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2024 International Energy Situation as Seen from EI Statistics (2): Energy Production and Exports

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Following my previous essay, "A Japanese Perspective on the International Energy Landscape (748)," this essay summarizes the key points of the international energy market in 2024 based on the EI Statistical Review of World Energy 2025. In this essay, I would like to sum up energy price trends mirroring the supply-demand balance in the international energy market, as well as production and export trends for oil, natural gas/LNG, and coal.

First, I would like to discuss crude oil prices, which are always the focus of attention regarding the international energy market. The average spot price of the benchmark Brent crude in 2024 was $80.76 per barrel, leveling off from the 2023 average of $82.64/bbl, a difference of nearly $20/bbl from the $101.32/bbl in 2022, when the Brent topped $130/bbl temporarily due to the outbreak of the Ukraine crisis. Compared with 2022, the oil market restored a certain level of stability in 2023 and 2024. However, the average above $80/bbl in 2024 was still historically high.

The average Dutch TTF (Title Transfer Facility) futures price, a natural gas benchmark in Europe, which was affected most gravely by the Ukraine crisis, plunged to $12.87 per million British thermal units in 2023 from the historic high of $37.09/MMBtu in 2022 and fell further to $10.89/MMBtu in 2024. The average Japan/Korea Marker LNG spot price for Asia also nose-dived to $13.77/MMBtu in 2023 from $33.98/MMBtu in 2022 and dropped further to $11.91/MMBtu in 2024. Both prices declined sharply from the historic highs in 2022 as the natural gas market calmed down. However, the 2024 average prices were still historically high. Although the average Henry Hub natural gas price in the United States indicated a similar price trend, the 2024 average stood at $2.25/MMBtu, far lower than the TTF and JKM prices, highlighting anew that U.S. gas market prices are significantly lower than other major gas market prices. The average benchmark coal price for Northeastern Europe followed a similar trend, plunging from $291.28 per ton in 2022 to $129.54/t in 2023 and $112.00/t in 2024. The coal price above $100/t was also historically high. Thus, international energy prices remained high in 2024. In the following, I would like to review supply trends related closely to the above price trends for oil, natural gas/LNG, and coal in that order.

Global oil production in 2024 increased by 0.6% from the previous year to 96.89 million barrels per day. The year's global oil demand growth came to 0.7%, indicating that oil supply moderately increased in line with the demand growth. Under the circumstances, production by oil-producing countries outside the Organization of the Petroleum Exporting Countries rose by 0.9% to 64.09 million bpd, while the OPEC members, which adjusts oil supply and demand, left its production almost unchanged, at 32.80 million bpd. Russia, a non-OPEC oil producer that takes part in the OPEC-plus group, reduced oil production in 2024 by 2.9% to 10.75 million bpd. Russian oil production thus decreased for the second straight year. Against this backdrop, the United States, the largest oil producer in the world, drove non-OPEC and global oil production growth in 2024 by increasing its production by 3.6% to 20.14 million bpd. The U.S. oil production increase, at 0.7 million bpd, exceeded the global

production growth of 0.56 million bpd. In contrast, production in Saudi Arabia decreased by 3.6% to 10.86 million bpd as the largest oil producer among the OPEC members implemented and enhanced a production cut in response to the production expansion by the United States and other non-OPEC oil producers. Of global oil production, the United States captured the largest share, at 21%, followed by 11% each for Saudi Arabia and Russia. The robust oil production increase in the United States contrasted with the declines in the other two among the world's three largest oil producers.

Global oil exports in 2024 increased by 0.1% from the previous year to 69.44 million bpd. Among major oil exporters, the United States boosted oil exports by 6.3% and Russia by 3.3%. In contrast, Saudi Arabia reduced oil exports by 6.3%. Russia, while reducing oil production, expanded exports even amid economic sanctions. The Middle East remained the world's largest oil-exporting region, accounting for 24.26 million bpd or 35% of global exports. The United States, though being the largest oil-exporting country, with 9.88 million bpd, imported 8.43 million bpd simultaneously, posting about 1.4 million bpd in net exports. In this sense, the United States contrasted with Saudi Arabia and Russia as giant net oil exporters.

Global gas production in 2024 increased by 1.2% from the previous year to 4,125 billion cubic meters (BCM). In line with a steady increase of 2.0% in global gas demand, gas production showed a steady expansion. The United States, the world's largest gas producer, produced 1,033 BCM in 2024, almost unchanged from the previous year. U.S. gas production bottomed out at 489 BCM in 2005 and has continued to increase for nearly 20 years, except for 2020 when it declined due to the COVID-19 pandemic. In 2024, U.S. gas production more than doubled its 2005 level. On the other hand, Russia, the world's second-largest gas producer, increased gas production in 2024 by as much as 7.1% to 630 BCM, still far below the 702 BCM in 2021 before the outbreak of the Ukraine crisis. By region, production increased by 5.0% in the former Soviet Union, by 2.3% in the Middle East, and by 2.1% in Asia-Pacific, while decreasing by 5.8% in Africa and by 3.4% in Europe. Region-by-region gas production trends were thus patchy in 2024.

Against this backdrop, some interesting changes were seen in global gas exports. In 2024, interregional pipeline gas trade increased by a significant 7.9% from the previous year to 420 BCM. On the other hand, LNG trade fell by 0.5% to 465 BCM. LNG's share of the total interregional gas trade, at 885 BCM in 2024, was 53%, indicating that LNG has become dominant in global gas trade. In the past, pipeline gas was far more dominant in gas trade, accounting for 76% of global gas trade in 2004, 20 years ago. However, the rapid expansion of LNG trade caused a reversal in 2022. It is basically expected that the current trend will continue in the future.

One of the most interesting developments in gas trade in 2024 was seen in Russia's gas exports. After accounting for 21% of the world's total interregional gas trade in 2021, Russian pipeline gas exports declined rapidly and significantly after the outbreak of the Ukraine crisis, from 201 BCM in 2021 to 125 BCM in 2022 and to 89 BCM in 2023. However, Russia's pipeline gas exports in 2024 increased by a significant 21.5% to 108 BCM. While the export level itself fell short of restoring the 2022 level, the increase of 19 BCM in 2024 drove the global pipeline gas export growth of 32 BCM. Russia's pipeline gas exports in 2024 increased by 6 BCM for Europe, by 8 BCM for former Soviet Union countries, and by 5 BCM for China. In fact, however, Russian pipeline gas exports to Europe, which had once been the mainstay of gas exports from Russia, were limited to only 31% of the 168 BCM in 2021 before the invasion of Ukraine. On the other hand, the United States, which has become the world's largest LNG exporter, increased its LNG exports in 2024 by 0.4% to 115 BCM. While decelerating the growth from 9% in 2023, U.S. LNG exports continued to increase and are expected to drive growth in global LNG exports and global gas trade as a whole.

Global coal production in 2024 increased by 0.9% from the previous year to 9.24 billion tons. The production increase responded to a consumption rise that came as the importance of a stable and affordable energy supply was highlighted. China, which accounts for 52% of global coal production, increased production by 0.9%. India, which captures 12% of global coal production, increased production by a steep 7.0%. Their production expansion more than offset a decline in production in other regions. Global coal exports in 2024 steadily increased by 1.3% from the previous year. Indonesia, the world's largest coal exporter, increased coal exports by 5.3%, and Australia, the world's second largest exporter, by 3.7%. Their robust coal exports exerted a dominant influence on the 2024 global coal export growth.

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