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The International Energy Landscape After the Middle East Crisis and the Role of Coal

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Geopolitical Risk Events since the Beginning of the Year



The Unraveling International Order and Its Implications

- The international order that has been maintained for decades has begun to erode in recent years, resulting in an increasing number of unexpected geopolitical events.

The institutions and norms that formed the int'l order

- An economic system centered on market mechanisms
- A rules-based free trade system
- The rule of law
- Respect for national sovereignty
- International frameworks for addressing climate change, etc.

Phenomena associated with the erosion of the int'l order

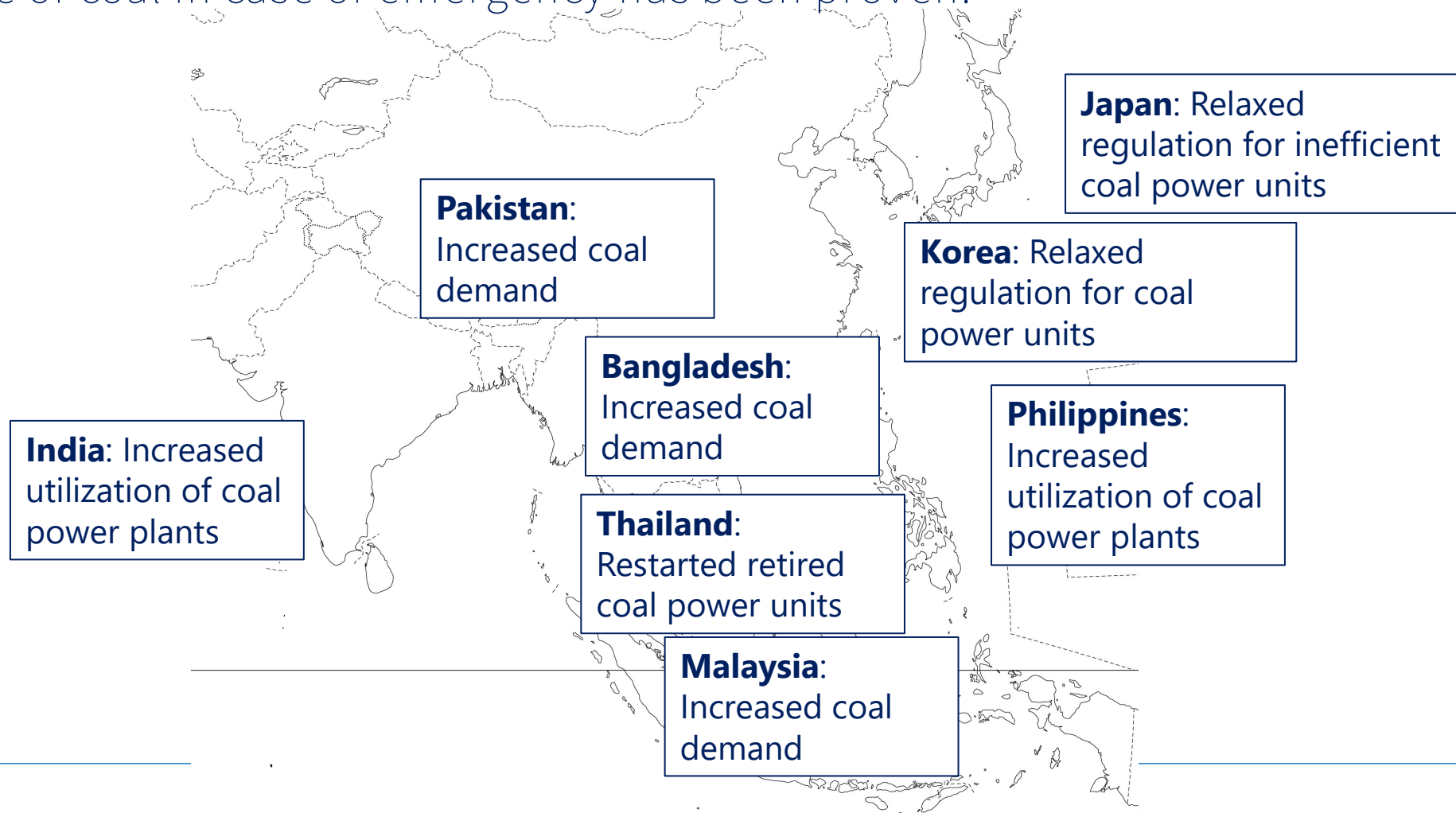
- Attempts to change the status quo by force
- Growing instability in the Middle East
- The “weaponization” of economic interdependence by major powers
- “Fragmentation” of supply chains
- The U.S. withdrawal from the UNFCCC, etc.

Middle East Crisis and Its Implications

- An unprecedented disruption to global energy supplies via the Strait of Hormuz
 - 20% of the global oil and gas supply was suddenly and unexpectedly interrupted.
- The international crude oil market has been relatively calm, but...
 - Oversupply before the crisis, stock release, China's drastic import reduction calmed the market.
 - Emerging concerns over the security of alternative supplies from the Red Sea.
- The Pandora's box has been opened.
 - Iran has demonstrated that it is capable of closing the Strait of Hormuz.
- U.S.–Iran negotiations remain highly uncertain.
 - Hardliners in Iran are gaining momentum, while the US administration faces the midterm elections.
- The Strait of Hormuz crisis as an Asian crisis
 - The majority of oil and gas transiting the Strait of Hormuz is destined for Asia.

The Role of Coal under the Crisis: Physical Supply

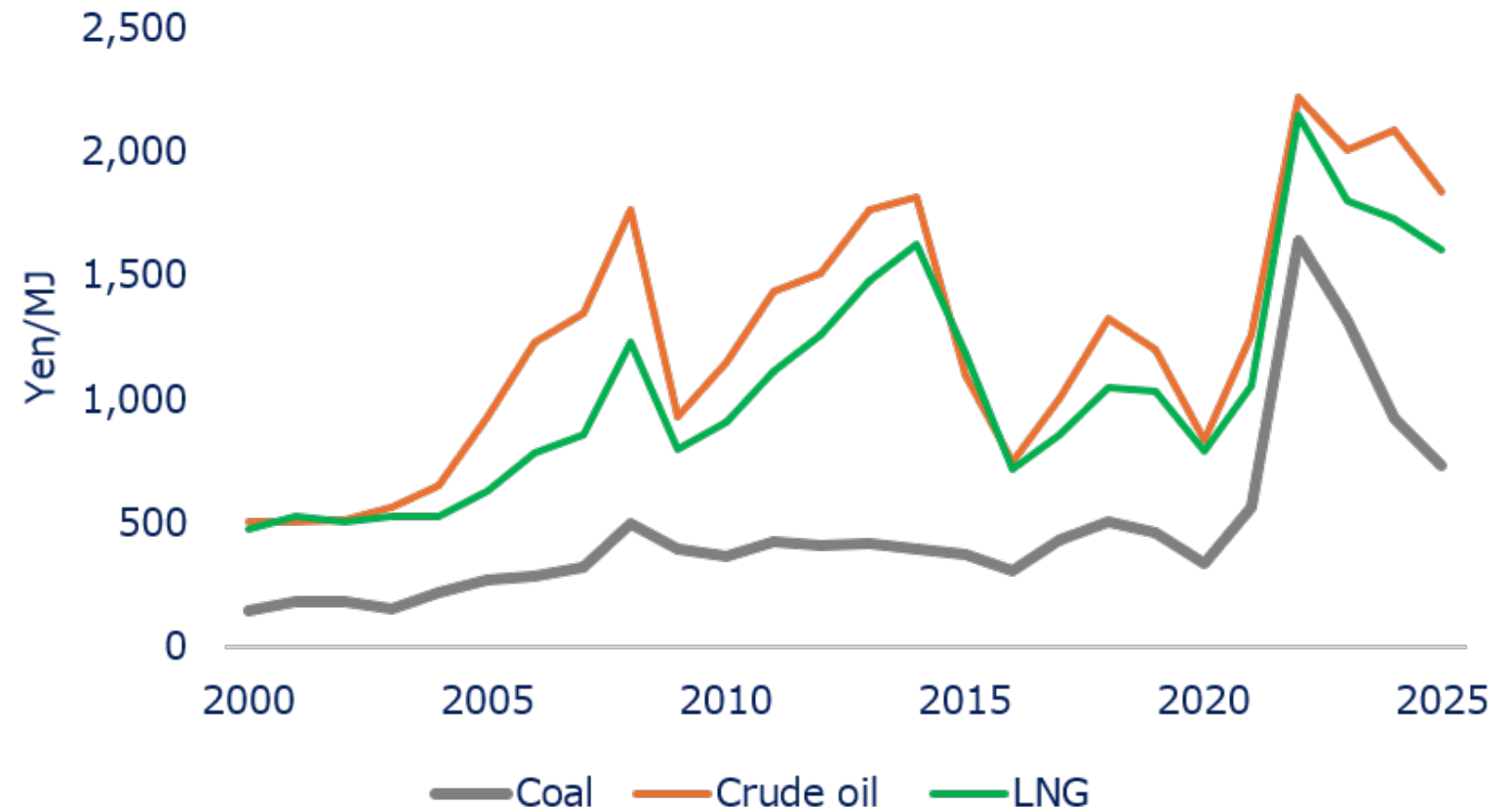
- Coal served as an alternative fuel to natural gas in many countries in Asia.
- The value of coal in case of emergency has been proven.



The Role of Coal under the Crisis: Price Stability

- Compared with the highly volatile crude oil and LNG prices, coal price has remained relatively stable.
- The Hormuz crisis further highlighted the value of price stability of coal.

CIF price of different fuels in Japan

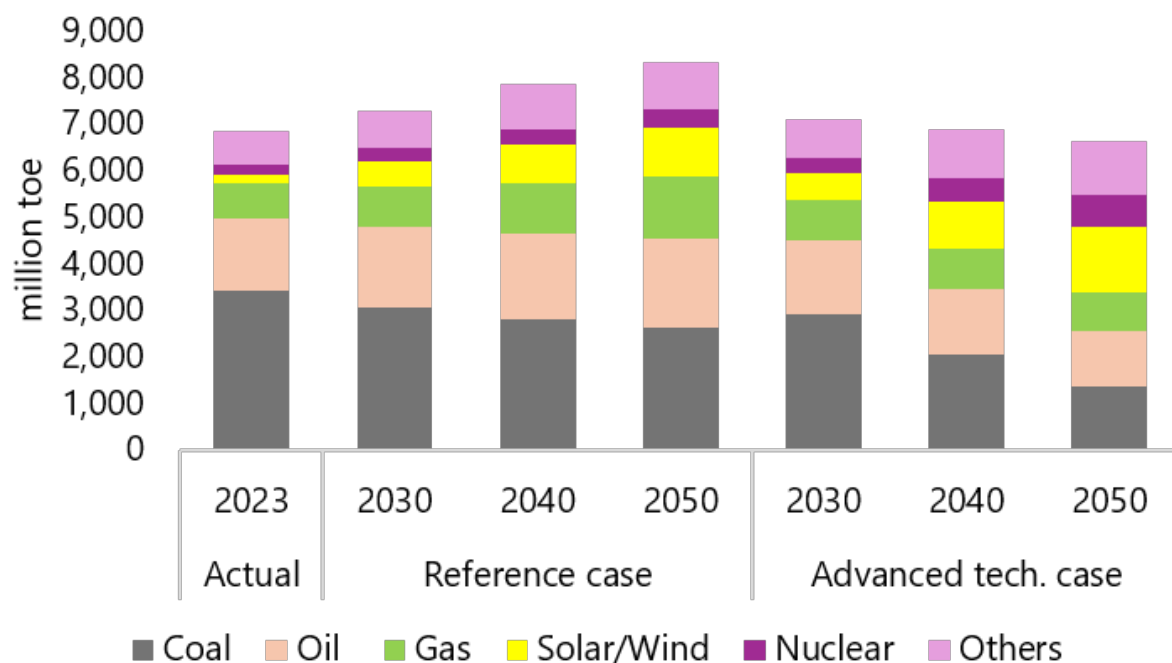


Source: IEEJ EDMC Data bank (2026)

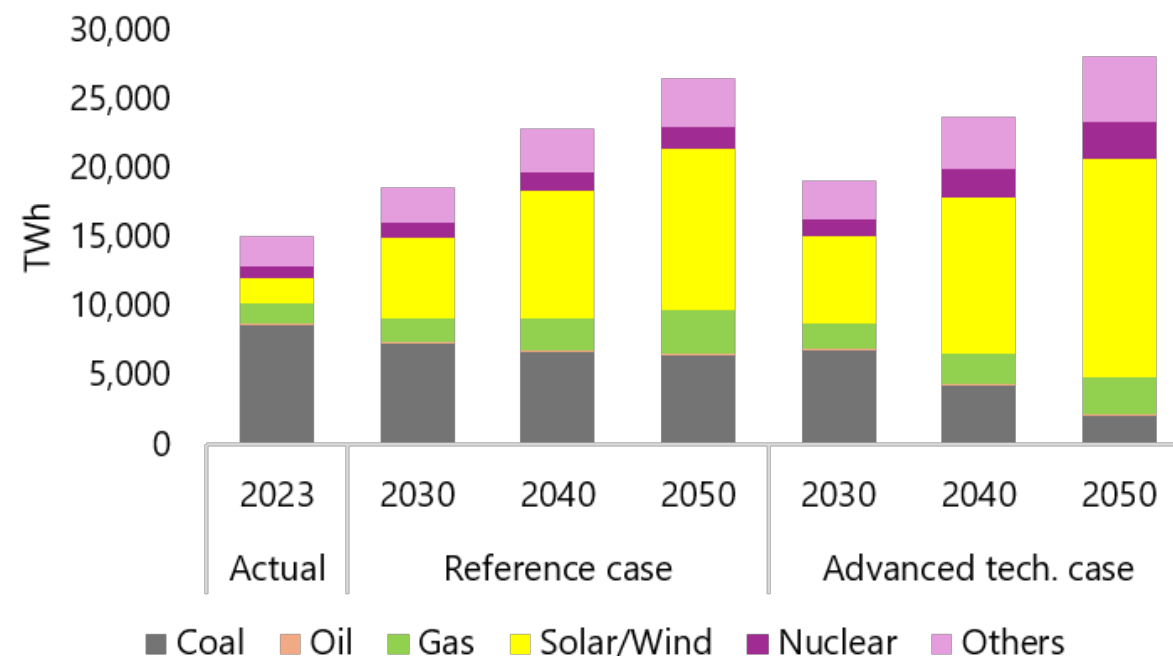
Coal Continues to Play a Significant Role in Asia

- According to our long-term outlook, even under the ambitious advanced clean technology deployment scenario, coal is expected to supply around 20% of primary energy in 2050.
- Coal-fired power plants in Asia are relatively young, suggesting that coal will continue to play a major role in the region's power sector for the time being.

IEEJ's outlook of primary energy supply in Asia



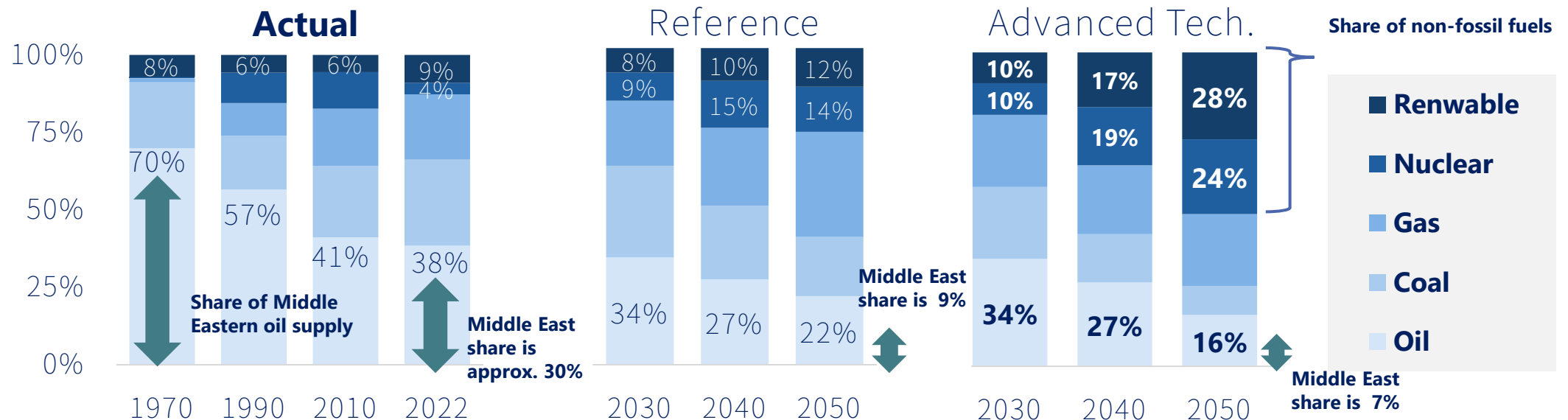
IEEJ's outlook of electricity generation in Asia



Outlook of Japan's Energy Mix

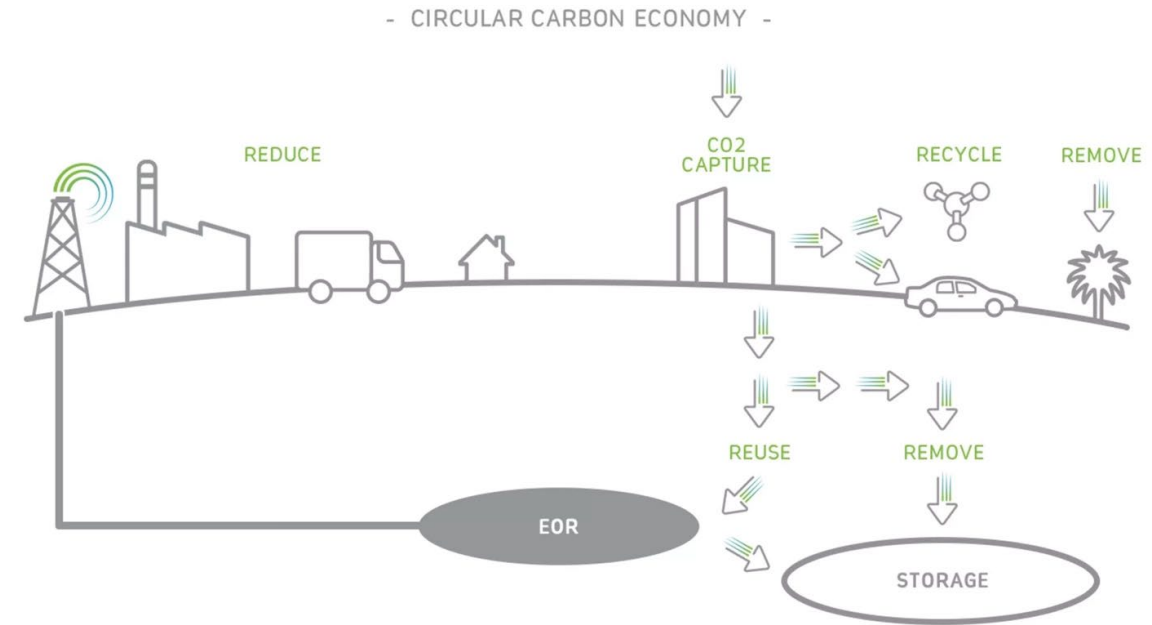
- Although coal demand is expected to decline, it will continue to play an important role in supporting Japan's energy system.
 - While coal demand will decrease, particularly in power generation, replacing coal will remain difficult in hard-to-abate industries.
 - Ammonia co-firing and carbon capture and storage (CCS) will play a critical role in reducing emissions from the remaining coal use.

IEEJ's Outlook of Japan's Primary Energy Supply



Circular Carbon Economy (CCE)

- The concept was originally proposed by Saudi Arabia, which hosted G20 summit in 2020.
- Carbon naturally circulates among the atmosphere, biosphere, oceans, and soils.
- CO₂ can also be circulated so that its concentration in the atmosphere does not continue to increase.
 - From the perspective of technological neutrality, CCE does not seek to restrict the use of fossil fuels from the outset.
 - Instead, it promotes the continued use of fossil fuels while managing CO₂ through technologies such as CCUS and/or offsetting residual emissions through Carbon Dioxide Removal.



Changing Role and Enduring Presence of Coal

- The recent crisis has reaffirmed the role of coal as an energy source that must remain available for unexpected events.
 - In the power sector, electricity generation (kWh) from coal is likely to decline, while the capacity (kW) required for energy security may not decrease as significantly.
- Preparing for the coming "Age of Electricity"
 - Expanding renewable energy and restarting nuclear power plants are essential. Coal-fired power remains one of the options for ensuring sufficient and reliable electricity supply when needed.
- Decarbonizing and making effective use of coal-fired power generation will remain an important policy issue.
 - It is time to re-evaluate the significance of the concept of Circular Carbon Economy—decarbonizing rather than abandoning fossil fuel use.
 - A realistic long-term outlook, together with continued investment in energy supply chains and supporting policy arrangements, will remain essential.