Chile's Largest Transmission Line Secures Environmental Approval

*The Chilean environmental authority has approved the Resolución de Calificación Ambiental (Environmental Qualification Resolution, the **"RCA"**) for the Kimal–Lo Aguirre HVDC transmission line, the country's largest transmission project and one that contributed to record investment levels in 2025, following an intensive public participation process. The case illustrates how Chile's environmental and permitting framework is evolving in the context of large renewable-integration projects across Latin America.*

Environmental approval and project significance

On 14 November 2025, the Kimal–Lo Aguirre HVDC transmission line obtained its RCA after a 735-day evaluation process. This project, the first HVDC (high-voltage direct current) line in Chile, will connect Kimal (Antofagasta Region) with Lo Aguirre (Metropolitan Region) over approximately 1,346 km, crossing 5 regions and 28 municipalities. With an estimated investment of US$2 billion and the creation of around 6,200 construction jobs, Kimal–Lo Aguirre has become the longest transmission line ever evaluated by the *Servicio de Evaluación Ambiental* (Environmental Assessment Service, the "**SEA**") in Chile.

Under Chilean law, the RCA serves as the project's integrated environmental authorization: it establishes environmental conditions and obligations and forms the basis for the subsequent processing of *Permisos Ambientales Sectoriales* (sectoral environmental permits, the "**PAS**"), including those related to water management, public works and energy matters.

The issuance of the RCA constitutes the primary enabling milestone for the start of construction in December 2025, subject to the coordination and issuance of the relevant sectoral permits, with commercial operation targeted for May 2029. Government authorities have highlighted the project's economic, social and environmental significance: the HVDC line is expected to facilitate the transmission of lower-cost renewable energy from northern to central Chile, reduce electricity prices for consumers and support the country's 2050 carbon-neutrality goal. According to Sebastián Fernández, CEO of Conexión Kimal–Lo Aguirre, the environmental approval of this project, which he describes as *"key for the energy transition"*, is particularly relevant in the run-up to COP 30, as *"it allows us to start construction in 2025 and to consolidate a more robust and resilient transmission system*".

The granting of the RCA for Kimal–Lo Aguirre also represented a milestone at the national level. With this approval, Chile reached in 2025 the highest annual amount of investment receiving environmental clearance, totaling approximately US$34.3 billion, surpassing the previous record of approximately US$32 billion in 2013. Of that total, the energy sector accounted for approximately US$15.7 billion of that investment approved in 2025, reflecting the dynamism of strategic projects such as this transmission line. Valentina Durán, Director of the SEA, highlighted the intensive inter-agency technical work that made it possible to approve Kimal–Lo Aguirre in full compliance with the applicable environmental regulations, while shortening standard evaluation timelines by approximately 30% through innovations in automation and coordination. According to Fernández, the project was subject to one of the most extensive and technically complex environmental impact assessments ever processed in Chile.

Public participation, Indigenous Consultation and environmental measures

The environmental evaluation of Kimal–Lo Aguirre was conducted under reinforced standards of public participation and environmental safeguards. The SEA assigned a dedicated team of 20 professionals to the technical assessment and another 20 focused on citizen participation. In this context, the project recorded one of the most extensive participation processes to date: 183 informational activities were held in 32 municipalities, with more than 2,200 attendees and 16,700 formal citizen comments submitted.

Additionally, a 504-day *Consulta Indígena* (Indigenous Consultation) process was conducted with the Diaguita communities within the project's area of influence. This process – initiated in June 2024 and concluded in October 2025 – led to agreements with 7 Diaguita communities along the approximately 1,346 km route, marking a milestone in the domestic implementation of *Convenio 169 de la OIT* (ILO Convention No. 169) in Chile. This international instrument, ratified by several Latin American countries, requires prior, good-faith and culturally appropriate consultation processes when projects of this nature may directly affect Indigenous peoples.

The agreements incorporated voluntary environmental measures and cultural commitments that strengthened the project's design. These include a cultural management plan to enhance the value of heritage sites, productive support initiatives, permanent community engagement programs and specific measures tailored to the needs of each community. The company has emphasized that this dialogue not only made it possible to reach agreements but also to "establish a long-term relationship" with the communities. Conexión's experience illustrates a broader regional trend: large energy infrastructure projects that, in order to secure social and environmental viability, require adaptive designs and extended engagement processes with local and Indigenous communities.

During the preparation of the *Estudio de Impacto Ambiental* (Environmental Impact Assessment, the "**EIA**"), submitted to the *Sistema de Evaluación de Impacto Ambiental* (Environmental Impact Assessment System, the "**SEIA**") in October 2023, Conexión conducted 63 anthropological studies and implemented an early participation process starting in 2022, which provided a solid basis for the subsequent formal consultation.

As a result of the evaluation, the RCA imposed more than 100 specific environmental commitments and 32 measures for mitigation, compensation and remediation. In response to citizens and agency comments, the company reduced the areas of permanent vegetation clearance by approximately 100 hectares (and by a similar amount in temporary areas) compared to the original design. Supporting infrastructure was reduced from nine to five, thereby limiting on-the-ground intervention. To improve implementation and minimize regional impacts, three route variants (Huasco, Elqui and Catemu) were assessed and ultimately incorporated into the RCA. The administrative process involved 117 public agencies coordinated by the SEA and was characterized by a high standard of technical coordination and transparency.

Strategic impact and the future of transmission in Chile

The Kimal–Lo Aguirre project forms part of Chile's national strategy for energy transition and transmission expansion aimed at integrating renewable energies. Its commissioning is expected to address the structural disconnect between abundant solar and wind generation in northern Chile and the main demand centers in the central region. From an environmental standpoint, the line is expected to reduce emissions by enabling fossil-fuel-based generation to be displaced by clean energy in the national electricity mix.

The project will also increase system resilience by adding a new direct-current transmission corridor, which is more robust in the face of natural disasters and entails lower electrical losses. Owing to its HVDC design, the line can actively regulate power flows, helping stabilize the system in view of variability in solar and wind generation. Moreover, HVDC technology requires a narrower safety corridor than equivalent alternating-current lines, reducing the project's territorial footprint and its impact on ecosystems and communities, an aspect expressly reflected in the RCA.

The planning, construction and future operation of the project incorporate high standards of sustainability and local participation, in line with the guidelines of the Acuerdo de Escazú (Escazú Agreement), a regional treaty on access to information, public participation and access to justice in environmental matters ratified by Chile and other Latin American countries. In this sense, Kimal–Lo Aguirre stands as a landmark HVDC transmission project in the search for a balance between infrastructure development and social and environmental protection.

At a strategic level, this HVDC line is a key element for reducing renewable energy curtailment – estimated at up to 3,000 GWh per year – and for moving towards a 70%–80% share of clean generation by 2030. It also provides a foundation for additional HVDC links in Chile. The government has already included a second project, called "Lo Aguirre – Entre Ríos" HVDC line, in the 2024 transmission expansion plan which would connect the central zone with the south of the country. This line, planned at 460 km and ±600 kV, would enable the evacuation of southern wind potential, relieve congestion between central and southern systems and transfer an additional 3,000 MW towards Santiago.

This southern HVDC link, with an estimated cost of US$1.3–1.5 billion, is expected to enter into operation around 2034, complementing Kimal–Lo Aguirre at the Lo Aguirre substation. Both lines will be interconnected at that point, creating a high-capacity north–south transmission axis. This will not only strengthen the internal integration of renewable energy, but could also facilitate potential international interconnections. Authorities note that the existence of HVDC could allow Chile to export surplus clean energy to neighboring countries once domestic demand has been fully met.

Legal advisory

Since 2024, Prieto Abogados has advised Conexión in the execution phase of the Kimal–Lo Aguirre project, in a context marked by contractual, regulatory, environmental and operational challenges inherent to a pioneering HVDC infrastructure project in the region. The advisory work has focused on ensuring that technical and strategic decisions are grounded in legal soundness and aligned with the regulatory standards applicable to the Chilean energy sector.

In general terms, the work has focused on three main areas: (i) the contractual management of the EPC contracts for the construction of the transmission line and converted stations; (ii) advisory services on environmental and regulatory matters associated with the execution of the project; and (iii) the identification and management of regulatory risks and changes.

This support has been complemented by training and institutional strengthening initiatives aimed at ensuring that technical and project teams work with shared tools —risk matrices, permit matrices and guidelines for contractual communications— that facilitate decision-making in a dynamic regulatory environment. The Kimal–Lo Aguirre experience shows that large HVDC transmission projects in the region require early integration between technical

design, permitting strategy and contractual allocation of risks, both in dealings with environmental authorities and in interactions with communities and contractors.

Conclusion

The issuance of the RCA for Kimal–Lo Aguirre marks a major milestone in the execution of this transmission line. With the environmental authorization granted, a green financing structure under development and detailed engineering at an advanced stage, the project is positioned as a structural component for reducing renewable energy curtailment and advancing towards a cleaner, safer and more efficient power matrix, consistent with Chile's decarbonization goals.

At the same time, the scale and technological complexity of the project entail significant legal challenges, particularly in the processing of sectoral permits, the coordination of highly specialized contracts and the implementation of robust social and environmental commitments. The regulatory and contractual experience gained throughout its development is expected to inform the design and development of future HVDC projects in Chile and other Latin American countries facing similar challenges associated with the large-scale integration of renewable energy, thereby contributing to the consolidation of best practices in major energy infrastructure projects across the region.

Nicolás Yuraszeck

Partner

nyuraszeck@prieto.cl

Josefa Reyes

Associate

jreyes@prieto.cl

Fernando Edwards

Associate

fedwards@prieto.cl