

IEEJ e-NEWSLETTER

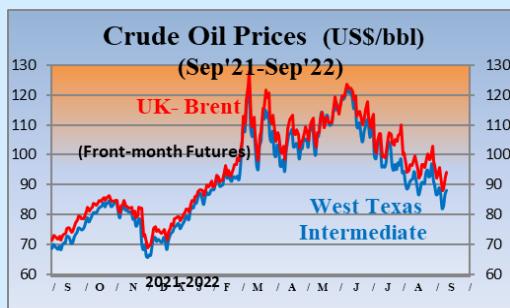
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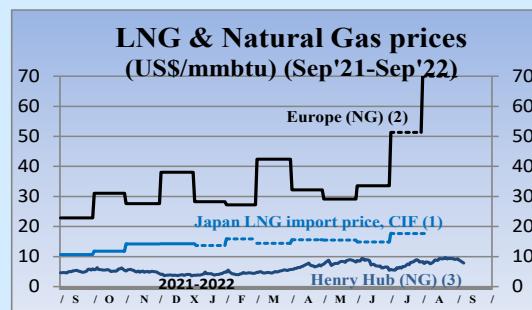
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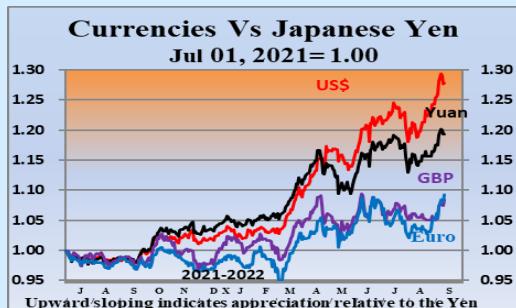
(As of September 12, 2022)



Sources:
 (1) DOE-EIA
 (2) Investing.com



Sources:
 (1) Ministry of Finance "Japan Trade Statistics"
 (2) Ministry of Economy, Trade and Industry (arrival month basis)
 (3) Estimated by World Bank (Netherlands Title Transfer Facility)
 (4) DOE-EIA, NYMEX (Front-month Futures)



Source: x-rates.com



Sources:
 (1) Finance. Yahoo.com
 (2) Investing.com

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Summary

1. Developments in Nuclear Power

Germany decided to keep two reactors on standby until mid-April 2023 in order, if necessary, to provide an additional contribution to the electricity grid based on the results of stress tests.

2. Recent Developments in the Oil and LNG Markets

Oil prices have been facing upward pressure in late August and natural gas prices for Europe and spot LNG prices remain extremely high. Japan is also struggling to secure stable supplies of electricity and city gas.

3. Update on Climate Change, Energy Conservation, and Renewable Energies

In the US, the Inflation Reduction Act, which includes massive spending on climate action, came into effect. The EU set a goal of reducing its gas demand by 15%.

4. Europe and US: Growing Interest in “Setsuden”

Amid the energy crisis, Europe is increasingly interested in “Setsuden,” Japan’s energy-saving experience after the Great East Japan Earthquake. The worst drought in five centuries is also adding to Europe’s distress.

5. China: Decarbonization, Stable Power Supply and Planned Outage

In China, where the introduction of non-fossil energies and reduction of dependency on imported fossil energies are making progress, scheduled blackouts were implemented in several regions. It is becoming difficult to secure a stable supply of electricity amid the abnormal weather conditions.

6. ME: Zawahiri, Leader of Al Qaeda, Killed

The United States killed Ayman al-Zawahiri, the leader of Al Qaeda. Tunisia held a constitutional referendum. Political turmoil continues in Iraq and Libya.

7. Russia: Intensifying War and Slowing Russian Economy

As Ukraine celebrated its anniversary of gaining independence from the former Soviet Union, the fighting intensified. Economic indicators suggest that the Russian economy is slowing down, and Russia is making desperate efforts to stop the exodus of foreign capital, including banning the sale of assets until the end of the year.

1. Developments in Nuclear Power

Tomoko MURAKAMI, Senior Economist, Manager
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Germany's determination to permanently terminate all operating nuclear reactors by the end of 2022 has slightly changed. Amid the mounting threats to energy security, on July 17 the Federal Ministry for Economic Affairs and Climate Action decided to conduct stress tests related to the stable supply of electricity and grid operations, with a view to continuing to operate the three remaining nuclear power plants in 2023 and beyond. On July 25, Prime Minister Olaf Scholz stated that whether the lifetime of the three plants will be extended will be decided pending the results of the stress tests, which are due to come out in a few weeks. On September 5, German government decided to keep two reactors, Isar 2 and Neckarwestheim, instead of shutting down at the end of 2022, on standby until mid-April 2023 in order, if necessary, to provide an additional contribution to the electricity grid.

The German people's views are divided. The opposition Free Democratic Party (FDP) has long opposed shutting down at the end of 2022 but the Green Party, which is part of the ruling coalition, is staunchly demanding that the plants be shut down at the end of the year. The debate remains gridlocked. According to a telephone survey and online poll conducted by ARD-DeutschlandTrend, a survey firm, from August 1 through 3, 15% of 1,313 respondents supported closing the plants, 41% supported a few months' extension, and another 41% longer-term use. When it decided to abandon nuclear power, Germany could have foreseen that energy security could deteriorate critically in the coming decades due to international disputes and the policies of resource-rich countries. It will be interesting to see how the German government handles the criticisms for being "reactive" and what decisions it makes.

Since early August, there has been continued shelling of the Zaporizhzhia Nuclear Power Plant (ZNPP) currently held by Russia in southern Ukraine, with both sides blaming the other for the attacks. IAEA Director General Mariano Grossi observed the current situation of ZNPP on August 30 and confirmed that all safety and security systems must be fully functional. At the NPT (Non-Proliferation Treaty) Review Conference held at the UN Headquarters from August 1 through 26, the draft final document, which demands that ZNPP be put back in the hands of the Ukrainian authorities, was opposed by Russia, and so the demand was watered down to the phrase "reaffirm the importance of control by the Ukrainian authorities." Nevertheless, the document was still not approved unanimously. It is hoped that experts from various areas work together to secure the safety of ZNPP.

Prime Minister Fumio Kishida participated online in the second meeting of the GX (Green Transformation) Implementation Council held at the Prime Minister's Office on August 24, and ordered that discussions begin on the subjects of (1) restarting the seven nuclear power plants that have obtained a reactor installation license for the summer of 2023 or later, in addition to the ten that have already restarted (including six in operation), (2) reviewing the lifetime extension of nuclear power plants, (3) proceeding with developing and constructing next-generation reactors, and that a conclusion should be reached by the end of this year.



2. Recent Developments in the Oil and LNG Markets

Tetsuo MORIKAWA, Senior Economist, Manager
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Oil prices have been facing upward pressure in late August. At a meeting on August 3, OPEC Plus decided to increase production by 100,000 b/d in September. The decision came as a minimum gesture of politeness by Saudi Arabia and OPEC Plus in response to President Joe Biden's request to increase output, but it also showed that many oil-producing countries have inadequate spare capacity to produce more as missing production targets is the norm now. On August 8, the EU presented a draft proposal for reviving the JCPOA, but the media reported that the US may not make further compromises to Iran, which would make the revival difficult. On August 22, Saudi Arabia's Energy Minister Abdulaziz bin Salman al Saud mentioned that OPEC Plus may start to cut production again.

According to the International Energy Agency (IEA), Russia produced 11.09 mb/d and exported 7.4 mb/d of oil in July, similar to the previous month. Europe is prioritizing controlling inflation and is steering itself away from building a strict framework for banning Russian oil, with the EU not opposed to transporting Russian oil outside the EU, and the UK bans insuring Russian oil exports only to exports to the UK. Meanwhile, demand for oil remains robust. In its August 11 Oil Market Report, the IEA raised its forecast for oil demand in 2022 by 0.5 mb/d from the previous month to 99.7 mb/d. While the supply of oil is likely to remain in surplus into the first half of 2023 even without the JCPOA revival, the market reacted to the possibility of another OPEC plus production cut mentioned earlier, causing Brent to rise again to \$100/barrel on the 23rd.

In the natural gas market, prices remain extremely high in Europe and for spot LNG. On August 22, the Dutch TTF price rose to \$81/Mbtu (\$476/barrel in oil equivalent) and the spot LNG price for Asia to \$58/Mbtu (\$341/barrel in oil equivalent), surpassing the levels before the Ukraine crisis. On the same day, the US Henry Hub price, which has been relatively low, also rose temporarily to \$10/Mbtu (\$59/barrel in oil equivalent). Europe is now being forced to curb demand, and on August 5 adopted a regulation to reduce the demand by 15% this winter. On August 5, Sakhalin Energy LLC was established as the new operating company of the Sakhalin 2 project. According to media reports, Mitsui and Mitsubishi, which are participating in the project, are set to join the new company. There are concerns about electricity shortages in Japan this winter, and the demand restriction for both gas and electricity might be introduced. Amid the tight LNG supply-demand balance, Japan is also struggling to secure stable supplies of electricity and city gas.

In Tokyo, the 43rd IAEE International Conference was convened from July 31 through August 4 co-hosted by the IEEJ, the International Association for Energy Economics (IAEE), and the National Graduate Institute for Policy Studies (GRIPS). One of the central themes was carbon neutrality, but energy security also took center stage given the soaring energy prices and the war in Ukraine. Ideally, both carbon neutrality and energy security should be achieved simultaneously, but in reality priority is being given to energy security.



3. Update on Climate Change, Energy Conservation, and Renewable Energies

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On August 16, US President Joe Biden signed the Inflation Reduction Act (H.R.5376). The legislation anticipates spending approximately \$369 billion on energy security and climate action. According to an estimate by the US Department of Energy, the clean energy initiative, which consists mainly of the Inflation Reduction Act and the 2021 Bipartisan Infrastructure Law, could reduce the US' 2030 GHG emissions by 40% from 2005 levels. It is also anticipated to help the US meet its 2030 GHG emissions reduction target (of 50–52% from 2005 levels).

The legislation extends the term of the investment tax credit (ITC) and production tax credit (PTC) for renewable energy to include projects whose construction began on or before January 1, 2025. Both the ITC and PTC are essential support measures for solar PV and wind power, respectively, and their terms have been extended repeatedly. The scope of the ITC now additionally includes energy storage facilities, biogas projects that satisfy certain requirements, and micro grid control facilities.

Further, measures to foster domestic clean energy industries were also incorporated in the Inflation Reduction Act. For the ITC and PTC, projects that meet certain domestic sourcing requirements are entitled to an additional 10% tax deduction. When the legislation becomes effective on August 18, only EVs assembled in North America will be eligible for the EV credit for new EV purchases. New tax credits were also introduced to support the production and sale of domestic parts for solar PV, wind power, and batteries.

Japan, too, is facing an urgent need to address constraints on the supply of resources and goods caused by the pandemic and the Ukraine crisis, as well as rising consumer prices. At the Industrial Structure Council meeting held on August 4, energy security and the stable supply of resources were identified as key issues in economic and industrial policies for FY2023. In addition to securing electricity and LNG supply capacity, the meeting proposed a policy to maximize the use of clean power sources such as renewables and nuclear power that contribute to energy security.

On July 20, the European Commission formulated Save Gas for a Safe Winter, with the goal of Member States reducing their gas demand by 15%. In addition, the Commission also proposed the Council Regulation on Coordinated Demand Reduction Measures for Gas, which urges all Member States to reduce gas demand in an emergency. The Regulation was adopted on August 5, and each Member State is now considering concrete measures to comply with this Regulation. For example, Germany will ensure that electricity and gas are saved in public buildings, and will keep the temperature to which offices are heated in winter to a maximum of 19°C, at both public and private offices. In the industrial sector, operators are working to save gas and shift to renewables, while the government is examining the gas demand data of 2,500 companies to develop a Gas Safety Platform that allows the government to consider reduction measures in an emergency. The Platform also plans to introduce a mechanism that allocates any energy surplus arising from efforts by companies to those companies in need.



4. Europe and US: Growing Interest in “Setsuden”

Ichiro KUTANI, Senior Research Fellow
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Assistant to Managing Director, Strategy Research Unit

In Europe, there is growing interest in the power saving programs that Japan implemented after the Great East Japan Earthquake. The earthquake caused many power plants in East Japan to stop and resulted in rolling blackouts in Tokyo. Through combined efforts at all levels spanning from individuals to industries, East Japan managed to reduce peak power demand by over 15% from the previous year. Japan's power saving scheme at the time is known in other countries as “Setsuden.” Europe is struggling to eliminate its dependency on Russian energy supplies and is being increasingly intimidated by Russia's weaponization of natural gas. In particular, it is hard to find alternatives to meet the demand for natural gas for heating and industry, and a stable gas supply is critically and directly connected with the lives and economic activities of the population. Accordingly, in addition to urgently topping up its wintertime gas reserves, Europe has set a goal of reducing its gas demand by 15%. Europe plans to also save electricity in order to reduce the gas that is consumed for generating power, and that is where Japan's experience caught Europe's attention.

Gas and electricity prices continue to soar in Europe due to concerns over the tighter and unstable balance of supply and demand. This has led to various problems, including utilities suffering financial difficulties and wider energy poverty (households spending a certain percentage of disposable income on energy). To address the former, for example, Germany has announced plans to impose a surcharge on the use of gas and spend the proceeds to rescue utilities. For the latter, for example, the UK will offer general households an electricity bill discount worth 400 pounds (approx. 65,000 yen) in total over six months from October 2022. Europe has liberalized its electricity and gas markets since the 1990s, but with the energy crisis, governments now seem to be playing a bigger role. One clear example is France, where the government announced that it will re-nationalize the country's largest power company, EdF, with the dual goals of controlling energy prices and developing nuclear power.

As Europe descends into an energy crisis due to its high dependency on Russia, another factor adding to the distress is the worst drought in five centuries. Many parts of Europe developed as logistics hubs by using the Rhine and other major rivers. As the scorching heat continues, river levels are falling, threatening the transport of petroleum products and coal in those regions. Further, nuclear power plants that use river water for cooling will be forced to lower their output as the water level falls, with the media in France reporting that some plants are already reducing their output.

Meanwhile, in the United States, the media have reported strong earnings reports from oil and natural gas companies such as ExxonMobil, Chevron, Occidental, and Chesapeake Energy. Just like in Europe and Japan, soaring energy prices are imposing enormous burdens on consumers in the US and are becoming a political issue, while generating huge profits for energy producers in the country. As the US has both producers and consumers, it can gain profits at times of both high and low energy prices. This highlights the strength and depth of the US as a major energy-producing country, in contrast to many other countries.



5. China: Decarbonization, Stable Power Supply and Planned Outage

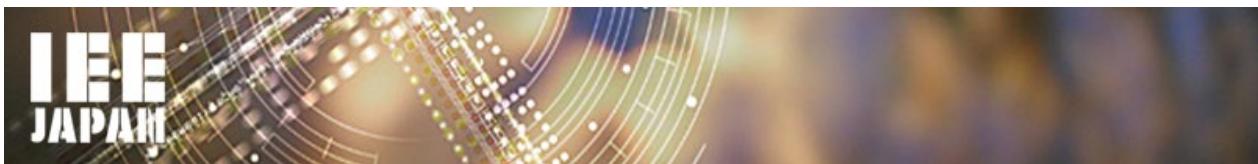
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According to the National Bureau of Statistics of China (NBS), primary energy consumption increased by 1.7% year-on-year in the first half of 2022. This is slower than the economic growth rate for the same period (2.5%). The ratio of non-fossil energies in primary energy consumption is estimated to have increased to 18%, up 1.6 points year-on-year, while falling by 0.3 points to 56.1% for coal, dropping by 1 point to 17.7% for oil, and down 0.3 points to 8.2% for natural gas. Further, according to the National Energy Administration (NEA), China Nuclear Energy Association, and others, the ratio of non-fossil power sources in power output increased by 1.9 points to 36.5% (including 31.5% of renewable energy, up 1.8 points, and 5% of nuclear power, up 0.1 point) from 2021. Thus, decarbonization is making progress.

Progress was also observed in the stable supply of fossil energies through both an increase in domestic production and decrease in imports. According to NBS, the General Administration of Customs of China, and others, domestic coal production increased by 11.5% to 2.56 billion tonnes and exports decreased by 18.2% to 140 million tonnes between January and July. The export dependency of nominal consumption (output + imports) decreased by 1.7 points to 5.1%. Oil production increased by 3.7% to 120 million tonnes and oil imports decreased by 4% to 290 million tonnes, causing import dependency to decrease by 1.6 points to 70.7%; natural gas production increased by 5.4% to 126.7 billion m³ and imports decreased by 9.6% to 85.8 billion m³ (62.21 million tonnes, 1 tonne = 1,380 m³), resulting in import dependency to decrease by 3.8 points to 40.4%. Domestic production marked a record high for both oil and natural gas.

Further, the sourcing structure was optimized, taking into account import prices, resource quantity, geopolitical risk, and so on. For example, for natural gas, because the average import price of LNG per tonne was \$758 for January-July (up 83% year-on-year), 2.2 times as high as that of pipeline gas (PNG) at \$350 (up 40%), LNG imports decreased by 21.6% to 35.93 million tonnes and PNG imports increased by 10.8% to 26.28 million tonnes. As for the sources of LNG imports, among the seven major exporters (Indonesia, Malaysia, Qatar, US, Australia, Papua New Guinea, Russia), which are long-term contractors with China, imports from Qatar, a stable supplier that has a low price (\$659) and the third largest reserves in the world, increased by 66% to 8.99 million tonnes while imports from the five other countries excluding Russia all decreased. Imports from the US decreased by 79% to 1 million tonnes and those from Australia decreased by 27% to 13.05 million tonnes. The 2022 China Natural Gas Development Report (NEA) predicts that in 2022, full-year natural gas consumption will increase by 1.6–3% to 375–380 billion m³, production will grow by 6% to 220 billion m³, and imports will decrease by 7.4–4.8% to 155–160 billion m³. The import structure is expected to continue changing as it is doing now, and both LNG and PNG imports from Russia are expected to increase.

Meanwhile, in mid to late August as abnormal weather continued, scheduled blackouts for industry were implemented in Sichuan Province, Chongqing City, and others. The direct cause of the supply-demand crunch was the worst heatwave on record since 1961 with temperatures surpassing 40°C, which sent electricity demand soaring in the residential/commercial sector, while a historic drought with only half the normal rainfall caused hydropower capacity, which accounts for around 80% of total power output (81% for Sichuan Province in 2021) to plummet to less than half the usual capacity. The challenge going forward is how to make renewables a main power source while securing a stable supply of electricity even under abnormal weather conditions. All policy resources will need to be mobilized, including diversifying the generation mix, ramping up grid balancing capacities, enhancing inter-regional power interchange capabilities, and strengthening demand response.



6. ME: Zawahiri, Leader of Al Qaeda, Killed

Shuji HOSAKA, Senior Research Fellow
President of JIME Center

On July 31, the United States killed Ayman al-Zawahiri, the leader of international terrorist group Al Qaeda, in a drone strike in the Afghani capital of Kabul. Neither the Taliban administration of Afghanistan nor Al Qaeda has officially admitted Zawahiri's death, but if the killing did take place, it is a major win for the US in its war against terrorism. Meanwhile, the fact that the leader of Al Qaeda was in the capital city has raised suspicion that the Taliban has not severed its ties with the terrorist group. In Afghanistan, the terrorist group Islamic State carried out suicide bombing attacks targeting Shia Muslims around the major Shia celebration of Ashura.

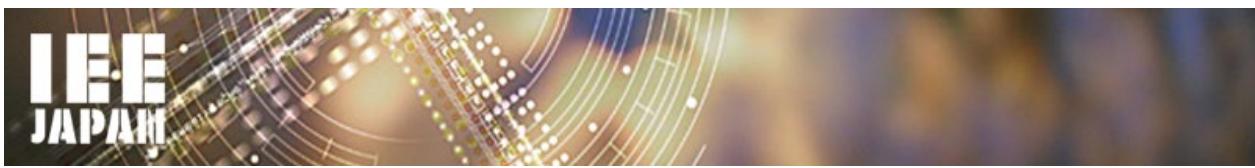
In Jeddah in western Saudi Arabia, a terrorist on the wanted list killed himself in a suicide bombing as the security police laid siege on him. In terms of public security, the intensifying clash between Israel and Palestine warrants caution. Since the start of August, armed clashes between Israel and the radical group Palestinian Islam Jihad have escalated, killing more than 40 people on the Palestinian side. A ceasefire became effective on August 7 but the cause of the clashes has not been resolved. Thereafter, clashes between Israel and Palestine have continued to occur in Jerusalem and elsewhere. In Yemen, the ceasefire between the legitimate government and the Houthis occupying the north was renewed for two months from August 2, but it is not clear whether this will lead to a truce or end of the war.

Gulf oil and gas producer countries are recovering economically as the pandemic subsides and oil prices remain high due to the Ukraine crisis. For instance, the net income of Saudi state oil company Saudi Aramco rebounded strongly in the second quarter of 2022, increasing 90% year-on-year. However, many non-oil producing countries are facing serious energy and food crises due to the war in Ukraine.

Lebanon is suffering not only economically but also due to domestic political battles that are adding to the difficulty. Though the World Bank and Gulf countries are extending assistance, the country's administrative arm is not functioning and cannot appropriately distribute the aid in the country. There is also no end in sight for the political turmoil in Iraq, an oil-producing country, where supporters of Muqtada al-Sadr temporarily occupied the parliament building.

Meanwhile, on July 25, Tunisia held a referendum on a new constitution. Many opposing the increasingly authoritarian President Saied boycotted the referendum on the new constitution, which significantly expands the powers of the president, resulting in a low voter turnout of just 30% or so. The new constitution went into effect with a vote of about 95% in favor.

In the renegotiation of the Iran nuclear deal (JCPOA), the EU submitted the final document for the agreement. In response, Iran put forward a proposal, and the US then submitted its answer to the proposal to the EU. However, it is not clear whether an agreement will be reached.



7. Russia: Intensifying War and Slowing Russian Economy

Sanae KURITA, Senior Researcher
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The fighting between Ukraine and Russia over southern Ukraine is intensifying. On August 16, explosions occurred at a military warehouse in the northern part of the Crimean Peninsula, and on August 18, a fire broke out at a Russian arms storage depot in Belgorod in western Russia bordering Ukraine. There were also explosions in Kerch in the eastern part of Crimea and in Sevastopol in the southwest. Meanwhile, the US government announced additional military aid worth up to \$775 million to Ukraine (including additional ammunition for high-mobility artillery rocket systems (HIMARS), 16 howitzers, 1,000 Javelin anti-tank weapons, mine-clearing vehicles, 15 unmanned aircraft vehicles and night vision devices). August 24, the anniversary of Ukraine gaining independence from the former Soviet Union, also marked 6 months since the start of Russia's military invasion. Security was tightened in many regions, including in Kiev where celebrations were canceled due to the heightened risk of Russian attacks, and in Kharkiv where a curfew was imposed amid intensifying attacks.

According to the Central Bank of Russia, Russia's balance of payments for the second quarter of 2022 was a surplus of \$70 billion, a four-fold increase from a surplus of \$17 billion recorded at the same time last year. Exports of goods and services rose 20% year-on-year due to higher international commodity prices, but the growth was smaller than last quarter's (59%) due to the sanctions and retaliatory measures. Meanwhile, imports of goods and services were down 22% year-on-year. Exports from the EU accounted for the greatest portion of the decline, while restrictions and the suspension of exports by foreign companies including from the US, Australia, Japan, Canada, the UK, South Korea, and Taiwan also had an impact, as did the exodus of overseas companies from the Russian market.

Russia's foreign reserves, as reported by the Central Bank, stood at \$571.2 billion as of July 29, down from the peak of \$643.2 billion on February 18 just before the invasion. As of March 2022, it is believed that "\$300 billion has been frozen due to the West's financial sanctions" (Finance Minister Siluanov, Tass News Agency), and about half of the country's foreign reserves are subject to restrictions. According to the Russian Federal State Statistics Service, the GDP growth rate for the second quarter of 2022 declined 4% year-on-year, worsening from a 3.5% increase in the previous quarter but not as much as the Central Bank had expected (a 4.3% decrease). Likely reasons for the negative growth include a slowdown in domestic consumption and the impact of the West's economic sanctions. The Central Bank commented that "the overall decline for 2022 will be smaller than was expected in April, but at the same time, the supply shock may cast a long shadow; it is forecast that the current account surplus may shrink in the second half of 2022."

On August 5, a presidential decree was issued banning the companies of "unfriendly countries" from selling their stakes in the product-sharing projects Sakhalin-1 and Kharyaga, strategic companies designated by Russia, rare minerals, and others until December 31. There has been an exodus of Western energy companies since the invasion of Ukraine, and the decree apparently aims to stop such moves and alleviate the negative impact on Russia's major industries. While views vary on the effectiveness of the economic sanctions by the West and others, the decree reveals that Russia is worried that the sanctions, though they may not be immediately effective, may erode the country's future growth potential.



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