



In collaboration with Accenture

Energy Transition Readiness: Latin America and the Caribbean

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Foreword



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The World Economic Forum's Energy
Transition Index 2025 shows that the global
energy landscape is undergoing a profound
transformation. For Latin America and the
Caribbean (LAC), this transformation is not
only a matter of maintaining its path towards
sustainability, but also seizing the opportunity to
build resilience, competitiveness and inclusive
long-term growth.

LAC stands at a defining moment in the global energy transition. The region holds some of the world's most favourable structural conditions for energy transition leadership – from abundant renewable resources to critical mineral wealth and a proven record of electrification. The task ahead is to convert these advantages into stronger outcomes at scale.

To do so, the region will need to overcome longstanding structural challenges such as fragmented policies, infrastructure bottlenecks and gaps in innovation, education and finance. The progress must accelerate to match the pace of global change.

With energy demand set to rise and global competition for investment intensifying, the region has a unique opportunity to strategically shape a more resilient, inclusive energy future that propels economic growth, improves sustainability and enhances regional integration. This regional assessment aims to inform and inspire that shift.

Three strategic questions will shape this journey:

- 1. Where does the region stand in its energy transition and what are the implications of global energy system shifts for LAC?
- 2. How can the region better leverage its vast energy advantage to drive stronger, more inclusive transition outcomes economic, social and environmental?
- 3. How can countries harmonize progress and scale success across borders learning from top performers and overcoming fragmentation?

This paper answers these questions with data-driven analysis and perspective, drawing on the 2025 Energy Transition Index (ETI) by the World Economic Forum and the Energy Transition Readiness Assessment (ETRA), to guide bold execution: meeting ambitious energy targets, advancing policy reform, scaling private investment, modernizing energy infrastructure and building regional interconnections. It will also depend on investing in people – reskilling the workforce, accelerating innovation and fostering cooperation across countries.

The opportunity is clear: LAC can transform its abundant resource advantages into long-term prosperity and resilience.

Now is the time to act with ambition and collective ambition and coordination.

Executive summary

Latin America and the Caribbean (LAC) has some of the world's most favourable conditions and potential for clean energy leadership, but realizing this promise depends on converting structural advantages into system-wide, future-ready progress through reform and regional action. Its solar and wind resources are among the strongest in the world, and renewables already account for around 70% of electricity generation (with hydropower contributing 52.5%); in transport, biofuels are twice as prevalent as the global average; fossil fuels represent a smaller share of total energy use than elsewhere and the region is a vital supplier of critical minerals - accounting for 25% of global critical mineral production. The region also shows strong potential to develop new green industries (including hydrogen), supported by rising clean energy deployment and associated job creation.

However, regional progress remains uneven and is not yet at the pace of global change. According to this year's Energy Transition Index (ETI) by the World Economic Forum, which benchmarks 118 countries on 43 indicators for energy system performance and transition readiness, LAC ranks third out of six global regions but sits below the global average score.

Crucially, over the past 10 years, the region's overall score has barely improved – up just 1.2%, while many other regions record significantly higher gains.

Many countries in the LAC are "dual energy-dependent", simultaneously exporting crude and coal while importing gas and refined oil, leaving them exposed to volatility in both pricing and supply. Structural challenges – from infrastructure bottlenecks to fragmented policies, limited innovation and weak financing – highlight the critical areas where focused reform and investment can unlock the region's full potential.

On the positive side, renewable generation capacity has expanded to over 366 GW (gigawatts), fossil fuel subsidies have been cut by 42% since 2016, and pioneering countries such as Brazil, Uruguay, Chile and Costa Rica show how countries can progress faster on renewables. Yet investment levels remain far below what is needed: despite rising clean energy investments projected to reach \$70 billion in 2025 – a 25% increase since 2015 – the region attracted only 5% of private clean energy investment globally in 2024, against requirements of \$150 billion annually by 2030.

The Energy Transition Readiness Assessment (ETRA) provides a data-driven framework to track progress and identify priorities built on the ETI. It highlights four strategic goals for the region:



Goal 1 Secure, resilient and integrated systems.



Goal 3 Future-proof industrial ecosystems.



Goal 2 Diversified, low-carbon energy mix.



Goal 4 Improved efficiency and productivity.

Key findings

▲ System performance, which measures energy security, equity and sustainability, remains stable, with strong sustainability scores, though continued momentum is needed in equity and security. The region's sustainability advantage is backed by renewables, which make up 70% of electricity generation (as opposed to 49% globally) and biofuels at 10% of transport demand (twice the global average). Yet equity risks are rising: 78 million people still lack access to clean cooking while energy security scores have improved by only 0.2% over the past decade.

Transition readiness, which measures a country's ability to enable and sustain ongoing transition progress, offers the greatest opportunity for improvement. Despite resource advantages, the region scores 31% below the global average on finance and investment. Infrastructure and innovation also lag, with transmission and distribution (T&D) losses averaging 13.5% and clean tech research and development (R&D) remaining underfunded – limiting commercialization and scale-up.

Transition pathways are diverging across countries and dimensions. ETI scores range from 44 to 67 with 2025 growth rates varying from -1.8% to 5.9%. Only 26% of countries advanced simultaneously in equity, security and sustainability, highlighting fragmentation and uneven progress across the region.

New opportunities are emerging. Clean hydrogen and fuels, critical minerals, digitalization and advanced nuclear technologies offer pathways to industrial renewal, but only if backed by clear strategies, investment and institutional capacity.

The road ahead

To turn natural advantages into transformative impact, the region must achieve a few clear milestones – expanding renewable generation, securing universal access to clean cooking fuel, developing storage and grid integration, advancing sustainable biofuels and improving efficiency. These priorities will require action across four pillars: stronger policy frameworks, deeper regional integration, scaled financing partnerships and greater investment in innovation and skills.

About the Energy Transition Readiness Assessment (ETRA)

ETRA offers a region-specific framework to assess energy system readiness and track transition progress across LAC.

ETRA provides a data-driven analysis based on the 2025 edition of the World Economic Forum's "Fostering Effective Energy Transition" report and its analytical basis, the Energy Transition Index (ETI). The assessment looks at the region's energy landscape and readiness to drive secure, equitable and sustainable energy systems. Produced in collaboration with Latin American Energy Organization (OLADE) and Accenture, ETRA aims to support policy-makers and stakeholders in LAC. It does so by measuring energy system performance, thereby identifying gaps and opportunities in transition-enabling conditions in various countries. The result is a transparent, data-driven regional analysis that can help inform national strategies and support intraregional energy sector cooperation.



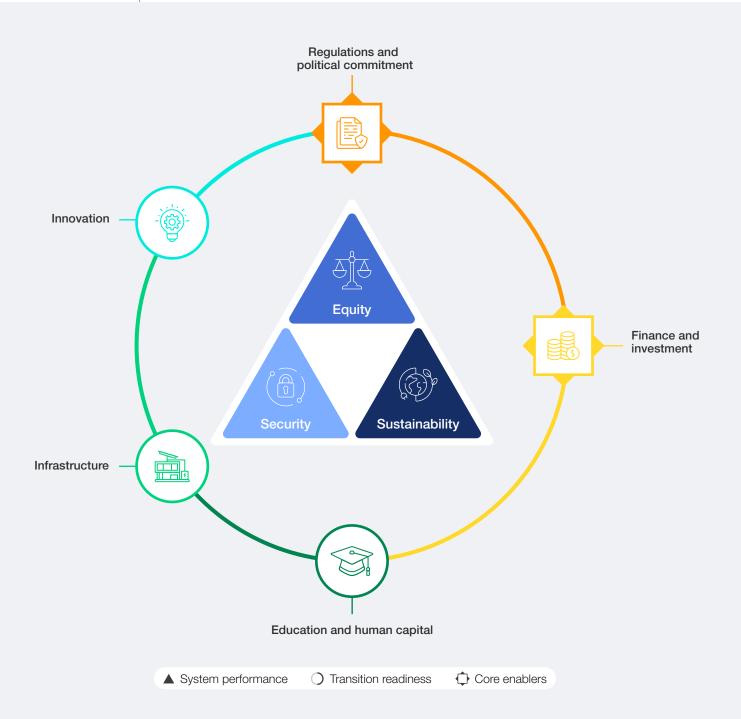
Analytical foundations

The Forum's ETI provides the data and analytical framework for the assessment. Built on 15 years of

country-level benchmarking, ETI evaluates countries across two sub-indexes.

FIGURE 1

The ETI framework



▲ System performance (60% of the score)

Assesses an energy system's outcomes evenly across the equity, security and sustainability dimensions. Equity considers factors related to energy access, affordability and economic development; security measures energy supply stability, reliability, diversification and resilience; and sustainability evaluates energy emissions, efficiency and clean energy use.

Transition readiness (40% of the score)

Measures a country's ability to enable and sustain ongoing transition progress in five dimensions: regulation and political commitment; infrastructure; education and human capital; innovation; and finance and investment.

In total, 43 indicators have been used to capture the complexity of energy systems, drawing on high-quality data that optimizes for the relevance, coverage, comparability, recency and quality of sources. Scores are normalized on a 0-100 scale, with 100 representing global best performance. Country scores have been interpreted within their structural and economic context, not as a standalone ranking.

Regional coverage and further methodology

ETRA covers the 19 countries tracked by the 2025 ETI. These countries are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay.

All references to score for the LAC region are based on the arithmetic mean of the 19 countries covered. References to global index values and other regions are based on 118 countries and their groupings included in the 2025 ETI.

For a full breakdown of the methodology and crosscountry data, please refer to the Fostering Effective Energy Transition 2025 report.¹





With rising pressures and vast potential, LAC must now deliver sustainable growth through energy system transformation.



The global energy landscape is shifting amid intensifying geopolitics, rapid technological disruption and escalating climate risks, creating new opportunities and challenges. The year 2024 was the hottest on record, amplifying extreme weather and exposing energy system vulnerabilities. Meanwhile, global energy demand rose at its fastest pace in years (2.2%), as factors such as electrification across sectors and digitalization through artificial intelligence (AI) continued to add new pressures on energy systems.

In line with increasing demand, energy-related carbon dioxide (CO₂) emissions hit a record 37.8 billion tonnes, ⁴ but their growth lagged global GDP growth of 3.2% – hinting at some decoupling between economic growth and emissions. Some of the progress can be linked to the expansion of the clean energy sector, with clean energy investment reaching \$2.1 trillion in 2024 – doubling since 2020⁵ and supporting over 16 million jobs. ⁶ However, investment growth slowed to 11%, down from 24-29% in previous years, ⁷ raising concerns about sustained momentum. Meanwhile, protectionism, monetary tightening and geopolitics are disrupting trade and investment, with resource nationalism straining critical material supply chains.

The 2025 ETI results reflect these challenges and renewed transition momentum: As many as 65% of countries improved their scores, reflecting gains in affordability, clean energy adoption and access. Energy equity rebounded with lower prices and subsidy reforms; sustainability rose with clean energy growth; while security stagnated amid import reliance and low flexibility. Yet only 28% of countries advanced simultaneously in energy security, equity and sustainability, highlighting the difficulty of a balanced transition.

At the same time, global transition readiness growth fell below its 10-year average, as progress in regulatory frameworks, the innovation ecosystem and investment capacity slowed. Restoring the readiness momentum will be crucial for ensuring secure, equitable and sustainable energy systems amid growing global uncertainty.

Against this backdrop, LAC occupies a strategic but challenging position. The region faces a dual challenge: high climate vulnerability and vast yet clean energy potential, highlighting urgent adaptation needs. In 2024, the mean temperature in the region was 0.9°C above the 1991-2020 average. The region faced more floods, droughts

and wildfires.⁸ Unlike global trends, energy use rose 3.8%, outpacing the 3% GDP growth⁹ and signalling the urgent need to scale efficiency and low-carbon solutions.

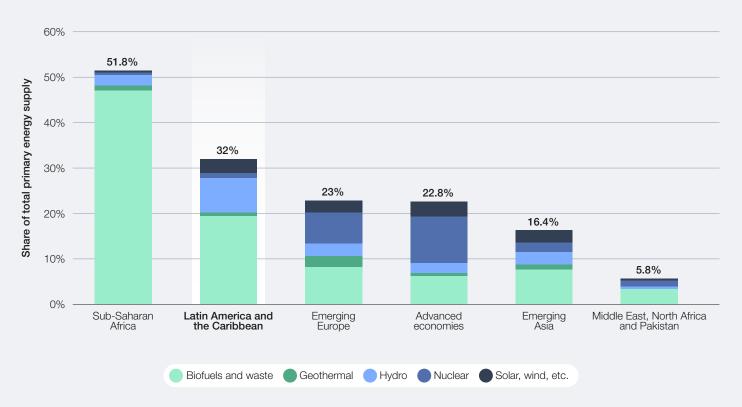
At the same time, rising global demand and decarbonization pressures are driving interest in natural gas. Countries like Mexico and Argentina are proposing new liquefied natural gas (LNG) export facilities and regional import capacity could rise by 50%. ¹⁰ Gas can play a transitional role as it is costeffective and reliable, but without clear long-term emission reduction strategies, new infrastructure risks becoming a liability in meeting climate goals – locking countries into carbon-intensive assets, crowding out investment in cleaner alternatives and creating the risk of stranded assets in the future.

In parallel, nuclear power is gaining momentum globally, with capacity projected to more than double by 2050 in high-growth scenarios. ¹¹ In Latin America, it contributes 2% of power and 10 countries in the region are exploring nuclear energy expansion, including major economies such as Argentina, Brazil and Mexico. ¹²

Renewable energy capacity in the region reached 366.5 GW in 2024 (7.1% growth year-on-year), led by Brazil with 213.9 GW – 58% of the regional total – followed by Mexico with 34 GW.¹³ This reflects the region's strong foundation for clean energy leadership, built on abundant solar, wind and hydropower potential.

FIGURE 2

Regional comparison of renewable energy mix, 2025



Notes: Share of renewable energy sources as part of total primary energy supply (TPES). Regional classification and country inclusion based on the 2025 Energy Transition Index.

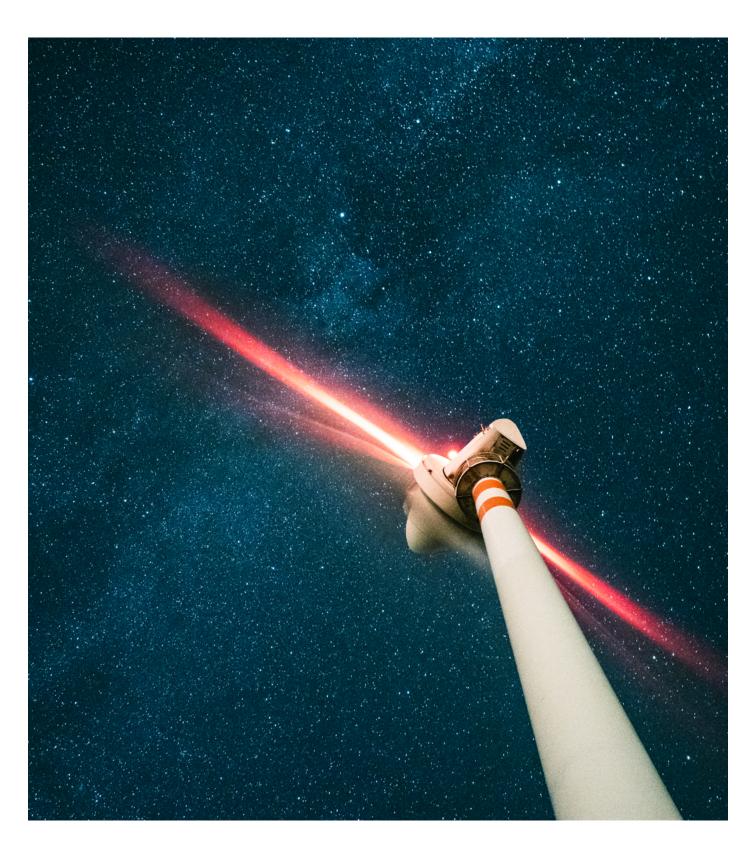
Source: World Economic Forum.

LAC represents 7% of the global population, 5% of global total energy supply, a significant share of future energy demand growth and rising clean energy investments (projected to reach \$70 billion in 2025, a 25% increase since 2015). Yet, the LAC region attracted only 5% of global private clean energy investment in 2024¹⁴ and 4% of total global energy transition capital, ¹⁵ constrained by high interest rates and limited capital access.

To meet energy and climate targets, total annual clean energy investment must rise to \$150 billion by 2030 and continue to increase steadily through 2050. Within this, grid infrastructure alone will require around \$30 billion per year until 2035, with nearly two-thirds of this amount expected to come from private capital, according to the World Economic Forum and Inter-American Development Bank's latest report, "Advancing Latin America's Power System Transformation". 16 Renewables growth remains uneven, and many countries still import refined fuels despite fossil fuel reserves – exposing them to price volatility and limiting value creation.

3 Energy transition in LAC

LAC's energy leadership depends on converting structural advantages into system-wide, future-ready progress.



3.1 | LAC in the global context

Vast energy advantages, untapped potential: LAC's clean energy leadership risks stalling without readiness, reform and regional action.

Key points

- Limited progress: LAC benefits from one of the world's most favourable energy baselines yet its energy transition progress remains tempered, with average ETI scores rising just 1.2% over the past decade, compared to 6.2% globally.
- Widening regional gaps: Transition conditions are highly uneven across the region. Country ETI scores for LAC range from some countries being in the top 20, to some in the bottom 20, with 2025 growth rates varying from -1.8% to +5.9%. Only 26% of countries advanced across all three energy dimensions, underscoring structural and institutional disparities.
- Readiness scores among the lowest globally. Despite ranking third in global system performance, the region remains the second lowest scoring region in transition readiness, showing virtually no improvement year-on-year (0.04%) and a 0.8% decline over the past decade.

Many LAC countries have significant opportunities for global energy leadership

The LAC has a resource base that's among the world's most favourable to support a secure, equitable and sustainable energy system.

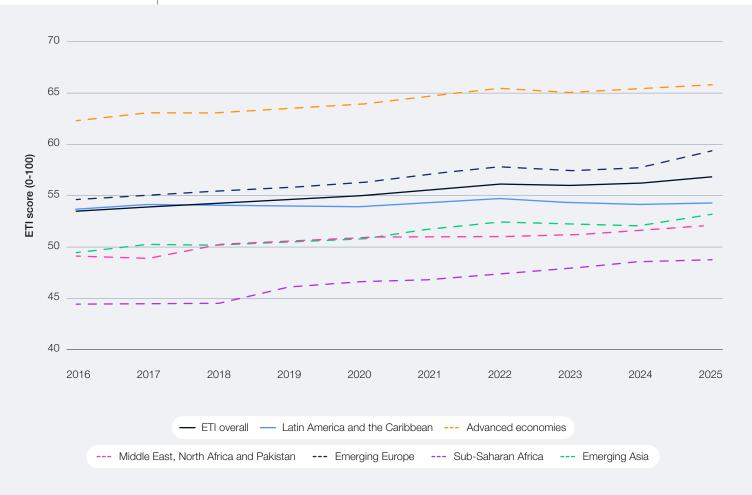
- LAC has abundant fossil fuel reserves (Venezuela has the largest proven reserves worldwide,17 while Brazil is the largest oil producer in South America). 18 These reserves support regional energy security and export capacity, while overall consumption remains relatively low - fossil fuels account for only twothirds of total energy use, far below the global average of 80%.19
- Its solar and wind resources are among the strongest in the world (for instance, the Atacama desert²⁰ and La Guajira),²¹ and renewables account for 70% of electricity generation, with hydropower alone supplying 52.5%.²²
- Oil continues to dominate transport, yet biofuels now cover about 10% of this demand²³ – nearly

twice the global norm - with Brazil standing out for particularly strong adoption.

- Historically, the region has contributed only 5% of global energy-related greenhouse gas (GHG) emissions since 1971, despite representing 9% of global GDP.24
- The region accounts for 25% of global critical mineral production²⁵ and is a key global supplier of minerals essential to clean energy technologies, producing 40% of global copper and 35% of lithium.²⁶
- Finally, its abundant renewable energy resources position the region as a key player in the global clean energy economy (e.g. with regard to green hydrogen and other clean fuels).27

However, marginal energy transition progress underscores regional challenges in leveraging this favourable energy potential. According to the ETI, 10 of 19 countries improved their scores in 2025 and 13 have advanced since 2016. Yet average scores rose just 1.2% since 2016, compared to 6.2% globally, shifting the region from slightly ahead of the global average to trailing it (Figure 3).

FIGURE 3 | ETI average regional scores



Source: World Economic Forum.

The state and progress of the energy transition is also uneven across the region. Overall scores vary widely - from 44 to 67 - with some countries placing in the top 20 and others in the bottom 20. The 2025 ETI growth rates varying from -1.8% to 5.9%, underscoring stark differences in

transition momentum and institutional readiness. Moreover, only 26% of the region's economies have simultaneously advanced in energy security, equity and sustainability, pointing to difficulties in balancing the elements of a successful transition.

Opportunities and challenges across the region

Strong renewables and low import dependence anchor the LAC energy system – but stagnation, inefficiencies and risks persist.

Key points

- Strong baseline potential, but underleveraged. Latin America enters the energy transition with one of the world's cleanest energy profiles - a high share of renewables, low import dependence and moderate emissions intensity - yet these advantages are not fully translating into faster progress.
- System performance holding, not advancing. The region continues to perform well in system performance dimensions such as sustainability (scores improved by 3% over the last decade and are 10.3% above the global average). However, deep structural issues – including affordability concerns, low clean tech exports, T&D losses and CO₂ inefficiencies – constrain further progress.
- Readiness bottlenecks undermine potential. Despite relatively strong system performance, generally low transition readiness – with scores declining by 0.8% over the past decade – reflects underdeveloped infrastructure, limited reform momentum and persistent gaps in finance innovation and human capital, all of which hinder the region's ability to translate structural advantages into longterm progress.

LAC stands at a crossroads - rich in clean energy potential yet held back by persistent structural barriers. The region ranks third globally in energy system performance, with aboveaverage sustainability and near-average security and equity. Yet, transition readiness - which includes improvement in the enablers of systems performance such as regulation, infrastructure, human capital, innovation and finance - remains among the weakest worldwide.

Over the past decade, the region's system performance has improved by only 2%, while transition readiness has declined by 0.8%, as per ETI. With the gap slightly expanding in 2025, there is a clear need for structural reforms to improve enabling conditions and unlock the region's potential to deliver secure, sustainable and equitable energy systems. The challenges underlying this imbalance – and the opportunities to overcome them – are explored in the following sections and summarized in the analysis of the region's opportunities and challenges (see Table 1).

System performance trends

FIGURE 4

LAC system performance, 2016-2025

Regional and global system performance dimension score (0-100), 2025



Security: Diversified generation and relatively low import dependence, yet grids face high losses and hydro is increasingly climate-exposed.



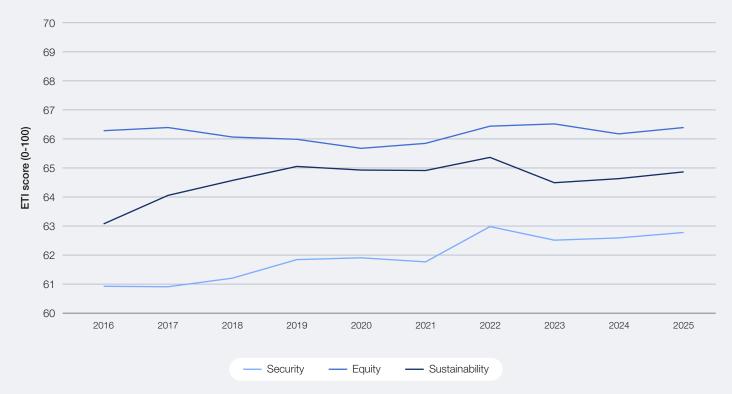
pressures remain, with uneven service quality.



reliance persists alongside modest efficiency gains.



LAC system performance score, 2016-2025





Countries in LAC have some of the world's most sustainable energy systems. Nearly 80% of countries ranked on the ETI in the region score above the global average for energy sustainability. This reflects a solid foundation built on low-carbon power generation, moderate energy use and lower emissions intensity compared to more industrialized economies. Gains in efficiency and clean electricity particularly from hydropower and renewables - have supported this advantage. Accordingly, the average share of clean energy in consumption has increased by 21.4% since 2016, reaching 14.8% in 2023.

Emissions intensity has recently started to deteriorate and while energy intensity scores have improved by 2.7% over the past decade (the region managed to improve energy efficiency from 97.5 kgoe (kilograms of oil equivalent) per thousand dollars of GDP in 1990 to 86.8 kgoe in 2022) improvements were far behind the 10.4% progress seen in advanced economies.²⁸ Moreover, while clean electricity is expanding, its reach across enduse sectors remains uneven. Fossil fuels continue to dominate energy use in transport and heavy industry, as is also the case globally, and methane mitigation remains an underutilized opportunity (though some countries like Colombia have implemented reduction strategies).29



Equity

The region has also made some gains in energy equity over the past decade, with dimension scores climbing by 2.8% since 2016. On average, scores for the share of rural population with electricity access and overall population with access to clean cooking fuels have climbed by 9.4% and 4.6%, respectively, in the 10 years to 2025. This reflects progress in closing access gaps in less developed countries in Central America and the Andes. Yet, 78 million people still don't have access to clean cooking.30 Meanwhile, electricity and gas price scores remain near or above global averages in many countries - meaning end-user prices are relatively affordable, largely due to domestic production and long-standing subsidy schemes.31

While this cushions households and firms, it strains public finances, distorts price signals and heightens exposure to price shocks, a vulnerability underscored by recent volatility. However, there is promising momentum in fossil fuel subsidy reform – a key lever for long-term affordability, efficiency and clean energy adoption. Since 2016, the region has cut fossil fuel subsidies by nearly 42% as a share of GDP,³² to less than half the global average (standing at 0.6% to 1.3% of the region's GDP between 2015 and 2021)33 - signalling growing alignment between social equity and fiscal sustainability.



Security

Energy security, historically the region's highestscoring dimension, has plateaued, rising just 0.2% over the past decade and now falling below the global average. Many of the region's countries benefit from diversified generation and relatively low energy import dependence, but structural weaknesses threaten reliability and resilience. T&D losses average 13.5%, exceeding the global average of 10.2%, due to ageing infrastructure, geographic challenges and in some cases, nontechnical losses.

In Brazil, technical losses make up 8.3% of the 10.7% total reported by the Companhia Energética de Minas Gerais (CEMIG) - and are naturally higher given the sheer length of transmission lines across the country's vast territory.34 These grid inefficiencies are compounded by limited system flexibility. In 2024 alone, the region lost an estimated 53,000 gigawatthour (GWh) of renewable power generation due to curtailment, which is equivalent to the annual electricity consumption of over 10 million households.³⁵

Grid congestion, high T&D losses, weak demandside integration and declining flexibility (down 9.5% over the past decade) undermine the integration of variable renewables. With only 1% of solar, 10% of wind and 30% of hydropower potential harnessed, the lack of new transmission lines remains a key barrier to scaling renewables. In this context, the addition of storage offers a double benefit: reducing energy costs by enabling new renewables capacity and optimizing power grid transport capacity.36

Transition readiness trends

Regulatory progress

LAC has made notable progress in laying the policy groundwork for the energy transition. Over the past decade, the region has seen a 13.5% improvement in regulation and political commitment scores. Almost half of the region's countries have adopted net-zero pledges, and countries such as Costa Rica (see case study 4) and Brazil that are policy leaders have put long-term energy and climate strategies in place.

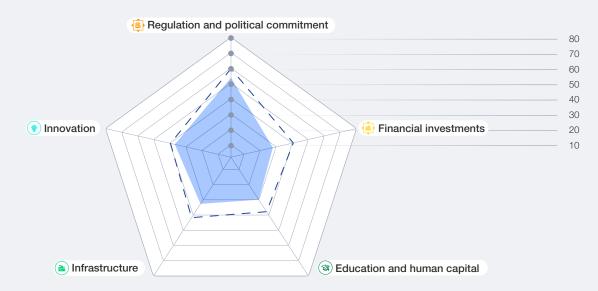
However, on average, policy progress has stalled in recent years, especially in areas such as regulation of renewables, energy efficiency and carbon pricing. Persistent gaps in institutional capacity, coordination and delivery risk undermining the credibility of policy commitments related to the energy transition.

Transition readiness trends

FIGURE 5

LAC transition readiness, 2016-2025

Regional and global transition readiness dimension score (0-100), 2025





Regulation and political commitment: Strong policy frameworks and long-term commitments, but enforcement and implementation remain inconsistent.



Innovation: Emerging activity in clean technologies, yet low R&D funding and weak commercialization hinder scaling of solutions.



Infrastructure: Well-developed in parts, yet aging grids, high losses and low digitalization limit efficiency and system integration.



--- ETI overall

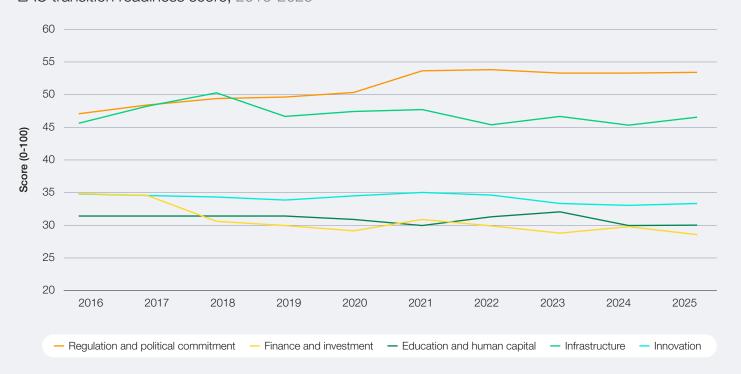
Financial investment: Some progress in attracting private capital, but volumes remain far below requirements, limited by high financing costs, credit risks and bankability challenges.



Education and human capital: Growing clean energy workforce, but persistent skills gaps and underdeveloped STEM and vocational training slow sector readiness.



LAC transition readiness score, 2016-2025





Investment and infrastructure barriers

ETI results indicate that unfavourable investment and financing conditions are among the region's greatest transition challenges.

Turning policy into impact requires successfully scaling investment, particularly in the infrastructure and innovation systems that underpin a resilient, inclusive and sustainable energy transition. However, the region scores 31.1% below the global average for the finance and investment dimension, its largest gap in the ETI.

Despite nearly \$16.4 billion in private capital mobilized since 2018, investment remains far below what is needed.³⁷ In 2024, LAC accounted for only 5% of global private clean energy investment,38 and just 4% of total global energy transition capital.³⁹ Around 55% of the 2024 energy investments are in fossil fuel supplies, with 35% in the power sector and 10% in end-uses.40

Structural barriers, including high financing costs - the region's weighted average cost of capital (WACC) for renewables is around 6.9%, well above Europe's 4.4%⁴¹ – weak credit ratings, limited de-risking tools and project bankability challenges continue to restrict both public and private capital flows. High interest rates and short debt maturities further elevate investor risk perceptions, constraining large-scale financing – particularly for grid infrastructure. Limited financial investments reflect not only transition-specific hurdles but also the broader macroeconomic and business environment – from high global interest rates, fiscal constraints and sovereign risk profiles to foreign investment restrictions and burdensome business regulations. There is therefore an opportunity to improve investment conditions and implement innovative ways to de-risk investments in order to unlock more domestic and foreign capital in the energy sector.

This investment gap is most visible in infrastructure. While the region has made gains in electricity access and renewables capacity, the ETI shows that overall progress has been limited (2% increase over the past decade). Outdated transmission networks, fragmented transport systems and low levels of digitalization are constraining integration, reliability and system-wide flexibility. Projects are often delayed by regulatory hurdles and financing bottlenecks, particularly in countries with limited fiscal space or weak enabling conditions. Without a step-change in de-risking mechanisms, regulatory consistency and access to affordable long-term capital, the region's ability to scale investment in clean energy and infrastructure

will remain constrained. Yet, countries like Brazil, Chile, Uruguay and the Dominican Republic are demonstrating what's possible.

Brazil's 2024 transmission auctions successfully mobilized nearly \$4 billion and resulted in around 6,500 km⁴² and 850 km⁴³ of new transmission lines - offering a replicable model for other countries in the region. Chile addressed some of these issues as it electrified urban transport (case study 1), and Uruguay and the Dominican Republic did so in order to expand renewable electricity generation (case study 2 and 7). Alongside grid-focused investments, the region is seeing rapid growth in green and sustainable finance. Since 2014, more than \$250 billion in green, social and sustainability bonds have been issued in LAC, including \$20 billion in 2024 alone.44



Innovation and human capital

At the same time, the region's ability to innovate and adapt is being held back by gaps in human capital and technology readiness. LAC ranks among the lowest globally for both education and human capital and innovation readiness, with more than 4% declines in both dimensions over the past decade. While renewable energy deployment is creating new jobs - over 508,000 in 2023,45 especially in biofuels – science, technology, engineering and mathematics (STEM) education, vocational training and workforce reskilling remain underdeveloped.

Only 17% of higher education graduates in the median country hold a science, technology, engineering and mathematics (STEM) degree and gender gaps further constrain the talent pool.⁴⁶ The reskilling of those employed in fossil fuel sectors like coal and community engagement will be especially important for ensuring an equitable transition (case study 6). Meanwhile, clean tech R&D remains underfunded and most innovations fail to scale, reflecting limited commercialization support and a lack of industrial partnerships. Countries like Brazil have also looked to reducing bureaucratic and regulatory barriers in order to drive clean technology rollout (case study 3 and 9).

In short, the region has strong transition intent, which must now be matched by targeted investment in infrastructure and strategic action on innovation and skills. Without addressing these interconnected readiness gaps, LAC risks falling short of its energy and climate ambitions - not because of a lack of vision, but because of a lack of delivery capacity.

TABLE 1 | Regional opportunities and challenges summary

Opportunities		Challenges	
(F)	Renewable energy potential	Exposure to climate volatility	
	Expanding renewables capacity	Exposure to fossil fuel price volatility	
PP C	High renewables share in power mix	Fragmented and inconsistent regulation ⁴⁷	
	Diversified clean energy sources	Weak regional cooperation	
	Strong biofuel use in transport	Ageing infrastructure and poor resilience	
	Large critical minerals reserves	Low R&D and slow commercialization	
	Relatively low import needs*	Limited capital flows	
	Strong export capacity*	Credit and investor confidence constraints	
	Low(er) energy and emissions intensity	High cost of capital	
	Public backing for clean energy ⁴⁸	Slow rate of energy efficiency improvements	
	Growing political and regulatory commitment		
	Job growth in clean energy sectors		

Notes: *For select economies. Source: World Economic Forum.

3.3 | Goals and pathways for the energy transition

To accelerate a secure and inclusive energy transition, LAC must focus on four interconnected goals. These energy transition goals reflect both the region's strengths - such as high renewables potential and growing climate ambition - and its structural challenges, including outdated infrastructure in many instances, limited innovation capacity and investment constraints. They are supported by a set of energy transition pathways - practical focus areas such as energy access,

climate resilience, renewables scale-up, grid integration and industrial transformation - that offer actionable levers for system-level change.

Together, these goals and pathways define the region's strategic priorities and map clearly to the key transition readiness levers: regulation and political commitment, infrastructure, education and human capital, innovation and financial investments (Table 2).

TABLE 2

Regional strategic energy transition priorities and transition readiness levers



Goal 1 Build secure, resilient, accessible and integrated energy systems

Why it matters: Addresses outdated infrastructure, high T&D losses and rising exposure to hydrological and supply risks.

Relevant energy transition pathways:

- Energy access and reliability
- Regional grid integration and planning
- Grid infrastructure transition and optimization
- Risk management, system resilience and climate adaptation



Regulation and political commitment

Harmonize regional grid codes and reliability standards to enable cross-border trade and integration



Financial investments

Mobilize blended finance and other innovative financing tools to accelerate arid modernization and climate adaptation investments



Education and human capital

Build specialized workforce skills in grid operations, maintenance and resilience planning



Infrastructure

Modernize and expand T&D networks, incorporating digital monitoring, flexible capacity and storage solutions



Innovation

Deploy smart grid technologies and advanced forecasting to manage variable renewables



Goal 2 Diversify energy mix and scale clean energy development

Why it matters: Builds on renewables leadership but addresses uneven deployment and hydro dependency.

Relevant energy transition pathways:

- Decarbonization and emissions reduction
- Renewable energy scale-up
- Clean molecule development (hydrogen, biofuels)



Regulation and political commitment

Streamline permitting and licensing to accelerate clean energy projects, learning from regional best practices



Financial investments

De-risk private investment in renewable energy and clean molecule projects through derisking strategies including guarantees, stable power purchase agreements (PPAs) and other instruments



Education and human capital

Build specialized workforce skills and training programmes for solar, wind and clean molecule technologies, with regional knowledgesharing hubs to support deployment and operation, and transfer workers from legacy energy sectors into clean technologies



Infrastructure

Invest in hybrid renewable projects and diversified generation assets



Innovation

Support R&D in storage, grid integration and alternative fuels



Goal 3 Build future-proof industrial ecosystems and supply chains

Why it matters: Addresses limited local value capture from critical minerals, low levels of clean tech manufacturing and weak innovation-commercialization linkages.

Relevant energy transition pathways:

- Innovation ecosystems and commercialization
- Critical minerals, clean tech manufacturing and trade integration



Regulation and political commitment

Introduce targeted and technology-neutral industrial policies to boost local manufacturing and value-add in critical minerals



Financial investments

Offer targeted incentives for important areas to scale and export financing for clean tech products



Education and human capital

Expand science, technology, engineering and mathematics (STEM) and vocational training for clean tech manufacturing



Infrastructure

Develop clean energy hubs linked to industrial clusters of co-located companies to leverage synergies in high-density areas of economic activity and jobs (companies in industrial clusters can share infrastructure, risks and resources to invest in a variety of clean energy solutions)



Innovation

Foster industry-research partnerships and partnerships between the public and private sectors to commercialize new technologies and drive early adoption



Goal 4 Improve energy efficiency and productivity across sectors

Why it matters: Leverages low energy intensity but addresses stagnating efficiency gains and underfunded demand-side management.

Relevant energy transition pathways:

Energy efficiency and industrial transformation



Regulation and political commitment

Enforce minimum efficiency standards across appliances, buildings, industry and transport, as well as other regulatory incentives and practical support for individuals and businesses



Financial investments

Expand concessional finance and energy service company (ESCO) models for efficiency projects (ESCOs de-risk projects by providing upfront financing). Actively explore multilateral development bank (MDB) funding opportunities to complement government funding



Education and human capital

Launch workforce training programmes for energy auditing and retrofitting as well as for building efficiency gains into business processes for continuous efficiency improvements



Infrastructure

Retrofit public infrastructure and industrial facilities for efficiency gains



Innovation

Scale deployment of digital energy management solutions and Al-based solutions that enhance efficiency

Source: World Economic Forum.

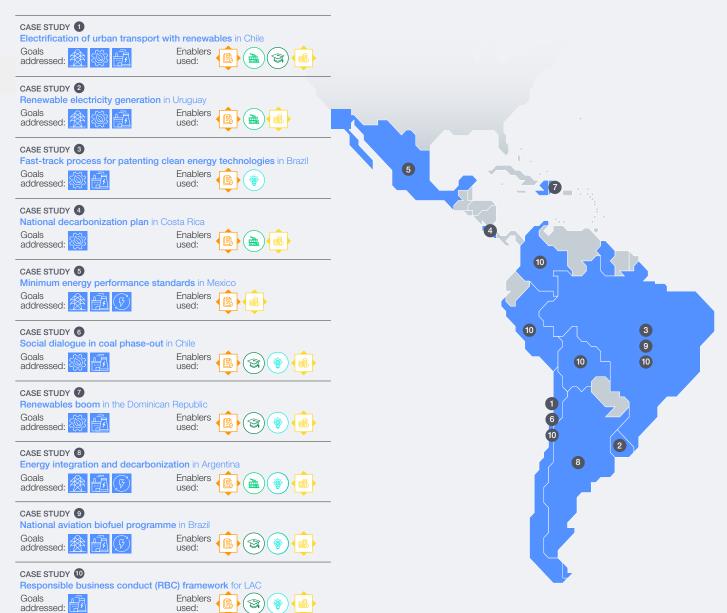


Lessons and solutions from and for the region

The case studies presented in this section show how targeted action can overcome barriers, unlock opportunities and accelerate the region's energy transition to inspire replication and further innovation.

The four strategic goals and corresponding transition pathways outlined in Section 3.3 set a clear direction for accelerating LAC's energy transition. However, translating them into tangible

outcomes requires concrete action on the ground. The following case studies illustrate how countries, companies and communities across the region are operationalizing these goals.



Electrification of urban transport with renewables in Chile (2017-ongoing)49

Energy transition goals:



Energy access and reliability.



Renewable energy scale-up.



Industrial competitiveness.

Problem description:

Chile's transport sector is the largest source of national emissions, with Santiago facing air quality, affordability and service quality challenges. Despite strong renewable power generation, the transport system risked undermining Chile's 2050 carbon neutrality goal.

Solution description:

The government set bold targets (100% electric buses by 2040, zero-emission vehicle sales by 2035) and embedded electrification into a wider mobility agenda. ⁵⁰ Large-scale procurement delivered 2,500 e-buses (the largest fleet outside China), supported by financing models, fare integration and service upgrades. Complementary measures – metro expansion, bus rapid transport (BRT) upgrades and anti-fare-evasion efforts – reinforced both decarbonization and accessibility.

Enablers used:



Regulation and political commitment: Integrated climate and air quality policy; vehicle emissions standards.



Infrastructure: Deployment of charging infrastructure, battery management and renewables integration.



Education and human capital: Skills development for bus operators, maintenance teams and urban planners.



Financial investment: Government-backed financing and guarantees for electric bus procurement.

Stakeholders involved:

- National ministry of environment and transport.
- Energy providers and bus manufacturers.
- Commuters and urban communities.

Outcomes achieved:

 Expanded access to clean, affordable mobility by achieving 30% fleet electrification by 2023 and improved public health (70% fewer bad-air days).

- Align policies for long-term certainty: Bundle climate, air quality and transport objectives into a coherent strategy
 to create predictable signals for investors and operators.
- Use public-private partnerships to de-risk adoption: Leasing models with utilities and energy companies can cover upfront costs, while operators focus on service – making large-scale rollouts financially viable.
- Pair electrification with service upgrades: Enhancing comfort, reliability and passenger experience builds public support and accelerates adoption.

Renewable electricity generation in Uruguay (2005-2025)51

Energy transition goals:



Energy access and reliability.



Renewable energy scale-up.



Industrial competitiveness.

Problem description:

Uruguay's heavy dependence on imported fossil fuels exposed the country to volatile global prices, supply disruptions and high carbon intensity. This over-reliance threatened energy security, affordability and economic competitiveness, while limiting resilience and slowing progress towards sustainable development goals.

Solution description:

Uruguay transformed its power system through a 2005 policy prioritizing diversification and resilience. By integrating wind, solar, biomass and hydropower with modernized grids, it shifted from fossil fuels to nearly 100% renewables. The state utility, UTE, anchored the transition via power purchase agreements (PPAs) that drew private capital while keeping public ownership, creating jobs, lowering costs and ensuring sustainable electricity.

Enablers used:



Regulation and political commitment: Long-term national energy policy (25-year vision); clear regulatory frameworks.



Infrastructure: Large-scale renewables deployment and grid integration upgrades.



Financial investment: Public-private partnerships (UTE-led PPAs mobilizing investment).

Stakeholders involved:

- National ministries of energy, economy and environment.
- State utility (UTE).
- Renewable energy developers.
- Citizens and electricity consumers.

Outcomes achieved:

- Renewable energy scale-up through near-total decarbonization of electricity (98% renewables in under two decades).
- Enhanced resilience and reduced dependence on fossil fuel imports.
- Industrial competitiveness through reduced poverty and job creation (50,000 jobs).

- Long-term policy certainty: A stable, forward-looking national framework can de-risk investments and anchor private-public collaboration.
- Public-private partnerships can de-risk adoption: A strong state utility can balance public ownership with private capital to accelerate renewables deployment.
- Integrated infrastructure planning: Coordinating generation with grid upgrades ensures reliability, scalability and resilience in rapid transitions.

Fast-track process for patenting clean energy technologies in Brazil (2012-ongoing)52

Energy transition goals:



Renewable energy scale-up.



Industrial competitiveness.

Problem description:

In the 2000s, Brazil faced a surge in patent filings that created severe backlogs. Clean technology approvals were delayed for years, stalling investment, slowing R&D cycles and discouraging commercialization of green innovations – undermining energy transition goals and industrial competitiveness.

Solution description:

In 2012, Brazil's National Institute of Intellectual Property (INPI) launched a "green patent" fast-track programme, cutting approval times from 43 to nine months. Lower costs, regulatory flexibility and a dedicated label encouraged clean tech uptake, with a large share of patents geared towards biofuels. Public, private and international actors collaborated to accelerate innovation and commercialization.

Enablers used:



Regulation and political commitment: Strong institutional support from INPI; long-term planning certainty, regulatory flexibility and reduced cost to incentivize investment and innovation.



Innovation: Branding benefitting from the "green patent" label to enhance market visibility and adoption of sustainable technologies.

Stakeholders involved:

- National Institute of Intellectual Property (INPI).
- Brazilian and international clean tech innovators.
- Investors and venture capital firms.
- United Nations Development Programme (UNDP) and international IP networks.

Outcomes achieved:

- Renewable energy scale-up by incentivizing technologies that diversify beyond hydro (e.g. biofuels), with more than 870 green patent applications filed by 2020, thousands more until 2024.
- Investment certainty and faster commercialization of clean technologies by reduction of average processing time from 43 months to nine.

- Streamlined IP frameworks accelerate innovation: Fast-track patenting reduces barriers and provides certainty for investors and developers.
- Branding mechanisms matter: The green patent label boosted visibility and market adoption of sustainable technologies.
- Institutional commitment drives momentum: Strong support from IP authorities and international cooperation is crucial for scaling clean tech ecosystems.

National decarbonization plan in Costa Rica (2019-ongoing)53

Energy transition goal:



Renewable energy scale-up.

Problem description:

Costa Rica needed a clear, long-term strategy to align with Paris Agreement commitments and achieve net-zero emissions. Without an integrated national plan, fragmented efforts risked undermining renewable energy momentum, economic competitiveness and the credibility of the country's climate leadership.

Solution description:

In 2019, Costa Rica launched its National Decarbonization Plan (NDP), mapping a phased path to net zero by 2050. Backed by strong political commitment, the plan leveraged state utilities for large-scale implementation. Grid upgrades, smart meters and renewables integration ensured reliable delivery, while international finance mobilized investment, reinforcing Costa Rica's leadership in efforts to reach 100% renewables-based electricity.

Enablers used:



Regulation and political commitment: Strong political and institutional commitment to long-term energy goals.



Infrastructure: Phased implementation approach to manage complexity and ensure delivery at scale; state utility as key implementation partner, enabling coordination and operational execution.



Financial Investment: International finance mobilized to support grid upgrades, smart technologies and renewables deployment.

Stakeholders involved:

- National ministry of energy and environment.
- State electricity and telecom provider.
- International finance institutions.

Outcomes achieved:

 Renewable scale-up through 100% renewable electricity mix, deployment of 475,000 smart meters and 61% of first phase National Decarbonization Plan (NDP) goals reached by 2022.

- Strong political commitment: Strong institutional and governmental commitment drives investment confidence and international leadership.
- Phased planning ensuring scalability: Structured implementation phases help manage complexity and sustain progress.
- Utility-led coordination: State utilities can anchor system-wide delivery and execution.

Minimum energy performance standards in Mexico (1994-ongoing)⁵⁴

Energy transition goals:



Energy access and reliability.



Industrial competitiveness.



Energy productivity/efficiency.

Problem description:

Mexico confronted rising energy demand, affordability challenges and fiscal pressure from subsidies. With no regulatory framework for appliance or equipment efficiency, energy waste threatened household budgets, strained public finances and risked undermining competitiveness in an increasingly integrated North American market.

Solution description:

In 1994, Mexico introduced Minimum Energy Performance Standards (MEPS), led by the National Commission on Energy Savings (now CONUEE). Targeting appliances and industrial equipment, MEPS improved efficiency while aligning with trade rules. Regulatory enforcement and collaboration with manufacturers spurred market transformation. Consumers saved on energy bills, while producers enhanced competitiveness and exports. MEPS became central to Mexico's sustainable energy strategy.

Enablers used:



Regulation and political commitment: Institutional leadership from the National Commission on Energy Savings; trade integration with North America.



Financial Investment: Integration with North American trade rules; improved FDI and business conditions incentivizing US/Canadian manufacturing participation.

Stakeholders involved:

- National Commission for the Efficient Use of Energy (CONUEE).
- Ministry of energy.
- Manufacturers and appliance retailers.

Outcomes achieved:

- Energy access and reliability through reduced household electricity demand and refrigerator use (-26%), easing fiscal burdens from subsidies.
- Domestic manufacturing competitiveness through 9x increase in refrigerator exports to the US between 2000 and 2014.

- Efficiency standards reduce fiscal pressure: Targeted appliance standards lower consumer bills and ease subsidy burdens
- Trade alignment expands impact: Integrating standards with trade partners strengthens supply chains and boosts exports.
- Institutional leadership ensures durability: A central coordinating agency sustains momentum and credibility for long-term efficiency goals.

Social dialogue in coal phase-out in Chile (2019-ongoing)55

Energy transition goals:



Renewable energy scale-up.



Industrial competitiveness.

Problem description:

Coal plants account for 80% of Chile's GHG emissions. In 2019, the government and major utilities agreed to phase out all coal by 2040. The 2020 plan targets 70% renewables by 2030 and carbon neutrality by 2050, with 11 coal plants (31% capacity) closing by 2024.

Solution description:

Chile's coal phase-out combined regulatory targets, multistakeholder dialogue and just transition policies. Government, energy firms, unions and communities set closure timelines and local plans. Training, reskilling and diversification programmes opened new opportunities. Public-private financing supported green job frameworks in tourism, services and hydrogen. This inclusive approach aligned climate action with economic and social resilience.

Enablers used:



Regulation and political commitment: Phase-out and reconversion plan, carbon-neutrality targets, multistakeholder roundtables.



Education and human capital: Technical and Vocational Education and Training (TVET) centres; Servicio Nacional de Capacitación Y Empleo (SENCE, Chile's national training and employment service) training scholarships; Chile Valora green job qualification frameworks.



Innovation: New qualification standards for emerging sectors (e.g. green hydrogen).



Financial investments: Public and private funding for retraining, Programa de Recuperación Ambiental y Social (PRAS, Chile's environmental and social recovery programme) projects and local economic diversification.

Stakeholders involved:

- National ministry of energy.
- Ministry of the environment.
- Ministry of labour and social security.
- Energy companies.
- Workers' representatives and unions.
- Civil society organizations.
- Local governments and community councils.
- International partners.

Outcomes achieved:

- Renewable energy scale-up through scheduled closure of 11 coal plants (31% of capacity) by 2024.
- Diversification of the economy through creation of new jobs in tourism, services and green sectors.
- Safeguarded labour productivity through equal treatment and health screening secured for subcontracted workers.
- Workforce adaptability and competitiveness by aligning skills with green job opportunities through targeted training.

- Dialogue builds legitimacy: Structured engagement with workers, companies and communities ensures equitable transition outcomes.
- Reskilling is essential: Training and qualification frameworks prepare the workforce for emerging green industries.
- Regional diversification sustains momentum: Local investments in alternative sectors create resilience beyond the coal economy.

Renewables boom in the Dominican Republic (2020-ongoing)56

Energy transition goals:



Renewable energy scale-up.



Industrial competitiveness.

Problem description:

Until 2020, the Dominican Republic's electricity mix relied heavily on imported fossil fuels, creating high costs, price volatility and exposure to global supply shocks. Limited renewables penetration constrained industrial competitiveness and climate ambitions.

Solution description:

Between 2020 and 2023, the country more than doubled renewables capacity from 555 megawatts (MW) to 1,126 MW, with solar photovoltaic (PV) leading the expansion. This was enabled by regulatory reform (Decree 65-23), which streamlined permitting, enhanced transparency and created incentives for foreign and private capital. Over \$1 billion in renewable energy investments were mobilized, positioning the energy sector as a top driver of economic growth, alongside tourism.

Enablers used:



Regulation and political commitment: Updated Renewable Energy Promotion Act (Decree 65-23), long-term climate targets.



Education and human capital: Emerging training and qualification initiatives in operation and maintenance of renewables.



Innovation: Strong uptake of utility-scale solar PV, growing pipeline in wind and storage.



Financial investments: Over \$1 billion in solar and wind capacity, foreign direct investment, concessional finance.

Stakeholders involved:

- Dominican presidency and ministry of energy and mines.
- Private developers and foreign investors.
- International financial institutions (e.g. Inter-American Development Bank (IDB), International Finance Corporation (IFC)).
- Civil society and local communities.
- Utility companies and grid operators.

Outcomes achieved:

- Renewable energy scale-up through doubled generation capacity in three years (103% growth).
- Boost in GDP and job creation with over \$1 billion in investments through renewables.
- Forty-third ranking for Dominican Republic in BNEF Climatescope 2023 (20th among emerging markets; sixth in LAC).

- Regulatory clarity drives investment: Simplified frameworks and clear signals attract capital at scale.
- Solar can deliver fast wins: Utility-scale solar PV can provide rapid deployment and affordability gains.
- Clean energy can rival tourism: Framing renewables as an economic growth engine strengthens political buy-in.

Energy integration and decarbonization in Argentina (2020-ongoing)⁵⁷

Energy transition goals:



Energy access and reliability.



Industrial competitiveness.



Energy productivity/efficiency.

Problem description:

Argentina's energy mix long depended on imports, costly liquid fuels and weak integration. Despite vast Vaca Muerta shale gas reserves, infrastructure and market gaps hindered displacement of high-carbon fuels, export growth and stronger energy security.

Solution description:

The government and Yacimientos Petroliferos Fiscales (YPF) launched an integrated strategy to expand gas production from Vaca Muerta and build transport, liquefaction and commercialization infrastructure. Argentina's Plan for the Production and Supply of Argentine Natural Gas (2020) incentivized producers, while the Néstor Kirchner Gas Pipeline (2023) boosted evacuation capacity. LNG export terminals and cross-border pipelines are planned, positioning natural gas as Argentina's transitional lever for cost-competitiveness and decarbonization.

Enablers used:



Regulation and political commitment: Argentina's Plan for the Production and Supply of Argentine Natural Gas with multi-year supply contracts, policy support for LNG exports, regional cooperation initiatives.



Infrastructure: Néstor Kirchner Gas Pipeline Phase I (2023), planned LNG export terminal, expansion of regional interconnectors.



Innovation: Advanced drilling techniques reducing production costs, digital monitoring for methane emissions control.



Financial Investments: ~\$5 billion in upstream and midstream gas infrastructure (2020-2024).

Stakeholders involved:

- National ministry of energy.
- YPF and other upstream producers (Tecpetrol, Pampa Energía, international majors).
- Transportadora de Gas del Sur (TGS), Transportadora de Gas del Norte (TGN).
- Provincial governments of Neuquén and Río Negro.
- Regional partners (Chile, Brazil, Uruguay).
- Local communities and labour unions.

Outcomes achieved:

- Reduced reliance on LNG imports through stabilization of domestic gas supply.
- Cost savings by displacing liquid fuels in thermal generation.
- Improved reliability of electricity generation with lower marginal costs.
- Regional integration pathways established, with initial exports to Chile and plans for Brazil.
- Methane reduction programmes initiated in Vaca Muerta fields to align with emissions reduction goals.

- Gas as a transition fuel: Harnessing domestic gas resources can accelerate emissions reduction when used to displace more carbon-intensive fuels.
- Market design matters: Long-term contracting frameworks such as Argentina's Plan for the Production and Supply
 of Argentine Natural Gas can provide investment certainty in volatile environments.
- Regional cooperation amplifies benefits: Cross-border pipelines and LNG trade enhance energy security and cost optimization beyond national borders.

National aviation biofuel programme in Brazil (2024-ongoing)58

Energy transition goals:



Energy access and reliability.



Industrial competitiveness.



Energy productivity/efficiency.

Problem description:

Aviation produces 3.5% of global ${\rm CO_2}$ emissions, with the sector growing rapidly in Brazil. Despite its biofuel leadership, reliance on fossil-based kerosene left Brazil without a clear pathway to decarbonize or seize sustainable aviation fuel (SAF) opportunities.

Solution description:

In 2024, the Brazilian government launched the ProBioQAV programme, a national initiative to foster the domestic production and use of SAF. The programme provides policy incentives, regulatory frameworks and research funding to accelerate SAF deployment, while aligning with the Carbon Offsetting and Reduction Scheme for International Aviation from the International Civil Aviation Organization (ICAO's CORSIA). It integrates the aviation sector with Brazil's established bioenergy ecosystem, leveraging feedstocks such as sugarcane ethanol, soybean oil and waste residues. ProBioQAV also promotes technological diversification, including second-generation and synthetic fuels.

Enablers used:



Regulation and political commitment: National programme launch, alignment with ICAO targets, blending mandates under discussion.



Education and human capital: Partnerships with universities and research centres to build technical expertise.



Innovation: Development of advanced conversion technologies, certification processes for multiple SAF pathways.



Financial investments: Public R&D funding, incentives for private-sector projects and airline offtake agreements.

Stakeholders involved:

- National ministry of mines and energy.
- Ministry of Infrastructure and Civil Aviation Authority (ANAC).
- Petrobras and private biofuel producers.
- Airlines (Gol, Azul, LATAM).
- Universities and research institutes ((e.g. Empresa Brasileira de Pesquisa Agropecuária (Embrapa), Universidade de São Paulo (USP)).
- International aviation organizations (International Civil Aviation Organization (ICAO), International Air Transport Association (IATA)).

Outcomes achieved:

- Establishment of a national SAF policy framework in line with global aviation decarbonization plans.
- Initial pilot projects producing bio-jet fuel at scale, with certification for commercial flights.
- Airline commitments to blend SAF on domestic routes starting in 2025 and strengthened links between Brazil's biofuel industry and international aviation markets.

- Policy certainty matters: Long-term signals (blending mandates, incentives) are crucial to attract investment and scale SAF production.
- Diverse technologies: Multiple feedstocks and conversion pathways reduce risks and improve resilience.
- International alignment: Programmes that align with ICAO and CORSIA frameworks strengthen market competitiveness and export potential.

Responsible business conduct (RBC) framework for LAC (2023-ongoing)59

Energy transition goal:



Industrial competitiveness.

Problem description:

LAC holds some of the world's largest reserves of transition minerals, indispensable for renewable energy technologies, EV batteries and grid infrastructure. Yet extraction has historically caused severe socio-environmental impacts: water scarcity, deforestation, biodiversity loss and pollution. As of 2020, the region accounted for 310 mineral-related socioenvironmental conflicts - 35% of all recorded worldwide.

Solution description:

The Organization for Economic Co-operation and Development (OECD), Adelphi and regional partners developed a responsible business conduct (RBC) framework for the LAC extractives sector. The approach emphasizes risk-based due diligence, stronger alignment with international human rights and environmental standards, as well as transparency mechanisms that integrate climate and conflict sensitivity into business models. RBC aims to:

- Prevent adverse environmental and social impacts.
- Improve trust and dialogue with local communities.
- Support governments in strengthening regulatory oversight and social benefit-sharing.
- Enable companies to maintain a "social licence to operate" in a context of rising global demand and climate urgency.

Enablers used:



Regulation and political commitment: OECD guidelines on RBC, integration into national mining policies and free, prior and informed consent standards under International Labour Organization (ILO) 169.



Education and human capital: Knowledge-sharing platforms between communities, companies and governments; capacity-building for risk assessment.



Innovation: Use of conflict-sensitive environmental management systems and water governance frameworks to reduce pressure on scarce resources.



Financial Investments: Royalty earmarks for R&D (e.g. Chile's Fondo de Innovación para la Competitividad (FIC), Colombia's 10% R&D rule, Peru's 20% "canon" for universities) to channel mining rents into sustainable development.

Stakeholders involved:

- OECD and Adelphi (framework development and research).
- National governments of Chile, Peru, Colombia, Bolivia and Brazil.
- Local communities, Indigenous and Afro-descendant groups.
- Extractive companies (lithium, copper and nickel producers).
- Civil society organizations and environmental defenders.
- International buyers and investors in clean energy value chains.

Outcomes achieved:

- Growing adoption of risk-based due diligence processes in mining firms operating in LAC.
- Policy debates in several countries linking extractives governance to climate and social stability.
- Increased attention to free, prior and informed consent (FPIC) requirements for Indigenous peoples.
- Recognition of RBC as a tool to de-risk supply chains and secure long-term investment in critical minerals.

- Embed conflict-sensitivity: Critical mineral projects must integrate climate and water stress risks into early-stage
- Prioritize community rights: FPIC and genuine benefit-sharing are essential to avoid resistance and violence.
- Use mining rents for diversification: Royalties and taxes should be reinvested into innovation, education and higher-value industries.
- Corporate accountability builds trust: Transparency, due diligence and alignment with human rights frameworks are key to maintaining access to global markets.

5 The way ahead

This report affirms that LAC offers a unique mix of structural strengths and market opportunities. Realizing this potential depends on five key factors: clear long-term policies, de-risked financing, modern infrastructure, social legitimacy and support, and competitiveness rooted in regional country strengths.

To drive the transition, the Latin American **Energy Organization** (OLADE) and other regional stakeholders have focused on priority areas that align with both established goals and emerging aspirations shaping the regional agenda. These include:

- Clean cooking access: Achieve universal access to clean cooking methods by 2035, aiming for 95% of the population to have access to clean and safe cooking.60
- Renewables generation: Achieve at least 80% of power generation from renewable sources and 73% of renewables power capacity installed by 2030.61
- Regional storage: Increase regional storage capacities to reach 24 GW by 2030 and 46 GW by 2035.62
- Energy efficiency gains: Increase regional energy efficiency by 1.3 percentage points compared to the 2020 baseline (0.65%), reaching an efficiency rate of 1.95% by 2030.63
- Financial investments: Mobilize \$150 billion per year in clean energy investment for the region's energy transition by 2030.64
- Methane emissions measurement: Establish region-wide standards for mandatory measurement, reporting and mitigation of methane emissions, particularly in oil, gas and waste sectors. Align with international initiatives (e.g. the Global Methane Pledge) while tailoring approaches to LAC's energy mix. Prioritize leak detection, flaring reduction and best-practice sharing across national oil companies and private operators. 65
- Biofuels: Building on Brazil's ethanol leadership and learnings, expand sustainable biofuel capacity across the LAC through increased regulatory support for biofuel blending of up to 25% in the transport sector.66
- Grid integration and planning: Build an integrated, resilient and climate-aligned energy system by harmonizing national energy planning, strengthening technical cooperation, promoting renewable energy and energy efficiency, and enhancing regional power integration to optimize resources, reduce costs and support sustainable development (through the Regional Energy Planning Council).

Strategic implications for the 2026 OLADE agenda

- Regional alignment, collaboration and energy market: Advance harmonization of regulatory frameworks, grid codes and market mechanisms to unlock cross-border energy trade and infrastructure sharing.
- Policy frameworks with meaningful goals: Strengthen energy policies to go beyond targets, embedding clear implementation roadmaps, accountability and system-wide resilience measures.
- Financing partnerships: Establish a multicountry platform for blended finance, working with development banks, climate funds and the private sector to mobilize large-scale capital for energy transition projects.
- Resilience measures: Integrate climate adaptation into all major energy planning and investment decisions to ensure that vulnerable populations are not disproportionately affected by climate risks, preventing setbacks into energy poverty and advancing equity in access, affordability and reliability.
- Capacity building and technical cooperation: Launch region-wide initiatives for workforce reskilling, innovation incubation and technical exchange, with a focus on underserved areas and emerging industries, and finance and provide technical support to create a regional women-in-energy network.

LAC stands at an important moment in its energy transition. The priorities outlined in this report show how to harness the region's strengths and address its challenges. By aligning national efforts, mobilizing investment and fostering inclusive, resilient energy systems, the region can lead a just and sustainable transition – one that delivers a secure, equitable and sustainable energy transition for all people in the region in a fast-changing global context.

Taken together, these priorities provide clear answers to the three questions that anchor this assessment: where the region stands – on a strong sustainability base with readiness gaps to close; how to leverage its advantages – by mobilizing capital, modernizing and integrating grids, and advancing innovation, skills and data foundations for Al-enabled operations; and how to move faster together - by aligning policies and markets, deepening cross-border interconnections, and embedding equity so that progress is shared across countries and communities.

Contributors

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