

In line with the theme focused on a Sustainable Future ... and as a representative of an automaker that seeks to create new values in sustainable mobility ... I will talk about the direction of our effort for the widespread application of environmental technologies and the advancement of science and technology.

Forty years ago, the year I joined Honda, a team of our engineers were reading reports about the serious impact pollution would have on the health of children if nothing were done to make automobiles cleaner. The U.S. government responded with what we in Japan called the Muskie Law. This was better known as the 1970 U.S. Clean Air Act – which created tough new emissions standards.

Using the words “blue skies for our children” as a battle cry, a team of Honda engineers set out to create technology that could improve the quality of the air we breathe. Ultimately, the team succeeded in developing a new engine that produced fewer emissions. And in November 1974 ... the Honda Civic became the first vehicle to meet the U.S. Clean Air Act based only on engine performance.

Today, the key environmental issues facing the industry have changed ... but Honda engineers today continue their effort to create and sustain better living environment for the future generation by following in precursor’s wish.

1) Challenges toward the sustainable advancement of the richer mobility society

There is no doubt that the automobile is an indispensable element of society that supports economic development and quality of life. However, the mass-production and mass-consumption of automobiles still contributes to environmental issues.

For an automaker to address these issues, we need comprehensive environmental technologies that reduce CO2 emissions and energy consumption during the entire lifecycle of an automobile from production ... to

product use ... and disposal.

Next-generation automobiles such as hybrid vehicles, battery electric vehicles, and fuel cell electric vehicles, which use electricity as one part or as the sole energy source, will help dramatically reduce emissions.

Moreover, it is also important to develop automobiles with a very high recycling-rate.

In the area of automobile fuel, increasing the use of alternative fuels to end dependence on fossil fuels will be the key. The use of ethanol is one example.

2) Toward the realization of such environmental technologies

It will be necessary to develop environmental technologies that are much more advanced than what we have today.

Plant-based fuels seem most promising as an alternative to fossil fuels. However, the biggest challenge that has surfaced is the need to avoid conflict with the supply of food and feed stock. Toward this end, Honda is making progress in the research of cellulosic-based ethanol production which uses inedible parts of plants.

To achieve mass-market commercialization of electric vehicles, both battery and fuel cell technologies must achieve significant advancement. For example, the energy density of gasoline is greater by double digits than current battery performance. Our challenge is how to bridge this gap. I believe this area requires collaboration among government and industry.

Our fuel cell technologies have achieved an advanced level, and we began lease sales of our fuel cell vehicles. However, there are still many challenges to achieve mass-market introduction of fuel cell vehicles. These include enhanced performance and durability, significant cost reduction and the establishment of a hydrogen fueling infrastructure.

As one method of supplying hydrogen, Honda is testing a system which generates hydrogen from water through electrolysis using solar power. This system will enable people to refuel with hydrogen at home without the need to rely on a public infrastructure.

Honda manufactures and sells products which consume energy. However,

we also want to be a company which generates energy for the future of our society. Toward this end, Honda began the production and sales of environmentally-responsible CIGS-type solar panels.

Still, when we consider the fact that it will take more time to establish such high-level environmental technologies, products utilizing hybrid technologies have the most promise in the world today.

With the Honda Insight hybrid vehicle introduced this year, we improved real world fuel economy with a price that makes hybrid technology affordable to many more customers. Honda will strive to increase the number of models utilizing our advanced hybrid technologies and to increase the performance and cost competitiveness of our hybrid products. In fact, we are scheduled to add more hybrid vehicles next year.

3) Expansion of the means of mobility for the future society.

The environmental technologies I mentioned so far are necessary to achieve the sustainable advancement of existing automobile-based transportation. At the same time, we must provide more people with the joy of mobility within future society by expanding the means of mobility.

At Honda, we are investing R&D resources not only in automotive product development, but also in fundamental technologies that advance other forms of mobility. Utilizing the knowledge obtained through research including ASIMO, Honda's bipedal humanoid robot, Honda announced testing of the Stride Management Assist and Bodyweight Support Assist devices. These are designed to help people walk who have weakened leg muscles due to aging and other reasons.

Honda also developed the Brain-Machine Interface (BMI) technology enabling control of a robot by human thought alone. Honda is striving to apply this technology to develop more human-friendly mobility by combining it with intelligence and robotics technologies.

4) Closing

40 years later, the technologies have changed ... new forms of sustainable mobility are on the horizon ... but Honda remains focused on the same objective that guided the company when I joined Honda in 1969 ... to leave "blue skies for our children."