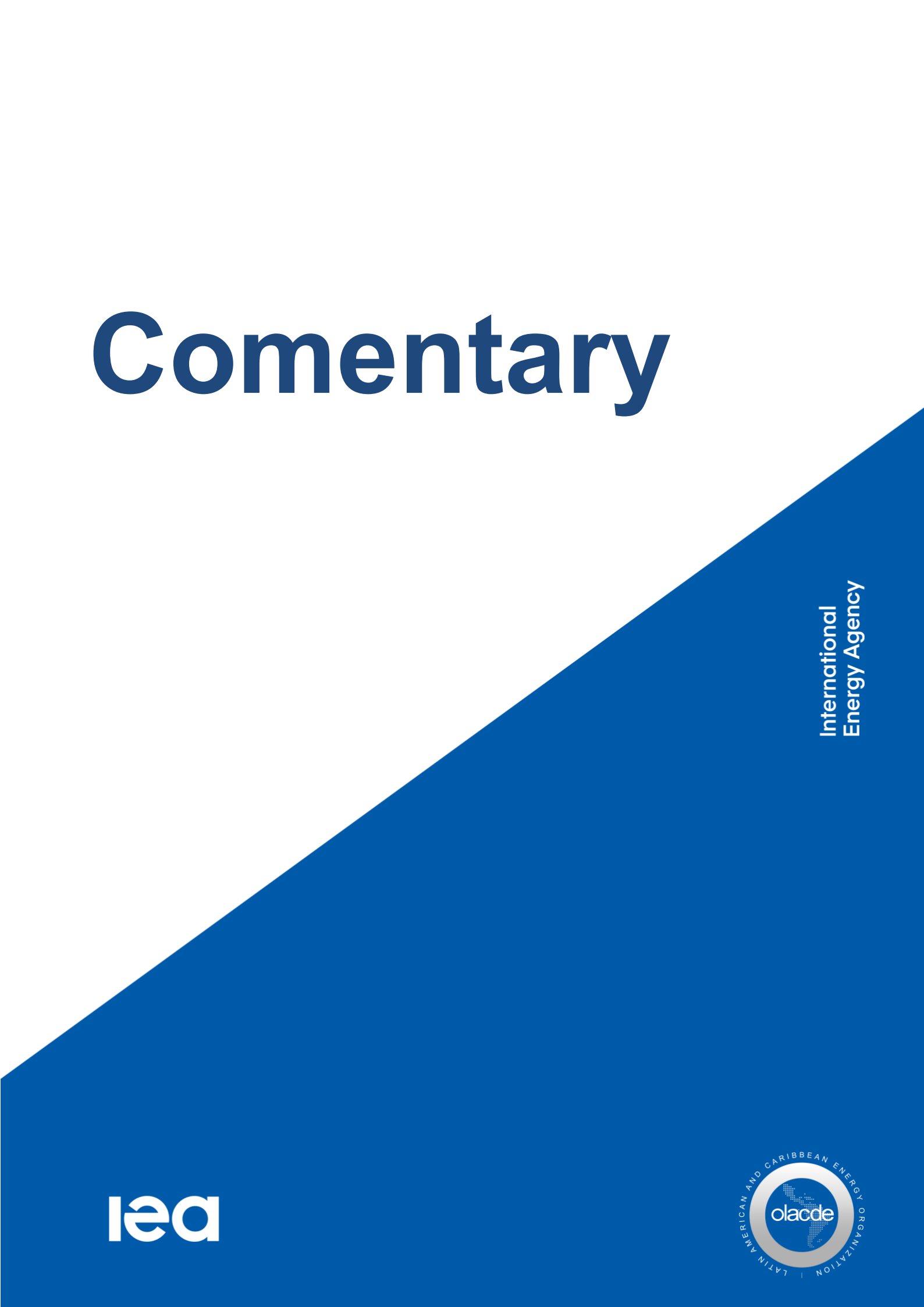
Comentary

International Energy Agency



Can Latin America and the Caribbean's workforce keep pace with the energy boom?

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Commentary — 08 October 2026

Energy jobs are booming worldwide. Since 2019, employment in the energy sector has grown nearly twice as fast as the economy-wide workforce, as investment in energy, electricity networks and emerging energy industries has accelerated. In Latin America and the Caribbean (LAC), the energy sector added 750 000 workers from 2019 to 2025.

Sustaining this momentum will increasingly depend on bringing more skilled workers into the sector. The fastest-growing occupations are concentrated in electricity-related trades, including electricians, lineworkers and solar PV installers. As demand for these workers rises, shortages risk becoming a constraint on energy investment, pushing up costs and delaying projects. As such, there is greater need to ensure energy is high up on the region's technical education and training agenda.

Many LAC countries and regional associations are actively engaged in attracting more young people into electricity and other high-demand technical occupations. Expanding this further could help sustain the current level of energy investments in the region, while positioning LAC to capture new opportunities in clean technology, digital infrastructure and the rapidly growing demand associated with AI and data centres.

This commentary draws on data and expertise from the Latin American and Caribbean Energy Organisation (OLACDE) and the International Energy Agency (IEA), including from the IEA's World Energy Employment 2025 report, to provide a region-specific picture of energy employment trends, while highlighting where the region's education and skills policies could help meet growing demand in the energy sector.

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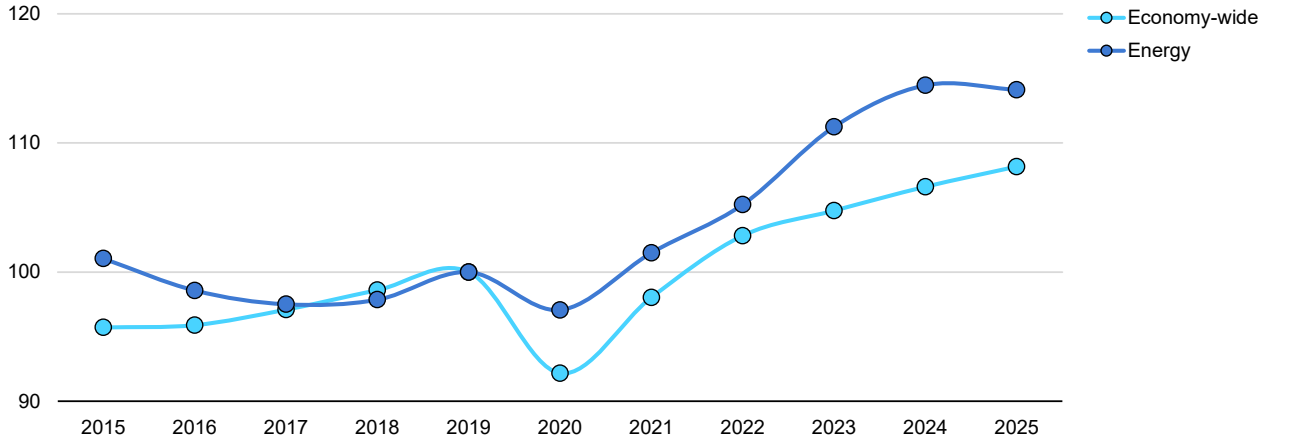
Clean energy is driving job creation in Latin America and the Caribbean

The region's energy sector employs 6.1 million people, around 8% of the global energy workforce. Energy-sector employment has increased by 2.2% a year since 2019 – faster than the pace of economy-wide employment growth across the region.

Energy and economy-wide employment in Latin America and the Caribbean, 2015-2025, index (2019=100)



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The power sector has been one of the main engines of this growth. Latin America's electricity mix has a particularly high share of renewable electricity, which accounts for two-thirds of generation in 2025, up from around half in 2015. Continued investment in low-emissions power is translating into employment growth: low-emissions power generation alone has created around 150 000 jobs since 2019, roughly one-fifth of all energy-sector job additions. Solar PV has been a particularly strong source of growth, with employment doubling since 2019.

Clean power, grids and batteries are set to remain among the largest sources of energy job growth in the region, with employment expected to increase by another 120 000 between now and 2035. This reflects continued investment in generation to meet growing electricity demand, alongside government and private-sector investment in batteries and electricity networks across countries including Brazil, Argentina, Mexico and Honduras.

The region's energy employment growth is also increasingly extending into clean technology manufacturing and supply chains. Latin America and the Caribbean has an established automotive manufacturing base, with around 1.5 million workers, concentrated primarily in Mexico and Brazil. Electric vehicles and batteries represented only a negligible share of these jobs in 2019, but investment is now expanding rapidly. EV-related jobs now represent 5% of automotive employment, with new production facilities and supply chains emerging across the region, including BYD's major electric vehicle plant in Bahia, Brazil, which opened in 2025. By 2035, EVs are expected to account for a quarter of jobs in the automotive sector.

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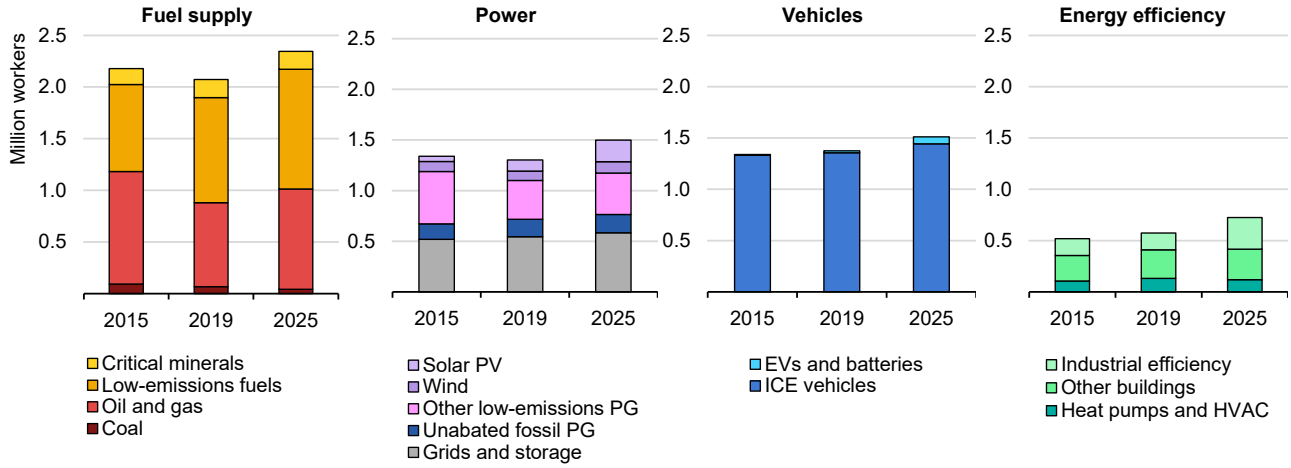
Biofuel production and processing is another major area of strength for the region. While oil and gas employment has experienced a more turbulent period, biofuel production has expanded strongly, particularly in Brazil, supported by the country's blending mandate and further increases expected in the coming years. Employment in the sector has grown by nearly 40% since 2015 and is expected to increase by a further 17% by 2035.

The mining and processing of critical minerals provide another source of opportunity. Countries including Chile and Peru are among the world's major producers of energy-related critical minerals, giving the region an important role in the supply chains underpinning batteries, electric vehicles and other clean technologies. Around one in five critical mineral mining jobs globally are in the LAC region.

Energy employment by sector in Latin America and the Caribbean, 2015-2025



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The electricity sector is becoming the pressure point

The composition of this growth matters. Energy employment is particularly concentrated in applied technical and vocational occupations, such as trades workers, installers, technicians and machine operators. Globally, these roles account for more than half of energy jobs, more than twice their share in the broader economy.

Some of the fastest-growing of these applied technical occupations are specifically linked to electricity. Electricians, lineworkers, solar PV installers, battery technicians and other electrical specialists are needed to deliver the infrastructure behind electrification. One in five new energy jobs since 2019 have been in electricity-related trades.

These workers are also increasingly in demand outside the energy sector. Technology companies building data centres and other infrastructure for the AI

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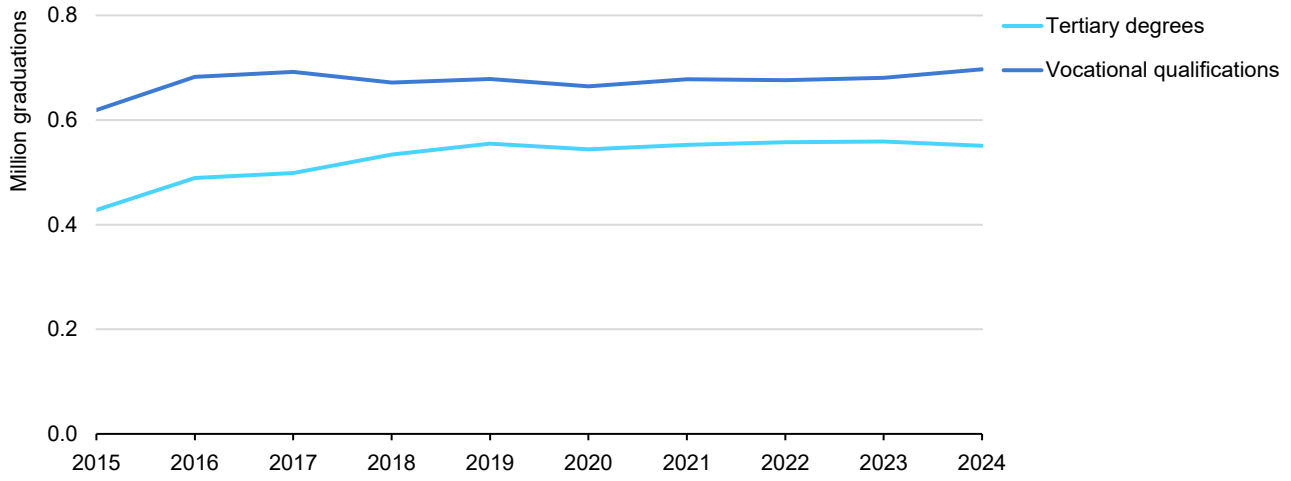
economy are competing for many of the same electrical and technical workers, putting additional pressure on the market for these roles.

Yet the supply of new workers is not keeping pace with demand. Labour statistics and the IEA's annual Energy Industry Employment Survey consistently identify these occupations among those facing significant shortages, as demand rises while the pipeline of new workers remains constrained.

Meeting this additional demand for skilled workers means expanding educational capacity to increase the supply of young entrants to the sector. But graduation from energy-relevant vocational programmes has largely stagnated in the 2020s, while relevant bachelor's and master's programmes have also seen limited growth.

Annual graduations from energy-relevant tertiary and vocational qualifications in Latin America and the Caribbean, 2015-2024



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Note: "Energy-relevant" qualifications refer to qualifications in the subjects of engineering, manufacturing and construction, corresponding to code 07 in the ISCED-F 2013 classification of fields of education.
Source: IEA analysis based on data from UNESCO Institute for Statistics and OECD Education at a Glance.
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The consequences can be significant. Where companies cannot find enough qualified workers, projects can take longer and costs can rise. Firms may also be forced to recruit workers without the full range of skills required for increasingly complex technical work, creating potential risks for quality and safety.

These occupations are also relatively physical and field-based. Many of the tasks involved are less exposed to near-term automation than more routine digital work, while AI could instead be used to make these jobs safer and more productive. For example, by supporting training and simulation away from potentially hazardous environments such as high-voltage lines or offshore wind installations.

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Policy action to expand the skilled workforce can help sustain the region's energy boom

The challenge is to ensure that the workforce grows fast enough to support the energy sector. Governments and energy stakeholders across the region are already investing in workforce monitoring, as well as in tertiary and vocational education, retraining and employment programmes. In Chile, the Ministry of Energy is actively promoting energy-related education through a dedicated platform and offers, together with AgenciaSE, trainings tackling many energy transition know-how and technologies.

At the regional level, OLACDE has placed workforce readiness and the Just Energy Transition at the centre of its ministerial agenda, fostering technical working groups to coordinate human capital planning across member states. Country-level efforts reflect this momentum. In Brazil, public vocational training networks such as SENAI partner with energy authorities and utilities to train technicians in grid modernisation, renewable installations and electromobility. In Colombia, the National Training Service (SENA) has organised strategic initiatives such as the Neiva Solar Panel Production Training Laboratory to support the rollout of renewable energy in local communities.

Industry involvement will also be critical. Energy technologies and operating practices are changing quickly, yet less than a quarter of companies surveyed by the IEA in 2025 reported engaging with educational institutions to ensure alignment of curricula with industry needs. Stronger partnerships between companies, utilities, training providers and governments can help ensure that qualifications reflect workplace requirements, including through apprenticeships, work-based learning and industry-recognised certifications.

The workforce also needs to be mobile. Energy projects are concentrated where resources and investment are available, while workers are distributed across the region. Common standards and mutual recognition of qualifications could help companies access skilled workers where they are needed, while giving workers greater access to employment as project demand shifts. This should go hand in hand with formal recognition of qualifications and strong health and safety standards, particularly in electrical occupations where inadequate training can carry significant risks.

Making energy a more explicit priority in education and skills policy could help remove one of the emerging constraints on the energy boom. A stronger pipeline of skilled workers would support faster delivery of clean energy and grid projects, strengthen the region's clean technology supply chains, and help meet growing demand from data centres and AI infrastructure.

The energy investment pipeline is set to remain a major source of employment in the years ahead. Building the workforce to deliver it could help Latin America and the Caribbean capture more of the economic opportunity created by the global shift towards electricity and clean energy.

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