

# **Country Analysis Brief: Iraq**

Last Updated: July 14, 2025

The U.S. Energy Information Administration (EIA), the statistical and a U.S. Department of Energy (DOE), prepared this report. By law, our d independent of approval by any other officer or employee of the U.S report do not represent those of DOE or any other federal agencies.	ata, analyses, and forecasts are

i

## **Overview**

Table 1. Iraq's energy overview, 2023

	Crude oil and other					Other	
	petroleum liquids	Natural gas	Coal	Nuclear	Hydro	renewables	Total
Primary energy consumption							
(quads) 2023 <sup>a</sup>	2.2	0.7				<0.1	2.9
Primary energy consumption							
(percentage)	74.8%	24.6%				0.6%	100.0%
Primary energy production (quads)							
2023 <sup>a</sup>	9.4	0.4				<0.1	9.8
Primary energy production							
(percentage)	96.0%	4.0%				0.1%	100.0%
Electricity generation							
(terawatthours) <sup>b</sup>	61.1	87.4			1.4	0.4	150.3
Electricity generation (percentage)	40.7%	58.2%			0.9%	0.3%	100.0%

**Data source:** U.S. Energy Information Administration

**Note:** Independent rounding may cause some shares to not equal 100%. Quads=quadrillion British thermal units; -- signifies not applicable

- Iraq (Federal Iraq and Kurdistan Regional Government) was the second-highest crude oil producer in OPEC after Saudi Arabia and the seventh-highest total petroleum liquids producer in the world in 2024.¹ It held 145 billion barrels of proved crude oil reserves, representing 17% of proved reserves in the Middle East and 9% of global reserves in 2023.² Most of Iraq's major known fields—all of which are located onshore—are producing or are in development.³ Most of Iraq's crude oil reserves are located in the southern Basra region, the Diyala region east of Baghdad, and the northeastern Kirkuk region.⁴
- Because of frequent government gridlock, Federal Iraq often faces delays in forming key legislation, passing annual budgets, and financing major energy projects by the government and foreign investors. A new government under the leadership of Mohammed Shia al-Sudani was formed in late 2022, which approved funds for several infrastructure projects that would have budgets in place between 2023 and 2025. However, the country still lacks sufficient energy infrastructure. The next parliamentary elections are slated for November 2025.<sup>5</sup>
- Crude oil export revenues account for a large part of Iraq's economy. In 2023, oil export revenue (mostly from crude oil) accounted for an estimated 90% of Iraq's total government revenues, according to the International Monetary Fund (IMF). Iraq's crude oil export revenues fell by an estimated 22% from 2022 to 2023, driven by lower crude oil prices and lower production following OPEC+ cuts and supply disruptions in northern Iraq. Lower global oil prices offset marginally higher crude oil production in Iraq in 2024 (following a partial recovery in Kurdistan

<sup>&</sup>lt;sup>a</sup> Hydropower and solar are combined for primary energy production and primary energy consumption, and hydropower accounts for the majority.

<sup>&</sup>lt;sup>b</sup> Includes only Federal Iraq

- Regional Government production and higher refining runs), resulting in slightly lower crude oil export revenues for Iraq.<sup>8</sup>
- Iraq consumed an estimated 2.9 quadrillion British thermal units of total primary energy in 2023, making it the fourth-highest energy consumer in the Middle East behind Iran, Saudi Arabia, and the United Arab Emirates. Natural gas and oil accounted for almost all of Iraq's total primary energy consumption; hydropower and solar energy contributed marginally (Figure 1). Iraq will primarily use oil to meet energy demand until it develops more natural gas processing capacity and pipeline infrastructure.

# Relationship between Federal Iraq and the Kurdistan Regional Government

- Federal Iraq refers to the political entity governed by the central government of Iraq in Baghdad. The Kurdistan Regional Government (KRG), the official ruling body of the semi-autonomous region in northern Iraq (which is predominantly Kurdish), has been involved in soverignty disputes with the central government for three decades.
- Türkiye stopped crude oil flows through the Iraq-to-Türkiye (ITP) pipeline in March 2023 when an international arbitration court ruled in favor of Federal Iraq. The court ruling restricted Türkiye from accepting crude oil directly from the KRG without the permission of Federal Iraq and ordered Türkiye to pay Federal Iraq for financial damages for previous KRG exports through the ITP. Türkiye agreed to comply with the arbitration and to accept only crude oil sold on behalf of Federal Iraq. KRG crude oil production fell from about 435,000 barrels per day (b/d) in 2022 to nearly 240,000 b/d in 2023 because of the pipeline closure and limited outlets to sell crude oil production locally to refiners. Although most of the production in northern Iraq was shut in or placed into storage immediately after the ITP pipeline stopped operating, the KRG fields increased production from slightly more than 100,000 b/d in April 2023 to about 300,000 b/d by March 2024. Production averaged close to 300,000 b/d annually in 2024. Northern refineries, including numerous small topping plants, increased crude oil purchases at steep discounts, and reportedly, some oil traders sent crude oil to Türkiye and Iran via truck.
- Federal Iraq's current budget stipulates that the KRG release 400,000 b/d of crude oil to Federal Iraq in return for a portion of the federal budget, but the ITP pipeline closure has hindered the KRG's ability to produce at that level. In effort to re-open the pipeline, Iraq's parliament passed a budget amendment in February 2025 that requires Federal Iraq to pay independent oil companies (IOCs) operating in the KRG \$16/b for crude oil sold through the pipeline, which is more than double the \$6/b from the budget law. <sup>13</sup> <sup>14</sup> (Please see endnote for more details). The KRG, Federal Iraq, and the IOCs are at a standstill with the negotiations as of June 2025. Any signficant delay in the resolution to these negotiations likely will affect future investment, the ability to raise production in the KRG, and the potential reopening of the ITP.

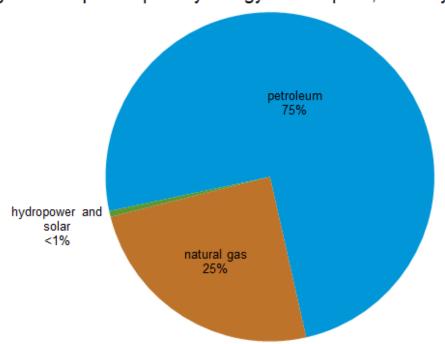


Figure 1. Iraq's total primary energy consumption, share by fuel,

eia

Data source: U.S. Energy Information Administration, International Energy Statistics
Note: Chart does not include traditional biomass and waste, such as burning firewood and waste.

# **Petroleum and Other Liquids**

- Iraq, one of the members of the OPEC+ agreement, raised its crude oil output (excluding condensates) in 2024 by nearly 100,000 barrels per day (b/d), to an average of 4.4 million b/d.<sup>15</sup> Iraq, along with other OPEC+ members, made several voluntary crude oil production cuts since the end of 2022.<sup>16</sup> The central government in Baghdad produced about 4.1 million b/d, and the KRG supplied nearly 300,000 b/d of crude oil from the northern fields it operates.<sup>17</sup> Iraq (including the KRG) produced, on average, 4.5 million b/d of total petroleum liquids (crude oil, condensates, and natural gas liquids) in 2024 (Figure 3).<sup>18</sup>
- In December 2024, eight OPEC+ members, including Iraq, announced they would phase out voluntary crude oil production cuts through the end of 2026. However, Iraq produced more crude oil than its allotted target of 4.0 million b/d in 2024 and agreed to compensate for any this overproduction. <sup>19</sup> If the ITP pipeline to Türkiye resumes operations in 2025, we expect Iraq's production to rise.
- Iraq's oil ministry plans to lift crude oil production capacity to 7 million b/d by 2029. In addition, it will target several upstream expansion projects, mostly in southern Iraq, to bolster the country's output and offset some of the oil declines from large legacy fields (Table 2).<sup>20</sup> Some of these projects are likely to face delays because of Iraq's political struggles, regulatory

- challenges, delays in restoring and expanding export infrastructure in the country's south, and the IOCs' uncertainty about the investment climate.<sup>21</sup>
- Iraq's oil production requires water injections to maintain reservoir pressure and to increase oil
  production. TotalEnergies intends to invest in a 7.5 million-b/d seawater conversion project as
  part of its energy agreement with the Iraqi government to bolster oil production from mature
  fields in southern Iraq. Iraq finalized its agreement with TotalEnergies in July 2023, and the first
  phase of the seawater conversion project is slated to come online in 2028, assuming no further
  project delays.<sup>22</sup>
- In August 2024, bp and the Iraqi government agreed to redevelop the Kirkuk region's energy sector, including its large oil fields in northern Iraq. bp is slated to invest up to \$25 billion over 25 years in further oil and natural gas development at four fields in the Kirkuk region (Table 2). Iraq and bp finalized the deal in February 2025, and Iraq's government approved the contract in March 2025. And Iraq's government approved the contract in March 2025.
- Iraq consumed nearly 1.1 million b/d of petroleum and other liquids in 2024.<sup>25</sup> Domestic refineries meet most of Iraq's petroleum product demand; however, Iraq imports some petroleum products, primarily gasoline.<sup>26</sup> Iraq also uses crude oil and high sulfur fuel oil for electric power generation.<sup>27</sup>
- Iraq's total operating refining capacity is approximately 1.3 million b/d.<sup>28</sup> The Iraqi government plans to reduce petroleum product imports by rehabilitating the refining sector and building new refineries but has struggled in its efforts to attract the foreign investment needed in the downstream sector. Iraq's refineries produce heavy fuel oil in excess of domestic needs and not enough gasoline and diesel to meet domestic demand.<sup>29</sup>
- Iraq has added 380,000 b/d of crude oil refining capacity since early 2023, including the 140,000 b/d-Karbala refinery. The South Refining Company also commissioned a fourth 70,000-b/d expansion unit at the Basra refinery at the end of 2023 and plans to retrofit the refinery to produce more middle distillates by 2026. 30 Iraq repaired the damaged 150,000 b/d-crude oil distillation unit at the North Baiji refinery complex, which had been closed since 2013, and reopened the refinery in early 2024. 31 Also, the North Refineries Company added 20,000 b/d to the Siniya refinery in 2024. 32
- Several new refinery projects are planned, including capacity expansion and upgrades at existing refineries, to alleviate domestic product shortages, reduce government import costs for oil products, and eventually increase exports of refined products.<sup>33</sup> Iraq signed a contract with China National Chemical Engineering Company in May 2024 to develop the largest of these projects, the 300,000-b/d Fao refinery. Iraq expects the first phase to come online in 2028.<sup>34</sup>
- In addition to the legal refineries in Iraq, many illegal topping plants exist, especially in the KRG region. These plants helped KRG crude oil production partially recover after the ITP pipeline closed in March 2023.<sup>35</sup>

#### Table 2. Crude oil projects in Iraq, 2025

		Additional			
		capacity			
		(thousands			
	Operator or	of barrels	Announced		
Field name	project investor	per day)	start date	Notes	

Majnoon	Basra Oil Company	200	mid-2024 <sup>36</sup>	
Faihaa crude oil processing facility	China's United Energy Group	100	April 2024	Located on the border with Iran. Plans include expanding the Faihaa field capacity from about 80,000 barrels per day (b/d) to 130,000 b/d and installing a 100,000-b/d processing facility. The facility could also process oil from nearby fields. 37
Zubair Musharf expansion station	ENI	200	2025	Any future expansions will require more water injection 38
Ratawi	TotalEnergies	110 (Phase 1) <sup>39</sup>	2025	Field expansion is part of TotalEnergies' \$27 billion deal signed in September 2021 with Iraq. The agreement was finalized in July 2023. The planned expansion of field capacity is to 210,000 b/d. Production in 2024 averaged about 60,000 b/d. 40
West Qurna-1	PetroChina, Basra Oil Company, Itochu, and Pertamina	250	2028	Iraq awarded a drilling contract to services firm Schlumberger. ExxonMobil sold its shares in the field to Basra Oil Company at the end of 2023. PetroChina is the new field operator. Current capacity is 550,000 b/d, and projected capacity is 800,000 b/d. Iraq targets a 200,000 b/d increase by the end of 2025. 41
Eridu	Lukoil, Inpex	250	2028	The pilot phase will include 30,000 b/d starting in 2027. The field's peak production target is set for 250,000 b/d. 42
West Qurna-2	Lukoil	320	2030	Capacity expansion includes the Yamama reservoir. Capacity was 480,000 b/d in late 2023, mostly from the Mishrif reservoir. A pilot project for the Yamama reservoir began in 2021 and was producing 20,000 b/d in November 2023. Projected capacity is 800,000 b/d. <sup>43</sup>

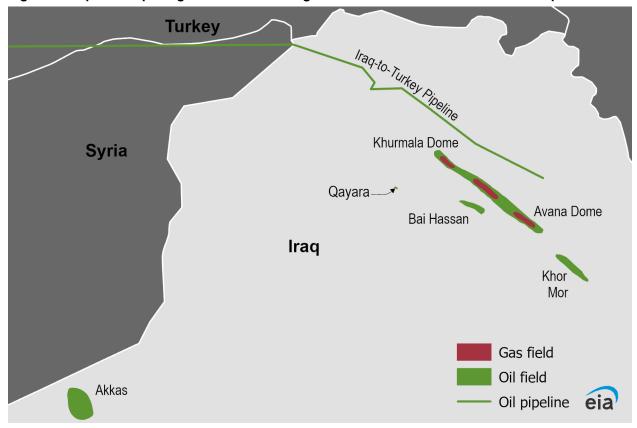
Nasiriya	Dhi Qar Oil Company (DQOC)	210	ТВА	Iraq is negotiating with Gazprom to further develop the Nasiriya field from 90,000 b/d to 300,000 b/d. 44
Kirkuk region (Kirkuk, Bai Hassan, Jambur, and Khabbaz field)	bp	120	ТВА	Iraq and bp signed a final contract to invest in redeveloping four oil and natural gas fields in Kirkuk. Current capacity is 300,000 b/d, and bp intends to increase capacity to 420,000 b/d. 45

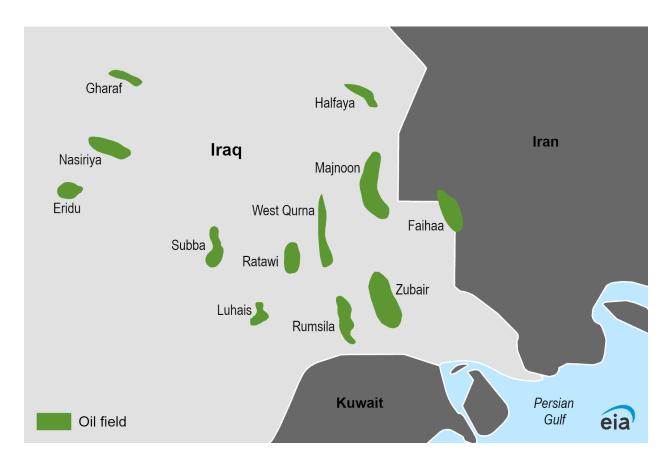
Data source: Middle East Economic Survey, Iraq Oil Report, Rystad Energy, Reuters, Al Arabiya News,

and company websites

Note: TBA=to be announced, b/d=barrels per day

Figure 2. Maps of Iraq's largest oil and natural gas fields in northern and southern Iraq





Source: U.S. Energy Information Administration, World Bank, and National Energy Technology Laboratory *Global Oil and Gas Infrastructure database* 

million barrels per day 6.0 COVID-19 pandemic begins (2020) 5.0 production 4.0 Iraq War begins in 2003 3.0 2.0 Gulf War (1990-91) consumption 1.0 0.0 1995 2000 1990 2005 2010 2015 2020

Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2025

Figure 3. Iraq's total petroleum and other liquids production and consumption, 1990-2024

## **Natural Gas**

- At 131 trillion cubic feet (Tcf), Iraq's proved natural gas reserves in 2023 accounted for 2% of global reserves and 4% of Middle East reserves. 46 Most of Iraq's natural gas reserves are associated with oil, and most of the associated natural gas is in large oil fields in southern Iraq. 47 Although Iraq has sizeable natural gas reserves, regulatory and investment hurdles and insufficient natural gas infrastructure have kept the natural gas production available for sale relatively flat since 2016 (Figure 4). 48
- About two-thirds of Iraq's natural gas output is associated natural gas, which is a byproduct of oil production.<sup>49</sup> Iraq's natural gas production rose slightly from 348 billion cubic feet (Bcf) in 2022 to 372 Bcf in 2023 (Figure 4). Iraq consumed 682 Bcf of dry natural gas in 2023, mainly for electric power generation.<sup>50</sup> Iraq intends to replace some oil-fired electricity generation with natural gas-fired generation and to become more self-sufficient in its natural gas supplies.<sup>51</sup> Once Iraq begins operations at some of the natural gas processing plants scheduled to be online before 2030, we expect natural gas production from associated natural gas fields to increase in the next few years.
- According to the World Bank, Iraq flared 625 Bcf of natural gas in 2023, ranking as the third-highest source country of flared natural gas in the world, behind Russia and Iran.<sup>52</sup> Natural gas is flared because of insufficient pipeline capacity and other midstream infrastructure to move the natural gas from crude oil production areas. Iraq delayed its target to eliminate natural gas flaring to 2028.<sup>53</sup> We expect that if Iraq can mobilize the investment to capture its flared natural gas, it could increase the share of electricity generated from natural gas, especially during the peak summer season, and potentially reduce its natural gas imports from Iran.
- Iraq is pursuing projects to capture associated natural gas production and is negotiating agreements with international companies to raise natural gas processing capacity<sup>54</sup> from about 700 Bcf in 2024<sup>55</sup> to more than 1.1 Tcf in 2030 (Table 3). Three key natural gas projects—Phase 1 of the Basra Natural Gas Liquids project, CNPC's Halfaya natural gas processing plant, and China's United Energy Group's natural gas processing facility at the Faihaa oil field—became operational between the end of 2023 and the end of 2024 (Table 3).<sup>56</sup> These processing plants capture associated natural gas production for domestic use and should reduce Iraq's natural gas flaring during the next few years.
- Federal Iraq aims to not only capture and sell more associated natural gas but also to develop natural gas fields not associated with oil production. This will help to meet the country's natural gas demand and reduce natural gas imports from Iran (Table 3).<sup>57</sup> The government is prioritizing the Akkas field in western Iraq and the Mansuriya field north of Baghdad as key nonassociated natural gas projects. Although Iraq is keen to develop these fields and the required natural gas processing infrastructure for them, these projects have encountered several delays over the past decade because of issues related to security, investment, contract terms, and commitment by international partners. In March 2023, the Akkas field began partial production at 22 billion cubic feet per year (Bcf/y) to serve a local power plant, and Iraq intends to further develop the field using foreign investment and technology.<sup>58</sup>
- The KRG has one nonassociated natural gas field, Khor Mor, with an operational capacity of 183 Bcf/y, which supplies power plants in Kurdistan (Table 3). UAE's Dana Gas, the operator of Khor Mor, began work on an expansion project slated to provide natural gas for the domestic electric power sector. Once domestic power demand is satisfied, additional natural gas production from the project could be exported to Türkiye and the European Union or sent to power plants in northern Federal Iraq. However, new natural gas pipelines or retrofitted oil pipelines would be

required to send the natural gas outside of the KRG. Since 2022, a series of rocket attacks in the vicinity of the plant have delayed work on the expansion project. <sup>59</sup>

Table 3. Major natural gas projects in Iraq, 2024

Project	Operator or project investor	Additional capacity (billion cubic feet per year)	Announced start date (estimated)	Notes
Associated natural g	as projects			
Basra Natural Gas Liquids (BNGL) project	Basra Gas Company (Iraq's South Gas Company, Shell, and Mitsubishi)	73 billion cubic feet per year (Bcf/y) in Phase 1 and 73 Bcf/y in Phase 2	End of 2023 and early 2025	The Basra Gas Company intends to add 73 Bcf/y for each phase a its BNGL project to process natural gas from the Majnoon, West Qurna-2, and Ratawi oil fields. <sup>60</sup> Phase 1 came online in 2023. <sup>61</sup>
Halfaya natural gas processing plant	China's CNPC	110	June 2024	Designed to capture flared gas from the large Halfaya oil field in Missan province. Natural gas is slated to replace oil use in the region's electric power sector. Condensate production is 20,00 barrels per day (b/d). <sup>62</sup>
Natural gas processing facility at Faihaa oil and gas field	China's United Energy Group	47	December 2024	The facility will process associated natural gas at the Faihaa oil field on Basra Oil Company's Block 9.63
Nassariya Gas Plant	South Gas Company and Baker Hughes	73	2026	Located in the Dhi Qar province it will process natural gas from the Nassariya and Gharaf oil fields. <sup>64</sup>
Bin Omar Project	Halfaya Gas Company	55	2027	Iraq's South Gas Company signe a contract with Halfaya Gas Company in January 2024 to construct the facility. 65
Gas Growth Integrated Project	TotalEnergies	110 in Phase 1 and 110 in Phase 2	End of 2027 and 2030	As part of TotalEnergies' deal in Iraq, the company plans to build a natural gas facility in two phases to gather and treat natural gas from the West Qurn 2, Majnoon, Ratawi, Tuba, and Luhais oil fields. 66
Kirkuk region (Kirkuk, Bai Hassan, Jambur, and Khabbaz field)	bp	36	ТВА	Iraq and bp signed a final contract to invest in the redevelopment of four oil and natural gas fields in Kirkuk. Current natural gas capture is 110 Bcf/y, and the goal is to capture and use 146 Bcf/y <sup>67</sup>
Total		687		

Khor Mor expansion project	UAE's Dana Gas, Crescent Petroleum, OMV, MOL, and RWE	91 in Phase 1 and 91 in Phase 2	second- quarter 2026 for Phase 1 and TBA for Phase 2	The KRG's sole nonassociated natural gas field. Khor Mor has a capacity of 183 Bcf/y, which supplies power plants in Kurdistan. Dana Gas intends to expand capacity by 91 Bcf/y by mid-2026 and plans a second expansion at a later date. 68
Mansuriya natural gas field	Jereh Group and PetroIraq	110	2029	Chinese oil service firm, Jereh Group and PetroIraq signed an agreement to jointly develop the Mansuriya natural gas field in November 2024. The block will provide natural gas to the natural gas-fired Mansuriya power plant. <sup>69</sup>
Akkas natural gas field	lraq's Midland Oil Company	146	2030	Located in the remote western province of Anbar, Akkas is designed to supply a nearby power plant. Midlands Oil began developing the field in March 2023 and signed a contract with Ukrainian firm Ukrzemresurs in April 2024. 70
Khashim al- Ahmar/Injana block	Crescent Petroleum	91	ТВА	The block will provide natural gas to the natural gas-fired Mansuriya power plant. 71
Total		529		

Data source: Middle East Economic Survey, Iraq Oil Report, Argus Media, Rystad Energy, Reuters,

Shafaq News, Dana Gas, Iraq Business News

**Note:** TBA=to be announced, Bcf/y=billion cubic feet per year

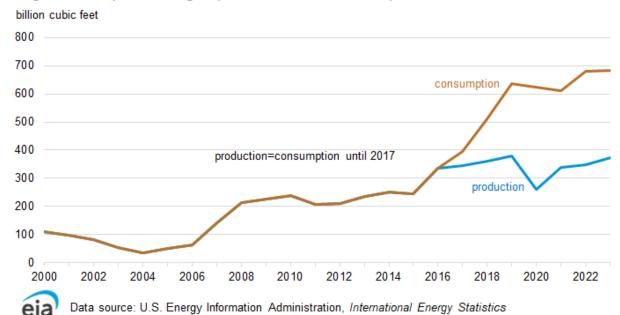


Figure 4. Iraq's natural gas production and consumption, 2000-2023

# **Electricity**

- Federal Iraq generated an estimated 150 terawatthours (TWh) in 2023, up from 134 TWh in 2022 (Figure 5).<sup>72</sup> Electricity output has increased rapidly over the past few years because of continued economic development, population growth, and increased generation capacity.<sup>73</sup> The KRG generated, at most, 17 TWh in 2024.<sup>74</sup>
- Nearly all (about 99%) of Iraq's electricity generation is from oil and natural gas.<sup>75</sup> Natural gas use in the electric power sector increased after 2016 because Iraq began importing natural gas from Iran to increase its own supplies. Small amounts of hydroelectricity and solar power account for the remaining shares of electricity production.<sup>76</sup>
- Iraq has plans to add 15 GW of new generation capacity to meet rising electricity demand. Iraq also plans to increase the efficiency of existing plants and other electric power sector infrastructure.<sup>77</sup>
- Solar generation currently accounts for an insignificant share of total power generation, but Iraq plans to develop 7.5 GW of utility-scale solar projects to add to their oil-fired and natural gasfired capacity and to reduce natural gas and electricity imports from Iran (Table 4).<sup>78</sup>
- In 2024, Federal Iraq's available peak electricity generation supply was an estimated 25 GW, much lower than the 48 GW needed to meet peak summer demand. Iraq's electricity demand peaks in the summer and winter months. High subsidies and electricity theft increase demand in the sector. Generation plants run at low utilization rates because of poor transmission and distribution infrastructure, inefficient or damaged power plants, and insufficient natural gas supply and infrastructure.<sup>79</sup>
- Iraq burns crude oil and fuel oil directly in power plants to make up for limited availability of
  other fuels, such as natural gas. Reports indicate that Iraq's power stations burned an average of
  about 200,000 b/d of crude oil in 2023 as a result of insufficient natural gas-fired electricity
  generation (Figure 6).<sup>80</sup> Although Iraq's official reports of crude oil burn were low during recent

years, we estimate that they have used at least 100,000 b/d of crude oil for power generation since 2015.  $^{81}$ 

Table 4. Key solar power projects in Iraq

#### Operator or project

investor	Capacity (megawatts)	Notes
TotalEnergies and QatarEnergy	1,250	Part of TotalEnergies' \$27 billion energy deal with the Iraq government. Iraq's cabinet approved the power purchase agreement with TotalEnergies in May 2023. Four development phases supplying the Basra grid will come online by 2027.82
Masdar (UAE)	1,000	This project consists of five solar plants in Dhi Qar, Ramadi, Mosul, and Amarah. Masdar and Iraq signed a preliminary agreement in October 2021.  Negotiations are underway to finalize the agreement. 83
ACWA Power (Saudi Arabia)	1,000	Iraq awarded the project to ACWA Power in January 2025. 84
PowerChina	750	Iraq's cabinet approved the PPA with PowerChina in May 2023. The plan has two phases; 250 MW and 500 MW located in southern Iraq. 85
Al-Bilal Group (UAE)	525	Located in central Iraq. Iraq's cabinet approved the power purchase agreement (PPA) with Al-Bilal in July 2023.86
UEG (China)	200	UEG is waiting for approval from the Basra Oil Company for the first phase of its solar project. 87
Total	4,725	

Data source: Middle East Economic Survey, Reuters, Zawya, Iraq Business News, Masdar, Arab

News

Note: MW=megawatts

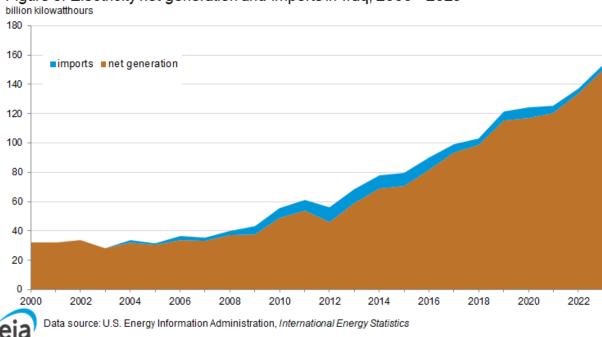
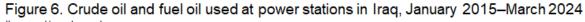
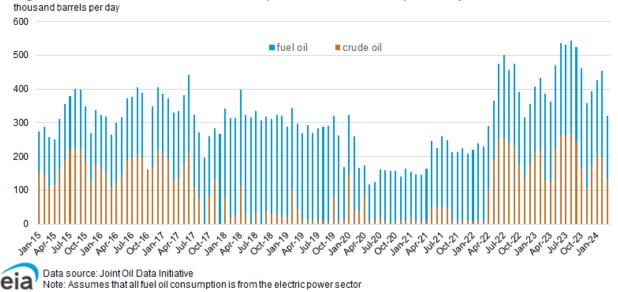


Figure 5. Electricity net generation and imports in Iraq, 2000-2023





# **Energy Trade**

# **Petroleum and other liquids**

• Iraq's total seaborne-traded crude oil exports averaged more than 3.2 million barrels per day (b/d) in 2024, which is lower than the nearly 3.6 million b/d in 2022, based on tanker loadings data. 88 The decline in exports reflects Iraq's lower crude oil production as it and some other

- OPEC+ members committed to additional voluntary cuts and as the Iraq-to-Türkiye crude oil export (ITP) pipeline ceased operations.
- During 2024, all of Iraq's seaborne exports were shipped from the southern terminals in the Persian Gulf, which export Basra medium and heavy crude oil grades (Figure 7).<sup>89</sup>
- Asia (led by India, China, and South Korea) was the main regional destination for Iraq's crude oil and imported 72% of Iraq's crude oil exports in 2024 (Figure 8). China and India imported more than 1.1 million b/d and nearly 900,000 b/d of crude oil, respectively, from Iraq (62% of Iraq's total exports), making them the top buyers of Iraq's crude oil in 2024. India's imports of Iraqi crude oil dropped after 2022 when India began to buy Russia's discounted crude oil.
- Outside of Asia, the Netherlands, Greece, and Italy imported the most crude oil from Iraq,<sup>90</sup> although some European imports at various Mediterranean ports travel further inland to Germany, Austria, and Serbia.<sup>91</sup> Collectively, European countries imported 21% of Iraq's crude oil exports in 2024.
- Red Sea disruptions in late 2023 and 2024 and the ITP pipeline closure diverted more of Iraq's crude oil from Europe to Asia, mostly China.<sup>92</sup> Partial sanctions on Russia's oil supplies to Europe and the Red Sea disruptions resulted in Europe importing more crude oil from the United States than in the past.<sup>93</sup> Russia also displaced some of Iraq's crude oil to Türkiye in 2024.<sup>94</sup>
- Infrastructure export capacity at Iraq's southern ports in Basra remains constrained, requires further investment to rebuild and restore, and limits the country's production capacity. Operational export capacity was about 3.4 million b/d in mid-2024. Iraq installed new compressors at a pumping station located near Basra in mid-2024, which the oil ministry claimed could boost export capacity by up to 300,000 b/d. Bottlenecks at pipelines in the area could offset the capacity addition. 95 Oil exports in southern Iraq will likely be constrained until Iraq can upgrade its infrastructure for the Sealine 3 pipeline.
- Iraq intends to replace the aging and malfunctioning subsea pipelines critical to oil export infrastructure offshore of Basra. In 2023, Iraq's cabinet approved Sealine 3, which would add 500,000 b/d to Iraq's oil production, and following a contract dispute, pipeline's construction was renegotiated in April 2025. Sealine 3, which is scheduled to come online in 2027, will connect the fifth and newest single mooring point to the Basra Oil Terminal and possibly to the Khor Al-Amaya Oil Terminal, which has been out of operations since 2017. 96 Iraq also approved \$1 billion in 2023 to construct Sealines 4 and 5, which will replace old, inefficient pipelines and raise southern crude oil export capacity by another 2 million b/d. Iraq has made no progress on these projects as of early 2025. 97
- In addition to its seaborne shipments, Iraq also exports relatively small volumes of crude oil by truck to Jordan<sup>98</sup> and by inland routes to Türkiye via an onshore pipeline from the Ceyhan terminal to Türkiye's Kirikkale refinery, near Ankara. The Ceyhan-Kirikkale pipeline has a capacity of 145,000 b/d.<sup>99</sup> However, Iraq's exports to the Kirikkale refinery have stopped until the ITP pipeline resumes operations.
- Seaborne oil exports from northern Iraq through the Turkish port of Ceyhan terminal averaged more than 400,000 b/d before the ITP closure in March 2023.<sup>100</sup> Federal Iraq exported more than 80,000 b/d of crude oil from its side of the Kirkuk fields through the KRG pipeline to Ceyhan, Türkiye, in 2022 before the ITP closed.<sup>101</sup> Federal Iraq has continued output from its Kirkuk fields and sends the oil to local northern refineries.<sup>102</sup> We expect that after Türkiye and Iraq restore ITP pipeline operations, Federal Iraq will resume these exports from Kirkuk.
- Reportedly, local crude oil buyers and traders in the KRG have transported crude oil and fuel oil to Türkiye and Iran via truck during the past two years as they looked for more lucrative

- markets. Although the volume sold is unclear, some reports have indicated that smugglers exported up to 200,000 b/d of crude oil through these routes during 2024. 103
- Iraq's exports of refined petroleum products nearly doubled between 2022 and 2024 from 243,000 b/d to 479,000 b/d. High sulfur fuel oil accounted for the majority of this increase as Iraq attempted to capitalize on its increased refining capacity and higher output of fuel oil compared with other products at its refineries.<sup>104</sup>

## **Natural** gas

- Iraq's annual natural gas imports averaged 310 billion cubic feet (Bcf) in 2023, down slightly from 333 Bcf in 2022. <sup>105</sup> Because Iraq's natural gas production and infrastructure growth have not kept pace with domestic demand growth, it began importing natural gas from Iran in 2017 to fuel electric power plants near Baghdad and Basra. <sup>106</sup> Iran renewed a five-year contract in March 2024 to supply Iraq with up to nearly 660 Bcf/y, <sup>107</sup> but Iran's actual exports are much lower than contracted volumes. <sup>108</sup> Over the past few years, Iran has purposely limited natural gas supplies to Iraq during peak electricity demand seasons because of the high domestic demand in Iran and because of Iraq's challenges in making direct payments for the fuel. <sup>109</sup>
- To diversify its natural gas supplies, Iraq signed a contract with Turkmenistan in October 2024 to import up to 258 Bcf/y of natural gas using Iran's pipeline system, <sup>110</sup> but transporting the natural gas through Iran will likely pose challenges. <sup>111</sup>
- Iraq plans to install a floating, storage, and regasification unit with a liquefied natural gas regasification capacity of about 182 Bcf/y at the Khor al-Zubair port in the Persian Gulf in 2025 to replace some imports from Iran.<sup>112</sup>

# **Electricity**

- Iraq imports a significant amount of electricity from Iran. Electricity imports from Iran made up only about 2% of Federal Iraq's total electricity supply in 2023, 113 but Iraq reported that natural gas imports from Iran account for more than 30% of electricity generation. 114 Iran reduced its electricity exports to Iraq after 2020 from 7.4 terawatthours (TWh) to 3.1 TWh in 2023 because of power shortages and insufficient power generation in Iran and because of Iraq's challenges in paying Iran for energy supplies from previous years. 115 In summer 2024, Iran limited supply to Iraq to 500 megawatts, well below the capacity level. 116
- After the United States reimposed sanctions on Iran in 2018, Iraq received sanction waivers to import electricity from Iran. In March 2025, the United States revoked these waivers, and Iraq stopped importing electricity from Iran.<sup>117</sup>
- The Iraqi government wants to diversify its sources of imported electricity and has transmission interconnection projects with the Gulf Cooperation Council (GCC), Saudi Arabia, Türkiye, and Jordan (Table 5). <sup>118</sup> Iraq began to import electricity through new transmission links with Türkiye <sup>119</sup> and Jordan <sup>120</sup> in 2024.

#### Table 5. Iraq's existing and planned electricity import sources

Import source	Capacity (megawatts)	Import status	Notes
Iran	1.200	1,200 Existing	Four major transmission lines that connect
ii aii	Tall 1,200 EXISTING	Iran to Iraq at various points. 121	

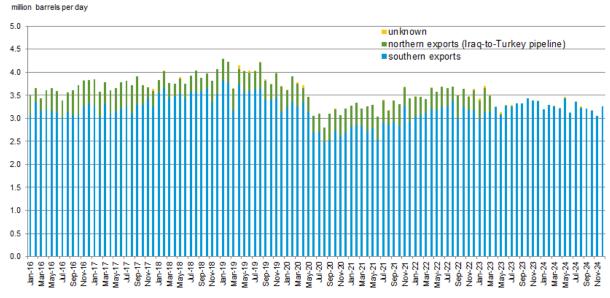
Jordan	200	March 2024 for Phase 1 and 1Q 2025 for Phase 2	A second phase of the transmission line is expected to increase capacity from 40 MW to 150 MW–200 MW. 122
Türkiye	300	July 2024	Iraq approved a contract to import up to 300 MW of electricity from Türkiye through Kurdistan in July 2024. Türkiye will export power to Iraq during the peak summer months, and Iraq will export up to 150 MW of power to Türkiye during the other months. 123
Gulf Cooperation Council Interconnection Authority (GCCIA)	500	mid-2025 <sup>124</sup>	Finalized an agreement in 2022 with the GCCIA. Transmission line will connect Iraq to the line in Kuwait. The parties target a final capacity of 1.8 GW following future phases. 125
Saudi Arabia	1,000	ТВА	Saudi Arabia and Iraq signed an agreement in mid-2022 to construct a transmission line from northern Saudi Arabia to the Baghdad area and began work on the project in mid-2023. 126
Total	3,200		

Data source: Middle East Economic Survey, Emirates News Agency, Shafaq News, Iraqi News, Iraq Oil Report,

Refinitiv/Zawya

Note: TBA=to be announced, MW=megawatts, GW=gigawatts

Figure 7. Iraq's monthly seaborne crude oil exports, by terminal, January 2016–December 2024



Data source: Vortexa tanker tracking (accessed March 2025)
Note: Exports only include seaborne-traded crude oil, not crude oil transported by trucks or onshore pipelines.

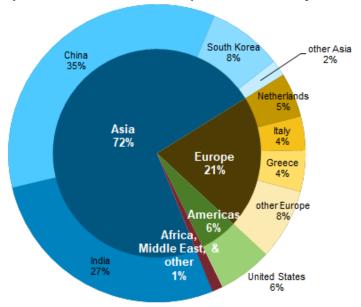


Figure 8. Iraq's seaborne crude oil exports in 2024, by destination



Data source: U.S. Energy Information Administration and Vortexa tanker tracking (accessed March 2025)

Note: Total crude oil exports were 3.2 million barrels per day in 2024. Exports only include seaborne-traded crude oil, not crude oil exported by truck or crude oil exported onshore to Turkey via the Ceyhan-Kirikkale pipeline to a refinery near Ankara.

Totals may not equal the sum of components because of independent rounding.

<sup>&</sup>lt;sup>1</sup> U.S. Energy Information Administration, Short-Term Energy Outlook May 2025.

<sup>&</sup>lt;sup>2</sup> Organization of the Petroleum Exporting Countries, Annual Statistical Bulletin 2025, Oil data: upstream.

<sup>&</sup>lt;sup>3</sup> Energy Intelligence, Crude Profiles and Analytics, Iraq country profile (published April 4, 2024); Fitch Solutions, Iraq Oil & Gas Report, Q2 2025, pages 8-9.

<sup>&</sup>lt;sup>4</sup> Energy Intelligence, World Crude Oil Database, Iraq (published April 4, 2024).

<sup>&</sup>lt;sup>5</sup> Shafaq News, "Iraq's democratic malaise: Challenges mount ahead of 2025 Elections," April 16, 2025; Shafaq News, "Billions lost, power gone: Iraq's energy crisis explodes," March 9, 2025; Shafaq News, "Iraq's 2025 election drama: Political showdown over law and seat expansion," February 13, 2025; Fitch Solutions, Iraq Oil & Gas Report, Q2 2025, page 6; Reuters, "Iraq approves record \$153 billion budget including big public hiring," June 11, 2023; International Monetary Fund, 2024 Article IV Consultation with Iraq, May 2024, pages 1, 4, 18, 31, and 63.

<sup>&</sup>lt;sup>6</sup> International Monetary Fund, 2024 Article IV Consultation with Iraq, May 2024, Table 2, page 25.

<sup>&</sup>lt;sup>7</sup> U.S. Energy Information Administration, OPEC Revenues Fact Sheet, July 2025.

<sup>&</sup>lt;sup>8</sup> U.S. Energy Information Administration, *Short-Term Energy Outlook* May 2025; *Middle East Economic Survey*, "Iraq Oil Export Revenues Hold Firm For 2024," February 14, 2025.

<sup>&</sup>lt;sup>9</sup> U.S. Energy Information Administration, International Energy Statistics.

- <sup>10</sup> Reuters, "Explainer: Why oil flows through the Iraq-Turkey pipeline have been halted," February 21, 2025; Reuters, "Iraq, Turkey yet to agree on northern oil exports resumption sources," August 22, 2023.
- <sup>11</sup> Kurdistan Regional Government, Ministry of Natural Resources, "MNR Issues Order to Regulate the Small Basic Refining Units in the Kurdistan Region," September 15, 2015.
- <sup>12</sup> Middle East Economic Survey, "MEES KRG misses out on 2022 windfall because of falling production," February 17, 2023; Middle East Economic Survey, "Baghdad fears US sanctions as Kurdish oil export resumption drags," February 28, 2025; Reuters, "Kurdish oil smuggling to Iran flourishes," July 11, 2024.
- <sup>13</sup> Note: Federal Iraq and the KRG must appoint a consulting firm to assess the actual production costs of KRG crude oil. However, the IOCs requested further clarification from the KRG and Federal Iraq on payment mechanisms, contract terms, and assurances that they will be paid for prior debts owed to them by the KRG. The IOCs insist that their contract and financial terms with the KRG be honored by all parties.
- <sup>14</sup> Middle East Economic Survey, "Baghdad fears US sanctions as Kurdish oil export resumption drags," February 28, 2025; Reuters, "Iraq parliament approves compensation plan to resolve Kurdistan oil dispute, say lawmakers," February 2, 2025; Shafaq, "EXCLUSIVE: Iraq to vote on amending Article 12 of Budget Law Sunday," February 1, 2025.
- <sup>15</sup> Energy Information Administration, *Short-Term Energy Outlook* May 2025.
- <sup>16</sup> Organization of the Petroleum Exporting Countries, "Several OPEC+ countries announce additional voluntary cuts to the total of 2.2 million barrels per day," November 30, 2023; Reuters, "Explainer: What OPEC+ oil output cuts are currently in place?," May 2, 2024.
- <sup>17</sup> Energy Information Administration, *Short-Term Energy Outlook* May 2025; *Middle East Economic Survey, "*Iraqi MPs Undermine Kurdistan's Oil Amendment," January 31, 2025.
- <sup>18</sup> U.S. Energy Information Administration, *Short-Term Energy Outlook*, May 2025.
- <sup>19</sup> Organization of the Petroleum Exporting Countries, "Saudi Arabia, Russia, Iraq, United Arab Emirates, Kuwait, Kazakhstan, Algeria, and Oman held a virtual meeting on the sidelines of the 38th OPEC and non-OPEC Ministerial Meeting (ONOMM)," December 5, 2024; Shafaq, "OPEC+ extends oil production cuts through December," November 4, 2024.
- <sup>20</sup> Shafaq News, "Iraq targets 7 million barrels daily oil output by 2029," January 28, 2025; Rystad, "Game-changing Kirkuk deal key to BP's strategic reset," March 7, 2025.
- <sup>21</sup> Fitch Solutions, Iraq Oil & Gas Report Q2 2025, pages 6, 22-23; *Middle East Economic Survey*, "Iraq Advances Southern Export Capacity," April 18, 2025.
- <sup>22</sup> Iraq Oil Report, "Key water project advances, promising to unlock new oil capacity," May 6, 2024.
- <sup>23</sup> Iraq Oil Report, "Iraq, BP advance in Kirkuk contract talks," January 9, 2025.
- <sup>24</sup> Reuters, "BP receives final green light from Iraqi government for Kirkuk project," March 26, 2025; Reuters, "Iraq, BP agree to develop four Kirkuk fields," February 25, 2025.
- <sup>25</sup> U.S. Energy Information Administration, *Short-Term Energy Outlook*, May 2025.
- <sup>26</sup> Vortexa Ltd. Tanker tracker (accessed March 2025).
- <sup>27</sup> Argus Media group, "Iraq begins importing Turkish power to cut crude burn," July 22, 2024; *Middle East Economic Survey*, "Iraq Eyes End-2025 Gasoline Surplus On Continued Refinery Gains," March 28, 2025.
- <sup>28</sup> Fitch Solutions Company, Iraq Oil & Gas Report Q2 2025, page 30.
- <sup>29</sup> *Middle East Economic Survey,* "Iraq Targets 1.54 mn b/d Refining Capacity with Relaunch of 150,000 mn b/d Missan Plans," April 4, 2025.
- <sup>30</sup> Middle East Economic Survey, "MEES Interview: Iraq's Deputy Oil Minister For Refining Affairs Hamid Younes," February 16, 2024, and "Iraq's Karbala Refinery Hits Full Capacity Despite Unresolved Technical Issues," September 29, 2023.
- <sup>31</sup> Reuters, "Iraq reopens North Refinery in Bajji closed for a decade," February 23, 2024.
- <sup>32</sup> Irag Business News, "Al-Siniya Refinery Increases Capacity," December 16, 2024; Middle East Economic Survey,
- "Iraq Targets 1.54 mn b/d Refining Capacity with Relaunch of 150,000 mn b/d Missan Plans," April 4, 2025.
- <sup>33</sup> Middle East Economic Survey, "Iraq Celebrates Year-End Refining Capacity Boost," December 23, 2023; Iraq Business News, "Iraq to Expand Maysan Refinery with New 70,000 bpd Unit," February 12, 2025.
- <sup>34</sup> Iraq Oil Report, "Iraq finalizes \$8 billion Fao refinery deal," May 21, 2024.
- <sup>35</sup> Kurdistan 24, "Kurdistan continue to operate its oil fields, KRG Minister," January 15, 2025; Iraq Oil Report, "Iraq leans on refining sector after major capacity expansion," August 28, 2024.

- <sup>36</sup> Iraq Business News, "New Gas Power Plant and Processing Unit at Majnoon," August 1, 2024; *Middle East Economic Survey*, "Iraq's Gas: Delays Now, Feedstock Crunch Later?", March 8, 2024.
- <sup>37</sup> Middle East Economic Survey, "Iraq's Faihaa Nears 100,000 b/d," July 12, 2024; United Energy Group Limited, Interim Result Announcement For the Six Months Ended 30 June 2024, pages 25 and 31 (published August 30, 2024).
- <sup>38</sup> Iraq Oil Report, "Q&A: Arkan Abdul-Satar Abdul-Jabbar, director of Zubair oil field," September 1, 2023; *Middle East Economic Survey,* "Zubair To Add 200,000 b/d Surface Capacity By End-2024," November 24, 2023.
- <sup>39</sup> TotalEnergies, 2024 Strategy and Outlook, October 2, 2024, page 23.
- <sup>40</sup> Iraq Oil Report, "Q&A: Hamza Abdul-Baqi, director general of the South Gas Company," April 11, 2024; *Middle East Economic Survey*, "Total And QatarEnergy Finalize Iraq Solar Stakes," November 1, 2024; Iraq Oil Report, "Iraq Crude Production and Export Tracker," July 2023, page 9; Rystad, "TotalEnergies breaks the mould with \$27 billion deal in Iraq", September 14, 2021.
- <sup>41</sup> Middle East Economic Survey, "Iraq Targets 200K 2025 at WQ-1," January 24, 2025; Iraq Oil Report, "PetroChina takes over as West Qurna 1 operator," January 9, 2024; Middle East Economic Survey, "ExxonMobil Finalizes West Qurna-1 Exit As PetroChina Assumes Operatorship," November 17, 2023.
- <sup>42</sup> Middle East Economic Survey, "Iraq: Pakistan Firm Exits Block 8," September 20, 2024, and "Iraq Bidding: Shell & Adnoc Locked Out By Inflexible Criteria," May 24, 2024.
- <sup>43</sup> Middle East Economic Survey, "Inpex To Sell Eridu Stake To Lukoil," November 24, 2023; Middle East Economic Survey, "Iraq: WQ-2 Gas Award", November 24, 2023; Iraq Business News, "Lukoil Extends Contract at Iraq's West Qurna 2 Oilfield," November 2, 2023; Middle East Economic Survey, "Iraq's WQ-2 Reaches Second Phase Capacity," June 16, 2023.
- <sup>44</sup> Middle East Economic Survey, "Gazprom Nasiriya Entry: Conciliatory Gesture?," March 8, 2024.
- <sup>45</sup> Iraqi News Agency, "PM Sponsors the Signing Ceremony of a Contract with BP to Develop and Produce the Four Kirkuk Oil Fields," March 26, 2025; Reuters, "Iraq, BP agree to develop four Kirkuk fields," February 25, 2025; Iraq Oil Report, "Iraq, BP advance in Kirkuk contract talks," January 9, 2025; Reuters, "Iraq and BP to sign Kirkuk oil and gas deal by first week of Feb, oil minister says," January 15, 2025.
- <sup>46</sup> Organization of the Petroleum Exporting Countries, Annual Statistical Bulletin 2025, Natural gas data.
- <sup>47</sup> Fitch Solutions, Iraq Oil & Gas Report Q2 2025, page 24; Rystad Energy, "TotalEnergies breaks the mould with \$27 billion deal in Iraq", September 14, 2021, page 4.
- <sup>48</sup> Fitch Solutions, Iraq Oil & Gas Report Q2 2025, pages 6, 25; *Middle East Economic Survey,* "Iraq Suffers Blackouts Amid Meagre Iran Gas Flows," January 24, 2025.
- <sup>49</sup> Fitch Solutions, Iraq Oil & Gas Report Q2 2025, page 24.
- <sup>50</sup> U.S. Energy Information Administration, International Energy Statistics.
- <sup>51</sup> Fitch/BMI, Iraq Oil & Gas Report Q2 2025, page 25.
- <sup>52</sup> World Bank, Global Gas Flaring Reduction Partnership (GGFR), Global Gas Flaring Data, June 2024.
- <sup>53</sup> Zawya (LSEG), "Iraq reduces gas flaring by 65% oil minister," August 19, 2024; Rudaw, "Iraq to end gas flaring within four years: Minister," September 9, 2024; *Middle East Economic Survey*, "Iraq Set for BGC Summer Gas Boost," April 28, 2023; Shafaq News, "Iraq eyes ending gas flaring by 2027, as it courts IOCs to capture associated output", November 23, 2021.
- <sup>54</sup> Fitch/BMI, Iraq Oil & Gas Report Q2 2025, page 43.
- <sup>55</sup> Middle East Economic Survey, "Iraq: Record Gas Capture As Flaring Falls To 35%, But Still A Long Way To Go," July 12, 2024; Middle East Economic Survey, "China's UEG Commissions Iraq Gas Plant," December 20, 2024.
- <sup>56</sup> Iraq Oil Report, "Iraq Oil Report Iranian pipeline outage underscores urgency of Iraq's domestic gas projects," November 26, 2024; *Middle East Economic Survey,* "Iraq: Halfaya Gas Start-Up," June 14, 2024; CNPC, "Halfaya Gas Processing Plant put into operation," June 11, 2024; *Middle East Economic Survey,* "Iraq Set for BGC Summer Gas Boost." April 28, 2023.
- <sup>57</sup> Fitch/BMI, Iraq Oil & Gas Report Q2 2025, page 25.
- <sup>58</sup> Middle East Economic Survey, "Iraq's Midlands Oil Hopes For Gas Boost To Staid Asset Portfolio," July 19, 2024; Middle East Economic Survey, "Iraq's Akkas & Mansuriya Fields: Back On Offer", March 31, 2023.
- <sup>59</sup> Iraq Oil Report, "Khor Mor development continues after latest drone attack," February 7, 2025; *Middle East Economic Survey*, "KRG's Khor Mor Gas: 2-Year Expansion Delay," November 15, 2024; *Middle East Economic Survey*, "KRG Gas Expansion: Dana Sacks Contractor," August 23, 2024; *Middle East Economic Survey*, "Iraq Approves Gas Purchase Deal With Kurdistan's Khor Mor," May 24, 2024; *Middle East Economic Survey*, "Kurdistan's

Khor Mor Gas Expansion Back On Track," May 19, 2023; *Middle East Economic Survey*, "Kurdistan Gas Expansion Delayed To May 2024 At Best," February 10, 2023; *Middle East Economic Survey*, "Iraqi Kurdistan Gas Expansion Work Suspended After Attacks", July 1, 2022; Reuters, "Rockets hit Khor Mor gas field in Iraq, no damage reported", July 25, 2022; Iraq Oil Report, "Rocket strike causes fire at Khor Mor gas field", July 26, 2022. <sup>60</sup> *Middle East Economic Survey*, "Iraq's Basrah Gas: Slow Startup at New Unit," June 30, 2023; *Middle East Economic Survey*, "Iraq Gas Flaring: No Rescue in 2022," December 24, 2021; *Middle East Economic Survey*, "Iraq Gas Capture Award Sparks Fresh Uncertainty On TotalEnergies Megaproject", July 8, 2022. <sup>61</sup> *Middle East Economic Survey*, "Iraq: Record Gas Capture As Flaring Falls To 35%, But Still A Long Way To Go," July 12, 2024; Basrah Gas Company, Our Operations, Our Growth Project – BNGL (accessed November 2024). <sup>62</sup> Iraq Business News, "Iraq Opens Major Gas Processing Plant at Halfaya," June 11, 2024; *Middle East Economic Survey*, "Iraq: Halfaya Gas Start-Up," June 14, 2024, "Iraq's Halfaya Gas Processing Mechanical Completion," October 6, 2023; Iraq Oil Report, "Halfaya gas capture project makes progress," April 18, 2023; *Middle East Economic Survey*, "Halfaya: 300mn cfd By End-23," February 3, 2023.

- <sup>63</sup> Middle East Economic Survey, "China's UEG Commissions Iraq Gas Plant," December 20, 2024; UEG, "Successful Lifting of the De-ethanizer Tower at Faihaa Oilfield CPF Gas Project," August 6, 2024; Middle East Economic Survey, "Iraq's Faihaa Nears 100,000 b/d," July 12, 2024.
- <sup>64</sup> Iraq Oil Report, "Q&A: Ali Salman Majeed, deputy director general of South Gas Company," October 18, 2024; *Middle East Economic Survey,* "Iraq Gas Capture Finally Gaining Traction," August 9, 2024; *Middle East Economic Survey,* "Iraq: Record Gas Capture As Flaring Falls To 35%, But Still A Long Way To Go," July 14, 2024; Iraq Oil Report, "Gas capture projects advance as Iraq aims to end flaring," April 10, 2024; *Middle East Economic Survey,* "Baker Hughes Eyes 2H24 Completion at Iraq's Nasariya Gas Plant," August 11, 2023; Argus Media, "Iraq eyes 2023 start of southern gas capture projects", December 22, 2022; Argus Media, "Baker Hughes agrees new Iraq gas capture project", September 19, 2021.
- <sup>65</sup> Middle East Economic Survey, "Iraq: Bin Umar Gas Contract," January 12, 2024; Baker Hughes, "Baker Hughes to Collaborate with Halfaya Gas Company on Gas Flaring Reduction Project in Iraq," April 19, 2024; Raban Al-Safina for Energy Projects (Rasep), Key Projects (accessed November 2024).
- <sup>66</sup> Middle East Economic Survey, "Total And QatarEnergy Finalize Iraq Solar Stakes," November 1, 2024; Middle East Economic Survey, "Iraq Gas Capture Finally Gaining Traction," August 9, 2024; Iraq Oil Report, "Q&A: Ali Salman Majeed, deputy director general of South Gas Company," October 18, 2024 and "Gas capture projects advance as Iraq aims to end flaring," April 10, 2024; Middle East Economic Survey, "TotalEnergies Becomes Iraq's Key Foreign Player With Closure Of \$27bn Megadeal," July 14, 2023; Reuters, "Iraq's massive Total oil deal heralds new revenue-sharing formula," July 19, 2023.
- <sup>67</sup> Iraqi News Agency, "PM Sponsors the Signing Ceremony of a Contract with BP to Develop and Produce the Four Kirkuk Oil Fields," March 26, 2025; Iraq News Agency, "Oil Minister reveals Kirkuk fields' production volume according to BP's rehabilitation contract," February 26, 2025; *Middle East Economic Survey,* "BP Lands Kirkuk Terms: Now For The Contract?," February 28, 2025; Reuters, "Iraq, BP agree to develop four Kirkuk fields," February 25, 2025.
- <sup>68</sup> Middle East Economic Survey, "KRG's Khor Mor Gas: 2-Year Expansion Delay," November 15, 2024; Middle East Economic Survey, "KRG Gas Expansion: Dana Sacks Contractor," August 23, 2024; Iraq Oil Report, "Rocket strike causes fire at Khor Mor gas field", July 26, 2022. Dana Gas, Media, Press Releases, "Dana Gas reports AED 410 million (\$112 million) Net Profit in 9M 2024," November 8, 2024; Iraq Oil Report, "KRG starts work to expand gas pipeline network," August 9, 2023; Middle East Economic Survey, "Baghdad to Purchase Gas from Kurdistan's Khor Mor", July 14, 2023; Middle East Economic Survey, "Kurdistan's Khor Mor Gas Expansion Back On Track", May 19, 2023; Middle East Economic Survey, "Dana Gas Kicks Off Khor Mor Drilling, Eyes Improved Egypt Terms," May 13, 2022.
- Middle East Economic Survey, "Iraq: China's Jereh Inks Mansuriya Contract ", May 24, 2024; Iraq Oil Report, "Mansuriya gas field contract signed despite security, political challenges," November 19, 2024; Jereh Group, "Jereh Officially Signs Development Agreement with Midland Oil Company of Iraq for Mansuriya Gas Field," November 1, 2024; Iraq Business News, "Iraq signs Gas Field Development Contract," November 1, 2024.
   Middle East Economic Survey, "Iraq's Midlands Oil Hopes For Gas Boost To Staid Asset Portfolio," July 19, 2024; Iraq Oil Report, "Ukrainian firm takes over Kogas contract for Akkas," April 26, 2024; Shafaq News, "Iraq Initiates Gas Investment Operations in Akkas Gas Field," March 29, 2023; Shafaq News, "Baghdad holds negotiations with

- Halliburton to invest in Akkas oil field", January 25, 2022; *Middle East Economic Survey*, "Iraq's Akkas Gas Project: Halliburton Closes In On Appraisal Drilling Deal", April 22, 2022.
- <sup>71</sup> Middle East Economic Survey, "Crescent Activates Iraq Contracts, Targets 250mn cfd In 18 Months," October 20, 2023; "Crescent Petroleum To Award Iraq Seismic Contract," August 30, 2024.
- <sup>72</sup> U.S. Energy Information Administration, International Energy Statistics.
- <sup>73</sup> Shafaq News, "Iraq unveils 15,000MW power projects to boost energy sector," January 27, 2025; International Monetary Fund, 2022 Article IV Consultation with Iraq, February 2023, page 12.
- <sup>74</sup> *Middle East Economic Survey,* "Baghdad Scrambles to Keep US Sanctions Waivers On Iran Electricity Imports", February 14, 2025.
- <sup>75</sup> U.S. Energy Information Administration, International Energy Statistics.
- <sup>76</sup> U.S. Energy Information Administration, International Energy Statistics.
- <sup>77</sup> Shafaq News, "Iraq unveils plan for steam power plants, attracting over 100 companies," February 16, 2025; Shafaq News, "Iraq's electricity: no longer rely on foreign fuel," February 24, 2025; Shafaq News, "Iraq unveils 15,000MW power projects to boost energy sector," January 27, 2025; *Middle East Economic Survey,* "Iraq Grapples With Mammoth Summer Peak Load," June 28, 2024.
- <sup>78</sup> Shafaq News, "Iraq proceeds with building its first large solar panel," May 8, 2024.
- <sup>79</sup> Middle East Economic Survey, "Iraq Suffers Blackouts Amid Meagre Iran Gas Flows," January 24, 2025; Middle East Economic Survey, "Iraq Grapples with Mammoth Peak Load", June 28, 2024.
- <sup>80</sup> Joint Oil Data Initiative (accessed January 2025).
- <sup>81</sup> S&P Global Platts conversation (September 2020).
- <sup>82</sup> Middle East Economic Survey, "Total And QatarEnergy Finalize Iraq Solar Stakes", November 1, 2024; Middle East Economic Survey, "TotalEnergies Becomes Iraq's Key Foreign Player With Closure Of \$27bn Megadeal", July 14, 2023; Zawya, "Total set to launch 1,000 MW power project in Iraq," June 6, 2023.
- <sup>83</sup> Zawya, "Iraq set to finalise solar power deals with Masdar, ACWA Power," April 5, 2024; Iraq Business News, "Strategic Meeting with Masdar to push Solar Projects in Iraq," January 23, 2024; Masdar, "Masdar signs agreement to develop solar projects in Republic of Iraq with a total capacity of 1 GW," October 7, 2021.
- <sup>84</sup> Zawya, "ACWA Power to build and operate 1,000MW solar power plant in Iraq," January 8, 2025; Arab News, "ACWA Power to develop 1,000 MW solar plant in Iraq," April 17, 2023.
- 85 Middle East Economic Survey, "Baghdad Approves Solar Projects," June 2, 2023.
- <sup>86</sup> Middle East Economic Survey, "Iraq Approves Al-Bilal 525 MW Solar", July 21, 2023.
- <sup>87</sup> Middle East Economic Survey, "China's UEG Plans Solar Shift in Iraq Operations," November 4, 2022.
- <sup>88</sup> Vortexa tanker tracking (accessed February 2025).
- <sup>89</sup> Vortexa tanker tracking (accessed February 2025).
- <sup>90</sup> Vortexa tanker tracking data (accessed February 2025).
- <sup>91</sup> Eurostat data (accessed January 2025).
- <sup>92</sup> Vortexa tanker tracking data (accessed February 2025).
- <sup>93</sup> U.S. Energy Information Administration, Data, Petroleum and Other Liquids, Exports by Destination (accessed February 2025); U.S. Energy Information Administration, World Oil Transit Chokepoints, Updated June 25, 2024.
- <sup>94</sup> Middle East Economic Survey, "India & Turkey See Imports Of Russian Crude Surge," June 7, 2024.
- <sup>95</sup> Middle East Economic Survey, "Iraq Oil Export Expansion Setback," July 26, 2024; Iraq Oil Report, "Iraq Crude Production and Export Tracker, August 2024, page 9.
- <sup>96</sup> Middle East Economic Survey, "Iraq Advances Southern Export Capacity," April 18, 2025; Middle East Economic Survey, "Iraq Oil Export Expansion Setback," July 26, 2024; Zawya, "Iraq approves \$1.26bln for Basra oil pipeline project," September 27, 2023; Iraq Oil Report, "Iraq crude oil production up in July as KRG oil trickles back online," August 21, 2023, "New life for Iraq's southern oil export expansion," July 14, 2023, and "Cabinet suspends approval of major oil export expansion," June 28, 2023.
- <sup>97</sup> Middle East Economic Survey, "Baghdad Approves Export Capacity Expansion," October 6, 2023; Iraq Oil Report, "Cabinet suspends approval of major oil export expansion," June 28, 2023.
- <sup>98</sup> Argus Media, "Jordan to resume crude imports from Iraq in April", March 27, 2022.
- <sup>99</sup> BOTAS website, Crude Oil (accessed September 2023); *Middle East Economic Survey,* "Turkey: Record Iraq Crude Imports," July 3, 2020.
- <sup>100</sup> Vortexa tanker tracking data (accessed February 2025).
- <sup>101</sup> KirkukNow, "Kirkuk exports 2.5M barrels in January for 180 million dollars," February 3, 2023.

- <sup>102</sup> Iraq Oil Report, "Iraq Crude Production and Export Tracker," August 2023, page 7 and June 2023, page 6.
- <sup>103</sup> Reuters, "Exclusive: U.S. piles pressure on Iraq to resume Kurdish oil exports, sources say," February 21, 2025; Reuters, "Kurdish oil smuggling to Iran flourishes," July 11, 2024.
- <sup>104</sup> Vortexa tanker tracker (accessed March 2025); Reuters, "Iraq's fuel oil exports head for record year after Oct volumes jump," November 20, 2024.
- <sup>105</sup> U.S. Energy Information Administration, *International Energy Statistics*.
- <sup>106</sup> Shafaq News, "Iran exports gas worth \$15 billion to Iraq since July 2017," March 28, 2024.
- <sup>107</sup> Middle East Economic Survey, "Iran-Iraq: New Gas Deal," March 29, 2024.
- <sup>108</sup> Middle East Economic Survey, "Iraq Grapples With Mammoth Summer Peak Load," June 28, 2024.
- <sup>109</sup> Fitch Solutions, Iraq Oil & Gas Report, Q2 2025, page 43; Reuters, "Iraq to pay \$2.76 billion in gas and electricity debt to Iran," June 10, 2023; *Middle East Economic Survey*, "Iraq Suffers Blackouts Amid Meagre Iran Gas Flows," January 24, 2025; Shafaq News, "Iraq moves forward with Gulf-Saudi electrical connection to boost power supply," July 27, 2024. Iran International, "Now Iran Energy Crisis Hits Supply To Iraq," February 29, 2024; Iran International, "Iran Facing Water, Power Shortages This Summer," June 3, 2022.
- <sup>110</sup> Interfax, "Turkmenistan to supply Iraq with 20 million cubic meters of gas per day Iraqi media," October 21, 2024; Iraq Oil Report, "Iraq Oil Report Iranian pipeline outage underscores urgency of Iraq's domestic gas projects," November 26, 2024.
- <sup>111</sup> Rudaw, "Iraq to import natural gas from Turkmenistan," October 19, 2024; Refinitiv/Zawya, "Iraq needs pipeline to get gas from Turkmenistan: report," August 28, 2023; News Central Asia, "Iraq to Import Turkmen Gas Through Iran in Swap Deal," August 25, 2023.
- <sup>112</sup> Reuters, "Exclusive: After US move on Iraq-Iran power trade, Baghdad looks to replace Iranian gas," March 10, 2025.
- <sup>113</sup> U.S. Energy Information Administration, International Energy Statistics based on annual reports from Federal Iraq's Ministry of Electricity.
- <sup>114</sup> Al Jazeera, "US ends sanctions waiver for Iraq to buy electricity from Iran," March 9, 2025; Reuters, "Exclusive: After US move on Iraq-Iran power trade, Baghdad looks to replace Iranian gas," March 10, 2025; *Middle East Economic Survey*, "US Expands Iraq-Iran Electricity Waiver But Questions Remain On Barter Deal," July 21, 2023. <sup>115</sup> U.S. Energy Information Administration, International Energy Statistics; *Middle East Economic Survey*, "Iran Power Demand Records More to Come?," August 18, 2023; *Middle East Economic Survey*, "Iran Halts Power Exports To Iraq As Baghdad Struggles To Curb Attacks On Pylons," August 20, 2021; Iran International, "Iran Falling Behind In Power Generation Due To Inadequate Investment," April 15, 2022.
- <sup>116</sup> Middle East Economic Survey, "Iraq Grapples With Mammoth Summer Peak Load," June 28, 2024; Iran International, "Iran's energy crisis halts electricity exports to Iraq," July 29, 2024.
- <sup>117</sup> Reuters, "Exclusive: After US move on Iraq-Iran power trade, Baghdad looks to replace Iranian gas," March 10, 2025.
- <sup>118</sup> Shafaq News, "Beyond Iran: Iraq's multi-pronged approach to electricity imports," July 20, 2024.
- <sup>119</sup> Middle East Economic Survey, "Iraq Imports Power From Turkey," July 26, 2024 and "Iraq Scrambles For Energy Import Alternatives After US Scraps Iranian Electricity Waiver," March 14, 2025; Argus Media group, "Iraq begins importing Turkish power to cut crude burn," July 22, 2024.
- <sup>120</sup> Iraq Oil Report, "Iraq poised to start power imports from Jordan," March 8, 2024; *Middle East Economic Survey*, "Jordan-Iraq Power Line Starts," April 5, 2024.
- <sup>121</sup> Middle East Economic Survey, "Baghdad Scrambles to Keep US Sanctions Waivers On Iran Electricity Imports," February 14, 2025.
- <sup>122</sup> Iraq Oil Report, "Iraq poised to start power imports from Jordan," March 8, 2024; *Middle East Economic Survey*, "Jordan-Iraq Power Line Starts," April 5, 2024; Emirates News Agency, "Jordan to complete 2nd phase of electrical connection with Iraq by Q1 2025," August 26, 2024.
- <sup>123</sup> Middle East Economic Survey, "Iraq Imports Power From Turkey," July 26, 2024; Argus Media group, "Iraq begins importing Turkish power to cut crude burn," July 22, 2024.
- <sup>124</sup> Iraqi News, "90% of Iraq-Gulf electrical interconnection project completed," December 30, 2024; *Middle East Economic Survey,* "Kuwait At Risk Of Blackouts In 2025", December 6, 2024; *Middle East Economic Survey,* "Iraq Scrambles For Energy Import Alternatives After US Scraps Iranian Electricity Waiver," March 14, 2025.
- <sup>125</sup> Middle East Economic Survey, "Iraq-GCC Power Link End-2024 Target," June 9, 2023; Refinitiv/Zawya, "Iraq, Gulf Cooperation Council sign grid connection pact," July 18, 2022.

<sup>126</sup> Shafaq News, "Iraq moves forward with Gulf-Saudi electrical connection to boost power supply," July 27, 2024; Iran International, "Saudi Arabia, Iraq Sign Deal For Connecting Power Grids," July 16, 2022; Refinitiv/Zawya, "Saudi Arabia announces official launch of Iraq powergrid project," June 11, 2023.