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ENERGY TRANSITION CHALLENGES IN IRAQ AND THE KURDISTAN REGION

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Introduction and Key Challenges

Iraq faces formidable obstacles in shifting to a cleaner and more equitable energy system. In 2023, Iraq ranked third globally in gas flaring – behind Russia (~59 billion m^3) and Iran (20.4 billion m^3) – burning roughly 17 billion cubic meters of associated gas, according to the World Bank's Global Gas Flaring Tracker.1 This flaring not only wastes potential fuel and revenue but also pollutes the air and exacerbates climate change. Most of this flaring involves associated gas produced alongside oil, which could be captured and utilized. Non-associated flaring is comparatively minor and usually linked to operational upsets, so Iraq's pervasive flaring is largely avoidable if policy and infrastructure gaps are addressed. A significant portion – around 20% of Iraq's flared gas – comes from the semi-autonomous Kurdistan Region (KRG) in the north.2 Unlike in remote deserts, many KRG oil fields are near towns and villages, meaning local populations are heavily exposed. An estimated 1.19 million Iraqis (mostly in the north) live within 1 km of multiple flare sites, suffering elevated health risks.3 These conditions underscore the environmental justice issues at stake: rural and minority communities near oil sites bear the brunt of pollution and health impacts. In fact, Iraq flares more gas than it imports from Iran to power its electricity grid, underscoring an energy-security paradox: the country wastes domestic gas while relying on costly imports.

Beyond flaring, Iraq's broader energy transition challenge stems from heavy dependence on oil for revenues and power generation, weak infrastructure for gas capture, and decades of conflict and underinvestment. Iraq's national grid is underpowered and often supplemented by diesel generators, while renewable energy is only beginning to be introduced. Crucially, political fragmentation between Baghdad's federal government and the KRG has led to disjointed energy policies. However, deeper than this territorial divide is the closed nature of Iraq's energy policymaking. Decisions about oil and gas are dominated by a narrow set of actors with minimal parliamentary oversight and no comprehensive legal framework, creating a "limited access order" that hampers investment, transparency and regulatory enforcement across both federal Iraq and the KRG. This briefing focuses on Iraq's main energy transition challenges and the power dynamics impeding progress, with a special lens on the KRG. It also examines implications for gas flaring policy and offers recommendations – including engaging regional coalitions – to advance a just energy transition, one that is fair, inclusive, and transparent.

Fragmented Energy Governance and Political Dynamics

"One country, two energy policies." This is how energy analyst Bilal Wahab explains that since 2014 Iraq's energy sector has effectively split into two separate regimes – one run by the federal government in Baghdad and the other by the Kurdistan Regional Government – leaving the country with two distinct sets of energy policies, contract models, and

1 World Bank. "Global Gas Flaring Data," n.d. https://www.worldbank.org/en/programs/gasflaringreduction/global-flaring-data.

2 Ahmed Tabaqchali, *The Kurdistan Region of Iraq's Gas-Export Potential: Deja Vu All Over Again* (Washington, DC: Atlantic Council, November 2022), https://www.atlanticcouncil.org/wp-content/uploads/2022/11/The-Kurdistan-Region-of-Iraqs-Gas-Export-Potential-Deja-Vu-All-Over-Again.pdf

3 Tom Brown, Christina Last, Stella Martany, and Alannah Travers, "Kurdistan Regional Government Likely to Miss Flaring Phase-Out Deadline, Satellite Data Suggests," *Rudaw*, 18 June 2022, https://www.rudaw.net/english/kurdistan/16062022

international partners.[4] Iraq's constitution leaves ambiguity over oil and gas authority, which has fueled a long-running power struggle between Baghdad and Erbil.[5] In practice, the KRG developed an independent oil and gas sector after 2005, passing its own oil law in 2007 and signing production-sharing contracts (PSCs) with foreign firms.[6] Meanwhile, the federal government insists it alone has the right to manage hydrocarbons nationwide, using its state-run companies and technical service contracts. This schism means Baghdad and the KRG each pursue separate strategies and rarely speak with one voice to investors or international partners. There is no unified legal framework, as efforts to pass a federal hydrocarbon law have stalled amid disputes.[7] The absence of a national hydrocarbons law not only discourages investment but also undermines environmental compliance and emissions monitoring – both essential for coordinated anti-flaring initiatives.

Key flashpoints have cemented this divide. In 2014, the KRG began exporting oil via Turkey independently of the federal State Oil Marketing Organization. Baghdad deemed this illegal and cut off the KRG's share of the national budget, causing an economic crisis in Erbil.[8] Since then, budget transfers have been a bargaining chip: Baghdad withholds funds when disputes flare, while the KRG ramps up independent oil sales when it can. Tensions escalated in 2022–2023 when Iraq's Supreme Court ruled the KRG's oil activities unconstitutional and an international tribunal backed Baghdad in stopping KRG oil exports through Turkey. As a result, the KRG's ~450,000 barrels/day of exports were shut in, forcing Erbil into a new budget deal that increased its financial dependence on Baghdad.[9] In July 2025, Baghdad and Erbil reached a tentative agreement to restart exports and implement a revenue-sharing arrangement, offering temporary relief but leaving the underlying legal disputes unresolved.[10] From Baghdad's perspective, these moves protect sovereignty and reassert control; from the KRG's perspective, they threaten the region's autonomy and economic survival.

International oil companies (IOCs) are caught in this power dynamic. The KRG's use of lucrative PSCs attracted smaller independent oil firms willing to operate in a high-risk environment, but most major oil companies stayed out due to the legal uncertainty and Baghdad's blacklisting of companies in KRG contracts. This has fragmented investment and technology transfer. For example, Iraq's federal oil sector (with help from majors and the World Bank) launched large gas-capture projects in Basra to reduce flaring, but none extend to Kurdistan.[11] The KRG instead struck separate deals – e.g. with a UAE-led consortium to develop the Khor Mor gas field, and even with Russia's Rosneft in 2017 to finance pipelines – bringing in cash but sometimes geopolitical strings attached.

In sum, power dynamics between Baghdad, the KRG, and oil companies are defined by contested authority and mistrust. Baghdad aims to recentralize control, while the KRG clings to its oil autonomy. Smaller oil firms in Kurdistan prioritize quick gains (often flaring gas as waste), as they face uncertain long-term prospects. This tug-of-war has produced regulatory duplication and confusion, hampering

4 Bilal Wahab, "Tipping Point of the Iraq-KRG Energy Dispute." *The Washington Institute for Near East Policy*. 13 February 2023. https://www.washingtoninstitute.org/policy-analysis/tipping-point-iraq-krg-energy-dispute

5 Ibid.

6 Shallaw A. Mohammed, "The KRG's Inability Factors for Independently Exporting Oil: After 2023," *Zanco Journal of Humanity Sciences* 28, no. 6 (December 2024): 301–317, https://www.researchgate.net/publication/387485383_The_KRG%27s_Inability_Factors_for_Independently_Exporting_Oil_After_2023

7 Huda Alshabebi, "The Legal Framework of the Oil and Gas Industry in Iraq," *Akkad Journal of Law and Public Policy* 1, no. 2 (2021): 44–53, https://journal.acefs.org/index.php/AJLPP/article/download/66/98

8 Nawras Jaff, "KRG Oil and the Slipping Dream of Financial Independence," *Fikra Forum* (Washington Institute for Near East Policy), 6 April 2023, https://www.washingtoninstitute.org/policy-analysis/krg-oil-and-slipping-dream-financial-independence

9 Mohammed A. Salih, "Recentralization Imperils Iraq's Stability and Fuels Regional Tensions," *Foreign Policy Research Institute*, 26 October 2023, https://www.fpri.org/article/2023/10/recentralization-imperils-iraqs-stability-and-fuels-regional-tensions/

10 Julian Bechocha, "KRG, Baghdad Strike Deal to Restart Kurdish Oil Exports," *Rudaw*, 23 February 2025, https://www.rudaw.net/english/business/230220251

11 Herman Wang, "Feature: Battle over KRG Oil Has IOCs Fretting Their Future in Iraqi Kurdistan," *S&P Global Commodity Insights*, 27 April 2023, https://www.spglobal.com/commodity-insights/en/news-research/latest-news/crude-oil/042723-feature-battle-over-krg-oil-has-iocs-fretting-their-future-in-iraqi-kurdistan

any coordinated national strategy on energy transition. Today, Iraq effectively operates as two parallel oil economies, a situation fundamentally at odds with a unified climate policy.

Implications for Gas Flaring and Transition Policies

The fractured governance directly undermines gas flaring reduction efforts. Iraq lacks a single enforcement mechanism or data-sharing system to curb flaring nationwide.[12] Baghdad's Oil Ministry has announced a goal to eliminate routine flaring in the south by 2028, in line with the World Bank's Zero Routine Flaring by 2030 initiative.[13] The KRG, separately, set a more aggressive target to end flaring by 2023.[14] In reality, the KRG's deadline passed with little progress – satellite data showed flaring actually increased in early 2022 compared to 2021– and it remains unclear what penalties, if any, were imposed on companies that missed the target.[15] The resignation of the KRG's oil minister, who championed the anti-flaring policy (in mid-2022), highlighted the political hurdles to sustained enforcement.

Captured gas in the KRG is primarily used to fuel the Region's own electricity plants, with the KRG itself acting as the sole buyer. Chronic payment delays and the absence of a functioning gas market mean companies have little incentive to build processing infrastructure. Moreover, there is no pipeline interconnection with the federal grid to redistribute gas beyond Kurdistan, creating a concrete infrastructure barrier to cooperation. Investment in gas capture has also been undermined by the 2023 closure of the pipeline exporting KRG oil via Turkey, which halted exports and left many companies unpaid; this created an unstable financial environment in which firms are unwilling to invest in capture infrastructure without clear prospects for monetization. Ambiguity over gas ownership rights in the KRG's confidential production-sharing contracts adds further confusion about who is responsible for capturing and monetizing associated gas. Effective gas capture requires not only collection at wellheads but also processing, transport and power-plant infrastructure; implementing such a system demands coordination among the KRG's ministries of Electricity, Natural Resources and Planning, which remains weak. Some fields in Kurdistan reinject associated gas to maintain reservoir pressure and boost oil recovery; while reinjection reduces flaring, it indirectly encourages greater fossil-fuel production and delivers limited climate benefits. At the same time, the KRG has focused on expanding non-associated gas fields like Khor Mor primarily to supply domestic electricity, reflecting a production-first strategy rather than an explicit effort to curb emissions.

Because the KRG is not fully integrated into federal plans, billions of cubic meters of gas continue to be flared instead of utilized, even as Iraq suffers electricity shortages. For example, the federal government cannot easily incorporate KRG gas output into its power plants, and the KRG has been ineligible for some international programs (like World Bank gas-capture funding) that operate through Baghdad.[16] Likewise, technologies or contractors used to capture gas in Basra have not been deployed in KRG fields, which instead often

12 Aare Afe Babalola and Damilola S. Olawuyi, "Overcoming Regulatory Failure in the Design and Implementation of Gas Flaring Policies: The Potential and Promise of an Energy Justice Approach," *Sustainability* 14, no. 11 (2022): 6800, https://doi.org/10.3390/su14116800

13 Reuters, "TotalEnergies Launches Final Phase of $27 Billion Iraq Energy Project," 14 September 2025 (statement noting elimination of routine flaring by 2028), https://www.reuters.com/sustainability/boards-policy-regulation/totalenergies-launches-final-phase-27-billion-iraq-energy-project-2025-09-14/; World Bank, "Zero Routine Flaring by 2030 (ZRF) Initiative," https://www.worldbank.org/en/programs/zero-routine-flaring-by-2030

14 Julian Bechocha, "KRG, Baghdad Strike Deal to Restart Kurdish Oil Exports," *Rudaw*, 23 February 2025, https://www.rudaw.net/english/business/230220251

15 Lizzie Porter and Staff of *Iraq Oil Report*, "KRG Misses Deadline to End Gas Flaring," *Iraq Oil Report*, 14 February 2023, https://www.iraqoilreport.com/news/krg-misses-deadline-to-end-gas-flaring-45482/

16 Muhammed Abed Mazeel al-Aboudi, "Taking Advantage of a Window of Opportunity in the KRG-Baghdad Gas Standoff," *The Washington Institute for Near East Policy*, 16 February 2024, https://www.washingtoninstitute.org/policy-analysis/taking-advantage-window-opportunity-krg-baghdad-gas-standoff

vent or burn off gas. The result is lost opportunity on both sides: wasted fuel that could generate power, lost revenue that could be shared, and needless pollution.

Gas flaring in the KRG thus exemplifies the cost of discord. Every year, Kurdistan's oil fields flare on the order of 3–4 bcm of gas – worth over $100 million in fuel in just Erbil province alone– while nearby communities choke on the fumes.[17] Residents near Erbil and Duhok have reported spikes in asthma and respiratory illnesses attributable to flaring emissions.[18] Yet, without a political settlement or clear legal framework, any joint flaring abatement projects are stalled by questions like: Who will own the gas? Who pays for capturing it, and who gains from its sale or use? Moreover, without unified emissions accounting between Baghdad and the KRG, Iraq risks underreporting methane emissions in its nationally determined contributions (NDCs) and undermining the credibility of its commitments under the Global Methane Pledge, since flaring is a major methane source when combustion is incomplete. The absence of a national hydrocarbons law means that even well-intentioned climate initiatives must navigate this legal gray zone. For instance, Iraq as a whole is a signatory to the Global Methane Pledge (aiming to cut methane 30% by 2030) and has commitments under the Paris Agreement, but incorporating the KRG's emissions and actions into these pledges is problematic given the political status quo.[19]

In practical terms, duplicated efforts and distrust have slowed Iraq's transition. Both Baghdad and Erbil have announced plans for renewable energy and gas utilization, but they largely proceed in parallel. There is no single electricity grid covering the country – the KRG's grid is only loosely connected to the federal grid– limiting the trade of power or gas between regions.[20] Flaring and emissions data are not jointly tracked or published in a transparent way for the whole country. Companies can sometimes play one government against the other, and environmental standards fall through the cracks in the institutional divide. In short, policy fragmentation has tangible consequences: Iraq is burning valuable resources and emitting greenhouse gases unnecessarily, undercutting its own energy security and climate goals.

KRG's Nascent Energy Transition Efforts

Despite these challenges, the Kurdistan Regional Government has begun to pursue cleaner energy policies in recent years, acknowledging the need for a transition. The notion of a "just energy transition" – shifting to sustainable energy in a way that benefits all communities and workers – is slowly entering the policy discourse in the KRG. Several initiatives illustrate this trend:

- **Renewable Energy Projects:** Kurdistan enjoys abundant solar potential. As of 2021, the Region had a modest ~75 MW of installed solar capacity as proof of concept. By late 2024, the KRG signed contracts for 350 MW of new solar PV and set targets to add 1,000 MW in the short term and 3,000 MW long-term of renewables (solar, wind, hydropower).[21] At COP29, KRG officials emphasized a commitment to shift away from diesel and oil-fired power toward solar, leveraging the region's high sunshine hours.[22] If implemented, these projects could

17 Mahmood Baban, "Gas flaring: a field-by-field and province-by-province analysis in Iraq and the Kurdistan Region," *Rudaw*, 9 April 2025, https://www.rudaw.net/english/analysis/09042025

18 Ibid.

19 Climate & Clean Air Coalition (CCAC), "Iraq Progresses on Fossil Fuel Methane Regulation," 30 August 2024, https://www.ccacoalition.org/news/iraq-progresses-fossil-fuel-methane-regulation

20 "Energy Independence Drive: Iraq Expands Gas and Electricity Networks," *Shafaq News*, 8 April 2025, https://shafaq.com/en/Iraq/Energy-independence-drive-Iraq-expands-gas-and-electricity-networks

21 "Kurdistan Region to Expand Solar Power Generation with 3,000 MW Target by 2034," *Kurdistan24*, 15 November 2024, https://www.kurdistan24.net/en/story/810823/kurdistan-region-to-expand-solar-power-generation-with-3000-mw-target-by-2034

22 United Nations Climate Change (UNFCCC), *Summary of Global Climate Action at COP 29* (Bonn: UNFCCC secretariat, 22 November 2024), https://unfccc.int/sites/default/files/resource/Summary_Global_Climate_Action_at_COP_29.

significantly cut the KRG's carbon footprint and free up natural gas for better uses (instead of burning it for electricity). Because solar and wind power are intermittent, scaling up these renewable projects will require complementary storage solutions – such as battery systems or pumped hydropower – to ensure grid stability and make best use of captured gas. Many projects involve foreign investors (including companies from the UAE) bringing in capital and expertise. To make these investments inclusive, the KRG can stipulate local job creation and training as part of project contracts, ensuring that Kurdish communities gain employment and skills from the renewables push.

- **Gas for Power (Utilization over Flaring):** A cornerstone of the KRG's energy strategy has been using domestic natural gas as a bridge fuel for electricity generation. Since 2008, the Khor Mor and Chemchemal gas fields (developed by the Dana Gas/Crescent Petroleum consortium) have supplied several power plants in Kurdistan.[23] This shift allowed the KRG to replace dirtier fuels (diesel, heavy oil) with gas, cutting pollution and greenhouse emissions. Gas-fired power plants typically emit roughly 30–50 % less carbon dioxide and substantially lower levels of particulates and sulfur oxides than diesel or heavy-oil units, so switching fuels significantly reduces pollution. Today, a large share of Kurdistan's electricity is generated by gas-fired plants, which emit less carbon and local pollutants than oil-fired generators. Importantly, better gas utilization directly reduces flaring: every cubic meter of associated gas captured and used for power is one less cubic meter burned off at an oil well. For example, some oil fields in the KRG now pipe gas to nearby electricity plants instead of flaring it.[24] The success of Khor Mor's gas project – which fuels power stations and has displaced costly diesel imports – is often cited as a model, showing how economic incentive (cheap power) can align with environmental benefit. Kurdistan still faces power shortages and cannot meet all demand with its own gas, especially after periodic disputes or attacks disrupt gas development. Nonetheless, the principle of "gas instead of flaring" has taken hold, illustrating a practical step toward transition that also improves citizens' electricity access.

- **Public-Focused Green Initiatives:** The KRG has launched programs to directly benefit communities with clean energy. A flagship example is installing solar panels on schools. As of early 2025, 81 schools across all four Kurdish provinces have been equipped with solar systems, providing reliable 24-hour electricity for lighting and cooling.[25] This has dramatically improved the learning environment (many schools previously suffered daily outages) and reduced reliance on noisy, polluting diesel generators. The Prime Minister has funded an expansion to dozens more schools, with the goal of solarizing all public schools. Such projects are socially inclusive – targeting public services that benefit lower-income families – and yield immediate health and education upsides. The KRG is also exploring greener public transport, such as introducing electric buses or solar-powered charging stations (plans mentioned at COP29).[26] Though early-stage, this indicates a vision of a clean-energy future that touches everyday life and not just the oil sector.

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23 Crescent Petroleum, "Crescent Petroleum and Dana Gas Reach 500 MMboe Cumulative Production from Khor Mor Field, Announce Major Growth and Development Plans," *Crescent Petroleum*, 3 April 2025, https://www.crescentpetroleum.com/2025/04/03/6028/

24 Lizzie Porter and Rawaz Tahir, "Kurdistan Gives Oil Companies 18-Month Deadline to End Gas Flaring," *Iraqi Economists Network*, 29 July 2021, https://iraqieconomists.net/en/2021/07/30/kurdistan-gives-oil-companies-18-month-deadline-to-end-gas-flaring/

25 Department of Media and Information, Kurdistan Regional Government, "81 Schools in the Kurdistan Region Now Powered by Solar Energy," 3 March 2025, https://gov.krd/dmi-en/activities/news-and-press-releases/2025/march/81-schools-in-the-kurdistan-region-now-powered-by-solar-energy/

26 International Association of Public Transport (UITP), "COP29: Public Transport at the Centre as Countries Update Their Climate Strategies," 21 November 2024, https://www.uitp.org/news/cop29-public-transport-at-the-centre-as-countries-update-their-climate-strategies/

- **Environmental Impacts and Illegal Refineries:** Pollution from flaring and the proliferation of illegal refineries has sparked protests in communities near Erbil, Sulaimani and Duhok. The closure of the export pipeline in 2023 left excess crude on the local market, fueling a surge of illicit refining operations that are often shielded by political connections. Enforcement of shutdowns is selective – one notable exception was a refinery cluster near Duhok that remained closed following a 2024 directive due to public-image concerns. Major refineries such as Qaiwan and Kar operate under ambiguous legal status because they were initially funded by Baghdad but completed by KRG-linked firms, complicating regulatory oversight and revenue tracking.

- **Runaki Smart-Meter Program:** The Runaki initiative aims to provide 24-hour electricity across Kurdistan by 2026 through the rollout of smart meters, progressive tariffs and new natural-gas-fired plants. As of 2025 the program has enrolled over 1.1 million residents, replaced more than 1,200 diesel generators and delivered measurable environmental benefits such as reduced noise and air pollution. However, Runaki faces significant political and social hurdles: many households resist higher tariffs, parties representing low-income groups have criticized the scheme, and generator operators and fuel traders – whose livelihoods are threatened – have mounted opposition campaigns.

- **Policy Commitments:** On paper, the KRG has aligned with Iraq's national climate commitments. The Kurdistan Region is covered under Iraq's Nationally Determined Contribution (NDC) to the Paris Agreement. KRG officials have pledged contributions like developing 900 MW of solar by 2030 as part of Iraq's climate goals.[27] The KRG has also declared "tight restrictions on gas flaring" in policy statements and banned new routine flaring in oil contracts.[28] It is not yet clear whether these contracts include concrete and enforceable penalties for routine flaring or simply express general intentions; this distinction is important for assessing whether the KRG is merely declaring environmental ambitions or actually putting in place mechanisms to ensure compliance by companies. In practice, enforcement is the challenge; however, the public stance of KRG leaders has shifted to openly acknowledge climate action and pollution reduction as priorities. This change in rhetoric is partly driven by civil society pressure – youth activists and NGOs in Kurdistan are increasingly vocal about sustainable development and holding the government to account.[29] A truly just transition will require involving these stakeholders in planning – for instance, retraining oil workers for jobs in renewables, and investing oil revenues into economic diversification so that communities are not left behind.

It must be noted that while these steps are positive, the KRG's economy remains heavily oil-dependent, and its capacity to pursue an aggressive green transition is constrained by budgetary and political uncertainties. Oil revenues fund public salaries and services; any rapid shift away from oil must be managed to avoid fiscal shocks that could hurt ordinary Kurds. This is why principles of transparency and good governance are critical – to ensure that existing oil wealth is used wisely to build the new energy future. Observers note that a just transition in Iraq "requires tackling corruption and ensuring oil wealth is shared fairly".[30] In Kurdistan, improving transparency in both oil revenue management and electricity provision can build public trust that new projects (like solar plants) will serve citizens' interests, not just elites. The KRG's nascent renewable programs are an opportunity to demonstrate tangible benefits:

27 Harry H. Istepanian, *Iraq Solar Energy: From Dawn to Dusk* (Amman: Friedrich-Ebert-Stiftung Jordan & Iraq, July 2020), https://library.fes.de/pdf-files/bueros/amman/16324-20200722.pdf

28 "KRG Bans Gas Flaring: Minister," *Rudaw*, 21 August 2021, https://www.rudaw.net/english/interview/210820211

29 Neeshad Shafi, "Climate Activism and Civil Society Organizations in the MENA Region," *Carnegie Endowment for International Peace*, 27 March 2025, https://carnegieendowment.org/research/2025/03/climate-activism-civil-society-mena?lang=en

30 Maxime Agator, "Iraq: Overview of Corruption and Anti-Corruption," *U4 Expert Answer* 374 (U4 Anti-Corruption Resource Centre/Transparency International, April 2013), https://www.u4.no/publications/iraq-overview-of-corruption-and-anti-corruption.pdf

lower electricity costs, jobs for local youth, cleaner air, and power for underserved areas. If people see these benefits materialize, it can bolster support for further reforms and climate actions.

Policy Recommendations: Toward a Unified and Just Transition

To surmount the challenges outlined and advance a just energy transition in Iraq (one that is climate-resilient, inclusive, and accountable), a multi-pronged approach is needed. Below are key recommendations for Iraqi policymakers, the KRG, and their international partners:

- **Rebuild Cooperative Governance:** Baghdad and Erbil must renew efforts to resolve oil/gas disputes and establish a unified framework for energy policy. Finalizing a long-delayed federal hydrocarbon law or a binding revenue-sharing agreement would clarify roles and reassure investors. In the interim, both governments should set up joint committees to coordinate on gas-capture projects, electricity interconnection, and renewable investments in the KRG. One concrete step is to develop an interconnection roadmap linking the KRG's grid to the federal grid, so that gas and power can flow in both directions and redundant flaring abatement projects can be avoided. A durable power-sharing arrangement would unlock greater cooperation – e.g. allowing federal programs or financing to support gas capture in Kurdistan, and enabling Kurdistan's surplus solar/wind power (in the future) to feed into the national grid. Rebuilding trust through consistent budget transfers and data-sharing is fundamental; without it, technical solutions to flaring or clean energy will be piecemeal. Donors and the UN can facilitate a dialogue on energy as a confidence-building measure between Baghdad and the KRG.

- **Accelerate Gas Flaring Reductions:** Iraq should treat gas flaring as a national emergency and pool resources to address it. This means expanding successful models like the Basra Gas Company[31] to other regions and including KRG sites in flaring reduction targets. Both governments should jointly support the World Bank's Zero Routine Flaring by 2030 initiative (to which Iraq is a party) with concrete provincial action plans. The KRG, for its part, needs to enforce its anti-flaring regulations – for example, by imposing fees or production curbs on companies that continue routine flaring. Where companies lack funds for gas-capture equipment, the governments could explore co-financing solutions or public-private partnerships (since capturing gas would benefit the public via electricity supply). Additionally, Iraq should fully leverage the Global Methane Pledge framework for technical and financial assistance in methane reductions. This could include seeking support from the Climate & Clean Air Coalition[32] and other partners to deploy modern flare reduction technologies (e.g. small-scale gas-to-power units, reinjection techniques) in both the south and the KRG. Every year of delay costs Iraq billions in lost gas and health damages,[33] so a united push on this issue is in both Baghdad's and Erbil's interest.

- **Invest in Renewables and Grid Integration:** Scale up investment in renewable energy as a national priority, focusing on solar and wind projects in both federal Iraq and the Kurdistan Region. Iraq can seek support from international funds (such as the Green Climate Fund[34] or the new climate financing

31 Basrah Gas Company, "Basrah Gas Company Signs Loan Agreement with International Finance Corporation – to Reduce Gas Flaring and Power Lives in Iraq," press release, 29 June 2021, https://www.basrahgas.com/press-releases/basrah-gas-company-signs-loan-agreement-with-international-finance-corporation-to-reduce-gas-flaring-and-power-lives-in-iraq/

32 Climate & Clean Air Coalition (CCAC), "Climate & Clean Air Coalition," accessed 13 October 2025, https://www.ccacoalition.org/

33 Mahmood Baban, "Gas Flaring: A Field-by-Field and Province-by-Province Analysis in Iraq and the Kurdistan Region," *Rudaw Research Center*, 10 April 2025, https://rudawrc.net/en/article/gas-flaring-a-field-by-field-and-province-by-province-in-iraq-and-the-kurdistan-region-2025-04-09

34 Green Climate Fund, "About GCF," accessed 13 October 2025,https://www.greenclimate.fund/about

pledged at COP28) to meet its goals for adding solar capacity. The KRG's target of 1,000 MW+ of renewables could be incorporated into Iraq's overall energy plan, with the Ministry of Electricity coordinating grid upgrades to handle new solar/wind inputs. Greater regional grid integration with neighbors can also help: Iraq is already connecting to the Gulf states' grid and Jordan to import electricity; in the future, it could also export excess solar power on mild days and import when needed. Developing wind power in the KRG's mountainous areas, for example, could benefit the whole country if infrastructure is linked. Diversify the energy mix by using gas as a transition fuel (not a permanent crutch) – continue projects that replace diesel generators with gas power plants in the short term, but channel a portion of oil/gas revenues into a sovereign fund for renewable energy and climate adaptation projects. International partners (like the EU, IRENA, and the World Bank) should be engaged to provide technical assistance and concessional loans for large-scale renewable parks, battery storage, and modernizing the grid. A cleaner power sector will over time reduce Iraq's need to flare gas and cut its huge fuel import bills, freeing up funds for development.

- **Enhance Transparency and Data Access:** Better access to information is a linchpin of a just transition. Iraq should strengthen transparency in the oil and power sectors so that citizens and stakeholders can hold authorities accountable. Specifically, fully implement the EITI (Extractive Industries Transparency Initiative)[35] across all of Iraq, including the Kurdistan Region. Iraq is an EITI member since 2010, but the KRG has historically provided limited data to the national reports. Bringing KRG oil/gas figures into the open is critical for trust. Notably, Iraq's Publish What You Pay (PWYP) civil society coalition – one of the largest in the region – includes members from Kurdistan working to encourage full KRG participation in EITI.[36] This push should be supported and heeded by policymakers. Both Baghdad and Erbil should publish regular data on gas production, flaring volumes, emissions, and progress on renewables. Modern satellite monitoring (such as NASA's VIIRS Nightfire used by researchers) can be used to publicly track flaring in near-real time,[37] creating pressure for reduction and recognizing successes. Transparency also entails contract clarity: key terms of oil and power contracts (especially any clauses on flaring or emissions) should be made public, aligning with global best practices on contract transparency.[38] Finally, Iraq would benefit from joining the Open Government Partnership (OGP) to signal its commitment to open data and citizen engagement in governance. Such steps ensure that the energy transition is not managed behind closed doors; instead, communities can access information on pollution levels, project revenues, and plans that affect their livelihoods and hold authorities accountable.

- **Leverage Regional Coalitions and Initiatives:** Iraq should actively engage in regional alliances that promote a just energy transition. One key platform is the Publish What You Pay MENA Just Energy Transition Working Group,[39] a coalition of civil society actors across the Middle East and North Africa (including members of Iraqi civil society) focused on equitable climate action. By working with PWYP's MENA network, Iraq can share experiences and learn from neighbors on phasing out fossil fuels while protecting vulnerable populations. The recent PWYP MENA regional meeting in 2023, which

35 Extractive Industries Transparency Initiative (EITI), *EITI Standard 2023* (Oslo: EITI International Secretariat, June 2023), https://eiti.org/eiti-standard

36 Resource Justice Network (formerly Publish What You Pay), "Iraq," n.d., accessed 13 October 2025, https://resourcejustice.org/pwyp_members/iraq/

37 Tom Brown, Christina Last, Stella Martany, and Alannah Travers, "Kurdistan Regional Government Likely to Miss Flaring Phase-Out Deadline, Satellite Data Suggests," *Rudaw*, 18 June 2022, https://www.rudaw.net/english/kurdistan/16062022

38 Nuralhuda Muntazar Hassan al-Fadli, "Ending Iraq's Damaging Oil Dependency," *Resource Justice Network*, 16 May 2022, https://resourcejustice.org/ending-iraqs-damaging-oil-dependency/

39 Report on 2023 PWYP MENA Regional Meeting: Energy Transition, Promoting Gender Equality This Year's Top Advocacy Campaign Priorities," *National News Agency (Lebanon)*, 6 June 2023, https://www.nna-leb.gov.lb/en/miscellaneous/619056/report-on-2023-pwyp-mena-regional-meeting-energy-t

included participants from Iraq, emphasized energy transition and gender equity as top advocacy priorities.[40] The Iraqi government (and KRG authorities) should welcome input from this network – for instance, incorporating civil society recommendations on protecting oil-dependent communities and monitoring environmental impacts. Additionally, Iraq can join or deepen cooperation in initiatives like the Middle East Green Initiative (MGI)[41] led by regional countries to combat climate change and desertification, and the Regional Center for Renewable Energy and Energy Efficiency (RCREEE),[42] of which Iraq is already a member. These forums facilitate knowledge-sharing on policy design, financing, and technology tailored to regional conditions. Regional methane reduction alliances can also amplify Iraq's efforts – for example, partnering with oil-producing neighbors through the Global Methane Alliance[43] or bilateral agreements to curb flaring (similar to how some Gulf states have virtually eliminated routine flaring). Engaging in such coalitions not only brings technical benefits but also demonstrates Iraq's commitment to being a responsible player in the global climate effort, which can attract climate finance and support. Lastly, deepen the budding collaboration with The Regional Network in Energy for Women (RENEW MENA) – a World Bank driven initiative –[44] which unites women leaders, policymakers, and practitioners to advance gender-inclusive energy policies. Engagement will help Iraq integrate gender perspectives into transition planning, build capacity among female energy professionals, and empower women-led community clean-energy projects – ensuring that half of the population benefits equally from new opportunities in renewables and clean technologies.

- **Protect Communities and Ensure Equity:** As Iraq and the KRG implement transition policies, they must prioritize just outcomes for workers and communities. This includes developing programs to retrain oil sector workers for jobs in renewables or gas processing, so that the shift away from oil over time does not lead to mass unemployment. It also means directing a fair share of oil/gas revenues to economic diversification projects in regions like Basra and Kurdistan that are heavily reliant on fossil industries. The government should expand investments in health care, education, and alternative livelihoods in oil-producing areas – turning today's resource curse into an opportunity. Community consultation is also critical: local populations should have a voice in decisions (for instance, siting of solar farms or routing of gas pipelines) to ensure their needs are met and cultural/environmental concerns respected.[45] Finally, special attention should be given to vulnerable groups – rural villagers near flaring sites, marginalized minorities in the north, and low-income households nationwide who suffer most from pollution and energy poverty. A just transition should uplift these groups with cleaner air, better services, and inclusion in the new green economy. Iraq's civil society and international partners (such as NRGI and the UNDP) can assist in designing just transition plans that include social protections and community development funds. This will help maintain public support for the difficult reforms ahead.

By pursuing the above recommendations, Iraq can begin to turn its abundant natural resources and sunshine into a boon rather than a hazard. Crucially, bridging the Baghdad–Erbil divide is the foundational step: only a unified effort will

40 Transparency Coalition in Extractive Industries (TCEI), "Press Release: Report on the 2023 PWYP MENA Regional Meeting – Energy Transition and Promoting Gender Equality This Year's Top Advocacy Campaign Priorities," 7 June 2023, https://tceiy.org/en/1126/

41 Saudi Green Initiative, "About MGI," accessed 13 October 2025, https://www.sgi.gov.sa/about-mgi

42 Regional Center for Renewable Energy and Energy Efficiency (RCREEE), "Who We Are," accessed 13 October 2025, https://rcreee.org/who-we-are/

43 Climate & Clean Air Coalition (CCAC), "Global Methane Alliance," n.d., accessed 13 October 2025, https://www.ccacoalition.org/projects/global-methane-alliance

44 World Bank, "RENEW MENA (Regional Network in Energy for Women in MENA)," n.d., accessed 13 October 2025, https://collaboration.worldbank.org/content/sites/collaboration-for-development/en/groups/renew-mena.html

45 Hanen Keskes and Laury Haytayan, "Energy Transition in the Middle East and North Africa: The Road to COP28," *Natural Resource Governance Institute*, 30 November 2023, https://resourcegovernance.org/publications/energy-transition-middle-east-and-north-africa-road-cop28

enable Iraq to harness its gas, curb flaring, attract renewable investments, and meet its climate commitments as one country. Regional cooperation and transparency will buttress these efforts by providing support, accountability, and shared progress toward a greener, fairer future for all Iraqis.

About the Arab Reform Initiative

The Arab Reform Initiative is an independent Arab think tank working with expert partners in the Middle East and North Africa and beyond to articulate a home-grown agenda for democratic change and social justice. It conducts research and policy analysis and provides a platform for inspirational voices based on the principles of diversity, impartiality, and gender equality.

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