

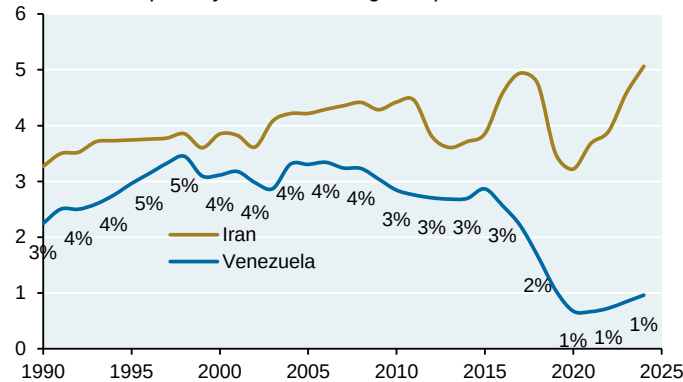


A few comments and exhibits on Venezuela, oil, geopolitics and drug trafficking

[1] Venezuela is not a large part of the global oil production picture, at least not right now. The impact on global oil markets from the US invasion/arrest of Maduro should be minor.

Iran vs Venezuela oil production

Million barrels per day, with share of global production for Ven.



Source: EI, JPMAM, 2025

[2] In June 2025 when the US attacked Iranian centrifuges, there was a risk that Iran would shut the Straits of Hormuz which could have had a larger impact since 20%-25% of global liquids consumption and seaborne oil trade pass through the Straits; yet the impact on oil markets at the time was pretty modest.

WTI crude oil prices

US\$ per barrel

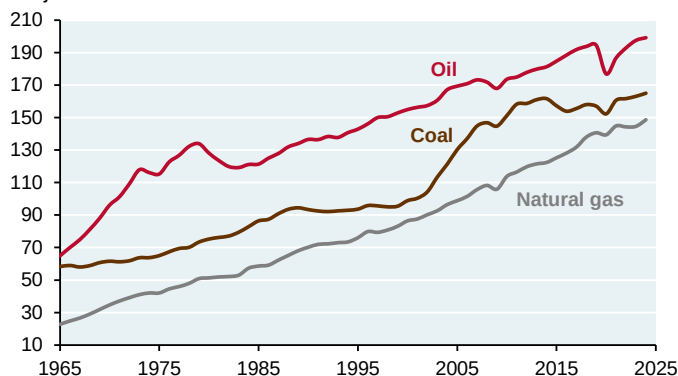


Source: Bloomberg, JPMAM, January 2, 2026

[3] To be clear, oil markets still matter: consumption is rising and exceeds natural gas and coal consumption, both on a global basis and in the US.

Global fossil fuel primary energy consumption

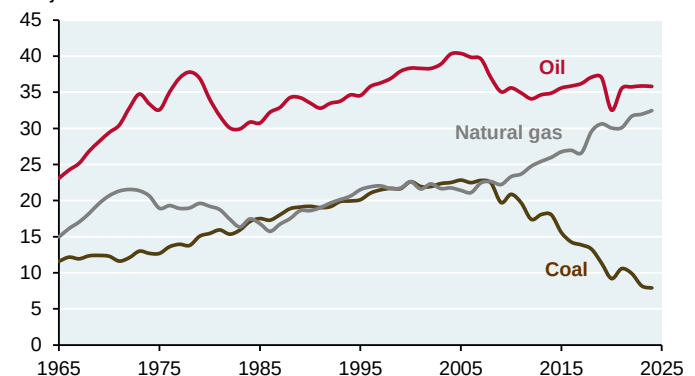
Exajoules



Source: Energy Institute, EIA, JPMAM, 2025

US fossil fuel primary energy consumption

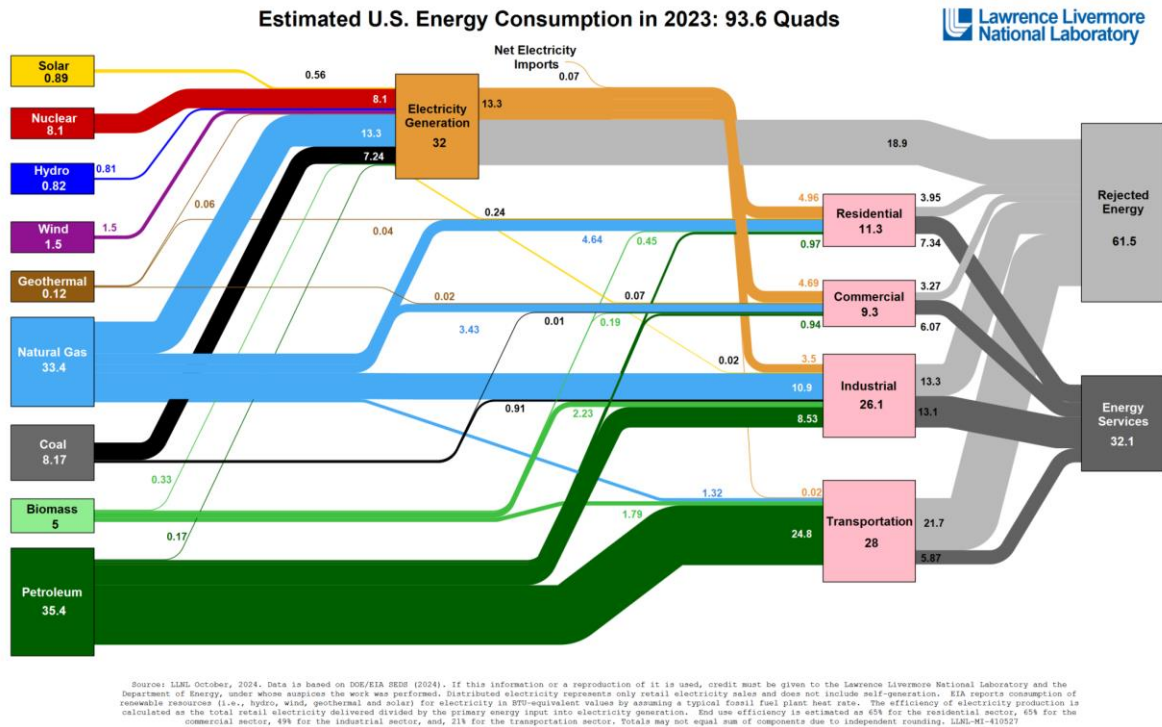
Exajoules



Source: Energy Institute, EIA, JPMAM, 2025



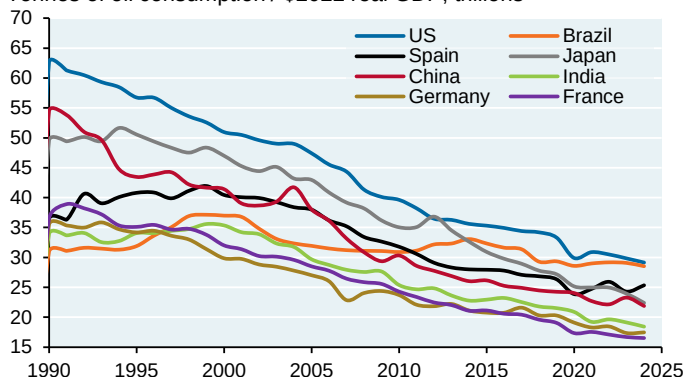
[4] A Sankey diagram of energy sources and uses makes clear that the US is still highly reliant on petroleum for 90% of transport energy consumption with the remainder mostly made up of natural gas and biomass, and for ~33% of industrial production (mostly high temperature heat and industrial feedstocks). The amounts of oil used for residential and commercial heating is pretty negligible, less than 10% of the respective totals. The oil flows are the dark green ones in the exhibit. Note: passenger cars, SUVs and light trucks represent around ~60% of transport energy consumption, with the remainder mostly split between heavy class 8 trucks, air travel and maritime. I agree with the potential for electrification to substantially change this picture, but that is not a relevant market topic for January 2026, particularly given the stated priorities of the Trump Administration.



[5] That said, the oil intensity of GDP is gradually declining in most of the world. At some point, this ratio may drop low enough that disruptions in oil supplies will be less of an issue for growth and consumer spending. I just have no idea what that level would be. Also: the US still has the highest oil intensity of GDP of countries in the chart. The September 2025 expiration of US EV subsidies makes it unlikely that the US will converge further to the rest of the group; Ford throwing in the towel on the F150 lightning is another sign of the times in the US regarding electrification of transport.

Oil intensity of GDP

Tonnes of oil consumption / \$2022 real GDP, trillions



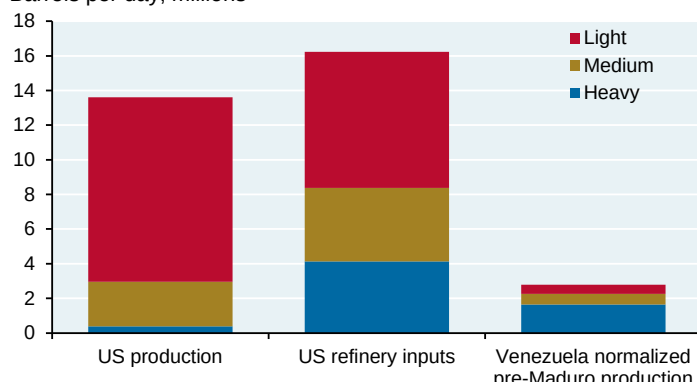
Source: Energy Institute, EIA, JPMAM, 2025



[6] I can see why some analysts believe that the US is geopolitically interested in Venezuela given its ability to complement US oil production and refining capacity. While US oil production is tilted towards light oil, US refining capacity is more even split among light, medium and heavier grades. Note how heavy and medium normalized oil production in Venezuela aligns better with US refining gaps.

US oil production & refining vs Venezuela production

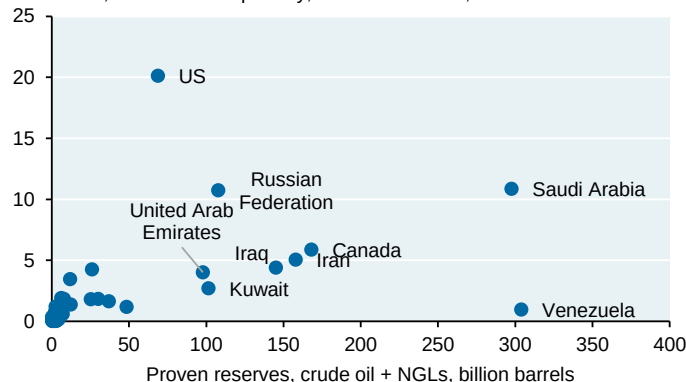
Barrels per day, millions



Source: PDVSA, Petróleo Y Otros Datos Estadísticos, JPMAM, 2025

Oil production vs proven reserves

Production, million barrels per day, crude oil + NGLs, 2024



Source: EI, JPMAM, 2025

[7] Among the top ten oil reserve countries, the US (#9) has invaded Venezuela (#1); Russia (#6) is under heavy sanctions; Saudi Arabia (#2) is facing off against the UAE (#8) in Yemen; and there are riots in Iran (#4). The next chart on production vs reserves is another widely cited reason for US focus on the Venezuelan oil sector.

[8] On critical minerals, there's some debate regarding Venezuela's untapped reserves of critical minerals such as coltan (niobium-tantalum), rare earth elements (REEs), nickel, bauxite and iron ore. These elements are important for military purposes: coltan is used in tantalum capacitors for military communications equipment, missile guidance computers and radar systems; rare earth elements enable permanent magnets in precision-guided munitions, aircraft actuators and electromagnetic systems; cassiterite (material from which tin is extracted through smelting) is used for electronics assembly, including defense systems; and bauxite is used for aluminum-based aerospace applications.

What about Venezuela? The USGS 2025 Mineral Commodity Surveys do not mention Venezuela as a major reserve country for tantalum, niobium, nickel, bauxite, iron ore or tin ore. In fact, Venezuela only shows up as a major reserve country for certain abrasives. However, InfoAmazonia cites Chinese buyers working directly with Colombian guerilla groups and the Venezuela military to acquire critical minerals from the region¹, and a 2023 article in the *Journal of Illicit Economies and Development* cites 48 different minerals present in the Orinoco Mining Arc², including the minerals cited above. While most of the country's mining production collapsed following government expropriation of private operators, in the 1990's mining exports accounted for 6% of total exports, and Venezuela was large regional producer of aluminum, gold, cement, bauxite, iron ore and steel³. Given the opaque nature of Venezuela's official and black market economy, we cannot say for sure what the real prospects are critical mineral development. But it's notable that China, which controls the vast majority of critical mineral mining and processing activities around the world, is active in Venezuela.

¹ "Critical Minerals Trade: Illegal Route Connecting the Amazon with China", InfoAmazonia, November 29, 2025

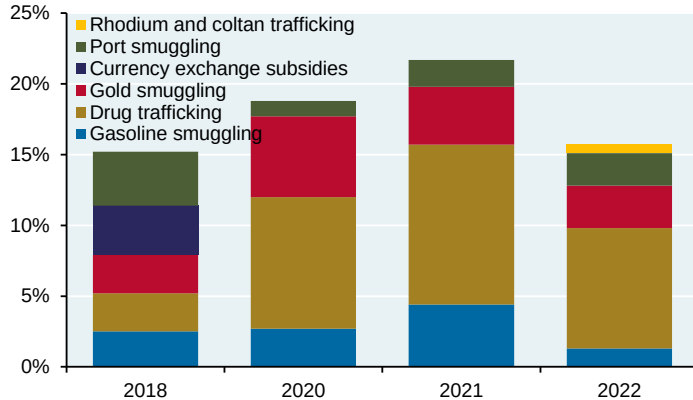
² "Control of Illegal Mining, Human Trafficking and Other Crimes", Journal of Illicit Economies and Development, Sara Lambertini, November 2023

³ "Venezuela: the post-Maduro Oil, Gas and Mining Outlook", Americas Quarterly, January 4, 2026



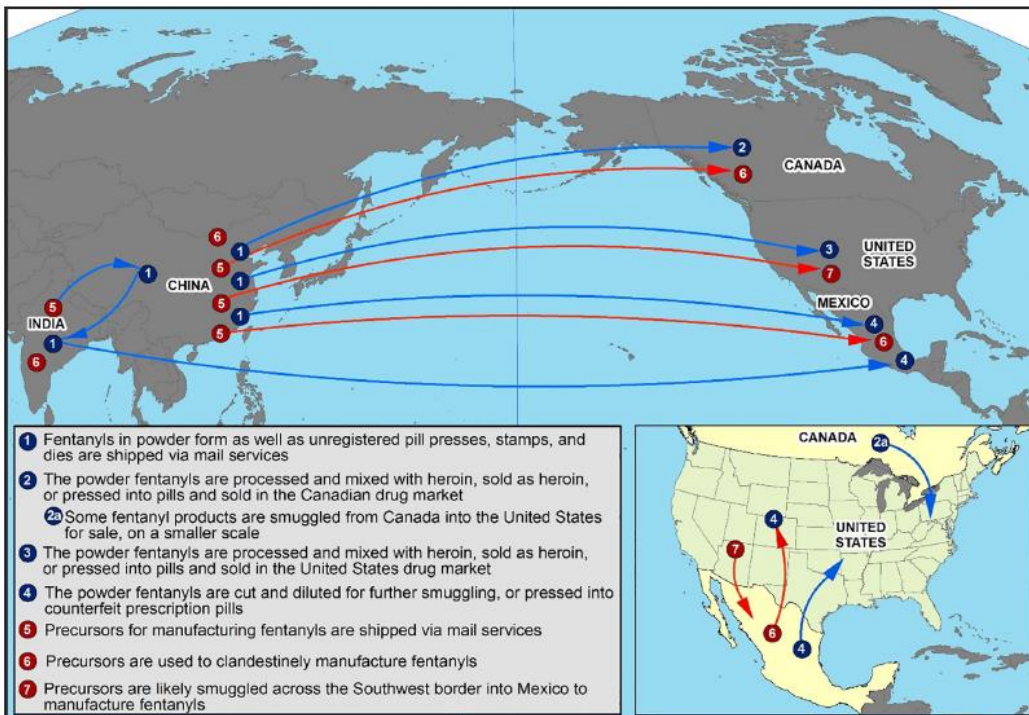
[9] What about the drug smuggling rationale for invading Venezuela and arresting Maduro? The story is complicated. The Maduro regime is/was reportedly highly reliant on illicit activities such as those shown below which amount to 15%-20% of Venezuela GDP. Note how drug trafficking was the largest illicit segment from 2020-2022. Ecoanalítica (a Venezuelan economic consulting firm) found that profits from illicit activity represent 56% of Venezuelan exports, 56% of total governmental income and 78% of all imports.

Illicit activities as a percent of Venezuela GDP



Source: Ecoanalítica, UN Comtrade, UNODD, CCDB, OCDE, OEA, 2024

[10] To be clear, on fentanyl per se Venezuela does not seem to be very involved. In 2020, the US DEA produced a detailed report on fentanyl flows into the US. As shown in the exhibit below, Venezuela was not even mentioned. Mexico and China were the primary source countries for fentanyl and fentanyl-related substances trafficked directly into the United States, with India emerging as a source for finished fentanyl powder and fentanyl precursor chemicals.

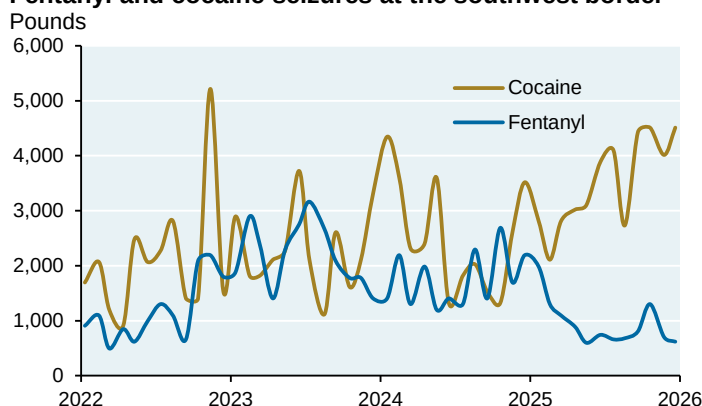


Source: DEA



[11] To complicate a muddy picture, Venezuela does seem to be a conduit for cocaine flows originating in Colombia and making their way to the US. While US fentanyl seizures have declined over the last two years, cocaine seizures remain high. The most heavily used export routes for the Latin America cocaine trade is via the Pacific, and via Colombia directly into the Atlantic. Venezuela is a third conduit for Colombia cocaine making its way to the US; according to the UN, 90% of US cocaine is sourced from Colombia, with Venezuela and the Caribbean accounting for ~10% of US-destined cocaine transshipments.

Fentanyl and cocaine seizures at the southwest border



Source: U.S. Customs and Border Protection, WSJ, 2025

[12] Trump mentioned the “Donroe Doctrine” as a successor to the 1820’s Monroe Doctrine when explaining US operations in Venezuela. In this regard:

- New York DA Robert Morgenthau announced in 2015 that his office found links between Venezuela, Iran and Hezbollah regarding the global cocaine trade, provision of Venezuelan passports to Iranian government officials for international travel purposes, and the sale of Iranian manned drones to Venezuela⁴
- Iran and Venezuela have exchanged oil, gold and infrastructure assistance using Iran’s Islamic Revolutionary Guard Corps and Hezbollah-linked front companies for money laundering and sanctions evasion⁵
- Iranian weapons transfers to Venezuela include Mohajer-6 and Shahed munitions-carrying unmanned aerial vehicles with 2,000 kilometer operational range, sufficient to reach any target in Florida⁶. These are not just weapons sales; Iranian drone manufacturing facilities have been built inside Venezuela⁷
- The Iranian presence in Venezuela includes Zolfaghar-class fast attack boats armed with CM-90 anti-ship missiles, the export version of Iran’s Nasr system. These missiles have 55 mile range and travel at 760 miles per hour using active radar guidance⁸
- Over 120 Russian troops reportedly operate in Venezuela and lead the “Equator Task Force.” Russian advisers provide training across multiple domains including infantry, drone operations, special forces, military intelligence, signals intelligence, armor, aircraft, artillery and domestic surveillance⁹

⁴ “NYC’s most legendary prosecutor sees a darker threat in Venezuela’s alleged global cocaine hub”, Business Insider, May 19, 2015

⁵ “The Cross-Continental Threat: Iran and Venezuela’s US-Defying Partnership”, JINSA, November 25, 2025

⁶ “Treasury Targets Iran-Venezuela Weapons Trade”, US Treasury, December 30, 2025; “Iranian Mohajer-6 Armed Drone Confirmed in Venezuelan Air Force Service, Signaling Deepening Tehran–Caracas Military Axis”, Defense Security Asia, December 31, 2025

⁷ “Venezuela prepares for potential attack with armed drones designed by Iran”, Miami Herald, Aug 29, 2025

⁸ “Venezuela displays Iranian anti-ship missiles”, Jane’s Defense Weekly, April 19, 2024

⁹ “Russian General in Venezuela Leading Advisory Mission”, The War Zone, November 19, 2025 based on information from Ukraine’s Defense Intelligence Directorate

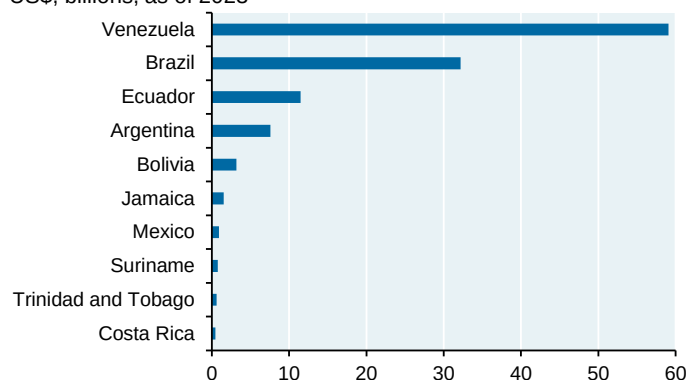


- Russian arms sales to Venezuela include Su-30MK2 fighter jets, S-300VM long-range surface to air missiles, Buk/Pechora medium/short-range surface to air missile systems, T-72B1 tanks, BMP-3 infantry fighting vehicles and a Kalashnikov production factory¹⁰
- Chinese arms sales to Venezuela include C-802A anti-ship cruise missiles and fast attack craft and VN-16 amphibious infantry fighting vehicles¹¹
- China has extensive ties with Venezuela; note the disproportionate amount of Chinese loans to Venezuela vs other Latin American countries (most of these loans were originated over a decade ago). China's military connections with Venezuela involve arms sales (missiles, jets, naval vessels), defense cooperation and strategic support; it's not clear what the benefit has been for Venezuela, at least based on last week. I'm tempted to draw similar conclusions as to possible military efficacy of US arms sales to Taiwan, which was one of the four risk segments in this year's Eye on the Market Outlook which was released on January 1st

In any case, last week appears to be a manifestation of the "Donroe Doctrine"; the question for markets is whether there is an explicit or implicit geopolitical quid pro quo as it relates to China/Taiwan or Russia/Ukraine.

Chinese loans to Latin American and Caribbean countries

US\$, billions, as of 2023



Source: Boston University Global Development Policy Center, 2025

Addendum: US invasions, military interventions and covert actions in Latin America since 1823

Peru, 1835-1836; Mexico, 1846; Nicaragua, 1855; Panama/Colombia, 1856; Guatemala, 1856; Puerto Rico (Spanish American War), 1898; Honduras, 1903; Nicaragua and Cuba, 1912; Mexico, 1914-1918; Haiti, 1915; Dominican Republic, 1916-1924; Panama, 1918; Nicaragua, 1933; Guatemala, 1954; Cuba and El Salvador, 1960; Cuba and Ecuador, 1961; Cuba and Colombia, 1962; Brazil, 1964; Dominican Republic, 1965; Bolivia, 1971; Uruguay and Chile, 1973; El Salvador, 1980; Nicaragua, 1981; Grenada, 1983; Panama, 1989; Nicaragua, 1990; Honduras, 2009

¹⁰ "Arms Sales, Mercenaries, and Strategic Bombers: Moscow's Military Footprint in Venezuela", Georgetown Security Studies Review, 2019; "S-300, Su-30 jets, T-72 tanks: Inventory of Venezuela's largely Russian-origin arsenal", The Print, January 2026

¹¹ "China's Arms Diplomacy in Venezuela Affects Stability in the Western Hemisphere", Georgetown Security Studies Review, 2020; "China, Iran, and Russia will Intervene in Venezuela to Threaten US Regional Hegemony", Center for Maritime Strategy, November 2025

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