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26
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SHURA AGENDA

Geopolitical Tensions and Energy Security

Rising geopolitical tensions in our region have once again brought energy security to the top of the global agenda. The sensitivity of oil and natural gas markets to geopolitical developments increases the risks of price volatility and supply disruptions, particularly for energy-import-dependent countries. As a highly import-dependent economy, Türkiye is directly and indirectly exposed to these risks.

In this issue of SHURA AGENDA, we assess the potential impacts of the ongoing conflict in the region on Türkiye's energy security, with a focus on oil and natural gas markets as well as the electricity system.

Impacts of geopolitical developments on Türkiye's energy system

In the short term, Türkiye is not expected to face a major disruption in oil and natural gas supply due to the regional conflict. However, risks and uncertainties persist in the medium and long term.

Key Risk Areas in Oil and Natural Gas Markets

Oil Market

- Upward pressure on global oil prices
- Risk of attacks on oil infrastructure in Iraq and Saudi Arabia and potential export disruptions
- Possible tightening of sanctions on Russia

Natural Gas Market

In the short term, no significant supply or demand risks are anticipated. This outlook is supported by a diversified supplier portfolio, declining reliance on natural gas in electricity generation, and the end of the winter season. However, in the medium and long term, several risk factors may emerge:

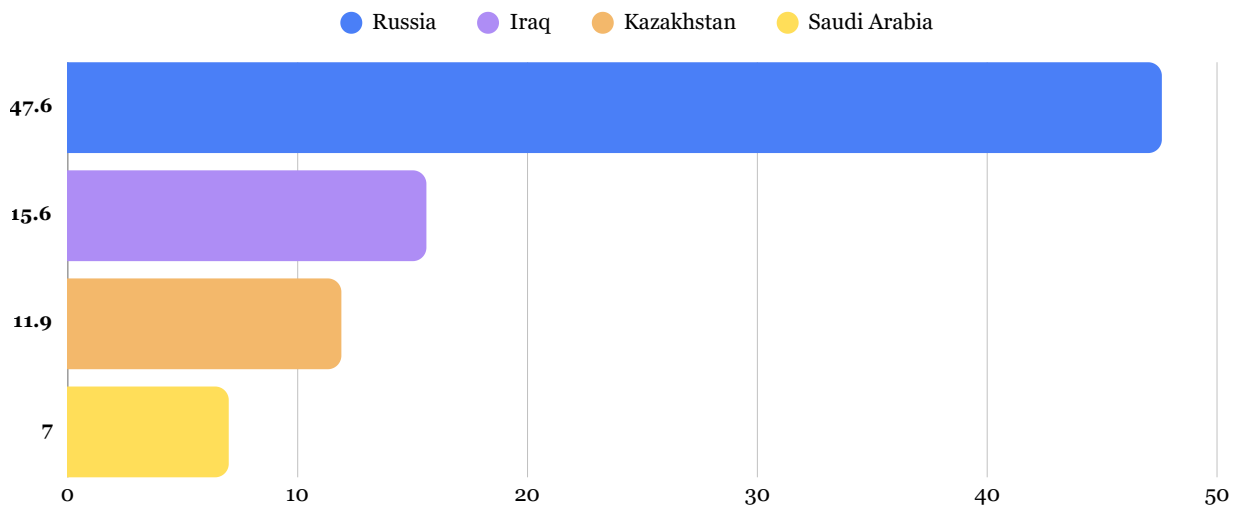
- Sustainability of supply agreements with Iran and Azerbaijan
- Deepening sanctions on Russia
- Supply pressures due to increased winter demand

In addition, persistently high oil prices could negatively affect Türkiye's trade balance, current account deficit, and inflation.

Current status of oil prices and supply

Brent oil prices are fluctuating around USD 100 or above amid heightened uncertainty caused by the conflict. The highest level in recent years was recorded at USD 119.6 in 2022.

Türkiye's main crude oil suppliers



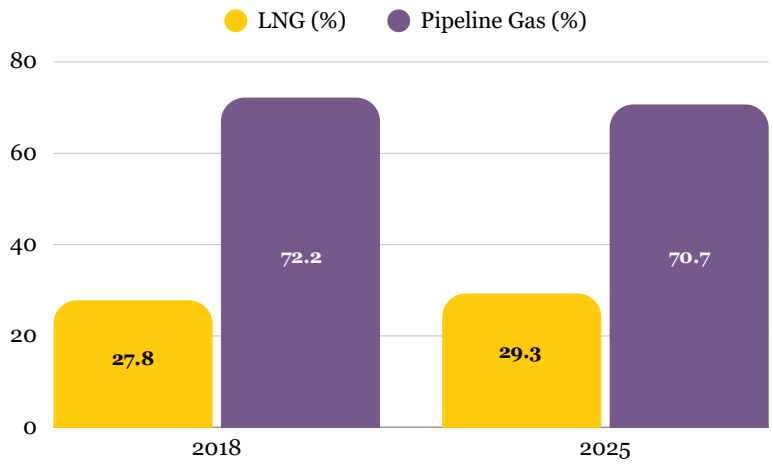
Türkiye's relatively limited dependence on supply routes through the Strait of Hormuz reduces the likelihood of major supply disruptions. However, Iraq's announcement of a temporary halt in crude oil exports following attacks in Northern Iraq after March 15 indicates potential challenges. Prolonged high oil prices may exert significant pressure on macroeconomic balances. In 2022, when Brent prices exceeded USD 100 on average, energy-driven trade deficit increased by 90% to USD 80 billion, total trade deficit rose 2.4 times to USD 110 billion, and current account deficit increased 3.5 times to USD 48 billion.

Current status of natural gas prices and supply

European natural gas prices continue to exhibit high volatility in parallel with geopolitical developments. Prices rose to as high as EUR 336.7/MWh in 2022. Over the past year, prices increased from around EUR 30/MWh to EUR 56/MWh with the crisis, and then declined to EUR 49/MWh.

The share of LNG in Türkiye's natural gas supply, particularly the share of spot LNG, has increased in recent years.

Share of LNG and Pipeline Gas in Türkiye's Natural Gas Imports (%)



2018: Approximately 40% of LNG was spot
2025: Approximately 75% of LNG is spot

Share of main suppliers in Türkiye's total natural gas imports in 2025

Pipeline Gas

- Russia: 36.5%
- Azerbaijan: 20.6%
- Iran: 13.5%

LNG

- United States: 15.7%
- Algeria: 7.7%
- Other countries: 6%

The United States is becoming an increasingly important supplier in the spot LNG market. At the same time, the share of long-term oil-indexed contracts in Türkiye's natural gas supply is decreasing, while the share of short-term and spot LNG—more exposed to market dynamics—is increasing. This shift:

- Enhances supply flexibility,
- However, also increases exposure to price volatility

Natural gas consumption and electricity generation in Türkiye

An analysis of Türkiye's natural gas consumption reveals a significant decline in the use of natural gas for electricity generation since 2018.

Examining the structural shift in consumption between 2018 and 2024:

- Natural gas use in electricity generation declined from 18–20 bcm to 13–14 bcm.
- The share of the electricity sector in natural gas consumption decreased from 37% to 25%, corresponding to a reduction of 4.7 bcm.
- Despite this decline, total natural gas consumption increased by 4.2 bcm.
- This increase was primarily driven by rising residential demand

This trend highlights that while Türkiye's reliance on natural gas in electricity generation has weakened, overall demand remains elevated due to growing residential consumption.

Change in Electricity Generation by Source (2018–2024)

Source	Change
Solar	+18 GWh
Wind	+17 GWh
Coal	+9 GWh
Hydro and other renewables	+25 GWh
Natural gas	−27 GWh

Total electricity generation increased by 42 GWh over the same period.

Although the decline in dependence on natural gas for electricity generation is a positive development, this trend remains sensitive to hydrological conditions. In years of low hydroelectric output, reduced generation is typically offset by increased use of natural gas power plants.

Indeed, due to the drought experienced in 2025, natural gas consumption in the electricity sector increased by 2.8 bcm compared to 2024, raising the sector's share in total natural gas consumption to 28%.

Winter supply security risk

From an energy supply security perspective, ensuring uninterrupted supply of natural gas for residential heating during winter months is of critical importance in Türkiye. Past disruptions highlight this vulnerability. For instance, in January 2022, a supply interruption from Iran, led to temporary curtailments—lasting up to three days—on power generation plants and some industrial facilities in order to sustain household and critical public services consumption.

Seasonal dynamics provide some relief. Declining residential demand after March, together with increased seasonal hydroelectric generation can reduce the reliance on natural gas. However, if supply disruptions linked to ongoing geopolitical tensions persist into the winter of 2026–2027, additional and potentially more comprehensive measures may be required. Moreover, if such disruptions extend into the summer months, refilling gas storage during a typically low-demand period could become more costly, leading to higher winter prices.

Several adverse scenarios could further elevate risks to Türkiye's pipeline-based gas supply, including:

- A prolonged conflict in Iran and constraints on transit through the Strait of Hormuz
- Damage to Iran's gas production and transmission infrastructure
- Disruptions in gas flows from Azerbaijan

In such cases, compensating for supply shortfalls through increased pipeline imports from Russia or additional LNG—particularly from the United States—may tighten global supply conditions and exert upward pressure on prices. A prolonged disruption of LNG exports from Gulf countries would further strain global markets, as Türkiye and Europe compete with sustained demand from East Asia, increasing pressure on alternative suppliers such as the United States, Russia, and Australia.

Renewable energy and Türkiye's energy independence

Periods of crisis tend to amplify the economic and security implications of Türkiye's dependence on energy imports. While substituting natural gas with coal—particularly domestic coal—is often considered as an initial response, this option faces significant practical constraints in Türkiye.

Beyond well-known climate, environmental, and public health concerns, new coal-fired power investments face serious financing barriers, long development timelines, and high upfront costs. Permitting and infrastructure requirements typically extend project lead times to at least five years. In the short term, imported coal plants are already operating at high capacity utilization rates, limiting their ability to increase output. Domestic coal plants, meanwhile, face structural challenges—including aging assets, lower efficiency, supply constraints, and financial pressures—that restrict their ability to scale up generation.

Against this backdrop, accelerating the clean energy transition remains critical for mitigating risks. In particular, reducing reliance on imported fossil fuels in power generation is essential to prevent electricity shortages. Renewable energy sources - especially solar and wind - stand out as the fastest and most scalable options. At the same time, modern, flexible, and increasingly digitalized electricity networks, supported by battery storage and other flexibility solutions, will be key to ensuring system reliability in a renewable-based energy system.

Recent increases in the share of renewable energy in electricity generation, alongside a reduced need for imported natural gas, have already strengthened Türkiye's energy system resilience. Further expansion of renewables and a continued reduction in fossil fuel use will play a critical role in enhancing energy security.

However, fossil fuel dependence persists in transport, heating, and industry. Strengthening energy independence in the medium term will require accelerated electrification across these sectors wherever feasible.

Ultimately, building a resilient energy system—where energy independence, energy security, and decarbonisation advance together—requires comprehensive planning of all components of the energy transition. A lasting solution will depend on efficiency-oriented industrial and transport policies that reduce energy intensity, increase value-added, and strengthen strategic sectors.

Priority policy actions for energy security

Reducing natural gas dependency in electricity generation: Strengthen system resilience by accelerating renewable energy investments, with a particular focus on scaling up storage-integrated solar and wind capacity.

Managing natural gas supply risks during the transition: Maintain supply diversity by preserving a balanced mix of pipeline gas and LNG; expand access to LNG from multiple geographies; optimise the balance between long-term contracts and spot purchases; and strengthen storage capacity to manage winter demand peaks and potential supply disruptions.

Strengthening electricity transmission and distribution grids: Rapidly deploy solutions that enhance system flexibility and resilience, such as battery storage systems, demand-side management, grid modernisation, and digitalisation, in line with the growing share of renewable energy.

Accelerating complementary market reforms: Advance electricity market design reforms that enable and incentivise battery storage, demand-side participation, and flexibility services, while improving price signals and system reliability.

Accelerating energy efficiency and electrification: Scale up energy efficiency measures across transport, industry, and buildings, and support the transition to electrified technologies wherever feasible.

Coordinated planning of energy transition and energy security policies: Ensure that energy security, energy independence, and decarbonisation objectives are addressed in a mutually reinforcing manner, supported by long-term, integrated policy and investment planning.

Industrial transformation and structural reduction of energy demand: Promote a shift from energy-intensive production structures towards innovation-driven, high value-added, and lower energy intensity sectors to sustainably reduce energy import dependency.

In a context of increasing geopolitical tensions, Türkiye's energy transition is not only a climate imperative—it is a core national strategy to strengthen energy security, reduce external dependency, and enhance economic resilience.

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