US sanctions and Venezuela's energy security?

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The origins of Venezuela's lasting energy security crisis and its effects on the country's public order and broader economy are often explained in light of the United States' increasingly interventionist foreign policy in the region. The United States administration's promotion of great power diplomacy over what it considers to be its own sphere of influence is but the latest development of the global superpower's aggressive posturing against Cuba, Venezuela, and other regimes of Latin America that do not align with US interests. In August 2017, Executive Order 13808 was imposed on Venezuela by the US, aiming at restricting dealings and transactions with the Venezuelan government as well as the state-owned oil and gas company PDVSA (Executive Order 13808, 2017). That same year, Venezuela counted over 18,000 power blackouts (Rendon 2019). In January 2019, further sanctions were imposed on PDVSA, which led to the country's spiral into hyperinflation as high as 10 million percent (Sanchez 2019).

Despite Venezuela hosting the most abundant oil reserves in the world, its oil production dropped between 2015 and 2020 from 2.4mb/d to 500kb/d, accounting for merely 0.5% of global oil production (Roy & Cheatham 2024). From 2020 to 2025, domestic oil production did not exceed 1mb/d (Sasu 2025). While this amount of production would be sufficient to guarantee domestic demand as well as international exports, domestic electricity outages and blackouts regularly occur due to the vulnerability of the nation's electricity distribution systems, as well as a second order effect of US sanctions. This article will analyse the causes of Venezuela's energy security vulnerability from 2017 to today, including the effect US sanctions and its aggressive foreign policy, and determine whether the seemingly improved cooperation between the US and Venezuela following Maduro's capture and transfer can improve the Bolivarian regime's energy security.

Venezuela's waning energy security from 2017 to 2026

Energy security in Venezuela during this period is best understood through four dimensions: availability, affordability, reliability and resilience. The central paradox is that a country with the world's largest proven oil reserves experienced simultaneous scarcity in refined fuels, failing electricity service, collapsing household purchasing power and growing dependence on foreign waivers, diluents, contractors and intermediaries. In other words, resource abundance did not result into secure energy access because of institutional decay, but rather infrastructure neglect and sanctions interacted in mutually reinforcing ways (Roy & Cheatham 2024; Rendon 2019).

Period

Availability

Affordability

Reliability

Resilience

2017

Oil output already falling; major financial constraints begin after EO 13808

Inflation accelerating sharply

More than 18,000 blackouts recorded

Low: underinvestment and corruption already entrenched

2019

PDVSA sanctions tighten export and financing bottlenecks

Hyperinflation destroys wages and savings

Historic nationwide blackout exposes grid fragility

Very low: extreme dependence on Guri and shrinking technical capacity

2020

Output bottoms near the post-crisis floor; refinery weakness persists

Real incomes collapse further

Blackout aftershocks continue to affect oil operations

Coping capacity weak; sanctions-evasion networks expand

2022 to 2023

Chevron waiver and partial reopening modestly lift output and exports

Scarcity eases for some consumers, but inequality widens

Service remains patchy outside Caracas

Limited adaptive rebound through waivers and external partners

2024 to 2025

Output improves, but remains far below historical potential

Inflation falls in 2024 then re-accelerates; minimum wage remains derisory

Nationwide blackouts return in 2024

Resilience remains externally dependent, especially on licences and imported inputs

2026

Production and exports recover further under political rupture and wider licences

Wages and pensions are adjusted, but inflation and poverty remain severe

New power-sector deals appear, but system repair remains incomplete

Potential improvement, though still conditional on foreign capital, licensing, and institutional reform

The qualitative comparison above synthesises the trajectory shown in the Federal Register order of 2017, CSIS's analysis of the 2019 blackout, CFR's 2024 overview, and Reuters and AP reporting on inflation, wages, oil output, exports and the 2024 to 2026 policy shifts (Executive Order 13808 2017; Rendon 2019; Roy & Cheatham 2024; Reuters 2024a, 2024b, 2024c, 2024d, 2025e, 2026a, 2026c, 2026g, 2026h, 2026j; Goodman & Cano 2024–2026).

a) Availability

The availability problem was not that Venezuela lacked hydrocarbons, but rather that the state progressively lost the organisational and technical ability to transform it into dependable supply. By 2024, CFR still described Venezuela as home to the world's largest oil reserves, yet also as a petrostate whose output had been starved by poor governance, underinvestment and sanctions. That distinction matters: sanctions constrained commercial options, but the production collapse had already begun before the 2019 oil embargo because PDVSA had been hollowed out administratively and financially (Roy & Cheatham 2024; Executive Order 13808 2017).

The availability picture improved only partially after 2022. Washington's limited Chevron authorisation, followed by the six-month 2023 relaxation tied to the Barbados electoral roadmap, helped increase exports and gave PDVSA some operational space. However, the rebound remained narrow. CFR notes that exports rose by about 12 per cent in 2023 after the easing, but the sector remained severely underinvested and structurally fragile. By late 2025, Reuters reported output at 1.17 million barrels per day in November; by March 2026 production was reported at 1.1 million barrels per day; and by June 2026 exports were running at around 1.25 million barrels per day, with official projections of 1.37 million by year's end (Roy & Cheatham 2024; Reuters 2025d, 2026g, 2026h).

Even this rebound did not mean energy self-sufficiency. Venezuela's heavy crude requires upgrading and blending, and sanctions complicated access to imported diluents, equipment and service providers. Reuters reported in late 2025 that lower diluent imports reduced export capacity and that roughly 80 per cent of exports were going to China through intermediaries circumventing sanctions. In that sense, availability survived through workaround networks rather than through restored sovereign control over the energy chain (Reuters 2025f).

b) Affordability

Affordability deteriorated more brutally than did availability due to a sustained period of hyperinflation. Even beyond the peak of hyperinflation, affordability remained the decisive social bottleneck. CFR reports annual inflation at 189.8 per cent in 2023, while Reuters reports that Maduro claimed inflation fell to 48 per cent in 2024, the lowest in twelve years. That disinflation, however, did not restore purchasing power, because wages had already been pulverised and public compensation depended increasingly on discretionary bonuses rather than durable salary recovery (Roy & Cheatham 2024; Reuters 2025e).

For energy consumers, the key issue was not only the price of petrol or electricity tariffs on paper, but the widening gap between nominal subsidies and the real cost of living. Reuters reported in May 2024 that public employees were receiving around US$130 a month in bonuses while the official minimum wage, unchanged since March 2022, was worth only a few dollars. AP reported in 2026 that the statutory minimum wage had fallen to just a few cents in monthly dollar terms, while basic household goods cost more than US$500. Reuters also reported a May 2026 increase in minimum income to US$240 and pensions to US$70, but even that was framed by the authorities themselves as insufficient relative to inflation and poverty (Reuters 2024c, 2026j; Cano 2026).

This helps explain why energy scarcity in Venezuela often took the form of queuing, informal charging, generator dependence, cooking-gas insecurity and transport contraction rather than price rationing alone. Af-

fordability improved briefly when inflation slowed and limited dollarisation spread, but that same dollarisation also entrenched inequality between those with foreign-currency access and those tied to state wages. Energy security therefore remained socially segmented: some urban consumers could still buy around the collapse; many others could not (Roy & Cheatham 2024; Cano 2024).

c) Reliability

Reliability was arguably the most visibly broken dimension of Venezuelan energy security. Rendon's 2019 CSIS analysis described a nationwide power outage that began on 7 March 2019 and stressed that Venezuela had already recorded more than 18,000 blackouts in 2017. He linked the breakdown to incompetence, underinvestment, corruption and brain drain, while noting the government's insistence on sabotage narratives. CSIS also emphasised Venezuela's dangerous dependence on the Guri dam system, which supplied roughly 80 per cent of national electricity at the time (Rendon 2019).

The outage was not solely restricted to the electricity-sector. Reliability failures cascaded into water supply, hospitals, telecommunications, transport and the oil industry itself. CSIS noted that the blackouts were debilitating for already-strained hospitals, while contemporary reporting tied grid failure directly to operational disruption in heavy industry and petroleum production. The problem, beyond low generation capacity, was systemic reliability (Rendon 2019).

What is striking is the persistence of this pattern into 2024. Reuters reported that a major outage on 30 August 2024 affected Caracas and all twenty-four states; follow-up reporting noted continued intermittency, especially in Zulia, and confirmed operational disruption at José, the country's main oil terminal, and at the Petropiar upgrader. That recurrence shows that even when oil output recovered somewhat, the electricity backbone remained highly unreliable, and therefore availability in export terms could coexist with insecurity in domestic service terms (Reuters 2024a, 2024b).

d) Resilience

Resilience concerns the capacity of an energy system to absorb shocks, reroute supply, recover from disruption and adapt institutionally. By that standard, Venezuela's performance from 2017 to 2026 was poor. A resilient system would not have remained so dependent on a single hydroelectric complex, imported diluents, politically contingent licences and an overstretched state oil company. CFR and CSIS both point to the same foundations of fragility: concentrated political power, corruption, and brain drain (Roy & Cheatham 2024; Rendon 2019).

There were nevertheless forms of adaptive resilience. Sanctions pushed Venezuela into alternative trading arrangements with China, Russia, Iran and intermediaries. Reuters reported that in 2025 reduced diluent imports

and reliance on indirect sales to China became central to PDVSA's operating model. Yet this was a brittle resilience. It depended on opaque logistics, geopolitical sponsorship and sanction evasion rather than on institutional repair. It prolonged survival, but it did not rebuild autonomy (Reuters 2025f).

By mid-2026, resilience showed signs of possible reconstitution through new agreements rather than evasive improvisation. Reuters reported separate accords with Shell, SLB, Repsol and GE Vernova, covering offshore gas, digital oilfield modernisation, incremental crude supply to domestic refineries and emergency power rehabilitation. These are important because they address not only extraction but upgrading, technology transfer and electricity supply. Still, they also underline a deeper point: Venezuela's resilience has not yet become endogenous again. It continues to rely on foreign firms, external approvals and politically conditioned capital inflows (Reuters 2026b, 2026e, 2026f, 2026i).

The effect of US foreign policy on Venezuela's energy security and independence

American policy affected Venezuela's energy security through three main channels: finance, trade and political leverage over sectoral investment. Executive Order 13808 in August 2017 restricted new debt and equity transactions involving the Venezuelan government and PDVSA, thereby tightening access to international finance and limiting the regime's capacity to refinance obligations or sustain capital expenditure. The 2019 sanctions were more severe still because they directly targeted PDVSA's oil business and constrained the import of inputs such as naphtha that were important for blending and refining heavy crude. In this sense, US policy did not create Venezuela's energy dysfunction, but it materially deepened the state's inability to stabilise production and maintain infrastructure (Executive Order 13808 2017; Roy & Cheatham 2024).

The political economy of these measures is clearer when the sequence is viewed as alternating between punishment and transactional relief. Chevron was allowed limited operations in November 2022. In October 2023, the United States widened relief for six months after the Barbados agreement. In April 2024 that relief was reversed when Washington judged Caracas not to have met electoral conditions. In March 2025 the Trump administration ordered a wind-down of Chevron's exports, and later that month imposed a 25 per cent tariff threat on countries buying Venezuelan oil and gas. By May 2025 Chevron had only a much narrower authorisation to keep assets without operating normally (Roy & Cheatham 2024; Reuters 2025a, 2025b, 2025c).

The effect on "independence" was paradoxical. Sanctions were intended to coerce political change, but they also restructured dependence. They pushed Venezuela away from open, rules-based market access and toward

opaque export channels, geopolitical patrons, and licence-dependent arrangements. Domestic sovereignty over the energy sector narrowed because operational continuity came to depend on external waivers and tolerated intermediaries. Put differently, sanctions weakened the regime's room for manoeuvre without generating a genuinely independent post-oil or post-rentier model (Roy & Cheatham 2024; Reuters 2025d, 2025f). This is an inference drawn from the pattern of reported production recovery, export redirection and ongoing reliance on foreign intermediaries.

That said, a serious analysis cannot flatten causality by only blaming US sanctions. CFR is explicit that government mismanagement and US sanctions jointly contributed to output collapse and underinvestment. CSIS's power-sector analysis is even stronger on domestic causes, stressing corruption, maintenance abandonment and the loss of technical personnel. The most defensible conclusion is therefore that US foreign policy acted as a force multiplier on pre-existing structural failure. It accelerated scarcity, narrowed policy options and politicised market access, but it did so in a system already weakened by petrostate pathologies and institutional erosion (Roy & Cheatham 2024; Rendon 2019).

What has changed since President Maduro's indictment and subsequent legal proceedings

The most important change in 2026 has been the shift from coercive isolation to conditional reopening. Reuters reported that after Maduro's removal from office and the political rupture around his legal proceedings, the United States issued broad new licences in February 2026 allowing major foreign companies including Chevron, BP, Eni, Repsol and Shell to resume or negotiate oil and gas operations more widely. The same reporting suggested that royalties and some federal tax flows would move through a US-controlled fund arrangement, underscoring that reopening has not meant a full restoration of unfettered Venezuelan control over hydrocarbon rents (Reuters 2026c).

A second change is the speed of sectoral deal-making. In January 2026, Venezuela enacted a revised hydrocarbons law to open more space for foreign investment, arbitration and operational control, though critics have warned that legal ambiguity remains. By June 2026 Reuters was reporting new agreements with Shell on the Loran gas field and flaring reduction, with SLB on digital modernisation and production workflows, with GE Vernova on electricity generation targets, and with Repsol on incremental crude and gas production linked to domestic refining needs (The Guardian 2026; Reuters 2026b, 2026e, 2026f).

A third change is the measurable improvement in upstream indicators. Reuters reported output at 1.1 million barrels per day in March 2026, up from 942,000 in January, and noted that gasoline and diesel production in 2025 had risen to 166,700 barrels per day from 146,200 in 2024. By June

2026 exports were said to be 1.25 million barrels per day, with about half heading to the United States. These are meaningful improvements in availability and external market access, and they would have been difficult to imagine under the 2019 to 2025 pattern of escalating restrictions (Reuters 2026g, 2026h).

Yet the social and macroeconomic constraints remain acute. Reuters reported in February 2026 that the IMF still considered Venezuela's situation "quite fragile", citing triple-digit inflation, poverty, inequality and public debt around 180 per cent of GDP, while also noting an exodus of roughly eight million people since 2014. Reuters and AP also reported that wage and pension increases in 2026 were responses to intense social pressure from workers whose incomes had been devastated by inflation. In short, the energy opening has moved faster than social recovery (Reuters 2026a, 2026j; Cano 2026).

The final change, therefore, is conceptual. Before 2026, Venezuela's energy strategy was largely about surviving sanctions. In 2026 it has become, increasingly, about rebuilding the sector under external supervision and foreign partnership. That is an improvement in availability and perhaps in resilience, but it is not yet a recovery of independence in the strong sense. Revenue channels remain politically conditioned, electricity reliability is still not restored nationwide, and affordability for ordinary households remains severely compromised. What has changed, then, is the operating environment, not the closure of the crisis itself (Cano 2026; Reuters 2024a, 2024b, 2026c, 2026j).

Conclusion

From 2017 to 2026, Venezuela's energy insecurity was produced by the interaction of domestic state failure and external coercion. Availability fell because PDVSA and the electricity system were already being eroded by underinvestment, corruption and technical decline; affordability collapsed because inflation destroyed real incomes; reliability failed because the grid became dangerously concentrated and poorly maintained; and resilience weakened because the country increasingly relied on external waivers, imported inputs and opaque trade channels. US sanctions did not originate these structural weaknesses, but they intensified them and reshaped the terms under which Venezuela could access markets, finance and technology (Executive Order 13808 2017; Rendon 2019; Roy & Cheatham 2024).

The developments of 2026 show that sanctions policy can alter the trajectory of Venezuelan energy security very quickly when it moves from maximum pressure to conditional re-engagement. Production has risen, foreign companies have returned, and the power sector has drawn new outside interest. Even so, the deeper lesson is that energy security is not measured by export barrels alone. Unless the gains in output are translated into reliable electricity, affordable household energy and stronger domestic

institutions, Venezuela will remain a country rich in hydrocarbons but poor in energy security (Reuters 2026c, 2026e, 2026g, 2026h; Cano 2026).

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