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The Issue of Fossil Fuel Supply on the Road to Decarbonization

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Oil major bp announced its Energy Outlook 2023 at the end of January 2023. It factored in the two major changes that took place since the previous year's Energy Outlook 2022; namely, the Russia-Ukraine war and the passing of the Inflation Reduction Act in the US. The New Momentum scenario, the only forecast type of the three projections, (refer to the "The Forecasting Approach and the Backcasting Approach" published in the Future Energy Landscape - Global Energy Agenda - on October 3, 2022) adjusts the demand for fossil fuels downward as compared from last year's forecast. In addition to the downward adjustment of the total demand in response to the slowdown in economic growth, it also assumes a trend toward energy conservation and domestic energy use (renewable energy and nuclear power) will increase due to supply constraints and soaring prices of fossil fuels. However, under the New Momentum scenario, which is based on current policies and trends, fossil fuels will continue to account for 55% of the world's primary energy supply in 2050. We can clearly see the difficulties involved in achieving decarbonization, and further global efforts will be required in order to achieve global carbon neutrality.

If the world aims to become carbon neutral, we know that it cannot continue to use fossil fuels in the way that it does now. This raises two questions: what will this mean for the price of fossil fuels in the future, and who will be the one to provide the last of the fuel?

There are two possible directions for the price of fossil fuels. On the one hand, a decrease in demand would soften the tension between supply and demand, ultimately leading to lower prices. Many have adopted this view, and major long-term world projections also assume that the price of fossil fuels will continue to fall in the future as demand declines. On the other hand, if the decline in supply occurs faster than the decline in demand, the tension between supply and demand will tighten, leading to higher prices. If we take coal as an example, there is demand for alternatives to Russian coal. This supply restriction has caused coal prices to rise. Under normal circumstances, companies would be looking to expand their business opportunities, and they would likely invest to increase coal production. But with future demand uncertain and intensifying headwinds regarding coal development, these companies may decide against investing. In this case, even though there are tensions between supply

and demand, supply is unable to be increased and prices therefore remain high.

It is conceivable that this could also happen with oil and natural gas. If we expect an abundance of zero emission energy supply will replace fossil fuels, policy-based restrictions on fossil fuel supplies may be one option, but the difficulties Europe is currently facing clearly indicate that there is no alternative energy source at this point in time that can completely replace fossil fuels. In these circumstances, it would be dangerous to impose immediate restrictions on fossil fuel supplies, and we will need to keep pace with the development of alternative supply sources.

The question of who will provide the last of the fossil fuels is also important. Developed countries, including Japan, have liberalized energy markets, but I believe there are systems in place to guarantee the supply of electricity and gas to consumers with final supply guarantee obligations imposed on certain companies. Oil and LPG companies do not have such systems imposed on them, and companies have the ability to withdraw their business operations at their own discretion. If demand for oil decreases in the future and companies no longer expect any profits, then there is a possibility that oil supplies will be cut off at the discretion of those companies, even if a demand for oil remains. Companies may well decide to withdraw early from such a declining market and move their capital into businesses in growing markets, and there is no way of preventing this except to appeal to vague notions like "social responsibility" and "morality." To top it off, the more socially responsible a company is, the more likely it will continue to be unprofitable as it continues to contribute to the stable supply of energy. While there may still be time left before we are faced with such a situation, this may change quickly once things get moving (an avalanche of withdrawals will begin at some point), and we must consider measures to counteract this.

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