reduction with increased production efficiency. We are also testing the production feasibility of Japan's first 6,000 metric ton class mega-cast machine at our Tochigi-based production technology R&D facility. This technology will continue to evolve and expand its application to large aluminum cast body structural components in the future.

In the battery pack assembly line, Honda will advance its unique "Flex Cell Production System," which combines modular part configurations and cell production methods according to vehicle characteristics. This system will allow for flexible responses to changes in production models and volume fluctuations.

Moreover, we will utilize Digital Twin technology to replicate real production line conditions in cyber

space in real-time, optimizing parts supply, production volume, and speed. This will enable timely product supply in response to market demands.



Late 2020s

These initiatives are planned to be expanded to the production of whole vehicle at Canada's dedicated EV factories by the late 2020s, reaching their final form. This will achieve world-class production efficiency, including significant improvements in operational rates and reductions in fixed costs, aiming for a roughly 35% reduction in production costs compared to conventional mixed production lines.

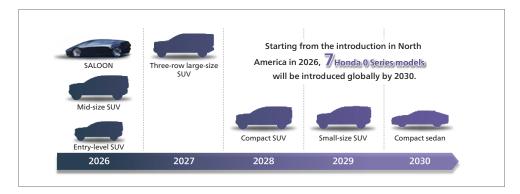
Automobile Business Strategy

EV Lineup Expansion

Introduction of Optimal Lineups for Each Series

Honda 0 Series

Starting with the launch of the Honda 0 Series in North America in 2026, the Honda 0 Series lineup will be globally expanded. By 2030, it is planned to introduce seven models ranging from small to mid-sized vehicles.



"e:N" "Ye" Series

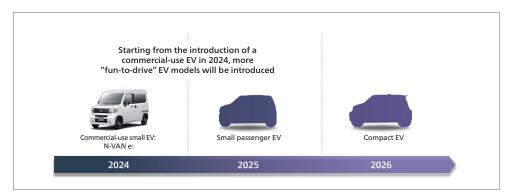
In China, where EV adoption is advancing, we plan to introduce 10 EV models globally from 2022 to 2027, and to transition all automobiles to EVs by 2035. Following the current"e:N" series in China, a new EV series named "Ye" will be launched. This will accelerate the expansion of the EV lineup, challenging and evolving in the rapidly changing Chinese market. Specifically, the "Ye P7" and "Ye S7" are scheduled for release at the end of 2024 or later. Additionally, a mass-production model based on the "Ye GT CONCEPT" is planned for release within 2025 as the second phase of the Ye series.



Small EV Series

Starting with the release of the small commercial EV "N-VAN e:" in Japan, we will sequentially introduce small EVs in regions with high demand. By 2025, a small passenger EV model will be introduced, followed by compact EVs designed for driving enjoyment in 2026.

Topics



Automobile Business Strategy

Enhancing the Foundation of Business Structure

Strengthening Our Ability to Adapt Flexibly to Environmental Changes

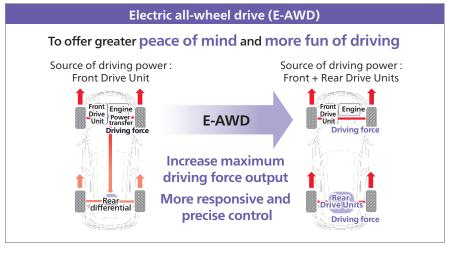
To achieve a high level of both fuel efficiency and a refined, enjoyable driving experience, Honda will advance its unique two-motor hybrid system "e:HEV" and update its platform. The e:HEV system will enable weight reduction and high efficiency, significantly lowering implementation costs. Additionally, we will advance plans for improving efficiency and standardizing the platform, aiming to achieve a substantial weight reduction of 100 kg.

To provide "safety" and "driving enjoyment," we will adapt EV development technologies for use in hybrids and employ electric four-wheel drive systems powered by EV motors. This approach allows for improved maximum driving force and more responsive, precise control of driving force distribution compared to traditional mechanical four-wheel drives. Additionally, by coordinating with the motion management system, we can enhance driving performance while stabilizing vehicle behavior.

Honda aims to strengthen its ICE (Internal Combustion Engine) business by offering advanced hybrid models to a global customer. We will also ensure stable revenue by flexibly responding to changes in demand and the environment through mixed production of EVs. The capital generated will be invested in new businesses, including EV businesses as well as other areas, with the goal of further growth.

Advancement of Hybrid-Electric Models: Starting Introduction in 2026

Renewal of power unit / platform Achieve both further improved fuel economy and high-quality and exhilarating driving experience Renewed e:HEV system, Honda's original Renewed platforms will be more two-motor hybrid system, will be lighter efficient and shared by more and more efficient. models. *Image of current model



Business Strategy

Topics

Automobile Business Strategy

Keisuke Umehara

Connected Solution Development Software Defined Mobility Development Unit After working as an IT engineer at an IT company, he joined Honda Motor Co., Ltd. in 2018. He was involved in the development and launch of the "Honda CONNECT" service and is currently leading the development of the nextgeneration connected platform. **Favorite motto** "Carry your own torch." Honda-ism which he has empathy "Eliminate no play, no error."



Interview

Creating the Future of Honda Vehicles at the Forefront of Innovation

I joined Honda with a desire to be directly involved in the automotive industry's once-in-a-century period of transformation and to take on challenging work. I was also drawn to the Company's culture that values innovation and taking on challenges.

Currently, my mission is to realize a safe and stress-free life with a car by designing and operating platforms and networks that support communication with vehicles worldwide, as well as developing mobile applications. Our connected technology, which links millions of vehicles, not only provides safe and convenient services like "Honda CONNECT" but also contributes to solving societal issues. For example, during the Great East Japan Earthquake and the Noto Peninsula Earthquake, driving data from Honda vehicles was used in disaster maps to display accessible roads in affected areas.

Our next goal is to realize Software Defined Mobility (SDM)*. Once SDM is achieved, it will significantly change how cars are used and perceived. For instance, vehicle functionality updates will become easier, enabling customization tailored to individual needs and enhancing entertainment options, potentially offering entirely new experiences.

To achieve this, we must shift from traditional hardware-centered development to software-centered development, incorporating agile methodologies. Currently, our team is united in the challenge of building a software development environment that operates independently of hardware by utilizing virtual spaces. While this unprecedented challenge comes with its difficulties, the open atmosphere at Honda, the culture that encourages bold initiatives, and the team members full of creative ideas constantly provide me with the motivation to keep moving forward.

I am proud to be a part of Honda, a company that strives for innovation and contributes to society and its customers. I am committed to leading Honda's digital transformation and enriching the lives of more people.

^{*} Software Defined Mobility (SDM): mobility whose functions can be controlled and updated through software

Business Overview / Revenue Highlights

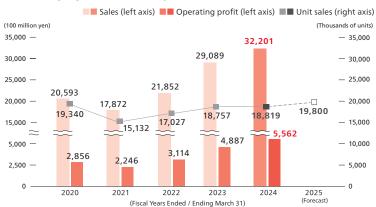
Delivering Unique and Appealing Honda Motorcycles to Customers Worldwide

Honda's motorcycle business, which is the origin of its manufacturing and a core part of its heritage, has developed a wide range of products over its 75-year history, meeting diverse needs and applications across the globe. Today, with approximately 30,000 dealers worldwide and an annual global sales volume of around 20 million units, Honda has grown into a top manufacturer in the motorcycle industry.

The world's largest production volume is supported by globally unified platforms and optimal supply systems for each category, maintaining Honda's unique appeal and high-efficiency operations.

Honda remains committed to providing customers around the world with rich experiences through motorcycles. Beyond practicality, Honda aims to enhance the joy of motorcycle life, including the thrill of riding and community building, while meeting customer expectations for safety and reliability. Honda will continue to explore new possibilities in the motorcycle market and lead the world as a pioneering company.

Revenue Highlights of the Motorcycle Business



Related Data



Recognition of the External Environment / Key Challenges

Growing Demand for Electric Motorcycles and Regional Disparities

The motorcycle market is expected to continue expanding, particularly in countries with a high proportion of young people.

In India, the world's largest motorcycle market, there is a rapid increase in demand for electric motorcycles, supported by favorable policies. Other countries face varying challenges related to infrastructure, such as stable power supply and charging networks, and differences in government sales support and industry development measures. However, the long-term trend toward the expansion of electric motorcycles is anticipated to continue. Honda, taking this situation into account, will strategically allocate resources based on the pace of expansion for internal combustion engine (ICE) motorcycles and electric motorcycles in each market, leveraging its strengths to compete with emerging electric manufacturers.

In addition to developed countries, demand for FUN motorcycles is also expanding in China and other emerging Asian countries. To enrich the motorcycle experience and offer both the enjoyment of manual transmission (MT) and the comfortable touring characteristics of automatic transmission (AT) models, Honda has introduced the world's first motorcycle with an electronic-controlled clutch, "Honda E-Clutch." This new value technology has been highly praised, and we plan to expand its application to more models in the future.

Business Targets (The Direction of Our Initiative)

Leading Environmental and Safety Innovations: "More Convenience, More Freedom"

Motorcycles play a vital role in supporting people's lives, especially in emerging countries like those in Asia, serving as a central element of social infrastructure.

To realize a safe and secure mobility society, Honda will expand models equipped with advanced safety technologies such as advanced brakes and LED lighting to enhance rider visibility and recognition, while also continuing global safety driving education.

In addressing environmental challenges, Honda will accelerate efforts beyond electrification of power units to achieve carbon neutrality. These efforts include improving fuel efficiency in the ICE sector, developing technologies for bioethanol fuel as an alternative to gasoline, expanding the use of biomass resin materials, and achieving carbon-neutral factories tailored to regional characteristics. By pursuing these initiatives, Honda aims to become a frontrunner in environmental sustainability.

Electrification Business Strategy

Direction of Electrification Business Strategy

Honda positions 2024 as the inaugural year for the global expansion of its electric motorcycles, marking the beginning of a full-scale entry into the electric motorcycle market. The period up to 2026 is defined as the market entry phase, 2026 to 2030 as the business expansion phase, and post-2030 as the full-scale business growth phase. Honda will strategically promote the introduction of electric motorcycles into the market throughout these phases.

In the near term, Honda will introduce battery-swapping models with "Honda Mobile Power Pack e: (MPP).", targeting the rapidly growing electric motorcycle markets in India and ASEAN countries, aiming to enter and expand sales in these markets. By 2025, Honda plans to launch models with fixed batteries, broadening the product lineup.

Regarding electric products, Honda will combine its strengths in ICE vehicles with the appeal of electric vehicles to create attractive electric motorcycles unique to the brand.

In production, procurement, and development, Honda will leverage existing ICE motorcycle assets while making proactive investments. With a global sales network of 30,000 stores and enhanced online sales, Honda aims to maintain its position as the top seller in the electric vehicle era.

Medium- to Long-Term Targets

For global electric motorcycle sales, Honda aims to increase its target from 3.5 million units announced in 2023 to 4 million units by 2030. To achieve this, Honda plans to launch approximately 30 electric models in global markets by 2030, including those already announced.

Simultaneously, Honda will accelerate cost reduction efforts by utilizing scale advantages from ICE motorcycle production. The goal is to reduce the cost of completed motorcycles by approximately 50% by 2030 through battery standardization, procurement, modularization of body parts, and optimization of production and procurement.

To achieve these goals, Honda will invest approximately 500 billion yen by the Fiscal Year Ending March 31, 2031 and aims to achieve Rate of Sales (ROS) of 5% or higher for electric motorcycles by 2030, with a target of 10% or higher in the 2030s.

Five Strategies for Electrification

1. Product Strategy

In 2024, Honda will introduce a model equivalent to a 110 cc ICE motorcycle, equipped with two MPPs. This includes an India-specific model that maintains the practicality of mass-market models and a global model featuring advanced equipment such as In-Vehicle Infotainment (IVI). The global model will launch

in Indonesia first, followed by sequential releases in Japan and Europe.

From 2025 onwards, Honda will be expanding the variety of electric motorcycles, including FUN models and plug-in rechargeable commuter models.

This will aim to increase our market share globally and establish ourselves as a leading company in electric motorcycles.



SC e: Concept

2. Electric Platform Strategy

In the short term, Honda will leverage existing ICE parts for rapid electric motorcycle development. In the long term, to address diverse global needs, Honda will proactively apply knowledge gained from ICE motorcycle development to quickly and efficiently market a variety of electric motorcycles. We will modularize the battery, power unit, and body, and by sharing these modules, we will create cost advantages and offer a diverse range of variations.

3. Connectivity Strategy

One of the major advancements in electrification is connectivity. Building on Honda's strengths developed with ICE vehicles, we will enhance comfort and convenience through connectivity. Additionally, we will offer electric motorcycles that continue to evolve after purchase through Over-the-Air (OTA) software updates, leveraging advanced software technology.

The 2024 battery-swapping model will feature "a proposal-type navigation function" for easy access to charging station information. Future models will use data from both ICE and electric vehicles to offer personalized features and experiences, advancing Honda's unique connectivity.

4. Battery Strategy

Batteries are the cornerstone of electric motorcycles. Honda will strategically develop cell procurement and pack production allocation, primarily in Asia, to support both motorcycles and power products.

In addition to the Nickel Cobalt Manganese (NCM) used in the current models, we are accelerating the development of a battery system equipped with Lithium Iron Phosphate (LFP) cells, aiming for application in models released from 2025 onwards. By having a variety of batteries, each with different strengths and costs, we will be able to offer products that meet a wide range of needs.

We will also introduce models equipped with more advanced next-generation batteries around 2030. This will ensure stable supply, enhance product appeal and cost competitiveness, and promote further adoption and expansion of electric motorcycles.

5. Procurement and Production Strategy

For electric motorcycles production, Honda will maximize the use of existing ICE business assets to ensure cost competitiveness during the market entry phase (up to 2026). After 2026, in the business expansion phase, we will commence global production of electric motorcycles in dedicated factories optimized for electric vehicle production, aiming to achieve the sales target of 4 million units by 2030. These specialized factories will incorporate modular platform technologies and other innovations, reducing assembly line length by approximately 40% compared to existing factories, thereby enhancing efficiency and automation.

For procurement, to build a more competitive system, Honda will consider shifting from procuring finished parts to in-house processing, assembly, and logistics. The reevaluation of each step in the process will improve the cost competitiveness per finished vehicle.

Enhancing the Foundation of Business Structure

Enhancing Adaptability to Environmental Shifts

In response to rising raw material and energy prices and increasing societal demands for environmental and safety standards, Honda is enhancing its resilience to adapt to these changes.

As the world's No. 1 motorcycle manufacturer by market share, Honda is leveraging its scale while shifting its focus to growing markets such as India, Indonesia, and Brazil. This shift serves as an opportunity to restructure production bases and procurement frameworks, reduce costs and shorten development timelines through mass production, and develop catalysts that do not rely on high-cost materials. These efforts aim to enhance our ability to respond to market changes.

Looking ahead, Honda aims to streamline and integrate parts and improve development efficiency across the entire value chain to further strengthen its business structure.

Additionally, this includes ongoing efforts to reduce costs for both ICE and electric motorcycle components through unified parts planning in terms of standardization, procurement, and production technology.

Through these initiatives, Honda will maintain a highly efficient business structure and build a solid foundation to become a leading company in the area of electrification.

Kaori Goto

Electrification Development Division Motorcycle and Power Products **Electrification Business Unit** After many years of working on the body design for ICE-equipped motorcycles, she engaged in the development of electric motorcycles. Served as the development project leader for the "EM1 e:." **Favorite motto** "Banri Ikkuu' Honda-ism which she has empathy "Carry your own torch."



Interview

Crafting the Standard for Honda's Electric Motorcycles with a **Commitment to Engineering Excellence**

My motivation for joining Honda stemmed from my experiences traveling in Thailand and Vietnam during my student years. I was deeply impressed by the abundance of motorcycles in the streets and their essential role in people's daily lives. This inspired me to develop motorcycles that enrich people's lives, which led me to pursue a career at Honda.

In recent years, our team at Honda focused on developing the "EM1 e:," the first electric motorcycle tailored for personal use in Japan. The development of electric vehicles still lacks sufficient knowledge, and each issue is being addressed through trial and error. For example, the absence of an engine made the vehicle's vibrations and sound more noticeable. The entire development team gathered around the prototype, painstakingly analyzing its mechanisms and tirelessly exploring improvement measures, repeatedly and diligently. Honda believes that our strength lies in the team's unity, focusing collectively on how to make this single vehicle better. Our relentless dedication to craftsmanship and attention to detail, setting aside the boundaries of individual responsibilities, embodies what we consider the essence of Honda's manufacturing prowess.

We are currently in the dawn of electric motorcycle development. The technologies and expertise we have generated are accumulating, shaping Honda's standards for electric motorcycles. Being involved in this crucial phase fills me with great joy as a developer. Of course, there are challenges along the way. However, when I envision the joy of seeing the mobility products I've been involved in making their way into the world, being chosen and ridden by customers, any present difficulties seem insignificant.

My dream is to offer society an appealing product that captures the unique charm of electric motorcycles, and to further enhance the joy of moving with mobility. If electric vehicles become more widespread, noise and exhaust emissions will decrease, potentially altering urban scenery. In guieter streets without engine noise, the way people communicate with each other may also change.

I look forward to the challenge of pursuing the mission, to provide experiences that enrich the lives and commuting experiences of all, alongside dedicated colleagues around the world who are committed to sincere Honda Report 2024 manufacturing.

Power Products Business Strategy

Business Overview / Revenue Highlights

Providing Products for Work and Daily Life

The power products business, which celebrated its 70th anniversary in 2023, has been driven by the desire to "make people's lives a little easier and richer, and contribute to their daily lives through technology." This mission has led to the supply of general-purpose engines, which serve as power sources for various types of machinery, to numerous equipment manufacturers. Additionally, Honda has developed, manufactured, and sold its own products, including generators, snow blowers, lawn mowers, tillers, and outboard motors.

To bring joy to people's lives and work through useful products, Honda is expanding its business potential by not only continuing to offer traditional ICE products but also by increasing its presence in the electric business sector. This includes the development of electric products and portable batteries, aiming to "provide new value in mobility and daily life."







Revenue Highlights: Power Products and Other Businesses



Topics

Operating Profit of Aircraft and Aircraft Engines Business Included in Total Operating Profit

(100 million yen)

FYE March. 31				
2020	2021	2022	2023	2024
-422	-323	-337	-257	-329

Recognition of the External Environment / Key Challenges

Toward Realizing a Work That Is "Kinder to Both People and the Planet"

In the construction machinery and industrial machinery sectors, the movement towards carbon neutrality, driven by both public and private sectors, is accelerating, and the demand for environmentally friendly products is increasing. Honda is playing a key role in accelerating the transition to a carbon-neutral society by expanding its lineup of electric products for corporate customers in these sectors, including construction and industrial machinery manufacturers.

In the garden sector, the electrification of small, short-duration products, such as residential lawn mowers, is accelerating. Additionally, with increasing environmental regulations, there is growing demand for electrification of larger products such as riding lawn mowers used by landscaping professionals. There is an expectation for electric products that meet the performance and operating time requirements of professional workers.

Power Products Business Strategy

intelligent technologies.

Business Targets (The Direction of Our Initiative)

Enriching Lives through Technology, Sustaining Prosperity and Delight

The power products business has developed a range of products that blend into people's lives and support daily living. Going forward, we will continue to offer products and services with excellent quality and reliability, leveraging Honda's strengths while considering regional characteristics and changing market needs.

In the core power unit business, we will pursue improvements in environmental performance and ongoing evolution of ICE products. In the construction machinery industry, where Honda has a significant market share in ICE sales, we will provide the electric power unit "eGX" and provide support services for their installation into finished machines for corporate customers. By strengthening the sales and service infrastructure, we will lead the global electrification of small construction machinery. In the garden sector, we will provide high-quality equipment and services to landscaping professionals in the United States, contributing to solving labor shortages and addressing challenges in the field.

In the marine business, to meet the high-power demands of the outboard motor market, we have launched a new outboard motor with a maximum output of 350 horsepower, the highest for Honda, in 2024. This motor achieves both high power and quiet operation while realizing top-class fuel efficiency and reducing environmental impact. As boats become larger and more multifunctional, there is a growing demand for improved maneuverability. Honda is also evolving in the area of intelligent features such as steering assistance. Additionally, Honda is building a system to continuously strengthen its product lineup and enhance co-creation with boat builders. Through these efforts, we aim to enhance the competitiveness of large outboard motors and steering assistance technologies, achieve high profitability, and accelerate research and development towards future electrification and



Honda"BF350"

Electrification Business Strategy

Direction of Electrification Business Strategy

The power products business will contribute to solving social issues such as labor shortages by providing new value unique to Honda, including not only electrification but also automation of machinery, thereby improving both the "quality of work" and "quality of life."

We will position the power unit and garden sectors as key domains for electrification and strengthen our efforts to enhance product capabilities, thereby leading the industry in this transformation. Additionally, leveraging Honda's strength in diverse mobility, we will enhance development and cost competitiveness by sharing core parts necessary for electrification with the motorcycle business, thus reducing costs and maximizing synergies across business areas.

Power Unit Sector

In addition to our existing B2B customers developed through our core business of general-purpose engines, Honda will actively expand the deployment of eGX in areas expected to electrify. To support this, we will strengthen collaboration with power unit suppliers, focusing on Japan and Europe.

In Japan, particularly, our sales and development departments collaborate closely to support installation of the eGX with our customers. By horizontally expanding these activities to other regions, we aim to further increase the adoption of the eGX. To meet our customers' diverse needs more precisely, we will prepare a wide range of variations within the eGX series.



Electric Power Unit "eGX Concept"



Honda Mobile Power Pack e







Garden Sector

In the U.S. market, Honda will offer a full lineup of electric products for landscaping professionals, aiming to expand the adoption of electric equipment among professional customers. To achieve this, we have moved to the mass production preparation phase for large models such as electric riding lawn mowers and robotic lawn mowers, which were showcased as prototypes at North American trade shows.

Since 2012, we have been selling robotic lawn mowers primarily in the European market. These mowers are positioned as one of the solutions to social issues such as aging populations and labor shortages. We will continue to implement ongoing technological advancements and sales strategies to address these challenges.

Furthermore, for small electric products such as push lawn mowers and brush cutters, we will leverage external partnerships to accelerate electrification through efficient development and production schemes. We will also expand the framework of these collaborations to target additional customer acquisition.



Electric Automatic Lawn Mower Prototype



Electric Robot Lawn Mower "Milmo" "HRM2500 Live"

Marine Sector

Starting with the introduction of environmentally friendly outboard motors based on the belief of Honda's founder, Soichiro Honda, "watercraft should not pollute the water," the marine business continues to challenge electrification. In 2023, we conducted a demonstration experiment with a small 4 kW electric motor, which has proven performance in electric motorcycles, and a "Honda Mobile Power Pack e:" on the Matsue Castle "Horikawa Sightseeing Boat" in Matsue City. This experiment will help us explore the expansion of our marine business and promote verification of marine product electrification in domestic and international markets.



Matsue Horikawa Sightseeing Boat



Small Electric Propulsion"BE4P" Prototype

Enhancing the Foundation of Business Structure

Enhancing Adaptability to Environmental Shifts

To flexibly address the diverse needs across countries and regions, we will produce and supplement our main products, the general-purpose engines, in Thailand, China, and India, while ensuring a balanced supply to demand areas. We will also assess the optimal timing for market introduction of our products. Additionally, by leveraging synergies with our motorcycle business, we will advance cost reduction through parts sharing and optimization of production and procurement systems, while effectively utilizing external resources to secure development resources and enhance procurement and production capabilities, thus pursuing efficient operations in development and production.

Power Products Business Strategy

Tadaaki Shimamoto

Marine Business Division Power Products Business Unit After working as a marine engineer for a shipping company, he joined Honda in 2020. As the sales project leader for the outboard motor "BF350," he is engaged in product planning and sales strategy.

Favorite motto

"It's never too late to learn." "No pain, no gain."

Honda-ism which he has empathy "Eliminate no play, no error."



Interview

Carrying Honda's "A Company Society Wants to Exist" to the Next Generation

From a young age, I have always loved mobility, and became a marine engineer because I wanted to live and work on a boat. However, as time went on, I developed a strong desire to be involved in manufacturing, where work leaves a lasting impact. This led me to join Honda in 2020.

A significant challenge for me was leading the development project of the outboard motor "BF350," Honda's first flagship model in 12 years and equipped with the Company's very first mass-produced V8 engine. The BF350 is a new engine structure with no existing knowledge within the Company. Starting from research and theoretical development, it required extensive trial and error to complete. Although I was anxious about whether I could lead as a newcomer with less than two years at the Company, a senior's advice, "At Honda, you might get in trouble for doing too little, but never for doing too much," became a breakthrough. Driven by the desire to create a better product that would bring joy to customers, I worked tirelessly both inside and outside the Company. There were times when passionate beliefs clashed with stakeholders. It's a product I was deeply invested in, as we aimed for excellence without compromise. When customers saw the final product and praised it by saying, "You really made it great," it was incredibly rewarding.

The BF350 incorporates low environmental impact engine technology applied from Honda's automobiles. Honda has carried forward the founding philosophy of Soichiro Honda, who believed "watercraft should not pollute the water." We have continuously developed fuel-efficient and durable products, earning high praise within the marine industry. Honda is unique on a global scale, as it brings the joy and freedom of mobility across land, sea, and air. I believe that the accumulation of challenges and efforts by predecessors has built the current Honda. Now it is our turn. I want to expand the marine business and ensure that Honda remains a "company society wants to exist" for future generations.

Initiatives to Accelerate Further Electrification

Honda Mobile Power Pack

To achieve carbon neutrality, there are challenges in accelerating electrification across various products, including mobility. Key issues include "charging time," "range/operating time," and "battery cost." As one approach to address these challenges and support the widespread adoption of electric products, we have developed portable and swappable batteries "Mobile Power Pack e: (MPP)." We are actively promoting its application not only for our own products but also for those of other companies.

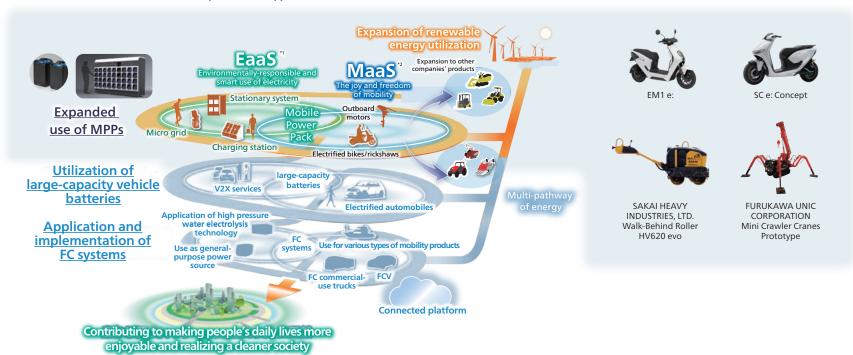
By easily swapping in a fully charged battery, users are freed from waiting for charging and do not need to equip products with large batteries to ensure range or operating time. Additionally, by sharing MPPs across different products or through battery exchange stations, customers can reduce their battery cost burden. Moreover, effective use of batteries and increased operational rates can lead to a reduction in the overall battery production needed for society.

To achieve carbon neutrality, promoting the use of renewable energy is However, much of renewable

energy generation depends on natural conditions and faces issues with adjusting power supply. By utilizing battery exchange stations as power storage, surplus electricity can be stored and shared efficiently. This approach allows for the effective use of clean electricity at all times, thereby facilitating the promotion of renewable energy use.

Honda is committed to the "Honda eMaaS" (Electric Mobility as a Service) concept, which aims to contribute to "freedom of mobility" and the "expansion of renewable energy use." One of the key initiatives within this concept is the "expansion of MPP utilization." Honda is not only developing battery packs and applicable products but also leading the standardization of portable and swappable batteries and building a shared system network. The goal is to enable wide use of these solutions, not just in Honda products but across products from other companies, thereby also serving as a part of the energy infrastructure.

Overall Vision of Honda eMaaS and Examples of MPP Applications



^{*1} EaaS (Energy as a Service): Next-Generation Power Supply and Energy Optimization Services

^{*2} MaaS (Mobility as a Service): Next-Generation Mobility Services

Initiatives to Accelerate Further Electrification

Energy Service

Honda believes that accelerating the adoption of EVs requires more than just offering appealing products; it also involves creating an environment where customers can use EVs with confidence and enjoyment through comprehensive energy services. To achieve this, Honda is focusing on four key areas in its business development: eliminating concerns about running out of power and the inconvenience of charging, providing the convenience of home charging, helping customers save on electricity costs and utilize energy in emergencies, and promoting an eco-friendly lifestyle with zero CO₂ emissions.

In addition, it is crucial to replace the energy source for EVs with clean, renewable energy as their adoption increases. To accelerate the integration of renewable energy across society, it is necessary to stabilize the power grid through demand-supply balance adjustments, given the instability of renewable energy generation. Honda has been addressing this challenge by researching Vehicle Grid Integration (VGI), where EVs contribute to stabilizing the power grid. Leveraging this expertise, Honda has developed energy services such as e:PROGRESS in Europe and Smart Charge in the United States.

Currently, in addition to providing charging services for homes and on-the-go, Honda is advancing a range of services including Vehicle-to-Home (V2H)*1, which integrates EVs with the entire household, and Vehicle-to-Grid (V2G)*2, which connects EVs to the power grid. These initiatives also involve efforts to deliver renewable energy to these systems. To achieve these goals, Honda is actively collaborating with like-minded partners.

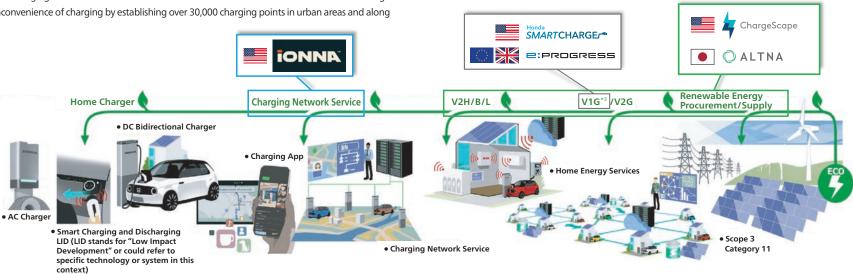
The establishment of "IONNA," announced in 2023, represents a collaborative effort among eight automakers to develop a high-power charging network in North America. The initiative aims to address concerns about running out of power and the inconvenience of charging by establishing over 30,000 charging points in urban areas and along

highways. The goal is to provide an exceptional customer experience, with installation expected to begin within 2024.

Similarly, to contribute to stabilizing the power grid using EVs, Honda has established "ChargeScape" in collaboration with the BMW Group and Ford Motor Company. This initiative aims to provide an information platform that connects automakers with numerous utilities across the U.S. and Canada. By leveraging the extensive power adjustment capabilities of a large number of vehicles, ChargeScape seeks to stabilize the power grid. Additionally, the platform aims to maximize the use of renewable energy, reduce charging costs for customers, and lower expenses for utility companies.

In Japan, Honda has established "ALTNA Co., Ltd." in a joint venture with Mitsubishi Corporation to develop new mobility services that reduce the total cost of EV ownership and to build a new energy business utilizing EV batteries over the long term. ALTNA will offer V1G (Vehicle-One-Grid) Smart Charge, an energy service that reduces charging costs for customers, while also aiming provide V2G services in the future, enabling energy exchange between EV batteries and the power grid. Additionally, ALTNA plans to repurpose batteries that have reached the end of their automotive life as storage batteries for the power grid, supplying grid stabilization power. This will contribute to the domestic circulation of scarce resources and further expand the use of renewable energy.

Honda views EVs not just as a mode of mobility but as products that can drive the evolution of energy systems for both customers and society. Therefore, Honda will continue to advance the development of energy management services.



- *1 V2H (Vehicle-to-Home): technology for supplying power from EVs to homes
- *2 V2G (Vehicle-to-Grid): technology for not only charging EVs from the power grid but also supplying power stored in EVs back to the grid
- *3 V1G (Vehicle-One-Grid): unidirectional charging control, charging from the power grid to EVs