



Toyota's Views on Climate Public Policies 2023

Main changes from 2022 edition

- Increased number of industry associations reviewed from six to twelve
- Performed third-party evaluation to review industry associations to ensure transparency

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Introduction

Toyota is striving to provide substantial information to our stakeholders so that they can better understand Toyota's efforts to achieve carbon neutrality. In doing so, we are referring to the standards presented by major investors.

In Toyota's Views on Climate Public Policies 2023, we aim to disclose our basic stance on important climate-related policies and specific activities, and to provide an overview of our industry associations. We have also promised to update the content of this disclosure annually, while listening to feedback from our stakeholders.

Environmental Initiatives

In 1992, we first published the Toyota Earth Charter and updated it in 2000, which for the first time announced publicly the broad polies by which we would engage with the world, cooperate and contribute to society and pursue environmental technologies. It also announced broad action guidelines for product design and manufacturing, choosing business partners, participating as a member of society, and for public disclosure. Lastly, it outlined a corporate governance structure.

We took further step by announcing the Toyota Environmental Challenge 2050 in October 2015, before the Paris Agreement was adopted. The six challenges within the Toyota Environmental Challenge 2050 are: life cycle zero CO₂ emissions, new vehicle zero CO₂ emissions, plant zero CO₂ emissions, minimizing and optimizing water usage, establishing a recycling-based society and systems, and establishing a future society in harmony with nature. These six specific challenges acting together will guide us toward our aim of achieving zero CO₂ emissions and a net positive environmental impact, and will assist us to contribute to the realization of a sustainable society.

In 2020, we announced the Seventh Toyota Environmental Action Plan—2025 Target, a new five-year action plan to achieve the Toyota Environmental Challenge 2050. Under this new target, we will accelerate environmental initiatives and contribute to the realization of a sustainable society including the Sustainable Development Goals (SDGs). We also formulated regional 2025 targets for six regions in line with the 2025 Target.

The following pages explain Toyota's views on climate public policies, which are a natural extension of what we have deeply believed for a long time on environmental and social contribution.



In the area of vehicle development, we began our fuel cell electric vehicle (FCEV) development efforts in 1992, and started lease sales of the first FCEV vehicle in either Japan or the U.S. in 2002 (top picture: 2008 Toyota FCHV-adv). Our battery electric vehicle (BEV) development started with the establishment of the Electric Vehicle Development Division in 1992, and we introduced the RAV4 EV to the market in 1996 (bottom picture).

Toyota Environmental Challenge 2050
<https://global.toyota/en/sustainability/esg/challenge2050/>



Toyota Aiming to Be Carbon Neutral by 2050

As part of efforts to pass our beautiful “Home Planet” to the next generation, Toyota has identified and is helping to solve issues faced by individuals and overall society, which Toyota calls “Achieving Zero,” hoping to help reduce the negative impacts caused by these issues to people and the environment to zero. Additionally, we are also looking “Beyond Zero” to create and provide greater value by continuing to diligently seek ways to improve lives and society for the future.

We leverage strengths fostered through manufacturing, producing technological innovation in application to CASE to expand the potential of cars, striving to provide services that provide freedom of mobility to all, in an effort to contribute to the achievement of the SDGs. Solving environmental challenges is an urgent issue that we must seriously tackle, and we are doing our utmost to achieve carbon neutrality by 2050. Furthermore, we are targeting carbon neutrality by 2040 in Europe, and have already established bold commitments for our manufacturing plants, vehicles, purchased goods and services, and logistics operations.

Toyota is committed to leaving no one behind and delivering the freedom of mobility for all to achieve carbon neutrality by 2050, taking into account various energy situations in each region around the world. We will continue our efforts to steadily reduce CO₂ emissions through a variety of options based on a multi-pathway approach, including battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

We believe in the idea of “introducing sustainable vehicles practically” and are developing a full line-up of electrified vehicles—comprising hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs), and fuel cell electric vehicles (FCEVs)—in preparation to offer our customers a wide range of choices. We have sold a cumulative total of more than 23.15 million electrified vehicles since 1997. Those electrified vehicles over their lifetime, have prevented an estimated 176 million tons of greenhouse gas (GHG) from entering the atmosphere (as of March 2023).

The latest Sixth Assessment Report (2022) of the United Nations Intergovernmental Panel on Climate Change (IPCC), a scientific review of the world’s latest findings, states that in addition to BEVs powered by low emissions electricity, the use of sustainable biofuels, low emissions hydrogen, and derivatives (including synthetic fuels), and fuel efficiency improvements are also effective ways to mitigate GHG emissions. We believe that our approach to providing diverse options is consistent with such scientific findings.

Also, in September 2022, Toyota was certified by the Science Based Targets initiative (SBTi) as meeting the 1.5°C standard for its Scope 1 and 2 GHG emissions reduction targets. In addition to this certification, our GHG emissions reduction targets for new vehicles were approved as meeting the well below 2°C standard. The evaluation from SBTi confirms that our approach is consistent with scientific findings.

Carbon neutrality in the automotive industry requires an integrated approach between renewable energy policy, charging infrastructure, electrified vehicle purchase incentives, supplier support, and battery recycling systems. It requires a holistic whole-of-economy effort. Success will be critically dependent on collaboration with, and contributions by, various stakeholders including governments, industry associations, fuel and infrastructure providers, customers, and NGOs. We cannot achieve carbon neutrality on our own - we truly need everyone’s support. Therefore, we will continue to strengthen cooperation between all stakeholders.



Cumulative Sales of electrified vehicles

23.15 million

Cumulative CO₂ emissions reduction effect

Approx. 176 million tons

※ As of March 31, 2023

Validation and approval of Toyota's emissions reduction targets by the SBTi
<https://global.toyota/en/sustainability/esg/environmental-policy/>

Toyota's Perspective on Public Policy

Toyota's mission is to provide goods and services that make people throughout the world happy, or in other words, to "Producing Happiness for All". We aim to be the "best-in-town company" that is loved and relied upon by everyone in the community.

In the area of climate change, it is extremely important to promote electrified vehicles globally. We believe the role of the government to promote energy policies and charging infrastructures to achieve this goal is critical.

We are in constant dialogue with governments in various countries and regions, and when requested, we are always willing to be of service by sharing our technical and consumer knowledge. We do this transparently and always in full accordance with the spirit and letter of the law.

In collaboration with our stakeholders and learning from each other, we seek to ensure that public policy, societal needs, technology development, and customer needs are aligned to the greatest extent possible, and make sure we progress toward carbon neutrality.

Specifically, we will contribute through such initiatives listed below.

- Build positive relationships with governments and their administrative agencies, regulators, mainstream major political parties, NGOs, local communities, customers, dealers, suppliers, and employees
- Have our executives and employees participate in various industry associations across the globe and contribute to their public policy advocacy
- Disclose our public policies on climate public policies

Governance

Toyota is committed to enhancing corporate governance to ensure sustainable growth and the stable long-term growth of corporate value.

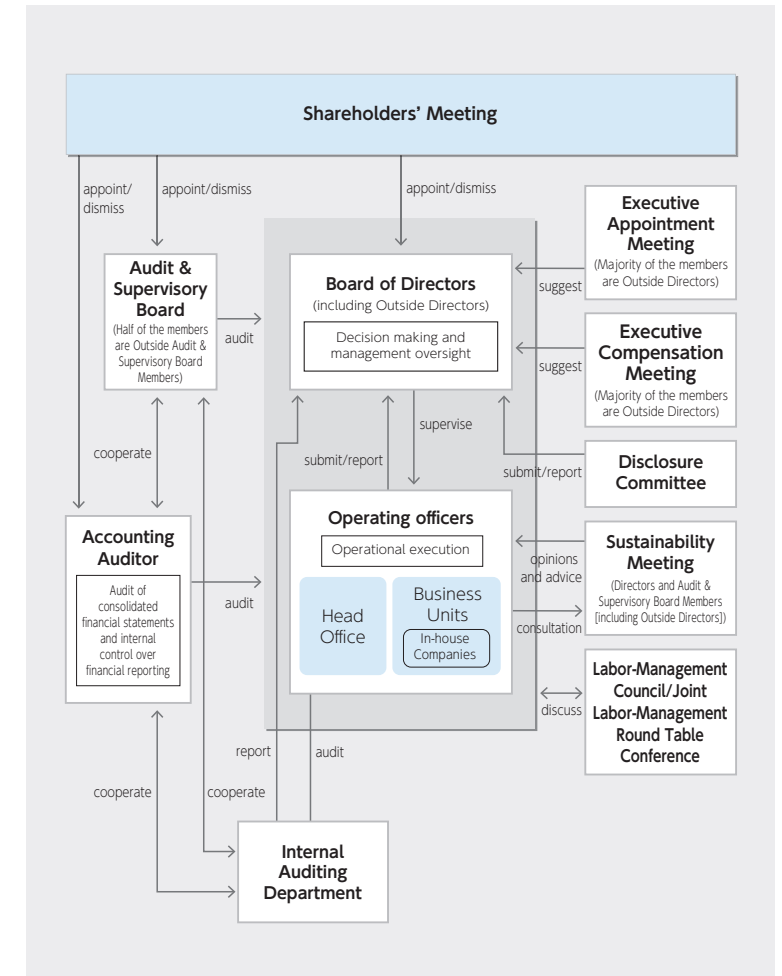
At Toyota, the Board of Directors is the ultimate decision-making and oversight body for addressing climate-related issues. The Board deliberates and oversees related strategy, major action plans, and business plans, and important climate-related matters are included in the Board's agenda. Furthermore, at Toyota, Outside Audit & Supervisory Board Members also take part in Board of Directors meetings. Final decisions are rendered by the ten Members of the Board of Directors, but they incorporate the views of the Outside Audit & Supervisory Board Members, who possess diverse backgrounds. In recent years, Outside Members of the Board of Directors and Outside Audit & Supervisory Board Members speak on almost all proposals.

Also, we often hold study meetings in which a group of seven Outside Members of the Board of Directors and Outside Audit & Supervisory Board Members discuss medium- and long-term issues.

We also set periodic opportunities, besides the Board of Directors meetings, for two-way communication between Outside Members of the Board of Directors and Outside Audit & Supervisory Board Members and the operational execution side on important management issues and medium- to long-term issues, including carbon neutrality.

In addition, we deliberate on and monitor management and corporate activities based on views of various stakeholders through a wide variety of bodies for deliberations, including the Labor-Management Council and the Joint Labor-Management Round Table Conference.

We have been continuing our efforts to respond swiftly to the rapidly changing external environment, and we will further press forward with our innovative changes.



Details on our corporate governance

Corporate Governance Report

https://global.toyota/pages/global_toyota/ir/library/corporate-governance/corporate_governance_reports_e.pdf

Integrated Report

https://global.toyota/pages/global_toyota/ir/library/annual/2022_001_integrated_en.pdf

Toyota's Stance on Climate-Related Policies

This section describes Toyota's stance on climate-related policies.

Our Stance on the Paris Agreement

The Paris Agreement was adopted by 196 parties at COP 21 in Paris in December 2015 and entered into force in November 2016. Its goal is to limit global warming to well below 2°C, and preferably to 1.5°C, compared to pre-industrial levels. Toyota supports the Paris Agreement and is conducting public policy engagement activities based on the scientific findings of the IPCC.

Our Stance on Carbon Neutrality

Toyota intends to fully concentrate on achieving carbon neutrality by 2050, and to do so, it is necessary to reduce CO₂ in the "producing," "transporting," and "using" process of energy.

We have been steadily advancing our electrification strategy for more than 20 years, which began with our launch of the Prius in 1997. Also, in the Toyota Environmental Challenge 2050 which was announced in October 2015, shortly before the adoption of the Paris Agreement, we were among the first to declare our commitment to reducing CO₂ on a life cycle basis, and we have been promoting comprehensive efforts. We believe that policy and financial measures by the government are necessary to further promote electrification in the future, and we are consulting with the government for strong support.

Our Stance on Renewable Energy

"Producing" Energy

To decarbonize the process of "Producing" energy, the spread of renewable energy is essential. Toyota supports the maximum introduction of renewable energy as a major power source with low cost, stable supply, and responsible business discipline.

We are already investing heavily in wind, solar, and other renewable power projects around the world. Since 2019, we have achieved a 100% renewable energy introduction rate at all plants in Europe, four plants in South America, as well as on the MIRAI production line in Japan. We will continue our efforts to make our plants carbon neutral by 2035.



Aiming to achieve carbon neutrality at all global plants by 2035

Our Stance on Energy Transition and Zero Carbon Technologies

“Transporting” Energy

In Japan, it is essential that the power transmission and distribution network be strengthened and made upcoming to transmit renewable energy to demand areas and to utilize distributed energy resources such as BEVs. We expect the government to continue to develop a master plan for the development of the power grid and steadily implement it. We also hope the government will ease regulations to promote the use of BEVs as virtual power plants (VPPs).

Toyota regards hydrogen as a promising option to achieve carbon neutrality and is developing a new portable hydrogen cartridge prototype that can be carried around, as well as working to improve the efficiency of hydrogen transportation. The IPCC states that low emissions hydrogen will contribute to the mitigation of CO₂ emissions, and we will continue to ask the government to accelerate regulatory reviews, subsidies and preferential taxation, and other matters, toward the realization of a hydrogen society.

“Using” Energy

We agree with IPCC’s latest report which states “Electric vehicles powered by low emissions electricity offer large potential for decarbonizing land-based transport.” We are serious about promoting BEVs and key examples of initiatives already announced include the following.

- Toyota and Lexus are aiming to achieve global sales of 3.5 million BEVs per year by 2030.
- Toyota plans to roll out 30 BEV models by 2030, offering a full lineup of BEVs in the passenger and commercial segments globally.
- Lexus aims to realize a full lineup of BEVs in all vehicle segments by 2030 and to have BEVs account for 100% of its vehicle sales in regions where necessary conditions are ready such as Europe. Also, Lexus aims for BEVs to make up 100% of its global vehicle sales by 2035.
- Toyota will invest 5 trillion yen in BEV-related R&D and capital investment by 2030.

We are also making various efforts on charging infrastructure, which is indispensable for the spread of BEVs. In Japan, more than 90% of our dealers are equipped with standard chargers, and we will install quick chargers at our dealers nationwide. In addition, we have invested in e-Mobility Power, Inc., which has more than 20,000 recharging facilities in Japan, and are working to expand the recharging network.

Support by the government is essential for the spread of BEVs. We will continue to ask the government to expand and accelerate the development of charging infrastructure (especially in rural areas where public transportation is insufficient, as well as in homes and apartment complexes), provide purchase support through subsidies and tax incentives, and promote public purchase by the government.

In addition to BEVs, the IPCC also states that sustainable biofuels, low emissions hydrogen, and derivatives (including synthetic fuels) can support mitigation of CO₂ emissions from land transportation. We believe that these technologies have the potential to expand the options for achieving carbon neutrality at an early stage and are working with various companies and local governments for their expansion.



Image of the completed building in the Phase 1 area of Woven City



16 BEV models unveiled at the briefing on BEV strategies

Toyota and Lexus aiming for
3.5 million BEVs
per year by 2030

Lexus aiming for **100%BEV**
by 2035 globally

5 trillion yen
for BEV investment

TOYOTA WOVEN CITY
<https://www.woven-city.global/>

Media Briefing on Battery EV Strategies
<https://global.toyota/en/newsroom/corporate/36428993.html>

We are studying the possibility of biofuels and synthetic fuels as a measure to reduce CO₂ emissions from the in-use fleet of vehicles. To advance the technology, we are testing vehicles that use biofuels and synthetic fuels derived from biomass in races.

However, in addition to technical and price challenges, the commercialization of these fuels requires public and private sectors to work together to disseminate information domestically and internationally for raising awareness, establish a supply chain, and develop a system to evaluate CO₂ reduction effects. To accelerate these discussions, in Japan, we approached the Ministry of Economy, Trade and Industry (METI) to establish a Public-Private Council for the Promotion of the Introduction of Synthetic Fuel (e-fuel) and are now participating in the discussions after it was established.

Regarding hydrogen, we are selling our FCEV, MIRAI, and are also developing a hydrogen engine vehicle.

We are the world leader in hydrogen fuel cell technology and in November 2023, we unveiled our new Crown FCEV. Together with our first- and second-generation MIRAI models, we have sold more than 23,000 units globally (as of October 2023). We also believe that fuel cell systems are effective for commercial vehicles, which require sufficient cruising range, payload capacity, and fuel supply in a short period of time. We are working toward the introduction of light-duty fuel cell trucks as a social implementation as part of our efforts for the early commercialization of fuel cell commercial vehicles. We are promoting technological demonstrations of heavy-duty fuel cell trucks with various companies, and are also participating in the "Green Innovation Fund Project/Establishment of a Smart Mobility Society," a research and development project subsidized by the New Energy and Industrial Technology Development Organization (NEDO), a national research and development corporation. In addition, in Japan, we are also engaging in discussions with the government to expand the use of hydrogen in the mobility field and participating in the Mobility Hydrogen Public-Private Conference established by the METI. We will contribute to discussions regarding policies essential to achieving these aims.

We are accelerating the development of hydrogen engines in the harsh environment of motorsports. We are working to expand the options for "producing," "transporting," and "using" hydrogen, such as by powering our hydrogen engine vehicles with hydrogen derived from sewage biogas produced in Fukuoka City and green hydrogen produced in Yamanashi Prefecture while conducting demonstrations to improve the efficiency of hydrogen transportation. With each race, the number of companies, local governments, and other organizations that share our enthusiasm and actions are increasing, and discussions toward the realization of a hydrogen society are steadily progressing.

Regarding hydrogen refueling infrastructure, Toyota was one of the member companies to establish Japan H2 Mobility, LLC (JHyM) in 2018, and has been supporting the successful strategic deployment of hydrogen stations in Japan.

Our Stance on a Carbon Tax and Carbon Emissions Trading

Toyota believes that CO₂ should be reduced by technological development and innovation. We support a system that is in line with the actual conditions in each country and region and promotes technological development/innovation and is fair and equitable, effective, and feasible. We hope that our position is reflected in the Japanese government's ongoing discussions on carbon pricing.

Our Stance on the Strengthening of GHG Regulations

Toyota believes it is important to reduce GHG emissions as soon as possible since GHGs are long-lived and therefore accumulate in the atmosphere over long periods of time. We support regulations that are predictable, technology neutral, and that allow us to provide safe and affordable vehicles to our customers. We support regulations that are integrated in an economy-wide, comprehensive energy and industrial policy. Further, we support deregulations and policies that promote the entire spectrum of measures to reduce barriers to success such as infrastructure development, consumer purchase incentives, and other complimentary policy measures.



Full lineup of electrified vehicles: HEVs, PHEVs, BEVs, and FCEVs



FCEV version of our flagship Crown has been launched to help achieve a hydrogen society

Toyota's Stance on Individual Policies

This section describes Toyota's stance on individual policies related to automobiles in Japan, the US, and Europe.

Japan

GX*1-Related Legislation

- The Act Concerning the Promotion of a Smooth Transition to a Decarbonized Economic Structure (GX Promotion Act) was enacted on May 12, 2023. Over the next 10 years, Japan has set the ambitious target of reaching over 150 trillion yen of green transformation (GX) investment by the public and private sectors to meet its international commitments to achieving carbon neutrality by 2050 while simultaneously reinforcing its industrial competitiveness and achieving economic growth. The promotion of GX is a pillar of Japan's growth strategy, and to make the most of public and private sector investment and to maintain and strengthen its industrial competitiveness, the government, along with the Japan Business Federation (Keidanren), called for the formulation and implementation of a GX policy package as an overall design for the nation. The GX Promotion Act reflects all of these recommendations. Toyota will act proactively to enhance the competitiveness of the mobility industry and help achieve carbon neutrality.

*1 With GX, initiatives for achieving carbon neutrality by 2050 and reaching Japan's GHG emissions reduction targets by 2030 are seen as opportunities for economic growth. GX seeks to transform the entire economic and social systems to reduce emissions and improve industrial competitiveness.

GX League*2

- Toyota endorses the GX League and is participating in Phase 1 during fiscal 2023. The GX-ETS*3 promotes the setting of ambitious targets by participants along with active investment and emissions reduction efforts to create growth and lower emissions. We are also participating in this, and have set and announced our targets, exhibiting leadership by boldly engaging in GX-oriented technology development and investment.

*2 GX League is a forum for cooperation between the Japanese government, universities, academic institutions, and companies aimed at meeting GHG emissions reduction targets and achieving carbon neutrality by 2050.

*3 GX-ETS refers to the voluntary emission trading scheme adopted by the GX League, created by the METI, through which CO₂ emissions reductions and absorption can be traded.



GXL for WORLD

<https://gx-league.go.jp/en/>

USA

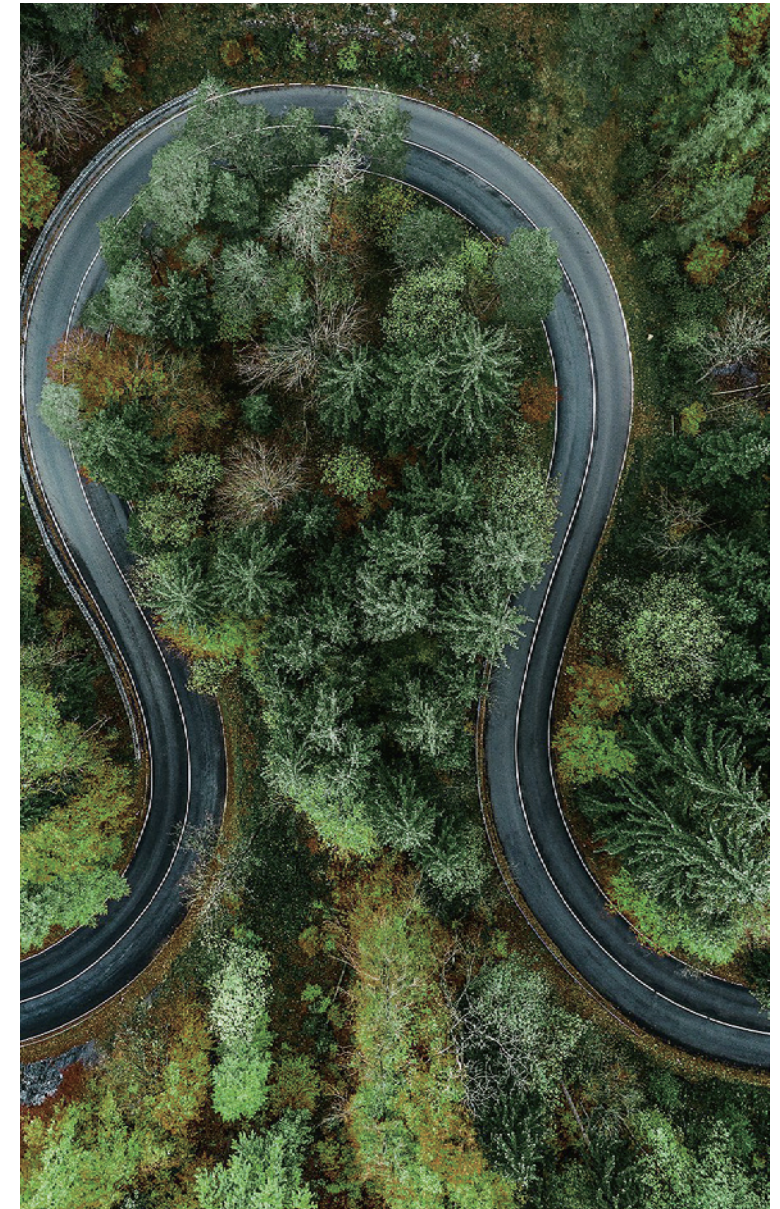
GHG, CAFE, and ZEV Emissions Standards for Passenger Vehicles

- In April 2023, EPA* proposed new greenhouse gas (GHG) and pollutant emissions standards for passenger cars and light trucks for Model Years 2027-2032. In July 2023, NHTSA* proposed new Corporate Average Fuel Economy (CAFE) standards for Model Years 2027-2032. Toyota shares the administration's goal to decarbonize transportation and is committed to vehicle electrification to improve society and the lives of our customers. Our goal is to continue to comply with all laws and regulations. Toyota has provided comments to EPA and NHTSA as part of the public regulatory process on their proposed GHG and CAFE standards. Toyota is expanding its investment in Toyota Battery Manufacturing North Carolina (TBMNC) to \$13.9 billion and 14 production lines to produce batteries for BEVs, PHEVs, and HEVs. Even with these substantial investments, Toyota believes the final regulations must account for key issues, such as the scarcity of minerals to make batteries, the fact that these minerals are not mined or refined in the U.S., the inadequate infrastructure, and the high cost of BEVs. The data shows a more effective approach to reduce more carbon sooner is to promote a multi-pathway strategy (PHEV, HEV, BEV and FCEV) that addresses these challenges, encourages innovation, and provides consumers with affordable choices that meet their needs. TMNA is pursuing multiple electrified vehicle technologies in parallel because we believe the fastest way to achieve carbon neutrality is to offer a diverse array of "carbon reducing" options in the short-term and "carbon neutral" options over the medium- to long-term. In the US, we currently offer products using all major electrification approaches -hybrid electric, plug-in hybrid electric, battery electric and fuel cell electric.

* EPA means Environmental Protection Agency; NHTSA means National Highway Traffic Safety Administration; CARB means California Air Resources Board.

California Advanced Clean Fleet (ACF) and At-Berth Vessel Regulations

- In September 2023, California finalized the Advanced Clean Fleets (ACF) regulation, which requires the full electrification of medium- and heavy-duty truck fleets in the state by 2045. The recently approved Ocean-Going At-Berth vessel regulations require a reduction of diesel particulate matter (PM) and oxides of nitrogen (NOx) from ocean-going vessels auxiliary engines while they are docked at California ports. Toyota owns and operates trucks in our logistics operations and uses California ports for some vehicle imports. Toyota is providing information to CARB as part of the public regulatory process. Given the duty cycles, daily driving routes, and need for faster refueling, hydrogen fuel cells are a promising technology for electrifying the heavy-duty fleet and for providing zero-emission shore power for at-berth vessels.



Clean Vehicle Credits from the Inflation Reduction Act (2022)

- The Inflation Reduction Act (2022) Section 30D provides for a maximum \$7,500 consumer credit for certain clean vehicles. Half (\$3,750) is based on the amount of critical materials contained in the battery sourced from a country with which the U.S. has a free trade agreement or have been recycled in North America. The remaining half is based on the value of the components of the battery manufactured or assembled in North America. The thresholds amount to qualify for each component increase over time. Importantly, a vehicle can only qualify if it assembled in North America. As of 2023, no Toyota vehicles qualify for the Clean Vehicle credit under Section 30D of the IRA. However, Toyota and Lexus BEVs that are leased may qualify for credits under the IRA Section 45W Commercial Vehicle Credit. Finally, we project that batteries produced at TBMNC when it begins production around 2025 will qualify for battery manufacturing tax credits under Section 45X or 48C of the IRA. Toyota supports the goal of this act and make efforts to contribute to materialize desirable policy outcomes.

Reducing GHGs in Our Operations

- While some states and regions within the US have adopted CO₂ cap-and-trade regulations, TMNA's major US manufacturing sites are not currently subject to those regulations. Nonetheless, under our Toyota Environmental Challenge 2050, we are aiming to achieve carbon neutrality in our US operations by 2030 for purchased power and by 2035 for on-site combustion. We are making progress towards these goals through energy efficiency and demand reduction, as well as by supporting renewable energy generation both on- and off-site. Two examples are shown to the right with additional details available in our North American Environmental Report and on the Carbon page of our environmental sustainability website.

Reducing GHGs in Our Supply Chain

- TMNA has developed goals to reduce our value chain emissions, including suppliers, logistics and dealerships. In 2022, we published our updated Green Supplier Requirements. As part of these requirements, suppliers are joining us in our efforts to reduce CO₂ emissions across the vehicle life cycle and are expected to commit to an annual 3% CO₂ reduction target. The Toyota and Lexus brands work with their dealerships through the Dealer Environmental Excellence Program (Deep) and provide guidance on sustainable strategies during construction and renovation projects to achieve Leadership in Energy and Environmental Design (LEED®) certification.



Toyota North American Environmental Report

<https://www.toyota.com/usa/environmentalsustainability/data-report-hub>

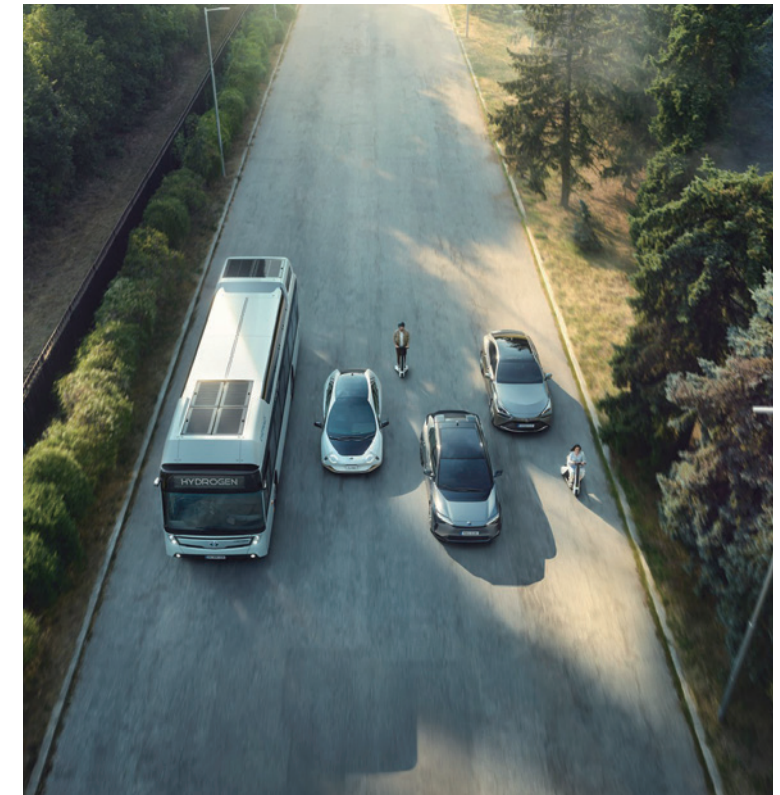
Europe

EU's 2035 zero emissions CO₂ target for cars and vans

- Toyota has been reducing CO₂ emissions since 1995 - establishing the company as a leader for vehicle CO₂ performance in Europe. We will fully take up the challenge to deliver the 100% vehicle CO₂ emissions reduction by 2035 in line with new EU target. Now that this target has been set by the EU, it is also necessary that this is complimented with the acceleration of key enabling conditions necessary to achieve this goal. This includes the development of European alternative zero emission vehicle infrastructure (electric re-charging and hydrogen re-fuelling points), as well as other enabling conditions such as clean renewable energy, access to relevant raw materials, and improving the affordability of products. Together with other automotive companies, we consider the EU Commission's 2026 review period as an important milestone to assess if sufficient progress is being made. Continued collaboration between Toyota and European regulators will be important to jointly realize greater zero emissions transport as well as promotion for long term manufacturing, economic competitiveness and growth.

UK's ZEV Mandate

- Toyota shares the goal of net zero, and we will continue to collaborate with the UK government and other stakeholders to jointly promote the realisation of greater zero emissions transport. The U.K. Government's announcement in September 2023 provides the clarity industry has been looking for regarding introduction of the zero-emissions vehicle mandate from Jan 2024. Given the quick introduction time of the new regulation, we support the government decision to add some flexibilities to give all stakeholders, including consumers, manufacturers, infrastructure and energy providers a framework to help adapt. Over the last 25 years Toyota has been at the forefront for CO₂ emissions reduction, globally investing billions of pounds to deliver decarbonisation. We have been following a clear road map for achieving zero emissions vehicles in the UK by 2035 - bringing to market a multiple range of clean technologies in support of customer mobility requirements. We are also committed to achieving carbon neutrality at our UK manufacturing plants by 2030 at the latest.



Toyota's Climate-Related Public Policy Activities

Japan

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Electrification / Hydrogen / Synthetic fuels

May - Industry individuals -

Toyota's New Management Policy & Direction Announcement

- Toyota made a presentation on the New Management Policy & Direction on April 7, 2023. Under the theme of inheritance and evolution, we introduced to our stakeholders our efforts to achieve carbon neutrality by 2050 over the entire life cycle of our vehicles.

When it comes to car manufacturing, we will continue to pursue a variety of options, based on a multi-pathway approach, to stay close to the future of energy and the condition of each region. First, we will thoroughly implement electrification, which we can do immediately. To steadily reduce CO₂ emissions from where we stand now, we will promote the practical popularization of electrified vehicles. We will expand our lineup of battery electric vehicles (BEVs), which represent one important option, over the next several years. At the same time, we are boldly preparing for the future. As one of our efforts toward the era of BEV popularization, we will do our utmost to develop next-generation BEVs and create new business models.

Through this all-direction approach, we aim to reduce average CO₂ emissions for vehicles we sell worldwide by 33% by 2030 and by more than 50% by 2035 compared to 2019. We will continue to promote decarbonization globally and steadily toward 2050.



President Sato explains New Management Policy & Direction Announcement

May - Industry organizations -

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Electrification / Hydrogen / Synthetic fuels

G7 Hiroshima Summit

- From May 18 to 21, Japan Automobile Manufacturers Association, Inc. (Chairman: Akio Toyoda; JAMA) held an exhibition to coincide with the G7 Hiroshima Summit. Titled "Diversity in Carbon Neutrality" and held at Hiroshima Gate Park Plaza, adjacent to the G7 International Media Center, the exhibition showcased carbon neutrality initiatives of the automotive industry. Japan's automotive industry has declared its commitment to achieving net zero CO₂ emissions by 2050 as part of an all-out effort toward carbon neutrality. For a long time, JAMA has been talking about the importance of having a wide choice of options for achieving carbon neutrality. This is based on its belief that there is more than one path to carbon neutrality, and that we must work together, and as soon as possible, by doing what we can do now to reduce CO₂ emissions. At the exhibition, JAMA member companies presented diverse mobility options across the full range of Japanese offerings in this field. They also sought to inform visitors of concrete initiatives for social implementation toward carbon neutrality together with Japan's unique path to carbon neutrality.



"Display in Carbon Neutrality" exhibition

📅 May - Industry individuals -

／ Carbon neutrality ／ Energy transition and decarbonization technologies ／ Variety of options ／ Hydrogen ／ Synthetic fuels

ENEOS Super Taikyu Series 2023

- Toyota took part in the ENEOS Super Taikyu Series 2023 Round 2 NAPAC Fuji SUPER TEC 24 Hours Race, held from May 26 to 28, with its #32 ORC ROOKIE GR Corolla H2 Concept, a hydrogen-powered Corolla. It was the first time in the world that a vehicle will race with liquid hydrogen fuel . We also conducted a synthetic fuel driving demonstration at mobilitas, the Toyota traffic safety education center adjacent to the race course. A Prius PHV and GR86 were driven using synthetic fuel manufactured in Japan. The demonstration was attended by members of government ministries and Diet members, who were able to experience driving identical to that done by gasoline-powered vehicles.



ORC ROOKIE GR Corolla H2 Concept with liquid hydrogen-powered engine

📅 June/ October

／ Carbon neutrality ／ Energy transition and decarbonization technologies ／ Variety of options ／ Electrification ／ Hydrogen ／ Synthetic fuels

Toyota Technical Workshop, Toyota MONOZUKURI Workshop

- On June 13, Toyota held a Toyota Technical Workshop with the theme of "Let's Change the Future of Cars," and on September 19, it held a Toyota MONOZUKURI Workshop with the theme of "Changing the Future of Carmaking." We explained the electrification, intelligence, and diversification that are the keys to Toyota's mobility concept. In addition, our BEV Factory, an organization dedicated to battery EVs launched in May, and our Hydrogen Factory, launched in July, explained the BEV and hydrogen business strategies, respectively. The workshops explained how we were taking on the challenges of commercializing next-generation batteries and solid-state batteries in preparation for the launch of the next generation of BEVs in 2026 and how we were working to cut production processes in half through measures such as our use of giga-casting and self-propelling assembly lines. We discussed the measures being taken by the Hydrogen Factory to establish commercial vehicle business, for which we expect to see major increases in demand in the future. Members of government ministries, Diet members, and members of the media watched the presentations and gained a deeper understanding with respect to future policy support.



The MONOZUKURI site that will change the future of cars, unveiled at the Toyota MONOZUKURI Workshop

📅 October - Industry organizations -

Carbon neutrality / Supply chain

Round-Table Meeting between Prime Minister Kishida and Keidanren Committee on Mobility

- On October 26, Prime Minister Fumio Kishida visited the Japan Mobility Show at Tokyo Big Sight (Koto-ku, Tokyo) where he also participated in a round-table meeting with the co-chairman of Keidanren Committee on Mobility (Masakazu Tokura, Akio Toyoda, and Koji Arima), the vice chairmen of Japan Automobile Manufacturers Association (JAMA), and others. All industries need to work together to achieve carbon neutrality, and thus the prime minister was invited to the round-table meeting to ensure that the automotive industry becomes the core of Japanese industries as well as promotes both carbon neutrality and competitiveness across industries while focusing on mobility. At the round-table meeting, the committee shared with the government its awareness of issues regarding the need to improve the investment environment for the mobility industry so that it can compete on the front lines of global competition. The committee also put forward specific requests, including the establishment of an investment environment that is competitive with other countries; support for investment by the small and midsize businesses that are key to the supply chain; and responses to issues of the Antimonopoly Act in B2B collaborations associated with Green Transformation (GX) investment.



Prime Minister Kishida's visit

📅 October/ November

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Electrification / Hydrogen

JAPAN MOBILITY SHOW 2023

- The Japan Automobile Manufacturers Association (JAMA) held the JAPAN MOBILITY SHOW 2023 from October 26 to November 5, 2023, attracting 1,112,000 visitors. With the theme of "Discover a future you can't wait to navigate!," a total of 475 companies and organizations, including startups and those from other industries, participated in the event, transcending the boundaries of the automotive industry. Members of government ministries, Diet members, and members of the media who visited the event gained a deeper understanding of both the multi-pathway approach that JAMA is advocating as well as the need for policy support for technological evolution.

Toyota exhibited at a booth with the theme "Let's Change the Future of Cars—Find Your Future." Our mission at Toyota is to meet the needs of customers around the world and continue delivering diverse mobility options. We believe this is the multi-pathway approach to the future that Toyota envisions.

In next-generation BEVs, all body structures and components will be miniaturized and lightened to create vehicle packaging that offers a higher degree of freedom. Through the driving feel polished through our many years of experience with LEXUS, together with advances in electrification technologies, we will create BEVs like only a true carmaker can, without compromising on functions or beauty.

At the Japan Future Session on October 27, "Carbon Neutrality x The Future of Mobility" session was held on the topic of decarbonization from the perspectives of the entire mobility lifecycle, not just usage but also monozukuri (manufacturing). Participants discussed the need for the comprehensive decarbonization of manufacturing, transportation, driving, and energy.



JAPAN MOBILITY SHOW 2023 Toyota Press Briefing

USA

📅 April

Washington “Fly-In” by Toyota Executives in the US

- In April 2023, over 85 TMNA senior executives met with more than 100 members of the U.S. Congress in Washington, D.C., in person, to talk about our portfolio approach towards electrification in North America, which includes an “all of the above” technology and energy strategy to bolster zero emission powertrain commercialization and reduce carbon emissions in surface transportation. Additionally, TMNA advocated for the implementation of the Inflation Reduction Act of 2022 by federal agencies in ways that can best enable and strengthen battery supply chains across North America.

Carbon neutrality / Supply chain / Energy transition and decarbonization technologies



Face-to-face meeting between TMNA executives and members of the U.S. Congress

📅 April

Future Fuels Showcase (Apr 2023)

- Toyota partnered with Chevron to demonstrate a real-world use case of low carbon gasoline. The demonstration featured three Toyota vehicles driving approximately 1,000 miles across the US Gulf Coast refinery corridor in Mississippi, Louisiana, and Texas. Toyota and Chevron conducted stakeholder events along the way that included elected officials, media, and academia. The events aimed to raise awareness of the benefits of low carbon liquid fuels and a multi-pathway approach to low carbon transportation energy. During the same month, Toyota partnered with Exxon to publicly release a video on the promise of low carbon liquid fuels, highlighting joint fuel testing at Toyota’s Ann Arbor, MI R&D facility.

Carbon neutrality / Energy transition and decarbonization technologies



“RAV4” used in the demonstration experiment

📅 September

Toyota and FuelCell Energy Complete World’s First “Tri-gen System” in California

- In September 2023, Toyota Motor North America, Inc. (TMNA) and FuelCell Energy, Inc. announced the completion of the first-of-its-kind “Tri-gen system” at TMNA’s Port of Long Beach operations. The Tri-gen system, owned and operated by FuelCell Energy, produces renewable electricity, renewable hydrogen and water from directed biogas. Tri-gen is an example of FuelCell Energy’s ability to scale hydrogen-powered fuel cell technology, an increasingly important energy solution in the global effort to reduce carbon emissions. Tri-gen will enable TLS Long Beach to be the company’s first port vehicle processing facility in the world powered by onsite-generated, 100% renewable energy and represents the types of innovative and bold investments the company is making as part of its environmental sustainability strategy.

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Hydrogen



The world’s first “Tri-gen system”

Europe

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Electrification / Hydrogen

April

“Let’s go beyond” event organised by Toyota Motor Italia

- Toyota Motor Italia held a 3 days corporate event to explain Toyota Vision to a wide audience of stakeholders, including National media and representatives of Institutions, among which Ministry officials and Parliament members. Main topics focus was to show Toyota Carbon neutrality ambition and commitment to contribute to realize a better society, demonstrating the benefits of multi-pathway approach to carbon neutrality. Great visibility was given to Toyota commitment to Hydrogen Society with display of technical solution adopting Toyota Fuel cell technology, from passenger cars to buses, from logistics to applications for stationary power generation.



Toyota’s electrified vehicles lined up at the vision briefing

July

Carbon neutrality / Hydrogen

“Looking forward – renewable hydrogen” event supported by Toyota Motor Spain (TES)

- To promote the benefit of hydrogen mobility in the passenger car/van market, Toyota Motor Spain supported the organisation of the “Looking Forward – renewable hydrogen” event, organised by Spanish Presidency of the Council of the European Union. The two-day event was attended by Members of the Spanish Government, European Member States and European Commission representatives and some Spanish companies and was the occasion to discuss the present and future of renewable hydrogen value chains and the challenges ahead with the participation of different hydrogen stakeholders. A Toyota Mirai was available for all participants to see and drive, as concrete and existing example of a viable application of Fuel cell technology to road transport.



Participants looking at the MIRAI on display at the event

📅 September

Toyota presented the Fuel Cell Hilux prototype

- Toyota has produced 10 prototype units of a hydrogen fuel cell electric Hilux. The ground-breaking pick-up was presented at Toyota Manufacturing UK's vehicle plant in Burnaston, England, where it has been developed in a joint project with consortium partners (inc. Ricardo, ETL, D2H, Thatcham Research), supported by UK Government funding. The prototype units are undergoing an extensive series of evaluation and, following performance results, opportunity for small series production will be considered. Hilux is a global icon of the Toyota brand with a reputation for exceptional reliability and durability. The development project has explored how these qualities might be maintained while adopting a new fuel cell electric zero emission powertrain. Its debut is a further demonstration of the broad scope of Toyota's multi-path strategy for achieving carbon-free mobility, applying different powertrain solutions – hybrid electric, plug-in hybrid electric, battery electric and fuel cell electric – to suit different user needs and operating environments worldwide.

Energy transition and decarbonization technologies / Hydrogen



FC Hilux prototype

📅 September

Hydrogen promotion and advocacy event organised by Toyota in Germany

- On September 7th Toyota Motor Europe, Toyota Germany teamed-up with GP JOULE in the organisation of a joint "parliamentarian breakfast" in Berlin, in the heart of German Parliament. Aim was to promote hydrogen, its important role for the energy supply and transport sector and to demonstrate the importance of like-minded partner collaboration to create viable H2 Eco-Systems. The event was attended by 45 people, including 28 Member of the German Parliament. For Toyota it was an opportunity to explain Toyota's approach towards Mobility for All, and Toyota's Multi-Pathway strategy to carbon emission reduction. Parliament members appreciated the trusty direct exchange and expressed high interest for a follow-up.

Energy transition and decarbonization technologies / Variety of options / Hydrogen



Parliamentarian breakfast meeting to promote hydrogen utilization

📅 October

Third edition of the Sustainability forum in Europe.

- On the 19th of October, Toyota Motor Europe hosted its 3rd Sustainability Forum with 45 external European stakeholders representing a broad spectrum of organisations: Companies, NGOs, Industry Associations, Policy makers and research institutes. Purpose of the meeting was to continue the 2-way dialogue to gain external insights into Toyota sustainability strategy and key initiatives in Europe. TME Executives outlined the European Sustainability roadmap, achievements to date and priorities for the years to come. The working groups allowed for good exchange and ensured a multi view perspective on key topics such as: Carbon Neutrality, Circular Economy and Human Rights. Discussions focused also on how to best support communities in case of a disaster and how Toyota Motor Europe can contribute to improve even more accessibility to education and skilling. TME's progress and ambitions on sustainability have been very well received by all attendees. Participants appreciated the open and transparent Q&A session with the Executives and how TME integrated sustainability into each parts of the business.

Carbon neutrality / Energy transition and decarbonization technologies



Explaining TME's initiatives at the Sustainability Forum

📅 November

“Let’s go beyond” event hosted by Toyota Motor Manufacturing UK

- On Friday 03rd November hosted at TMUK Burnaston Plant, Toyota (GB) PLC, Toyota Motor Manufacturing (UK) Ltd, and Toyota Motor Europe London Office held a stakeholder day to showcase Toyota Vision. The event was attended by 44 people including 2 Members of the UK Parliament, members from the Embassy of Japan in the UK, representatives of key industry bodies including the SMMT as well as dignitaries and partners from the local Derby region. It was an opportunity to share with stakeholders how Toyota is shaping products and services, its technology innovations, our progress towards carbon neutrality, and our commitment to help deliver sustainable mobility for all. The event provided great visibility for Toyota’s multipath approach with a particular focus on our commitment to Hydrogen Society showcasing Toyota Fuel cell technology, including passenger cars and buses, logistics and power generation. The showcase was open to a wider audience over a two week period including internal Toyota colleagues, dealer network and other associated Toyota partners in the UK.

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Hydrogen



Green electricity generated through the project

China

Carbon neutrality

June

Cooperate with local government toward achieving the goal of Carbon Neutrality

- To actively promote the national strategy of achieving carbon neutrality in response to climate change, the local government of Chengdu City announced a model for constructing near zero carbon emission zones in June 2023. FAW Toyota Motor (Chengdu) (FTCC) is promoting the following initiatives toward building a zero carbon plant.
 - Achieving at least 95% for the rate of clean energy use
 - Achieving 100% for the rate of renewable energy electricity use
 - Installing renewable energy equipment and facilities
 - Promoting the recovery and use of thermal energy from production
 FTCC was certified as a model company for Chengdu City's low-carbon emission zone after its series of initiatives were inspected and recognized by the local government.



Inspection by the Chengdu Municipal Bureau of Ecological Environment and experts

July

China International Import Expo (CIIE 2023)

- Toyota Motor China Investment (TMCI) exhibited at CIIE 2023, held in November, introducing Toyota's initiatives for electrification through a multi-pathway approach to the central and local governments, industrial organizations, and research institutions visiting the exhibition under the theme "Co-creating a new future for automobiles based in China." For fuel cells, we displayed a series of technologies for hydrogen energy, including the "producing," "transporting," "storing," and "using" process. Regarding BEVs, which are important for us to achieve our multi-pathway approach, we showed our intention of achieving practical use of all-solid-state batteries—crucial components supporting the development of BEVs—in 2027 to 2028. In addition, for HEVs, we showcased our fifth-generation HEV system (battery, motor, and electrical control), allowing visitors to see the technologies that can be trusted by consumers—2.5 million people in China and 24 million people worldwide—in terms of safety, reliability, and energy saving.

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Hydrogen



Exhibition at the China International Import Expo 2023

November

Promotion of Hydrogen-Related Initiatives at the International Hydrogen and Fuel Cell Vehicle Congress & Exhibition 2023 (FCVC 2023)

- To promote hydrogen mobility, TMCI showcased Toyota's contributions to the development of industry chains for the production, transportation, and use of hydrogen at FCVC 2023, which was held in July. We displayed the second-generation MIRAI that has already been launched in China; our latest replaceable hydrogen storage module technology; and a large-capacity, high-pressure hydrogen tank for commercial vehicles. Other than displays, at the forum, we also introduced our initiatives and future prospects in hydrogen to representatives from industrial organizations and the central government. We also announced that Toyota will continue to encourage the adoption of hydrogen fuel cell technology in China's market, expand collaboration with partners centered on commercial vehicles, and build a hydrogen-energy society.

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Electrification / Hydrogen



Exhibition at the International Hydrogen and Fuel Cell Vehicle Congress & Exhibition 2023

Thailand

March

SCG, Toyota, and CJPT Sign an MOU towards achieving Carbon Neutrality in Thailand

- To accelerate initiatives in the three areas of energy, data, and mobility toward achieving carbon neutrality unique to Thailand, memorandums of understanding regarding collaborations were signed in April 2023 with Charoen Pokphand Group (CP) and Siam Cement Group (SCG) respectively, founded on the participation of Commercial Japan Partnership Technologies (CJPT). Ahead of this effort, test drives centered on commercial vehicles were held in Bangkok City in March, and part of the collaborations was announced, including the use of hydrogen manufactured using biogas obtained from CP's poultry farm. To immediately start working on the three areas, we will conduct social implementation projects throughout the self-supporting cycle of "producing," "transporting," and "using" energy in some special economic zones in Thailand. Thereafter we will verify the outcome and try to create the basic unit which can be deployed to other regions. We will also take on the challenge of visualizing actions and effects toward carbon neutrality, such as by calculating the potential effect in case of expanding these collaborations throughout Thailand, based on the actual amount of CO₂ reductions achieved.

Carbon neutrality / Energy transition and decarbonization technologies / Variety of options / Hydrogen



Carbon Neutral Mobility Event in Thailand

India

June

Toyota Kirloskar Motor and ReNew Energy Global Plc jointly launch self-generated solar and wind renewable energy project

- Toyota Kirloskar Motor (TKM) embarked on a renewable energy project using solar and wind power through a joint venture with ReNew Energy Global, the leader in India's renewable energy power generation sector. TKM is expected to reduce CO₂ emissions by 51,000 tons per year through being supplied with green power generated by this project. In June 2021, TKM announced that it has achieved carbon neutrality within the electric grid through the use of renewable energy by its plant in Bidadi and eight on-site suppliers. The collaboration with ReNew Energy Global this time showed TKM's stance of further strengthening CO₂ reduction initiatives across the entire life cycle of the automobile business

Carbon neutrality / Energy transition and decarbonization technologies



Green electricity generated through the project

Review of Toyota's Industry Associations

Six Stances with Respect to Industry Associations

In conducting activities for fostering understanding of public policies aligned with the Paris Agreement, Toyota takes the following stances regarding the realization of carbon neutrality.

We have used these as evaluation items in studying the positions of industry organizations.

1 Paris Agreement	We support the Paris Agreement and ensure that our collective action objectives are consistent with it.
2 Climate change science	We respect the latest scientific findings of organizations such as the IPCC. We quote objective scientific research and make reference to the impact of human activity on climate change.
3 Emissions reduction targets	We have defined emissions reduction targets that are consistent with the Paris Agreement and announced our backing of support policies.
4 Energy efficiency improvement	We have declared our understanding of the importance of improving energy efficiency and we support related policies (energy-saving, fuel efficiency improvement, etc.).
5 Technology	We make reference to and provide recommendations regarding the development and verification of new technologies that contribute to carbon neutrality, recommended by organizations such as the IPCC.
6 Carbon pricing	We support carbon pricing (a fair, structured, effective, and feasible system that takes into account the conditions in each region, encourages technological development and innovation, and includes implicit carbon pricing), which uses market mechanisms to efficiently promote emissions reductions.



bZ4X



Lexus charging station

Review of Toyota's Industry Associations

Associations that we Reviewed

In our 2022 disclosure, we reviewed the following six associations, which consist of automobile-related associations that engage in climate change-related public policy activities and associations whose activities include the preparation and improvement of automobile-related infrastructure. These associations are ones in regions where Toyota production and sales sites are located, as well as ones in which Toyota members have been assigned positions with influence over their policies.

- Japan Automobile Manufacturers Association (JAMA)
- Japan Business Federation (Keidanren)
- Alliance for Automotive Innovation (Auto Innovators)
- European Automobile Manufacturers' Association (ACEA)
- Society of Motor Manufacturers and Traders(SMMT)
- World Business Council for Sustainable Development(WBCSD)

Third-Party Evaluations

To improve the transparency of the evaluations of industry associations' climate change-related public policy activities, we have switched to the use of evaluations delegated to a third party with an extensive overseas track record.

The evaluation standards consist of four criteria: 1. Aligned, 2. Partially aligned, 3. Not aligned, and 4. No public position.

Strategy when an association is not aligned with the Paris Agreement

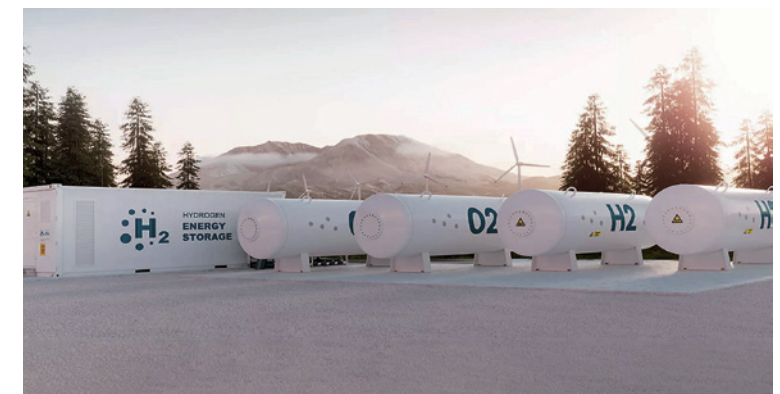
In cases where an association is conducting activities that are inconsistent with the goals of the Paris Agreement, we will encourage the association to review its stance through constructive dialogue by following the steps indicated below.

- We will share Toyota's stance with respect to climate change.
- We will clarify the differences between Toyota's stance with respect to climate change and that of the association.
- We will engage in an exchange of opinions regarding climate policies.
- Through constructive dialogue, we will encourage the association to review its stance.

We will reexamine the industry association membership in an appropriate manner each year.

In 2023, to further enrich our information disclosure, we have doubled the number of associations we review by adding the following six associations.

- Central Japan Economic Federation (Chukeiren)
- Japan Hydrogen Association (JH2A)
- Japan Association of Corporate Executives (KEIZAI DOYUKAI)
- The National Association of Manufacturers (NAM)
- Hydrogen Council
- Thailand Business Council for Sustainable Development (TBCSD)



Methanation with hydrogen derived from renewable energy

※ This review was prepared between 10th, Aug, 2023 and 1st, December, 2023 and is based on information reviewed at the time of preparation.

Results of Third-Party Evaluations of Industry Associations (Summary)

The majority of industry associations were conducting activities that are aligned or partially aligned with the Paris Agreement. There were no cases of Not aligned activities.

Organization name	1 Consistency with Paris Agreement	2 Consistency with climate change science	3 Emissions reduction targets	4 Energy efficiency improvement	5 Technology	6 Carbon pricing
JAMA	Aligned	Aligned	Aligned	Aligned	Aligned	Partially Aligned
Keidanren	Aligned	Aligned	Aligned	Aligned	Aligned	Partially Aligned
Chukeiren	Aligned	No public position	Partially Aligned	Aligned	Aligned	Partially Aligned
KEIZAI DOYUKAI	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
JH2A	No public position*	No public position*	No public position*	Aligned	Aligned	Aligned
WBCSD	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
AAI	Aligned	No public position*	Aligned	Aligned	Aligned	No public position
NAM	Aligned	Aligned	Partially Aligned	Aligned	Aligned	No public position
ACEA	Aligned	No public position*	Aligned	Aligned	Aligned	Aligned
SMMT	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
Hydrogen Council	Aligned	No public position*	Aligned	Aligned	Aligned	Aligned
TBCSD	Aligned	No public position	Aligned	Aligned	No public position	Aligned

* Item for which, due to its nature, the association is not required to declare a position

Results of Third-Party Evaluations of Industry Associations

Organization name	Japan Automobile Manufacturers Association (JAMA)	
Objective	To promote the sound development of the Japanese automotive industry and contribute to social and economic welfare	
Membership of board/ executive committee	Akio Toyoda: Chairman (Chairman of the Board of Directors, Toyota Motor Corporation), Koji Sato: Vice Chairman (President, Toyota Motor Corporation), Jun Nagata: Policy Committee Chairman (Operating Officer, Toyota Motor Corporation)	
Item	Result	Summary
1 Consistency with Paris Agreement	Aligned	JAMA recognizes the global context of the Paris Agreement and has declared its support for policies and its intent to take on the challenges of achieving carbon neutrality.
2 Consistency with climate change science	Aligned	JAMA has created and announced a scenario for reducing global road traffic emissions of CO ₂ , confirming the ability of these scenarios to achieve reductions equivalent to those of the IPCC AR6 WG3 1.5°C scenario. It defers to the scientific findings of the IPCC.
3 Emissions reduction targets	Aligned	JAMA observes Japan's carbon neutrality policies and has set zero CO ₂ emissions targets.
4 Energy efficiency improvement	Aligned	JAMA understands the importance of energy efficiency improvements and has estimated the contributions of fuel efficiency improvements to the total CO ₂ emissions of Japan's transportation sector. It has indicated that it will continue to work to improve fuel efficiency. It is also working to reduce power and fuel energy usage.
5 Technology	Aligned	JAMA recognizes the need for BEV- and FCEV-related measures. It provides policy recommendations in line with diverse technologies (FCEVs, BEVs, and carbon neutral fuel-powered internal combustion engine (ICEs)).
6 Carbon pricing	Partially aligned	JAMA has made statements on designing a system that does not hinder international competitiveness that contributes to growth. On the other hand, it has expressed concerns about the introduction of a carbon pricing system.

Organization name	Japan Business Federation (Keidanren)	
Objective	To contribute to the self-sustained development of the Japanese economy and the improvement of the lives of citizens, by drawing out the dynamism of corporations as well as that of the individuals and communities that support them	
Membership of board/ executive committee	Shigeru Hayakawa: Vice Chair of the Board of Councilors (Vice Chairman of the Board of Directors, Toyota Motor Corporation)	
Item	Result	Summary
1 Consistency with Paris Agreement	Aligned	Keidanren engages in Challenge Zero activities in coordination with the government so that companies and groups can take the lead in working toward the decarbonization of society set forth in the Paris Agreement.
2 Consistency with climate change science	Aligned	Keidanren uses the data of the NOAA Earth System Research Laboratories (ESRL) Global Monitoring Division and recognizes the high concentration of CO ₂ in the atmosphere. It makes reference to the extensive harm being caused by global warming and indicates that initiatives must be implemented with a sense of urgency. It also sees this situation as creating a need for GX initiatives.
3 Emissions reduction targets	Aligned	Keidanren has set achieving carbon neutrality by 2050 as a critical target, issued its Keidanren Carbon Neutrality Action Plan, and is calling for the formulation of a vision for carbon neutrality. It has declared its support for domestic policies in support of the Paris Agreement.
4 Energy efficiency improvement	Aligned	The automotive industry members of Keidanren have defined an industry vision for carbon neutrality by 2050 through the popularization of electrified vehicles, the realization of a hydrogen-powered society, and more.
5 Technology	Aligned	The Keidanren Carbon Neutrality Action Plan clearly states that emissions will be reduced by fully leveraging the best available technologies (BATs) and by developing innovative technologies.
6 Carbon pricing	Partially aligned	With respect to carbon pricing, Keidanren has indicated a positive outlook regarding emissions trading systems and recommends designing systems that are matched with the actual situation in Japan. However, it has expressed opposition to carbon taxes.

Organization name

Central Japan Economic Federation

Objective

To compile opinions of businesses in the central Japan economic region, submit recommendations and requests to governmental agencies and related organizations, and work to stimulate the economy of central Japan through various activities

Membership of board/
executive committee

Shigeki Terashi: Vice Chairman
(Executive Fellow, Toyota Motor Corporation)

Item

Result

Summary

1 Consistency with Paris Agreement

Aligned

Chukeiren proposes strategic directions for policies aimed at achieving Paris Agreement targets.

2 Consistency with climate change science

No public position

Chukeiren does not make any reference to climate science or climate change being caused by human activity.

3 Emissions reduction targets

Partially aligned

Chukeiren has requested that the national government propose a feasible roadmap for achieving carbon neutrality. In this sense, it has not set targets as an association. Given its use of the expression "exceedingly difficult," it appears to take the position that it will only support policies when a roadmap has been issued. However, it does recognize achieving carbon neutrality as essential.

4 Energy efficiency improvement

Aligned

Chukeiren recognizes the need for decarbonization. It proposes methods for steadily achieving this. Its recommendations also include thorough energy conservation.

5 Technology

Aligned

Chukeiren has made statements supporting the social implementation of the hydrogen supply chain.

6 Carbon pricing

Partially aligned

Chukeiren calls for a system design that allows decarbonization to lead to new businesses, while also giving consideration to maintaining and improving international competitiveness. On the other hand, it has mentioned that there are many burdens due to oil and coal taxes that have already been imposed.

Japan Association of Corporate Executives

To allow top executives of corporations to participate as individuals, express opinions and ideas unconstrained by the interest of any specific company or industry, deliberate regarding various problems, both domestic and global, and issue policy recommendations, with the aim of creating a better economic society and enriching people's lives

Yutaka Shimasaki: Manager
(Fellow, Toyota Motor Corporation)

Result

Summary

Aligned

KEIZAI DOYUKAI supports Japan's carbon neutrality policies and issues recommendations for advancing the cause of carbon neutrality.

Aligned

In its GHG emissions reduction recommendations, KEIZAI DOYUKAI refers to the IPCC in its recognition of the current state of affairs and states that there is no question that global warming is a real phenomenon. It has confirmed this information before issuing recommendations.

Aligned

Within its Vision for Japan in 2050, KEIZAI DOYUKAI recommends achieving both sustainable economic growth and carbon neutrality.

Aligned

KEIZAI DOYUKAI supports the advancement of carbon neutrality policies. It has issued recommendations to the government to formulate a decarbonization transition roadmap.

Aligned

KEIZAI DOYUKAI has issued recommendations to the government for measures to support the development of hydrogen energy, etc.

Aligned

KEIZAI DOYUKAI supports carbon pricing and has issued its opinions on the introduction of carbon pricing to the government.

Organization name

Japan Hydrogen Association (JH2A)

Objective

To allow companies, associations, and local governments with diverse technologies and expertise to engage in discussions aimed at realizing a hydrogen-powered society and to provide policy recommendations regarding the establishment of social implementation projects, the creation of demand, and the relaxation of regulations

Membership of board/
executive committee

Takeshi Uchiyamada: Chairman
(Executive Fellow, Toyota Motor Corporation)

Item

Result

Summary

1 Consistency with Paris Agreement

No public position

JH2A does not make any reference to the Paris Agreement or related policies.

2 Consistency with climate change science

No public position

JH2A does not make any reference to climate science.

3 Emissions reduction targets

No public position

JH2A does not make any reference to reduction targets.

4 Energy efficiency improvement

Aligned

JH2A was established to promote hydrogen and provide support for hydrogen business.

5 Technology

Aligned

JH2A organizes information necessary for the development and promotion of hydrogen technologies and issues policy recommendations related to them.

6 Carbon pricing

Aligned

JH2A demonstrates a positive stance toward carbon pricing in its policy recommendations for the realization of a hydrogen-powered society.

World Business Council for Sustainable Development (WBCSD)

To accelerate the shift to a sustainable world by leading sustainable businesses to success

Shigeru Hayakawa: Executive Committee
(Vice Chairman of the Board of Directors, Toyota Motor Corporation)

Result

Summary

Aligned

WBCSD positions the Paris Agreement as the core of climate policy activities.

Aligned

WBCSD quotes IPCC reports and states that climate change is caused by human activity.

Aligned

WBCSD is advocating a concept for limiting global warming to 1.5°C or less by 2050.

Aligned

WBCSD collaborates with the U.S. and U.K. governments in initiatives for transitioning to a ZEV society.

Aligned

WBCSD creates mobility decarbonization projects involving diverse stakeholders to accelerate the development and adoption of ZEVs and related charging infrastructure. It is strengthening its dialogue with the public and private sectors and creating opportunities for technical expansion.

Aligned

WBCSD states that carbon pricing mechanisms will be important to achieve the 1.5°C target.

Organization name

Alliance for Automotive Innovation (Auto Innovators)

Objective

To work with policymakers to support cleaner, safer, and smarter personal transportation that helps transform the U.S. economy and sustain American ingenuity and freedom of mobility

Membership of board/
executive committee

Chris Reynolds: Member of the Board of Directors
(Chief Administrative Officer, Toyota Motor North America)

Item

Result

Summary

1 Consistency with Paris Agreement

Aligned

Auto Innovators is committed to collaborating with managers in aligning the automobile industry with the Biden administration's policy of net zero carbon transformation by 2050 and in accelerating the shift to the use of BEVs .

2 Consistency with climate change science

No public position

Auto Innovators does not make any reference to climate change science.

3 Emissions reduction targets

Aligned

Auto Innovators supports the Biden administration's policy of net zero carbon transformation by 2050 and is committed to achieving net zero emissions.

4 Energy efficiency improvement

Aligned

Auto Innovators has stated that that the automobile industry is committed to improving energy efficiency. It has also expressed its views on clean fuel standards and stated that speedily improving and decarbonizing liquid fuels would be more practical than raising the rate of BEV adoption.

5 Technology

Aligned

Auto Innovators has declared its support for BEVs and plans to invest over 33 billion dollars into electrification in the automobile industry by 2025.

6 Carbon pricing

No public position

Auto Innovators does not make any reference to carbon pricing.

National Association of Manufacturers (NAM)

To serve as the association representing 14,000 member companies—from small businesses to global leaders—in every industrial sector

Chris Nielsen
(Executive Vice President, Product Support & Chief Quality Officer Toyota Motor North America)

Result

Summary

Aligned

NAM supports the objectives of the Paris Agreement and is committed to ensuring that all of the sectors of the U.S. economy play their parts in reducing emissions.

Aligned

NAM refers to the report issued by the U.S. Global Change Research Program (USGCRP) and recognizes that climate change is caused by human activity and is having an impact on the world.

Partially aligned

NAM has indicated that it supports the Paris Agreement but has not indicated any net zero goals.

Aligned

NAM understands the need for energy efficiency improvements and issues policy recommendations.

Aligned

NAM has made reference to hydrogen development as a new technology and issued policy recommendations for the advancement of technology development.

No public position

NAM does not make any reference to carbon pricing.

Organization name

The European Automobile Manufacturers' Association (ACEA)

Objective

To drive Europe's mobility transition—while at the same time ensuring that the automotive industry remains a strong global and competitive player

Membership of board/
executive committee

Didier Leroy: Member of the Board of Directors
(Chairman of the Board of Management, Toyota Motor Europe)

Item	Result	Summary
1 Consistency with Paris Agreement	Aligned	ACEA has demonstrated understanding of the Paris Agreement and defined it as a goal of its activities.
2 Consistency with climate change science	No public position	ACEA does not make any reference to climate science.
3 Emissions reduction targets	Aligned	ACEA has declared its intent to achieve automotive industry climate neutrality by 2050 in accordance with the Paris Agreement.
4 Energy efficiency improvement	Aligned	ACEA has demonstrated a positive stance with respect to the EU emissions restrictions, but believes that resolving this issue through efforts by the automotive industry alone would not be feasible and is therefore providing constructive opinions to policymakers. It also supports and provides assistance for policies on energy efficient production.
5 Technology	Aligned	ACEA is investing in electrification to improve the infrastructure environment and promote BEV use.
6 Carbon pricing	Aligned	ACEA has demonstrated a positive stance with respect to carbon pricing. It has also taken an affirmative position with respect to the inclusion of the automotive industry in the EU Emissions Trading System (EU ETS).

The Society of Motor Manufacturers and Traders (SMMT)

To support and promote the interests of the U.K. automotive industry at home and abroad

Agustin Martin: Member of Executive Board
(President & Managing Director of Toyota (GB))

Result	Summary
Aligned	SMMT has shown support for the net zero aims of the U.K. government. The government's goals are based on the Paris Agreement, so SMMT can also be considered to have shown support for the Paris Agreement. It is also investing in decarbonization and taking commensurate action.
Aligned	In a questionnaire study used to set the U.K.'s carbon budget, SMMT referred to IPCC evidence and appears to have an affirmative view of climate science.
Aligned	SMMT has shown support for achieving the net zero target for 2050 set by the U.K. government.
Aligned	With respect to ZEV sales efforts, SMMT emphasizes the importance of making infrastructure improvements, creating incentive systems for consumers, and involving various stakeholders. It is also sharing information regarding energy efficiency via its website and actively issuing recommendations.
Aligned	SMMT is investing in electrification to improve the infrastructure environment and promote BEV use. It is engaging in ongoing advocacy efforts regarding zero emissions technologies and engaging in continuous dialogue with the government. It is also engaging in technical consulting for the entire supply chain to promote greater adoption of ZEVs.
Aligned	SMMT appears to have taken an affirmative position with respect to the ETS mechanism and has recommended linking it with U.K. and EU schemes.

Organization name

Hydrogen Council

Objective

To bring together leading companies with a united vision and long-term ambition for hydrogen to foster the clean energy transition under a global CEO-led initiative

Membership of board/
executive committee

Stephan Herbst
(General Manager, Toyota Motor Europe)

Item

Result

Summary

1 Consistency with Paris Agreement

Aligned

The Hydrogen Council was established with the aims of promoting hydrogen and limiting global warming to 2°C, in accordance with the target set by the Paris Agreement.

2 Consistency with climate change science

No public position

The Hydrogen Council does not make any reference to climate science.

3 Emissions reduction targets

Aligned

The Hydrogen Council was established with the goal of limiting global warming to 2°C based on the Paris Agreement. Furthermore, its activities include issuing recommendations for supporting low carbon, renewable hydrogen, so its objectives can be seen as contributing to the substantial reduction of emissions.

4 Energy efficiency improvement

Aligned

The Hydrogen Council has issued recommendations for hydrogen use as a cost-efficient roadmap for decarbonization.

5 Technology

Aligned

The Hydrogen Council has issued a joint report together with the World Bank's Climate-Smart Mining Facility . It has reported on the amount of raw materials such as metals needed to prepare hydrogen infrastructure used to achieve decarbonization, the impact on water resources, etc. It is analyzing hydrogen roadmaps from the perspectives of resource usage.

6 Carbon pricing

Aligned

The Hydrogen Council asserts that with carbon pricing, the price of blue hydrogen would be higher than the price of gray hydrogen.

Thailand Business Council for Sustainable Development (TBCSD)

To lead sustainable development in Thailand with a membership of over 43 companies across Thailand's major industries

Kalin Sarasin
(Chairman of the Board, Toyota Motor Thailand)

Result

Summary

Aligned

TBCSD is committed to limiting global warming to 1.5°C or below.

No public position

TBCSD does not make any reference to climate science.

Aligned

TBCSD's goals are achieving carbon neutrality by 2050 and limiting global warming to 1.5°C or below.

Aligned

TBCSD provides funding for activities that promote energy conservation.

No public position

TBCSD does not make any reference to corresponding technologies.

Aligned

TBCSD calls for all governments to set ambitious carbon neutrality targets and has shown its intent to call for introducing policy frameworks such as carbon pricing.

List of our Industry Association Memberships

In addition to the twelve associations we reviewed, we have listed some of our associations that are influential in climate change related policies. Toyota will continue to engage with these associations and help the world achieve carbon neutrality.

Japan	Battery Association for Supply Chain https://www.basc-j.com/	EPA Green Power Partnership https://www.epa.gov/greenpower	German Hydrogen and Fuel Cell Association (Germany) https://www.dvw-info.de/german-hydrogen-fuel-cell-association/?lang=en
	The Hydrogen Utilization Study Group in Chubu ※No official Website https://global.toyota/jp/newsroom/corporate/34806052.html	Fuel Cell and Hydrogen Energy Association https://www.fchea.org/	Hydrogen Europe https://www.hydrogeneurope.eu/
	CHAdEMO Association https://www.chademo.com/ja/	Information Technology Industry Council https://www.itic.org/	H2 Mobility (Germany) https://h2.live/h2mobility/
	Automobile Business Association of Japan https://www.aba-j.or.jp/	Resources for the Future https://www.rff.org/	National Platform Future of Mobility (Germany) https://www.plattform-zukunft-mobilitaet.de/en/
	Fuel Cell Commercialization Conference of Japan https://fccj.jp/	Renewable Energy Buyers Alliance https://rebuyers.org/	Plateforme de la Filière Automobile (France) https://pfa-auto.fr/
	WWF Japan https://www.wwf.or.jp/	VELOZ https://www.veloz.org/	Society of Motor Manufacturers and Traders (UK) https://www.smmt.co.uk/
U.S.	CALSTART https://calstart.org/	Europe Clean Energy Partnership (Germany) https://cleanenergypartnership.de/en/home-engl	UKH2 Mobility (UK) http://www.ukh2mobility.co.uk/
	Center for Climate and Energy Solutions https://www.c2es.org/	Confederation of British Industry (UK) https://www.cbi.org.uk/	Zemo Partnership (UK) https://www.zemo.org.uk/
	Electric Drive Transportation Association https://electricdrive.org/	France Hydrogène (France) https://www.afhypac.org/	Others THAI RENEWABLE ENERGY (RE100) ASSOCIATION (Thailand) https://re100th.org/en/home-english/