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Iraq's Energy Self-Sufficiency Progress, Constraints, and Policy Risks

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● **Analyses**

Iraq's Energy Self-Sufficiency: Progress, Constraints, and Policy Risks

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On 4 November 2025, Prime Minister Mohammed Shia' Al-Sudani announced that Iraq had achieved self-sufficiency in key petroleum products, presenting the development as an important step toward genuine energy independence. He subsequently ordered the cessation of imports of gasoline, gas oil, and kerosene, while directing that surpluses be exported on the grounds that domestic production had exceeded local demand. In a separate announcement, the Prime Minister forecast that Iraq would end gas imports by 2028.

Before the November 2025 directive, Iraq imported approximately 6–8 million liters of gasoline per day to supplement domestic supply and meet consumption of more than 30 million liters per day. Six months later, the country experienced severe gasoline shortages as demand rose above 34 million liters per day. The new government of Al-Zaidi was therefore compelled to resume imports at a time of exceptionally high prices and significant difficulty in securing supplies.

Why the Gasoline Import Ban Proved Unsustainable

The decision to halt gasoline imports did not adequately account for several structural and operational factors:

1. **Blending requirements.** Much of the imported gasoline

was used to blend with lower-octane gasoline produced domestically, particularly by the Baiji refineries.

2. Seasonal demand. The apparent surplus emerged in November, when gasoline demand typically moderates. Iraq's pronounced seasonal consumption pattern has been recognized for decades, including during the 1990s: demand peaks during the hot summer months and falls to its lowest level during the colder months.

3. Strategic stock management. Based on long-standing Ministry of Oil practice, strategic reserves of gasoline and gas oil are accumulated during autumn and winter from seasonal surpluses. By contrast, reserves of kerosene and liquefied petroleum gas are built during summer, when demand for those products is at its lowest. Once gasoline imports ceased, inventories were drawn down to meet rising demand, eventually contributing to severe shortages in summer.

4. Supply losses through internal and external smuggling. Two additional factors reduced the volume available to the domestic market. First, "internal smuggling" diverted product to the Kurdistan Region because of the financial incentive created by substantial differences in retail prices. Second, "external smuggling" to neighboring countries

continued, likewise driven by price disparities.

Supply expectations were further weakened by delays to the long-awaited fluid catalytic cracking unit at the Basrah refinery. The unit, which was being commissioned to produce approximately 5 million liters per day of high-octane gasoline, did not enter service after the contractor departed because of the regional conflict.

Taken together, these factors indicate that Iraq had not yet achieved durable self-sufficiency in key petroleum products. The episode illustrates the importance of distinguishing between a temporary seasonal surplus and a sustainable supply position supported by adequate refining capacity, blending components, strategic inventories, and effective controls on leakage from the domestic market.

Gas Supply and the 2028 Self-Sufficiency Target

Dependence on Imported LNG

Achieving gas self-sufficiency by 2028 will be highly challenging. This assessment is supported by Iraq's agreement with the US company Excelerate Energy to provide and operate storage and regasification unit at the port of Khor Al-Zubair. Excelerate Energy and the Ministry of Electricity signed a definitive five-year agreement

on 25 October 2025, extending beyond the stated target year for ending gas imports.

The plan envisages an initial phase of liquefied natural gas imports equivalent to 250 million standard cubic feet per day in 2026, with subsequent increases expected. The final scale of those increases should be specified once confirmed.

It's also important to mention the gas imports from Iran for many years to feed gas turbines in the Investment Projects which continued even through the 2025 though at low rate.

Gas Flaring and Processing Capacity

Iraq has historically flared large volumes of gas because of insufficient processing capacity and has ranked among the world's largest gas-flaring countries. Total gas production excluding the region of Kurdistan averaged about 3,250 mmscfd, of which about 2,200 mmscfd were captured or utilized and the remaining 1,000 mmscfd were flared. This amounts to a flaring ratio of 30% of total gas produced which exhibits a significant improvement from the 40% to 50% flaring ratio years ago. This reduction became possible after signing and implementing a number of contracts during 2019 and after. The principal projects include:

- Basrah Gas Company expansion, Trains 1 and 2: total processing capacity of 400 million standard cubic feet per day;
- Halfaya Field gas-processing project: 300 million standard cubic feet per day;
- Nasiriyah and Gharraf fields gas-processing project: 200 million standard cubic feet per day;
- Ratawi gas-processing project, Stages 1 and 2: 600 million standard cubic feet per day; and
- Bin Umar Field gas-processing project: 150 million standard cubic feet per day.

The first three projects have been completed, together with part of the first stage of the Akkas gas field, which has a current capacity of approximately 40 million standard cubic feet per day. These additions have contributed to a substantial reduction in gas flaring and increased utilization of produced gas to more than 70 per cent across the 15 governorates administered by the federal government.

Structure of Iraq's Gas Resource Base

Total gas reserves in Iraq exceed 130 trillion standard cubic feet, more than 75% of it is associated gas. Most gas produced in Iraq is associated gas. Only three non-associated gas fields are managed

by the Ministry of Oil: Akkas, Mansuriya, and Siba. The Siba field was developed and is producing and the other two fields are being developed, and they could add about 700 mmscfd when they are fully developed. A number of gas reservoirs within oil and gas fields that were awarded in the 5th Bid Round have potential to add significant gas when developed.

The Kurdistan region holds significant free gas reserves concentrated in a number of fields, the most important is Kormore Gas field.

The Power Sector Overview

Sector Context and Structural Challenges

The power sector constitutes the second major component of the energy sector, alongside oil and gas. Over the past 22 years, electricity supply has remained unreliable and well below demand because of inadequate capacity across all three subsectors: generation, transmission, and distribution.

Demand has continued to rise while electricity services remain heavily subsidized, with the government reportedly bearing approximately 90% or more of operating costs. The situation has been compounded by corruption, weak management, and political appointments to key positions. Technical losses, illegal connections, and non-payment

of bills have further increased the sector's financial burden.

In addition, the three subsectors carry substantial staffing levels, similar to those of other self-financed public companies. The Ministry of Electricity has been unable to settle payments for fuel supplied by the Ministry of Oil. As a result, the Council of Ministers has periodically written off debts owed by the Ministry of Electricity to the Ministry of Oil.

Iraq's Long Road to Durable Energy Independence

The current crisis has once again exposed Iraq's continuing vulnerability. The country's failure to achieve durable energy independence is not the result of a single constraint, but of a combination of historical disruption, infrastructure weaknesses, institutional shortcomings, and delayed reform.

The Main Obstacles

1. Decades of political turmoil, wars, sanctions, terrorism, and insecurity.
2. Limited and vulnerable oil export routes.
3. Outdated refining technology and insufficient domestic refining capacity.

4. Inadequate gas-processing capacity, resulting in the loss or underuse of valuable associated gas.
5. Insufficient power-generation and transmission capacity.
6. Obsolete electricity-distribution systems and weak sector management.
7. Heavy subsidies for products and services supplied by state-owned, self-financing companies responsible for operating the sector.
8. The absence of deep, coordinated reform across the energy sector.

The Foundations Laid in the 1970s

During the 1970s, Iraq made substantial progress not only in energy, but also in the economy, health, education, and other areas of national development. In the energy sector, the nationalization of oil resources between 1972 and 1975 placed hydrocarbon management under national control. The Iraq National Oil Company (INOC) became the sole operator, and major oil fields were discovered during the decade.

INOC emphasized long-term planning, exploration, field development,

and the creation of Iraqi capabilities in oil-field services. At the same time, it drew on foreign contractors and suppliers from around the world. This combination contributed to a rapid expansion of oil-production capacity.

Iraq also expanded its export infrastructure. Existing pipelines and terminals, including the Al-Bakir Oil Terminal, were constructed and enlarged, while new outlets were developed through Turkey via the Iraq-Turkey Pipeline. Internal pipelines, including the Strategic Pipeline, were constructed to provide greater flexibility in moving crude between northern and southern production systems.

Gas, Refining, Power, and Industrial Development

After years of neglect by foreign operators, gas received special attention. The North Gas Project in Kirkuk comprised two processing trains with a combined capacity of about 500 million standard cubic feet per day. In Basrah, the South Gas Project included natural-gas-liquids facilities in North Rumaila, LPG plants, refrigeration and storage depots, and an export terminal for LPG and condensate, with total processing capacity exceeding 1,000 million standard cubic feet per day.

A gas-pipeline network was built to supply industrial facilities and

power stations in both northern and southern Iraq. The Basrah petrochemical complex was supplied with fuel and feedstock gas from the Khor al-Zubair gas-processing plant. The Dora refinery was expanded, the Shuaiba refinery was built in Basrah, and the first refinery at Baiji was completed. The power sector also underwent major expansion through gas-fired, steam, and hydroelectric stations.

The Ministry of Oil and INOC recognized that effective national management depended on human-capital development. Oil-training institutes, modern laboratories, and research centers were established. Staff selected on merit received scholarships for postgraduate study at reputable universities in the United Kingdom, the United States, France, and elsewhere, while others attended specialized training across the oil and gas industry.

International Cooperation and Rising Capacity

INOC and the Ministry developed relationships with international institutions in both East and West and cooperated with foreign oil companies in exploration and field development. Agreements with France's Elf-Erap and CNPC, Brazil's Petrobras, and the Soviet Union's Techno export contributed to the discovery or development of major fields, including Missan, Majnoon, East Baghdad, and West

Qurna.

By the end of the decade, Iraq's oil industry was positioning itself among the world's most promising producers, and the country played an influential role in OPEC. Crude-oil production capacity stood at approximately 3.5 million barrels per day at the beginning of 1980. The approved Second Five-Year Plan for 1979–1983 targeted oil production capacity of 5.3 million barrels per day.

War, Export Vulnerability, and Lost Investment

The Iran–Iraq War, which began in September 1980, marked the start of a destructive eight-year conflict with profound consequences for the energy sector and for Iraqi society. Beyond the immense human losses, the war damaged infrastructure, reduced investment, and burdened the country with heavy foreign debt.

One of its clearest strategic lessons was that Iraq needed at least three substantial export outlets through neighboring countries, supported by a transportation network linking northern and southern oil fields. When exports through the Arabian Gulf are disrupted, Iraq risks losing not only most of its oil exports and revenue, but also much of its gas supply, because southern gas production is largely associated with crude-oil production. A fall in gas output,

in turn, reduces power generation and constrains petrochemical, fertilizer, and other industrial production. One of Iraq's most serious responses to this lesson was the construction of Iraq's Pipeline across Saudi Arabia (IPSA).

After the war, the sector began to recover. Oil production rose, and plans were developed to reach 6 million barrels per day within five years. The Ministry also designed a new model of cooperation with international oil companies for the development of supergiant fields. Those efforts were overtaken by Iraq's invasion and annexation of Kuwait in August 1990.

The 1991 War and Thirteen Years of Sanctions

The 1991 Gulf War caused extensive destruction across Iraq. Oil-production facilities, water-injection pumps, major pumping stations, storage depots, refineries, power stations, and bridges were damaged or destroyed. The Dora refinery was struck by missiles on two occasions, while the Baiji refinery suffered aerial bombardment. The true losses extended far beyond physical infrastructure to include deaths, injuries, displacement, and other grave human consequences.

The conflict was followed by uprisings in the south and north, which

the regime violently suppressed. Oil and gas production capacity fell sharply, the Dora and Baiji refineries were taken out of service, and prolonged electricity blackouts became common.

The sanctions imposed on Iraq for the next thirteen years had a devastating effect on the country and its energy sector. Oil exports were restricted, imports were tightly controlled, and the industry suffered from war damage, inadequate investment, and severe shortages of spare parts and chemicals. Nevertheless, experienced and dedicated personnel restored important facilities. Despite heavy damage, the Dora refinery resumed production only 45 days after the ceasefire, followed by Baiji. Damaged degassing stations in the Rumaila field were also rehabilitated.

Production capacity gradually recovered, particularly after implementation of the United Nations Oil-for-Food Program, under which limited funds were allocated to rehabilitate the industry and sustain oil exports.

The Post-2003 Breakdown

The 2003 war brought about the collapse of the regime. Although it did not cause the same level of direct physical destruction to oil, gas, and power infrastructure as earlier conflicts, extensive looting—

particularly in southern oil fields and gas-processing facilities—caused major losses in production capacity. A broad rehabilitation program subsequently supported a gradual recovery in oil and gas production and power generation.

Within months, however, terrorist groups began targeting crude-oil and petroleum-product pipelines, field installations, and refineries in an effort to weaken the new state's economy. Sabotage, looting, and smuggling continued for years despite government countermeasures.

At the same time, two deeply damaging practices became entrenched: widespread corruption and the appointment of politically connected officials who lacked the necessary experience, qualifications, or commitment. As security deteriorated, capable senior staff were killed, disappeared, or left the country. Many others retired as the statutory retirement age was reduced. The cumulative result was a sustained brain drain and a deterioration in institutional management.

Reform Plans Without Implementation

Considerable effort was devoted to correcting these problems. Policies, plans, and strategies were prepared with the stated goals of reforming the sector, rebuilding capacity, maximizing economic

returns, and making Iraq energy self-sufficient.

The most important of these initiatives was the National Integrated Energy Strategy 2012–2030. Prepared with technical and financial support from the World Bank, the strategy was developed by Booz & Company in cooperation with a high-level Iraqi committee chaired by the head of the Prime Minister's Advisory Commission and including senior representatives from the ministries of oil, electricity, and other relevant institutions.

The Council of Ministers approved the strategy, and it was well received by international organizations operating in Iraq. Yet it was not implemented. Resistance to change, weak political commitment, fragmented authority, and the absence of sustained reform prevented its recommendations from being translated into action.

ISIS, Continuing Political Fragmentation, and Strategic Risk

The rise of ISIS and its occupation of nearly one-third of the country caused further deterioration. The Baiji refinery complex was severely damaged, the Iraqi Turkish export pipelines were removed from the northern export network, and power stations and other facilities were forced out of operation.

Following the defeat of ISIS, improved security allowed Iraq to increase oil and gas production and construct additional gas-processing facilities. Nevertheless, political divisions among governing parties continued. Corruption became more widespread, government formation after elections repeatedly took months, and disputes between the Federal Government and the Kurdistan Regional Government over oil management and budget shares persisted for years.

Project implementation has consequently become slower and more expensive. Investigations and prosecutions involving officials in the ministries of oil and electricity, members of parliament, and other public bodies have illustrated the extent to which corruption has penetrated both the executive and legislative branches.

Iraq also remains dangerously dependent on a limited number of export routes. A study published by the Iraqi Economists Network on 15 August 2022 warned of the potentially devastating consequences that closure of the Strait of Hormuz would have for Iraq's oil and gas industry and the wider economy. The warning reinforced a lesson first demonstrated by earlier wars: energy independence requires not only production capacity, but also diversified export outlets, resilient domestic infrastructure, competent institutions, and the political will to implement reform.



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