

The Strategic Implications of Veneoranto's Natural Gas Deal with Venezuela's PDVSA: An Energy Trilemma Analysis

Global Energy Sector Commentary
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Foreword

The partnership between VeneOranto (Atlas-Oranto) of Nigeria and Petróleos de Venezuela, S.A. (PDVSA), in a natural gas deal, holds significant geopolitical, environmental, and economic implications. This report evaluates the effects of this collaboration using the Energy Trilemma framework, focusing on Energy Security, Energy Equity, and Environmental Sustainability. It aims to assess how this partnership could contribute to a just and inclusive African energy transition.

The analysis incorporates insights from the International Energy Agency (IEA), Organisation of the Petroleum Exporting Countries (OPEC), International Energy Forum (IEF), World Energy Council (WEC), and Oxford Institute for Energy Studies (OIES). The commitment of Veneoranto (Atlas Oranto) and PDVSA to a natural gas deal has drawn attention due to its potential impact on various aspects of the energy landscape.

This report explores the implications of this partnership, analysing how it aligns with key energy priorities such as Energy Security, Energy Equity, and Environmental Sustainability. By examining insights from prominent energy organisations, we aim to provide a nuanced assessment of the partnership's potential role in shaping the African energy transition.

The Veneoranto-PDVSA natural gas deal highlights the interconnected nature of energy security, equity, and sustainability. By examining the partnership through the Energy Trilemma lens, we can better understand its potential to drive a just and inclusive energy transition in Africa. The Veneoranto-PDVSA natural gas deal represents a significant development in the African energy landscape. By considering the Energy Trilemma, this report provides a comprehensive evaluation of the partnership's implications. As Africa seeks to transition towards a more sustainable energy future, collaborations such as this one have the potential to play a crucial role in shaping the continent's energy trajectory.

This agreement has significant implications for global energy security, African energy transition dynamics, the just energy transition, and Africa's broader sustainable development agenda. It also intersects with geopolitical issues surrounding international sanctions on Venezuela and emerging trends such as artificial intelligence (AI) and data centre energy demands. This report provides a comprehensive analysis and actionable recommendations for managing the risks and opportunities associated with the deal.

EXECUTIVE SUMMARY



Africa Faces a Significant Energy Challenge



Low Electrification Rates



Underdeveloped Energy Infrastructure



Insufficient Transmission and Distribution Networks



High Energy Costs



Hindering Economic Development



Increasing Energy Demand Driven

Solution



Gas Supply Agreement with Petróleos De Venezuela, S.a. (**PDVSA**).

Veneoranto's gas deal with Venezuela's PDVSA introduces significant geopolitical and energy security implications. This brief evaluates the strategic value and risks of the agreement within the framework of the **Energy Trilemma** balancing **Security, Equity, and Sustainability**. Africa faces a significant energy challenge characterised by several interconnected factors: low electrification rates, particularly in rural and underserved communities; underdeveloped energy infrastructure, including insufficient transmission and distribution networks; high energy costs, hindering economic development and impacting affordability for consumers; and rapidly increasing energy demand driven by a burgeoning population and accelerating industrialisation across the continent. This necessitates a proactive and multi-faceted approach to ensure sustainable and reliable energy access for all. One proposed solution involves a natural gas supply agreement with Petróleos de Venezuela, S.A. (PDVSA). This partnership aims to alleviate the current energy deficit by providing a substantial increase in natural gas supplies. The anticipated benefits include bolstering industrial production by providing a reliable and relatively inexpensive energy source for manufacturing processes; enhancing electricity generation capacity through increased access to fuel for power plants, thereby improving energy security and grid stability; and potentially establishing Liquefied Natural Gas (LNG) export capabilities, opening new avenues for revenue generation and economic diversification.

However, this strategic partnership faces considerable risks associated with the ongoing political and economic sanctions imposed on Venezuela. These sanctions significantly restrict access to international financial markets, limiting PDVSA's ability to invest in necessary infrastructure upgrades and maintain consistent production levels. Further complicating the situation is the deterioration of Venezuela's own energy infrastructure, resulting in potential supply disruptions and affecting the reliability of gas deliveries. Thorough risk assessment and mitigation strategies, including diversification of supply sources and robust contractual safeguards, are crucial in mitigating these challenges and ensure the long-term viability of the gas supply agreement. A comprehensive analysis considering both the potential benefits and inherent risks is essential before proceeding with this strategic partnership. Furthermore, any African energy strategy must include environmental considerations and the pursuit of sustainable energy solutions.

GLOBAL ENERGY

SECURITY IMPLICATIONS

2.1 The Strategic Context



Global Energy Realignment:

With energy supply chains disrupted by geopolitical tensions (e.g., Russia-Ukraine conflict), countries and companies are increasingly looking for diversified, non-traditional alliances.



Venezuela's Comeback:

PDVSA is seeking new markets and strategic partners to revitalise its declining oil and gas infrastructure under a limited easing of US sanctions.



African Ambitions:

Africa is positioning itself as a global energy hub—both for fossil fuels and renewables. Deals like this reflect African energy companies asserting their autonomy in the global energy order.

2.2 Risk Factors

01 Sanctions Exposure:

US and EU sanctions on Venezuela may implicate secondary entities through financial or operational partnerships.

02 Reputational Risk:

Partnering with PDVSA may draw scrutiny from Western allies and international financial institutions.

03 Operational Uncertainty:

PDVSA's infrastructure is aged and under-invested; reliability of supply and technology compatibility may be problematic.



2.3 Global Energy Security and Geopolitical Context

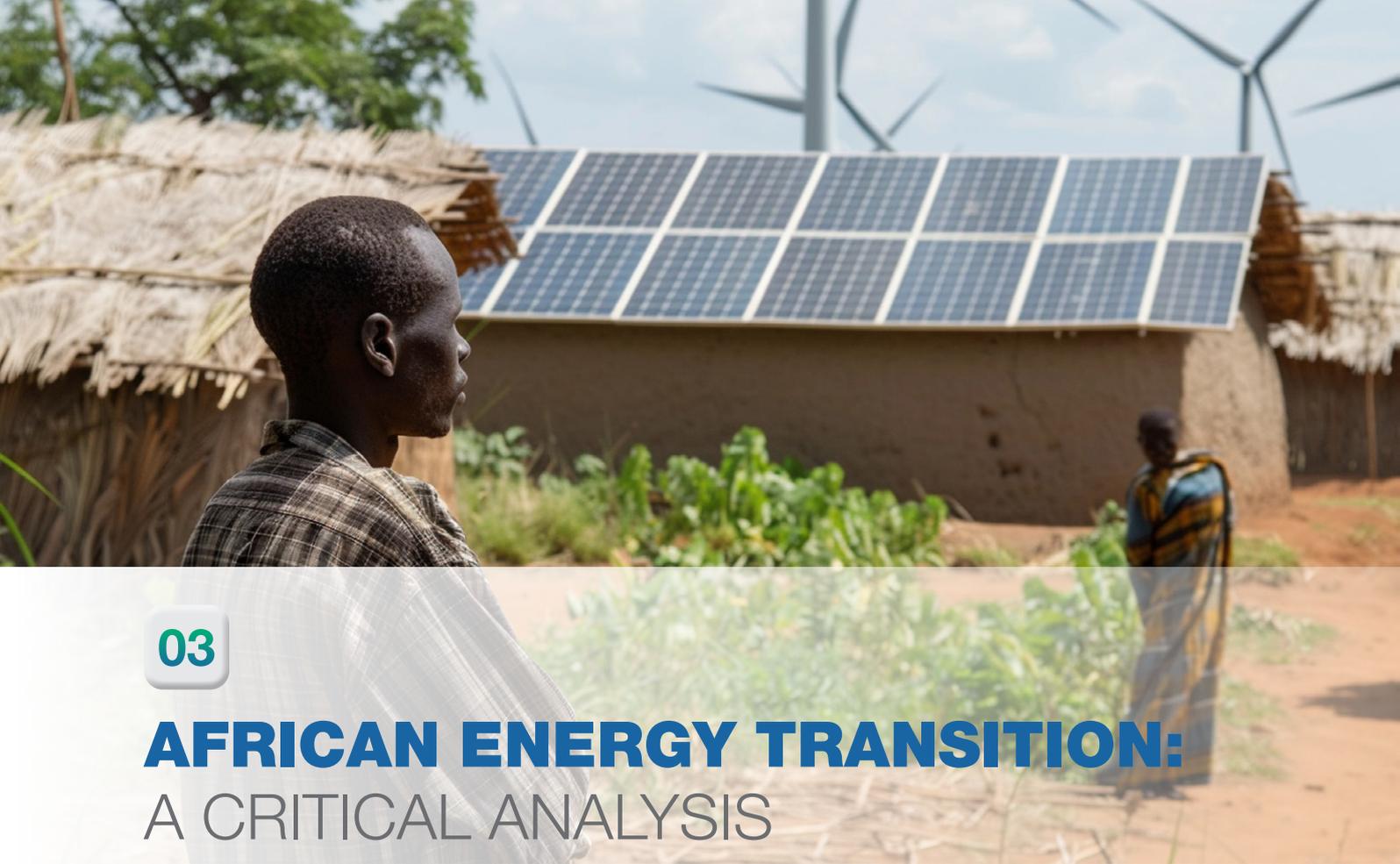
Sanctions and Regulatory Risks

Engaging with PDVSA exposes the Veneoranto to potential secondary sanctions, particularly from the U.S. and EU, which could impact access to international financing and markets. The IEA emphasises the importance of diversified energy partnerships to mitigate such geopolitical risks.

Energy Market Dynamics

OPEC's 2024 World Oil Outlook projects a sustained increase in global oil demand, driven by growth in developing regions, including Africa. However, the organisation also notes the necessity for continued investment in the oil industry to meet this demand.





03

AFRICAN ENERGY TRANSITION: A CRITICAL ANALYSIS

3.1 Africa’s Unique Transition Path

Africa’s energy transition differs significantly from global narratives. With over 600 million people still lacking access to electricity, the continent must balance:



Energy Access



Economic Growth



Decarbonisation

3.2 African Just Energy Transition

A just energy transition in Africa requires:

Inclusion of fossil fuels (especially gas) as a transition fuel.

Financing for adaptation and local infrastructure development.

Respect for national development priorities, not imposition of external agendas.

3.3 The Energy Trilemma

Africa faces a trilemma:

Energy Security – Provide reliable and affordable energy

Sustainability – Achieve climate targets

Equity – Ensure inclusive access and local benefits

This deal must be assessed against how it supports or undermines these pillars.

African Energy Transition and the Just Energy Transition

3.1 Transition Pathways

The International Energy Agency's (IEA) World Energy Outlook 2024 highlights that Africa requires approximately \$110 billion in annual energy investments to achieve universal access and meet climate goals. The continent's energy transition must balance expanding access, economic growth, and environmental sustainability.

3.2 Equity and Access

The World Energy Council's World Energy Trilemma Report 2024 underscores the need for energy policies that ensure security, equity, and sustainability. Africa's energy strategies should prioritise affordable access while transitioning to cleaner energy sources.

The Energy Trilemma: Core Framework

 Dimension	 Definition	 Relevance to the PDVSA-Veneoranto Gas Deal
Energy Security	Reliable, uninterrupted energy supply at reasonable cost	Could enhance short-term supply, but risks sanctions-based supply disruption
Energy Equity (Access and Affordability)	Inclusive access to modern energy services	May increase energy affordability if gas is used for domestic electricity generation
Environmental Sustainability	Transition to cleaner energy sources with low carbon emissions	Gas has lower carbon intensity than coal or diesel, but still a fossil fuel; long-term risk of locking in emissions





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IMPLICATIONS FOR AFRICA'S SUSTAINABLE DEVELOPMENT

4.1 Positive Impacts



Energy Security:

Natural gas from Venezuela can supplement domestic supply or be used to generate electricity, reducing blackouts.



Industrial Growth:

Stable gas supply may boost fertiliser production, petrochemicals, and industrial power generation.



Strategic Autonomy:

It reflects Africa's agency in global energy markets.

4.2 Risks and Trade-Offs

01 Dependency:

Relying on unstable partners may create new vulnerabilities.

02 Lock-in Effects:

Investing in gas infrastructure may delay renewables if not properly planned.

03 Compliance Risk:

Multilateral development banks may restrict funding if sanctions are breached.

4.4 Infrastructure and Investment

The Oxford Institute for Energy Studies (OIES) highlights significant challenges hindering Africa's energy transition. These challenges stem primarily from a critical lack of investment in energy infrastructure and persistent policy uncertainties.

The OIES report emphasises that substantial and strategic investments are urgently needed to develop the necessary infrastructure to support sustainable development goals across the continent and to ensure equitable access to modern energy services for all Africans. This includes investments in renewable energy sources, grid infrastructure to facilitate the integration of renewables, and improvements in energy efficiency.

The report further suggests that clear, consistent, and long-term energy policies are crucial to attract the necessary private and public sector investment, fostering a stable and predictable environment for energy companies and investors. Without such investments and policy clarity, the OIES concludes that Africa will struggle to achieve its sustainable development objectives and bridge the significant energy access gap affecting a large portion of its population. The lack of financing, coupled with regulatory instability, creates a high-risk environment that deters potential investors, further exacerbating the existing challenges.



4.3 Economic and Industrial Growth

The natural gas deal could bolster energy security and support industrial activities, such as fertiliser production and petrochemicals, contributing to economic growth. However, reliance on fossil fuels may pose challenges to meeting climate commitments.

AI, DATA CENTRES AND ENERGY DEMAND

5.1 Energy Demand from AI Infrastructure

- **AI training and inference** require large-scale computation and uninterrupted power, increasing base-load energy demand.
- **Data Centres** are major energy consumers. In Africa, rising cloud and digital infrastructure investment (e.g., Google, AWS, Huawei) is driving energy demand.

5.2 Implications for Natural Gas

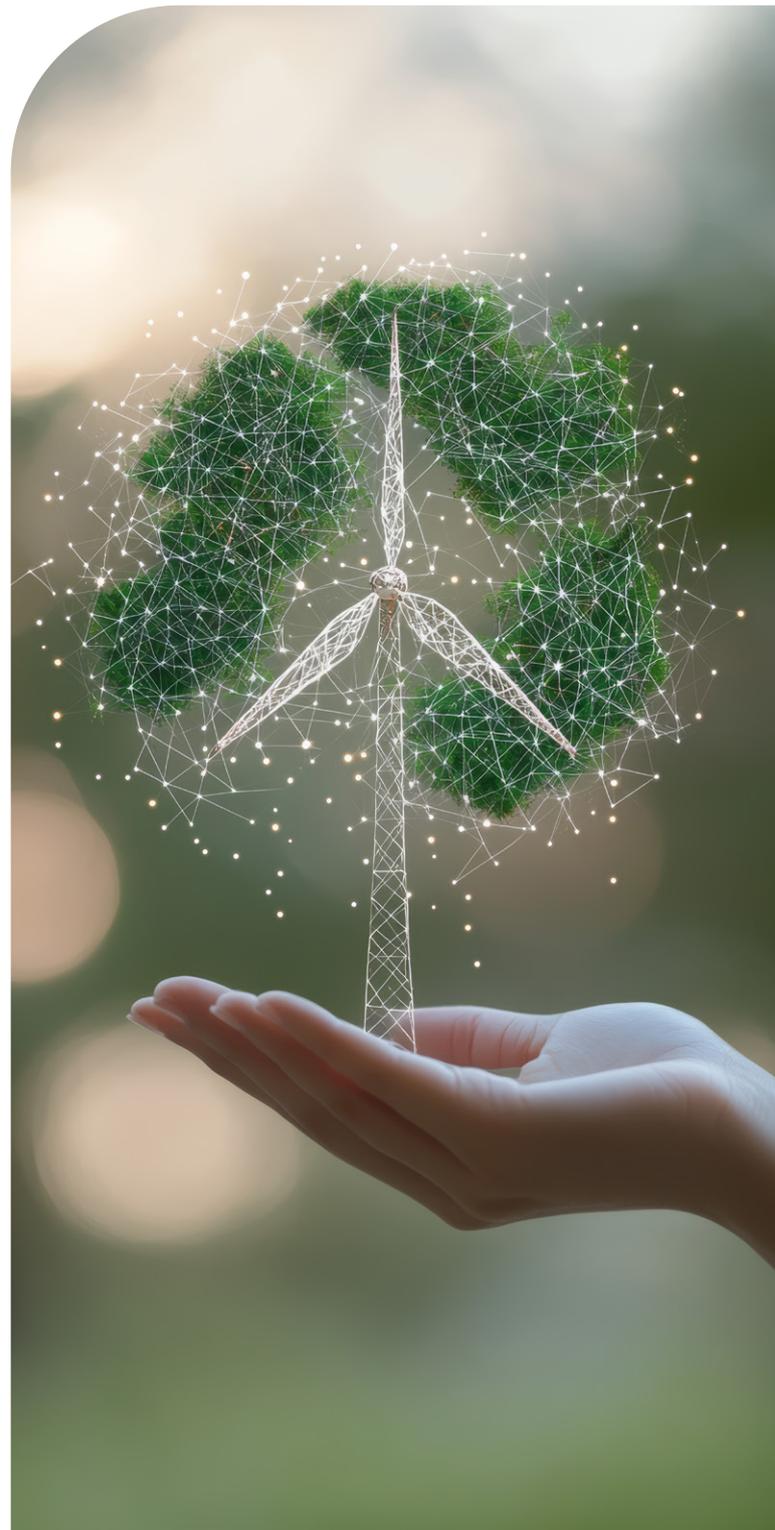
- **Gas as a Balancing Fuel:** Natural gas can provide stable energy for AI infrastructure while renewables are scaled.
- **Stranded Asset Risk:** Overinvestment in gas may create stranded assets if renewable prices drop further or global finance tightens.

5.3 Rising Energy Consumption

The proliferation of AI and data centres is increasing energy demand. Natural gas can serve as a transitional energy source to meet this increasing demand, providing reliable power while we scale up renewable energy capacity.

5.4 Renewable Integration

The IEA emphasises the importance of integrating renewable energy into the grid to accommodate the growing energy needs of digital infrastructure. Investments in renewables can complement natural gas in supporting AI and data centre operations.



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GEOPOLITICAL AND REGULATORY CONSIDERATIONS

6.1 Geopolitical Risks

- Heightened exposure to secondary sanctions and tariff restrictions from the U.S. and EU.
- Potential reputational risks and challenges in accessing international finance and ESG-aligned investment.
- Risk mitigation requires legal, policy, and diversification strategies.



6.2 Sanctions and Tariffs

- **Secondary Sanctions Risk:** Veneoranto engaging with PDVSA may face financial access restrictions from US/EU banks or exclusion from dollar-based transactions.
- **Regulatory Scrutiny:** Partnerships involving sanctioned entities may require legal due diligence and risk mitigation clauses.
- **Political Relations:** Deals with Venezuela could complicate African countries' diplomatic positioning with the West.





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STRATEGIC RECOMMENDATIONS

7.1 Risk Mitigation

Legal Compliance and Due Diligence:

Conduct thorough legal assessments to ensure compliance with international sanctions. Engage sanctions experts to structure deals compliant with international regulations.

Multilateral Shielding:

Work with African Union or regional blocs (ECOWAS, AfCFTA) to frame the deal as a continental energy security project.

Diversified Partnerships:

Engage with a range of international partners to reduce dependency on any single entity.

Diversify Supply:

Use Venezuelan gas as a short-term bridge, while building up local and regional gas production and renewables.

7.2 Sustainable Development Alignment

Investment in Renewable:

Allocate resources to develop renewable energy projects, aligning with global sustainability goals.

Infrastructure Development:

Invest in energy infrastructure that supports both fossil fuels and renewables to ensure a balanced energy mix.

7.3 Policy and Governance

Transparent Policies:

Develop clear and transparent energy policies to attract investment and support the energy transition.

Regional Collaboration:

Work with regional bodies to harmonise energy strategies and share best practices.

7.4 Policy and Governance

 Advantage	 Adaptation Strategy	 Mitigation Solution
Gas as bridge fuel	Build hybrid gas-renewables systems	Align with Just Transition goals
Energy for AI/data	Co-locate gas turbines with data centres	Integrate with solar PV and storage
Access to PDVSA assets	Use JV model for knowledge transfer	Audit infrastructure and ESG compliance
Diplomatic alignment with Global South	Frame as South-South cooperation	Transparency with global partners

01

Legal Compliance and Due Diligence:

Conduct thorough legal assessments to ensure compliance with international sanctions. Engage sanctions experts to structure deals compliant with international regulations.

02

Diversified Partnerships:

Engage with a range of international partners to reduce dependency on any single entity.

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Diversify Supply:

Use Venezuelan gas as a short-term bridge, while building up local and regional gas production and renewables.

STRATEGIC FIT WITH CRITICAL RAW MINERALS (CRMS) GROWTH

9.1 Linkages

01

Gas + CRMs Synergy:

Gas can power CRM extraction and processing (e.g., cobalt, lithium).

02

Infrastructure Dual Use:

Pipelines and power lines for gas can serve mining operations and community electrification.

03

Revenue Diversification:

Gas revenue can fund CRM value chain development.

9.2 Risks



Environmental Harm:

Poor gas practices may undermine ESG credentials in CRM mining.



Economic Overreliance:

Avoid “resource stacking” without diversification (oil + gas + minerals).





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CONCLUSION

This deal is emblematic of Africa's growing assertiveness in shaping its own energy narrative. While there are real risks—particularly geopolitical and reputational—the strategic opportunity lies in using such agreements to bridge current energy deficits, power digital infrastructure, and finance a balanced transition pathway. However, meticulous risk management, regulatory compliance, and integration with Africa's long-term sustainable development strategy are crucial.

The natural gas agreement between the Veneoranto and PDVSA presents both opportunities and challenges. While it can enhance energy security and support economic growth, it also necessitates careful navigation of geopolitical risks and alignment with sustainable development objectives. By integrating insights from leading energy institutions and implementing strategic recommendations, the company can position itself to contribute positively to Africa's energy future.

SUMMARY OF KEY RECOMMENDATIONS



Use gas as a transitional solution—complemented by massive investment in renewables, AI-ready energy systems, and grid infrastructure. **Leverage gas supply to support data infrastructure and CRM processing**, positioning Africa as a digital and industrial powerhouse.



Structure the Deal for Domestic Allocation: Prioritise local gas use for power, fertiliser, and industry.



Mitigate Sanctions Risk: Legal compliance, regional hedging, and diversified partnerships are critical.



Structure the partnership under a broader African energy cooperation framework to shield from unilateral exposure.



Invest in ESG-compliant extraction, processing, and export strategies to align with global finance and trade systems.



Pair Gas with Renewables: Encourage gas-renewable hybrid systems to support grid resilience and emissions reduction.



Invest in Mitigation: Adopt carbon offset strategies and consider CCUS technologies.



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