Message from the CEO

Kazuo Tadanobu

President, CEO

Unwavering Commitment to Realizing Our Mission

Our reason for existence is to deliver safety and security to people's lives and contribute to improved sustainability in society

Since Panasonic Energy's establishment in 2022, we have worked towards realizing our Mission of *"achieving a society in which the pursuit of happiness and a sustainable environment are harmonized free of conflict,"* our Vision of *"energy that changes the future,"* and our strong intention to embrace great challenges, as expressed in our Will of *"doing what humankind requires."*

We are on a mission to deliver electrical energy to people in a more abundant and sustainable way. Historically, there have been three stages associated with electricity: generation, transmission, and use. But in recent years, "storage" has been added. In order to use generated energy more effectively and sustainably, the storage function is growing increasingly important. We are especially focused on the areas of energy storage and use, creating indispensable value for society. We are not just a company that makes batteries. We provide the world with the batteries we make, and through our products and solutions, we generate energy, including stored energy, to support society and change it for the better. Delivering safety and security to people's lives and contributing to improvements in sustainability for society —that is our reason for existence.

Enhancing our strengths even further and challenging ourselves to maximize contributions

From 2024 to 2025, the business environment surrounding the Company underwent some considerable changes. That said, our goal has not changed in the slightest; rather, there is now an even stronger need for us to realize the Mission I mentioned above. This is because extreme weather and natural disasters caused by climate change are intensifying, and the impacts of such events are growing more severe year by year, leading to heightened expectations for us to bring about faster and greater changes. Moreover, we have been required to conduct activities on a much broader scope, and the speed at which we must respond has increased.

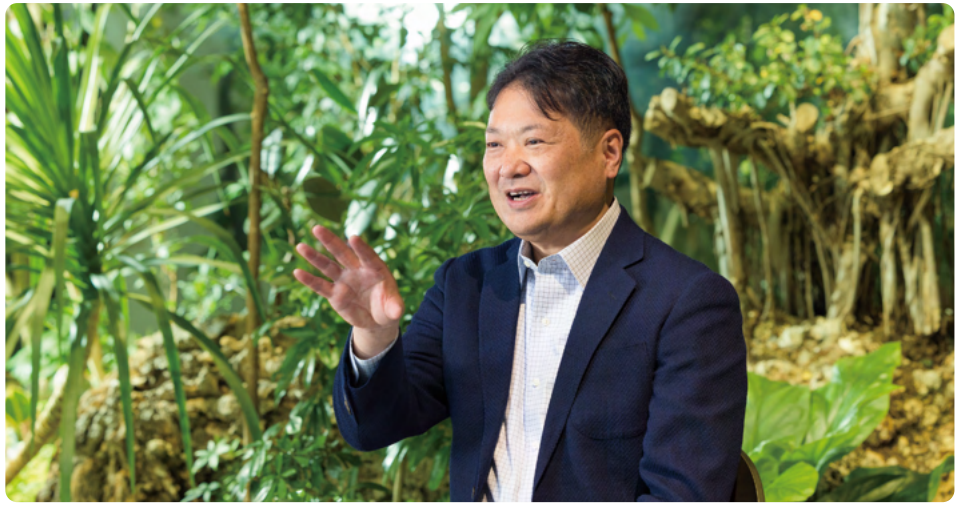
The strength of the Company, in my view, lies in our business portfolio that contributes to the pursuit of people's happiness and a sustainable environment, as well as in having a workforce that is strongly motivated and committed to realizing our Mission, along with highly specialized personnel who have long been at the forefront of the industry. To accelerate our response to changes in the world, we will be a leading force in the industry and pass it on to the future. It is our mission to further evolve what we have been working on and give back to society. We want to be a company that advances while boldly challenging the difficult problems that lie before us, and we aim to make our ability to do so even stronger. That is precisely why we believe we must uphold our Mission, Vision, and Will.

I recognize that reinforcing this strength and putting the Company on a firm footing is one of the major responsibilities entrusted to me. We possess the technology to meet the demands of society, and in addition, we have the capacity to create new technologies with a pioneering approach. We also have the resources to respond to those demands. We are considering how to respond to these environmental changes by utilizing not only our own resources, but also those of the Panasonic Group, and by closely collaborating with external partners who share the same aspirations and values.

In 2014, we made the decision to invest in the establishment of a solid foundation in North America, the leading EV market. Since then, we have pressed ahead with the largest investment in the history of the Panasonic Group by building and improving our production system and supply chain with the aim of securing a strong position in this market.

We know that EV market growth is currently in an adjustment phase, and while there are some uncertainties in the in-vehicle business, establishing production bases at the earliest opportunity in North America, one of the main battlegrounds for EVs, aligns with the US administration's policies. Going forward, we will further strengthen this system while evolving our technological superiority to ensure that we maintain our dominance in this business. At the same time, we will also continue to further diversify our customers and partners in order to respond more flexibly to changes in business environments.

Our investments in the North American in-vehicle business will gradually transition to a "recovery stage" from fiscal 2026. We will look to recoup our investments efficiently by firmly grasping changes in the market environment and aligning with customer strategies obtained through close collaboration with our customers.



Message from the CEO

Meanwhile, building the business foundation in the industrial and consumer business before our competitors, based on our development and proposal capabilities honed and refined over many years, has been highly lauded. This owes to the combination of our battery development prowess centered on materials and our system proposal capability that helps solve customer challenges. In particular, in our mainstay business for data centers, the expectations and demands on us to respond to the rapid evolution of generative AI, which is experiencing significant marked growth, are moving faster than we expected, and the business domain itself is also expanding rapidly. We are targeting further business growth by firmly capturing opportunities where we can leverage our strengths.

In the in-vehicle business, some adjustments will be necessary in the near term, but in the industrial and consumer business, we are generating better-than-expected growth. This balanced management and business portfolio is one of our strengths. For some time now, I have operated our business under the policy of "two-pillar management," meaning that we advance both the in-vehicle business and the industrial and consumer business side by side. I believe that this two-pillar management functions organically and serves as a buffer against recent changes in the operating environment. We will continue to keep a close eye on changes in our business structure, optimally allocate resources, and strive to maximize our contributions.

Overcoming great changes as a team and growing as a team

While our Mission remains the same, the environment that envelops us is changing significantly. Not only those of us in management roles but also each and every employee will need to respond to these changes. On the other hand, it is human nature to fear change, so it is our teams and corporate culture that must encourage and support those who may have a reluctance to change in order to transform their behavior. While the difficulty or scale of the challenges faced by each team varies, teams capable of fighting together with a positive attitude and a culture that boosts motivation must be continuously cultivated at all times, regardless of changes in the business environment. I believe that such cultural reform will generate vitality, give rise to problem-solving capabilities, and function as the strength of the Company when it is faced with major changes. We will create a corporate culture that views the very timing of great changes as an opportunity for growth and encourages the entire Company to work together on it. I believe that by fully leveraging this opportunity, individuals can grow and, in turn, take on even greater challenges in their work.

To overcome these significant changes, I want everyone to approach their work with a sense of mission rather than out of obligation. For that reason, in October 2024, we established the Mission Ownership Taskforce as a department that reports directly to the President, and I myself have taken on the role of director of this division. I certainly hope that each employee strongly identifies with the Company's Mission, Vision, and Will, and proactively embraces challenges and growth with a lot of energy to positively influence those around them. Every individual should truly understand what they need to do, ignite their sense of mission to find solutions, draw upon new wisdom, and turn their actions into the kind of change society is calling for. As a result, the motivation and engagement of every employee will rise even further, and through this chain reaction, the Company will grow. It is this kind of cycle that I want to create.

Working to reduce our environmental impact across the entire value chain

We have stated in our Mission that we aim to achieve a sustainable environment, and we have publicly declared that we will tackle environmental issues head-on and contribute greatly to reducing environmental impacts. With climate change progressing faster than expected and its negative effects being felt on a daily basis, our intentions remain unchanged, regardless of how the business environment may change up ahead. In fact, our commitment has grown even stronger. Therefore, to further accelerate our efforts, we are committed to improving the trust and corporate evaluation of the Company in the fields of environment and CSR to the extent that we will be seen as an industry leader.

In terms of specific initiatives, for example, we are expanding our number of Net Zero Factories, introducing renewable energy, and establishing resource-recycling schemes to drive decarbonization and resource recycling in our production activities. Regarding the expansion of Net Zero Factories, we have already established a roadmap to achieve this across all sites by fiscal 2029. We are making steady progress at our sites in Japan and overseas according to this plan, and as of July 2025, 17 out of 21 sites had been turned into Net Zero Factories. As to resource-recycling schemes, the possibilities are manyfold. As a concrete example, in fiscal 2025, we started recycling the components of cathode materials for Li-ion batteries in collaboration with a supplier, and we have also established a process to recycle zinc and manganese separated from used dry batteries as trace elements in fertilizer. We plan to engage in these initiatives even more actively in the future. In addition, building a supply chain with a small environmental footprint is a very important element in the execution of our business strategy. By expanding our range of products with low environmental impact, which is what our customers want to see, we will further enhance the added value of our products and gain a competitive advantage. To reduce our burden on the environment across the entire value chain, we will continue to demonstrate leadership and deepen our collaboration with various partners going forward.

Aiming to realize our Mission without fear of change

Given the further changes anticipated in the business environment and the uncertainty about the future, I believe fiscal 2026 will be a challenging year. Nevertheless, I believe that times of crisis are opportunities for growth, so I look forward to taking on this challenge. My management of the Company is underpinned by the belief that what we have done based on our Mission, what we are about to do, and the goals ahead are all correct.

As I already mentioned, we are not just a company that makes batteries. We will deliver freedom and security to people's lives and make society more sustainable. That is our reason for existence and our promise for the future.

In a turbulent world, we will steadfastly pursue the realization of our Mission without fear of change. Each employee will face change with determination, share their wisdom, and continue to take on challenges. And one year from now, we will look back and proudly say, "We truly outdid ourselves a year ago." Please look forward to it.

The Path to our Mission: Embracing the Challenge

This picture depicts ourselves undeterred by unpredictable trials, building a boat strong enough to handle rough waves and to cross the lake.

Our DNA, the Source of Our Strengths

Panasonic Group "The Basic Business Philosophy"
https://holdings.panasonic/global/corporate/about/philosophy.html

Konosuke Matsushita
Founder

In accordance with the management philosophy of Panasonic's founder, Konosuke Matsushita, we have developed batteries for more than 100 years with the goal of freeing humanity from inconvenience. Going forward, we will continue to put into practice the Basic Management Objective and the Company Creed, which constitute the heart of his management philosophy, and we will continue to undertake the challenge of creating unprecedented value in order to deliver energy to a society that harmonizes enriched lifestyles with the environment.

Management Philosophy of the Panasonic Group

The Basic Management Objective

Recognizing our responsibilities as industrialists, we will devote ourselves to the progress and development of society and the well-being of people through our business activities, thereby enhancing the quality of life throughout the world.

The purpose of the Panasonic Group's business and its mission remain unchanged since the proclamation of Meichi, and the Basic Management Objective captures this philosophy concisely. Every day, we continue to strive for progress by providing society with unparalleled products and services to improve the well-being and quality of life of people around the world.

Company Creed

Progress and development can be realized only through the combined efforts and cooperation of each employee of our company. United in spirit, we pledge to perform our corporate duties with dedication, diligence and integrity.

The Company Creed expresses our attitude toward the way the Panasonic Group conduct our work on daily basis. It is essential for everyone to collaborate and work together with sincerity every day. Only when each organization sets its own high goals, its members understand them fully and make them their own, and there is teamwork based on mutual trust, can the goals of the organization and ultimately the development of society be realized.

Company history

Note: Company names are written using the names at that time only on this page.

1918 Konosuke Matsushita found Matsushita Electric Housewares Manufacturing Works

1923 Battery business founded

1929
- Management objective and company creed announced

1931
- Acquired the Komori Dry Battery's factory and starts in-house production of dry batteries

1935
- Reorganized as Matsushita Electric Industrial Co., Ltd.; established National Storage Battery Co., Ltd.; established Matsushita Dry Battery Co., Ltd.

1947 Sanyo Electric Works was established

1950
- Established Sanyo Electric Co., Ltd.

SANYO

1979
- Established Matsushita Battery Industrial Co., Ltd.

2008
- Established Panasonic Corporation Energy Company

2011 SANYO Electric Co., Ltd. became a wholly owned subsidiary

2013
- Established Panasonic Corporation Automotive & Industrial Systems Company

2014
- Established Panasonic Energy Corporation of North America(PENA) Factory starts operation in 2017

2019
- Established Panasonic Corporation Industrial Solutions Company and US Company

2021
- Established Panasonic Corporation Energy Company based on the energy business area of the Industrial Solutions Company; the Tesla Energy business of the US Company; and the Energy Technology Division under the Panasonic head office

2022 Established Panasonic Energy Co., Ltd. following transformation into an operating company system

2025

History of Freedom

History of Practicing the Management Philosophy

Throughout our history spanning more than 100 years, we have engaged with the challenges faced by society during each era. And through the creation and development of new batteries, this history of freeing humanity from numerous inconveniences has in and of itself served as the practice of our management philosophy, including the Basic Management Objective and the Company Creed.

Freedom from the darkness

In an era when bicycle lights were dominated by candles and oil lamps, we perfected an innovative bullet-shaped battery-powered lamp by combining an Excel bulb and an Excel battery. This approach extended the life of bicycle lamps from a mere two to three hours, to more than thirty to forty hours, freeing bicycle riders from the darkness.

1923

- Invented and released bullet-shaped battery-powered lamp
- Released Excel dry batteries for bullet-shaped battery-powered lamps

Freedom from use-and-discard

Despite the fact that dry batteries had already become standard throughout the world upon entering the 21st century, these faced environmental challenges because they were, by nature, disposable. In response to this social issue, Sanyo Electric Co., Ltd, as it was then known, bet the entire company on developing eneloop and together with the subsequent rechargeable EVOLTA battery overturned the common assumption that batteries are disposable.

1964

- Started production of Cadnica nickel-cadmium Batteries

2005

- Released eneloop nickel-metal hydride batteries

2008

- Released Rechargeable EVOLTA nickel-metal hydride batteries

Freedom from environmental impact

The electrification of mobility is playing a critical role in the solutions to climate-change related issues. Ever since delivering the batteries for the world's first mass produced HEVs, we have supplied the electric vehicle market with high-capacity cylindrical Li-ion batteries that ensure long driving ranges, thereby freeing the world from the environmental impacts of human mobility.

2008

- Started mass production of automotive Li-ion batteries(1865 size)

2024

- Completed preparations for mass production of cylindrical automotive Li-ion batteries (4680 size)

2017

- Started mass production of automotive Li-ion batteries(2170 size)

Freedom from short service life

After developing National Hi-Top, last longer than conventional batteries with twice and have a longer shelf life, we went on to develop NEO Hi-Top with 1.5 times the service life of the original design. In response to the strict dimensional restrictions on length, width, and height demanded by international standards, we delivered the longest lasting energy in the world to every corner of the planet.

1963

- Released National Hi-Top manganese dry batteries

1969

- Released National NEO Hi-Top manganese dry batteries

Freedom from size, weight, and lack of power

The development of countless different electronics products has led to the needs for smaller, lighter, more powerful energy sources, ultimately leading to the demand for unprecedented performance from batteries. The Li-ion batteries that we developed enabled compact, lightweight laptop computers and smartphones, and have therefore contributed significantly to today's information society.

1994

- Developed Li-ion rechargeable batteries

2006

- Started mass production of high-capacity cylindrical Li-ion batteries using nickel-based cathode materials

The Seven Pillars of Transformation

Practicing the Management Philosophy Handed Down through to Today

Our Mission, Vision, and Will illustrate the destination for which we aim, but to reach that destination, we must continue to evolve ourselves. We established the Seven Pillars of Transformation as a new set of guideposts for evolving our everyday activities. These guideposts present the activity guidelines that will help each of our employees modify their behavior in a way that is required to arrive at our destination.

The Seven Pillars of Transformation can also be considered an equation that corresponds to our business in that it represents the fundamental law of evolution, which all life undergoes through repeated mutation and adaptation. Our belief is that we will arrive at our mission by achieving absolute transformation (pillar of mankind) through inevitable evolution (pillars of offense), which ultimately give rise to what had never existed before, and through ultimate adaptations (pillars of defense), which continues to perfect what already exists to the greatest extent possible. By conveying to employees in words that it is okay to take on bold challenges and break through whatever has been holding them back, we aim to encourage each individual to continue to take action beyond their own limitations while still feeling a sense of security.

[The Seven Pillars of Transformation]

Evolution is inevitable
<Pillars of Offense>

Challenge the impossible

In order to change the future, we must challenge what we think impossible, even without clear pass to success. With this shared vision, we can make impossible reality with team collaboration.

Find joy to challenge impossible together with friends

That path to evolutional change sometime defies common sense. However, the future awaits us at the end of this journey. No worries. The smiles of our friends will always give us strength. All we have to do is to keep taking on the challenge with resilience and flexibility.

Push forward until we achieve the unimaginable

Somewhere lies a solution to change the future, but we merely haven't realized it yet. Use all of our senses and try everything. After a series of remarkable mistakes and coincidences, we will be sure to find the "it" that will allow us to solve the problem.

Ultimate Adaptation
<Pillars of Defense>

To maintain the status quo is to abandon the future

Learn from the past, think about the future, understand yourself, know the world, and discern the changes of the times. There is no future if we stand still. Keep imagining the next step at all times.

Attacking is the best form of defense

Do not rest on our current achievements. We must continuously be on the offensive in order to evolve and meet the demands of the future. Every day, continue to set the next goal and keep pushing forward until we surpass our best.

Keep your passion burning

No matter what your job is, if you keep pouring your heart into it, you can continue to improve yourself forever. Keep the fire in your hearts alive and pass it on to the next generation.

Absolute Transformation
<Pillar of Mankind>

For those who come after us

We are not just working for the present. We must transform our company to one with an energy that will change the future for our children and our children's children.

Internal measures
for behavior change

Through measures that encourage behavioral changes aimed at realizing the Mission, Vision, and Will, we are trying to ensure that they take hold throughout the company.

The Forest Conference

The forest is a world in which living organisms and nature coexist in harmony. Participants in the Forest Conference experience a world in which the pursuit of happiness and a sustainable environment are harmonized free of conflict as aimed for by the Mission. This environment is precisely why we value holding these meetings in the forest. The Forest Conference is held in a way that brings together a diverse range of talent, focusing on key middle management levels. It has been held a total of 48 times as of the end of fiscal 2025, with 686 employees participating.

The "real stories" of the Seven Pillars Heroes

Every year, employees who put the Seven Pillars of Transformation into practice are selected as "Seven Pillar Heroes" and announced at an awards ceremony in which all employees participate online.

Since the awards ceremony cannot convey all the achievements of the Heroes and the process leading to their awards, we compile the Heroes' "real stories" into videos and post them on the company intranet to encourage understanding and inspire action among all employees.

Strengths of Panasonic Energy

Technological capabilities, market creation, reliability and track record cultivated in the 100 years since our founding

Even in a future world of intense uncertainty, we will create new markets using our steadfast technological capabilities, and leverage the trust of our partners and our track record to maintain our business and to expand our contributions to society.

Technological capabilities

- Material development and cell design
- Intellectual property

11,000 patents

Market creation

- Strategic relationships with customers
- Ability to solve customer problems

Contribution to the evolution of lifestyles

Reliability and track record

- Manufacturing that supports high reliability
- Brand

Zero recalls of automotive Li-ion batteries*

*Recall attributable to batteries

Since 1923

Technological capabilities

Another Level of Know-how Accumulated Over 100 Years

For Panasonic Energy's medium- to long-term technology strategy, see "Intellectual Property Strategy" on page 24.

Ever since we launched our battery business in 1923, more than 100 years ago, we have been involved in the development of batteries. And the material development capabilities acquired from the manufacture of dry batteries, the know-how for improving the packing density of materials, and the sealing and can manufacturing technologies that enable longer battery service life are all alive and well in the way we manufacture secondary batteries today.

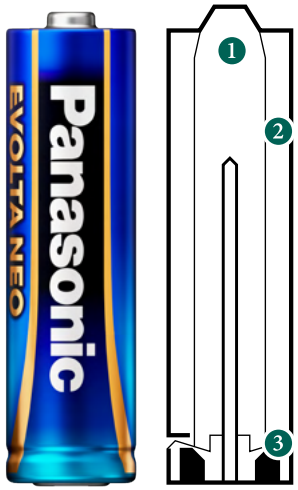
Moreover, we have focused on cylindrical secondary batteries that leverage the technologies we have accumulated in this field. The breadth of know-how we possess, ranging from primary to secondary batteries, constitutes our technological capabilities – our strengths.

And we will continue to leverage these technological capabilities as we increase the capacity of batteries and realize a greater level of safety in an effort to maintain and continuously expand our battery business.

Technologies for Creating High-capacity, Highly Reliable Batteries

Dry Batteries
Since 1923

Longest lasting in the world*1



❶ Materials Technology

We possess the advanced process control and other peripheral technologies required to fully utilize battery materials. Likewise, we are able to manufacture high-capacity, highly reliable batteries in a way that addresses battery material reactivity, expansion, contraction, and other challenges.

❷ Electrode Structuring Technology

Increasing battery capacity relies on the technology for packing materials into a limited space. We possess the production technology for packing powders of different geometries in an efficient, uniform manner, thereby allowing us to achieve higher capacities.

In regard to Li-ion batteries with a cylindrical configuration consisting of a wound three-ply cathode-separator-anode structure, we possess winding technologies that create high-precision cylinders, thereby enabling us to manufacture highly reliable batteries.

❸ Sealing/Can Manufacturing Technology

The seals and cans that come into contact with air-borne moisture and oxygen are a critical part of ensuring the safety and security of batteries. We possess sealing techniques that prevent leaks, and sealing and can manufacturing technologies that restrict gas generation, which allow us to manufacture highly reliable batteries.

❹ Analysis Technology

Leveraging observation techniques suited to the materials, measuring know-how with a deep understanding of electrochemistry, and other advanced analysis capabilities, we are able to make accurate performance assessments and discover problems, thereby enabling us to manufacture highly reliable batteries.

Li-ion Batteries
Since 1994

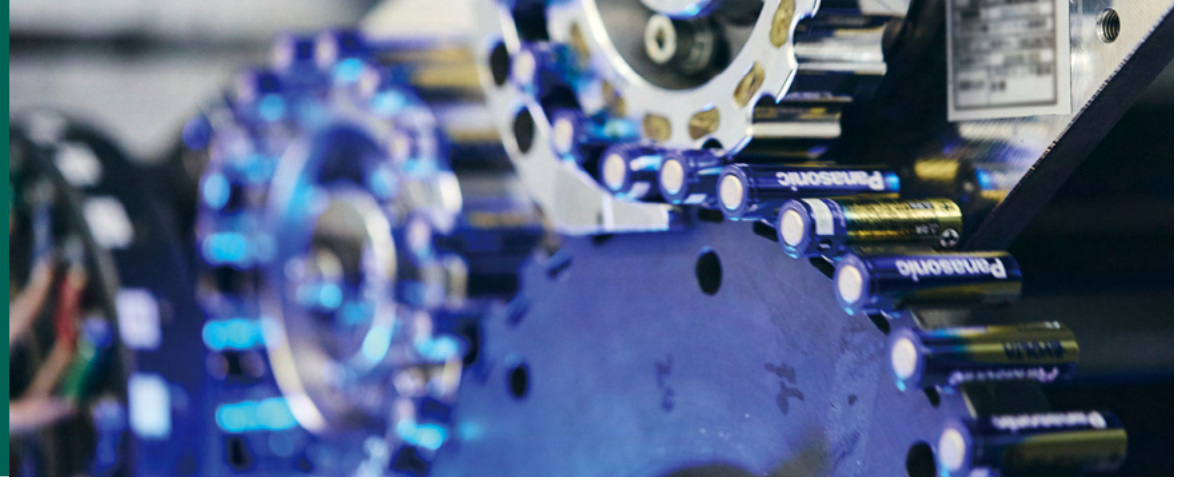
Highest capacity in the industry*2

*1 EVOLTA NEO: Certified by Guinness World Records™ on October 2, 2017, as the longest lasting AA-size alkaline battery (LR6). Recertified on February 28, 2025. Based on the average value under full-discharge mode in accordance with IEC standards. 250 mA; one-hour discharge cut-off voltage per day of 0.9 V, etc. (temperature: 20±2°C, relative humidity: (55+20, 55-40)%).

*2 According to research by Panasonic Energy

Market creation

Pioneering New Battery Applications through Technological Innovation



We have provided solutions to social issues by using our advanced technological capabilities and have created new markets by disrupting existing understandings. And we have supported the lifestyles of people, by creating markets for cylindrical Li-ion batteries that ensure a high level of safety, by entering the telecommunications infrastructure business with an eye to the coming future, and by creating markets for dry batteries designed to be stored in preparation for disasters. Through our ongoing, tireless efforts to evolve our technologies, we will solve challenges faced by society and create new markets.

Creating Markets for Cylindrical Li-ion Batteries

At a time when it was uncommon to use the cylindrical format for automotive batteries, we began developing and manufacturing cylindrical Li-ion batteries from the perspective of balancing high energy density and safety.

In-vehicle battery packs are composed of modules in which multiple cells connected in parallel and serial. The cells in cylindrical batteries can be more efficiently cooled, which keeps battery temperatures from rising even during rapid recharging, in turn preventing battery deterioration.

We began mass producing cylindrical automotive Li-ion batteries in 2008, at which time we pioneered new markets for these. In 2017, we commissioned a cylindrical automotive Li-ion batteries plant in Nevada, USA, and worked to expand mass production in an effort to create a larger market for these batteries.

Entering the Telecommunications Infrastructure Market

In 2014, we entered the storage battery systems market for data centers.

More recently, the demand for data centers has expanded with the growing use of generative AI. We therefore began developing and manufacturing these storage battery systems in anticipation of growing demand for data center backup power supplies.

Given their need to operate consistently even in emergencies, the most important issue for data centers is the reliability of their backup power supplies. We have captured a high share of the market because our exceedingly safe, highly reliable storage battery systems are ideal for data centers.

We have also horizontally deployed the technology accumulated in targeting data centers to residential storage battery systems, thereby contributing to various parts of the social infrastructure.

Creating Markets for Storage-use Dry Batteries: EVOLTA NEO

Dry batteries deteriorate when stored long-term, regardless of whether they are used or not, so we face challenges in terms of capacity drops and leaks.

Applying the technological capabilities we have built-up over the years, we revolutionized the dry battery materials, production methods, and structures to create EVOLTA NEO. This battery can be stored for ten years, thereby allowing us to establish a market for dry batteries intended to be stored as a means of providing support in the event of disasters or emergencies.

As a dry battery that helps people enjoy safe, secure lifestyles at all times, even in the event of disasters, EVOLTA NEO has the longest-lasting performance in the world, a fact certified by Guinness World Records™, and is designed to prevent leaks using the "battery leakage preventing manufacturing process Ag+".

Reliability and track record

Reliable market performance and brands

We have supplied a cumulative total of over 19 billion cylindrical automotive Li-ion battery cells to date (as of March 2025).
The most important part of battery manufacturing for us is the extent of product safety and quality, which is why we have made tireless efforts involving quality innovation with a top priority on product safety.
In the field of automotive Li-ion batteries, these efforts have manifested in the fact that no recalls have stemmed from our batteries.

Battery Manufacturing Innovation Based on Manufacturing Technology Advancement

Manufacturing Strengths

- Highly productive, high-quality production processes
- Product safety management
- Perfected traceability systems

We have committed to transforming our manufacturing technologies as batteries have evolved. Today, our advanced manufacturing processes enable us to manufacture high-quality cells at high speeds, with production reaching 80 automotive Li-ion battery cells every second, or more than 7 million cells every day*. Specifically, this capability is founded on the in-house manufacturing relying on the technologies we have accumulated to date, the traceability system which detects abnormalities and contaminants, conducts causal analysis of such abnormalities and corrects them, and the advanced production line management which is based on regular condition-based maintenance.

*As of 2022

Materials → Electrodes → Assembly → Inspection → Modules → Market

Key process: In-house manufacturing

- Proprietary development of production process technologies
- In-house manufacturing of key process equipment

Traceability & production monitoring

- Sensing and monitoring systems
- Traceability from plant to market

Production line management

- Process visualization, condition detection and feedback
- Condition-based maintenance

Shoichiro Watanabe

Executive Vice President
Chief Technology Officer
(CTO)

Message from the CTO

At the Forefront of the Evolving Energy Transition

Leading the world in battery performance

For more than 100 years now, we have been leading the evolution of battery technology, always at the forefront of the industry primarily with our technology for higher energy density for Li-ion batteries. In addition, our cylindrical batteries for electric vehicles (EVs) stand out from the competition for not only their long-range performance on a single charge, but also for their safety. They are rated particularly highly in the North American automotive market, which is characterized by a vast land mass and long travel distances. That said, in order to continue to be favored in the market, it is imperative that we possess not only outstanding performance, but also a highly productive automotive batteries factory at the GWh scale, coupled with a resilient supply chain.

We were the first to enter the North American market, starting production at our Nevada Factory in 2017. We have now established a large-scale production capability with an annual capacity of approximately 41 GWh. We have applied the experience gained from the challenges faced there to our Kansas Factory, which came online in fiscal 2026 and is designed to achieve a 20% improvement in productivity compared to the Nevada Factory in part through the introduction of labor-saving production lines. Also, with the growing complexity of world affairs, securing material sourcing networks has grown more challenging. Amid such circumstances, we are steadily expanding partnerships, including those upstream in the supply chain, while also considering our environmental footprint.

Meanwhile, the rise of generative AI has led to a sharp increase in data centers that require stable operation 24 hours a day, 7 days a week. In this environment, our energy storage systems for data centers are held in high regard by hyperscalers* for their safety, long lifespan, and high reliability, as well as for achieving high output and space efficiency.

*Cloud service providers with large-scale servers.

Making EVs affordable

Looking back on the three years since I took office as CTO, we have improved the capacity of the 2170-size automotive batteries by using new materials and we have begun supplying next-generation cells that boast a world-class volumetric energy density of over 800 Wh/L. We are advancing the development of materials with the aim of achieving 1,000 Wh/L by 2030, striving to stay ahead of the competition, even at a time when materials development has reached the stage where breakthroughs on multiple fronts are necessary for the next evolution. Moreover, at our Wakayama Factory, we have completed the preparations for the mass production of 4680-size cells, which have approximately five times the capacity of the 2170-size cells, and are making discussions with our customers. As to our production capability in North America, the Kansas Factory has been built and has started its operations. In parallel with this, we have been developing a framework for local procurement and recycling, based on the concepts of local production for local consumption and reducing environmental impact, as part of our ongoing efforts to shape and realize the ideal supply chain for the North American market.

Mass production of the 2170-size cells commenced at the Kansas Factory in fiscal 2026, and we are finally entering the phase of recouping the investments made thus far. The biggest challenge going forward will be costs. With an eye on the full-fledged uptake of EVs after 2030, the primary objective is to make EVs affordable. Improving energy density and capacity not only extends the range of EVs but also reduces the number of battery cells used in each vehicle, directly contributing to lowering the cost of EVs. The real challenge lies in how far we can lower the per-vehicle battery cost while overcoming the difficult technical issue of balancing safety and battery performance. We will not only continue to drive technological evolution, but also promote production efficiency and supply chain transformation.

In the area of production efficiency, we have doubled down on the introduction of automation for factory operations. As depreciation costs of equipment and labor expenses account for 20%–30% of manufacturing costs, we will lighten capital investments and further enhance labor productivity by optimizing production lines and employing the use of AI. And as part of our efforts to transform the supply chain, we have initiated various initiatives, such as the joint development of nickel processing technology with Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO). This is because significant cost reductions and lower CO_2 emissions are expected to be achieved through the development and simplification of upstream processes specialized in battery materials.

Reducing our carbon footprint and realizing a circular economy

We aim to halve the carbon footprint (CFP) of our automotive Li-ion batteries produced in North America by fiscal 2031 compared to fiscal 2022. In particular, over 80% of CO_2 emissions come from upstream activities such as mining, raw material processing, and distribution. In terms of the key issues, we are focusing on local procurement, the use of recycled materials, and reductions in the use of rare metals.

In addition, as part of our efforts to expand the use of recycled materials in cathode materials for automotive Li-ion batteries, we are partnering with Redwood Materials Inc. in the US to establish a scheme for recycling cathode materials from process waste and used batteries. We have begun operating a battery-to-battery closed-loop recycling system in collaboration with Sumitomo Metal Mining Co., Ltd. in Japan and suppliers in China, extracting nickel, a type of rare metal, from battery waste generated in factories for reuse in cathode materials. We are also planning similar initiatives for lithium and cobalt. Up ahead, the key will be to increase the number of partners to ensure a stable supply of battery scrap and to scale up the scheme to a point where we can generate cost advantages.

In addition to these initiatives, we are stepping up efforts geared towards a circular economy for primary batteries. We have begun utilizing recycled zinc materials in our EVOLTA NEO dry batteries. Furthermore, as a new initiative for utilizing recycled materials, we have established a recycling process in collaboration with TOMATEC CO., LTD. in Japan to use mixed powders containing components such as zinc and manganese separated from used dry batteries as trace elements in fertilizer. In this way, we are at the forefront of efforts to reduce environmental impacts related to the battery business in both Japan and the US.

Promoting better solutions for energy storage systems for data centers

In the industrial and consumer fields, we have elevated our offerings from cells to battery packs, modules, and systems architecture in an effort to enhance the added value of energy storage system solutions. As a result, we have been able to incorporate the needs of AI data centers and grow our energy storage systems for data centers into a business pillar. Data centers process vast amounts of data in real time, and even a momentary power disruption can lead to hardware failures or data loss. This is where backup power is essential. Our distributed power systems can provide stable power supply, especially during momentary outages or fluctuations in electricity. Plus, our systems are more compact than centralized power systems and can be distributed at the server rack level, making them a perfect match for the current proliferation of high-performance GPU servers used for AI processing.

Message from the CTO

Data center demand is expected to expand at an accelerated pace in the future, and we have our sights set on capturing a dominant market share of the energy storage system for backup power applications. As AI data centers experience significant fluctuations in electricity usage between peak computing times and non-peak times, relying entirely on external power sources would require substantial investments in power infrastructure. For this reason, by leveling out power peaks with our power control technology, we can contribute to significantly reducing infrastructure investments, so in this regard as well, our solutions play a crucial role.

Leveraging our expertise in battery materials, we have a significant advantage by being involved with hyperscalers from the design stage. In the future, fluctuations in power consumption are expected to become even larger, and the solutions demanded by users will become more sophisticated. Accordingly, we will proactively anticipate the needs of our customers and take up the challenge of new innovations. Unlike the automotive battery market, where scale and cost are the main focus, the backup power market has specialized applications. Therefore, we will focus on developing technologies that enhance the value of solutions that solve our customers' challenges.

Focusing on DX and IP strategies as well

We will also accelerate digital transformation (DX) to improve production efficiency in the automotive battery business. Particularly in North America, where there is a high employee turnover, it can be difficult to implement Japanese-style plant operations that rely on the accumulation of experience by long-serving employees. That is why we have aggressively promoted automation and DX at our Nevada Factory. Furthermore, we have implemented a system that incorporates past knowledge into AI so that it can optimally allocate personnel and provide instructions for handling issues. For R&D, we are drastically improving experimental efficiency through materials informatics, enabling us to quickly narrow down material candidates and speed up development.

As for intellectual property (IP), we have teamed up with LG Energy Solution Ltd. (LGES) in the Republic of Korea to launch an industry-first joint licensing program that will bolster our efforts to protect and monetize our IP. In the batteries domain, we are focusing on patent applications across a wide range of areas, and in terms of the Group's research and development of all-solid-state batteries, we are proudly ranked number one* in the world for the number of international patents published by the Japan Patent Office.

*According to the Japan Patent Office's 2023 survey results on technology trends in patent applications by field
(proportion of international patents for 2013–2021)
(https://www.jpo.go.jp/resources/report/gidou-houkoku/tokkyo/2023theme.html)
(Available only in Japanese)

Developing personnel capable of overseeing processes is key

Over the past three years, we have hired around 1,000 technical personnel in Japan. In preparation for such large-scale hiring, we established the Academy of Battery Technology & Manufacturing in April 2023 and have been developing and promoting the programs to train personnel who can contribute immediately. As the scale of our production increases, so does the specialization of each process, which in turn leads to a division of responsibilities. Therefore, we aim to develop personnel who, after gaining general experience through rotation across different roles, can solve problems effectively with a broad perspective on the entire operations. Externally, we are pressing ahead with an industry-academia collaboration at the newly built research building on the campus of Osaka Metropolitan University. We have been providing the know-how cultivated at the academy to convey the appeal of working in the battery industry to engineering students.

Overseas, we are planning to hire thousands of employees to support the operations of the Kansas Factory, and, the recruitment process is going smoothly due to the relatively large population living in the surrounding area. On the other hand, since the area is not a hub for high-tech companies, we believe we need to strengthen our commitment to securing local battery talent over the medium to long term. To that end, as a joint effort between industry and academia, we are partnering with the local University of Kansas to promote technological development and the training of specialized personnel in automotive batteries.

Always challenging ourselves to stay one step ahead

As electrification is on the rise toward the realization of a decarbonized society, the presence of storage batteries is growing increasingly important day by day. Back when development first began, there was little certainty about the future market expansion both for automotive batteries, which are now entering the investment recovery phase, and for energy storage systems for data centers, where demand is rapidly growing. Even so, we persisted with development efforts for over a decade, believing that a time would come when these solutions would be needed in society. The accumulation of those efforts is what supports our growth today. We will continue to look ahead to the future of the energy transition and remain at the forefront of a constantly changing society.

Value Creation Process

External environment

- Tighter environmental regulations
- Climate change
- Resource depletion
- Poverty
- Child labour/ forced labour
- Health care crisis
- Technological innovation
- Growing ESG awareness

Panasonic Energy will utilize its diverse capital, including its human resources and technology, to promote solutions to social issues with our strengths at the core and achieve sustainable enhancement of corporate value.

Our Will
Doing what humankind requires

Our Vision
Energy that changes the future

Our Mission
Achieving a society in which the pursuit of happiness and a sustainable environment are harmonized free of conflict

Inputs P.19

[Human capital]
Strengthening of human resources

[Natural capital]
Strengthening responses to resource and environmental issues

[Social and relationship capital]
Sustainable and resilient supply chain

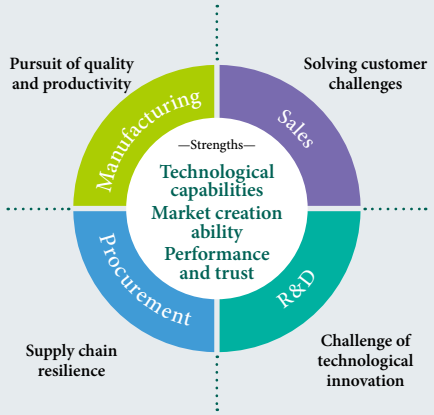
[Intellectual capital]
Strengthening R&D to improve battery performance and reduce environmental impact

[Manufactured capital]
Improvement of productivity, pursuit of quality and product safety

[Financial capital]
Generation of operating cash flow and expansion of investment for growth

Business activities P.26

Building a strong management foundation and promoting solutions to social issues with our strengths at the core



Human resource as a core competence

Robust corporate governance

[Related materiality]
- Promoting human capital management and respecting human rights
- Responsible supply chain
- Thorough compliance
- Corporate governance

Outputs P.20

Mobility Energy
Reduce CO_2 emissions by supporting electrification of mobility

Energy Solutions
Contributing to a safe and secure social infrastructure that does not stop even in emergencies

Energy Device
Providing convenient and comfortable living with eco-friendly batteries

[Related materiality]
- Providing energy for the pursuit of happiness
- Achieving decarbonization
- Realizing a circular society

Value proposition P.21

Society

Realization of a lower environmental impact society

Customers

Supply of safe and reliable battery products

Collaboration partners

Growing together by solving social issues

Co-workers

Improving employee well-being

Further capital reinforcement for sustainable corporate value enhancement

Source of Value Creation: the six capitals (inputs)

We regard human capital, natural capital, social and relationship capital, intellectual capital, manufactured capital, and financial capital as the six critical components of corporate value, which we are always working to improve.

All figures in the table are results for fiscal 2025.

Human capital

Consolidated Group employees ..... Approx. 21,000 (↑)

Overseas personnel ..... 71.1 % (→)

Work-related fatalities ..... 65 pt (↑)

Enhancing human resources

To expand our business in Japan and overseas, we aim to increase the number of employees, focusing on technical and manufacturing human resources. In addition, we will enhance our business competitiveness by fostering an organizational culture in which each and every employee can thrive and building a system and environment that encourages them to take on challenges. We also focus on improving the wellbeing of our employees by promoting health and safety activities and "Health and Productivity Management."

Natural capital

Net Zero Factories*1 ..... 17 sites worldwide (↑)

CO_2 avoided emissions*2 ..... 16.32 million tons (↑)

Strengthening responses to resource and environmental issues

We will reduce our CO_2 emissions and contribute to the reduction of CO_2 emissions in society as we move towards decarbonization. We are also stepping up our efforts to maximize the positive impact and minimize the negative impact on both achieving decarbonization and the realization of a circular society to use limited resources efficiently and reduce our environmental footprint.

*1 Factories that have achieved virtually zero CO_2 emissions by promoting energy conservation, introducing renewable energy, and using carbon credits.

*2 The amount of CO_2 emissions reduced by customers and society through the use of our products compared to the baseline level without our products.

Social and relationship capital

Rate of implementation of self-assessments related to human rights and labour ..... 100 % (→)

Rate of implementation of risk assessments related to the environment and human rights for existing suppliers ..... 100 % (→)

Sustainable and resilient supply chain

We will work with various stakeholders to fulfill our social responsibilities with regard to human rights, labour, health, and safety while also establishing a robust supply chain by promoting recycling of battery materials and diversifying and local procurement of raw materials.

Intellectual capital

R&D expenditures ..... 39.5 billion (↑)

Strengthening R&D to improve battery performance and reduce environmental impact

In addition to improving battery performance such as higher capacity, we will focus on minimizing the use of rare metals by transitioning to cobalt-free and less-nickel batteries, thereby contributing to a reduction in environmental impact. Meanwhile, to meet customer needs, we will steadily strengthen our product capabilities along the two axes of progress: higher capacity and higher power output.

Manufactured capital

Manufacturing sites worldwide ..... 20 sites (→)

Number of serious product accidents ..... 0 (→)

Capital investment ..... ¥ 501.1 billion (↑)

Improvement of productivity, pursuit of quality and product safety

While working to improve productivity at each site through human resource development and the promotion of automation, we are promoting quality innovation with product safety as the top priority. In addition, we will make efficient capital investments to expand production capacity by starting operations at the Kansas Factory and the Wakayama Factory and by increasing domestic production for new customers in Japan.

Financial capital

Total assets ..... ¥ 1,904.2 billion (↑)

Operating cash flow ..... ¥ 213.0 billion (↑)

ROIC ..... 11.9 % (↘)

Generation of operating cash flow and expansion of investment for growth

The in-vehicle business will accelerate the establishment of revenue bases in both Japan and the U.S., while the industrial and consumer business will strengthen its solutions for the data center business. In this way, we will increase our ability to generate future operating cash flows and transform into a highly profitable business entity.

Panasonic Energy's Contributions (outputs)

Panasonic Energy contributes to society every day through our cutting-edge technologies and diverse products, which are used in various scenes of life.

In-vehicle Business	Industrial and Consumer Business	
Contributing to reduce CO_2 emissions by supporting electrification of mobility	Contributing to a safe and secure social infrastructure that does not stop even in emergencies	Providing convenient and comfortable living with eco-friendly batteries
Mobility Energy Business Division	Energy Solutions Business Division	Energy Device Business Division

Space

The recovery capsule of the asteroid probe Hayabusa 2 uses a lithium primary battery that is resistant to environmental changes.

Illustrations: Akihiro Ikeshita

Data centers

Safe, long-lasting, and highly reliable storage battery systems based on Li-ion batteries are used as a backup power source.

Commercial buildings

Nickel-metal hydride batteries, which are characterized by their long life, are used in guide lights and emergency lights.

Houses

Dry batteries are used in familiar products such as remote controls and clocks. In addition, long-term, reliable lithium primary batteries are used in state-of-the-art gas and water smart meters. Furthermore, Li-ion batteries are used for household storage batteries.

Hospitals

A variety of batteries, such as nickel-metal hydride batteries and lithium primary batteries, are used in medical devices that require high safety and reliability.

Bicycles

Electric-assist bicycles use Li-ion batteries, which are characterized by their high-capacity, small size, and light weight.

Solar cell systems

Nickel-metal hydride batteries are used as rechargeable batteries for solar-powered ocean buoys, which can be used in harsh environments with large temperature differences.

Cars

Li-ion batteries, which are characterized by their high-capacity and safety, are used as a power source for electric vehicles. Also, nickel-metal hydride batteries are used for the TCU, which is the system that communicates between the car and the external network, and e-call, which is an emergency reporting system for vehicles.

In-vehicle Business + Industrial and Consumer Business

Industrial and Consumer Business

Panasonic Energy's Value Proposition (outcome)

Panasonic Energy achieves sustainable value creation by providing a variety of value to stakeholders and collaborating with them.

Society

Realization of a lower environmental impact society

By promoting the electrification of mobility, including EVs, we will make a significant contribution to the decarbonization of society. We also aim to realize a circular society that reduces consumption of natural resources by expanding recycling and reducing waste.

Value proposition

Achieving decarbonization
- Increasing avoided CO_2 emissions
- Reduction of CO_2 emissions during battery production

Realizing a circular society
- Reduced consumption of natural resources
- Waste reduction

Providing energy for the pursuit of happiness
- Contributing to safe and secure lifestyles
- Contributing to learning among children

Major Initiatives
- Reduction of CO_2 emissions at our own factories
- Use of in-house and external renewable energy
- Reduction of CO_2 emissions through technological innovation
- Promotion to utilize recycled materials
- Research and development to promote recycling/reuse
- Promotion of social contribution activities

Customers

Supply of safe and reliable battery products

By supplying safe and reliable battery products to our customers, we contribute to the popularization of EVs and support social infrastructure (such as IoT, data centers, medical care, and gas and water meters), thereby helping to make our daily lives more convenient and comfortable.

Value proposition

In-vehicle area
- Safety with zero recalls attributable to our batteries
- Increased cruising range due to higher capacity
- Widespread use of EVs due to lower costs

Industrial and consumer areas
- High safety and reliability
- High-capacity and long life
- Improved living convenience through miniaturization and wireless operation
- Provision of power supply in the event of a disaster

Major Initiatives
- Material development
- Improvement of volumetric energy density
- Product safety management
- Improvement of production capacity
- Up one layer and new market development
- Stable supply of products

Collaboration partners

Growing together by solving social issues

With our collaboration partners, we work together to maintain and improve the quality of purchased products, realize competitive prices, and respond to market changes based on mutual trust and cooperation. We also grow together while studying to solve social issues.

Value proposition
- Resolution of social issues through collaboration
- Partnership that continues to grow together
- Maintenance and improvement of product quality
- Realization of competitive prices
- Response to market changes

Major Initiatives
- Local procurement of materials
- Promotion of procurement of materials with low environmental impact
- Compliance with CSR Guidelines
- CSR risk reduction through voluntary assessment
- CSR education and training
- Support for suppliers
- Human rights due diligence
- Responsible minerals procurement
- Promotion of joint research through industry-academia collaboration
- Promotion of projects in cooperation with national governments

Co-workers

Improving employee well-being

We strive to enhance the wellbeing of our employees by creating a work environment in which each and every employee, with their diverse values, can work with high engagement and vitality in a safe, secure, and healthy environment.

Value proposition
- Resonance with Mission, Vision, and Will (MVW)
- Personnel system to accelerate challenge and growth
- Various personalized training programs
- Securement of diverse and talented human resources
- Respect for each individual's personality, experience, and values
- Creation of safe and secure workplaces
- Employee health promotion

Major Initiatives
- Transitioning to job-based human resource management
- Formulation and encouragement of the Seven Paths to Transformation
- Implementation of Forest Conference, an approach to promoting Mission, Vision, and Will (MVW)
- Raise the wage level
- Conduction of internal forums
- Measurements to increase job satisfaction and workplace flexibility
- Enhancement of leave systems
- Thoroughly strengthen measures to prevent industrial accidents
- Acquisition of certification in the White 500 (goal)

Material Issues for Value Creation (Materiality)

We have identified material issues (materiality) that we must address from an environmental, social, and governance (ESG) perspective in order to contribute to a sustainable society.

Materiality identification process

Panasonic Energy identified seven material issues using the following four steps.

01
List social issues

We listed 71 social issues that are candidates for materiality.

02
Evaluate their importance from the perspective of Panasonic Energy

For each item on the list of social issues, we evaluated its impact on our business and relevance to our policies from Panasonic Energy's perspective.

03
Evaluate their importance from a stakeholder perspective

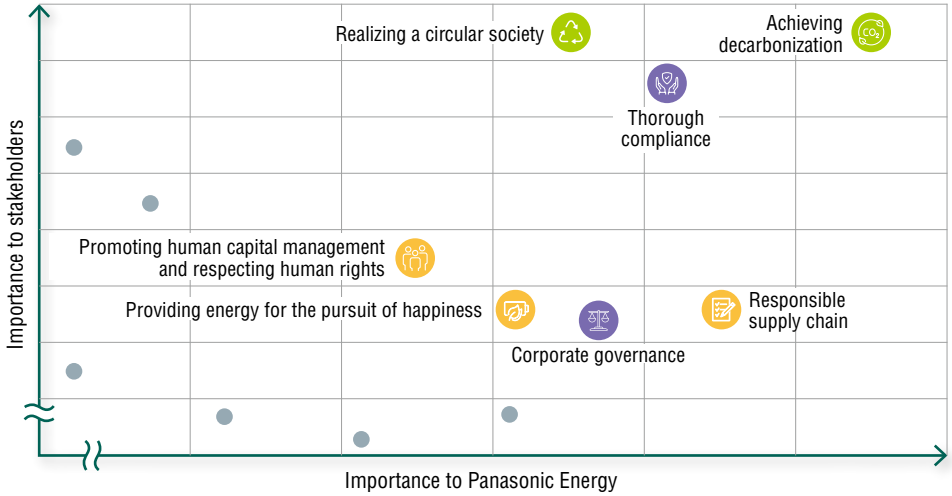
For each item on the list of social issues, we evaluated its importance from the perspective of all stakeholders, based on the opinions we have obtained through dialogue with stakeholders to date and the interest of investors and certifying organizations.

04
Deliberate and identify

After sorting out our thoughts on ESG management and what we aim to achieve, we identified seven material issues through multiple rounds of deliberations between the officers, including the Representative Director, and staffs of the relevant departments.

Materiality matrix

We evaluated social issues from two perspectives: their importance to Panasonic Energy and their importance to our stakeholders, and plotted the most important of these issues in the materiality matrix below.



Seven identified material issues and specific examples of initiatives

- Materiality relating to the environment (E)
- Materiality relating to society (S)
- Materiality relating to governance (G)

Realizing a circular society
P.42
- Building a recycling-oriented supply chain
- Development of recycling-oriented products
- Waste reduction
- Promotion of recycling

Promoting human capital management and respecting human rights
P.44
- Ensuring occupational safety and health
- Promotion of human resource development
- Promotion of Diversity, Equity & Inclusion (DEI)
- Prevention of discrimination and child/forced labour

Corporate governance
P.49
- Strengthening the functions of the Board of Directors and management team
- Ensuring transparency

Achieving decarbonization
P.38
- Reduction of greenhouse gas (GHG) emissions
- Contribution to reducing CO_2 emissions in society
- Effective use of renewable energy
- Local procurement

Providing energy for the pursuit of happiness
P.43
- Contributing to a safe and secure society
- Eradication of poverty and hunger
- Contributing to local communities

Responsible supply chain
P.48
- Responsible procurement of minerals
- Respect for human rights in the supply chain
- Supply chain management

Thorough compliance
P.51
- Pursuit of quality and product safety
- Compliance with laws and regulations
- Ensuring information security

Materiality & KPIs at a Glance

Materiality	KPI	FY2023	FY2024	FY2025	FY2031
Achieving decarbonization	Environmental Contribution Index	4.5	4.0	4.9	10*10
	Avoided CO_2 emissions*1 (10,000 t-CO_2)	1,316	1,271	1,632	4,500*10
	Net Zero Factories*2	10 sites	14 sites	17 sites	All sites (FY2029)
	Electricity renewable energy ratio*3	23%	33%	46%	100% (FY2029)
	Carbon footprint*4	100% (FY2022)	100%	−22% (vs. FY2022)	−50% (vs. FY2022)
Realizing a circular society	Recycled material utilization rate	—	—	—	Compliance with local regulations in each country
Providing energy for the pursuit of happiness	Sales of stationary storage batteries that support clean energy*5	1.3	1.9	3.6	4.0
	Sales of healthcare storage batteries that support everyday life*5	1.3	0.7	1.0	2.4
	Sales of dry batteries that provide support in emergencies*5 *6	1.1	1.2	1.2	2.2
	Sales of batteries that protect the security of mobility*5 *7	1.0	1.1	1.5	8.2
Promoting human capital management and respecting human rights	EOS Score: Employee engagement (global)	70pt	70pt	70pt	85pt*11
	EOS Score: Employee enablement (global)	63pt	62pt	65pt	80pt*11
	Percentage of women in managerial positions (non-consolidated)	5.8%	6.5%	7.3%	15%
	Rate of childcare leave taken among men and women (consolidated, Japan)	Women 100% Men 56.2%	Women 100% Men 58%	Women 100% Men 86%	Men/Women 100%
	Health management index(non-consolidated)	52.5pt	55.7pt	56.9pt	White 500
	Number of fatalities due to industrial accidents (global)	0 incidents	0 incidents	1 incidents	0 incidents
	Number of industrial accidents (lost time incidents in Japan, consolidated)	4 incidents	5 incidents	3 incidents	0 incidents
	Percentage of implementation of self-assessments related to human rights and labour (overseas manufacturing subsidiaries) and percentage of executed corrective plans	100%	100%	100%	100%
Responsible supply chain	Written CSR consent acquisition rate from tier 1 suppliers	46%	62%	100%	100%
	Ratio of tier 1 suppliers with an A-rank CSR self-assessment	77%	81%	87%	100%
	Ratio of assurance provided by conducting CSR audits of tier 1 suppliers	—	10%	34%	100%
	CMRT/EMRT collection rate	98%	99%	100%	100%
	Utilization ratio of conformant/active smelters	82%	82%	90.8%	100%
Thorough compliance	Number of serious product incidents*8	0	0	0	0
	Number of serious legal and compliance violations*9	0	0	0	0
	Number of information security incidents*9	2	2	6	0

*1 The amount of CO_2 emissions reductions achieved for our customers and society as a result of the introduction of our products, compared to the baseline level where no products were introduced.
*2 Factories that have achieved virtually zero CO_2 emissions by conserving energy, introducing renewable energy, and using credits.
*3 Percentage of electricity, fuel, etc. used by Panasonic Energy that is derived from renewable energy sources (includes certificates, credits, and other externally procured items).
*4 CO_2 emissions per unit capacity of lithium-ion batteries for automotive use produced at the North American factory.
*5 Sales volume with fiscal 2022 set as 1
*6 Sales in the three key regions
*7 Automotive batteries excluding those for drive applications
*8 Number of product incidents leading to safety-related recalls
*9 The criteria are based on internal rules and regulations, etc.
*10 Target values revised based on market conditions in-vehicle business and other factors
*11 Target values revised to include sites outside of Japan

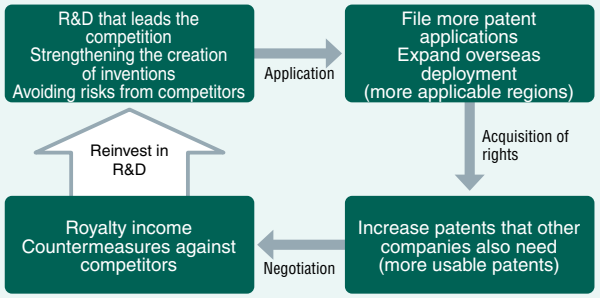
Intellectual Property Strategy That Enhances Corporate Value

Focusing on creating a virtuous cycle by further strengthening and utilizing our intellectual property rights.

Strategy and policy

The purpose of Panasonic Energy's intellectual property (IP) strategy is not only to protect R&D results in the form of IP, but also to establish and maintain a virtuous cycle in which profits gained from utilizing IP are reinvested into R&D. Currently, our IP balance sheet, defined as the profits generated by our IP minus the expenses necessary to acquire the IP, is in the black, which means that IP income covers a portion of our R&D expenditures. To further expand this virtuous cycle, we are working on both strengthening IP rights and utilizing IP rights, with a dual focus on application endpoint and geographic region. In terms of strengthening IP rights, we are actively utilizing the PCT international application system to promote our ownership of IP rights in regions where late-started manufacturers are aggressively entering the market. We are also focusing on rights ownership in regions where our business partners are located to ensure smooth business operations with them.

Establishing and maintaining a virtuous cycle for IP



Strengthening IP rights

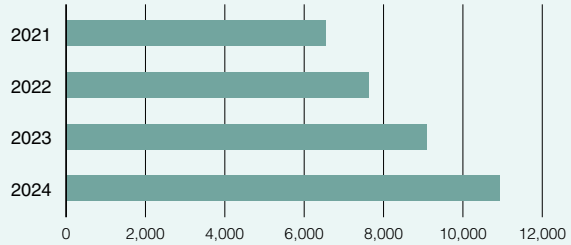
Strengthening applications and discovering promising patents

Panasonic Energy files patent applications that cover a wide range of areas, from existing batteries to all-solid-state batteries and next-generation secondary batteries. For these batteries, our patent applications are mainly in the areas of materials and chemistry related to cathodes and anodes that yield high energy density, as well as safety-enhancing mechanisms and shapes for battery cells and packs. We are also expanding our business globally, mainly in the U.S., and the percentage of our patent applications first filed in Japan that we subsequently file overseas has reached 90%.

In addition to the U.S. and China, we are strengthening our overseas applications in Europe where we expect to acquire new royalties, and in India where we anticipate future growth. As a result, the overseas expansion coefficient per domestic patent application has expanded from 3.4 countries in fiscal 2022 to 4.4 countries in 2025*.

Furthermore, the total number of applications worldwide (including PCT national phase applications) in fiscal 2025 almost doubled compared to fiscal 2022, and as of the end of fiscal 2025, our total number of patents held worldwide (including applications) increased by 1.7 times compared to the end of fiscal 2022.

Number of patents held (end of each fiscal year)



In recent years, we have also increased patents related to production technology and equipment. Until now, these patent applications have not been actively filed, and instead have been managed as confidential information within the company. However, while continuing to keep confidential know-how secret, starting from fiscal 2025, we have shifted to a policy of filing patent applications for inventions that have unique equipment features and for production technologies that are of general use to other companies. As a result, in fiscal 2025, patent applications for production technology increased by 75% compared to fiscal 2024.

Furthermore, in order to expand royalty income, it is also important to identify key patents that other companies are infringing upon. Not only does the Intellectual Property Department become involved in development benchmarks, but it also identifies the analysis items necessary to prove patent infringement and works to discover infringements by other companies.

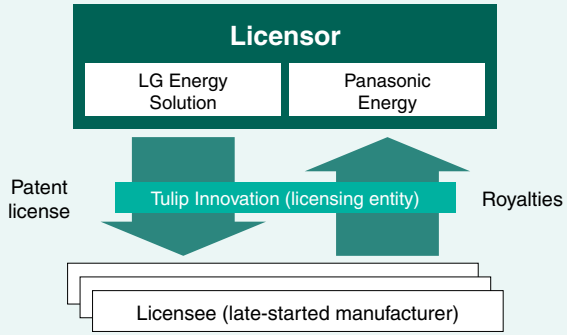
* Europe is counted as one country

Utilization of IP rights

Joint licensing program

Over the years, we have made significant R&D investments that have contributed to the advancement of battery technology. By protecting this technology from unauthorized use and ensuring that our development investments are properly rewarded, we create a fairer competitive environment for everyone. That is why we launched the industry's first joint licensing program with LG Energy Solution (LGES), a company that shares this view.

Under this scheme, operated by the patent licensing solutions company Tulip Innovation, we are building a system that allows access to a wide range of patented technologies under a single license by aggregating patents related to Li-ion battery technology from Panasonic Energy and LGES. This allows us to efficiently obtain appropriate royalties from late-started manufacturers, enabling us to reinvest royalty income into the development of differentiated technologies and strengthen the virtuous cycle created by our IP activities.



Risk assessment

We also actively conduct risk assessments to defend our business against patents from other companies. Not only in the area of technologies developed in-house, but we also scrutinize the patent risks of parts and materials procured from suppliers in collaboration with the Procurement Department, thereby contributing to the strengthening of the supply chain.

Process for Enhancing Corporate Value

We have broken down the factors that contribute to increasing corporate value into three categories: created value, growth potential, and cost of capital. Note that we also promote both financial and non-financial initiatives from each of these perspectives. We are promoting initiatives to ensure that all measures based on "two-pillars" management will enhance financial performance and ESG management to support non-financial performance, which will lead to enhance corporate value. Taking two material issues of ESG management, such as "achieving decarbonization" and "realizing a circular society," certain measures such as reducing CO_2 emissions in battery production, contributing to CO_2 reduction through products, and establishing a recycling model for batteries will contribute to "enhancing created value" as a solution to the climate change and resource depletion faced by society as a whole. At the same time, the technological capabilities and partner relationships fostered in this process can be seen as drivers of "enhancing growth potential" in the future. We believe that the combined effect of each materiality or measure leads to an increase in corporate value.