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BRINGING KRG NATURAL GAS TO GLOBAL MARKETS:

OPPORTUNITIES AND CONSTRAINTS

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Executive Summary

The impact of the U.S.–Israeli war with Iran, which broke out on February 28, 2026, on global energy markets and energy security has presented a significant opportunity for the Kurdistan Regional Government (KRG) to bring its natural gas capacity to the forefront, both in the rest of Iraq and in Europe. Capitalizing on this opportunity depends on translating the region's reserve potential into actual production, overcoming technical and infrastructural obstacles, determining priorities between domestic consumption and exports, and resolving political disputes.

- The KRG's abundant natural gas resources have attracted the attention of major powers to the region, particularly regarding the development of its natural gas sector. According to estimates by the KRG Ministry of Natural Resources, the region may hold natural gas resources equivalent to approximately 3% of the world's total natural gas reserves.[1]
- The KRG's strategic location between producing regions and consumer markets, its potential to integrate its natural gas network into regional and international energy infrastructure, and its proximity to Türkiye, a major energy transit country, provide significant advantages in capitalizing on growing global energy demand.
- Nevertheless, despite having focused on developing its natural gas sector since 2007 and increasing the share of natural gas in electricity generation, the KRG has failed to develop sufficient capacity to meet its entire domestic demand. The failure to resolve longstanding disputes between Erbil and Baghdad, technical and infrastructural challenges, and the intertwining of energy issues with political disputes continue to hinder the sector's development.
- One of the primary technical obstacles is the need for gas processing. The high hydrogen sulfide content of natural gas in most of the region's gas fields poses challenges for processing and transportation. Developing these fields requires the establishment of extensive gas treatment facilities and substantial investment in costly technical infrastructure. In contrast, fields such as Khor Mor, which have lower hydrogen sulfide concentrations, can be more easily integrated into existing processing and transportation infrastructure.
- The markets to which increased natural gas production is directed also determine the region's export capacity. A significant portion of the additional production capacity at the Khor Mor field is being allocated to supplying power plants within the KRG's territory. The commencement of natural gas deliveries from Khor Mor to Iraq's Federal Ministry of Electricity in August 2026 has provided concrete evidence that the region's resources can contribute to Iraq's over-

all energy supply. Meanwhile, the allocation of part of the Chamchamal field's future production to regional industrial facilities indicates that natural gas will primarily be used for domestic consumption. Therefore, the KRG's potential to enter international markets depends not only on increasing production capacity but also on establishing priorities for gas utilization. It is not possible to regard all existing production as export-ready natural gas supply.

- The development of the natural gas sector in the KRG has the potential to reduce Iraq's dependence on Iranian natural gas and help meet the federal government's electricity needs. However, Tehran is assessed to be concerned about the Erbil administration's efforts to develop its natural gas sector, given the possibility that KRG gas could serve as an alternative to gas supplied by Iran.
- In addition to regional competition, internal political disputes within the KRG also play a decisive role in shaping the sector's future. The rivalry between the KRG's two main political parties, the Kurdistan Democratic Party (KDP) and the Patriotic Union of Kurdistan (PUK), constitutes one of the most significant obstacles to the development of the natural gas sector. Ensuring the sector's sustainable development requires the establishment of comprehensive and institutionalized cooperation between the two parties.
- Overcoming these obstacles and transforming KRG natural gas into an alternative energy source for Europe, beyond merely meeting domestic demand, would enhance the region's strategic importance in terms of energy supply, energy revenues, foreign corporate investment, and capital inflows. In this context, natural gas serves not only as a resource supporting the KRG's economic development but also as an instrument for strengthening Erbil's political and geoeconomic position vis-à-vis Baghdad and European countries.

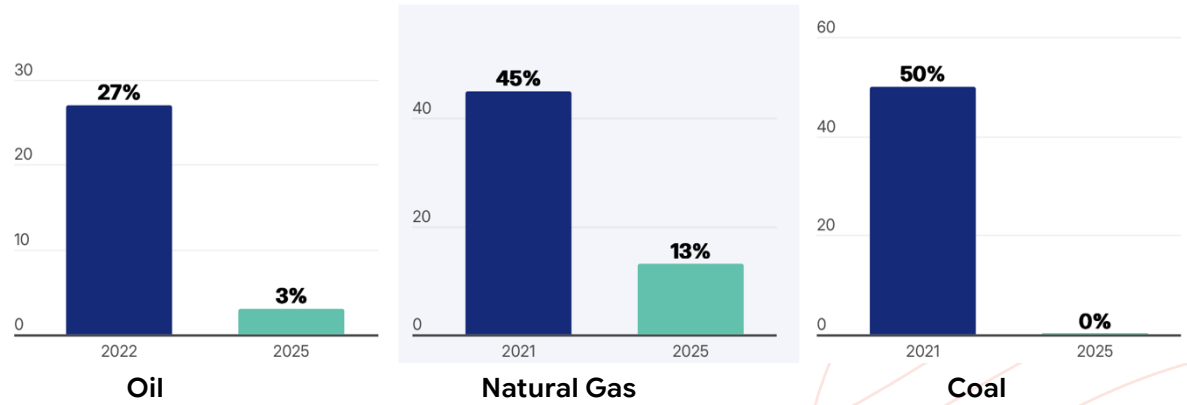
Introduction

The war that broke out between the U.S.–Israeli axis and Iran in February 2026, followed by Iran's closure of the Strait of Hormuz, one of the world's most critical chokepoints for global energy trade, to maritime traffic, directly undermined global energy security and triggered a severe crisis in international energy markets. Given that approximately one-fifth of global seaborne oil trade and more than 20% of global liquefied natural gas (LNG) trade pass through the Strait of Hormuz, the blockade of this critical passage posed a serious threat to international energy supply security. The price of Brent crude oil, which had hovered around $70–75 per barrel before the war, surged past the $120 threshold to reach as high as $126, heightening the risks of global inflation and recession through rising energy costs.[2] Described by the International Energy Agency (IEA) as "the greatest global energy security challenge in history" and "the largest supply disruption in the history of the global oil market," this situation has prompted international markets, particularly Europe, which is heavily dependent on energy imports, to seek new, alternative, reliable, and sustainable sources of supply.[3] Within this emerging geopolitical landscape, the strategic importance of the KRG's natural gas capacity for diversifying global energy supplies has increased, as it offers the potential for an alternative overland supply route through pipelines, despite its geographical proximity to the conflict zone.

The recent crisis that erupted in the Middle East has further deepened the vulnerabilities of global energy markets, which had already been destabilized by the Russia–Ukraine war that began in 2022. The European Union's (EU) heavy dependence on Russian natural gas supplies prior to Russia's invasion of Ukraine led to the renewed securitization of natural gas in international politics.

The recent crisis that erupted in the Middle East has further deepened the vulnerabilities of global energy markets, which had already been destabilized by the Russia–Ukraine war that began in 2022.

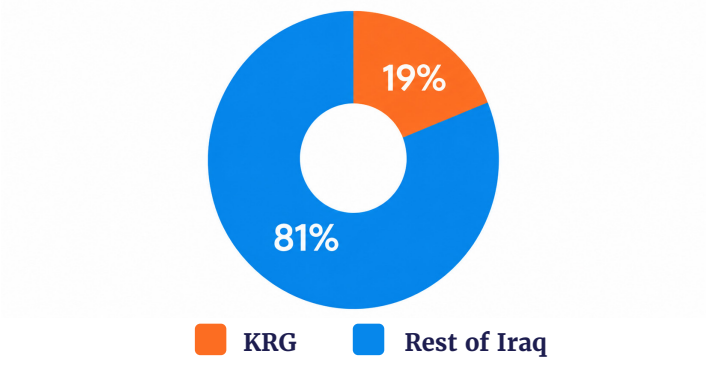
Figure 1: Europe's Energy Imports from Russia[4]



The EU's heavy dependence on Russia for natural gas imports prior to Russia's invasion of Ukraine made energy security one of the central issues on Europe's foreign policy agenda and in international relations following the outbreak of the war. In this context, European countries increased their imports of liquefied natural gas (LNG) from the United States and Qatar to reduce their dependence on Russian natural gas, while also pursuing investments in renewable energy, energy conservation policies, and, in some countries, new policy approaches toward coal and nuclear energy. Consequently, European countries sought to reduce their vulnerability to Russia by placing alternative energy sources in Central Asia, the Middle East, and Africa on their policy agendas.[5]

This situation presents a significant opportunity for the KRG. However, the KRG's ability to position itself as a reliable natural gas supplier to Europe depends not only on its reserve potential but also on increasing production capacity, developing export infrastructure, and institutionalizing energy diplomacy. Although data from the KRG Ministry of Natural Resources suggest that the region holds approximately 3% of the world's natural gas reserves, according to a report by the Energy Institute, an independent international organization, Iraq's total proven natural gas reserves amount to approximately 3,5 trillion cubic meters, ranking the country 11th globally.[6] Within this context, the KRG accounts for one-fifth of Iraq's proven natural gas reserves.

Figure 2: The KRG's Share of Iraq's Proven Natural Gas Reserves[7]



The KRG's role in the energy supply security equation is becoming increasingly significant. In particular, the completion of the KM250 expansion project at the Khor Mor field in October 2025 has resulted in a tangible increase in the region's production capacity.[8] If this momentum is sustained and transportation pipelines are constructed and secured, exporting natural gas to European markets, particularly through Türkiye, will emerge as a more viable option. At the same time, advancing export plans in coordination with the Iraqi federal government, rather than bypassing it, and taking local and regional dynamics into account will make the KRG's progress toward becoming part of the international energy supply framework more concrete and institutionalized.

This study examines data on the KRG's natural gas reserves, developments in production capacity, and activities within the sector, as well as the local, regional, and international challenges it faces. By focusing on discovered natural gas reserves in the region, export opportunities, and infrastructure development, the study assesses the opportunities and risks facing both Iraq and the KRG.

1. Historical Background of the KRG's Natural Gas Sector

Following the U.S. invasion of Iraq in 2003, hydrocarbon resources became one of the central pillars of the KRG's economic development strategy and pursuit of political autonomy. The failure to enact comprehensive federal oil and natural gas legislation in Iraq following the adoption of the 2005 Constitution provided the Erbil administration with an opportunity to establish its own institutional and legal framework for the energy sector. In this context, the KRG Ministry of Natural Resources was established in 2006, and the KRG Parliament adopted the Oil and Gas Law in 2007.[9] The fact that more than 90% of the country's revenues depend on oil and natural gas exports has exacerbated disputes over the division of powers between Erbil and Baghdad, producing profound economic and political consequences for the parties involved, which continue to this day. Indeed, taking advantage of the constitutional ambiguity surrounding the allocation of authority, the KRG signed large-scale contracts with international companies such as Chevron, ExxonMobil, Total, Rosneft, and Genel Energy, laying the groundwork for disputes between Erbil and Baghdad.

In 2007, the KRG also signed natural gas agreements with Dana Gas and Crescent Petroleum.[10] Under these agreements, the companies were granted exclusive rights to explore for, develop, produce, market, and sell oil and natural gas from the Khor Mor and Chamchamal fields under KRG control, while securing access to a stable supply of natural gas to fuel power plants in the region in return. Established in 2005, Dana Gas describes itself in its corporate profile as the first and largest private-sector natural gas company operating in the Middle East. The company conducts exploration and production, processing, and transportation activities in Egypt and the KRG. Through the $250 million KM250 expansion project, the company aimed to expand

the Khor Mor field and increase its production capacity to 20 million cubic meters per day by April 2023. However, due to security risks and attacks in the region, this target was delayed and could only be achieved following the completion of the project in October 2025, with production reaching the targeted level in 2026.[11]

The largest and most active investors in the sector are the UAE-based companies Dana Gas and Crescent Petroleum. The Pearl Petroleum consortium, established under the leadership of these two companies, also includes European firms from Austria (OMV), Germany (RWE), and Hungary (MOL Group), each holding a minority stake of 10%. Meanwhile, the production-sharing contracts for the Bina Bawi and Miran fields held by Genel Energy, which had previously been a major player in the KRG's natural gas sector, were terminated by the KRG at the end of 2021. In arbitration proceedings before the London Court of International Arbitration (LCIA), the termination was ruled valid. This development demonstrates that the investment environment in the KRG's natural gas sector cannot be considered independently of legal and political uncertainties.[12]

Table 1: Companies Operating in the KRG's Natural Gas Sector and the Current Status of Gas Fields[13]

Production	Area of Operations	Company Share	Status	Country	Operating Companies	Discovered Fields
700 million ft^3/day	Sulaymaniyah	%35	Production	UAE	Dana Gas	Khor Mor Chamchamal
		%35		UAE	Crescent Petroleum	
		%10		Austria	OMV	
		%10		Germany	RWE	
		%10		Hungary	MOL Group	
No Production	Erbil	%100	Development (Contract Terminated)	Türkiye	Genel Energy	Bina Bawi
No Production	Sulaymaniyah	%100	Development (Contract Terminated)	Türkiye	Genel Energy	Miran
No Data Available	Erbil	No Data Available	Production	KRG (Iraq)	KAR Group	Khurmala

2. Natural Gas Fields and Potential Reserves in the KRG

Natural gas resources are concentrated in the central and southern parts of the KRG, particularly in the Khor Mor and Chamchamal fields. Assessments by the United States Geological Survey (USGS) indicate that the basin located within the KRG's borders contains more than 1,70 trillion cubic meters of natural gas reserves.[14]

In November 2015, Tony Hayward, then CEO of Genel Energy, stated that the KRG's territory was estimated to hold approximately 5 trillion cubic meters of natural gas, exceeding the reserves of several major natural gas suppliers, including Norway, Libya, Azerbaijan, and the Netherlands.[15] Furthermore, according to assessments by UAE-based Dana Gas and its partners, the Khor Mor and Chamchamal fields alone are estimated to contain approximately 2.10 trillion cubic meters of natural gas and 7 billion barrels of oil in geologically risked petroleum initially in place (PIIP).[16]

Table 2: Oil and Natural Gas Reserves[17]

Field	Proven Oil Reserves + Potential (million barrels)	Proven + Potential Natural Gas Reserves (billion m^3)
Khurmala	2,726	101.9
Shaikan	1,001	36.8
Atrush	854	2.8
Tawke	731	2.8
Taq Taq	579	2.8
Kurdamir	541	65.1
Sehikh Adi	531	11.3
Pulkhana	409	-
Topkhana	55	48.1
Chamchamal	10	96.3
Khor Mor	138	124.6
Miran	34	99.1
Bina Bawi	45	138.7
Summail	-	39.6
TOTAL	7,754	770.2

Optimistic projections made in the past regarding the KRG's natural gas potential have tended to position the region as a significant player in global energy markets. However, current international energy data indicate that these assessments should be cautiously compared with proven reserves. According to 2023 data, Iraq holds approximately 3,50 trillion cubic meters of proven natural gas reserves, accounting for 2% of global reserves. This makes it necessary to assess the reserve potential attributed to the KRG separately from confirmed national reserve figures.[18]

Table 3: Hydrogen Sulfide (H_2S) Content in the KRG's Natural Gas Fields[19]

Gas Field	H_2S Content	Approximate Volume Percentage
Khor Mor	100 ppm	%0.01
Kurdamir	6,000 ppm	%0.6
Bina Bawi	12,000–20,000 ppm	%1.2–2
Miran	12,000–20,000 ppm	%1.2–2
Khurmala Dome	72,000 ppm	%7.2
Pirmam	180,000 ppm	%18

The data presented in Table 3 demonstrate that natural gas fields in the KRG differ significantly not only in terms of reserve volumes but also in their chemical composition and processing requirements. Indeed, the high sulfur content of natural gas in certain fields makes it difficult to integrate these resources directly into existing production and transportation infrastructure.

An increase in the concentration of hydrogen sulfide (H_2S) in natural gas necessitates extensive treatment before the gas can be delivered to consumers or introduced into pipeline systems. This is because hydrogen sulfide that has not been adequately re-

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moved poses risks to operational safety and prevents the gas from meeting international commercial quality standards. This creates a significant gap between total reserve volumes and the amount of natural gas that can be technically and commercially utilized, particularly in fields such as Miran, Bina Bawi, Khurmala Dome, and Pirmam.

These technical differences between fields also explain why investments in the KRG's natural gas sector have been largely concentrated in the Khor Mor field. The relatively low H_2S content at Khor Mor, together with its existing processing facilities and pipeline connections to power plants, has enabled the field to be developed at lower risk and investment cost compared with other resources. By contrast, bringing fields with substantial reserve potential, such as Bina Bawi and Miran, into production depends not only on conducting new drilling operations and constructing pipelines but also on establishing capital-intensive processing facilities capable of removing high concentrations of hydrogen sulfide. Furthermore, resolving the ongoing contractual and legal disputes between the companies and the KRG would also accelerate the transition of these fields to commercial production.

Therefore, the total volume of natural gas reserves held by the KRG does not, on its own, provide an accurate indication of the region's production and export capacity. In calculating the actual volume of natural gas available for export, the H_2S content of the fields, the volume of marketable gas obtained after treatment, and processing costs must be assessed together. In this context, under a scenario in which high-sulfur fields other than Khor Mor cannot be brought into production, a significant proportion of the region's annual natural gas supply would have to be allocated to meeting domestic electricity demand. In addition, the Pearl Petroleum consortium, led by Dana Gas and Crescent Petroleum, has signed ten-year natural gas sales agreements with six companies to sell a portion of the natural gas planned to be produced from the Chamchamal field to regional industrial enterprises. This, in turn, significantly limits the prospects for achieving high-volume natural gas export targets to the Turkish and European markets in the near term.

3. The KRG's Natural Gas Infrastructure

Dana Gas has been one of the leading investors in the KRG's natural gas sector and has played a pioneering role in the development of the region's natural gas infrastructure. At the same time, the integration of the domestic market has gained momentum with the involvement of local companies. In this regard, the local energy company KAR Group undertook a strategic natural gas pipeline project comprising a 36-inch pipeline from the Khor Mor natural gas fields to Erbil and a 52-inch pipeline from Erbil to Duhok. The Erbil–Duhok natural gas pipeline, constructed at a cost of $591 million, was completed and officially commissioned in October 2025.[20] Production data from Dana Gas and its partners indicate that gross natural gas production, which stood at approximately 12,8 million cubic meters per day during 2021–2022, increased significantly follow-

ing the commissioning of the KM250 expansion project in October 2025. With the completion of the project, the Khor Mor field's total processing capacity rose to 21,2 million cubic meters per day, while production reached approximately 19,8 million cubic meters per day as of December 2025.[21]

This increase in production has also marked a new phase in addressing the electricity crisis, one of the KRG's most significant infrastructure challenges. Although the KRG's total installed electricity generation capacity stands at approximately 8,000 MW, actual generation remained constrained to around 4,000–4,500 MW for many years due to insufficient natural gas supplies to fuel its power plants. However, the completion of the Erbil–Duhok pipeline, additional gas supplies from the KM250 project, and the government's "Runaki (Light)" initiative, launched in 2024, have brought the region significantly closer to its goal of providing 24-hour uninterrupted electricity from the public grid across much of its territory since late 2025.[22]

The KRG's natural gas sector has reached its current production capacity not only through technical investments but also as a result of managing past legal and financial disputes. As may be recalled, in 2013, the Pearl Petroleum consortium, led by Dana Gas and Crescent Petroleum, initiated arbitration proceedings against the KRG at the London Court of International Arbitration (LCIA), seeking $2.3 billion over underpayments for liquefied natural gas produced. Although the KRG stated that its revenues had declined sharply due to counterterrorism efforts and falling oil prices, the parties reached a comprehensive settlement in 2017. Under the settlement, the KRG paid the company $1 billion, the remaining balance was restructured, and the company's 17-year contract was extended until 2049, with additional blocks incorporated into its areas of operation.

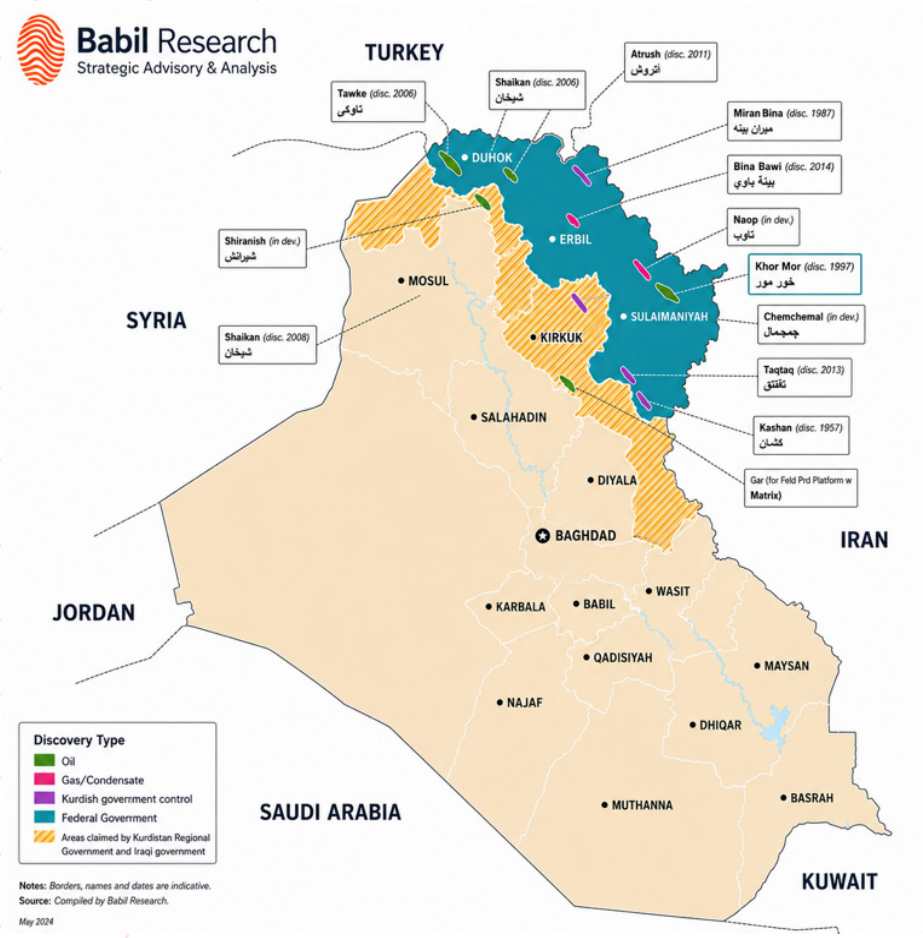
Furthermore, the 2017 settlement marked a significant turning point, bringing an end to enforcement proceedings in the United States and compensation claims amounting to billions of dollars. Under the agreement, the KRG committed to purchasing half of the additional gas production for electricity generation, transforming the relationship between the parties from a legal dispute into a restructured energy partnership. In this regard, the Dana Gas–Pearl Petroleum relationship can be regarded as an important example of both past crises and the capacity for institutional cooperation in the KRG's natural gas sector.[23]

Meanwhile, anticipated international support for export infrastructure has faced setbacks. Despite its statements of intent in 2017, Russia's Rosneft, which was expected to construct pipelines to transport the KRG's natural gas to Türkiye and Europe, was unable to implement the project. In particular, the severe international sanctions and financial restrictions imposed on Rosneft following the outbreak of the Russia–Ukraine war in 2022 made it impossible for the company to provide financial support for the project.[24] Against this international backdrop, export-oriented

pipeline projects were relegated to the background, while priority was given to strengthening the domestic natural gas network through the Khor Mor–Erbil and Erbil–Duhok pipelines.

However, natural gas fields are predominantly concentrated in areas under the control and influence of the Patriotic Union of Kurdistan (PUK) and are also located near border areas where elements of the Popular Mobilization Forces (PMF), including Iran-aligned groups, and the Iraqi army are deployed. Consequently, the management and protection of natural gas infrastructure constitute a complex dynamic that requires security coordination and energy governance among these actors.

Map 1: Distribution of Oil and Natural Gas Fields in the KRG[25]



4. The Importance of KRG Natural Gas for the Energy Market

Although more than 15 years of investment in the KRG's natural gas sector have increased the region's production capacity, fully meeting domestic demand for electricity generation remained a significant challenge until recently. When considered alongside the upward trend in global en-

The KRG's location between energy-producing regions and consumer markets, its potential to integrate its natural gas network into regional and international energy infrastructure, and its proximity to Türkiye, a major energy transit country, facilitate its ability to benefit from growing global energy demand.

ergy demand, this situation further enhances the strategic importance of the KRG's natural gas resources. Indeed, OPEC's World Oil Outlook reports project that global primary energy demand will increase by approximately 23% by 2045, with much of this growth driven by the economies of developing countries, particularly China, India, and other Asian countries.[26]

The KRG's location between energy-producing regions and consumer markets, its potential to integrate its natural gas network into regional and international energy infrastructure, and its proximity to Türkiye, a major energy transit country, facilitate its ability to benefit from growing global energy demand. Awareness among political circles in the region of the need to invest in the natural gas sector further strengthens its capacity to capitalize on these opportunities.

4.1. The Role of Natural Gas in Erbil–Baghdad Relations

Baghdad and Erbil have been unable to resolve their protracted disputes over the management of natural resources. These disputes reached a peak in February 2022, when Iraq's Federal Supreme Court ruled that the KRG's 2007 Oil and Gas Law was unconstitutional, invalidated it, and declared the contracts signed by Erbil with international companies illegal.[27] Consequently, these legal and political disputes with the Baghdad government have adversely affected the development of the KRG's energy sector.

Meanwhile, this situation has been further complicated by the oil export crises between Baghdad and Erbil in recent years. Following a ruling in Baghdad's favor in March 2023 in arbitration proceedings conducted under the auspices of the Paris-based International Chamber of Commerce (ICC), the suspension of the KRG's independent oil exports through Türkiye significantly increased Erbil's economic dependence on federal budget transfers from Baghdad.[28] While Baghdad views these measures as a means of establishing constitutional authority, the KRG considers them an instrumentalization of the law, particularly by Iran through its allies in the Baghdad government, aimed at reducing Erbil's share of the federal budget and undermining the regional government's autonomy.

An examination of Iraq's energy landscape reveals that the country's electricity demand, which peaks during the summer months, reaches between 45,000 MW and 48,000 MW according to

recent data. By contrast, the national grid's current generation capacity remains at approximately 24,000–26,000 MW, including power plants fueled by domestic gas, imported gas, and liquid fuels.[29] Due to this structural supply deficit, Iraq has long depended on electricity and natural gas imports from Iran to sustain its power system. Indeed, the five-year agreement renewed with Iran in March 2024 provided for Iraq to import up to 18,6 billion cubic meters of natural gas annually (approximately 50 million cubic meters per day) for use in its power plants. While this energy dependence places a substantial burden on the Iraqi economy, the country has also had to settle more than $4 billion in accumulated debts to Iran arising from these imports in recent years.[30] Although it is not technically feasible for Iraq to discontinue electricity and natural gas purchases from Iran in the short term, the Baghdad government faces a severe energy bottleneck amid U.S. sanctions waivers and political pressure.

The fundamental paradox of this crisis is that, despite possessing substantial natural gas reserves, both Iraq and the KRG have struggled to achieve the electricity generation capacity needed to meet their demand. In the past, the KRG Ministry of Natural Resources optimistically estimated that the region could hold up to 5,67 trillion cubic meters of natural gas reserves. However, this figure should be regarded as an estimate of potential resources rather than proven reserves. By contrast, current international data indicate that Iraq as a whole holds 3.5 trillion cubic meters of proven natural gas reserves.[31] Meanwhile, independently of Erbil, Baghdad has pursued a goal of significantly increasing natural gas production and eliminating imports by 2025, particularly by capturing and utilizing gas that would otherwise be flared at oil fields in southern Iraq. Indeed, although significant progress has been made in processing associated gas through the $27 billion Gas Growth Integrated Project (GGIP), signed with French energy giant TotalEnergies, and investments by the Basrah Gas Company, the goal of eliminating gas imports had not yet been fully achieved as of 2025/2026, and the need for Iranian gas persisted.[32] Therefore, a political agreement between the Erbil and Baghdad governments would make it considerably more feasible to meet the country's entire electricity demand from domestic resources in the near future and subsequently export natural gas to international markets.

In this context, a significant development took place in August 2026 regarding the supply of natural gas from the KRG to the rest of Iraq. Under an agreement signed with Iraq's Federal Ministry of Electricity in December 2025, Dana Gas and Crescent Petroleum began supplying 100 million standard cubic feet (approximately 2,83 million cubic meters) of natural gas per day from the Khor Mor field to the Taza power plant in Kirkuk on August 4, 2026. Initially covering a one-year period, the agreement enabled the additional production and processing capacity created by the KM250 expansion project at Khor Mor to be utilized within Iraq's federal electricity system. This development demonstrated that natural gas from the KRG could play a tangible role not only in meeting regional electricity demand but also in diversifying Iraq's overall energy supply.[33]

4.2. Achieving Integration Between Sulaymaniyah and Erbil

Disputes between the PUK and the Kurdistan Democratic Party (KDP) over control of energy policy and decision-making are among the biggest obstacles to the development of the natural gas sector. The disagreements between the two parties are not limited to political and administrative issues but also involve economic factors. Both parties believe that whoever controls the energy sector in the KRG will also be able to control the economic sphere and, consequently, gain the upper hand in domestic and foreign politics.

The PUK does not want the KDP to replicate in the natural gas sector the success it achieved in gaining control over the oil sector in previous years.

The PUK does not want the KDP to replicate in the natural gas sector the success it achieved in gaining control over the oil sector in previous years. This is because a substantial proportion of the region's natural gas reserves, particularly the Khor Mor and Chamchamal fields, are located around Sulaymaniyah, an area under the PUK's military and administrative control. However, the KDP's numerical majority in the KRG Parliament, its control of the presidency and premiership, and its efforts to manage natural gas production and exports independently through diplomatic relations are a source of serious concern for the PUK.

At this point, it is essential to examine the historical background of relations between the two parties. The deep leadership crises that emerged within the PUK following the death of its historic leader, Jalal Talabani, in 2017, and Bafel Talabani's subsequent consolidation of power and adoption of a more aggressive political approach, created a sharp rupture in relations between the two parties. In particular, allegations that Sulaymaniyah Governorate was not receiving its fair share of budget allocations and energy revenues, the political assassinations in Erbil in 2022, and the subsequent boycott of KRG cabinet meetings by PUK ministers for several months further deepened tensions between Erbil and Sulaymaniyah. This institutional and political fragmentation between the two rival parties poses a significant risk to the region's energy sector and directly delays infrastructure investments. Furthermore, shifts in the political balance between the two parties, coupled with a lack of transparency and institutionalization, have created uncertainty over the prospects of transforming the issue of natural resources into an opportunity for economic integration between Sulaymaniyah and Erbil.[34]

4.3. Export Scenarios for the KRG's Natural Gas

The construction of a pipeline to transport the KRG's natural gas to European markets via Türkiye depends not only on the region's total reserves but also on the volume of natural gas that can be

produced annually and allocated for export. This is because the economic feasibility of pipeline investments is determined by a steady flow of gas secured through long-term sales contracts, rather than the total volume of resources estimated to lie underground. Therefore, any assessment of the KRG's potential export capacity must clearly establish how much gas can be produced from individual fields, what proportion of that production will be allocated to meeting the region's electricity demand, and how much surplus gas will remain available for export after domestic consumption has been met.

Although the capacity expansion at the Khor Mor field has led to significant progress in the KRG's natural gas production, a substantial proportion of current output is used to supply power plants within the KRG and to deliver gas to the Iraqi Federal Ministry of Electricity under an agreement signed in August 2026. Therefore, it is not possible to regard all the natural gas produced at Khor Mor as export-ready supply that could be directed to Turkish or European markets. Achieving annual export targets of 10 billion m^3 would require not only increased production at Khor Mor but also the development and commissioning of fields such as Chamchamal, Miran, and Bina Bawi, which have either not yet entered production or remain under development. Nevertheless, ongoing technical, legal, and contractual issues affecting these fields continue to create uncertainty regarding the volume of natural gas that could be allocated for export in the short term.

For this reason, assessing the export options for the KRG's natural gas under different production and supply scenarios offers a more realistic approach. A low-volume scenario of up to 5 billion m^3 per year could initially be limited to regional sales targeting Türkiye's domestic market. A medium-scale scenario of between 5 and 10 billion m^3 per year could enable stronger integration with Türkiye's natural gas network and, on that basis, the exploration of opportunities to access European markets. A high-volume export scenario exceeding 10 billion m^3 per year would require the simultaneous development of multiple natural gas fields, the construction of new processing facilities, and the signing of long-term gas purchase agreements between producers and buyers. Furthermore, making such capacity sustainable would require a binding agreement between Erbil and Baghdad governing export authority, revenue sharing, and the legal status of the natural gas sector.

Therefore, bringing the KRG's natural gas to international markets via Türkiye and Europe is not merely a technical infrastructure issue that can be resolved through the construction of a new pipeline. Achieving this objective also depends on establishing sustainable production capacity sufficient to make the pipeline economically viable, generating an adequate export surplus after meeting domestic consumption needs, and securing this supply through long-term contracts.

4.4. The Role of KRG Natural Gas in Europe's Energy Security

The war between Russia and Ukraine that began in February 2022 and the severe sanctions imposed

on Moscow by the European Union (EU) sharply reduced the share of Russian natural gas in the European market, prompting European countries to seek alternative sources of supply. Indeed, while Russian gas accounted for 45% of the EU's total natural gas imports in 2021, its share had fallen to 12% by 2025. Over the same period, the share of liquefied natural gas (LNG) in total gas imports increased from 20% to 45%. In 2025, Norway accounted for 31% of the EU's natural gas imports, followed by the United States at 26%, North Africa at 13%, Azerbaijan at 4%, and Qatar at 4%.[35] Although this diversification has significantly reduced Europe's dependence on Russia, the growing share of LNG in total imports has made the continent more vulnerable to global price fluctuations and potential disruptions to maritime transportation.

Following the geopolitical disruption caused by the 2022 war, the Iran-centered crises around the Strait of Hormuz in 2026 also raised serious concerns about the security of seaborne LNG supply chains. In 2024, approximately 20% of global LNG trade passed through the Strait of Hormuz, with 83% of the LNG transported along this route destined for Asian markets. Therefore, the impact of any disruption in the strait on Europe would not be limited to the volume of natural gas imported directly from Qatar. Major Asian buyers turning to LNG cargoes from the United States, Africa, and other producing regions could intensify price competition between European and Asian markets, placing additional pressure on Europe's energy procurement costs. Indeed, following the 2026 crisis, spot LNG prices in Asia rose above European prices, leading to the diversion of flexible LNG cargoes from Europe to higher-priced Asian markets.

Ultimately, the simultaneous emergence of pipeline-related risks associated with Russia and maritime transportation risks centered on the Strait of Hormuz has made the KRG's natural gas, with its potential to offer a more secure overland supply route through pipelines, one of the strategic options for Western actors.[36]

The region's potential has long attracted the attention of international energy companies. In this context, Tony Hayward, former CEO of BP and one of the founders of Genel Energy, described the region in 2011, during the company's entry into the KRG market, as "one of the world's last great exploration frontiers for the oil and gas industry."[37] In this context, transporting the KRG's natural gas to international markets through secure transit routes stands out as a strategic alternative for Western actors seeking to diversify their energy supplies.

Since 2007, the KRG has become an increasingly prominent actor in regional energy geopolitics, owing to its institutional energy policies and natural gas potential. Estimates by regional authorities suggest that the KRG may possess natural gas resources equivalent to approximately 3% of the world's total natural gas reserves. The possibility of accessing European markets via Türkiye further enhances the strategic significance of this potential for energy security. However, the

While pursuing its goal of becoming a regional energy hub, Türkiye is also seeking to meet its growing domestic energy demand and ensure an uninterrupted energy supply for its industrial sector.

total volume of reserves attributed to the region does not necessarily translate into natural gas capacity that can be directly produced and allocated for export. Turning this potential into tangible export capacity depends on developing fields beyond Khor Mor, processing gas with high sulfur content in accordance with international standards, generating a sufficient export surplus after meeting domestic consumption needs, and securing this supply through long-term sales contracts.

Furthermore, managing the energy-related competition between the KDP and PUK, strengthening internal administrative coordination, and resolving the ongoing constitutional and legal disputes between Baghdad and Erbil are among the essential conditions for establishing the KRG as a reliable natural gas supplier. This is because the reliability of a natural gas supplier is measured not only by the size of its reserves or production capacity, but also by its ability to deliver contracted gas to buyer markets continuously and within an agreed timeframe.

Therefore, the role of the KRG's natural gas in Europe's energy security should be assessed not on the basis of previously expressed optimistic estimates of reserves and export potential, but rather in terms of the volume of natural gas that can be produced within a given timeframe, remain available after domestic consumption needs have been met, and be delivered under long-term contracts. In the near term, Türkiye and the rest of Iraq stand out as more feasible and accessible markets for the KRG's natural gas. Large-scale and sustained natural gas supplies to Europe, however, will only become possible once the necessary production, processing, and transportation infrastructure has been developed, commercial guarantees have been secured, and a binding legal and political agreement has been reached between Erbil and Baghdad.

4.5. The Natural Gas Dimension of KRG–Türkiye Relations

The KRG's proximity to Türkiye, a key energy transit country, and the strong relations between Ankara and Erbil are considered significant advantages for bringing the region's natural gas and oil to international markets. For Türkiye, however, this relationship extends beyond strengthening its role as an energy transit corridor. While pursuing its goal of becoming a regional energy hub, Türkiye is also seeking to meet its growing domestic energy demand and ensure an uninterrupted energy supply for its industrial sector.[38]

Particularly following the outbreak of the Russia–Ukraine war in 2022 and the subsequent global energy shocks, Ankara has viewed the KRG's natural gas as a strategic option for strengthening Türkiye's energy security and diversifying its sources of supply. The KRG's substantial natural gas potential and geographical proximity to Türkiye present a significant opportunity for Ankara, both in terms of transit advantages and its ambition to become a regional energy hub.[39]

The growing security and energy cooperation between Ankara and Erbil provides an important foundation for transporting the KRG's natural gas to international markets via Türkiye. However, the success of this process depends on more than relations between the KDP and Ankara, as a substantial proportion of the KRG's major natural gas fields are located in the Sulaymaniyah area, where the PUK holds considerable influence. Although relations between Türkiye and Sulaymaniyah have been strained in the past due to Ankara's security concerns over the PKK presence, recent developments, including the lifting of the flight ban, the PKK's symbolic disarmament process, and the increased inclusion of Turkmens in the administration of Kirkuk, suggest a partial thaw in relations. This easing of tensions could expand opportunities for cooperation on exporting the KRG's natural gas to Europe via Türkiye. However, achieving lasting results will depend on maintaining a balance between the KDP and PUK, addressing security concerns centered on Sulaymaniyah, overcoming the legal disputes between Baghdad and Erbil, and establishing trilateral coordination involving Baghdad. In other words, pursuing an energy initiative without Baghdad's involvement could subsequently generate new political, legal, administrative, and economic costs for both Ankara and Erbil.

Table 4: Natural Gas Reserves in Areas Controlled by the KDP and PUK[40]

Natural Gas Reserves in Areas Under PUK Control	Natural Gas Reserves in Areas Under KDP Control
Khor Mor Field: 124.6 billion m^3	Bina Bawi Field: 138.7 billion m^3
Miran Field: 99.1 billion m^3	Khurmala Field: 104.8 billion m^3
Chamchamal Field: 96.3 billion m^3	Summail Field: 39.6 billion m^3
Kurdamir Field: 65.1 billion m^3	Shaikan Field: 36.8 billion m^3
Topkhana Field: 48.1 billion m^3	Sheikh Adi Field: 11.3 billion m^3
	Atrush Field: 2.8 billion m^3
	Tawke Field: 2.8 billion m^3
	Taq Taq Field: 2.8 billion m^3

At this point, the energy sector also offers the KRG an important opportunity to restructure its relations with Baghdad on a more rational basis grounded in mutual interdependence. In this context, rather than allowing political disputes to overshadow the natural gas issue, it should be transformed into an area of shared interest that strengthens economic cooperation, commercial integration, and regional energy security. In this regard, the KRG's existing natural gas capacity offers a strategic opportunity to reinforce domestic stability while enhancing the region's position at both the regional and international levels.

Iran's strategy of military pressure was not limited to Erbil, which is under KDP control, but also targeted the Khor Mor natural gas field, the region's largest production site.

5. Iran's Perspective on the KRG's Natural Gas

A significant proportion of the political and security pressures emanating from Baghdad that constrain natural gas development projects in the KRG must be considered in the context of Iran's influence and the positions of Tehran-aligned actors in Iraq. This is because the prospect of the KRG exporting natural gas to Europe via Türkiye is viewed as a development that could challenge Iran's influence in Iraq's energy market and its regional energy interests. Accordingly, Iran is one of the principal actors opposed to the KRG's ability to independently develop its natural gas and oil production and export these resources to foreign markets. Tehran pursues this position not only through diplomatic channels but also through its political allies and Iran-aligned militia networks in Iraq, thereby deriving a strategic advantage from Iraq's continued dependence on Iranian electricity and natural gas supplies.

Indeed, one of the most significant examples of this was the attacks targeting KAR Group, whose CEO, Sheikh Baz Karim Barzanji, owns a 40% stake in the oil and gas pipelines, while Russia's Rosneft controls the remaining 60%. On March 13, 2022, twelve ballistic missiles launched directly by Iran's Islamic Revolutionary Guard Corps (IRGC) toward Erbil struck Barzanji's villa in the city.[41] Just days after this severe military intimidation, Barzanji stated that "100% of the existing natural gas pipeline, which they planned to expand, would be dedicated to the KRG's domestic infrastructure and had nothing to do with exports outside Iraq." Despite this effort, however, missiles also struck KAR Group's Kawergosk refinery shortly after KRG Prime Minister Masrour Barzani announced in the UAE that the KRG would export natural gas to Europe.[42]

Iran's strategy of military pressure was not limited to Erbil, which is under KDP control, but also targeted the Khor Mor natural gas field, the region's largest production site. The series of attacks on the Khor Mor field began in June 2022 with successive Katyusha rocket strikes. At the

time, Peshmerga forces thwarted the attempted attacks and seized the rocket launchers, leading to assessments that the attacks had been organized from areas controlled by Iranian-backed armed militia groups such as Asaib Ahl al-Haq and Kataib Hezbollah.[43]

The rocket attacks on the Khor Mor field, which began in 2022 without causing major disruptions to production, evolved into more serious security risks in subsequent years. In April 2024, a drone attack on the Khor Mor field resulted in the deaths of foreign workers, a temporary suspension of natural gas production, and widespread power outages across the KRG.[44] Similarly, the Khor Mor field experienced serious disruptions due to attacks throughout the war with Iran, which began in February 2026. The nature and timing of these attacks should be understood in the context of Iran's efforts to preserve its influence in Iraq's energy market, Erbil's attempts to develop its energy infrastructure, and the KRG's ambition to establish export capacity.

Conclusion and Recommendations

The institutional, transparent, and nonpartisan management of the natural gas sector, which holds major strategic importance for the KRG, will play a decisive role in shaping the region's economic and political future. In particular, Europe's efforts to reduce its dependence on Russian natural gas following the outbreak of the Russia–Ukraine war in 2022, together with the maritime transit security challenges around the Strait of Hormuz in 2026, have increased the importance of reliable overland routes for energy supplies. This emerging geopolitical environment has positioned the KRG's natural gas as a potential overland alternative for international markets, while creating a significant opportunity for Erbil to deepen its strategic relations with Türkiye and European countries.

Nevertheless, it would be unrealistic to regard the KRG's natural gas as an alternative capable of replacing Europe's existing large-scale sources of supply. Rather than meeting Europe's overall natural gas demand, the region's potential role is limited to serving as a supplementary source that could contribute to diversifying energy supplies for Türkiye and Europe. For the KRG to translate this potential into tangible export capacity and evolve from an energy actor known primarily for the size of its reserves into a reliable supplier, several fundamental structural steps must be taken:

- **Strengthening Institutionalization and Transparency in Domestic Politics:** Energy competition and political fragmentation between the KDP and PUK should be reduced, while the management of natural gas fields should be placed within a more institutionalized, transparent, and accountable framework. Fairness in the distribution of energy revenues should be ensured, anti-corruption efforts strengthened, and public finances placed on a more sustainable footing. Otherwise, disputes with Baghdad over the budget, arbitration, and revenue

sharing will continue to put pressure on the KRG's economy. Furthermore, the fact that a significant proportion of natural gas fields are located in areas where the PUK holds considerable influence makes it essential to establish a joint, institutionalized decision-making mechanism between the KDP and PUK for the energy sector. This mechanism should cover key issues such as field management, investment decisions, and revenue sharing to ensure that the region's export capacity can be developed independently of political rivalry.

- **Restructuring the Security Framework for Energy Infrastructure:** Opening the natural gas sector to foreign markets makes the KRG's energy infrastructure an increasingly prominent target of regional competition. Rocket and drone attacks on the Khor Mor field have demonstrated that the physical security of energy facilities is vital to the region's economic future. The KRG should therefore deepen security cooperation with its regional partners, particularly Türkiye, and strengthen deterrent defense, early warning, and intelligence mechanisms to protect natural gas fields, processing facilities, and transportation pipelines.

  The impact of security risks to energy infrastructure is not limited to temporary disruptions in production. These risks lead to higher insurance premiums, greater returns demanded by investors to compensate for increased risk, rising financing costs, and reduced commercial viability of pipeline projects. In this context, the security of natural gas fields and transportation pipelines should not be treated as a secondary component of the export strategy, but rather as one of the fundamental conditions directly determining production and financing capacity.

- **Establishing a Legal and Constitutional Agreement with Baghdad:** To ensure the sustainability of natural gas exports, legal and political uncertainties between Baghdad and Erbil must be reduced. Arrangements based on mutual interdependence should be developed for the management of energy resources, export authority, and revenue sharing, preventing rulings by Iraq's Federal Supreme Court from becoming a persistent instrument of pressure. A model under which the KRG contributes to Iraq's electricity and natural gas needs could both expand Erbil's economic room for maneuver and provide Baghdad with a complementary option for reducing its energy dependence on Iran.

  Nevertheless, any potential export model must be based on a binding legal framework involving both Erbil and Baghdad, covering production, sales, transit, revenue sharing, and dispute resolution. Otherwise, renewed disagreements over sales and export authority could lead to disruptions in gas flows, difficulties in implementing long-term contracts, and a loss of investor confidence. Therefore, an agreement between Baghdad and Erbil is not merely a political necessity but also a fundamental prerequisite for natural gas projects targeting foreign markets to secure financing and establish commercial credibility.

- **Developing Technical Production and Processing Capacity:** The size of the total natural gas reserves attributed to the KRG does not, in itself, indicate the volume of gas that can be produced and allocated for export. The fact that current production relies heavily on the Khor Mor field, with a substantial share of its output used by regional power plants, limits the volume of gas available for export in the short term. Therefore, increasing the KRG's export capacity depends not only on expanding existing production at Khor Mor but also on bringing fields that have yet to enter production or whose development remains incomplete into operation.

  Given Iraq's considerable dependence on natural gas and electricity imported from Iran for power generation, it is important for the KRG to present a realistic roadmap for meeting Iraq's natural gas and electricity needs. Amid deepening tensions between Iran and the United States and mounting sanctions pressure, the KRG could adopt a more constructive approach that benefits both its own population and Iraq's overall energy security.

  Pursuing this strategy would enable the KRG to export approximately 30 million m^3 of natural gas per day (10 billion cubic meters annually) to Türkiye and Europe.[45] With the full resumption of the KRG's suspended oil exports, potential combined energy trade revenues exceeding $1.9 billion per month would significantly strengthen the regional economy.[46] Moreover, this substantial capacity would not only help address the KRG's shortcomings in public services and infrastructure but also make an exceptional contribution to permanently resolving the issue of "civil servants' salary payments" in the region, which has repeatedly become a source of political crisis with Baghdad.

  Furthermore, the high hydrogen sulfide concentrations in fields such as Miran, Bina Bawi, Khurmala Dome, and Pirmam necessitate the establishment of extensive gas treatment, processing, and sulfur recovery facilities before these resources can be brought into commercial production. Accordingly, field development policies should be based not merely on total reserve volumes but on the volume of marketable gas that can be obtained after the necessary technical infrastructure is established and processing is completed. Otherwise, conflating substantial underground reserves with short-term production and export capacity will lead to unrealistic expectations.

In conclusion, the KRG's natural gas offers a significant strategic opportunity for the region's economic development, energy security, and external relations. Nevertheless, it does not represent a readily available, large-scale alternative capable of replacing Europe's existing natural gas suppliers in the near term. The KRG's more realistic priorities should be to meet its own energy needs first, contribute to reducing supply shortages in the rest of Iraq, and direct any gas remaining after domestic consumption to the Turkish market.

If the Erbil administration harnesses this potential on the basis of institutional transparency, KDP–PUK cooperation, security capacity, technical production capabilities, long-term commercial contracts, and legal, political, and administrative agreements with Baghdad, the natural gas sector will not only reduce the KRG's financial vulnerabilities but also strengthen the region's role in the energy landscape of Iraq, Türkiye, and Europe. In this way, natural gas could evolve from a mere source of economic revenue into a strategic instrument that supports the KRG's domestic stability, political room for maneuver, and regional geoeconomic position.

Final Notes

1. For the estimate that the KRG may possess up to 200 trillion cubic feet (5.67 trillion m^3) of natural gas reserves, equivalent to approximately 3% of the world's total natural gas reserves, see Kurdistan Regional Government Ministry of Natural Resources, "Vision", August 25, 2013, https://archive.gov.krd/mnr/mnr.krg.org/index.php/en/gas/vision-gas.html
2. U.S. Energy Information Administration (EIA), "World Oil Transit Chokepoints", https://www.eia.gov/international/analysis/special-topics/World_Oil_Transit_Chokepoints
3. International Energy Agency (IEA), "Global Energy Security and Supply Disruptions Reports", https://www.iea.org/topics/energy-security
4. Europe's Energy Imports from Russia, https://commission.europa.eu/topics/energy/repowereu_en
5. For the EU's phased and coordinated process of ending Russian fossil fuel imports under the REPowerEU Roadmap; the decline in Russian gas's share of total EU gas imports from 45% in 2021 to 12% in 2025; the EU's main gas suppliers in 2025 being Norway (31%), the United States (26%), North Africa (13%), Azerbaijan (4%), and Qatar (4%); and the increase in LNG's share of total gas imports from 20% in 2021 to 45% in 2025, see European Commission, Directorate-General for Energy, "In Focus: EU Energy Security Explained", April 20, 2026, https://energy.ec.europa.eu/news/focus-eu-energy-security-explained-2026-04-20_en
6. For a comparison of the Kurdistan Regional Government Ministry of Natural Resources (MNR) reserve estimates and independent global natural gas reserve rankings, see Energy Institute, "Statistical Review of World Energy 2025", https://www.energyinst.org/statistical-review
7. Country Analysis Brief: Iraq, July 14, 2025, https://www.eia.gov/international/content/analysis/countries_long/Iraq/Iraq_2025.pdf
8. Rudaw, "Dana Gas Increases Production at Khor Mor Gas Field by 50%", https://www.rudaw.net/turkish/kurdistan/15102025
9. For details on the legal deadlock surrounding Iraq's Oil and Gas Law since 2005, see Channel8, "Iraq's Oil and Gas Law: 19 Years of Disputes Between Erbil and Baghdad", May 2026, https://channel8.com/english/news/58365
10. Kurdistan Region of Iraq Operations, Source: Dana Gas website, https://bit.ly/3TJLb3K
11. Rudaw, "Dana Gas Increases Production at Khor Mor Gas Field by 50%" (October 15, 2025), https://www.rudaw.net/turkish/kurdistan/15102025
12. Kurdistan Regional Government v. Genel Energy Miran Bina Bawi Limited, itaLaw, https://www.italaw.com/cases/14549

13. The data in the table have been compiled based on the latest production reports of the Pearl Petroleum consortium. Furthermore, Genel Energy's contracts for the Miran and Bina Bawi fields were unilaterally terminated by the KRG at the end of 2021, and the international arbitration proceedings recently concluded in favor of the KRG. (For details on the matter and the arbitration ruling, see Channel8 News, "London Arbitration Court Orders Genel Energy to Pay Over $26 Million to Kurdistan Region for Contract Breach", https://channel8.com/english/news/35437)
14. U.S. Geological Survey (USGS), "Petroleum Reserves and Undiscovered Resources in the Total Petroleum Systems of Iraq", 2021. https://pubs.usgs.gov/myb/vol3/2020-21/myb3-2020-21-iraq.pdf
15. Hürriyet Daily News, "KRG plans 10 bcm in natural gas exports to Turkey in two years", November 20, 2015. https://www.hurriyetdailynews.com/krg-plans-10-bcm-in-natural-gas-exports-to-turkey-in-two-years-91471
16. Dana Gas, "Corporate Report: Quarter 3", p. 5, 2023, https://www.danagas.com/wp-content/uploads/2023/11/Dana-Gas-PJSC-Directors-Report-Quarter-3-2023-English.pdf
17. The field data presented in the table have been compiled from the archived records of the Kurdistan Regional Government Ministry of Natural Resources (MNR) and reserve audit reports prepared by independent international firms (DeGolyer and MacNaughton; Gaffney, Cline & Associates) covering the region's 2P and 2C reserves and contingent resources. The figures in the table reflect seismically established baseline estimates and therefore present a more conservative assessment than the companies' latest projections and estimates (e.g., Dana Gas's estimate of 75 trillion cubic feet). For the archive of the relevant reports, see Kurdistan Regional Government, MNR Publications, https://gov.krd/mnr-en/publications/
18. Energy Institute, "Statistical Review of World Energy", 2025, https://www.energyinst.org/statistical-review
19. For hydrogen sulfide (H_2S) measurements representing the most readily available comparable data for the KRG's gas fields, see Ahmed Tabaqchali, "The Kurdistan Region of Iraq's Gas-Export Potential: Deja Vu All Over Again", Atlantic Council, November 2022, p. 6, https://www.atlanticcouncil.org/wp-content/uploads/2022/11/The-Kurdistan-Region-of-Iraqs-Gas-Export-Potential-Deja-Vu-All-Over-Again.pdf
20. For details on the completion and commissioning in October 2025 of the $591 million strategic Erbil–Duhok natural gas pipeline constructed by KAR Group, see Kurdistan24, "PM Barzani Inaugurates Strategic Gas Pipeline, Pledges 24-Hour Power", October 2025, https://www.kurdistan24.net/en/story/872107/pm-barzani-inaugurates-strategic-gas-pipeline-pledges-24-hour-power-for-all-kurdistan-region

21. For official production reports on the completion of the KM250 project and daily production exceeding 700 million cubic feet as of January 2026, see Dana Gas, "Corporate Reports & Press Releases 2026", https://www.danagas.com/operations/kri/
22. For data on the gas supply challenges faced by the KRG despite its 8,000 MW of installed power generation capacity, and on the "Runaki (Light) Project", which aims to provide uninterrupted electricity through the development of new gas pipelines, see The Institute of Regional and International Studies (IRIS), "Kurdistan Region Electricity Reform and the Runaki Project", https://auis.edu.krd/iris/publications/kurdistan-region-electricity-reform-and-%E2%80%9C-runaki%E2%80%9D-project
23. For details on the settlement of the arbitration dispute between the Pearl Petroleum (Dana Gas) consortium and the KRG in 2017 through a $1 billion agreement, see Al Arabiya, "Kurdistan pays $1 bln to Dana Gas, partners to settle $2.2 bln London case", August 30, 2017,https://english.alarabiya.net/business/energy/2017/08/30/Kurdistan-pays-1-bln-to-Dana-Gas-partners-to-settle-2-2-bln-London-case
24. For a detailed analysis of the suspension and subsequent cancellation process of Rosneft's natural gas pipeline project in the KRG amid the war in Ukraine and international sanctions, see Rudaw Research Center, "The Consequences of Russia's Sanctions on Kurdistan Region and Iraq", May 2026, https://rudawrc.net/en/article/the-consequences-of-russias-sanctions-on-kurdistan-region-and-iraq
25. Babil Research, "Geographical and Political Distribution of Oil and Natural Gas Fields in the Kurdistan Region of Iraq", May 2024, https://babilresearch.com/
26. For the latest official data on OPEC's projections for global energy demand, the growth of Asian economies, and fossil fuels, see Organization of the Petroleum Exporting Countries (OPEC), "World Oil Outlook (WOO) 2045", https://woo.opec.org/
27. For the landmark ruling by Iraq's Federal Supreme Court invalidating the KRG's Oil and Gas Law, see Reuters, "Iraq's federal court deems Kurdish oil and gas law unconstitutional", February 15, 2022, https://www.reuters.com/world/middle-east/iraqs-federal-court-deems-kurdish-oil-gas-law-unconstitutional-2022-02-15/
28. For details of the Paris-based International Chamber of Commerce (ICC) arbitration ruling in favor of Baghdad, which halted oil exports from the KRG, see Associated Press (AP News), "Ruling halts oil exports from Iraq's Kurdish area via Turkey", March 25, 2023, https://apnews.com/article/iraq-turkey-kurdish-region-oil-arbitration-ruling-4116e1a3b082f52a28778481ccd9c01f

29. For comprehensive data examining the gap between Iraq's current electricity generation capacity (24,000–26,000 MW) and rising summer demand (35,000 MW), see World Bank, "Iraq Economic Monitor, Spring/Summer 2023: Reemerging Pressures", https://documents1.worldbank.org/curated/en/099453507282342287/pdf/IDU0b9f5dc440cf2f047f9098e202d3dab0861c7.pdf
30. For details on Iraq's latest natural gas import agreement with Iran (a five-year contract for 50 million m^3 per day) and its annual costs, see Reuters, "Iraq, Iran sign 5-year gas supply deal", March 27, 2024, https://www.reuters.com/business/energy/iraq-iran-sign-5-year-gas-supply-deal-2024-03-27/
31. For the methodological distinction between the KRG's unilateral claim of 200 trillion cubic feet of natural gas reserves and Iraq's total proven reserve figures, see Energy Institute, "Statistical Review of World Energy", https://www.energyinst.org/statistical-review
32. For details on the landmark $27 billion Gas Growth Integrated Project (GGIP) agreement signed between Baghdad and TotalEnergies as part of Iraq's goal of ending its dependence on Iranian gas, see Associated Press (AP News), "Iraq moves toward easing its energy crisis with $27B Total Energies deal", July 11, 2023, https://apnews.com/article/iraq-total-oil-energy-economy-5ed7621ab7d44bdca572aa3155ec5366
33. Dana Gas and Crescent Petroleum, "Dana Gas and Crescent Petroleum Commence Gas Supplies to the Iraqi Ministry of Electricity", August 4, 2026, https://www.danagas.com/storage/2026/08/20260804-FI-Gas-Sales-EN.pdf
34. The Patriotic Union of Kurdistan Plays the Natural Gas Card Against the Kurdistan Democratic Party, Source: Draw News, Date: January 25, 2021, https://bit.ly/3smi62H
35. European Commission, Directorate-General for Energy, "In Focus: EU Energy Security Explained", April 20, 2026, https://energy.ec.europa.eu/news/focus-eu-energy-security-explained-2026-04-20_en
36. For the sanctions imposed by Europe on Russian gas following the Russia–Ukraine war (the REPowerEU plan) and strategies to diversify energy supplies, see European Commission, "REPowerEU: Affordable, secure and sustainable energy for Europe", https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en
37. For the full text of former BP CEO Tony Hayward's official statement in 2011 describing the KRG as the "last great frontier" when entering the region's market through Vallares (later Genel Energy), see The Guardian, "Tony Hayward in line for multimillion windfall after Iraq oil deal", September 7, 2011, https://www.theguardian.com/business/2011/sep/07/tony-hayward-windfall-kurdistan

38. For Türkiye's growing energy demand and its current strategic vision of becoming a global natural gas hub (Gas Hub), rather than merely serving as a transit corridor, see Atlantic Council, "To realize its gas hub dreams, Turkey needs to follow liberal market principles", December 20, 2022, https://www.atlanticcouncil.org/blogs/turkeysource/to-realize-its-gas-hub-dreams-turkey-needs-to-follow-liberal-market-principles/
39. For an analysis of the strategic significance of the KRG's natural gas reserves in Türkiye's efforts to reduce its heavy dependence on Russian and Iranian gas, and the geopolitical implications of this strategy, see Al-Monitor, "Will renewed interest in Iraqi Kurdish gas fuel Turkey-Iran rivalry?", April 2022, https://www.al-monitor.com/originals/2022/04/will-renewed-interest-iraqi-kurdish-gas-fuel-turkey-iran-rivalry
40. The reserve figures in Table 4 are based on audit data from the Kurdistan Regional Government Ministry of Natural Resources (MNR) (see Table 2). The geopolitical classification of the fields according to the administrative areas of the KDP (Yellow Zone) and PUK (Green Zone) is based on international geopolitical analyses examining the de facto distribution of energy resources between the two parties in the region. For the classification methodology and the political background of the division of energy control between the KDP and PUK, see Emirates Policy Center (EPC), "Iraqi Kurdistan Gas Resources: The Icarus Adventure", August 29, 2022, https://epc.ae/details/featured/iraqi-kurdistan-gas-resources-the-icarus-adventure, New Lines Institute, "The Kurdish Gas Gambit", July 2025, https://newlinesinstitute.org/middle-east-center/the-kurdish-gas-gambit/
41. For data on the expansion of the KRG's natural gas production capacity and the infrastructure of the strategic Erbil–Duhok pipeline constructed by KAR Group, see The New Region, "Erbil-Duhok pipeline set to supply gas to 1,000 MW power plant", September 22, 2023, https://thenewregion.com/posts/3470/erbil-duhok-pipeline-set-to-supply-gas-to-1-000-mw-power-plant

42. For details on the KRG's payment of $1 billion to the Dana Gas (Pearl Petroleum) consortium to settle the case before the London Court of International Arbitration, see Al Arabiya, "Kurdistan pays $1 bln to Dana Gas, partners to settle $2.2 bln London case", August 30, 2017, https://english.alarabiya.net/business/energy/2017/08/30/Kurdistan-pays-1-bln-to-Dana-Gas-partners-to-settle-2-2-bln-London-case
43. For the implications of Dana Gas's (Pearl Petroleum) agreement with the KRG following the arbitration settlement, including payments and the extension of contracts until 2049, see Arabian Business, "Dana Gas swings to net profit in 2017 boosted by Kurdistan settlement", February 11, 2018, https://www.arabianbusiness.com/business/389603-dana-gas-swings-to-net-profit-in-2017-boosted-by-kurdistan-settlement
44. For an analysis of Russian energy company Rosneft's reported reduction of its stakes in pipeline projects in the KRG to avoid international sanctions imposed following the war in Ukraine, and the implications for the region, see Insight Iraq, "Rosneft reportedly reduces stake in Kurdistan pipeline to avoid US sanctions", https://insightiraq.com/articles/rosneft-reportedly-reduces-stake-in-kurdistan-pipeline-to-avoid-us-sanctions/
45. For a detailed report examining the KRG's natural gas reserve potential and the political and technical obstacles to its target of exporting 10–30 billion cubic meters of natural gas annually (30 million m^3 per day) to Türkiye and Europe, see Atlantic Council, "The Kurdistan Region of Iraq's Gas-Export Potential: Deja Vu All Over Again", https://www.atlanticcouncil.org/wp-content/uploads/2022/11/The-Kurdistan-Region-of-Iraqs-Gas-Export-Potential-Deja-Vu-All-Over-Again.pdf
46. For a financial and political analysis of the KRG's heavy dependence on oil and natural gas revenues, the impact of the budget deficit on the regional economy, and the political crisis (including protests) arising from unpaid civil servants' salaries, see The Washington Institute for Near East Policy, "Divisions in Iraqi Kurdistan Are Costing the United States a Reliable Partner", https://www.washingtoninstitute.org/policy-analysis/divisions-iraqi-kurdistan-are-costing-united-states-reliable-partner

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Concerns over global energy supply and energy security are bringing the natural gas resources of the Kurdistan Regional Government (KRG) back into focus. The region's reserve potential is significant not only for meeting Iraq's electricity needs and reducing its dependence on Iranian gas but also for Europe's search for alternative energy sources. However, translating this potential into actual production and exports requires meeting domestic consumption needs, making substantial investments in costly infrastructure, and overcoming political disputes.

This report examines the KRG's natural gas capacity alongside the technical, economic, and political dynamics shaping its production and export prospects. It assesses the obstacles facing the sector in the context of Erbil–Baghdad relations, the KDP–PUK dispute, and Iran's regional interests, while exploring the potential implications of natural gas for the KRG's economic development and political standing. It also discusses the conditions under which the region could assume a greater role in Iraq's energy supply and emerge as an alternative supplier to Europe.

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