

Turnaround in U.S. Strategic Perception (3): Energy Security Perception

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“Let us set as our national goal, in the spirit of Apollo, with the determination of the Manhattan Project, that by the end of this decade we will have developed the potential to meet our own energy needs without depending on any foreign energy sources,” then U.S. President Richard Nixon said in an address in November 1973 announcing Project Independence, a new large-scale national project to achieve energy independence for the United States then plagued with the serious impact of the first oil crisis.

In the 20th century called the Century of Oil, the United States was the center of global energy governance, boasting the world’s largest oil production and even spare capacity to increase production in emergency. During World War I and II, U.S. oil production played a key strategic role through stable and additional supply for the United States and its allies. As U.S. oil demand continued to expand, however, the United States turned a net oil importer with its oil production slipping below its demand in the first half of the 1960s. In 1973 when the first oil crisis came, the United States depended on imports for 37% of its oil demand. Then, the Middle East or the Organization of the Petroleum Exporting Countries became the gravity center of global oil supply.

Energy price spikes and the subsequent international energy market chaos under the oil crisis undermined Western industrial countries’ growth model based on abundant, cheap oil supply from the Middle East. As the solidarity of oil-consuming industrial countries collapsed due to the Arab oil embargo by oil-producing countries, how to secure stable oil supply topped the agenda at the first summit of Western industrial democracies that took place in France’s Rambouillet in 1975. Oil-consuming industrial countries rebuilt their cooperation by creating the International Energy Agency and implemented oil supply security policies to promote energy conservation, the development of alternatives to oil, their oil development outside the Middle East or OPEC, and oil stockpiles. Project Independence represented an ambitious U.S. national project to overcome the first oil crisis.

Later U.S. administrations gave top priority to oil supply security in their energy security policy while trying to reduce dependence on oil imports. U.S. dependence on oil imports, though falling temporarily thanks to the development of huge oil fields in Alaska, basically continued an uptrend even until the early 21st century. In 2006, the oil import dependence rate came to 66.4%. Until then, the United States had no choice but to give priority to an energy security policy to address oil shortage in the face of the high oil import dependence rate.

“An attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force,” stated the Carter Doctrine that then U.S. President Jimmy Carter announced in January 1980. This indicated how serious the United States was in prioritizing oil supply security and the Middle East in the face of the second oil crisis

chaos and the Soviet Union's invasion into Afghanistan. Following the two oil crises, the United States perceived the high oil import dependence rate and oil shortage as threats related to national policy or strategy.

After the national strategy based on the oil shortage perception continued for more than 30 years, however, a revolutionary development started to emerge silently to reverse such strategy. That was the shale revolution.

Massive oil and gas resources in hard shale layers had long been known in the United States. In the absence of technologies or initiatives to commercially extract and use such resources, however, shale resources had remained simple underground substances rather than economic goods. In the early 2000s, however, new technologies for horizontal drilling, hydraulic fracturing and advanced information technology were combined to break through this situation. As massive shale resources were turned into economic goods, shale gas production expanded, followed by shale oil production. In addition to the new technologies, special U.S. conditions contributed much to sharp growth in shale gas and oil production. They included numerous small entrepreneurial oil and gas companies' proactive shale resources development initiatives, the presence of pipeline networks since before the shale revolution (that made it easier for shale oil and gas to be provided to the market) and landowners' ownership of underground resources (that has served as an incentive for landowners to develop shale resources).

U.S. oil production bottomed at 6.83 million barrels per day in 2006 and increased 2.5-fold to 17.07 million bpd in 2019. Natural gas production rose 1.9-fold from the bottom of 489.4 billion cubic meters in 2005 to 930 billion m³ in 2019. Through the sharp production growth, the United States has become the world's largest oil and natural gas producer. The oil import dependence rate declined remarkably from 66% in 2006 to only 4% in 2020, indicating that the United States almost attained oil self-sufficiency. The natural gas import dependence rate also declined from 22% in 2005, allowing the United States to become a net natural gas exporter in 2011. Since 2019, the natural gas self-sufficiency rate has exceeded 120%, meaning that production is over 20% more than domestic consumption. Through the shale revolution, the U.S. energy security perception changed dramatically and naturally. Freed from the constraint of the oil shortage perception, the United States now bases its energy strategy on the oil abundance perception.

For the United States, benefits from the shale revolution have not been limited to the reduction of the oil import dependence rate. The sharp oil and natural production growth encouraged investment and employment in oil and gas sectors, and relevant infrastructure industries as well as consumption, supporting economic growth. Production growth has led to export expansion. The United States has become a major exporter of liquefied natural gas. The revolution has thus provided new business opportunities, contributing to economic growth. The production expansion increased supply pressure on U.S. and other oil markets and brought about a looser international oil supply-demand balance, becoming a major factor behind the oil price crash from late 2014. In the United States, gas production expansion brought about remarkable domestic gas price declines, leading gas to replace coal as power generation fuel. Subsequent drops in electricity and gas prices contributed to enhancing U.S. economic and industrial competitiveness. Gas's replacement of coal also made contributions to U.S. CO₂ emission cuts. In this way, the shale revolution contributed much to enhancing the United States' overall national strength.

The previous Trump administration used the term "energy dominance" for its energy policy. While the word is variously defined and interpreted, it is apparently understood as

representing an attempt to take advantage of U.S. oil and gas supply increased through the shale revolution to maximize U.S. national interests. This means an energy strategy based on oil and gas abundance. The U.S. national strategy to address energy shortage has transitioned to one taking advantage of energy abundance. The Biden administration has emphasized a priority on climate change rather than on oil or natural gas. It seems critical of overall fossil fuels. Irrespective of differences with the Republican Trump administration, however, the Democrat Biden administration might have understood that energy abundance achieved through the shale revolution has supported the United States' national power and economy. Becoming free from the constraint of oil shortage, the United States seemingly can now invest more policy resources in other important agenda. The perception change from shortage to abundance has driven the United States, exerting great impacts on the world.

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