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From Minerals to Megawatts: Understanding Chinese Involvement in Latin America's Renewable Energy Value Chain

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From Minerals to Megawatts: Understanding Chinese Involvement in Latin America's Renewable Energy Value Chain

Kehan Wang

Abstract

This paper maps and explains how Chinese firms engage across the renewable energy value chain in four South American countries: Argentina, Chile, Colombia, and Peru. As part of the regional project *Capitalizing on the New Climate Economy in the Americas* we compiled a database with project-level data on ownership, engineering, procurement and construction (EPC), financing and timelines, covering minerals, power generation, grids, and selected end-uses. It is the first integrated database of its kind on Chinese roles along the renewable energy value chain in South America.

Using this database, the paper offers direct comparisons of Chinese participation and highlights where local value is captured or not, citing three key patterns; (1) Chinese involvement is widespread but uneven, firms having a strong presence in mineral extraction and the energy sector, but absent from local manufacturing of renewable energy equipment; (2) participation patterns follow host-country endowments and policy frameworks: Peru and Colombia attract Chinese investments in copper mining, while Argentina and Chile focus on lithium, and (3) financing has transitioned from an early dominance by policy banks to a more diverse mix of mergers and acquisitions, commercial lending, and project-level partnerships. The paper provides a framework for identifying value capture and technology dependencies, ultimately clarifying China's international footprint in South America's energy transition.

Keywords: China–Latin America; just energy transition; critical minerals; renewable-energy value chain; governance & finance.

From Minerals to Megawatts: Understanding Chinese Involvement in Latin America's Renewable Energy Value Chain

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Índice

Introduction

Latin America is strategically positioned within the global renewable energy value chain, particularly due to its abundant reserves of critical minerals, which are essential for the global energy transition. Chinese companies have expanded their footprint across various stages of this value chain in the region, driven by China's ambitious investment in clean energy technologies and its dominance in the production and processing of transition minerals such as copper and lithium. In examining four key countries—Peru, Chile, Argentina, and Colombia—it is evident that Chinese investments are not uniformly distributed across the value chain stages, but instead align with each country's strategic positioning and domestic policies governing the mining and power sectors.

This paper is grounded in the regional Just Energy Transition (JET) project, conceived to offer a nuanced, comparative analysis of Chinese investments in Latin America through the lens of a fair energy transition. Drawing on a robust empirical foundation assembled by country-level research teams, the study systematically collects and cross-checks detailed data on Chinese firms, investment amounts, timelines, project locations, and sector-specific activities. The result is a standardized and comprehensive database: China in Latin America's Energy Transition (the JET database, hereafter). For the power generation and distribution sectors, our database is the first one to track not only Chinese-owned generation assets, but also cases where a Chinese company serves as the engineering, procurement, and construction (EPC) contractor. We also partially cover cases where Chinese companies provide technology and equipment. It offers a broad lens that captures the full picture of Chinese participation in the project development and operation stage of the value chain. It enables meaningful comparison and synthesis across diverse national contexts.

Building on this dataset, the paper undertakes a cross-cutting analysis of the role of Chinese actors across distinct stages of the renewable energy value chain in the four countries. The four countries have a strong presence of Chinese companies in all stages of the value chain, except for manufacturing (see Table 1). Peru and Chile have the most comprehensive engagements, with Chinese companies active in materials extraction, project development, operation, and even energy distribution and usage. This broad participation reflects the critical role of Peru and Chile as global suppliers of strategic minerals, as well as China's interest in securing raw materials and contributing to the development of domestic energy infrastructure.

Argentina highlights robust Chinese participation in mineral extraction and project operations, aligning with the country's rich lithium reserves, which are vital for battery manufacturing and China's expanding electric vehicle market. Colombia, although less prominent in terms of material extraction, benefits from Chinese engagement primarily in developing and operating renewable energy projects. Overall, these patterns demonstrate how Chinese companies have tailored their involvement in each country to local resource endowments and sectoral opportunities.

Table 1. Chinese Company Participation Across the Renewable Energy Value Chain in Latin America (by Country and Stage)

	Material Extraction & Processing	Equipment Manufacturing	Project Development	Project Operation	Energy Distribution & Usage
Peru	x		x	x	x
Chile	x		x	x	x
Argentina	x		x	x	
Colombia	x		x	x	

Source: Own elaboration based on the JET Database (2025).

This analysis also highlights the role of host countries in determining how Chinese capital is absorbed and deployed within the renewable energy and mining sectors. In some countries, governments have successfully harnessed Chinese investment to fill infrastructure gaps and advance their energy agendas; elsewhere, institutional weaknesses or regulatory ambiguity have hampered efforts to steer investment toward national objectives. Either way, Chinese companies operate within the regulatory framework of natural resources, industrial policies, and the existing sector status quo, capitalizing on the opportunities present in each country.

The rest of the report is divided into stages of the value chain. Section Two discusses the Chinese presence in the mineral extraction and processing in the four countries. Section Three examines China's involvement in the power sector, with a focus on renewable energy, before reaching the conclusion section. It is worth mentioning that since the Chinese ownership of many renewable energy projects in Chile and Peru is a byproduct of acquiring energy distribution companies, Chinese participation in the last stage of the value chain will be presented together with project development and operation in Section Three of this paper. By comparing these four countries, this report examines the strategic deployment of Chinese investments, seeking to identify opportunities and risks associated with different stages of the renewable energy value chain in Latin America. The aim is to ensure a just energy transition by maximizing economic, social, and environmental benefits while mitigating the inherent risks of intensive resource extraction and industrial development.

1. Material Extraction & Processings

1.1. Peru

Chinese investment in Peru's mining industry began in 1992, when the state-owned Shougang Group bought the bankrupt Hierro Perú iron ore complex in Marcona, Ica. In the three decades that followed, Shougang invested approximately US$2.8 billion (Shougang Hierro Peru, 2024) and maintained the historic "company-town," in which the firm controls not only the mine but also most local land and utilities. That control has repeatedly sparked labor disputes, but the operation nonetheless signaled to other Chinese companies that Peru was open to large-scale, long-horizon mineral investment.

A second, far larger wave arrived between 2007 and 2009, when surging Chinese demand for metals coincided with Peruvian officials' determination to attract capital. In quick succession, Chinese firms acquired five major projects: the Rio Blanco copper project, the Toromocho copper project, the Galeno copper project, the Pampa de Pongo iron project, and the Don Javier copper project. Minera Chinalco Perú paid US$1.5 billion for the Toromocho copper deposit and soon committed more than US$2 billion to build the mine, backed by the China Development Bank; the Xiamen Zijin-Tongguan consortium took over the Río Blanco copper project for an investment initially projected at more than US$2.5 billion; and Minmetals and Jiangxi Copper bought the El Galeno copper–gold deposit for a planned US $3.5 billion (Sanborn, Pareja and Quispe, 2024).

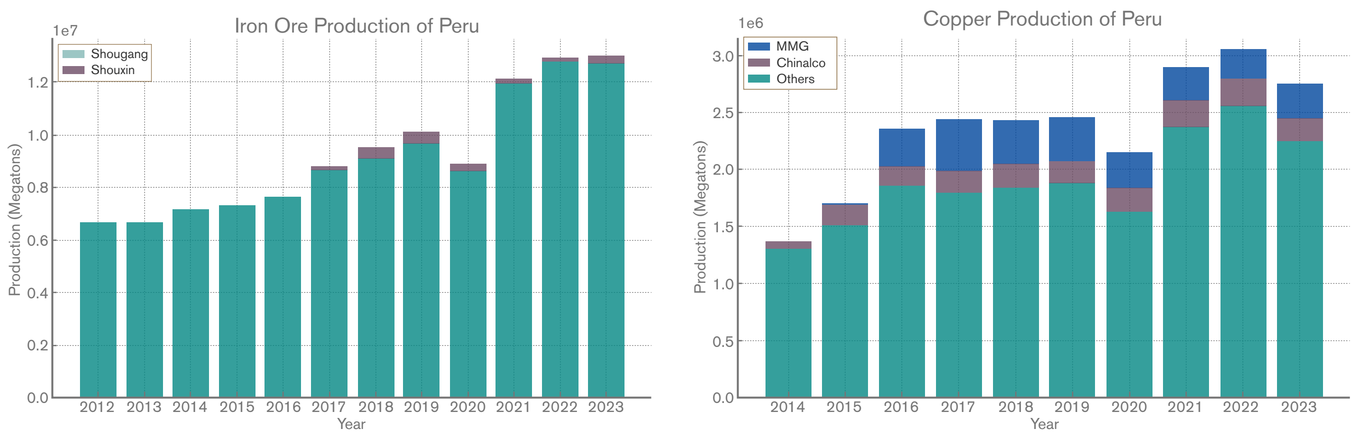
Although these acquisitions positioned Chinese firms at the heart of Peru's copper industry, several were undertaken without thorough due diligence, exposing Chinese investors to unexpectedly intense socio-environmental resistance. Río Blanco, for example, never advanced beyond feasibility studies. Part of the reason is that the project lies in a high-biodiversity cloud-forest zone, so farming communities fear water contamination and have mobilized domestic and transnational allies to block the project (Sanborn, 2009; González-Vicente, 2022; Irwin & Gallagher, 2013; Sanborn & Chonn, 2016).

Toromocho proved the standout success of this early copper wave. Chinalco negotiated Peru's most ambitious voluntary resettlement to make room for the open pit, moving roughly 5,000 residents from old Morococha to the purpose-built town of Nueva Morococha, where the company provided houses, utilities, and civic infrastructure (Sanborn & Chonn, 2014). Commercial production began in 2013, and a phase two, US$815 million expansion was approved in 2021 after the company resolved 86 technical observations made by the environmental authorities. Yet, satisfaction with the relocation has waned as job creation lagged, leading many families to leave Nueva Morococha and forcing the government to mediate ongoing negotiations over compensation and outstanding social commitments (Chávez, 2021).

Chinese mining reached a new level in 2014, when a consortium led by MMG—the Australian-based overseas arm of China Minmetals—bought the high-altitude Las Bambas copper project from Glencore for about US$7 billion, the largest Chinese merger-and-acquisition (M&A) deal in Latin America to that date (Reuters, 2014). Las Bambas shipped its first concentrates in 2016 and once claimed to supply roughly 2% of the global copper output (ProInversión, 2022), but the replacement of a planned slurry pipeline with heavy-haul trucking on an unpaved road triggered chronic blockades: by 2024 the mine had lost over 600 operating days to community protests (Sanborn & Xie, 2019; Reuters, 2024).

In 2024, almost two decades after acquiring the currently stalemated Río Blanco copper project, Zijin made another purchase in Peru: the La Arena gold-copper project in the La Libertad region from Canada's Pan American Silver for US$245 million. The project consists of La Arena I, a gold-producing project with only three years life-of-mine remaining, and a yet to be developed La Arena II site, with significant gold and copper reserves (Gestión, 2024).

Chart 1. Iron and copper production in Peru by company, 2012-2023



Source: MINEM. Prepared by the author.

Chinese investors have also diversified their Peruvian portfolio beyond copper. In 2015, Zhongrong Xinda acquired the dormant Pampa de Pongo iron ore deposit for about US$1.7 billion; the underground project obtained a green light from the Peruvian regulatory agency (SENACE) in 2025 (SENACE, 2025) and construction will begin in 2028 (Gestión, 2025). Meanwhile, Shougang has partnered with Baiyin Nonferrous to form a new company, Shouxin Perú, to process the tailings from Hierro Perú. Shouxin and Hierro Perú are currently the only two scaled-up iron ore producers in the country.

By 2025, Chinese companies were operating five producing large mines—Shougang Hierro Perú, Shouxin, Toromocho, Las Bambas, and La Arena I —and control eight[1] projects in the Ministry of Energy and Mines' investment pipeline, accounting for about one-fifth of its value (US$13 billion) (MINEM, 2025). Even as unresolved social-environmental conflicts over resettlement, water use, and transportation logistics continue to test both corporate strategy and the state's capacity to manage resource-sector tensions, the capital, technology, and long-term credit of Chinese companies have become central to Peru's copper and iron ambitions.

1. 2. Chile

China is now Chile's dominant commercial partner, accounting for 38.7% of all Chilean exports in 2023—almost three times the share held by the United States (15.1%). Copper underpins that relationship: the metal accounts for 42.6% of Chile's total exports and 71.7% of the copper ores sail to China (OEC, 2025). Yet, the surge in Chinese outward investment that many expected to follow this trade dependence has not materialized in the Chilean copper industry. Instead, almost all of the recent growth in Chinese mining FDI has been directed towards lithium.

Chile's state-owned CODELCO's Gaby project has been the only attempt by a Chinese company to be directly involved in copper mining in Chile – and it failed. In 2005, CODELCO reached a tentative deal to sell to China Minmetals a 49-percent stake in the yet-to-be-built open-pit mine (Reuters, 2008). The announcement was opposed by CODELCO's powerful workers' union and some Chilean elites (Ahumada Benítez, 2008). In turn, Minmetals advanced CODELCO a US$550 million loan backed by China Development Bank, through a Bahamas-registered joint venture called CUPIC (AidData, n.d.). CUPIC functioned as a vehicle for Minmetals to purchase all of Gaby's minerals at a fixed price formula for 10 years, splitting copper-price risk equally with the Chilean side. Gaby entered production in 2008 under total control by CODELCO; CUPIC was wound down on schedule in 2016, and no Chinese company has since acquired an equity position in Chilean copper (Rehner et al., 2026).

Chinese capital has instead made its mark in lithium. In 2019, Tianqi Lithium Corporation, already a major player in Australia, bought 22 percent of SQM, securing access to the Salar de Atacama brines (Rehner, Lorie & Muñoz, 2023). To preserve free competition, the National Economic Prosecutor (FNE) barred Tianqi from influencing SQM's management, with the restriction set to lapse in 2024–25. Before that deadline, President Gabriel Boric's National Lithium Strategy pushed CODELCO to participate in SQM's lithium extraction; Tianqi was kept out of the talks and, on two occasions, its petitions to the Financial Market Commission (CMF) to force a shareholder vote were rejected. The CODELCO-SQM partnership renews SQM's operating license until 2060, raising permitted output to 280,000 tons of lithium-carbonate starting from 2031. It also gives CODELCO a majority stake and 85% of future profits while leaving SQM in day-to-day control of the company. The deal has soured relations between Tianqi and SQM (Rehner et al., 2026).

Although Chile's free competition authority has already approved the CODELCO–SQM joint venture (Reuters, 2025), the deal still requires clearance from regulators in other major jurisdictions, including China, the European Union, and Japan. Because SQM holds a strong position in global lithium markets, competition authorities abroad must evaluate whether the partnership could distort market dynamics. In China, the State Administration for Market Regulation (SAMR) has taken up the review but recently paused the process (Munita, 2025). This suspension has introduced uncertainty into the agreement and may impact on Tianqi's delicate relationships with both CODELCO and SQM. A precedent back in 2013 has demonstrated SAMR's influence in scrutinizing mergers and acquisitions abroad. When Glencore acquired Xstrata, SAMR granted only conditional approval, requiring the divestiture of the Las Bambas copper mine in Peru. While the Chinese regulator did not specify a buyer, the asset was ultimately purchased by the Chinese firm MMG (MofCom, 2013).

Elsewhere in Chile, the tender by ENAMI's (Empresa Nacional de Mineria) for partners to develop new salt flats has drawn bids from CNRG and Chinese DLE specialists, including Sunresin and the Green Lithium Initiative consortium (Rehner et al., 2026). Thus, while Chinese state-owned-enterprises remain absent from Chilean copper pits, Chinese investors and technology suppliers are becoming visible in the country's lithium-extraction landscape, despite the spats between Tianqi and the Chilean government arising from the changes in the nation's policies on lithium extraction.

1. 3. Argentina

Chinese investments in Argentina's mining sector primarily focus on lithium, with a notable presence also in gold and silver. Chinese investments started with conventional metals like iron and gold in 2006, and after Ganfeng acquired the Mariana lithium projects in 2018, investments in lithium exploded. The announcements of mergers and acquisitions in Argentina's lithium sector involving Chinese companies between 2020 and 2023 totaled roughly US$1.7 billion, accounting for 22% of the M&A deals in the lithium sector in Argentina. As of September 2025, there were seven[2] projects producing lithium in Argentina, and other 60 were under development. Chinese companies are involved in 14 out of the 67 projects and have provided technology agreements in others (See Table 2) (González and Trevignani, 2026a).

Similar to the situation in Peru, the first Chinese investment in Argentina's mining sector involved acquiring an old iron mine that was struggling to survive. The Sierra Grande Iron Mine was established in the 1970s. Due to high operational costs,

1 Río Blanco (Zijin-Rio Blanco), La Arena II (Zijin-La Arena), El Galeno (China Minmetals-Lumina Copper), Don Javier (Junefield), Ampliación de Shougang (Shougang Hierro Perú), Sustitución de Ferrobamba (MMG-Las Bambas), Pampa de Pongo (Jinzhao) y Ampliación de Toromocho (Fase II) (Chinalco).

2 Fénix by Arcadium Lithium; Salar de Olaroz by Arcadium, Toyota Tsusho, and JEMSE; Cauchari-Olaroz by Ganfeng, Lithium Argentina, and JEMSE; Sal de Oro by POSCO Argentina; Centenario-Ratones by Eramnet (after buying out China's Tsingshan in October 2024); Mariana by Ganfeng; Tres Quebradas by Zijin.

the mine ceased production in 1991. In 2006, the Metallurgical Corporation of China (MCC) acquired a 70% stake in the mine, aiming at revitalizing its operations. Despite this investment, the mine faced numerous challenges, including high phosphorus content in the ore, inadequate infrastructure, and water scarcity. These issues led to continued financial losses, preventing the mine from achieving profitable production levels. By 2022, the ongoing difficulties prompted MCC to list its 70% ownership stake and associated debts for sale on the Beijing Equity Exchange (Sina, 2012; Reuters, 2022). Another key investment occurred in 2017, when Shandong Gold purchased a 50% share in the active Veladero gold-silver mine in the San Juan Province, which used to be fully owned by Barrick Gold, extending its operational life until 2034 (Barrick, 2017).

Since 2018, China has become the predominant destination of Argentine lithium. In 2023, China accounted for 43% of Argentina's lithium exports, ahead of Japan (25%), the United States (11%), and South Korea (11%) (Ministerio de Economía, 2024). In 2024, China's share climbed to 67%, with the United States coming in second with 14%, while Japan's share shrank to only 4% (Ministerio de Economía, 2025). The lithium boom in Argentina has also attracted Chinese companies to invest in the sector since 2018. Many of the Chinese-controlled projects are still in the pipeline – of Argentina's six producing lithium projects, only two (Cauchari-Olaroz and Mariana) currently involve Chinese companies.

Table 2. Chinese Investments in Argentina's Lithium Mining

Project	Holding Company	Chinese Ownership	Location
Proyecto de litio Mariana I, II y III	Ganfeng Lithium Co. Ltd.	2018	Salta
Proyecto de litio Cauchari-Olaroz	Ganfeng Lithium Co. Ltd.	2018	Jujuy
Proyecto Sal de los Ángeles	Revotech Asia Limited, Tibet Summit Resources Co. Ltd. y Leading Resources Global Limited	2018	Salta
Proyecto Salar Arizaro	Tibet Summit Resources Co. Ltd.	2018	Salta
Proyecto Solaroz	CNGR Advanced Material Co. Ltd.	2019	Jujuy
Proyecto litio Hombre Muerto Norte (HMN)	Chengdu Chemphys Chemical Industry Co.	2019	Salta y Catamarca
Proyecto Sal de la Puna (SDLP)	Ganfeng Lithium Co. Ltd.	2021	Salta
Proyecto Tres Quebradas	Zijin Mining Group Ltd.	2022	Catamarca
Proyecto Laguna Caro	JinYuan Holding Group	2022	Catamarca
Proyecto Pozuelos Pastos Grandes (PPG)	Ganfeng Lithium Co. Ltd.	2022	Salta
Proyecto Pastos Grandes	Ganfeng Lithium Co. Ltd.	2024	Salta
Proyecto Incahuasi Moncho	Ganfeng Lithium Co. Ltd.		Salta
Proyecto Doncella	Hanaq Group		Salta
Proyecto Arizaro Norte	Hanaq Group		Salta

Source: the JET Database (2025).

According to González (2024), Chinese companies tend to acquire lithium projects at advanced stages of development and then gradually increase their ownership to gain full control. For Example, China's Ganfeng Lithium initially entered Argentina's Mariana lithium brine project as a joint-venture partner and later bought out its partner's remaining stake. By 2021, Ganfeng acquired International Lithium Corp's last 8.58% share, consolidating total ownership of the Mariana project as it moved into the construction phase (MINING.COM, 2021). Similarly, at the Cauchari-Olaroz lithium project, Ganfeng initially held a minority stake and gradually increased its share. It raised its ownership from 37.5% to 50% in 2019 through a major investment and subsequently to a controlling 51% in 2020 by purchasing additional equity in the joint venture. This stepwise takeover granted Ganfeng operational control just as Cauchari-Olaroz was nearing production, reflecting the strategy of buying out other investors over time (Barrera, 2020).

Another example is the Tres Quebradas (3Q) lithium project. China's Zijin Mining Group waited until 3Q was well advanced – pilot evaporation ponds and a pilot plant had been built, and a feasibility study nearly complete – and then moved to acquire the entire project. In late 2021, Zijin agreed to purchase 100% of Canada's Neo Lithium Corp (the developer of 3Q) in an all-cash deal, thereby gaining full ownership of the 3Q brine project. The takeover, completed in early 2022, came after 3Q had reached a construction-ready stage (Zijin, 2021; Reuters, 2022).

1. 4. Colombia

Chinese involvement in the Colombian mining industry started in 2016, during the 10th China-Latin America Entrepreneurs Summit (part of China-CELAC Forum), where a Chinese mining services company, Shaanxi Yihao, signed a contract with Caribbean Resources Corporation to develop the La Caypa coal mine in the La Guajira Department and some other gold projects in the Antioquia Department, for a total investment of US$9.3 billion (Chinese Government, 2016; Sohu, 2016). The following year, Yihao formed a consortium with several other Chinese companies from the same Chinese province of Shaanxi to invest in Colombia's mining sector (Sohu, 2017). Since then, Yihao has been involved in coal, gold, and emerald mining in the country. In 2019, Yihao acquired Promotora 77 S.A.S., a gold mining company based in the northern city of Barranquilla, and embarked on direct ownership of mining projects in Colombia (Sohu, 2022). The La Caypa coal mine is under production and operated by Yihao (Foreign Ministry, 2018).

In 2019, Zijin Mining Group acquired the Buriticá gold mine from Canadian Continental Gold for around US$1 billion. The mine launched commercial operations in 2020, with an estimated annual production of 240,000 ounces of gold. The municipality of Buriticá is located in the Department of Antioquia, which has historically faced security issues (MINING.COM, 2020). In 2023, production was partially halted due to reports of attacks against workers, allegedly by illegal miners allied with a major crime gang (Reuters, 2023). Zijin condemned the attack and called for the Colombian authorities to address violence associated with illegal mining (Zijin, 2023). After a new attack in early 2025, the Buriticá mine resumed production (Reuters, 2025).

In 2023, a Beijing-based private company (JCHX Mining Management Co.) acquired for US$100 million (JCHX, 2025) a 50% stake in CMH Colombia S.A.S. – a subsidiary of the Canadian Córdoba Minerals Corp. which owns 100% of the Alacrán copper project. The initial capital cost (CAPEX) of the project was US$420.4 million, which would be used for the construction of a conventional open pit mine. A feasibility study and drilling work resumed in 2023 (Tang, 2025). Despite its modest scale, the project is significant in Colombia, where copper was described by the government in 2021 as a critical mineral for the energy transition and of strategic national interest (Minergía, 2021). In 2025, to accelerate the project's development, a consortium led by JCHX acquired the remaining 50% of CMH Colombia from Cordoba Minerals. The transaction resulted in JCHX controlling 55% of CMH and the Alacrán project (JCHX, n.d.).

1. 5. Cross-cutting Issues and Points of Comparison

Chinese investments in the mining sectors of Peru, Chile, Argentina, and Colombia reveal market differentiation directly tied to each country's resource endowments and historical contexts. While Peru and Colombia predominantly host Chinese ventures focused on traditional metals such as copper, iron, and gold, Chile and Argentina have increasingly attracted Chinese capital to their lithium extraction projects. This distinctive bifurcation warrants examination of its underlying causes and the broader implications for corporate governance, financial strategies, and environmental and social dynamics.

The observed divergence results, in part, from geological factors. Peru and Colombia possess abundant reserves of copper, iron, and gold, thereby drawing large-scale, capital-intensive investment projects. Conversely, Chile and Argentina lie within the so-called "Lithium Triangle," which houses the world's largest known lithium reserves, thereby naturally attracting investment focused on this mineral. But geology alone does not fully explain this phenomenon; historical and policy contexts significantly shape investment trajectories (as Chile has far more copper resources than Peru). At any rate, Peru's liberal mining policies, implemented since the 1990s, facilitated the initial entry of Chinese state-owned enterprises (SOEs), such as Shougang's acquisition of Hierro Perú, subsequently paving the way for larger, strategic investments like Chinalco's Toromocho and MMG's Las Bambas. While home to more copper resources (more than 20% of the world's copper), Chile's copper industry has long been under the strategic leadership of CODELCO, the state-owned enterprise, and dominated by the large Western multinationals. There have been few new copper projects for the Chinese, as relative newcomers, to bid on. Nevertheless, Chile became attractive for Chinese lithium producers as the Chinese new climate economy began to take off in the latter half of the 2010s.

This differentiation in investment focus has significant implications linked to the ownership structures of the investing Chinese firms. In Peru, state-owned companies such as Chinalco, Shougang, and Minmetals account for the lion's share of investments. Even when private companies have gained concessions in mining, such as the Pampa de Pongo iron project in southern Peru, they have faced more complicated financial hurdles to get the project started. Those state-owned conglomerates often have a long history dating back to the establishment of the People's Republic of China, deep pockets to acquire large projects, which are more common in the copper and iron industries than in lithium's, and the support of Chinese state-owned commercial and policy banks. For example, Chinalco received loans from China Development Bank, a state-owned policy bank, to acquire and develop the Toromocho mine (AidData,n.d.). In Colombia, too, the Buriticá gold project operated by the state-owned Zijin has a larger scale than the other gold and copper investments by its private peers.

In contrast, the Chinese companies operating in the lithium sector in Chile and Argentina are primarily private companies (such as Ganfeng, Tsingshan, and Tianqi) or junior state-owned mining companies with significant private shareholdings (for example, Zangge Lithium). The lithium industry in China is relatively young, with most companies being established after 2000 and expanding rapidly, driven by the demand for batteries in renewable energy and electric vehicles. Until recently, the industry in China was still dominated by private companies like Ganfeng, Shengxin, and Tianqi from the Jiangxi and Sichuan provinces. Meanwhile, State-owned companies, such as Zijin and China Minmetals, have shown a greater interest in the industry and have begun acquiring smaller private and state-owned players (SMM News, 2024). This trend is also reflected by Chinese investments in Argentina's lithium sector. Ganfeng has the largest investment in Argentine lithium, controlling projects like Cauchari-Olaroz, Mariana, and Pozuelos, two of which are among the six operating lithium projects in the country. Meanwhile, state-owned Zijin is also expanding its presence in the lithium sector in Argentina. Zijin already controls the Tres Quebradas project, and with the acquisition of shares in Tibet Summit (CCCMC, 2022), Zijin will have a greater role in the latter's investments in Argentina.

Although Chinese lithium companies initially had their eye on Chile, they have been more successful in Argentina. It appears that Chinese companies, although powerful in the global lithium battery supply chain and well-capitalized, only strive to adapt to local situations, with little evidence that they try to influence the governance structure. In Argentina, there is no differentiated regulatory regime for mining lithium and other materials. Lithium, along with other natural resources, is in the hands of provincial governments, which are generally eager to grant concessions to Chinese companies for investment (González, 2024); it is a lucrative opportunity for Chinese lithium companies. Meanwhile, in Chile, lithium was considered of special interest for national security reasons as it can be used in the nuclear industry. The current lithium concessions are concentrated in the hands of Albemarle and SQM, and even though the Chilean government is opening new concessions for bidding, the country is increasingly leaning towards greater central state involvement in the lithium industry, replicating the Codelco model. Even though Tianqi entered Chile as early as 2016 (earlier than most Chinese companies entering Argentina), it is still struggling with the relationship with SQM and the Chilean government (Rehner & Muñoz, 2023).

Table 3. Chinese Investments in Peru, Chile, Argentina, and Colombia's Mining Industries

Country	Main Chinese-backed minerals	Flagship Chinese projects
Peru	Copper, Iron, Gold	Toromocho (Chinalco); Las Bambas (MMG); Shougang Hierro Perú; La Arena I (Zijin)
Chile	Lithium (minor copper footprint)	22 % stake in SQM (Tianqi); bids on new salares (CNRG, Sunresin, Green Lithium Initiative)
Argentina	Lithium (plus iron, gold, silver)	Cauchari-Olaroz & Mariana (Ganfeng); Tres Quebradas (Zijin); Solaroz (CNNET); Centenario-Ratones (Eramet–ex Tsingshan)
Colombia	Gold, Emerging Copper	Buriticá (Zijin); Alacrán (JCHX)

Source: the JET Database (2025).

It should be noted that Zijin has a presence in three of the four countries under study. Zijin's rise in the global mining league coincides with its push into Latin America. When the company acquired the Rio Blanco project in Peru in 2007, it was far from being recognized on the elite list, while from 2019 to 2024, it jumped from 20th to 10th in PwC's Mine Top 40 (PwC, 2019; PwC, 2024), and from 889th to 267st on the Forbes Global 2000 (Zijin, 2019; Zijin, 2024). Four transformative Latin-American acquisitions took place in the same years: Buriticá (Colombia, 2019), Aurora (Guyana, 2020), Tres Quebradas lithium (Argentina, 2021), and La Arena (Peru, 2024). Together, they added high-grade gold, large-scale copper, and battery-grade lithium to Zijin's portfolio, transforming the firm from a China-centered gold producer into a diversified metals supplier pivotal to energy-transition supply chains. For Beijing, such Latin American footholds reduce import vulnerability and extend influence over upstream critical mineral flows; for host countries, understanding the strategies of rising giants like Zijin has become essential to negotiating future projects and governance frameworks across the region.

Chinese mining companies with varying ownership structures are subject to different regulatory frameworks regarding ESG practices. State-owned companies, particularly those owned by the central government under the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), are expected to have "exemplary effects" on other companies (SASAC, 2023). Besides the regulations issued by other departments (such as the National Development and Reform Commission and the Ministry of Environment), SASAC has its own regulations for social and environmental responsibility and ESG disclosure for central SOEs (Xinhua, 2023; SASAC, 2024). This means that state-owned giants in copper and gold should have higher standards than small- to medium-sized privately owned miners in the lithium sector[3]. Privately-owned mining companies, in comparison to their SOE peers, have different incentives for compliance with high ESG standards. They are more responsive to risks and more willing to adapt to higher standards, should it help to avoid disruptions to daily operations (Interview with Responsible Critical Minerals Initiative, April 2025). Meanwhile, since the Ministry of Finance and the Securities and Futures Commission ordered companies in the Chinese stock market to disclose ESG reports in 2024 (Ministry of Finance, 2024), the gap in regulatory structure between privately owned companies and SOEs is narrowing.

Ownership structure also has an impact on the company's investment strategies. Since private or small-to-medium-sized state-owned companies are more sensitive to profitability, they are savvier and more flexible than their giant peers in the host country market. For example, Chinese lithium companies are well-adapted to the decentralized governance of natural resources in Argentina. According to González (2024), although they are newcomers to the market, they have already rapidly developed forward and backward linkages in Argentina. They tend to acquire advanced-stage projects to avoid risk and accelerate production. They also form consortia and partnerships with each other and companies from other countries to jointly develop projects. Although they are mostly private companies, due to their status in the lithium industry, Chinese banks are not shunned from lending to them. However, even with bankrolling, they still demonstrate prudence and incrementalism in acquiring projects.

Being private or small- to medium-sized state-owned also means that these companies may not have the same level of capacity to manage risks, such as cyclical commodity price busts and geopolitical uncertainties. Decreasing lithium prices due to waning global demand have been damaging the profitability of Chinese lithium producers. In March 2025, Tianqi released its 2024 financial report, showing operating income dropping by 67.75% from 2023, and a CNY 7.9 billion (~US$11 billion) deficit. This marks the company's worst annual performance since its initial public offering. Analysts attributed Tianqi's crisis to the continued decrease of lithium prices – in 2024, the average price of battery-grade lithium carbonate fell by 36% (Sina, 2025). Even more profitable players, such as Ganfeng and Shengxin, experienced net deficits for the first time in 2024 (STCN, 2025). Private companies often do not have the deep pockets or as many options to obtain long-term loans with preferential interest rates from Chinese policy and state-owned commercial banks, like their SOE peers. There are a handful of lithium projects under construction in Argentina with Chinese participation; once these projects enter production, the Chinese companies may see themselves under even greater pressure.

The integration of Chinese lithium miners has already begun, with giants in the industry acquiring junior players and downstream companies exerting more control over the supply chain (Li, 2025). As the lithium price continues to decline, many junior players may face difficulties due to the rapid expansion in recent years. This creates a favorable opportunity for large SOEs that are late to the lithium sector to take over. In early 2025, China Minmetals, together with the government of Qinghai province, formed China Salt Lake Group, integrating the latter's Qinghai Salt Lake Potash company, a leader in China's brine lithium extraction. The new company is expected to become a "world-level" brine lithium producer (SASAC, 2025). Chinese SOEs' increasing influence in the lithium industry may have multiple implications beyond Chinese borders, especially for countries like Chile and Argentina that are trying to capitalize on China's new climate economy.

Geopolitical factors also complicate Chinese companies' overseas operations. For example, in June 2022, Chinese lithium company Zangge (the other major player in brine lithium extraction in China besides the aforementioned Qinghai Salt Lake Potash) acquired 65% stake in the Laguna Verde project in Argentina from the Canadian company, Ultra Lithium (Tang, 2022). However, by November that year, Zangge, together with two other Chinese companies that invested in Canadian lithium companies, had already received instructions from the Canadian government to

3 Among the Chinese companies invested in copper and gold in the four countries, Chinalco and MMG (Minmetal) are centrally owned SOEs, and Zijin is considered a local or provincial SOE.

divest from Canadian critical mineral companies, citing national security reasons (Government of Canada, 2022). Zangge and its Canadian partner followed the order (Lutz, 2022), and the lithium project was eventually shared with an Australian company (Investing News Network, 2023). This case demonstrates that while global competition for critical minerals and a relatively relaxed regulatory framework in host countries may create opportunities for Chinese companies, China's competition with Global North countries in securing the critical minerals supply chain may also generate risks.

2. Project Development & Operation

2.1. Peru

In February 2024, the National Institute for the Defense of Free Competition and the Protection of Intellectual Property (*Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual* - Indecopi) in Peru approved China Southern Power Grid (CSPG)'s acquisition of Enel Peru, marking the total acquisition of the electrical distribution services of Metropolitan Lima and adjacent areas by Chinese companies (Indecopi, 2024a). The Italian multinational company Enel Energy announced its exit from Peru at the end of 2022. In February 2023, the state-owned CSPG announced its bid for Enel Peru's power distribution business for US$3 billion (Bonifaz, 2023). Enel Peru supplied energy to the northern half of Greater Lima – one-third of the country's population lives in the capital and Lima accounts for 55% of the country's electricity market (Fuertes, 2023).

The transaction raised concerns about potential monopolistic practices, as another Chinese state-owned company, Yangtze Power International, a subsidiary of China Three Gorges (CTG), already services the southern half of Greater Lima after acquiring Luz de Sur in 2020. That year, Yangtze bought the Peruvian business from US-based Sempra Energy, a company traded on the New York Stock Exchange. This acquisition resulted in CTG's ownership of Luz de Sur, a power transmission and distribution company serving the southern half of the capital area, and Inland Energy, a power generation company that owns the hydropower plant Santa Teresa (98MW) and has multiple projects in the pipeline (Bonifaz, 2023).

In its final decision published in February 2024, Indecopi greenlighted CSPG's acquisition of Enel Peru's distribution business under certain conditions. The authority ruled that CSPG and CTG belonged to the same economic group. To preserve free competition, Enel Peru can only choose suppliers through the bidding mechanism administered by the Peruvian Energy and Mining Investment Supervisory Agency (Osinergmin) or through a transparent and competitive tender in the presence of a notary supervised by Indecopi (Indecopi, 2024a).

This decision has significant implications for Chinese companies in Peru. It established that all Chinese companies under the supervision of SASAC are considered part of the same business group. Therefore, operations and transactions between them in the country are under scrutiny for transparency and free competition. Indecopi deemed that SASAC can influence the competitive strategy of these companies, for example, by appointing and changing their board of directors, approving bond issues, and performing other functions that could affect their financial and commercial planning. Although Indecopi recognizes that there are formal regulations that limit SASAC's capacity to intervene in the production and operation activities of Chinese state-owned companies, in practice, there are powers that grant it a certain degree of control over its management and operation (Indecopi, 2024b).

Before this conspicuous acquisition, CSPG and CTG had already been deeply involved in the Peruvian power market. In 2015, CTG and the Portuguese state-owned electricity company, EDP, formed a joint venture named Hydro Global to develop power projects in South America. The creation of Hydro Global was part of the agreement between the two when CTG purchased a 21% stake in EDP in 2011 (De Clercq, 2015). In 2016, Hydro Global acquired the San Gaban III hydropower project (206MW) in Peru (CTG, 2018), financed by the China Development Bank, and started commercial operations in May 2025 (SASAC, 2025).[4] In 2019, CTG acquired the Chaglla hydroelectric dam (460MW) for US$1.4 billion from the heavily indebted Odebrecht; it is the seventh-largest power plant in the country and generates 3.7% of the country's power (Ray & Batista, 2021). In 2018, CSPG bought a 27.7% stake in the Chilean power transmission and distribution company Transelec, owner of the Peruvian company Conelsur (Sanborn, Pareja & Quispe, 2024).

Table 4 Electricity Projects Owned by Chinese Companies in Peru

Project	Chinese Participation	Holding Company	Subsidiary	Stage	Chinese Ownership	Capacity - MW
Santa Teresa	IPP	China Three Gorges	Inland Energy S.A.C	Operation	2019	98.2
Chaglla	IPP	China Three Gorges	Empresa de Generación Huallaga S.A.	Operation	2018	456.0
Santa Teresa-Ampliación	IPP	China Three Gorges	Inland Energy S.A.C	Studies/Estudios	2020	40.4
Santa Teresa II	IPP	China Three Gorges	Inland Energy S.A.C	Studies/Estudios	2020	280.0
Lluclla	IPP	China Three Gorges	Inland Energy S.A.C	Studies/Estudios	2020	288.0
Ahobamba	IPP	China Three Gorges	Inland Energy S.A.C	Studies/Estudios	2020	2.32
Huallaga I	IPP	China Three Gorges	Empresa de Generación Huallaga S.A.	Studies/Estudios	2020	392.0
San Gabán III	IPP	China Three Gorges	Hydro Global Perú S.A.C	Construction	2016	205.8

4 In 2022, Portugal's EDP sold its 50% stake in Hydro Global to CTG, making the latter the sole owner of Hydro Global (EDP, 2022).

Pucará	IPP	China Railway Engineering Coorporation (CREC)		Studies/Estudios	2016	178.0
Belo Horizonte	IPP	Zhonghong International Engineering/China Rainbow International Investment		Studies/Estudios	2018	180.0
C.E Parque Eólico Marcona	IPP	China Yangtze Power Co., Ltd (CYPC)	Luz del Sur	Operation	2024	32.1
C.E Tres Hermanas	IPP	China Yangtze Power Co., Ltd (CYPC)	Luz del Sur	Operation	2024	97.2
C.S Repartición	IPP	China Yangtze Power Co., Ltd (CYPC)	Luz del Sur	Operation	2024	20.0
C.S Majes	IPP	China Yangtze Power Co., Ltd (CYPC)	Luz del Sur	Operation	2024	20.0

Source: the JET Database (2025).

Including all its acquisitions in Peru, CTG directly and indirectly owns three operating hydropower projects (Santa Teresa I, Chaglla, and San Gabán III), two operating solar projects (Repartición and Majes), and two working wind projects (Marcona and Tres Hermanas). CSPG is still focused on power transmission and distribution. In Peru, hydropower is the most prominent renewable energy source, accounting for about 40% of the installed capacity. Solar and wind account for less than 6% (Osinergmin, 2023). According to a recent report by Osinergmin (Osinergmin, 2025), the government approved 105 solar and wind projects (45 wind, 60 solar) between 2020 and 2025, but only 15 have obtained concessions for construction. None of those 15 new projects under construction is owned by a Chinese investor.

2. 2.Chile

Similar to the situation in Peru, Chinese participation in Chile's electricity sector primarily consists of acquisitions of existing assets previously owned by the US company Sempra and other international investors. For example, in 2019, State Grid International Development (SGID) acquired Chilquinta, a company established in the 1920s and privatized in 1986, which specializes predominantly in electricity transmission, distribution, and customer service. This acquisition integrated Chilquinta's extensive distribution networks in the Valparaíso, Maule, and Biobío regions into SGID's global investment portfolio (WorldFolio,n.d.; Sempra, 2020). In a similar strategic move, SGID acquired a 96.04% stake in Compañía General de Electricidad (CGE) in 2020 from the Spanish firm Naturgy through a public tender offer (OPA). Through the acquisition, SGID further established itself in Chile's electricity transmission and distribution sectors. Notably, this acquisition excluded CGE's natural gas assets, such as Metrogas and an LNG terminal, which remained under Naturgy's control (Rehner et al, 2025).

Another electricity giant from China, China Southern Grid (CSG), also made an investment in 2018 by acquiring a 27.8% stake in Transelec. This company operates electricity transmission infrastructure in Chile and maintains a dominant position, managing approximately 90% of the National Electric System (SEN). Notably, the ownership of Transelec reflects a highly international and diversified structure, comprising major international investors: Canadian Pension Plan Investment Board (CPP) with 27.7%, British Columbia Investment Management Corp. (BCI) with 26.0%, and Public Sector Pension Investment Board (PSP) with 28.5%, in addition to CSG's share (Rehner et al, 2025).

In addition to the multi-billion-dollar investments in distribution and transmission companies, Chinese companies also actively participate in the power generation market in Chile as independent power producers (IPP). For example, China Three Gorges Corporation (CTG) acquired the Rucalhue hydroelectric project (90MW) in the Biobío Region in 2018 from a Brazilian operator. Despite this strategic acquisition aimed at expanding renewable energy generation capacity in Chile, the project continues to face considerable socio-environmental opposition, which is hindering progress in its construction (Rios, Figueroa & Freites 2023).

Table 5 Electricity Projects with Chinese Participation in Chile

Project Name	Chinese Participation	Holding Company	Construction	Status	Chinese ownership since	Source	Capacity-MW
Arica I Solar PV Project	IPP	Sky Solar Holdings, Ltd. (天华阳光)		Cancelled	2012	Solar	18.0
Various Small Solar Projects under the Programa Pequeños Medios de Generación Distribuida (PMGD)	IPP	Sky Solar Holdings, Ltd. (天华阳光)		Construction	2017	Solar	24.0

CEME1 Photovoltaic Project	EPC	GM Renewables Holdings SPA	PowerChina	Operation		Solar	480.0
Venezia Solar PV Park	EPC	Eurus Energy Chile	PowerChina	Construction		Solar	10.9
Ravenna Solar PV Park	EPC	Eurus Energy Chile	PowerChina	Construction		Solar	12.0
Hydroeléctrica Chacayes	IPP	State Power Investment Corporation (SPIC)		Operation	2016	Hydro	111.0
Las Centrales hidroeléctricas de pasada Coya y Pangal	IPP	State Power Investment Corporation (SPIC)		Operation	2016	Hydro	76.0
Parque Eólico Punta Sierra	IPP	State Power Investment Corporation (SPIC)		Operation		Wind	82.0
Hidroeléctrica La Higuera	IPP	State Power Investment Corporation (SPIC) (50%)		Operation	2016	Hydro	155.0
Hidroelétrica La Confluencia	IPP	State Power Investment Corporation (SPIC)		Operation	2016	Hydro	163.0
Central Solar Solar Wing	IPP	State Power Investment Corporation (SPIC)		Pre-construction		Solar	184.0
Central Solar Desierto de Atacama	IPP	State Power Investment Corporation (SPIC)		Construction		Solar	293.0
Central Solar Don Patricio	IPP	State Power Investment Corporation (SPIC)		Pre-construction		Solar	200.0
Central Eólica Amolanas	IPP	State Power Investment Corporation (SPIC)		Pre-construction		Wind	199.0
Central Hidroeléctrica Rucalhue	IPP	China Three Gorges Corporation		Pre-construction		Hydro	90.0
Parque eólico Ckani (Ckhúri)	IPP	Xinjiang Goldwind Science & Technology		Operation	2012	Wind	70.0

Source: the JET Database (2025).

The other major Chinese player in the Chilean power generation market is State Power Investment Corporation (SPIC). SPIC has expanded its presence in Chile by acquiring in 2016 the Australian company Pacific Hydro, which has been active in Chile since 2002. Before the acquisition, the company already partially or wholly owned several hydropower plants, such as the La Confluencia (163MW) and Higuera (155MW) projects. After the acquisition, Pacific Hydro shifted its focus to solar and wind, building the Punta Sierra wind farm (82MW), and has multiple wind and solar projects under the pipeline (e.g., Desierto de Atacama solar farm – 293MW and Amolanas wind farm – 199MW) (JET Database, 2025).

The global EPC giant, Power China, is also present with the construction of turn-key projects in Chile. The company built the CEME1 solar project (480MW) for GM Renewables and two small solar projects for Eurus Energy Chile. Other Chinese companies are also engaged in the renewable energy sector of Chile, including Trina Solar, JA Solar, Envision Energy, and Xinjiang Goldwind. Trina Solar was involved in the Arica I solar project (18MW) in 2012, but the project eventually got canceled. It currently operates a series of small solar projects. Xijiang Goldwind operates in Chile through Huemul Energía, a joint venture with an Irish company, and constructed and owns the Ckani wind project (70MW). The participation of Chinese companies in Chile also involves providing equipment, technology, and operational expertise for solar and wind projects owned and built by other investors (JET Database, 2025).

2. 3. Argentina

The launch of the RenovAr Program in 2016 significantly boosted the role of Chinese companies in Argentina's renewable energy sector, facilitating investment through public tenders and M&A. During RenovAr rounds 1 and 1.5, Chinese companies secured 285MW out of 1,472MW awarded for wind energy projects, accounting for 19% of the total. In solar energy, Chinese companies acquired 45% of the 916.2MW awarded in RenovAr rounds 1 and 1.5. Overall, Chinese firms captured 29% of awarded solar and wind projects, followed by Spanish companies with 17%, and the remainder distributed among 16 other international and Argentine firms (González, 2021).

Table 6 Electricity Projects with Chinese Participation in Argentina

Project Name	Chinese Participation	Holding Company	Construction	Status	Chinese ownership since	Source	Capacity - MW
Parque Eólico El Angelito	IPP	Sinowind Technologies		Cancelled	2015	Wind	200.0
Parque Eólico Vientos del Secano	IPP	Envision Energy		Operation	2016	Wind	50.0
Parque Eólico García del Río	IPP	Envision Energy		Operation	2016	Wind	10.0
Parque Eólico Cerro Alto	IPP	Envision Energy		Cancelled	2016	Wind	50.0
Parque Eólico Los Meandros	IPP	Envision Energy		Cancelled	2016	Wind	125.0
Plantas Eólicas Loma Blanca I	IPP+EPC	Goldwind Science & Technology	PowerChina	Operation	2017	Wind	52.0
Plantas Eólicas Loma Blanca II	IPP+EPC	Goldwind Science & Technology	PowerChina	Operation	2017	Wind	52.0
Plantas Eólicas Loma Blanca III	IPP+EPC	Goldwind Science & Technology	PowerChina	Operation	2017	Wind	52.0
Plantas Eólicas Loma Blanca VI	IPP+EPC	Goldwind Science & Technology	PowerChina	Operation	2017	Wind	103.0
Planta Eólicas Miramar	IPP+EPC	Goldwind Science & Technology	PowerChina	Operation	2017	Wind	96.0
Parque Solar Cafayate	EPC	Canadian Solar	PowerChina	Operation		Solar	97.6
El Parque Solar Cauchari I	EPC	JEMSE (Empresa de Energía del Estado Jujeño)	PowerChina	Operation		Solar	105.0
El Parque Solar Cauchari II	EPC	JEMSE (Empresa de Energía del Estado Jujeño)	PowerChina	Operation		Solar	105.0
El Parque Solar Cauchari III	EPC	JEMSE (Empresa de Energía del Estado Jujeño)	PowerChina	Operation		Solar	105.0
Pampa Wind Project			PowerChina/Sinohydro	Cancelled			
Mariana Photovoltaic and Energy Storage Project	IPP+EPC	Ganfeng Lithium	PowerChina		2021	Solar	120.0
Pia María de Río Seco Photovoltaic Project	EPC		PowerChina			Solar	35.0
Arauco 400 MW Wind Power Project	EPC		PowerChina			Wind	400.0
Cura Brochero Solar Project	EPC		China Triumph International Engineering Co., Ltd.	Operation		Solar	30.0
Parque solar Iglesia-Estancia Guañizuil	IPP	JinkoSolar Holding Co. Ltd.		Operation	2018	Solar	80.0
Proyecto Central Eólica Gastre	EPC	Generadora Eólica Argentina del Sur S.A. (GEASSA)	Beijing Construction Engineering Group International (BCEGI) 北京建工集团	Cancelled		Wind	1350.0
Centrales hidroeléctricas Kirchner y Cepernic	EPC	Empresa Energía Argentina (ENARSA)	Gezhouba, Eling Energía (antes Electroingeniería) e Hidrocuyo	Construction		Hydro	1310.0
Central Hidroeléctrica El Tambolar	EPC	Energía Provincial Sociedad del Estado (EPSE) San Juan	PowerChina (Synohydro), Panedile, SACDE y Peterson	Construction		Hydro	70.0

Source: the JET Database (2025).

Chinese companies have expanded their presence in Argentina's renewable energy sector through various pathways, from direct project acquisition (IPP) to participation in public and private tenders (EPC). An early case of Chinese participation is the Cauchari Solar Park in the Jujuy Province. In 2016, PowerChina and Shanghai Electric Power Construction won the EPC contract of the Cauchari solar complexes (210MW) offered by the provincial state-owned company Jujuy Energía y Minería del Estado (JEMSE). The project is one of the largest awarded through the RenoAr energy auction. The Export-Import Bank of China financed 85% (US$332 million) of the project costs, with the provincial government issued green bonds for the remaining 15% (GDPC, 2025; Koop and Pike, 2019). The Cauchari Solar Park was completed in 2020 and transferred to JEMSE in 2023, helping PowerChina to establish itself in Argentina (PowerChina, 2023). After Cauchari, PowerChina has taken more than 10 EPC contracts for solar and wind projects owned by Chinese and non-Chinese companies (See Table 6).

The Cauchari Solar Park is a good example of China's strategic push for renewable energy projects within the "Belt and Road" Initiative, backed by Chinese public development finance institutions (PDFIs) which facilitates the global expansion of the Chinese renewable industry and services (Zhou et al., 2018). However, this type of explicit state-to-state financing or large projects financed by policy banks from China is not the norm for the Chinese participation in the Argentine renewable energy market. Instead, the majority of the Chinese actors involved in solar and wind projects that can be found in the JET Database have a diversified source of finance. For example, the Cafayate solar farm was built by PowerChina under an EPC contract with Canadian Solar, which acquired the project in 2018 and obtained financing through a syndicated loan from the Development Bank of Latin America and the Caribbean (CAF), Banco BICE, and Banco de la Ciudad (CanadianSolar, 2018). The project began operating in 2019. Similarly, the private Chinese company Jinko Solar was awarded the Iglesia-Estancia Guañizuil solar project in San Juan under the RenovAr Program, and financed its construction through IDB Invest, launching commercial operations also in 2019 (Ministerio de Economía, 2019). Additionally, Goldwind received syndicated financing from Santander, CITIC, and Bank of China to develop the Loma Blanca I, II, III, and VI wind farms in Chubut and the Miramar wind farm in Buenos Aires (Sina, 2022). No Chinese PDFI involvement has been observed in financing renewable energy projects since 2019 (Xu et al, 2025).

Although Chinese companies have achieved great success in Argentina, several projects have experienced setbacks. Envision Energy won the auction of four projects in RenovAr Round One (R1). The Cerro Alto project (50MW) was subsequently canceled due to ongoing conflicts with the local Mapuche communities, and the designated capacity was passed on to the Los Meandros project (75MW), which was also canceled later due to lack of financing (Rodríguez, 2022). Out of the four projects that Envision Energy bid on, they only finished two, the García del Río (10MW) and the Vientos del Secano (50MW) wind projects, both in the Buenos Aires Province (Ini, 2019; Municipio de Villarino, 2020). While not categorized strictly under renewable energy due to its scale[5], the Kirchner and Cepernic hydroelectric dams (1,310MW) in Santa Cruz constitutes another prominent Chinese-funded project that was seriously delayed. The project EPC was awarded to a joint venture consisting of the Chinese Gezhouba Group and Argentine firms Electroingeniería and Hidrocuyo in 2013. The dams are owned by the national government through Energía Argentina (Enarsa) and the financing was obtained from Chinese banks, including CDB, ICBC, and Bank of China, totaling US$4.714 billion, with US$1.85 billion already disbursed. Although construction has been disrupted repeatedly for various reasons since the launch of the project over a decade ago, the construction progress in the Cepernic and Kirchner dams is at 42% and 20%, respectively (Diamante, 2024).

Besides directly owning or developing projects through EPC contracts, Chinese companies are also active in providing equipment. For instance, Goldwind's recently signed agreements to supply wind turbines for three wind projects (Aluar's La Flecha, Genneia's Trelew Park, and TotalEnergies's Tierra del Fuego) across the country (Medinilla, 2025).

2. 4. Colombia

Chinese involvement in Colombia's power sector has unfolded in two distinct phases that together chart the evolution of China's global energy strategy. The first phase began in 2008, when the China United Engineering–Dongfang Turbine consortium (CUC-DTC) secured a turnkey contract from Colombian SOE Generadora y Comercializadora de Energía del Caribe (Gecelca) to build the coal-fired Gecelca 3 plant in Córdoba for US$236 million. In 2012, the CUC-DTC consortium requested a one-year extension, triggering a US$75,000 delay penalty (Hernán Peláez, 2013). The Gecelca 3 plant was finally finished in 2015 at a price tag of US$690 million (GEM, n.d.), and the plant is considered the first one in Colombia to apply advanced technology to utilize low-quality coal while reducing harmful emissions (Gecelca, n.d.). Despite the delay with Gecelca 3, in 2013 the Colombian company nevertheless awarded the same Chinese consortium a second 250-MW unit, Gecelca 3.2, for US$430 million (SEMANA, 2015). The project was commissioned in 2018 (PowerTechnology, 2024).

The second phase is characterized by PowerChina emerging as a significant EPC contractor for solar power projects in Colombia. PowerChina's first assignment was the 19.9MW Urrá Solar Park in 2021, for which it was partnered with a local company, Luxim Colombia International Group. The Urrá project is a public-private partnership enterprise developed for the state-owned utility company Urrá SAESP. After running through a US$76 million budget, the project was suspended at 99% completion amid cost overruns and a corruption probe (Infobae, 2025). After this hiccup entering the Colombian market, PowerChina soon multiplied its Colombian footprint by building solar projects for various state-owned and private utility companies: it built Celsia's Palmira III (12.7MW), Andalucía (10MW), and Escobar I-V (128MW), Empresas Públicas de Medellín's (EPM) Tepuy (83MW), Enel Colombia's Guayepo III (80MW), Efigen's Tikuna F1-3 (238MW), and CTG's Baranoa I (Yarumo) (19.9MW), to name a few (JET Database, 2025).

5 In Argentina, according to Law 27191 (National Promotion Regime for the Use of Renewable Sources) of 2015, hydro-projects up to 50MW are considered renewable energy ones.

Table 7 Electricity Projects with Chinese Participation in Colombia

Project Name	Chinese participation	Holding company	Construction	Status	Chinese Ownership since	Source	Capacity - MW
Bosques de Los Llanos I	EPCM	Matrix Renewables	Trina Solar	Operation		Solar	27.0
Bosques de Los Llanos II	EPCM	Matrix Renewables	Trina Solar	Operation		Solar	27.0
Bosques de Los Llanos III	EPCM	Matrix Renewables	Trina Solar	Operation		Solar	28.0
Bosques de Los Llanos IV	EPCM	Matrix Renewables	Trina Solar	Operation		Solar	27.0
Bosques de Los Llanos V	EPCM	Matrix Renewables	Trina Solar	Operation		Solar	25.0
Central Térmica Gecelca 3	EPC	GECELCA	Dongfang Turbine Co. LTDA	Operation		Coal	164.0
Central Térmica Gecelca 3.2	EPC	GECELCA	Dongfang Turbine Co. LTDA	Operation		Coal	270.0
Central Hidroeléctrica Hidroituango	EPC	Empresas Públicas de Medellín (EPM)	PowerChina (Yellow River Engineering Consulting Co.)	Operation		Hydro	2400.0
Atrato Alto basin hydroelectric project (CAA) (Talasa project)	IPP	Global Hydro (CTG) (80%)	China Three Gorges International Co.	Construction	2018	Hydro	170.9
Parque Solar Urrá	EPC	Empresa URRÁ SAESP	Luxpower 2022 (Luxim Ingeniería S.A.S. & Powerchina International Group)	Construction		Solar	19.9
Parque Solar de la Refinería de Cartagena (Reficar)	EPC	Ecopetrol	PowerChina	Operation		Solar	23.0
Ecoparque Solar Providencia	EPC	Ecopetrol	PowerChina	Construction		Solar	1.8
Parque Solar Guayepo III	EPC	Enel Colombia SAESP	PowerChina	Construction		Solar	80.0
Parque solar Tepuy	EPC	Empresas Públicas de Medellín (EPM)	PowerChina	Operation		Solar	83.0
Celsia Solar Palmira III	EPC	Celsia SAESP	PowerChina	Operation		Solar	12.7
Proyecto Solar Andalucía	EPC	Celsia SAESP	PowerChina	Operation		Solar	10.0
Complejo Solar Escobal (I-V)	EPC	Celsia SAESP	PowerChina	Construction		Solar	128.0
Parque Eólico Las Acacias	EPC		PowerChina	Construction		Wind	240.0
Proyecto Solar Baranoa I (Yarumo)	IPP+EPC	China Three Gorges International Co.	PowerChina	Operation	2023	Solar	19.9
Proyecto Solar San Francisco	EPC		PowerChina (Sinohydro)	Construction		Solar	8.2
Proyecto Solar Doña Juana	EPC		PowerChina (Sinohydro)	Construction		Solar	7.7
Planta Solar Tikuna F1	EPC	Efigen	PowerChina	Construction		Solar	59.5
Planta Solar Tikuna F2	EPC	Efigen	PowerChina	Construction		Solar	59.5
Planta Solar Tikuna F3	EPC	Efigen	PowerChina	Construction		Solar	119.0
Proyecto Pétalo de Córdoba II	IPP	Henan BCCY Environmental Energy Co.		Operation	2023	Solar	9.9

Proyecto Pétalo de Sucre I	IPP	Henan BCCY Environmental Energy Co.		Operation	2024	Solar	9.9
Proyecto Petalos de Cesar I	IPP	Henan BCCY Environmental Energy Co.		Operation	2024	Solar	9.9
Relleno Sanitario Los Pocitos-Barranquilla	IPP	Henan BCCY Environmental Energy Co.		Operation	2024	Biomass	5.3

Source: the JET Database (2025).

PowerChina is also involved in a mega-project under construction in Colombia. In 2023, *Empresas Públicas de Medellín* (EPM), another Colombian SOE in the energy sector, selected a Colombian–Chinese joint venture formed by the Yellow River Engineering Consulting Company, a subsidiary of Power China, and the Colombian private builder Schrader Camargo, to complete the final civil works package at Hidroituango (or the Ituango Dam). With a projected 2,400MW output, Hidroituango is Colombia's largest hydroelectric undertaking and is expected to supply 17% of the country's electricity, once it becomes fully operational in 2027 (EPM, 2023; Mercado, 2025). EPM obtained a US$1 billion loan from IDB Invest to partially finance the project. The financing package comprises US$300 million from the IDB Group, US$50 million from the IDB Invest-administered China Co-Financing Fund for Latin America and the Caribbean, and US$650 million from international commercial banks and institutional investors (CDPQ, KFW IPEX, BNP Paribas, ICBC, Sumitomo Mitsui Banking Corporation, BBVA and Banco Santander) (IDB, 2018). The loan was granted right before the dramatic downturn of the relationship between IDB and the Chinese government in 2019, surrounding that year's IDB annual conference (Bull, 2022).

Other Chinese manufacturers now straddle both development and equipment supply. Jinko Solar is supplying modules for Ecopetrol and AES Colombia's Castilla solar park (Jinko, 2019). Trina has finished its EPC contract with Matrix Renewables and built the Los Llanos I-V (82MW) (ENF, 2021). CTG's regional subsidiary headquartered in Bogotá, CTG Latam, has contracted PowerChina to finish the 98-megawatt Baranoa I (Yarumo) solar complex (Xinhua, 2025), signaling the conglomerate's diversification beyond hydro energy. Even the waste-to-energy stage now bears a Chinese imprint: Henan BCCY Environmental Energy operates three 5.3-megawatt biogas units at landfills (BCCY, n.d.).

2. 5. Cross-Cutting Issues and Points of Comparison

Chinese companies have become significant players in the power sectors of Peru, Chile, Argentina, and Colombia, extending across building projects, supplying technology, owning power plants, and operating utility companies. As shown in the database, China's presence is deeply embedded in Latin America's renewable energy sector, well beyond what standard FDI tallies could show. Across the database, Chinese engagement in the four countries' power sectors has demonstrated some commonalities in terms of actors, source of energy, and project finance. Then again, significant differences can also be found in this engagement, exemplifying the leverage of host countries' own policies in energy transition.

One commonality across the four countries is Chinese engagement in hydropower projects, a sector dominated by China's state-owned giants. In Argentina, China Gezhouba Group leads the construction of the twin Kirchner and Cepernic dams (1,310MW); in Colombia, PowerChina (through its subsidiary Yellow River) was brought in to finish the 2,400MW Ituango hydropower megaproject; and in Peru and Chile, China Three Gorges Corporation (CTG) has acquired and developed significant hydro assets. This mirrors the situation in China itself – dams remain the realm of state-owned conglomerates – and indeed most Chinese-built hydro plants abroad are spearheaded by centrally controlled SOEs.

By contrast, in wind and solar energy, a mix of actors has emerged. In the four countries, Chinese private or mixed-ownership companies have taken prominent roles in renewable energy projects. Firms like Goldwind (turbine manufacturer turned project developer), Trina Solar, Jinko Solar, Yingli, Envision Energy, and others have all emerged in wind and solar ventures across the region. In China, these companies are also the current leaders in manufacturing and R&D in wind and solar energy. That said, even in the wind and solar stage, Chinese SOE contractors are never far from the scene – companies such as PowerChina and China Energy Engineering Group often carry out the EPC work. Notably, as of 2024, about 86% of EPC contracts for renewable energy projects in China itself were handled by state-linked builders such as the two aforementioned giants (Beijixing, 2025). This tendency carries over into Latin America, where Chinese and non-Chinese renewable energy investors frequently entrust construction to Power China.

It is worth mentioning that Chinese involvement in hydropower across the four countries is not limited to headline megaprojects. We observed a diverse range of hydro plants in Chinese companies' portfolios. The Kirchner and Cepernic projects in Argentina and the Hidroituango project in Colombia are the only two mega-hydro projects involving Chinese companies. In Peru, CTG owns the 100MW Santa Teresa plant (acquired with Luz del Sur) and the 456MW Chaglla plant, which is already the country's third-largest hydro plant (CTG, n.d.). In Chile, the Rucalhue hydro project, albeit controversial in social and environmental terms (Rios, Figueroa & Freites 2023), will only have an installed capacity of 90 MW. In Colombia, CTG acquired the 71MW Talasa (Cuenca Atrato Alto) hydro project that is yet to be built. Not only in terms of size, but also in sheer numbers, Chinese-involved hydro projects are fewer than those in the wind and solar segments.

Chinese companies penetrated Latin American wind and solar power markets later but expanded swiftly in several countries through a variety of business models. Argentina and Chile saw significant Chinese activity in the utility-scale wind and solar segment during the last decade, while Colombia is now experiencing a newer wave of Chinese participation, and Peru remains a notable outlier where Chinese firms have yet to build any large solar or wind farm. Argentina's renewable energy push, particularly the RenovAr program (2016–2018), provided an entry point: Chinese companies won projects or competitive tenders and also invested via joint ventures. In Chile, the pattern was slightly different: Chinese firms primarily entered the market by acquiring companies that already had assets in the renewable energy sector. SPIC's takeover of Pacific Hydro gave it a portfolio of hydropower plants, and later it shifted its focus to wind and solar. Nevertheless, Chinese technology is present on many Chilean wind and solar projects via turbine and panel sales.

In Colombia, Chinese companies have quickly become involved in the burgeoning solar and wind sector, though so far they act mostly as contractors and suppliers. Colombia only recently began adding large non-hydro renewables, and Chinese firms seized the opportunity to provide expertise. PowerChina has emerged as a key builder of solar farms on an EPC basis for Colombian firms. Chinese developers are now also stepping into ownership roles on a limited scale in Colombia. For example, CTG's Latin America subsidiary recently took on a 19.9MW solar project (Yarumo solar, part of the Baranoa cluster) as an IPP. Peru, by contrast, has so far not seen any large Chinese-built or -owned wind or solar projects – Chinese investors in Peru have focused on hydro and grid assets, and Peru's expansion in the renewable energy sector has been slow in recent years. The absence of Chinese involvement in the solar and wind energy development in Peru reflects a lack of diversification in both the country's grid and in Chinese engagement there. Indeed, Peru's power mix remains dominated by hydro and gas, and its government has held few renewable energy auctions in recent years, resulting in limited opportunities for new players (Serrano and Curi, 2025).

The way Chinese projects are *financed* also shows some common patterns over time. In earlier ventures, especially large public-sector projects, Chinese public development finance institutions (PDFIs) were crucial not only in overcoming technical obstacles and incubating nascent renewable technologies in China (Xu and Gallagher, 2022), but also pivotal in helping Chinese companies to establish themselves in the four countries (Xu et al, 2025). We have observed major loans from China Development Bank (CDB) and the Export-Import Bank of China (CHEXIM), the two most prominent Chinese PDFIs, to various players in the power sector. In Chile, CDB lent funds to an Irish company, Mainstream Renewable Power Ltd., to build the Negrete Cuel Wind Project, equipped with turbines from Xinjiang Gold Wind (AidData, n.d.). In Peru, CDB extended a loan to CTG to build the 206MW San Gabán III hydro project in 2017 (Xinhua, 2017). Also in 2017, in Argentina, CHEXIM provided 85% of project finance to the Argentine SOE JEMSE, to contract PowerChina in building the Cauchari Solar complex (315MW) (BU GDP, 2025). These deals exemplify the state-led model of Chinese participation in the early stage, where projects were built with preferential loans from Beijing to either Chinese companies or local players, such as governments, SOEs, and other domestic and international companies that are willing to engage with Chinese firms in project development.

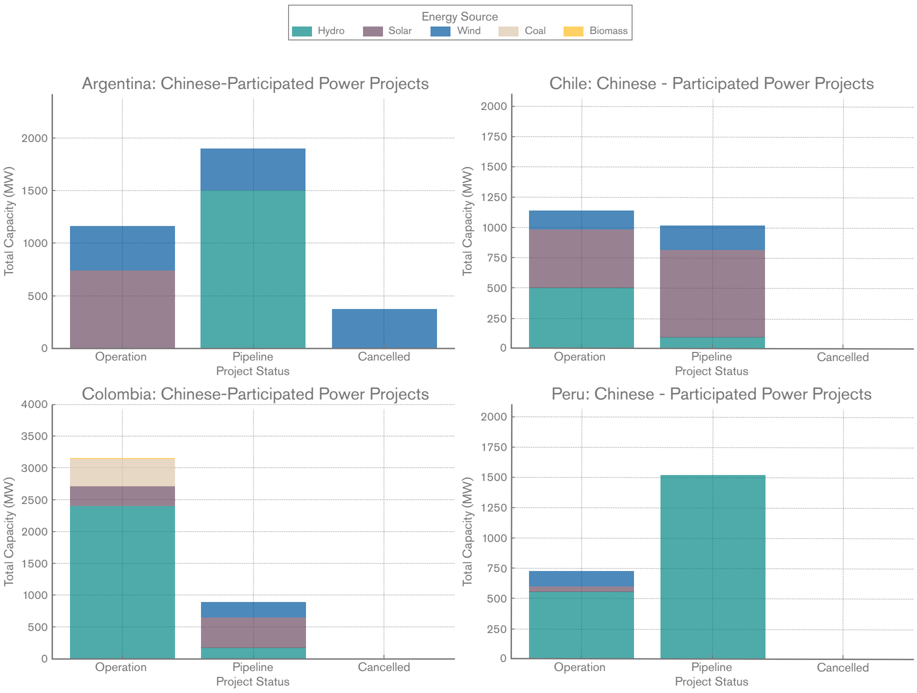
However, this model has not been maintained overtime for most Chinese investments in renewable energy in South America. In Argentina's renewable energy boom and in nearly all Chinese IPP projects in Chile, financing has shifted toward commercial or multilateral sources, often without direct Chinese PDFI involvement. The Chinese ambassador to Argentina once described the environment for Chinese engagement as a combination of "Chinese products and technology, European-North American financing, and the Argentine market." Jinko's solar park, for instance, was funded through IDB Invest, and Goldwind's wind farms secured loans from a syndicate including Spain's Santander and China's own Bank of China and CITIC. In Colombia, the trend towards local financing is even more pronounced. Take Trina's Bosques de Los Llanos EPC contract for example: it was the first time a solar farm project in Colombia was financed locally with a Chinese firm in the lead – Trina was responsible for securing a COP 22.37 billion loan (~US$11.5 million) from Colombian development bank FDN and Banco Davivienda (Sánchez Molina, 2020).

Aside from the commonalities, the extent of Chinese involvement also differs considerably by country, as is the case with the mining sector, showing both differences in resource endowment and host-country agency. In terms of sheer number of projects and megawatts, Colombia and Argentina lead, whereas Peru has the smallest Chinese footprint in generation. Colombia now hosts more than 30 Chinese-involved power projects (mostly solar installations in the tens of megawatts, plus the megaproject Hidroituango, counting as one very large project). Argentina also hosts a long list of projects (25 in the database). Chile falls somewhere in between (17) – Chinese companies control a substantial share of assets (especially via acquisitions), but the number of distinct generation projects involving Chinese firms is moderate. Peru is the outlier: despite receiving billions in Chinese investment through acquisitions of utilities, Peru has seen very few Chinese-partnered generation projects on the ground (San Gabán III being an exception).

The growth trajectory also differs: Chinese activity in Argentina and Peru surged earlier (around 2015–2019) and has since plateaued, whereas in Colombia and Chile, Chinese engagement in renewables has been on an upward trend more recently. Argentina's renewable energy sector boomed under RenovAr but then slowed down after 2019 due to economic and policy shifts, with few new projects for Chinese (or anyone) to invest in lately. After an initial wave of private-sector interest in renewables, Peru has likewise seen a lull in new projects in the late 2010s and early 2020s. After all, Peruvian policymakers see natural gas as a more accessible replacement for other fossil fuels and the increasingly unstable hydropower to power the grid (Serrano and Curi, 2025). Chinese firms in Peru focused on acquisitions instead of greenfield development, which means no big pipeline of new Chinese-built plants is forthcoming. In contrast, due to the lack of fossil fuels, Chilean authorities are keen on adding wind and solar energy capacity each year, and Chinese firms have indicated interest in further investments – for instance, SPIC has plans to expand Pacific Hydro's portfolio. Colombia is in the early stages of its non-hydro renewables rollout, so Chinese companies are still actively involved in projects under construction or recently awarded (solar farms, a few wind projects, plus grid infrastructure).

The composition of Chinese-linked projects also varies (see Chart 2). In Peru and Colombia, a large portion of the Chinese-involved capacity is hydropower. Peru's only Chinese-built generation projects so far are hydro plants. It mirrors Peru's less diversified generation mix. For Colombia, the largest Chinese-participation project is by far Hidroituango (a single hydro plant dwarfing the capacity of all Chinese-built solar projects in the country combined), but after taking it out of the list, we can still observe a strong presence of Chinese companies in other forms of renewable energy endeavors. In Argentina and Chile, wind and solar projects dominate the list of Chinese engagements. Argentina still has the Kirchner–Cepernic hydro project (1.3GW) on its books, but that project has been mired in delays and is currently on hold pending environmental and design modifications. Putting that aside, virtually all other active Chinese projects in Argentina are wind and solar farms. Similarly, Chile has a lot of Chinese companies engaged in non-conventional renewable energy (solar, wind, small hydro). In general, Chinese companies have followed the resource endowments and host country priorities: they are heavy in hydro where it looms large (Andean countries) and focused on wind/solar in the Southern Cone (and increasingly in Colombia) where those resources and market incentives are stronger.

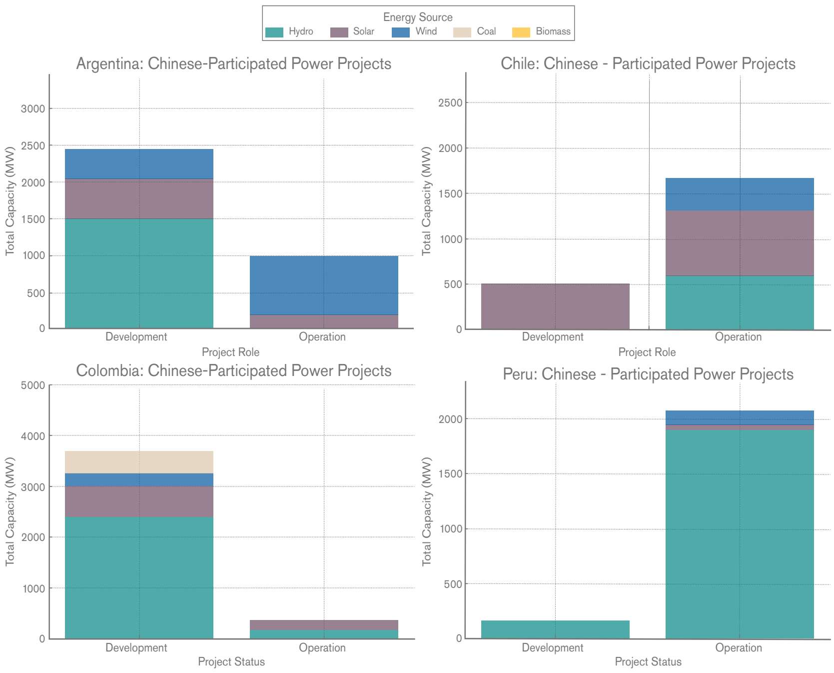
Chart 2. Composition of Power Projects with Chinese Engagement



Source: JET Database (2025)

Another cross-country difference is the predominant mode of Chinese engagement – whether Chinese companies come as EPC contractors or as investors (see Chart 3). Broadly, we see a pattern: In markets where the electricity sector still has significant state ownership or a dominant public utility, Chinese firms usually enter as EPC contractors (building plants for local state-owned companies); in markets that are fully privatized and liberalized, Chinese firms typically enter as investors or owners of assets. For instance, in Argentina and Colombia, many Chinese-participation projects involve a Chinese company building a facility that will be owned and operated by a local entity, such as a state company or a private firm. Argentina's Cauchari solar park is owned by a provincial SOE (JEMSE) and PowerChina only played the role of a builder. Colombia's biggest utility, EPM, owns and operates Hidroituango but hired PowerChina to do critical construction work. Similarly, a number of Colombian power projects owned by local players (like Ecopetrol or Celsia) were developed via EPC contracts with Chinese firms.

Chart 3. Mode of Chinese Engagement in Power Projects



Source: JET Database (2025)

By contrast, in Chile and Peru, which have liberalized power markets and where private ownership of energy generation firms is the norm, Chinese companies have more often entered through equity investment and acquisition. In Chile, all major generation is private, so Chinese companies like CTG and SPIC acquired stakes in energy generation companies (or bought entire companies outright) to gain a foothold – essentially acting as independent power producers (IPPs) in a competitive market. In Peru, likewise, CTG and China Southern Grid have acquired distribution and generation assets directly, making them owners of utilities rather than just contractors. The result is that Chinese firms own significant portions of the power sector in Chile and Peru, whereas in Argentina and Colombia, their involvement is frequently a step removed (as builders or minority partners rather than outright owners). There are, of course, exceptions – Argentina does have Chinese IPPs (Goldwind owns its wind farms), and Colombia has seen small private Chinese IPPs too (like the 9.9MW solar plants that Henan BCCY operates). But overall, we see more EPC in Argentina and Colombia, and more IPP in Peru and Chile, reflecting the differing openness and structure of the markets.

Conclusions

Our database reveals nuanced and significant Chinese involvement in the renewable energy value chains within Peru, Chile, Argentina, and Colombia. China's presence spans multiple stages, including mineral extraction—particularly lithium and copper—renewable energy generation through solar, wind, and hydroelectric projects, as well as critical infrastructure for electricity distribution. This multifaceted engagement underscores Chinese companies' strategic interests in securing critical minerals and actively participating in the region's energy transition. It also manifests the leverage of the four countries' policies in related sectors in shaping the investment strategies and daily operations of Chinese companies.

A distinctive feature of Chinese engagement is the division of roles between state-owned enterprises (SOEs) and private firms throughout the value chain. In mineral extraction, SOEs primarily dominate investments in copper and gold extraction, reflecting China's strategic emphasis on securing key metals essential for infrastructure and technological advancement. Conversely, private Chinese enterprises largely predominate in lithium mining, driven by market opportunities and responsive to varied regulatory environments. In renewable energy project development and operation, private firms typically supply technology and equipment for wind and solar energy, while SOEs are heavily involved in hydropower ventures and project EPC.

Another significant characteristic is the adaptability of Chinese companies in different market environments and regulatory landscapes across the four countries. In the lithium sector, private Chinese firms have demonstrated notable flexibility, swiftly adapting to diverse regulatory environments and decentralized governance structures, which are particularly evident in Argentina. In power project development, Chinese firms have demonstrated their ability to adapt to different project scales, regulatory demands, and niches opened in the national market, effectively taking on roles as investors, contractors, or equipment and services suppliers, and managing both large-scale national infrastructure projects and smaller, regional endeavors.

Considering these distinctive features, Latin American stakeholders, especially national governments, play a critical role in shaping outcomes from Chinese involvement in their value chains. Latin American countries have so far demonstrated strong resolve in subjecting Chinese investments to serious oversight, aiming to channel these investments towards long-term development goals. For example, Peru's active regulatory oversight in market competition, with interventions by agencies such as Indecopi, has increased transparency and competition, positively influencing Chinese corporate practices.

However, in the environmental and social regulations governing mining and infrastructure projects related to the energy transition, there is still much to be done. Most Latin American countries hold high ESG standards for foreign investment, but in practice, those regulations have not been executed rigorously for various reasons (Merino, 2026; Rehner et al, 2026; González and Trevignani, 2026b; Defelipe and Díaz, 2026). Chinese companies, particularly SOEs owned by the central government and under the supervision of SASAC, have made significant commitments to operate under high ESG standards, endorsed by China's government. This creates an excellent opportunity for host countries to strengthen their rule of law in ESG adherence, pushing Chinese investments beyond basic compliance towards comprehensive social and environmental governance. For researchers, longitudinal analysis and additional empirical research are required to determine the extent to which ownership structure correlates with superior ESG performance.

Chinese engagement has been instrumental in driving the expansion of renewable energy in the region, fostering job creation, upgrading infrastructure, and supporting the achievement of global energy transition goals. Initially, this progress was made possible through strong backing from Chinese PDFIs and state-owned commercial banks. Up until 2019, Chinese PDFIs were vital in enabling Chinese companies to establish a foothold across the four countries, not only by providing loans to local firms to contract Chinese companies for project construction or to procure Chinese equipment and services, but also through direct lending to Chinese companies investing locally. Since 2019, however, the involvement of Chinese PDFIs has wound down, with multinational development finance institutions and commercial banks taking a larger role in project financing. As renewable energy technologies have become more affordable and profitability has grown, even local financial institutions have increasingly stepped in to provide funding.

Besides the achievements, significant gaps remain regarding technology transfer and the development of local manufacturing capabilities. This can largely be attributed to China's capacity for manufacturing renewable energy equipment, which is boosted by the vast domestic demand and China's industrial policy to lead the production of this equipment. Take solar PV as an example: In 2023 alone, 90% of investments in PV manufacturing were made in China, and manufacturing costs were 30-65% lower compared to those in the United States and Europe (IEA, 2024). This enduring advantage effectively removes incentives for Chinese firms to localize manufacturing in Latin America. Nonetheless, Latin American stakeholders often express the expectation for Chinese companies to engage more actively in technology transfer, local workforce training, and supporting domestic industries to enhance the overall sustainability and equity of investments.

Looking forward, the findings of this study offer cautious optimism about the trajectory of Chinese involvement in Latin America's renewable energy sectors. Both Chinese investors and Latin American stakeholders increasingly demonstrate a willingness to adapt policies, enhance stakeholder engagement, and raise regulatory standards. Sustaining this positive momentum will require establishing and sustaining an ongoing dialogue, improved transparency, and stronger accountability mechanisms. Ultimately, this collaborative approach can ensure that Chinese investments effectively contribute to equitable and sustainable growth across the region, serving as a global model for responsible international cooperation in the just energy transition.

Bibliography

Ahumada Benítez, E. (2008, 24 de septiembre). China y Chile llegan a acuerdo sobre propiedad de mina Gaby. Observatorio Parlamentario. Recuperado de: https://www.bcn.cl/observatorio/asiapacifico/noticias/china-chile-acuerdo-propiedad-mina-ex-gaby

AidData. (s. f.). CDB provides $330 million loan to Codelco-Minmetals JV company Copper Partners Investment Company Ltd. https://china.aiddata.org/projects/37231/

AidData. (s. f.). CDB provides $118 million loan for Toromocho Project [Proyecto financiado]. Recuperado de: https://china.aiddata.org/projects/96312/

AidData. (n.d.). CDB *provides a $52 million loan for the 33MW Negrete Cuel Wind Project* [Project file]. AidData. Retrieved from: https://china.aiddata.org/projects/39065/

Barrera, P. (2020, February 10). *Ganfeng increases stake in Lithium Americas' Cauchari-Olaroz*. Investing News Network. Retrieved from: https://investingnews.com/daily/resource-investing/battery-metals-investing/lithium-investing/ganfeng-increases-stake-lithium-americas-cauchari-olaroz/

Barrick Gold Corporation. (2017, April 6). *Barrick anuncia Acuerdo de Cooperación Estratégica con Shandong Gold* [Press release]. Retrieved from: https://s25.q4cdn.com/322814910/files/press-release/2017/Barrick-anuncia-Acuerdo-de-Cooperacion-Estrategica-con-Shandong-Gold.pdf

Beijixing. (2025, January 13). 超183GW光伏电站EPC定标. 北极星太阳能光伏网. [Press note]. Retrieved from: https://mguangfu.bjx.com.cn/mnews/20250113/1422321.shtml

BCCY (n.d.). *Historia BCCY Córdoba*. BCCY Colombia Holding web site. Retrieved from: https://bccycolombia.com/cordoba

Bonifaz, J.L. (2023). Distribución eléctrica en Lima Metropolitana: ¿Monopolio chino? Lima: Centro de Competencia (CeCo). Universidad Adolfo Ibáñez. https://centrocompetencia.com/distribucion-electrica-en-lima-metropolitana-monopolio-chino/#ing

Boston University Global Development Policy Center. (2025). *China's Overseas Development Finance Database*. Retrieved from: https://www.bu.edu/gdp/chinas-overseas-development-finance/

Bull, B. (2022). *Caught in the crossfire: The Inter-American Development Bank and US–China rivalry*. Global China Pulse. Retrieved from: https://thepeoplesmap.net/globalchinapulse/inte-american-development-bank-and-us-china-rivalry/#:~:text=However%2C%20it%20is%20also%20the,of%20contestation%20and%20superpower%20rivalry.

Canadian Solar. (2018, December 4). *Canadian Solar secures US$50 million long-term financing for a 100.1MWp solar power project in Argentina* [Press release]. Retrieved from: https://investors.canadiansolar.com/news-releases/news-release-details/canadian-solar-secures-us50-million-long-term-financing-1001-mwp

Chávez, Y. (2021). El reasentamiento de la ciudad de Morococha: las relaciones de poder en la vieja y nueva Morococha (Master's Degree Thesis, FLACSO).

China Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters (中國五礦化工進出口商會, CCCMC). (2022, July 18). 豪掷 4.58 亿元！紫金矿业竞得西藏珠峰 1600 万股股权 [Institutional news]. 中国五矿化工进出口商会. Retrieved from: https://www.cccmc.org.cn/hyzj/hydt/ff80808181489d3201821f682d891475.html

China Three Gorges Corporation (CTG). (2018, February 13). *Peru's San Gaban III Project Receives Its First Cash Infusion*. CTG. Retrieved from: https://www.ctg.com.cn/ctgenglish/news_media/news37/2024080621151699058/index.htm

Chinese Goverment. (2016). Gov.cn [Official government website]. Retrieved from: https://www.gov.cn/xinwen/2016-10/18/content_5120505.htm

Colombian Goverment. (n.d.). *Código Sustantivo del Trabajo*. [Legal document]. Retrieved from: https://www.cancilleria.gov.co/sites/default/files/Normograma/docs/pdf/codigo_sustantivo_trabajo_pr002.pdf

CTG (n.d.). *Central Hidroeléctrica Chaglla* [Webpage]. Retrieved from: https://egh.com.pe/hidroelectrical/

De Clercq, G. (2015). *Portugal's EDP springboard for China Three Gorges investment abroad* [News article]. Reuters. Retrieved from: https://www.reuters.com/article/world/portugal-s-edp-springboard-for-china-three-gorges-investment-abroad-idUSKBN0OY1HT/

DeFelipe, C., & Díaz, J. (2026). *América Latina, China y una transición energética justa: el caso de Colombia* (América Latina, China y una Transición Energética Justa: Serie de Documentos de Trabajo). Universidad del Pacífico Centro de Estudios sobre China y Asia-Pacífico, Boston University Global Development Policy Center.

Diamante, S. (2024, February 7). *La construcción de las represas de Santa Cruz está frenada desde diciembre a la espera del financiamiento de China* [News article]. La Nación. Retrieved from: https://www.lanacion.com.ar/economia/la-construccion-de-las-represas-de-santa-cruz-esta-frenada-desde-diciembre-a-la-espera-del-nid07022024/

EDP – Energias de Portugal, S.A. (2022, December 23). EDP completes the sale of its 50 % stake in Hydro Global to CTG. *Market Notifications*. Retrieved from: https://www.edp.com/en/investors/investor-information/market-notifications/edp-completes-sale-its-50-stake-hydro-global-ctg

El Peruano. (2018, August 1). Ampliación en Shougang elevará producción de hierro. El Peruano.

Empresas Públicas de Medellín (EPM). (2023, October 11). *EPM awards the civil works contract for the second stage of Hidroituango* [Press release]. Retrieved from: https://www.epm.com.co/content/dam/epm/investors/relevant-information/Relevant%20Information%202023/CRW256436-oct_11.pdf

ENF Solar. (2021, January 27). 天合光能哥伦比亚 82 兆瓦光伏电站成功并网 [News article online]. Retrieved from: https://fr.enfsolar.com/news/17366/天合光能哥伦比亚-82-兆瓦光伏电站成功并网

Fuertes, V. (2023). ¿Cómo funciona el mercado de electricidad en el Perú y qué implica la venta de Enel a una empresa china? RPP. https://rpp.pe/economia/economia/como-funciona-el-mercado-de-electricidad-en-el-peru-y-que-implica-la-venta-de-enel-a-una-empresa-china-noticia-1479810?ref=rpp

Foreing Ministry. (2018, February 8). 驻哥伦比亚大使李念平对中资企业承包工程项目进行安全巡视. Ministry of Foreign Affairs of the People's Republic of China.

Gallagher, K.P. (2016). The China triangle: Latin America's China boom and the fate of the Washington Consensus. Oxford University Press.

GECELCA. (n.d.). GECELCA: *Soporte técnico de Colombia*. [Business Unit Section]. Retrieved from: https://gecelca.com.co/en/unidades-de-negocio/generacion-2/

Gestión. (2024, December 3). *Pan American cierra venta de mina La Arena por US$ 245 mllns a Zijin Mining*. Gestión. Retrieved from Gestión: https://gestion.pe/economia/empresas/pan-american-cierra-venta-de-mina-la-arena-por-us-245-mllns-a-zijin-mining-zijing-mining-group-mina-de-oro-la-libertad-empresas-mineria-noticia/

Global Development Policy Center (GDPC). (2025). *China's Overseas Development Finance Database*. Boston University. Retrieved from: https://www.bu.edu/gdp/chinas-overseas-development-finance/

Global Energy Monitor (GEM). (n.d.). *Gecelca 3 power station. In: Global Energy Monitor* (GEM Wiki). Retrieved from https://www.gem.wiki/Gecelca_3_power_station

González-Vicente, R. (2022). In the name of the nation: Authoritarian practices, capital accumulation, and the radical simplification of development in China's global vision. Globalizations, 1041-1056. https://doi.org/10.1080/14747731.2022.2121061

Irwin, A., & Gallagher, K.P. (2013). Chinese mining in Latin America: A comparative perspective. *Journal of Environment and Development*, 22(2), 207-234.

Gobierno de la República Argentina. (2019, May 10). *Se inauguró el Parque Solar Iglesia – Estancia Guañizuil en San Juan*. Argentina.gob.ar. Retrieved from: https://www.argentina.gob.ar/noticias/se-inauguro-el-parque-solar-iglesia-estancia-guanizuil-en-san-juan

González, J., & Trevignani, M. (2026a). *Gobernanza socioambiental y presencia china: el caso de Argentina* (América Latina, China y una Transición Energética Justa: Serie de Documentos de Trabajo). Universidad del Pacífico Centro de Estudios sobre China y Asia-Pacífico, Boston University Global Development Policy Center.

González, J., & Trevignani, M. (2026b). *Transición energética, cadenas de valor y presencia china: el caso de Argentina* (América Latina, China y una Transición Energética Justa: Serie de Documentos de Trabajo). Universidad del Pacífico Centro de Estudios sobre China y Asia-Pacífico, Boston University Global Development Policy Center.

González-Vicente, R. (2022). In the name of the nation: Authoritarian practices, capital accumulation, and the radical simplification of development in China's global vision.

Government of Canada. (2022, November 2). *Government of Canada orders the divestiture of investments by foreign companies in Canadian critical minerals companies* [Institutional communiqué]. Innovation, Science and Economic Development Canada. Retrieved from: https://www.canada.ca/en/innovation-science-economic-development/news/2022/10/government-of-canada-orders-the-divestiture-of-investments-by-foreign-companies-in-canadian-critical-mineral-companies.html

IDB (2018, January 4). *IDB Invest sings largest renewable energy project in Colombia.* [Communiqué]. Inter-American Development Bank. Retrieved from: https://www.iadb.org/en/news/idb-invest-signs-largest-renewable-energy-project-colombia#:~:text=%241%20billion%20loan%20to%20EPM,hydropower%20project%20in%20the%20country.

International Energy Agency. (2024). *Advancing clean technology manufacturing: An energy technology perspectives special report*. International Energy Agency. https://iea.blob.core.windows.net/assets/7e7f4b17-1bb2-48e4-8a92-fb9355b1d1bd/CleanTechnologyManufacturingRoadmap.pdf

International Renewable Energy Agency. (2024). *Solar PV supply chains: Technical and ESG standards for market integration*. Abu Dhabi: International Renewable Energy Agency. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2024/Sep/IRENA_Solar_PV_supply_chains_technical_ESG_standards_2024.pdf

Infobae (2025, March 8). *Siguen los escándalos de un proyecto solar en Colombia, consorcio perteneciente a amigos de hijo de Petro* [News article]. *Infobae*. Retrieved from: https://www.infobae.com/colombia/2025/03/08/siguen-los-escandalos-de-un-proyecto-solar-en-colombia-consorcio-perteneciente-a-amigos-de-hijo-de-petro/

Ini, L. (2019, November 27). *La china Envision Energy inaugura su primer proyecto eólico en el país. Energías-Renovables.* Retrieved from: https://www.energias-renovables.com/eolica/la-china-envision-energy-inaugura-su-primer-20191127

Indecopi (2024). El Indecopi autoriza con condiciones la operación de adquisición de Enel Distribución por parte de China Southern Power Grid International. https://www.gob.pe/institucion/indecopi/noticias/902252-el-indecopi-autoriza-con-condiciones-la-operacion-de-adquisicion-de-enel-distribucion-por-parte-de-china-southern-power-grid-international

Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (Indecopi). (2024[a], February 5). *Indecopi autoriza con condiciones la operación de adquisición de Enel Distribución por parte de China Southern Power Grid International* [Institutional communiqué]. Retrieved from: https://www.gob.pe/institucion/indecopi/noticias/902252-el-indecopi-autoriza-con-condiciones-la-operacion-de-adquisicion-de-enel-distribucion-por-parte-de-china-southern-power-grid-international

Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (Indecopi). (2024b, October 10). *Resolución 14-2024/2024* – CLC. GOB.PE. Retrieved from: https://www.gob.pe/institucion/indecopi/informes-publicaciones/6099686-resolucion-14-2024-2024-clc

Investing News Network. (2023, May 17). *Ultra lithium sells laguna verde for share stake in power minerals*. [Financial news]. *Investing News*. Retrieved from: https://investingnews.com/ultra-lithium-sells-laguna-verde-for-share-stake-in-power-minerals/

Gestión. (2025, April 28). *Pampa del Pongo avanza: Jinzhao plantea 32 cambios en mina por US$ 1,798 millones*. Gestión. https://gestion.pe/economia/empresas/pampa-del-pongo-avanza-jinzhao-plantea-32-cambios-en-mina-por-us-1798-millones-noticia/

González, J. (2024). *Chinese investments in Argentina's lithium sector: Economic development implications amid global competition. The Extractive Industries and Society, 20,* Article 101551 Retrieved from: https://www.sciencedirect.com/science/article/abs/pii/S2214790X24001473

González, J. (2021, December). *How Argentina pushed Chinese investors to help revitalize its energy grid* [Public policy report]. Carnegie Endowment for International Peace. Retrieved from: https://carnegie-production-assets.s3.amazonaws.com/static/files/Jauregui_Argentina_China_final.pdf

JCHX Mining Management Co., Ltd. (n.d.). *Company profile* [Corporate profile]. Retrieved from: https://www.jchxmc.com/?about_109.html

Jinchengxin Mining Management Co., Ltd. (2025, May 8). 关于拟收购哥伦比亚CMH公司5%股权并取得其控制权的补充公告. 金诚信矿业管理股份有限公司. Retrieved from: https://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2025/2025-5/2025-05-09/11097397.PDF

JinkoSolar Holding Co., Ltd. (2019, December 18). *JinkoSolar supplies its high efficiency modules to AES Colombia and Ecopetrol for the construction of the 21MWp PV project, Castilla Solar, in Colombia* [Press release]. JinkoSolar. https://www.jinkosolar.com/en/site/newsdetail/1296

Kaplan, S. (2014). The China boom in Latin America: An end to austerity. Working Papers 2014-19. The George Washington University, Institute for International Economic Policy.

Koop, F., & Pike, L. (2019, February 22). *China builds Latin America's largest solar plant.* Dialogue Earth. Retrieved from: https://dialogue.earth/en/energy/23529-china-builds-latin-americas-largest-solar-plant/

Li. (2025, January 9). 碳酸锂行业集中度有望提升 [Economic news]. 上海证券报 (via: 证券时报· 产经). Retrieved from: https://www.stcn.com/article/detail/1485819.html

Lutz, J. (2022, November 4). *Ultra Lithium, Zangge Mining agree to terminate investment agreement following Canadian government order* [Financial news]. *The Deep Dive*. Retrieved from: https://thedeepdive.ca/ultra-lithium-zangge-mining-agree-to-terminate-investment-agreement-following-canadian-government-order/

Medinilla, M. (2025, April 9). *Goldwind apunta a cerrar 400MW con soluciones de financiamiento integradas* [Article on a specialized website]. Energía Estratégica. Retrieved from: https://www.energiaestrategica.com/goldwind-apunta-a-cerrar-400-mw-con-soluciones-de-financiamiento-integradas/

Mercado, D. (2025, May 4). *Lo que falta para limpiar la casa de máquinas de Hidroituango y comenzar a instalar las últimas cuatro turbinas*. El Tiempo. Retrieved from: https://www.eltiempo.com/colombia/medellin/lo-que-falta-para-limpiar-la-casa-de-maquinas-de-hidroituango-y-comenzar-a-instalar-las-ultimas-cuatro-turbinas-3450307

Merino, R. (2026). *Gobernanza socioambiental e inversiones chinas: el caso de Perú* (América Latina, China y una Transición Energética Justa: Serie de Documentos de Trabajo). Universidad del Pacífico Centro de Estudios sobre China y Asia-Pacífico, Boston University Global Development Policy Center.

Ministerio de Economía. (2025, January). *Informe mensual: Exportaciones mineras de Argentina.* Dirección Nacional de Promoción y Economía Minera, Subsecretaría de Desarrollo Minero. Retrieved from: https://www.argentina.gob.ar/sites/default/files/2025.01_exportaciones_mineras_en_argentina.pdf

Ministerio de Economía. (2024, May). *Informes de cadena de valor: Minería: litio* (Year 9, N.° 72). Secretaría de Política Económica. Retrieved from: https://www.argentina.gob.ar/sites/default/files/informe_sectorial_litio_2024-2.pdf

Ministerio de Energía y Minas. (2025). *Cartera de proyectos de inversión minera 2025*. https://cdn.www.gob.pe/uploads/document/file/8000189/6722917-cpim-2025.pdf?v=1747778840

Ministerio de Minas y Energía de Colombia. (2021, October 21). *La ruta de la nueva minería en Colombia*: Por un mundo más verde [Institutional presentation]. Retrieved from: https://www.minenergia.gov.co/static/mineriaco/src/document/Presentacion-MineriaCO-211021.pdf

MINING.COM. (2020, October 23). *Buritica gold mine in Colombia officially opens [News article]. MINING.COM*. Retrieved from: https://www.mining.com/web/buritica-gold-mine-in-colombia-officially-opens/

MINING.COM (2021, September 21). *International Lithium sells remaining stake in Mariana project to Ganfeng. Mining.com*. Retrieved from: https://www.mining.com/international-lithium-sells-remaining-stake-in-mariana-project-to-ganfeng.?amp=1

Ministry of Finance of the People´s Republic of China. (2024, May 22). 关于征求《企业可持续披露准则——基本准则（征求意见稿）》意见的函 [Official notice]. Retrieved from: https://kjs.mof.gov.cn/gongzuotongzhi/202405/t20240527_3935674.htm

Ministry of Commerce of the People's Republic of China (MofCom). (2013, April 16). 商务部公告2013年第20号 关于附加限制性条件批准嘉能可国际公司收购斯特拉塔公司经营者集中反垄断审查决定的公告. Retrieved from: https://fldj.mofcom.gov.cn/article/ztxx/201304/20130400091222.shtml

Municipio de Villarino. (2020, November 26). *Se inauguró Vientos del Secano, el segundo parque eólico en Villarino*. Municipio de Villarino. Retrieved from:

https://www.villarino.gob.ar/2020/11/26/bevilacqua-inauguro-el-segundo-parque-eolico-en-villarino

Munita, I. (2025, August 11). Autoridad antimonopolios de China decide pausar revisión de acuerdo entre Codelco y SQM para explotación de litio en Salar de Atacama. The Clinic. Retrieved from: https://www.theclinic.cl/2025/08/11/autoridad-antimonopolios-de-china-decide-pausar-revision-de-acuerdo-entre-codelco-y-sqm-para-explotacion-de-litio-en-salar-de-atacama/?fbclid=IwQ0xDSwMHbSRleHRuA2FlbQIxMQABHsWK_OEJ4rYRZZBBZ2_dX1mDj1O4wRYO4z4Wet5QrDbp-8BFja4WeknQwFy5_aem_9vtQ9T5TgwoBqwCe3Zrgnw

Observatory of Economic Complexity. (2025). Chile. OEC. Retrieved from: https://oec.world/en/profile/country/chl

Osinergmin. (2024). Información Técnica de Proyectos de Centrales de Generación de Energía Eléctrica No Convencional https://web.archive.org/web/20240904170429/https://www.osinergmin.gob.pe/seccion/centro_documental/electricidad/Documentos/Publicaciones/Compendio-Proyectos-CGENC-EPO-aprobados-COES.pdf

Peláez, J. H. (2013, August 8). *El cuento chino de los mil días* [Analysis column]. *La República*. Retrieved from: https://www.larepublica.co/analisis/jorge-hernan-pelaez-500047/el-cuento-chino-de-los-mil-dias-2048171

PowerChina. (2020, February 14). 邹肖力大使致信祝贺中国电建签署阿根廷2个光伏项目合同. PowerChina. Retrieved from: https://www.powerchina-intl.com/gszx/1594.html

PowerChina. (2023, October 26). *Cauchari solar park phase I handed over in Argentina.* [News article online]. PowerChina. Retrieved from: https://en.powerchina.cn/2023-10/26/c_828607.htm

Power Technology. (2024, October 21). Power plant profile: Gecelca 3.2 power plant, Colombia [Technical article]. Retrieved from https://www.power-technology.com/data-insights/power-plant-profile-gecelca-3-2-power-plant-colombia/

PricewaterhouseCoopers International Limited. (2024). Mine 2024: 21st edition: Preparing for impact. [Corporate report]. PwC. Retrieved from: https://www.pwc.com/gx/en/mining/assets/pwc-global-mine-2024.pdf.

PricewaterhouseCoopers International Limited. (2019). Mine 2019: Resourcing the future [Corporate report]. PwC. Retrieved from: https://www.pwc.com/id/en/industry%20sectors/EUM/mine-report-2019-id.pdf

ProInversión. (2022, March 25). *Peru approves expansion of Las Bambas copper mine*. Invest in Peru. Retrieved from: http://investinperu.pe/en/invest/detail-news/peru-approves-expansion-of-las-bambas-copper-mine

Ray, R. & Batista, P.H. (2021). China-Latin American economic bulletin, 2020 edition. *Boston: Global Development Policy Center*. https://www.bu.edu/gdp/files/2020/03/GCI-Bulletin_2020.pdf

Rehner, J., Lorie, A., & Muñoz, F. (2023, October 30). *Extracción y Procesamiento de Litio en Chile y la Participación de China* [Case study]. ICLAC – Núcleo Milenio Impactos de China en América Latina. Retrieved from: https://iclac.cl/publicaciones/case-report/extraccion-y-procesamiento-de-litio-en-chile-y-la-participacion-de-china/

Rehner, J., Freites, A., Lorie, A., & Atienza, M. (2026a). *Gobernanza socioambiental y presencia china: el caso de Chile* (América Latina, China y una Transición Energética Justa: Serie de Documentos de Trabajo). Universidad del Pacífico Centro de Estudios sobre China y Asia-Pacífico, Boston University Global Development Policy Center.

Reuters. (2022, February 4). *China's Zijin Mining to invest $380 mln in Argentina lithium plant. Reuters*. Retrieved from: https://www.reuters.com/article/business/chinas-zijin-mining-to-invest-380-mln-in-argentina-lithium-plant-idUSL6N2UF06P/#:~:text=Last%20year%2C%20Zijin%20purchased%20Canada%27s,3Q%29%20project

Reuters. (2025, January 20). *China's Zijin restarts gold production at major Colombian mine after attack* [News article]. Reuters. Retrieved from: https://www.reuters.com/markets/commodities/chinese-miner-zijin-restarts-gold-production-major-colombian-project-following-2025-01-20/

Reuters. (2008, April 8). *CRU-Codelco no está obligada a vender Gaby a MinMetals: ex pdte*. Reuters. https://www.reuters.com/article/business/cru-codelco-no-est-obligada-a-vender-gaby-a-minmetals-ex-pdte-idUSN08377048/

Reuters. (2014, July 31). Glencore reaps $7 billion from Las Bambas mine sale to China's MMG. *Reuters*.

Reuters. (2023, June 2). *Operations at Zijin Colombia mine partially halted after attacks*. [News article]. Reuters. Retrieved from: https://www.reuters.com/world/americas/operations-zijin-colombia-mine-partially-halted-after-attacks-2023-06-02/

Reuters. (2022, February 9). 中国中冶挂牌出售中冶阿根廷矿业70%股权及债权，转让底价约6.5亿元人民币 [Online article]. Reuters. Retrieved from: https://www.reuters.com/article/markets/asia/7065-idUSL4S2UK209/

Reuters. (2024, April 10). Protesters blockade Peru's Las Bambas mine after talks fall through. Reuters. Retrieved from: https://www.reuters.com/world/americas/protesters-blockade-perus-las-bambas-mine-after-talks-fall-through-2024-04-10/?utm_source=chatgpt.com

Reuters. (2025, April 24). Chile regulator greenlights Codelco-SQM lithium joint venture. Retrieved from: https://www.reuters.com/business/energy/chile-regulator-greenlights-codelco-sqm-lithium-joint-venture-2025-04-24/#:~:text=SANTIAGO%2C%20April%2024%20(Reuters),a%20major%20investor%20in%20SQM.

Rodríguez, N. (2022, August 7). *Plaza Huincul quiere recuperar el parque eólico. Minuto Neuquén*. Retrieved from: https://www.minutoneuquen.com/neuquen/2022/8/7/plaza-huincul-quiere-recuperar-el-parque-eolico-318139.html

Sanborn, C. (2009). China INC., las industrias extractivas y el Perú: Un estudio exploratorio. In: C. Sanborn & V. Torres (Eds.), *La economía china y las industrias extractivas: desafíos para el Perú* (pp. 225-379). Fondo Editorial de la Universidad del Pacífico.

Sanborn, C., & Chonn, V. (2014). Making way for mines: Chinese investment in Peru. *ReVista: Harvard Review of Latin America*, Winter, XIII(2).

Sanborn, C., & Chonn, V. (2016). La inversión china en la industria minera peruana: ¿Bendición o maldición? In: R. Ray, K.P. Gallagher, A. López, & C. Sanborn (Eds.), *China en América Latina: lecciones para la cooperación sur-sur y el desarrollo sostenible* (1.ª ed., pp. 217-269). Universidad del Pacífico/Boston University.

Sanborn, C., & Xie, W. (2019, March 9). The challenges to Chinese extractive investment in Latin America: A south-south conversation. Columbia Center on Sustainable Investment. https://ccsi.columbia.edu/news/challenges-chinese-extractive-investment-latin-america-south-south-conversation.

Sanborn, C., Pareja, A. & Quispe, D. (2024). De Marcona a Chancay: La Presencia Económica y Empresarial China en el Perú, 1992-2023. Lima: Centro de Estudios sobre China y Asia-Pacífico. Universidad del Pacífico.

Sánchez, P. (2020, March 13). *Trina Solar suministrará los módulos y seguidores al primer parque solar financiado por el gobierno en Colombia*. PV Magazine. Retrieved from: https://www.pv-magazine-latam.com/2020/03/13/trina-solar-suministrara-los-modulos-y-seguidores-al-primer-parque-solar-financiado-por-el-gobierno-en-colombia/

Semana. (2015, July 11). *El "cuento chino" de la energía de Gecelca*. [Newspaper article]. Semana. Retrieved from: https://www.semana.com/nacion/articulo/gecelca-obras-retrasadas-la-costa-caribe-sin-energia/434389-3/

Serrano, S. & Curi, M. (2025) Transición energética, diversificación económica y presencia china: El caso de Perú. Proyecto JET China–LAC, Universidad del Pacífico & Boston University. (Forthcoming report).

Servicio Nacional de Certificación Ambiental para las Inversiones Sostenibles – Senace. (2025, April 27). *Senace aprobó MEIA-d de Mina Pampa del Pongo* [News article]. Gob.pe. Retrieved from: https://www.gob.pe/institucion/senace/noticias/1156636-senace-aprobo-meia-d-de-mina-pampa-del-pongo

Sempra Energy. (2020, June 9). *Sempra Energy and State Grid International Development target to close sale of Chilquinta Energía in Chile by June 24* [Press release]. Retrieved from: https://www.sempra.com/sempra-energy-and-state-grid-international-development-target-close-sale-chilquinta-energia-chile

Shanghai Metals Market. (2024, September 8). 中国盐湖集团来了！中国五矿牵头成立拟百亿收购盐湖股份 [Economic news]. *SMM*. Retrieved from: https://news.smm.cn/news/102944053

Shougang Hierro Perú S.A.A. (2024). *Memoria anual 2023*. Retrieved from: https://www.smv.gob.pe/ConsultasP8/temp/Memoria%20Anual%202023%20-%20SHP.pdf

Sina. (2025, March 31). 二代接班首年，天齐锂业亏损79亿，造史上最差业绩！ [Financial news]. 新浪财经. Retrieved from: https://finance.sina.com.cn/roll/2025-03-31/doc-inerqfek3702788.shtml

Sina. (2022, May 8). 金风科技获境外2.7亿美元绿色银团贷款 用于阿根廷风电项目建设. Sina Finance. Retrieved from: https://finance.sina.cn/2022-05-08/detail-imcwipii8702490.d.html

Sina. (2012, August 28). 中冶阿根廷铁矿扭亏困难 海外三矿同陷困境. 新浪财经). https://finance.sina.cn/sa/2012-08-28/

detail-ikftssan6678157.d.html?from=wap

State-owned Assets Supervision and Administration Commission of the State Council (SASAC). (2023, September 9). 新华社：国资央企探路ESG建设 推动实现高质量发展. [Institutional guidance reviews]. Retrieved from: http://www.sasac.gov.cn/n2588025/n2588139/c28868506/content.html

State-owned Assets Supervision and Administration Commission of the State Council (SASAC). (2024, June 4). 国务院国资委印发指导意见推动新时代中央企业高标准履行社会责任 [Institutional guidance reviews]. Retrieved from: http://www.sasac.gov.cn/n2588035/n2588320/n2588340/c30936490/content.html

State-owned Assets Supervision and Administration Commission of the State Council (SASAC). (2025, February 11). 中国五矿与青海省携手打造盐湖产业"航母" [Institutional communiqué]. Retrieved from: http://www.sasac.gov.cn/n2588025/n2588124/c32782265/content.html

State-owned Assets Supervision and Administration Commission of the State Council (SASAC). (2025, May 9). 中企在秘鲁投資的首個水電項目投產發電 [Institutional news article]. Retrieved from http://www.sasac.gov.cn/n2588025/n2588124/c33457769/content.html

Sohu. (2016, October 21). 陕西怡豪集团与哥伦比亚企业签订51亿美元大单 [News article]. 搜狐. Retrieved from: https://m.sohu.com/n/470933358/?wscrid=95360_7

Sohu. (2017, January 14). 怡豪集团引领陕西知名企业抱团走进哥伦比亚 [News article]. 搜狐. Retrieved from: https://www.sohu.com/a/124298980_431094

Sohu. (2022, May 7). 专访怡豪集团董事长付波：竭力实现掘金南美的愿望与梦想. Sohu. Retrieved from: https://www.sohu.com/a/544535158_431094

STCN. (2025, May 8). 锂价"深蹲"挤压利润空间，产业企业解锁成本优化"新姿势" [Financial news]. 证券时报·产经 (Securities Times – Industria). Retrieved from: https://www.stcn.com/article/detail/1820662.html

Tang, S. (2025, May 9). *China's JCHX gets financing to take over Alacrán mining project in Colombia* [Financial news]. Yicai Global. Retrieved from: https://www.yicaiglobal.com/news/chinas-jchx-secures-local-support-to-take-control-of-alacrn-copper-mine-in-colombia

Tang, S. (2022, June 17). *China's Zangge gains on buying 65% stake in Argentinian lithium mine from Canadian miner* [Financial news]. *Yicai Global*. Retrieved from: https://www.yicaiglobal.com/news/china-zangge-gains-on-buying-65-stake-in-argentinian-lithium-mine-from-canadian-miner

The Worldfolio. (2025, August 13). *Chilquinta Energía* [Company profile]. Retrieved from: https://www.theworldfolio.com/company/chilquinta-energia/115/

Universidad del Pacífico Center for China and Asia-Pacific Studies. (2025). China in Latin America's Energy Transition [Data set].

Xinhua News Agency. (2023). *Xinhuanet* [Official web site]. Retrieved from: http://www.news.cn/2023-08/01/c_1212250754.htm

Xinhua. (2017, November 30). 国开行与三峡集团合作助力秘鲁圣加旺3号水电站项目 [Online article]. 新华丝路网. Retrieved from https://www.imsilkroad.com/news/p/72216.html

Xinhua Silk Road. (2025, January 24). 中国三峡集团在哥伦比亚投资的首个光伏电站并网发电 [Online article]. 新华丝路网. Retrieved from: https://www.imsilkroad.com/news/p/532612.html

Xu, J., & Gallagher, K. P. (2022). Transformation towards renewable energy systems: Evaluating the role of development financing institutions. *Studies in Comparative International Development,* 57(4), 577–601. Retrieved from: https://link.springer.com/article/10.1007/s12116-022-09375-8

Xu, J., Deng, H., & Zou, Y. (2026). *Role of Chinese public development financial institutions in fostering renewable energy transformation in Latin America* (Latin America, China and a Just Energy Transition: Working Paper Series). Universidad del Pacífico Center for China and Asia-Pacific Studies, Boston University Global Development Policy Center.

Zhou, L., Gilbert, S., Wang, Y., Muñoz, M., & Gallagher, K.P. (2018). Moving the green belt and road initiative: From words to actions [Report]. Boston University Global Development Policy Center; World Resources Institute. Retrieved from: https://www.bu.edu/gdp/files/2018/11/GDP-and-WRI-BRI-MovingtheGreenbelt.pdf

Zijin Mining Group Co., Ltd. (2019, May 26). *Zijin ranked No. 889 on the Forbes 2000 — 1st among global gold companies and Chinese nonferrous companies* [Corporate news]. Retrieved from: https://www.zijinmining.com/news/news-detail-119015.htm

Zijin Mining Group Co., Ltd. (2021, October 10). *Zijin Mining to acquire world-class high-grade lithium brine project in RMB 5 bn deal*. Zijin Mining Group Co., Ltd. Retrieved from: https://www.zijinmining.com/news/news-detail-119178.htm

Zijin Mining Group Co., Ltd. (2023, May 19). *Zijin Mining strongly condemns attack on the Buriticá Gold Mine in Colombia* [ESG Institutional communiqué]. Retrieved from: https://www.zijinmining.com/sustainable/esg-message-detail-119694.htm

Zijin Mining Group Co., Ltd. (2024, June 27). *Zijin Mining rises to 267th on Forbes 2024 Global 2000 List* [Corporate news]. Retrieved from: https://www.zijinmining.com/news/news-detail-121326.htm.

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Kehan Wang works on the political economy of energy and mining in Latin America, with a focus on investment governance, ESG regulatory frameworks, and the role of Chinese companies and financial institutions across extractive and renewable energy value chains. He holds a PhD in Political Science from Boston University and previously worked with the Global Development Policy Center as a Global China Fellow. His work integrates policy analysis of resource and overseas investment governance with project-level applied studies on social and gender impacts in extractive contexts.