



Add certification label
(if the project is
certified)

Assessment Report

Project Name: Cuerquia HPP

Installed Capacity: 68 MW

Country: Colombia



Project Sponsor: Energo-Pro Colombia

Report Authors: Joerg Hartmann, Juan Quintero

Report Date: August 27, 2026



Cover page photo: San Andrés River downstream of the future intake of the Cuerquia HPP

Published by:

Hydropower Sustainability Alliance
Edifício LACS
Rocha Conde d'Óbidos
1350-352 Lisboa, Portugal
Email: info@hs-alliance.org

Reporting template first published in September 2021.
This edition published October 2023.

Copyright
© 2023 Hydropower Sustainability Alliance

All rights reserved. No part of this publication may be reproduced, stored or transmitted without the prior permission of the publisher.

The findings in this report are based on an independent assessment conducted in compliance with the processes set out in the Hydropower Sustainability Assurance System.



Hydropower Sustainability Standard

About the HSS	The Hydropower Sustainability (HS) Standard is the normative document that sets out the performance requirements of the Hydropower Sustainability Certification System, a global labelling and certification scheme outlining the expectations for hydropower projects around the world. The HS Standard recognises hydropower projects for their environmental, social and governance (ESG) performance by setting minimum and advanced performance requirements for the sector and acknowledging projects for meeting these requirements. The HSS is aligned with the safeguards of key lenders (e.g. IFC and World Bank) and can be used to attract climate-aligned finance through green bonds certified by the Climate Bonds Initiative and support electricity sales to RE100 companies. The HS Standard is managed by the Hydropower Sustainability Alliance. The HS Alliance was established in October 2023 to act as the independent and multistakeholder standard-setting body that oversees the Hydropower Sustainability Certification System.
Intended users and uses	The HS Standard includes three separate stages: Preparation, Implementation and Operation. These reflect the different stages of hydropower development and have been designed to be used as standalone documents. Each reporting template provides an action plan to help project teams address any gaps against minimum (good practice) and advanced requirements (best practice). Official HS Standard assessments are carried out by Accredited Assessors, who take an evidence-based approach based on data triangulation. All findings are supported by objective evidence, which is factual, reproducible, objective and verifiable. The HS Standard is most effective when operators and developers commit to implement the recommendations provided and resolve identified significant gaps. Hydropower development and operation may involve public entities, private companies or combined partnerships, and responsibilities may change as the project progresses through its life cycle. It is intended that the organisation with the primary responsibility for a project at its particular life-cycle stage will have a central role in any HS Standard assessment.
Structure of the reporting template	The HS Standard comprises 12 sections that cover the environmental, social, governance and climate change impacts, both negative and positive, that arise from hydropower development and operation. Summary sections at the beginning of the report include: (A) Assessment Overview, (B) Project Details, (C) Performance against Minimum Requirements, (D) Performance against Advanced Requirements, (E) Environmental and Social Action Plan and (F) Abbreviations and Acronyms. The summary sections are followed by the 12 ESG sections where requirements for good and best practices are presented and project findings are provided. The report finishes with three appendixes that list the types of evidence used in the assessment.
Supporting resources	Additional guidance on the structure, content and history of the HS Standard can be found online at: www.hs-alliance.org
Version date	October 2023

A. Assessment Overview

Assessor(s)	Joerg Hartmann (Sustainable Water & Energy LLC), Juan Quintero (Environmental Engineering Consultants LLC)
Assessment objective	1. Position Energo-Pro as a company aligned with industry best practices (GIIP) and the Hydropower Sustainability Standard (HSS) framework throughout the entire project lifecycle, demonstrating responsible leadership, stewardship, and management in its environmental, social, and governance practices from the early stages of its projects, thereby strengthening stakeholder trust and facilitating access to sustainable and competitive financing mechanisms. 2. Reaffirm Energo-Pro's objective of being a pioneering organization in the development of hydropower projects with high sustainability standards in Colombia, with a commitment to developing and strengthening local capacities in the areas where the company operates. 3. Design projects that reflect a planning approach based on short- and medium-term risks and opportunities, minimizing impacts while incorporating principles of environmental protection and conservation, as well as social development and capacity-building in the areas where the company operates.
Assessment dates	May 11-15, 2026
Assessment report date	August 27, 2026
Summary of key findings	HSS-1: The Cuerquia project has a limited environmental and social footprint, as the underground development of major components (pressure tunnels and powerhouse) minimizes surface impacts to 14 ha, and the bypass reach is only 7.5 km long. The project also optimizes the use of existing components of the Chorreritas hydropower project downstream, by discharging into the Chorreritas intake and using the Chorreritas transmission line. The ESIA and ESMP are generally adequate, adhered to official ToR issued by Corantioquia, and in some respects (e.g. cumulative and climate impacts) went beyond standard practice. Energo-Pro has a well-resourced ESMS. HSS -2: There are no indications for any gaps regarding labour and working conditions. Energo-Pro Colombia will build on its experience with managing labour issues in the Chorreritas project, and will benefit from the group's experience and policies, backed up by a robust regulatory system. HSS-3: Negative impacts of the project implementation on erosion, sedimentation and water quality are minor, except some localized sediment input from construction sites. During operation, the reduction of waterflows in the bypass reach will diminish dilution and assimilation capacity of the San Andrés River for discharges of domestic wastewater and leachates from an open solid waste dump. The project will provide environmental flows and support a number of investments (including closure of waste dump) to mitigate and compensate this impact, resulting in improved conditions.

	HSS-4: The Cuerquia HPP will result in only minor economic displacement and few other negative community impacts, which are expected to be well mitigated, but will generate significant and sustained benefits for the community. This will add to the significant improvements in livelihoods and living standards, and population influx that the area has experienced over the past 15 years, as a result of investments in multiple hydropower projects. There are some opportunities to improve the coordination of community investments, visibility of fiscal benefits, and analysis of public health and safety risks and opportunities. There are no significant concerns regarding dam safety. HSS-5: Not relevant HSS-6: The footprint of the project is approximately 14 ha of which 2.6 ha will be flooded by the headpond, with some riverine and secondary forest. Other affected areas are intervened habitats, mainly pastures. No critical habitats or protected areas are affected by the project. Biodiversity offsets for the Chorreritas and Cuerquia projects, riverine forest restoration, and water quality improvements provide opportunities for enhancement of biodiversity in the watershed. HSS-7: Not relevant HSS-8: The archaeological prospecting and monitoring programs and some awareness campaigns, allow the identification and preservation of archaeological material in the project footprint. The material found to date is of minor significance and, in cooperation with ICANH will be analysed, and its final destination determined. HSS-9: Hydropower projects in Colombia face a number of governance challenges, including security problems and regulatory obstacles. However, Energo-Pro Colombia's corporate governance and procurement processes are well designed to deal with these challenges and deliver sustainable projects. HSS-10: There is broad, constructive and personal engagement of Energo-Pro with local stakeholders in the project area, as well as with institutional-level stakeholders, both from the ongoing Chorreritas project and from the upcoming Cuerquia project. HSS-11: The assessment of hydrological issues included generation planning as well as multicriteria analysis and determination of environmental flow regimes, taking into account the interaction with the Chorreritas project directly downstream. HSS-12: The Cuerquia project will make a significant positive impact to climate change mitigation by providing a very low-carbon source of power and displacing high-carbon energy sources, both directly and indirectly. A climate change resilience assessment was carried out, based on climate change scenarios modelled by the government research institute IDEAM, which projected moderately increased flows over the coming decades.
Limitations of the assessment	Note that the project was assessed as planned, with environmental licensing and possible conditions to the license still pending.

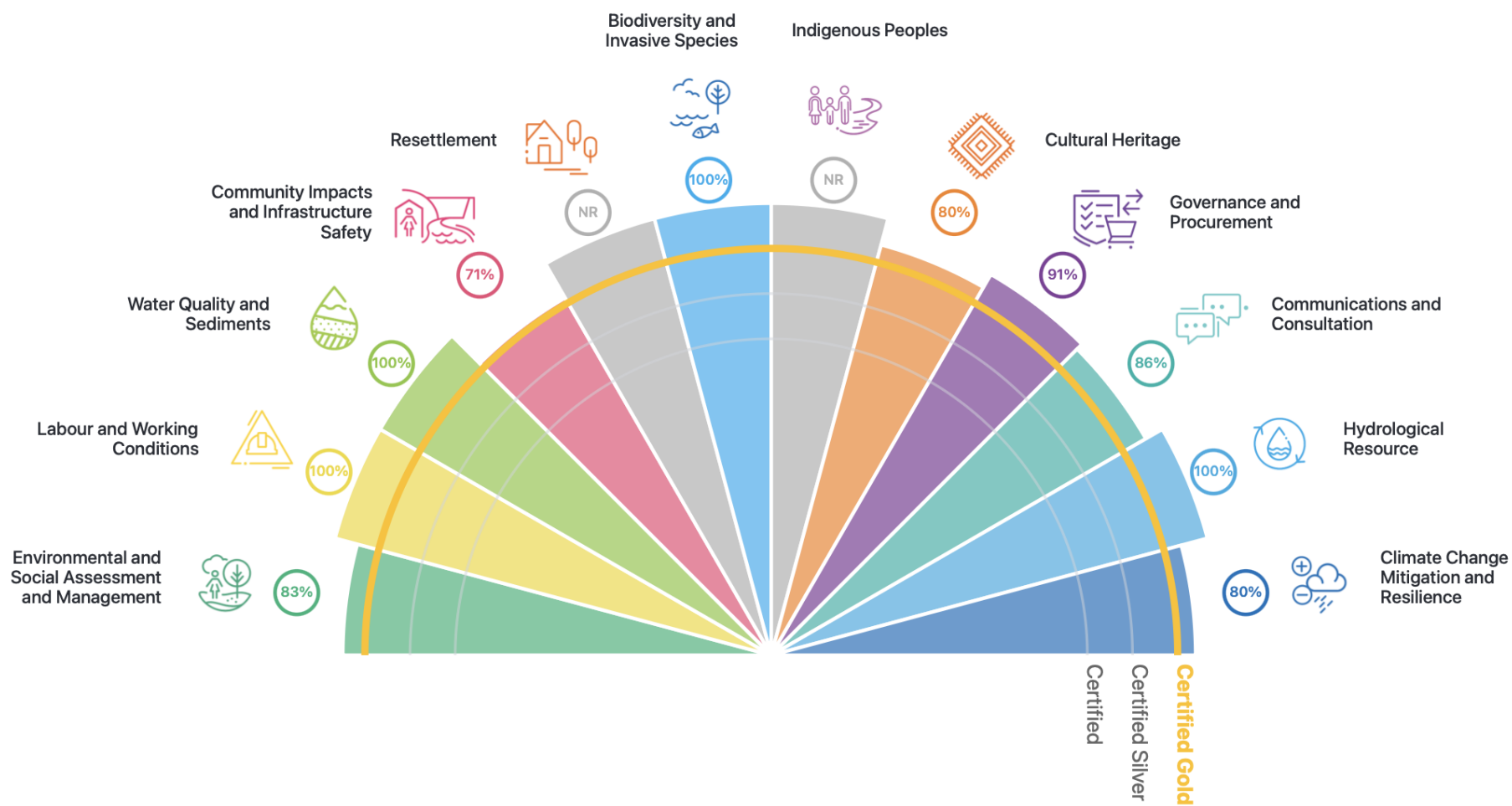


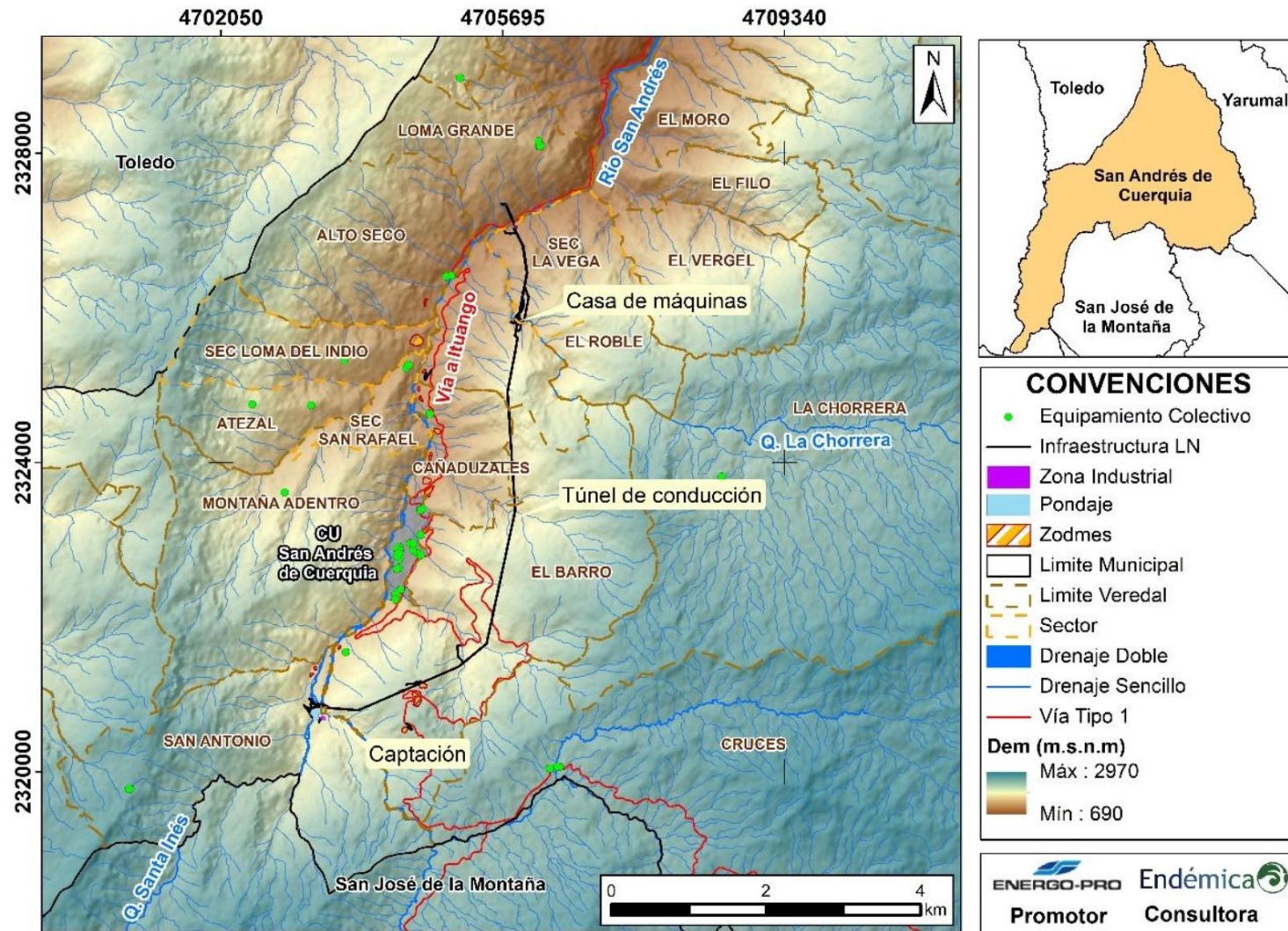
Figure 1 – Hydropower Sustainability Standard (HSS) Results Diagram

B. Project Details

Project name	Cuerquia HPP
Country	Colombia
Location	Department of Antioquia, on the San Andrés River, a right-bank tributary to the Cauca
Purpose	Hydropower generation
Developer / Owner	Energo-Pro Colombia, through the subsidiary Cuerquia SPV S.A.S E.S.P
Financer(s)	Equity from Energo-Pro Group; debt from Colombian commercial banks (under negotiation)
Installed capacity (MW)	68 MW
Construction start date (planned or actual)	Depending on environmental licensing and financial close
Commercial operations date (planned or actual)	Estimated construction period: 38 months
Annual average generation (GWh / year)	350 GWh
Associated infrastructure: road(s) (length)	1.1 km of new permanent or temporary access roads to several project components
Transmission lines and sub-stations (names, lengths and capacities)	388 m of connection to 110 kV TL Chorreritas-Guárcama
Total cost (USD m)	USD 226.8 million (exchange rate August 11, 2026 throughout this report)
Annual operating costs (USD m)	USD 0.779 million
Specific investment cost (USD m / MW)	2.76
Levelised energy cost (USD / kWh)	n/a
Dam type	Concrete gravity dam with 4 gated spillways and 2 bottom outlets
Dam height (m)	25 m
Dam length at crest (m)	261 m
Units (number, type, MW)	2 x Pelton @ 34 MW
Reservoir area at Full Supply Level (FSL) (km ²)	2.5 ha
Average net head at FSL (m)	732 m
Average flow (m ³ / s)	7.04 m ³ /s
Design flow (m ³ / s)	10.6 m ³ /s
Load factor	350 / (68 x 8,760) = 59 %
Number of physically displaced households	None
Power density (W / m ²)	68,000,000 / 24,921 = 2,729
Emissions intensity (gCO ₂ e / kWh)	n/a
Contacts / website	https://www.energo-pro.com/en

Cuerquia HPP, 68 MW, Colombia

Figure 2 – Map of project in the San Andres valley



C. Performance against Minimum Requirements

There are no significant gaps against Minimum Requirements.

D. Performance against Advanced Requirements

	Sections											
	1. Environmental and Social Assessment and Management	2. Labour and Working Conditions	3. Water Quality and Sediments	4. Community Impacts and Infrastructure Safety	5. Resettlement	6. Biodiversity and Invasive Species	7. Indigenous Peoples	8. Cultural Heritage	9. Governance and Procurement	10. Communications and Consultation	11. Hydrological Resource	12. Climate Change Mitigation and Resilience
TOTAL NUMBER OF REQUIREMENTS	12	3	7	14	3	5	5	5	11	14	13	10
NUMBER OF REQUIREMENTS MET	10	3	7	10	n/r	5	n/r	4	10	12	13	8
PERCENTAGE OF REQUIREMENTS MET	83%	100%	100%	71%	n/r	100%	n/r	80%	91%	86%	100%	80%

Note:

- A project must meet all Minimum Requirements on all relevant sections to achieve HS Certified label.
- To receive the HS Silver label, a project must meet all Minimum Requirements on all relevant sections AND meet at least 30% of the Advanced Requirements on each relevant section.
- To receive the HS Gold label, a project must meet all Minimum Requirements on all relevant sections AND meet at least 60% of the Advanced Requirements on each relevant section.

E. Environmental and Social Action Plan (ESAP)

There are no significant gaps against Minimum Requirements.

F. Abbreviations and Acronyms

CEERA	Centro de Estudios de la Energía Renovable y el Agua	Center for Renewable Energy and Water Studies
COMFENALCO	Caja de Compensación Familiar Antioquia	Family Subsidy Agency of Antioquia
COPASST	Comité Paritario en Seguridad y Salud en el Trabajo	Tri-party Committee for Health and Safety
Corantioquia	Corporación Autónoma Regional del Centro de Antioquia	Regional Autonomous Corporation for Central Antioquia
ESIA		Environmental and Social Impact Assessment
ESMP		Environmental and Social Management Plan
ICA	Informe de Cumplimiento Ambiental	Environmental Compliance report
ICANH	Instituto Colombiano de Antropología e Historia	Colombian Institute of Anthropology and History
IDEAM	Instituto de Hidrología, Meteorología y Estudios Ambientales	Institute of Hydrology, Meteorology and Environmental Studies
MADS	Ministerio de Ambiente y Desarrollo Sostenible	Ministry of Environment and Sustainable Development
OH&S	Sistema de Gestión de la Seguridad y Salud en el Trabajo	Occupational Health and Safety
PMF		Probable Maximum Flood
SG-SST	Sistema de Gestión de Seguridad y Salud en el Trabajo	Workplace Health and Safety System
UPME	Unidad de Planeación Minero-Energética	Unit for Mining And Energy Planning



1 Environmental and Social Assessment and Management

Scope and principle

This section addresses the assessment and planning processes for environmental and social impacts associated with project implementation and operation throughout the area of impact of the project, the contribution of the project in meeting demonstrated needs for water and energy services, and the evaluation and determination of project siting and design options. The principle is that environmental and social impacts are identified and assessed, and that avoidance, minimisation and mitigation measures are designed and implemented.

Background

Identify the main environmental and social issues during implementation	The main environmental issues during construction are associated with: (i) construction impacts from erosion and sedimentation from cuts and excavations, effluent from tunnels, sedimentation of streams, noise from blasting operations, waste from crushing and concrete plants, dust, and disposal of construction waste; (ii) removal of riverine vegetation during construction of intake, pressure pipes, and tunnel portals. The main social impact is an increase in local employment and economic activity.
Identify the main environmental and social issues during operation	The most important issue during operation is the reduction of water flows in the San Andrés River between the dam site and the intake of the Chorreritas project (also owned by Energo-Pro). The reduction of flows in this approximately 7.5 km stretch will diminish the river's assimilation/dilution capacity of liquid waste from the San Andrés urban area, mainly leachates from an open solid waste dump managed by the municipality and the discharge of untreated sewage from the urban area. The main social issues are related to benefit sharing.
Identify the environmental regulator	Corantioquia - <i>Corporación Autónoma Regional del Centro de Antioquia</i> – (Regional Autonomous Corporation of Central Antioquia) is the licensing agency, and in charge of monitoring and supervision.
Identify other regulators (e.g. on land, water use, Indigenous Peoples)	A number of other central and local government agencies are involved in issuing permits and non-objections, such as the Ministry of the Interior (for certification on absence of indigenous peoples in the area of influence of the project) and ICANH (<i>Instituto Colombiano de Antropología e Historia</i> , Colombian Institute of Anthropology and History) for approvals and monitoring of archaeological artifacts. The Municipality of San Andrés is responsible for local permits, including for disposal sites.
Summarise the ESIA regulatory requirements	The environmental license application was submitted to Corantioquia in February 2026.
List the key license conditions/voluntary commitments	Not available (license has not yet been issued)
Total environmental and social costs in project development, including resettlement costs	Out of the total estimated costs of project development of USD 226.8 million, USD 4.2 million are budgeted for land acquisition and USD 6.2 million for implementation of all E&S programs.

Description of the non-physical cultural heritage in the project area	The area is characterized by a well-established urban centre, dispersed rural communities, intensive cattle ranching and coffee cultivation. The influence of hydropower projects including Hidroituango (2,400 MW) has induced substantial economic activity and stabilized the population. The traditional lifestyle of typical Antioqueñan communities persists throughout the department of Antioquia.
---	--

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Assessments of project environmental and social impacts	✓	A full environmental and social impact assessment (ESIA) was conducted following Terms of Reference issued by Corantioquia. The ESIA is under review by the agency.	The assessment takes broad considerations into account, and both risks and opportunities	✓	The assessment process has considered both risks and opportunities. The optimization of operation of Cuerquia in conjunction with the Chorreritas project downstream, minimizes environmental impacts in the dewatered reach and flood risks. The assessment went beyond standard practice in Colombia, for example by considering cumulative and climate impacts.
Assessments address:					
• project implementation	✓	The ESIA includes an ESMP with detailed management plans for all construction activities.			
• project operation	✓	The ESMP includes specific plans and monitoring activities during operation.			
• associated facilities	✓	The Cuerquia project will utilize the same transmission line as the Chorreritas project downstream. A short line will connect the Cuerquia powerhouse to this line. A full ESIA for the transmission line has been prepared, and the line has been licensed by the regulator. The joint use of the line by Chorreritas and Cuerquia is a good practice that minimizes land requirements and impacts on terrestrial habitats and scenic values.	The social impact assessment incorporates assessment of human rights	✓	Social issues were included in the ESIA. Human rights were not explicitly addressed. This gap is not considered significant, because 1) Colombia has strong policies and legislation for human rights and labour rights; 2) Energo-Pro has a strong standalone policy on human rights; and 3) despite the ongoing security problems in the area, no human rights issues have been raised during several years of implementation of the Chorreritas project.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• cumulative impacts	✓	Under the Chorreritas project, Energo-Pro had carried out a scoping exercise of cumulative impacts in the watershed, which included consideration of the Cuerquia project and several other small hydropower projects in the watershed, as well as the interrelationships between these projects, 3 of which already exist and 2 others are in the planning stages. Energo-Pro then included a formal cumulative impacts assessment following IADB's methodology in the Terms of Reference for the ESIA of the Cuerquia hydropower project. This assessment resulted in several management decision to minimize impacts by: • Managing reduced flow impacts by utilizing the headworks of the Chorreritas project for the delivery of discharge waters by the Cuerquia project. • Establishing a common biodiversity compensation reserve of 150 ha. for all Energo-Pro projects. Other developers can potentially also use this area for a regional compensation scheme. • Energo-Pro's projects and potentially those of other			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		developers will share the same transmission line corridors. Utilization of a common transmission line for both ENERGO projects thus minimizing scenic impacts. Coordination with the other projects is through participation in working groups regarding basin conservation and development, as well as direct meetings with other developers such as EPM (<i>Empresas Públicas de Medellín</i>), and consolidation of social projects with other developers.			
• role and capacity of third parties	✓	Project management is fully aware of capacity limitations of various government authorities that could cause delays in decision making and other issues (for instance, implementation of landfill and wastewater treatment plant for San Andrés Municipality).			
• impacts associated with primary suppliers	✓	Aggregates are being supplied by the project's own borrow areas or from excavation in leased areas or private suppliers. All primary suppliers need to present evidence of environmental licensing for operations.			
Assessments have been prepared using appropriate expertise	✓	The ESIA was prepared by Endémica, a competent consulting firm in Medellín. The ESIA team included environmental engineers, ecologists,			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		anthropologists and social scientists. The firm had already prepared the ESIA for the Chorreritas project.			
A baseline has been established and well-documented for the pre-project condition against which post-project changes can be compared	✓	A detailed baseline, based on secondary data complemented by field work was prepared for physical, biological and socio-economic conditions in the area of influence of the project. This baseline is included in detailed chapters of the ESIA and complemented by maps at appropriate scales.			
Assessment of needs for water and energy services	✓	The Cuerquia project fits in the overall generation expansion plan of Colombia (2025-2039), which foresees some addition of hydropower to firm up a strong expansion of solar and wind capacity. The project is registered with UPME. UPME has identified the need for additional energy in the region and has planned for a substation (Guarcama) as connection for all hydropower projects in the watershed.			
Assessment of options to meet water and energy needs	✓	A standalone Environmental Diagnostics of Alternatives (DAA) study considered different sites for the dam, energy generation alternatives, and configurations for the alignment of power tunnels and sites for the powerhouse.		✓	The cumulative impact assessment identified the Valued Ecosystem Components at the watershed level. Maintaining river flows is key for the sustainability of the watershed. The project, together with Chorreritas, will contribute to a healthy river ecosystem by implementing riverine forest restoration programs which will minimize erosion and improve water quality. A common biodiversity offset program in the upper watershed will contribute to sustained river flows and biodiversity conservation in the watershed. Then project will also improve the sanitation conditions of the urban area by improving and expanding the water supply network and closing an open solid waste dump

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					and replacing it with a technically sound landfill.
Assessment of national and regional policies and plans relevant to those needs	✓	Municipal development plans for San Andrés de Cuerquia have been assessed as part of the EIA.	The assessment is based on dialogue with government planners, policy makers and key stakeholder groups	✓	Energo-Pro has a long-standing relationship with the Municipality of San Andrés as well as other stakeholders, such as other developers and the Hidroituango project downstream. Energo-Pro has instituted working committees with these stakeholders.
Social and environmental considerations, including regulatory considerations, have been analysed at an early stage in preliminary project designs and options	✓	All E&S considerations and typical regulatory requirements at the regional and municipal level have been considered.	Options take into consideration sustainable river basin design and integrated water resources management	✓	The DAA (Environmental Diagnostics of Alternatives) study included different options for layout and configurations. Then project water concession has been approved by Corantioquia under the Water Resource Management Plan (<i>Plan de Ordenamiento del Recurso Hídrico</i>). Energo-Pro has proposed using part of the obligatory contribution for watershed management (1% of project costs) to finance elaboration of a Watershed Management Plan (POMCA) for the San Andrés River. The biodiversity offsets area protects an important part of the watershed.
MANAGEMENT					
Environmental and social management plans and processes have been developed	✓	An organizational structure has been put in place by Energo-Pro to manage environmental and social issues. Energo-Pro has designed and implemented a comprehensive	Processes are in place to anticipate and respond to emerging risks and opportunities	✓	Energo-Pro's ESMS is adequately resourced to anticipate and respond to any emerging risks and opportunities. Lessons learned from the implementation of the Chorreritas

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		Environmental and Social Management System (ESMS), managed under a Sustainability Department, with sufficient staff and resources. The EIA includes environmental and social management plans for construction and operation phases of the project.			project have been incorporated into internal processes.
Plans address project implementation	✓	Plans cover project implementation. Lessons learned from implementing the Chorreritas project have been incorporated in the Cuerquia management plans.			
Plans address project operation	✓	Plans include the operation phase of the project.			
Plans have been prepared using appropriate expertise (internal and external)	✓	Plans have been prepared by competent firms combined with in-house expertise.			Energo-Pro is committed to implementing good ESG practices and attain sustainability in their projects. It has developed a set of Key Performance Indicators (KPIs) aligned with the Sustainable Development Goals (SDGs) and ESG Good International Industry Practice (GIIP), documented in an annual Sustainability Report. However, the lack of certification of the ESMS is a significant gap .
Plans address all key social and environmental issues	✓	All environmental and social risks and impacts have been addressed.	Plans are embedded within an internationally recognised environmental management system which is third party verified, such as ISO 14001	✗	
Plans address construction-related waste, noise, air quality, land disturbance and rehabilitation	✓	Detailed management plans for construction related impacts have been prepared.	Independent review mechanisms are utilised	✗	There have been no independent reviews, on dam safety (see section 4) or other complex issues. The ongoing regulatory review by Corantioquia is

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
Environmental and social impact assessment and key associated management plans are publicly disclosed	✓	The ESIA has been submitted to Corantioquia and is under review. Public disclosure will take place once the license has been issued by Corantioquia. The preparation of the ESIA included consultation and participation of local communities.			not considered an independent review as intended under this requirement (although Corantioquia staff are well experienced in hydropower issues and Energo-Pro facilitated training on the HSS for them). Hence, this is considered a significant gap.
An optimisation process has been undertaken to assess the project siting and design options	✓	A comprehensive analysis of dam sites, alignment of pressure tunnels and location of powerhouse, as well as different alternatives for generation has been undertaken.			
OUTCOMES					
Environmental and social plans avoid, minimise and mitigate negative impacts	✓	The mitigation hierarchy has been consistently applied to all siting and design decisions. The ESMP includes mitigation and restoration measures to address all environmental and social impacts.	Environmental and social plans avoid, minimise, mitigate and compensate negative project impacts	✓	The mitigation hierarchy has been applied to all project components. The plans include biodiversity offsets, riverine forest restoration, and benefit sharing.
The strategic fit of the project with needs for water and energy services, and relevant policies and plans can be demonstrated	✓	There are no indications for any inconsistencies with relevant policies and plans. The project was approved under the Water Resource Management Plan of the San Andres River.	Plans provide for enhancements to pre-project environmental or social conditions or contribute to addressing issues beyond those impacts caused by the project	✓	Mitigation measures include closure, confinement of existing municipal waste dump area, as well as design and implementation of a technical land fill that will benefit the entire municipality. Also, the project plans to improve and expand the supply of potable water in the urban area of San Andrés.
The final project siting and design has responded to	✓	A comprehensive analysis of alternatives was carried out by a competent firm in 2024. Different	The project is one of the priority options to address demonstrated needs	✓	Energo-Pro conducted a comprehensive process to identify and compare project options, and the

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
environmental and social considerations		siting options and alternative configurations were analysed on their environmental and social merits. The regional environmental authority Corantioquia endorsed the selected alternative.			Cuerquia project is aligned with the needs to increase reliability of an increasingly solar PV-based power system.
The project can pay for social and environmental plans and commitments		✓ Appropriate budgets have been set aside for the implementation of the required ESMP.	✓ The final project siting and design is optimal with respect to sustainability considerations for siting and design		The key E&S impacts and therefore the key E&S issues for siting and design are the bypass reach, with reduced flows that could affect water users and aquatic ecology, and the affected surface area, which displaces terrestrial ecology and other land uses. The selected site is optimal as it minimizes the length of the bypass reach and the affected surface area; both are very small compared to the installed capacity.

List of significant gaps against Minimum Requirements	Number of Advanced Requirements met
None	10 out of 12

Summary of findings and other notable issues
The Cuerquia project has a limited environmental and social footprint, as the underground development of major components (pressure tunnels and powerhouse) minimizes surface impacts to 14 ha, and the bypass reach is only 7.5 km long. The project also optimizes the use of existing components of the Chorreritas hydropower project downstream, by discharging into the Chorreritas intake and using the Chorreritas transmission line. The ESIA and ESMP are generally adequate, adhered to official Terms of Reference issued by Corantioquia, and in some respects (e.g. cumulative and climate impacts) went beyond standard practice. Energo-Pro has a well-resourced ESMS.

Relevant evidence	
Interview	1, 13-32

Cuerquia HPP, 68 MW, Colombia

Document	5, 9-32, 37, 40, 52, 53, 55, 57, 62, 63, 66, 79, 82, 84, 86
Photo	3, 4, 8, 10, 12, 14, 15, 19-22



2 Labour and Working Conditions

Scope and Principle
This section addresses labour and working conditions, including employee and contractor opportunity, equity, diversity, health and safety. The principle is that workers are treated fairly and protected.

Background	
Labour requirements during implementation (full-time equivalent)	ESIA estimate: average 280, in peak times up to 350 workers
Labour requirements during operation (full-time equivalent)	ESIA estimate: 10 workers
Applicable key human resources regulations	The key legislation is the <i>Código Sustantivo de Trabajo</i> , which has undergone multiple modifications since its introduction in 1950, including a significant reform in 2025 (Ley 2466).
Applicable key occupational health and safety (OH&S) regulations	A series of laws and decrees, including the requirement for all companies to maintain a OH&S Management System (<i>Sistema de Gestión de la Seguridad y Salud en el Trabajo</i> , SG-SST) with an OH&S Committee between staff and management (<i>Comité Paritario en Seguridad y Salud en el Trabajo</i> , COPASST)
Identify the regulator for labour law and OH&S	Ministry of Labour

Minimum Requirements		Advanced Requirements	
Requirement is met: yes (✓) or no (✗)	Findings and Observations	Requirement is met: yes (✓) or no (✗)	Findings and Observations
ASSESSMENT			
Assessment of human resource and labour management requirements	✓ Energo-Pro Colombia currently has 37 staff, all on direct and permanent contracts. The small administrative team is supported by an external human resources service provider. Rough estimates for labour requirements for the construction and operation of the Cuerquia HPP have been made. Plans have been made to accommodate workers and Energo-	The assessment takes broad considerations into account, and both risks and opportunities	✓ The previous project Chorreritas was successful in identifying and promoting local and female workforce participation in the project, with 170 workers from the area of influence. The Cuerquia project plans to expand on this and directly contract local community groups. Lessons have been learned from several work accidents including

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		Pro staff in the town of San Andrés de Cuerquia, following the successful example of other hydropower projects in the area. A large proportion of skilled and unskilled workers is expected to be hired locally, many of which previously worked on other hydropower projects in the area, including the large Ituango project which is winding down.			fatalities, and incidents of extortions and other security threats, in the Chorreritas project.
The assessment includes project occupational health and safety issues, risks, and management measures	✔	OH&S risks, working conditions, and other issues related to construction are partially covered in the ESIA/ESMP. Issues such as security and safe transport of workers between the town and work sites have been discussed. More detailed assessments, down to the level of individual worksites (e.g. work in tunnels) will be prepared with contractors in due course.			
MANAGEMENT					
Human resource and labour management policies, plans and processes have been developed for project implementation	✔	Energo-Pro has a series of corporate policies at the group level that apply to labour issues, including a Human Resources Policy (2024), OH&S Policy (2021), a Whistle-blower Policy (2026), Code of Conduct, and Human Rights Policy (2026). All are available in Spanish, including on the corporate website. There are also a number of internal procedures and guidelines for Energo-Pro Colombia. There is a well-	Processes are in place to anticipate and respond to emerging risks and opportunities	✔	There are multiple examples of best practices in labour-related monitoring and adaptive management. The participation of female employees has been successfully increased, with 133 men and 23 women at the Chorreritas project (end-2025) and 19 men and 17 women at Energo-Pro’s Medellín headquarter. A mediation committee (<i>Comité de Convivencia Laboral</i>) with 2 employer and 2 employee

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		managed grievance mechanism, and an induction process for new staff. An OH&S Management System as required by regulations has been introduced. There are also staff security policies and processes, which is particularly relevant because of the security situation in the project area, where there have incidents with armed groups threatening workers at hydropower projects. Staff are covered by collective life, health and labour risk insurance (ARL). Other insurance policies (All Risk, Third Party Liability) will be taken out and among other risks, will also cover labour-related incidents (including those potentially related to public safety issues in the project area).			representatives handles individual complaints and disputes (including for contractor workers), and there is a special process for handling sexual harassment cases. In construction projects, Energo-Pro has full visibility of the contractors' workforces (including gender, origin and other parameters); OH&S statistics are regularly analysed, and annual improvement plans required; the kitchens of contracted food providers are inspected by the OH&S supervision team; etc. Labour issues are one of the problems for which contractor pay can be retained until resolved. Best practices in Energo-Pro are also confirmed through external review by COLMENA, the labour insurance company.
Human resource and labour management policies, plans and processes have been developed for project operation	✓	Similar processes will be applied during operations.			Staff security is addressed through a number of processes, including security coordination committees, close cooperation with security forces, policies for kidnapping and extortion, and a private security company.
These plans cover all labour management planning components, including those of contractors, subcontractors and intermediaries	✓	Energo-Pro implements a 'Contractor and Sub-contractor Management Plan' (2023) that specifies how corporate ESG requirements - including on labour issues - are applied in the supply chain. Labour practices are taken into account in the selection of and in the contractual requirements for contractors. Energo-Pro will			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		supervise correct labour contracts and payments to workers and social security by contractors. Contractors have to present labour-related plans to Energo-Pro and have these approved. Every contractor is also required to have its own OH&S lead and management system (and these will be harmonized to allow exchange of data and analysis of risks and trends), and medical evacuation plan. Worker health exams will be required at hiring, annually, and at termination. Contractors will be required to maintain insurance, including ARL. The Ministry of Labour's regional offices and the ARL insurer may undertake inspections of documentation and of work sites.			
OUTCOMES					
There are no identified inconsistencies of labour management policies, plans and practices with internationally recognised labour rights	✓	Colombia has ratified most fundamental ILO Conventions, and Colombian regulations as well as Energo-Pro's policies and plans are protective of workers. Workers have the right to collective bargaining, although in practice, Energo-Pro staff are not unionized, and trade unions have been relatively weak in Colombia's construction sector.	Labour management policies, plans and practices are demonstrated to be consistent with internationally recognised labour rights	✓	Energo-Pro actively works against discrimination in the workplace, encourages skills development and employee engagement, pays equal salaries to female and male employees, and provides better working conditions than comparable employers, resulting in good retention rates. High OH&S performance has been independently confirmed, and there are plans to certify the project against ISO 45001 (see section 1).

List of significant gaps against Minimum Requirements	Number of Advanced Requirements met
None	3 out of 3

Summary of findings and other notable issues
There are no indications for any gaps regarding labour and working conditions. Energo-Pro Colombia will build on its experience with managing labour issues in the Chorreritas project, and will benefit from the group's experience and policies, backed up by a robust regulatory system.

Relevant evidence	
Interview	1-12, 13-29
Document	1, 3-5, 15, 21, 33, 35, 36, 39-46, 48-57, 65
Photo	-



3 Water Quality and Sediments

Scope and Principle
This section addresses the management of water quality, erosion and sedimentation issues associated with the project. The principle is that water quality in the vicinity of the project is not adversely impacted by project activities, and that erosion and sedimentation caused by the project are managed responsibly and do not present problems with respect to other social, environmental and economic objectives.

Background	
Water Quality	
Description of water quality	The San Andrés River flows through an Andean valley with steep slopes. The river has a high assimilation capacity given its high gradient, water velocities and oxygenation rates.
Key water quality issues	Baseline studies for the EIA concluded that the San Andrés River presents generally good water quality conditions, although with bacterial contamination. Water quality indexes were good or acceptable in almost all of the stations monitored, with lower values near (upstream and downstream) the urban area of San Andrés.
Main influences on water quality	Untreated wastewater discharges from San Andrés town, run-off from cattle ranching upstream, and leachates from an open municipal solid waste dump, are the main sources of pollution of the San Andres River.
Sedimentology	
Key sediment issues	Very steep watershed but with vegetation cover in steepest parts. Steep slopes prone to landslides. Overall erosion potential classified as moderate for both the San Andrés and the Santa Inés watersheds (the Santa Inés tributary joins the San Andrés at the damsite). Aggregates will be extracted from the project's own excavation and own quarries which have been licensed by Corantioquia.
Sediment load (tonnes/year)	Sediment loads at the weir site have been estimated at 35,000 t/a.
Catchment area at the dam	The catchment above the intake has an area of 164 km ² (San Andrés) plus 47 km ² (Santa Inés), from 3,100 masl to 1,780 masl at the intake.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Water quality issues assessment	✓	Water quality issues have been addressed in the ESIA. Baseline studies included water quality sampling with different parameters,	The assessment takes broad considerations into account, and both risks and opportunities	✓	The assessment is based on quality risks and takes onto account water users in the watershed. The project’s planned investments into urban

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		and biological water quality surveys. Monitoring data has identified that the main sources of pollution in the dewatered river stretch are the discharge of domestic wastewater from San Andrés and the leachates form an open dump operated by the municipality 1-2 kms downstream from the Cuerquia intake. There are limited pollution sources in the catchment area above the Cuerquia intake, mainly runoff from cattle ranching. Water quality modelling along the dewatered zone (using the QUAL2 -K model) concluded that the reduced flows in the bypass reach will increase the concentration of pollutants (especially coliforms) in the river. However, this increase does not pose a major risk for the communities as water for domestic uses is not taken from the river but from tributaries. The river receives the discharge of the powerhouse at the Chorreritas headworks, thus recovering its dilution capacity. The project will implement an ecological flow regime downstream of the intake, with minimum flows for every month of the year based on hydrological and ecological considerations. The river has an excellent self-cleaning capacity			sanitation and watershed management also represent an opportunity for improving water quality in the San Andrés River and improving sanitary conditions in the San Andrés Municipality.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		because of the high velocities and rapids. The area of the small impoundment at the intake (around 2.5 hectares of riverine forest, some secondary forest) will be cleared of all vegetation. This, plus the low detention time at the impoundment, will assure that no water quality issues will be present at the impoundment site.			
Erosion and sedimentation issues assessment	✓	Moderate erosion and sedimentation impacts are expected during construction of the project, especially from construction sites associated with the tunnel, intake and spoil disposal sites.			
Identification of erosion and sedimentation impacts that may be caused by the project	✓	The intake includes infrastructure for releasing environmental flows and flushing sediments from the headpond into both streams that are dammed at this point, the San Andrés and the Santa Inés rivers, thus sediment trapping will be kept at a minimum and sediment transport will remain largely unchanged. Erosion of riverbanks is not expected in this mountain river. Erosion impacts from civil works (portals, access road, spoil deposits etc.) will be managed through well-known mitigation measures during construction.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
Identification of erosion and sedimentation issues that may impact on the project	✔	Construction of tunnel portals and other works might present some slope instability issues, that are well understood.			
An understanding of the sediment load and dynamics for the affected river system	✔	Although erosion is not expected for the bypass reach, flushing of sediments from the intake will be monitored and an adaptive management plan will be implemented.			
MANAGEMENT					
Plans and processes to address identified water quality issues have been developed for project implementation	✔	The project will address the main sources of pollution in the bypass reach. It will confine the existing dump through placement of compacted layers of soil, impermeabilization and revegetation, and, most importantly, through the intersection and treatment of leachates from the open dump. In addition, it will design and build a landfill which will be transferred to the municipality for its operation. The project will also monitor the implementation of a wastewater treatment plant for the urban area of San Andrés that will be built under the ESMP of the Hidroituango project.	Processes are in place to anticipate and respond to emerging risks and opportunities for water quality	✔	Water quality monitoring will be implemented to determine if any additional water quality measures are needed in the bypass reach during operation.
Plans and processes to address identified water quality issues have been developed for project operation	✔	The main sources of pollution will be minimized through the closure of the open waste dump and its replacement by a technically sound landfill, plus the construction of a wastewater			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		treatment plant in the San Andres town (to be constructed by Hidroituango). Water quality monitoring during project operation will identify the need of any additional mitigation measures along the bypass reach. Water quality models have demonstrated that the proposed mitigation measures will minimize the impact of reduced flows and should even improve water quality conditions in that stretch of the river.			
Plans and processes to address identified erosion and sedimentation issues have been developed for project implementation	✔	Erosion and sedimentation from construction activities will be addressed through site specific management plans that will be implemented by the contractor and supervised directly by the Energo-Pro environmental team. Lessons learned from Chorreritas have been incorporated into the ESMP.	Processes are in place to anticipate and respond to emerging risks and opportunities for erosion and sedimentation	✔	Flushing of sediments will be monitored and an adaptive management plan implemented; additional mitigation measures will be considered as needed.
Plans and processes to address identified erosion and sedimentation issues have been developed for project operation	✔	The project includes infrastructure and a flushing program to manage sedimentation at the intake. A coordinated operation schedule between Cuerquia and Chorreritas (both operated by Energo-Pro) should provide additional opportunities for minimizing erosion and sediment impacts, if any.			
OUTCOMES					
Plans avoid, minimise and mitigate negative water	✔	Negative water quality impacts have been properly identified and will be	Plans avoid, minimise, mitigate and compensate	✔	Through the investments by Energo-Pro and EPM (Hidroituango), water

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
quality impacts arising from project activities		adequately managed, and water quality objectives will be achieved through the implementation of the ESMP.	negative water quality impacts		quality issues will be adequately addressed especially in the bypass reach.
			Plans provide for enhancements to pre-project water quality conditions or contribute to addressing water quality issues beyond those impacts caused by the project	✓	The project investments in solid waste disposal, together with the wastewater collection and treatment system to be built by EPM, will improve water quality in the San Andrés River and improve sanitation conditions in the urban area of the municipality.
Plans avoid, minimise and mitigate erosion and sedimentation issues arising from project activities	✓	Sediment and erosion issues have been properly assessed, and adequate management plans have been designed.	Plans avoid, minimise, mitigate and compensate erosion and sedimentation issues arising from project activities	✓	Adaptive management of sediment flushing will identify any need for additional mitigation measures.
Plans avoid, minimise and mitigate erosion and sedimentation issues that may impact on the project	✓	Slope stability issues will be managed through appropriate engineering designs and construction techniques.	Plans provide for enhancements to pre-project erosion and sedimentation conditions or contribute to addressing erosion and sedimentation issues beyond those impacts caused by the project	✓	The project will implement a riverine reforestation program along the San Andrés River. This will reduce sediments entering the system and also minimize impacts on water quality from agricultural run-off. Elaboration of a watershed management plan and transfers of funds during operation to government agencies for environmental improvements, should also have positive impacts on erosion and water quality.

List of significant gaps against Minimum Requirements	Number of Advanced Requirements met
None	7 out of 7

Summary of findings and other notable issues

Negative impacts of the project implementation on erosion, sedimentation and water quality are minor, except some localized sediment input from construction sites. During operation, the reduction of waterflows in the bypass reach will diminish dilution and assimilation capacity of the San Andrés River for discharges of domestic wastewater and leachates from an open solid waste dump. The project will provide environmental flows and support a number of investments to mitigate and compensate this impact, resulting in improved conditions.

Relevant evidence

Interview	1, 13-29
Document	9-22, 27, 29, 32, 37, 57, 58, 62, 63, 79, 81
Photo	6, 7, 17, 23



4 Community Impacts and Infrastructure Safety

Scope and Principle

This section addresses impacts of the project on project-affected communities, including economic displacement, impacts on livelihoods and living standards, public health impacts, and impacts to rights, risks and opportunities of those affected by the project. This section also addresses project benefits and infrastructure safety during project preparation, implementation and operation. The principle is that livelihoods and living standards impacted by the project are improved relative to pre-project conditions for project-affected communities, and that life, property and community assets and resources are protected from the consequences of dam failure and other infrastructure safety risks. This section does not address requirements that relate to physical displacement or to Indigenous Peoples, which are addressed in Section 5 and 7. Other interested parties and groups are addressed in Section 10.

Background

Community Impacts and Benefits

Description of project-affected communities and how they are affected (distinguish between physically displaced (addressed in Section 5), economically displaced and other project-affected communities and include estimated number of people and households)	According to the 2018 census, the municipality of San Andrés de Cuerquia in northern Antioquia with an area of 177 km² had a total population of 7,235 inhabitants, with approximately 2,500 in the main town and the rest spread across a number of dispersed villages (<i>veredas</i>). Agriculture is the main economic activity, in recent years complemented by investments in several hydropower projects (contributing employment, improved infrastructure such as the main highway, and municipal revenues). In the ESIA, the socio-economic area of influence of the Cuerquia project was defined as the urban area of San Andrés as well as the villages of San Antonio, Ateza, Alto Seco, Loma Grande, El Roble, El Barro, and Cañaduzales. However, Energo-Pro is supporting all villages and their village development committees (JACs, <i>juntas de acción comunal</i>) in the municipality. Support is in the form of regulatory obligations (mitigation measures for impacts, investment of 1% of construction cost in the impacted area, transfers of 6% of operational revenue to environmental authorities and municipalities) as well as voluntary initiatives related to social investments, employment and procurement. The principal negative impacts of the project are the loss of land (primarily used as pastures), construction impacts, and impacts on river uses. Parts of the population have been subject to previous displacement from armed conflicts and insecurity, and other infrastructure projects. The loss of land is very minor, compared to the installed capacity, because • much of the project's infrastructure (such as the powerhouse) is underground, • the project will use existing infrastructure (such as roads and transmission lines), • parts of the remaining 14 ha surface footprint (such as spoil dumps and industrial areas) will be only rented and then rehabilitated and returned to owners.
Agencies relevant to land acquisition	The project is expected to be declared in the public interest by the Ministry of Mines and Energy, which allows expropriation if a sales agreement cannot be negotiated. In projects of public interest, the value of the property is to be

	determined by specified entities, so-called 'lonjas', which are non-profit associations of qualified real estate professionals.
Agencies relevant to livelihood restoration and project benefits	Livelihood restoration for the few property owners affected by the project, will be done through the project directly. Project benefits will be managed by the project in conjunction with local authorities such as the municipality, JACs and associations such as ASOCOMUNAL, ASOMANOL and the associations of coffee growers.
Infrastructure Safety and Public Health	
Type of dam	Concrete gravity
Dam height (m)	25 m
Probable maximum flood (m ³ /s)	1,148 m ³ /s
Design flood (expressed as estimated flood with return period)	Spillway gates 840 m ³ /s (70% of PMF) plus two bottom valves of 190 m ³ /s each, for a total of 1,220 m ³ /s
Spillway capacity (m ³ /s)	840 m ³ /s
Spillway crest elevation (masl)	1,780 masl
Headrace length (m)	Upper tunnel: 3,766; Intermediate tunnel: 2,588; lower tunnel: 150
Headrace width (m)	3.1-3.4 m
Headrace capacity (m ³ /s)	10.6 m ³ /s
Seismicity	Colombia is seismically active, and major earthquakes have occurred in Antioquia. While earthquake hazards in the region are considered intermediate/moderate, several fault lines have been identified close to the project.
Geology	Local geology is dominated by schists. The terrain is steep with some instable zones and landslides. There are few alluvial deposits in the narrow reach of the San Andrés River affected by the project. The valley opens up and sediments are deposited further downstream, before the river enters the Ituango reservoir.
Dam safety regulatory authorities	There are no specialised dam safety authorities in Colombia. Project designs are part of the documents submitted to and approved by environmental authorities, such as Corantioquia.
Local presence/capacity of emergency services	Small volunteer fire department, police station and army detachment in San Andrés de Cuerquia. The next larger and well-equipped emergency services are located at the Ituango dam, at a distance of 45 km.
Potential safety risks in this context	Dam failure
Degree of risk of dam failure and in what way	A failure of the dam is very unlikely; as the discharge capacity is greater than the PMF. Dam break analysis shows that the flood flows associated with the simulated failure events do not differ significantly from the results obtained with the natural flood flows. Depths fall within a magnitude range between 0.10 m and 10.46 m. The flood flow resulting from operational failure of the dam during a 2.33-year flood event shows the lowest depths, while the flood flow resulting from dam failure with a natural PMF event the greatest depths. These floods would likely erode the riverbanks and damage the concrete dam, but not lead to a complete and rapid failure.
Population at risk of dam break (locations, numbers)	The dam break analysis shows that a 1-in-100 years flood level will affect one residential building. There is no intensive water use, dwellings or human activity downstream the dam in the flood zone along the bypass reach.

Dam safety standards followed	Design of Small Dams (USBR, 1987), as well as Colombian standards for seismicity and bridges, and USACE standards for reinforced concrete hydraulic structures and spillway gates
Agencies relevant to dam safety	See above
Other infrastructure safety issues	Stability of slopes especially at the tunnel portals; minimum traffic safety issues (as construction sites are off the main road 25 AN); electrical safety
Description of key public health issues	Most of the population in the area lives close to the paved main road 25AN, which has been significantly improved due to the construction of the Ituango project and allows access to public health facilities locally (in particular, the level 1 hospital in San Andrés) as well as in Medellín. There are no active health posts in the villages. Most of the project neighbours are covered by the publicly subsidized health system.
Agencies relevant to public health	The municipality administration includes a public health department.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✕)	Findings and Observations		Requirement is met: yes (✓) or no (✕)	Findings and Observations	
ASSESSMENT					
Community Impacts and Benefits					
An assessment of issues relating to project-affected communities	✓	Project-affected communities are well known, and issues are well understood from the recent Cuerquia HPP ESIA as well as from continuous engagement over several years.	The assessment takes broad considerations into account, and both risks and opportunities relating to project-affected communities and project benefits	✕	In general, the assessment was both broad and detailed, down to the level of individual properties to be rented or purchased, and their owners. The assessment of project benefits took not only direct support from the project into account but also opened up opportunities for communities to access support from government (for example, the formalization of the JACs now enables them to obtain grants from a Ministry of the Interior program). However, there is one area where risks and opportunities have not yet been assessed. The municipality of San Andrés has inadequate sanitation infrastructure and operational capacity (for solid waste disposal,
This assessment utilised local knowledge	✓	Communities are well acquainted with hydropower projects and contributed their concerns and objectives. Energo-Pro’s Chorreritas project assisted each JAC in developing its institutional capacity and a development plan.			
An assessment of opportunities to increase the development contribution of the project through additional benefits and/or benefit sharing strategies	✓	Energo-Pro has identified an impressive range of strategies to embed their projects in the local communities and maximize their contributions to sustainable development.			
The pre-project baseline against which delivery of benefits can be evaluated	✓	The baseline is very well known from Energo-Pro’s previous work in the San			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
post-project is well-documented		Andrés valley and from the extensive surveys reported in the ESIA.			water supply, and wastewater disposal). This problem has been exacerbated by the influx of population related to the various hydropower projects. Also, the Cuerquia project will reduce flows in a river reach where leachates from the solid waste dump and untreated wastewater from the town reach the river, and will thus exacerbate existing water quality issues. Several hydropower projects (Ituango, Chorreritas, Cuerquia) are planning to address these issues with physical investments under their 1% obligations, but without a master plan for the town, plans for sustainable operations, or sufficient coordination between the individual projects. This is a significant gap. Another significant gap is the lack of visibility regarding fiscal opportunities for the municipalities in the catchment of the project, San Andrés de Cuerquia and San José de la Montaña. There are no estimates of the value of transfers that the municipalities will receive during operation from the various hydropower projects in their territories, and limited awareness of these mechanisms among the local leadership, and therefore these

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					transfers cannot be taken into account in the planning of municipal capital and operational expenditures as well as requirements for capacity building for public financial management and procurement.
Infrastructure Safety and Public Health					
An assessment of dam and other infrastructure safety risks during project preparation, construction, and operation	✓	The design of the dam was developed through a progressive engineering process, with successive technical reviews and optimizations during the different stages of the project's development. Geological, geotechnical, hydrological and seismic risks were evaluated in the feasibility and design phases with the stability of slopes (natural and of spoil deposits) in case of earthquakes and heavy rains as the main safety concern. Risks associated with the cofferdam were considered and found to be negligible. The dam has an inherently safe design even in case of substantial floods, with evacuation capacity of spillway gates and bottom valves greater than the PMF. There are no significant buildings or infrastructure near the river for several km downstream along the bypass reach. A standalone dam break and inundation analysis was prepared. Using the design information, a model for probabilistic failure scenarios of	The assessment takes broad considerations into account, and both risks and opportunities relating to infrastructure safety	✓	The dam safety assessment was both broad and detailed, down to the level of individual properties to be affected at different flood levels under different dam break scenarios. The combined assessment of Cuerquia with Chorreritas provides a higher level of confidence. Contractors will implement site specific emergency plans for all other project components.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		the dam was developed in the McBreach software. The model results provide the failure hydrographs for the most probable scenarios according to the type of failure (under normal conditions and during a flood). The model covered a short reach that includes the weir area, its impoundment, and several hydraulic cross sections downstream of it. Natural flood events and the generated failure hydrographs are routed through a two-dimensional (2D) hydraulic model using HEC-RAS (Hydrologic Engineering Centre's River Analysis System) software, version 6.4.1, allowing comparisons.			
This assessment was conducted using appropriate expertise	✓	Dam break analysis, preliminary and detailed designs were carried out by competent firms.			
Public health issues assessment	✓	The ESIA includes a rapid assessment of the public health status including facilities, insurance status, health education, and potential project impacts.	The assessment takes broad considerations into account, and both risks and opportunities relating to public health	✗	The ESIA did not address the adequacy of health system capacities for the population of San Andrés (which is constantly changing as a result of multiple hydropower projects), nor the effects of worker influx on contagious or sexually transmitted diseases, and gender related violence, which is a significant gap . While these are ongoing risks, they will be extended in time by the construction of the Cuerquia project.
This assessment includes public health system capacities and access to health services	✓	See above. The capacity of the local hospital has been improved by social investments under the Ituango HPP.			
This assessment has considered health needs, issues and risks for different community groups	✓	See above. Some health information was provided differentiated by <i>vereda</i> and for each family affected by land acquisition.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)	Findings and Observations		Requirement is met: yes (✓) or no (✗)	Findings and Observations	
MANAGEMENT					
Community Impacts and Benefits					
Management plans and processes for issues that affect project-affected communities have been developed	✓	Energo-Pro Group and Energo-Pro Colombia have a number of applicable policies, strategies, procedures and plans, such as a Policy on Land Acquisition and Resettlement (2024) and a Human Rights Policy (2026). The ESIA includes a series of social management plans, including voluntary measures not required under the Corantioquia license. The management plans are building on those implemented in the Chorreritas project.	Processes are in place to anticipate and respond to emerging risks and opportunities relating to project-affected communities and project benefits	✓	As described in section 10, Energo-Pro maintains very close relations with project-affected communities and their representatives through a variety of channels. These relationships in combination with Energo-Pro’s ESG commitments should ensure that any relevant risks and opportunities are anticipated and responded to.
These plans and processes include monitoring procedures, utilising local expertise when available	✓	Most of the formal monitoring plans address physical or biological, not social parameters. Monitoring is expected to be largely informal and qualitative, based on strong community engagement, grievance mechanisms etc.			
If there are formal agreements with project-affected communities, these are publicly disclosed	✓	All agreements that have already been made, through minutes of meetings or other documents, are available or can be accessed upon request. Note that the Cuerquia ESIA itself and the environmental license with its conditions (in other words, the documents that will describe the formal commitments) are not easily publicly available or have not been issued yet; see section 10.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
Project benefit plans and processes have been developed for project implementation that incorporate additional benefit or benefit sharing commitments	✓	As described in the ESIA, benefits will include the obligatory investment of 1% of project costs, which is planned to be used for a Watershed Management Plan (<i>Plan de Ordenación y Manejo de la Cuenca Hidrográfica</i>, POMCA), improvements in wastewater disposal, and ecological rehabilitation. Additionally, the project has committed to a voluntary social investment plan for small project grants of USD 20,000 for each of the 14 <i>veredas</i> of the municipality. Project benefit plans are closely related with the stakeholder engagement strategy (section 10), based on experiences from the Chorreritas project, and on plans developed with the municipality and the JACs. They include a range of additional initiatives, beyond the ones described in the ESIA, for example regarding local employment and procurement. A program for local entrepreneurship is starting in June 2026 and is expected to lead to additional opportunities for local suppliers.			
	✓	During operation, the main benefit will be the transfer of 6% of revenues, the use of which will be decided by recipient agencies (environmental authorities and municipalities), as part			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
additional benefit or benefit sharing commitments		of their regular planning and budgeting process. San Andrés municipality will benefit significantly, as it will receive transfers from several hydropower projects, including a share of the transfers from the large Ituango project downstream.			
Commitments to project benefits are publicly disclosed	✓	All commitments to project benefits are publicly disclosed, although the largest benefit financially (the transfer of 6% of revenues) has not been estimated.			
Infrastructure Safety and Public Health					
Dam and other infrastructure safety management plans and processes have been developed for project implementation	✓	Construction quality will be monitored by Energo-Pro following good practices and lessons learned from the implementation of the Chorreritas project. The project's ESMP addresses several exogenous risks (earthquake, floods, mass movements, disturbances of public order) and endogenous risks (work accidents, spills, fire/explosion, operational or structural failure of weir and spillway, flood caused by construction stage failure, tunnel collapse, failure of spoil deposits). Several of these are primarily assessed in terms of their impact on project workers and project infrastructure and would have little impact on public safety. The civil works contractor will be required to have emergency plan in place, with	Processes are in place to anticipate and respond to emerging infrastructure safety risks and opportunities	✗	There are no specific processes in place for emerging infrastructure safety risks and opportunities, for example related to climate change, new infrastructure, or emergency services in the San Andrés valley. This is a significant gap .

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		simple flowcharts for responses to different types of events. A number of additional safety-relevant processes are in place.			
Dam and other infrastructure safety management plans and processes have been developed for project operation	✓	Emergency preparedness plans have been prepared which include an alarm system, training and awareness programs, appropriate for the identified risks.			
These plans have been developed in conjunction with relevant regulatory and local authorities	✓	The emergency preparedness plans have not yet been disclosed or discussed with relevant local and regional authorities. They are included as part of ESIA that is under review by Corantioquia, and disclosure cannot be carried out before the license is issued by Corantioquia. As with the Chorreritas project, Energo-Pro is committed to sharing these plans in due course.	Plans provide for public safety measures to be widely communicated in a timely and accessible manner	✓	These communications cannot take place before the approval of the ESIA and the issuing of the environmental license by Corantioquia. Emergency plans were communicated to local communities in the Chorreritas project, and this is also planned for Cuerquia.
Plans provide for communication of public safety measures	✓	See above			
Emergency response plans include awareness and training programmes and emergency response simulations	✓	See above	Emergency response plans are independently reviewed	✓	Emergency response plans undergo institutional review by Corantioquia and local authorities. These plans will be disclosed to the public once the EIA is approved by Corantioquia.
Dam safety is independently reviewed	✓	The design of the Cuerquia dam was developed through a progressive process of engineering, optimization and technical review, in which the initial solution was subjected to			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✕)		Findings and Observations	Requirement is met: yes (✓) or no (✕)		Findings and Observations
		successive revisions during the different stages of project development, by competent firms. Consequently, the final design of the dam and the dam failure analysis corresponds to the result of a structured process of review, validation and optimization of the engineering. There has been no fully independent review, which is a gap. However, this gap is not considered significant, as the final review was well documented and certified by a highly experienced engineer.			
Plans and processes to address identified public health issues have been developed for project implementation	✓	No significant public health impacts have been identified, and public health is not one of the priorities for Energo-Pro’s social investments. The project will focus on the health and safety of workers and will aim at not burdening the public health system unnecessarily, by maintaining a high OH&S standard and by providing health services to workers.	Processes are in place to anticipate and respond to emerging public health risks and opportunities	✕	There are no such systematic processes, which is a significant gap . There have been voluntary initiatives in the Chorreritas project (such as health campaigns that reached about 925 residents), but these were not based on a systematic monitoring and prioritization process, and there are no specific plans to continue them. The investments in urban sanitation are also not based on a systematic public health planning process.
Plans and processes to address identified public health issues have been developed for project operation	✓	See above.			
OUTCOMES					
Community Impacts and Benefits					

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
Plans provide for livelihoods and living standards impacted by the project to be improved	✓	The combination of mitigation, compensation and benefit sharing measures is expected to improve livelihoods and living standards at all levels (affected households, <i>veredas</i> and municipality). However, there is currently a lack of monitoring plans to document such improvements.	Plans provide for livelihoods and living standards that are impacted by the project to be improved with the aim of self-sufficiency in the long-term	✓	Many of the social management plans aim at self-sufficiency, by boosting skills, economic activity, infrastructure, and long-term fiscal opportunities.
Plans provide for economic displacement to be fairly compensated, preferably through provision of comparable goods, property or services	✓	Economic displacement will primarily affect a small number of families who will lose access to parts of their land, temporarily or permanently, which is now primarily used for livestock pastures. Compensation will be paid in accordance with established mechanisms which are generally perceived as fair and impartial. Additionally affected families receive compensation for lost income, and other support.	The project contributes to addressing issues for project-affected communities beyond impacts caused by the project itself	✓	The project contributes to addressing multiple pre-existing issues in its area of influence. Examples are the strengthening of the JACs and other community organizations, improvements of village roads and sanitation in San Andrés town, catchment management and protection, supplier development, and educational stipends for local youth.
Plans deliver benefits for communities affected by the project	✓	The cumulative socio-economic and demographic impacts of the various hydropower projects in the San Andrés valley are strongly positive. The Cuerquia project will deliver a number of additional benefits.	Plans deliver significant and sustained benefits for communities affected by the project	✓	The benefits are very significant and by design, will be sustained over the lifetime of the project.
Infrastructure Safety and Public Health					
Plans avoid, minimise and mitigate safety risks	✓	No significant residual safety risks have been identified. Safety risks are considered low because of minimum human activity along the bypass reach. In addition, construction will not affect the main road significantly.	Plans contribute to addressing safety issues beyond those risks caused by the project itself	✓	Engaging local authorities, communities and emergency services in the management of safety risks in the Chorreritas project has provided an opportunity for strengthening these institutions. This approach will

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					also be applied in the Cuerquia project.
Plans avoid, minimise and mitigate negative public health impacts arising from project activities	✓	No significant negative public health impacts have been identified.	Plans avoid, minimise, mitigate and compensate negative public health impacts	✓	The measures to maintain and improve environmental health – primarily through the investments in sanitation in San Andrés – will largely compensate for the increased population.
			Plans provide for enhancements to pre-project public health conditions or contribute to addressing public health issues beyond those impacts caused by the project	✓	It is plausible that investments in public infrastructure (urban sanitation as well as village roads, which allow better access to health services) and livelihoods (which improve nutritional status) will have some positive impacts on public health.

List of significant gaps against Minimum Requirements	Number of Advanced Requirements met
None	10 out of 14

Summary of findings and other notable issues
The Cuerquia HPP will result in only minor economic displacement and few other negative community impacts, which are expected to be well mitigated, but will generate significant and sustained benefits for the community. This will add to the significant improvements in livelihoods and living standards, and population influx that the area has experienced over the past 15 years, as a result of investments in multiple hydropower projects. There are some opportunities to improve the coordination of community investments, visibility of fiscal benefits, and analysis of public health and safety risks and opportunities. There are no significant concerns regarding dam safety.

Relevant evidence	
Interview	1-12, 13-29
Document	3, 5, 9-23, 28, 31, 32, 37, 40, 44, 46, 47, 52-57, 59, 62-76, 80, 83
Photo	1, 2, 9, 12-14, 16, 23



5 Resettlement

Scope and Principle

This section addresses physical displacement arising from the hydropower project development. The principle is that the dignity and human rights of those physically displaced are respected; that these matters are dealt with in a fair and equitable manner; and that livelihoods and standards of living for resettles and host communities are improved. This section does not address those that are only economically displaced, who are addressed in Section 4.

Background

Does the project require or result in any physical displacement of people? Please state the evidence on which this determination is made.

Yes, this section is relevant

[Click here to enter text.](#)

No, this section is not relevant

The Cuerquia HPP will change the land use on 14 hectares, mostly used for pastures and forests. The 20 properties affected to some degree by land acquisition, are owned by 4 other hydropower projects and 14 families, but none of them will be physically displaced by the project.



6 Biodiversity and Invasive Species

Scope and Principle

This section addresses ecosystem values, habitat and specific issues such as threatened species and fish passage in the catchment, reservoir and downstream areas, as well as potential impacts arising from pest and invasive species associated with the project. The principle is that there are healthy, functional and viable aquatic and terrestrial ecosystems in the project-affected area that are sustainable over the long-term, and that biodiversity impacts arising from project activities are managed responsibly.

Background

Short description of the ecological region in the project area	The project is located between the pre-montane humid forest of the Central Cordillera and the humid tropical forest of the Cauca valley, with a very high level of biodiversity. Affected land uses include pastures, crops and fragmented forests, principally a small area of riparian forest in the intake area, on the San Andrés River.
Protected areas (national parks and reserves etc) and their distance from the project	The area of influence of the Cuerquia project does not overlap with any national conservation priority areas or areas under any conservation category at the local and regional level. The closest protected areas are a Soil Conservation District in the municipality of Peque (distance of 20 km), the Paramillo National Natural Park (60 km), the District of Integrated Management of the Dry Forest of Western Antioquia (17 km), the Regional District of Integrated Management of the Páramos and High Andean Forest System of the Middle Northwest of Antioquia (20 km) and the Regional District of Integrated Management of Alto de Ventanas (28 km).
Critical habitats in the project area, including important bird areas, hotspots of endemism etc.	According to the ESIA, no critical habitats, important migratory pathways or strategic ecosystems such as ecological corridors are affected. Multiple fauna and flora species that are endemic or of conservation concern were identified in, or are known from the broader project area, but within the small project footprint, no critical habitats are known.
# threatened species in the directly affected area: terrestrial	None identified
# threatened species: aquatic	None identified
Any other species of conservation importance	None identified
Migratory pathways	None identified
Invasive species: terrestrial	None identified
Invasive species: aquatic	None identified
Key threats to biodiversity	Deforestation, principally for agriculture and livestock; illegal mining; water pollution

Agencies involved in biodiversity conservation	Corantioquia is the regional entity responsible for the environment and renewable natural resources, adhering to the guidelines issued by the Ministry of Environment and Sustainable Development (<i>Ministerio de Ambiente y Desarrollo Sostenible</i>, MADS). National Natural Parks of Colombia is a special administrative unit of the Ministry in charge of managing the National System of Protected Areas.
--	--

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)	Findings and Observations		Requirement is met: yes (✔) or no (✘)	Findings and Observations	
ASSESSMENT					
Assessment of terrestrial biodiversity	✔	The EIA includes a detailed assessment of terrestrial habitats based on secondary information and complemented by field sampling in selected plots.	The assessment takes broad considerations into account, and both risks and opportunities	✔	The compensation property identified for this project is in the upstream municipality of San José de la Montaña. It is larger than the regulatory requirement and was selected to accommodate offsets for the transmission line and for future hydropower projects. An additional 24 ha will be added for the Cuerquia program. The property has equal or higher biodiversity value and also serves for the protection of water resources. It is in the premontane forests of the northern region of the Central Cordillera, which are considered as strategic ecosystems, with a high structural complexity and floristic diversity.
Assessment of aquatic biodiversity including passage of aquatic species and loss of connectivity to significant habitat	✔	The EIA includes an assessment of aquatic biodiversity, in particular fish. One species is migratory over short distances; none is endangered. Fish biodiversity is low because of existing natural and man-made barriers.			
Assessment of risks of invasive species	✔	No invasive species were identified in the EIA.			
MANAGEMENT					
Plans and processes to address identified biodiversity issues have been developed for project implementation	✔	During construction, the ESMP includes an inventory and rescue of vascular plants (epiphytes and orchids) from the impoundment; animal rescue as needed; and reforestation of riverine forest.	Processes are in place to anticipate and respond to emerging risks and opportunities	✔	Biodiversity monitoring programs will identify the need for additional mitigation and/or compensation measures. Riverine forest restoration measures along the San Andrés will improve water quality along the river

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					and provide additional habitat for regional flora and fauna.
Plans and processes to address identified biodiversity issues have been developed for project operation	✓	An additional area of 24 ha for biodiversity compensation will be added to the offset area for the Chorreritas project. The ESMP includes biodiversity monitoring programs for the operations stage.	Commitments in plans are public, formal and legally enforceable	✓	As all measures contained in the ESMP, the biodiversity mitigation and offset measures will be part of the formal obligations of Energo-Pro under the license from Corantioquia.
OUTCOMES					
Plans avoid, minimise, mitigate and compensate negative biodiversity impacts arising from project activities with no significant gaps	✓	The Cuerquia project will not have a significant impact on biodiversity. The ecological footprint of the project is small with a total of 14 ha. Only 2.6 ha will be affected by the small impoundment, mainly riverine forest and fragmented secondary forest. Other affected areas, mainly for disposal sites and other project installations, are in modified habitats, mainly pastures.	Plans avoid, minimise, mitigate and compensate negative biodiversity impacts arising from project activities with no identified gaps	✓	There are no identified gaps for biodiversity impacts. The terrestrial biodiversity risks are low, and the project will likely result in a net gain for biodiversity. The incremental aquatic biodiversity impact, through the barrier effect of the dam and the reduced flows, is low because of pre-existing barriers, and should be compensated by habitat improvements related to riparian reforestation and water quality improvements.
			Plans provide for enhancements to pre-project biodiversity conditions or contribute to addressing biodiversity issues beyond those impacts caused by the project	✓	The biodiversity offset and riverine forest restoration will enhance biodiversity values in the watershed.
List of significant gaps against Minimum Requirements			Number of Advanced Requirements met		
None			5 out of 5		

Summary of findings and other notable issues	
The footprint of the project is approximately 14 ha of which 2.6 ha will be flooded by the headpond, with some riverine and secondary forest. Other affected areas are intervened habitats, mainly pastures. No critical habitats or protected areas are affected by the project. Biodiversity offsets for the Chorreritas and Cuerquia projects, riverine forest restoration, and water quality improvements provide opportunities for enhancement of biodiversity in the watershed.	
Relevant evidence	
Interview	1, 13-29
Document	9-24, 30, 37, 53, 57, 62, 63, 66, 81
Photo	5, 6, 11



7 Indigenous Peoples

Scope and Principle

This section addresses the rights at risk and opportunities of Indigenous Peoples with respect to the project, recognising that as social groups with identities distinct from dominant groups in national societies, they are often the most marginalised and vulnerable segments of the population. The principle is that the project respects the dignity, human rights, aspirations, culture, lands, knowledge, practices and natural resource-based livelihoods of Indigenous Peoples in an ongoing manner throughout the project life.

Background

Are any of the affected people Indigenous Peoples? Please state the evidence on which this determination is made.

Yes, this section is relevant

[Click here to enter text.](#)

No, this section is not relevant

As one of the first countries in the world, Colombia ratified the ILO Convention 169 and implemented it into its national constitutional framework in 1991. The rights to free, prior and informed consultation and consent are legally protected. Indigenous, Afro-Colombian and other ethnic minority territories are recognized and registered in official databases. The Ministry of Interior confirmed in 2025 that no ethnic communities are registered in the project's area of influence. 45 persons in the municipality of San Andres de Cuerquia consider themselves as Afro-descendant, and 1 person as indigenous; while a majority of 99.27% do not consider themselves as belonging to any ethnic group.



8 Cultural Heritage

Scope and Principle

This section addresses cultural heritage, with specific reference to physical cultural resources, at risk of damage or loss by the hydropower project and associated infrastructure impacts (e.g. new roads, transmission lines). The principle is that physical cultural resources are identified, their importance is understood, and measures are in place to address those identified to be of high importance. This section does not address non-physical cultural resources, which are addressed in Section 1 and/or in Sections 5 and 7 when relevant.

Background

Does the project affect any physical cultural resources? Please state the evidence on which this determination is made.

Yes, this section is relevant	Yes, this section is relevant. Some sections in the project area could have been settled by pre-colonial populations. The construction of other hydropower plants, transmission lines and roads in the valley has yielded some archaeological remains, typical for many construction projects in Colombia. A preventative archaeology programme for the Cuerquia project was approved by ICANH in 2025 and yielded small ceramic fragments from 16 test pits in two directly affected areas (polygons), out of 726 test pits in 35 polygons.
No, this section is not relevant	Click here to enter text.

Sites of physical cultural heritage affected by or in proximity to the project-affected areas	How they are affected
There may be some archaeological remains within the direct footprint of the Cuerquia project (14 ha).	Archaeological remains may be disturbed by construction works.

Agencies responsible for cultural heritage	Colombian Institute of Anthropology and History (<i>Instituto Colombiano de Antropología e Historia</i> - ICANH)
Other important local or regional physical cultural heritage values and issues	The project area has no significant historic buildings or sites that are protected for their cultural heritage value; some historic buildings are located in the nearest town San Andrés de Cuerquia but would not be affected.

Minimum Requirements		Advanced Requirements	
Requirement is met: yes (✓) or no (✗)	Findings and Observations	Requirement is met: yes (✓) or no (✗)	Findings and Observations
ASSESSMENT			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
A cultural heritage assessment has been undertaken	✓	As part of the ESIA, a cultural and archaeological impact assessment was undertaken, including literature and field research.	The assessment takes broad considerations into account, and both risks and opportunities	✓	Although the archaeological assessment could not execute test pits in all affected areas (polygons), due to access and other issues, it can be considered comprehensive, considering the small footprint of the project and the well-established archaeological context.
The assessment includes:					
• identification and recording of physical cultural resources	✓	Resources were identified and recorded based on public information and test digs.			
• evaluation of the relative levels of importance	✓	Ceramic fragments were generally too small to be analysed; results were consistent with previous knowledge.			
• identification of any risks arising from the project	✓	No specific risks were identified.			
MANAGEMENT					
Plans and processes to address physical cultural resources have been developed for project implementation	✓	A standard archaeological management plan for the construction stage has been formulated in ICAHN resolution 435 (2025). Additional excavations will be carried out in the two areas where test pits yielded positive results.	Processes are in place to anticipate and respond to emerging risks and opportunities	✓	The management and monitoring program is adequate for the cultural heritage issues that have been or may be identified.
Plans and processes to address physical cultural resources have been developed for project operation	✓	By regulation, an equivalent process will be in place during the operation stage, in the event of any chance finds during operations.			
Plans include arrangements for chance finds	✓	Chance finds procedures are generally known, have been equally applied in the Chorreritas project, and are described in ICANH resolution 435.	Plans are supported by public, formal and legally enforceable commitments	✓	Colombia has a strong regulatory framework for archaeological management plans.
Plans ensure that cultural heritage expertise will be on	✓	The prospecting studies were carried			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
site and regularly liaised with by the project management team during construction		out, and the archaeological management plan during construction will be implemented by registered and qualified archaeological professionals, as required by Colombian regulations.			
OUTCOMES					
Plans avoid, minimise, mitigate and compensate negative impacts on cultural heritage arising from project activities with no significant gaps	✔	There are no indications that any negative cultural heritage impacts will not be appropriately managed.	Plans avoid, minimise, mitigate and compensate negative cultural heritage impacts with no identified gaps	✔	No gaps have been identified. The ESIA mentions archaeological resources as one of the few values that could be affected by residual impacts after mitigation, but such impacts are expected to be minor and of low probability.
			Plans contribute to addressing cultural heritage issues beyond those impacts caused by the project	✘	The ICANH resolution 435 authorizing the preventative archaeology programme prescribes some outreach activities such as induction talks with workers, schoolchildren and local officials, but these are largely related to potential project impacts. If additional archaeological material is found and is of interest to museums or other agencies, it may be displayed or archived there, but this remains to be seen. At this point, it appears unlikely that there will be measures to address other cultural heritage issues, which is a significant gap .
List of significant gaps against Minimum Requirements			Number of Advanced Requirements met		
None			4 out of 5		

Summary of findings and other notable issues	
The archaeological prospecting and monitoring programs and some awareness campaigns, allow the identification and preservation of archaeological material in the project footprint. The material found to date is of minor significance and, in cooperation with ICANH will be analysed, and its final destination determined.	
Relevant evidence	
Interview	1, 13-29
Document	9-23, 37, 57
Photo	-

9 Governance and Procurement



Scope and Principle
This section addresses corporate and external governance considerations for the project, and all project-related procurement including works, goods and services. The principle is that the developer has sound corporate business structures, policies and practices, and that procurement processes are equitable, transparent and accountable.

Background	
Key information on political context and public sector risks	Colombia has suffered from many years of political instability and armed conflict. On the World Bank's Worldwide Governance Indicators, in 2024 Colombia had declining (compared to 2019) and below-average scores (compared to the Latin American average, except for Regulatory Quality). On Transparency International's CPI index, Colombia was ranked 99 th in 2025.
Key information on corporate ownership and governance	Energo-Pro is a privately held group of power companies, headquartered in Czechia and with operations in Czechia, Bulgaria, Georgia, Türkiye, Colombia, Spain and Brazil. The Cuerquia HPP will be developed by Cuerquia SPV SAS ESP, a 100% subsidiary of Energo-Pro Colombia.
Details of the concession, if applicable	Connection to the grid has to be provided by the regional grid operator, in this case EPM, after technical and commercial analysis by the grid operator and the planning unit of Ministry of Energy (<i>Unidad de Planeación Minero Energética</i> , UPME).
Key licensing or permitting requirements	The Cuerquia HPP has applied for its environmental license from the regional regulator Corantioquia, responsible for projects under 100 MW.
Key information on expected procurement strategy for this project (EPC, BOOT, etc)	The contracting strategy is similar to the one for the Chorreritas HPP, and includes contracts for site preparation, tunnels and roads, intake and powerhouse, electromechanical equipment, the ESMP, and the transmission line.
Other relevant information	The project region (northern Antioquia) has been among the most instable regions in Colombia, with significant coca production and trafficking, illegal gold mining, and competing armed groups.

Minimum Requirements		Advanced Requirements	
Requirement is met: yes (✓) or no (✗)	Findings and Observations	Requirement is met: yes (✓) or no (✗)	Findings and Observations
ASSESSMENT			
Assessments have been undertaken of the following through the project development cycle:	There are no significant opportunities for	✓	The company is well connected, supported by legal and other advisors,

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• political and public sector governance issues	✓	Energo-Pro Colombia staff and consultants have a good understanding of the political and public sector governance situation in Colombia in general, and in the project region. The project is expected to be able to obtain all required permits and approvals.	improvement in the assessment of political and public sector governance issues		and engaged in sector policy through an association of independent power producers (<i>Centro de Estudios de la Energía Renovable y el Agua - CEERA</i>).
• corporate governance requirements and issues	✓	Corporate governance requirements are established by the Energo-Pro group, and partially customized for the specific regulatory context in Colombia.	There are no significant opportunities for improvement in the assessment of corporate governance requirements and issues	✓	There are no indications for any significant opportunities.
• major supply needs, supply sources, relevant legislation and guidelines, supply chain risks and corruption risks	✓	Supply needs, procurement guidelines and contracting strategy are being defined by Energo-Pro internally, without an owner's engineer. This has worked well in the Chorreritas project.	The assessment includes opportunities for local suppliers and local capacity development.	✓	Increasing local content and employment are part of the procurement objectives. Following several other hydropower projects, the local economy is already set up to benefit from employment and procurement opportunities. In the Chorreritas project, major contractors had to submit within 30 days a program for local supplier development, which was approved and supervised by the client. In the Cuerquia project, Energo-Pro will go further, and is just starting a program for local entrepreneurship which is expected to lead to additional opportunities for local suppliers, including cooperatives. The contracting strategy with multiple contracts supervised directly by

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					Energo-Pro, also facilitates access by local firms.
MANAGEMENT					
Processes are in place to manage the following:					
• corporate, political and public sector risks	✓	Risks are addressed through a range of separate corporate policies and practices, for example regarding money laundering.	Processes are in place to anticipate and respond to emerging risks and opportunities	✓	Energo-Pro's management at the national and group level are well prepared to anticipate and respond to emerging governance issues. For example, sustainability certification is strategically used to build relations, reduce risks, and develop opportunities with government entities, financing institutions, and power offtakers.
• compliance	✓	Energo-Pro Colombia's legal specialist is also responsible for compliance and reporting to authorities, for example to the UIAF (<i>Unidad de Información y Análisis Financiero</i>).	Contractors are required to meet or have consistent policies as the developer	✓	The procurement policy and processes emphasize alignment with Energo-Pro's ESG policies and the objective of maximizing local content, through contractor selection (e.g. previous sustainability record, E&S management plans) and contracting (e.g. confirmation of compliance with Energo-Pro policies). Periodic payments to contractors are conditioned upon adequate performance, including on E&S criteria (in particular, OH&S and environment), and there have been cases in the Chorreritas project where payments have been delayed until problems had been resolved (for example, delayed payments to local suppliers).
• social and environmental responsibility	✓	Energo-Pro Colombia has a comprehensive approach to managing corporate responsibility.			
• grievance mechanisms	✓	A 2023 document at the level of the Energo-Pro Group provides guidance on grievance mechanisms. The mechanism for Chorreritas is described in the Stakeholder Engagement Plan and has worked well in practice. A similar mechanism will apply to Cuerquia.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• ethical business practices	✓	Ethical business practices are embedded in corporate policies and processes. The Energo-Pro Group's Code of Conduct and Anti-Bribery and Anti- Money Laundering Policy which are guided by zero tolerance principles, are available on the website. There is an anti-bribery and anti-money laundering committee at the group level.	Sustainability and anti-corruption criteria are specified in the pre-qualification screening	✓	Depending on the procurement category, potential suppliers have to be registered and have to submit commitment letters and information on some sustainability aspects, such as their OH&S management system (SG-SST), references from previous clients, their own ESG certificates or policies, etc. Contractors with previous performance issues, including on ESG management, may be excluded.
• transparency	✓	Energo-Pro operates with a considerable degree of transparency. The group makes its sustainability-related corporate policies accessible in all languages of countries where the group operates, and publishes an annual sustainability report. There are frequent interactions with local stakeholders where information is shared and feedback obtained.			
Policies and processes are communicated internally and externally as appropriate	✓	Most of Energo-Pro's policies are publicly available through the website, are referenced in the annual group sustainability report and procurement documents, and are communicated to stakeholders as required. Internally, policies and processes are shared through induction and other trainings, and easily accessible.			
Independent review mechanisms are utilised to address sustainability issues	✓	To date there have been no particular cases of project capacity shortfalls, high sensitivity of particular issues, or	Anti-corruption measures are strongly emphasised in	✓	See above regarding ethical business practices. A variety of anti-corruption safeguards are built into Energo-Pro's

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
in cases of project capacity shortfalls, high sensitivity of particular issues, or the need for enhanced credibility		a need for enhanced credibility. For the Chorreritas project, the reports from the 2022 and 2023 independent HESG and HSS assessments were made publicly available, as was the Corantioquia sustainability certification report.	procurement planning processes		procurement practices, including limits on gifts and sponsorship, rules contracts with associated persons, dedicated training, accounting practices, whistleblower mechanism, sanctions, etc.
Procurement plans and processes have been developed for project implementation	✓	The Energo-Pro Group’s Procurement Policy and the General Terms and Conditions for Purchase of Goods and/or Services are available on the website. Draft conditions of contract will be included with tender documents. Detailed plans are on track to be developed in time, based on the experience with the Chorreritas project.			
Procurement plans and processes have been developed for project operation	✓	See above.			
CONFORMANCE AND COMPLIANCE					
The project has no major non-compliances relating to governance	✓	There are no indications for any major non-compliances.	There are no non-compliances	✓	There are no indications for any non-compliances.
Processes and objectives relating to procurement have been and are on track to be met with:					
• no major non-compliances	✓	Procurement for the Cuerquia HPP has been limited to consultancy contracts. There are no indications for any major non-compliances.			
• no major non-conformances	✓	There are no indications for any major non-conformances.	There are no non-conformances	✓	There are no indications for any non-conformances.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✕)		Findings and Observations	Requirement is met: yes (✓) or no (✕)		Findings and Observations
Any procurement related commitments have been or are on track to be met	✓	There are no indications otherwise. Commitments are primarily related to local content objectives.			
OUTCOMES					
There are no significant unresolved corporate and external governance issues identified	✓	There are no indications for significant governance issues with the potential to impede the development of the project.	There are no unresolved corporate and external governance issues identified	✕	A number of recurrent governance issues in the development of new hydropower projects in Colombia are making it unnecessarily difficult to achieve sustainable outcomes. For example, - there is no integrated planning at the basin level and little consideration by regulators of cumulative impacts or of opportunities to maximize the benefits from ecological and social compensation, by coordinating between projects and with local development and conservation plans; - permitting processes suffer from bureaucratic delays and inefficiencies (in particular, generic Terms of Reference for preparatory studies and monitoring programs that provide data unrelated to impacts, while important impacts - especially downstream - remain overlooked); and - regional gid operators have insufficient incentives to rapidly
Procurement of works, goods and services across major project components is:					
• equitable	✓	There are no indications otherwise.			
• efficient	✓	There are no indications otherwise. The consultants for the ESIA have significant previous experience.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					connect new independent renewable power projects. These governance-related obstacles are affecting projects such as the Cuerquia HPP and - at a macro level - the energy transition in Colombia, and therefore constitute a significant gap . They are not under the responsibility of Energo-Pro (which can only work to limit the implications for the company) and would have to be addressed at the national level.
• transparent	✓	There are no indications otherwise.	Opportunities for local suppliers including initiatives for local capacity development have been delivered or are on track to be delivered	✓	As described above, Energo-Pro is actively working to utilize and further develop local supplier capacities.
• accountable	✓	There are no indications otherwise.			
• ethical	✓	There are no indications otherwise.			
• timely	✓	There are no indications otherwise. The ESIA was contracted and delivered in time.			
Contracts are progressing or have been concluded within budget or changes on contracts are clearly justifiable	✓	There are no indications otherwise.			

List of significant gaps against Minimum Requirements	Number of Advanced Requirements met
None	10 out of 11

Summary of findings and other notable issues
Hydropower projects in Colombia face a number of governance challenges, including security problems and regulatory obstacles. However, Energo-Pro Colombia's corporate governance and procurement processes are well designed to deal with these challenges and deliver sustainable projects.

Relevant evidence	
Interview	1-12, 13-32
Document	1, 3, 5, 7, 25-47, 55, 57, 64-66, 79, 82, 84-86
Photo	-



10 Communications and Consultation

Scope and Principle

This section addresses the identification and engagement with project stakeholders, both within the company as well as between the company and external stakeholders (e.g. affected communities, governments, key institutions, partners, contractors, catchment residents, etc). The principle is that stakeholders are identified and engaged in the issues of interest to them, and communication and consultation processes establish a foundation for good stakeholder relations throughout the project life. Communications and consultation requirements unique to Indigenous Peoples are found in Section 7.

Background

Directly affected community-level stakeholders	See section 4. There is a small number of families directly affected by land acquisition, as well as other residents of the San Andrés de Cuerquia municipality who will be affected negatively or positively by the project, and their grassroots groups such as the JACs and cooperatives.
Directly affected institutional-level stakeholders	Government agencies with different roles, including the municipality, Corantioquia, UPME, ICANH; contractors, financiers, offtakers and other business partners; EPM as the regional utility that will have to provide the transmission connection; and other hydropower developers in the San Andrés valley.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Stakeholder mapping has been undertaken to identify and analyse stakeholders	✓	The ESIA contains a description of the socio-economic baseline including local stakeholders. The Chorreritas project staff have maintained a register of contacts. In general, because of the small footprint of the Cuerquia project, there are a limited number of directly-affected stakeholders, and these are well known to project staff.	The stakeholder mapping takes broad considerations into account	✗	The stakeholder register contains a number of property owners and local community leaders, but no additional contacts such as regulators, other hydropower companies in the area, other businesses (such as banks, contractors, offtakers), NGOs, and other civil society representatives; this is a significant gap . The ESIA mentions that this register will be updated, but the scope will remain limited to the area of influence of the project.
It establishes those that are directly affected	✓	The list with local contacts includes 1) officials of the municipality, 2) presidents of JACs and other local			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		leaders, and 3) owners of affected properties.			
It establishes communication requirements and priorities	✓	ESIA-related requirements and priorities such as public meetings to present the ESIA progress and results, are described in the ESIA. Voluntary communications priorities are identified in a number of documents such as the stakeholder engagement plan for the Chorreritas project (to be adapted for Cuerquia), and the strategy for relationships with and strengthening of the JACs.			
MANAGEMENT					
Communications and consultation plans and processes have been developed at an early stage	✓	Plans and processes are being continued and adapted from the Chorreritas project. Formally, the ESIA contains a Programme for Information Management, Participation and Communication (PMA-SOC-01), which will become an obligation once the environmental license is granted. Communication materials include presentations, flyers, and the group sustainability report. There is early engagement with banks and other business partners, active membership in a business association (CEERAA), and a Memorandum of Understanding with the regional environmental agency Corantioquia.	Communication and consultation plans and processes show a high level of sensitivity to communication and consultation needs and approaches for various stakeholder groups and topics	✓	Community members and leaders such as representatives of the JACs have confirmed that they have been engaged with a high level of sensitivity and interest.
They outline communication and consultation needs and	✓	Three rounds of consultations were held with the different <i>veredas</i> ,			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
approaches for various stakeholder groups and topics		property owners and other stakeholders. The ESIA lists all concerns raised by community members, and proposed management and communication measures.			
They are applicable to project preparation, implementation and operation	✓	The Programme for Information Management, Participation and Communication (PMA-SOC-01) will run through the life cycle of the project.	Processes are in place to anticipate and respond to emerging risks and opportunities	✓	The grievance and monitoring mechanisms as well as frequent community interactions should help Energo-Pro detect any relevant developments early on.
They include an appropriate grievance mechanism	✓	The Programme for Information Management, Participation and Communication (PMA-SOC-01) includes a grievance mechanism. Energo-Pro also has its own corporate guidelines for setting up a grievance mechanism.			
STAKEHOLDER ENGAGEMENT					
There has been engagement with the following groups, or on the following topics, or through the following processes, with directly affected stakeholders:			Engagement with directly affected stakeholders has been inclusive and participatory	✓	There are no indications for any intentional exclusions of stakeholder groups. While some potential stakeholders are not included in the local stakeholder register, there has been broad engagement in the context of the previous project Chorreritas, including project visits by many different groups. Engagement has included stakeholder groups not directly affected (for example, veredas outside the area of direct influence) and issues unrelated to the projects (for example, activities such as the
• Project preparation, on topics of interest and relevance to directly affected stakeholders	✓	Energo-Pro staff and the ESIA consultants have organized many formal and informal meetings with affected people.			
• The business interacts with a range of directly affected stakeholders to understand issues of interest to them	✓	Personal relationships are maintained with officials of the municipality, community leaders, business owners and other local stakeholders, as well as stakeholders at the regional and national level, which allows Energo-Pro a good understanding of stakeholder perspectives.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• Environmental and social impact assessment and management planning	✓	Stakeholder engagement has been conducted beyond the levels formally required under the Colombian ESIA process.			'Schools for Life' and 'Ecological Homes' under the MoU with Corantioquia, and engagement with the coffee grower association).
• Siting and design optimisation	✓	As described in section 1, the project underwent a formal process for the environmental comparison of alternatives, with the results publicly available and approved by Corantioquia.			
• Project benefits	✓	There has been significant engagement with leaders of the municipality and the JACs. As described in section 4, coordination of the investments in San Andrés town could be improved.			
• Project-affected communities	✓	See above.			
• Resettles and host communities	✓	Not relevant			
• Assessment and planning for cultural heritage issues	✓	See section 8. There are no indications for any particular interests regarding cultural heritage from local stakeholders.			
• Assessment and planning for public health, including health officials	✓	See section 4. There has been limited but generally sufficient engagement on public health.			
• Downstream flow regimes	✓	See sections 4 and 6. There are no indications for any particular interests regarding downstream flows from local stakeholders.			
• Plans for the management of climate risks	✓	See section 12. Engagement has been open to discussions of climate risks,			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		but this issue has not been raised by stakeholders. Under the MoU with Corantioquia, Energo-Pro contributes to the PIRAGUA program for climate resilience in the region.			
Engagement with directly affected stakeholders has been appropriately timed:			Negotiations are undertaken in good faith	✓	There are no indications otherwise.
• Project preparation, on topics of interest and relevance to them	✓	There are no indications otherwise. Plans for the Cuerquia project have been discussed for years, including by other developers before Energo-Pro took on the project.			
• Environmental and social impact assessment and management planning	✓	There are no indications otherwise.			
• Siting and design optimisation	✓	There are no indications otherwise.			
• Project benefits	✓	There are no indications otherwise.			
• Project-affected communities	✓	There are no indications otherwise.			
• Resettles and host communities	✓	Not relevant			
• Assessment and planning for cultural heritage issues	✓	There are no indications otherwise.			
• Assessment and planning for public health	✓	There are no indications otherwise.			
• Downstream flow regimes	✓	There are no indications otherwise.			
Engagement with directly affected stakeholders has often been two-way:			Feedback on how issues raised have been taken into consideration has been thorough and timely	✓	There are no indications otherwise.
• Project preparation, on topics of interest and relevance to them	✓	There are no indications otherwise.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• Environmental and social impact assessment and management planning	✓	There are no indications otherwise.			
• Siting and design optimisation	✓	There are no indications otherwise.			
• Project benefits	✓	There are no indications otherwise.			
• Project-affected communities	✓	There are no indications otherwise.			
• Resettlees and host communities	✓	Not relevant			
• Assessment and planning for cultural heritage issues	✓	There are no indications otherwise.			
• Assessment and planning for public health	✓	There are no indications otherwise.			
• Downstream flow regimes	✓	There are no indications otherwise.			
Engagement is undertaken in good faith	✓	There are no indications otherwise.			
Ongoing processes are in place for stakeholders to raise issues and get feedback	✓	There are frequent meetings, the grievance mechanism as well as other communication channels such as WhatsApp groups to raise issues and get feedback.			
Ongoing processes are in place for:					
• Environmental and social impact assessment and management planning	✓	See above. Interested parties can also intervene formally in the ongoing environmental permitting process with Corantioquia.			
• Siting and design optimisation	✓	See above.			
• Project benefits	✓	See above. Some of the benefits will be discussed also in periodic meetings of the town council and JACs.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• Project-affected communities	✓	See above.			
• Resettles and host communities	✓	Not relevant			
• Employees and contractors on human resources and labour management issues	✓	Energo-Pro staff have direct access to management (see section 2). In the Chorreritas project, there have been multiple trainings, meetings and other opportunities for interaction with contractors and contractor staff, and this is expected to be continued in the Cuerquia project.			
• Assessment and planning for cultural heritage issues	✓	The management of cultural heritage issues will be based on continuing engagement with ICANH.			
• Assessment and planning for public health	✓	See above.			
• Downstream flow regimes	✓	See above.			
Engagement with resettles has been culturally appropriate	✓	Not relevant	Engagement with resettles and host communities has been inclusive and participatory	✓	Not relevant
Resettles and host communities have been involved in the decision-making around relevant options and issues	✓	Not relevant			
Public disclosure:			The business publicly reports on project performance in sustainability areas of high interest to its stakeholders	✗	Energo-Pro shows a high level of transparency in some areas, e.g. by making all corporate policies available on their website in several languages. However, there is no simple and quick access to official project reports
• the business makes significant project reports publicly available	✓	The environmental license will be published by Corantioquia. The underlying ESIA (which also contains a project description) and other official documents are available through			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		government agencies at various levels or through Energo-Pro, upon request. Access could be much simplified by making the ESIA, the periodic reports (ICA) and other relevant information available online on Energo-Pro's website. Other information materials (printed and audio-visual) have been and will be prepared for publication.			and/or to materials specifically prepared for stakeholders in Colombia. The Energo-Pro Group Sustainability Report may be useful for some stakeholders but is in English and does not have substantial information specifically on the Chorreritas and Cuerquia projects. The lack of a materiality analysis to show what areas are of high interest to stakeholders of these projects, and the lack of dedicated reporting on project sustainability performance are a significant gap .
• the business publicly reports on project performance, in some sustainability areas	✓	Information materials on project progress and compliance with the environmental and social obligations will be presented at meetings and prepared for publication. More substantive information could be provided e.g. through the corporate website, but this is not considered a significant gap at the level of minimum requirements, given the limited public interest in this low-impact project.			
• results of the assessment of strategic fit are publicly disclosed	✓	The DAA and ESIA contain some information on project options and alternatives, and mention that the project is aligned with national plans for the energy sector, such as the <i>Plan Energético Nacional</i> . See also Section 1.	The assessment of project resilience has been publicly disclosed	✓	The ESIA which is to be published includes an annex on the impact of climate change on hydrology (see section 12).
• power density calculations, estimated GHG emissions, and / or the results of a site-specific assessment have been publicly disclosed	✓	The power density is very high (see section 12) and can be easily calculated from publicly available documentation.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
STAKEHOLDER SUPPORT					
Affected communities generally support or have no major ongoing opposition to the plans for the issues that specifically affect their community	✓	There are no indications for major opposition from community members. Energo-Pro has built a track record of good relations with the community and is generally trusted to implement the Cuerquia project with a similar approach as the Chorreritas project.	Formal agreements with nearly all the directly affected communities have been reached for the mitigation, management and compensation measures relating to their communities	✓	Energo-Pro will conclude formal agreements mostly for the investments under the community support program, once the environmental license is issued.
Resettlees and host communities generally support or have no major on-going opposition to the Resettlement Action Plan	✓	Not relevant	There is consent with legally binding agreements by the resettlees and host communities for the Resettlement Action Plan	✓	Not relevant
Directly affected stakeholder groups generally support or have no major ongoing opposition to the cultural heritage assessment, planning or implementation measures	✓	There are no indications otherwise.	Formal agreements with the directly affected stakeholder groups have been reached for cultural heritage management measures	✓	The only stakeholder group that has shown an interest in cultural heritage management related to the project is ICANH, the regulatory body that approved the management plan (see section 8).
CONFORMANCE AND COMPLIANCE					
Processes and objectives relating to communications and consultation have been and are on track to be met with:			There are no non-compliances	✓	There are no indications for any non-compliances.
• no major non-compliances	✓	There are no indications for any major non-compliances.			
• no major non-conformances	✓	There are no indications for any major non-conformances.	There are no non-conformances	✓	There are no indications for any non-conformances.
Any communications related commitments have been or are on track to be met	✓	There are no indications otherwise.			

List of significant gaps against Minimum Requirements	Number of Advanced Requirements met
None	12 out of 14

Summary of findings and other notable issues

There is broad, constructive and personal engagement of Energo-Pro with local stakeholders in the project area, as well as with institutional-level stakeholders, both from the ongoing Chorreritas project and from the upcoming Cuerquia project.

Relevant evidence

Interview	1-12, 13-32, 33-36
Document	3, 5, 21, 22, 36, 37, 44-47, 55-57, 62, 63
Photo	14, 16, 18



11 Hydrological Resource

Scope and Principle

This section addresses the hydrological resource availability and reliability to the project, reservoir planning and downstream flow regimes in relation to environmental, social and economic impacts and benefits. The principle is that the project's planned power generation takes into account hydrological resource availability and reliability in the short- and long-term, and that the reservoir and downstream flow regimes are planned and managed with an awareness of environmental, social and economic objectives.

Background

Hydrology and flows

Average flow at dam (m ³ /s)	7.04 m ³ /s
Minimum monthly average flow (m ³ /s)	4.05 m ³ /s (February)
Maximum monthly average flow (m ³ /s)	9.05 m ³ /s (May)
Lowest observed flow (m ³ /s)	Not available
Highest observed flow (m ³ /s)	Not available
Design flow (m ³ /s)	10.6 m ³ /s
Affected river reaches (start/end and how affected)	7.5 km, reduction of flows between Cuerquia intake and Chorreritas headpond

Reservoir

Reservoir length (km)	100 m
Minimum operating level MOL (masl)	1,774.00 masl
Normal operating level (masl)	1,786.95 masl
Full supply level FSL (masl)	1,786.95 masl
Reservoir area at FSL (km ²)	0.026 km ²
Reservoir area at MOL (km ²)	Not available
Volume at FSL (million m ³)	0.34 million m ³
Volume at MOL (million m ³)	0.05 million m ³
Average retention time in days	13.4 hours at average flows
Number of days for filling	13.4 hours at average flows

Minimum Requirements		Advanced Requirements	
Requirement is met: yes (✓) or no (✗)	Findings and Observations	Requirement is met: yes (✓) or no (✗)	Findings and Observations
ASSESSMENT			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
Assessment of hydrological resource availability	✓	A detailed hydrological assessment has been carried out, complementing the hydrological studies for the Chorreritas project downstream.	Issues that may impact on water availability or reliability have been comprehensively identified	✓	The hydrological assessment included statistical analysis using different modelling techniques. Climate change considerations were also incorporated (see section 12).
Hydrological resource assessment has been undertaken utilising:					
• available data	✓	All relevant available data from the San Andrés watershed and extrapolated from nearby watersheds were used in the hydrological studies.			
• field measurements	✓	Field sampling included an own hydrometric station, sediment and water quality surveys.			
• appropriate statistical indicators	✓	Appropriate statistical indicators were used in the hydrological analysis.			
• a hydrological model	✓	Hydrological models were used to define design flows, flood floods and operating rules for Cuerquia and the Cuerquia-Chorreritas cascade.	Hydrological uncertainties and risks have been extensively evaluated over the short- and long-term	✓	There has been some evaluation of uncertainties and risks, adequate for a project of this type and size, and given that a) the design is conservative from a dam safety perspective, and b) a general increase in precipitation is expected, and c) the watershed is not expected to experience rapid deforestation.
Issues which may impact on water availability or reliability have been identified and factored into the modelling	✓	A climate change assessment was carried out (see section 12); no other issues (such as potential future upstream abstraction or land use change) were considered relevant.			
Hydrological resource assessment includes evaluation of scenarios, uncertainties and risks	✓	Some scenarios, uncertainties and risks were included in the hydrological studies. These were informed by a long tradition of climate-aware hydrological studies in Colombia, including from government institutions such as IDEAM and UPME.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
Assessment of important considerations prior to and during reservoir filling	✓	The hydrological assessment included water demands during construction and closing of the dam, which are minor. Preparation of the impoundment area before filling was also covered (see sections 4, 6, 8).	The reservoir assessment is based on dialogue with local community representatives	✓	There are no residents in or around the impoundment area that would be affected by reservoir operations.
Assessment of important considerations during reservoir operations	✓	Operational rules, for Cuerquia only and in cascade with Chorreritas, were evaluated, including how to minimize the effects of peaking on flow fluctuations and changes in the hydrological regime of the San Andrés River.			
Assessment of flow regimes downstream of project infrastructure	✓	Minimum flows in the affected reach were determined by a multi-criteria methodology widely used in Colombia and accepted by the environmental authority (Corantioquia). Variability will be provided by tributaries, spilling, and sediment flushing. Environmental flows will vary from month to month and will be assured through direct flow measurement. Downstream of the powerhouse discharge, flows be determined by the operation of the Chorreritas project.	The reservoir and flow regimes assessments take broad considerations, risks and opportunities into account	✓	Ecological flow regimes were determined based on hydrological, hydraulic, ecological and water quality considerations. The methods are sufficiently broad given the limited risks and opportunities around the headpond area and bypass reach.
Flow regimes assessment includes all potentially affected river reaches	✓	The bypass reach between the Cuerquia intake and its discharge into the headpond of the Chorreritas project was the focus of the assessment. No other reach is affected, as the reach below			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		Chorreritas has its own ecological flow regime.			
Flow regimes assessment includes identification of the flow ranges and variability to achieve different environmental, social and economic objectives	✔	Multicriteria analyses were carried out for the determination of ecological flow regime downstream. The basic concept is Q95, the flow for each month that is exceeded 95% of the time, which is then adjusted for a number of variables. Corantioquia needs to approve the proposed flow regime for Cuerquia.	The flow regimes assessment is based on field studies	✔	The assessment included field visits to verify water users and ecological conditions, complemented by orthophoto surveys.
Flow regimes assessment is based on relevant scientific and other information	✔	Well known methodologies and multicriteria analysis were used to determine ecological flow regimes.			
MANAGEMENT					
Plans and processes for generation operations have been developed to ensure efficiency of water use	✔	A standalone study on cascade operation for Cuerquia-Chorreritas was carried out, to optimize generation while maintaining ecological and social values. Generation in the wet season will be continuous while in the dry season, it will be limited to several hours per day, during times of peak demand.	Generation operations planning has a long-term perspective	✔	Operation of the Cuerquia project has been optimized in tandem with the cascade configuration with Chorreritas. This coordination minimizes storage retention times and flow fluctuations in the bypass reaches.
Plans and processes for generation operations are based on:					
• analysis of the hydrological resource availability	✔	See above	Generation operations planning takes into consideration multiple uses and integrated water resources management	✔	The operations schedule minimizes disruptions in the bypass reach. There will be no seasonal regulation of the San Andrés River, due to the small storage volume.
• a range of technical considerations	✔	A number of scenarios for peaking and base load operations, as well as single project and cascade operations were considered.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• an understanding of power system opportunities and constraints	✓	Energo-Pro has a good understanding of the Colombian power system, both from a sector policy and from a commercial perspective, and is currently in the process of negotiating PPAs.	Generation operations planning fully optimises and maximises efficiency of water use	✓	The operation of Cuerquia was optimized on a desktop basis for a cascade configuration with Chorreritas downstream; it will be further adjusted once both projects are in operation.
• social and environmental considerations including downstream flow regimes	✓	Water users and the presence of aquatic species in the river were considered for the determination of the ecological flow regime downstream of the Cuerquia intake.			
Plans and processes to manage reservoir preparation and filling have been developed	✓	Before filling the headpond, rescue of epiphytes and orchids, extraction of valuable timber, fauna rescue/repelling, and biomass removal will be carried out.	Generation operations planning has the flexibility to anticipate and adapt to future changes	✓	Within a framework of future PPAs and dispatch arrangements, the operation of the cascade scheme, including machine maintenance and flushing of sediments, will be monitored and adjustments will be made as needed.
Plans and processes to manage reservoir operations have been developed	✓	Water quality monitoring programs will include the headpond, and water quality is not expected to deteriorate in the headpond given the low retention times.			
Plans and processes for delivery of downstream flow regimes have been developed	✓	Ecological flow regimes, with monthly variations, have been determined. Structures to allow and measure these flows have been designed.	Reservoir plans are based on dialogue with local community and government representatives	✓	There are no residential buildings or community infrastructure in the headworks area. The closest buildings are related to Celsia's upstream San Andrés hydropower project. Reservoir management requirements will be determined by Corantioquia.
Downstream flow plans include:					
• flow objectives	✓	Objectives include hydraulic considerations, water users (sporadic users) and maintaining aquatic life.	Processes are in place to anticipate and respond to emerging risks and opportunities	✓	Climate change, dam break analysis and extreme flood conditions have been included in the assessment of hydrological conditions. Regular monitoring and reporting will provide
• magnitude, range and variability of the flow regimes	✓	The flow regime includes seasonally variable flows, with additional			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		variability provided by spilling, tributary inflows and sediment flushing.			a basis for any necessary adjustments.
• locations at which flows will be verified	✔	Environmental flow measurement is included in the outlet infrastructure.	Commitments in plans are public, formal and legally enforceable	✔	Commitments to maintain the ecological flow regime are included in the ESIA and ESMP and will be enforced by Corantioquia through the environmental license.
• ongoing monitoring	✔	Monitoring programs for water quality, flows, and sediments include the bypass reach.			
Downstream flow plans, where formal commitments have been made, are publicly disclosed	✔	Downstream ecological flow regimes are proposed in the ESIA which is under review by Corantioquia, and the environmental license will include these requirements. The ESIA will be disclosed once it is approved and the license is issued.			
OUTCOMES					
Plans for downstream flows take into account environmental, social and economic objectives	✔	The multicriteria assessment took technical, economic, ecological and social considerations into account.	Plans for downstream flow regimes represent an optimal fit amongst environmental, social and economic objectives	✔	The downstream flow regime represents an optimal solution for making the best economic use of water resources while protecting remaining social and ecological values, in this heavily modified river.
Where relevant, downstream flows take into account agreed transboundary objectives	✔	Not applicable.			
List of significant gaps against Minimum Requirements			Number of Advanced Requirements met		
None			13 of 13		

Summary of findings and other notable issues
The assessment of hydrological issues included generation planning as well as multicriteria analysis and determination of environmental flow regimes, taking into account the interaction with the Chorreritas project directly downstream.

Cuerquia HPP, 68 MW, Colombia

Relevant evidence	
Interview	1, 13-29
Document	6, 8, 13, 23, 58, 60, 61, 79, 81, 84
Photo	3, 7, 15



12 Climate Change Mitigation and Resilience

Scope and Principle

This section addresses the estimation and management of the project's greenhouse gas (GHG) emissions, analysis and management of the risks of climate change for the project, and the project's role in climate change adaptation. The principle is that the project's GHG emissions are consistent with low carbon power generation, the project is resilient to the effects of climate change, and the project contributes to wider adaptation to climate change.

Background

Climate Change Mitigation

Capacity (MW)	68
Average reservoir area (representing area of flooded land, net of pre-impoundment water body) (km ²)	A headpond with a (roughly estimated) area of 2.6 ha (0.026 km ²) will be formed by the dam.
Power density (W / m ²)	2,729
Emissions intensity (gCO ₂ e / kWh)	Not relevant
National and regional policies, plans and commitments relevant to mitigation	Colombia has low per capita CO ₂ emissions of 1.61 tons/capita/year. In September 2025, Colombia submitted its NDC 3.0, in which the country commits to capping greenhouse gas (GHG) emissions at 155–161 million tons CO ₂ e by 2035, in line with its commitment to achieve carbon neutrality and climate resilience by 2050.

Climate Change Resilience

Hydrological data available for the project site and the basin, and observed climate trends	Flow data are available from one IDEAM gauge on the San Andrés River, and flow projections were generated by rainfall models and watershed transposition of flows based on adequate historic series. No statistically significant trend for runoff was identified.
Regional and basin-level climate models relevant to the project location, if any	Predictions from global climate models for large watersheds such as the Magdalena-Cauca are available, for example, through the World Bank portal: https://climate.knowledgeportal.worldbank.org . According to the latest assessment report from the International Panel on Climate Change (IPCC), precipitation is likely to increase for northwestern South America but to decrease over the Caribbean. In its 2024 study ' <i>Escenarios de cambio climático de la Cuarta Comunicación de Colombia</i> ', the government research institute IDEAM has provided regionally downscaled projections for climate changes until 2100.
Any climate change predictions for the project location, and degree of consistency	There is no specific climate modelling for the San Andrés River, which in any case would be difficult for a mountain watershed of this small size. Nevertheless, the 2024 IDEAM projections were used for a climate study for the Cuerquia project.

National policies, plans and commitments relevant to adaptation and resilience	A National Climate Change Policy was issued by the Environmental Ministry in 2020, and sectoral and regional climate plans include adaptation measures.
--	---

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✕)	Findings and Observations		Requirement is met: yes (✓) or no (✕)	Findings and Observations	
ASSESSMENT					
Climate Change Mitigation					
For projects with a power density below 5 W/m2, net GHG emissions (gCO2e) of electricity generation have been estimated and independently verified	✓	Not applicable	If a site-specific assessment is required, it incorporates a broad range of scenarios, uncertainties and risks	✓	Not applicable
For projects with a power density below 5 W/m2 and estimated emissions are above 100 gCO2e/kWh, a site-specific assessment of GHG emissions has been undertaken	✓	Not applicable			
An assessment of the project’s fit with national and/or regional policies and plans on mitigation has been undertaken	✓	See section 1. The ESIA includes a brief analysis of the alignment of the project with national energy and climate mitigation policies.			
Climate Change Resilience					
An assessment of the project’s resilience to climate change has been undertaken	✓	An analysis of hydrological projections under climate change for the San Andrés River and the Santa Inés Creek, which supply the water for the Cuerquia project, was carried out by Energo-Pro’s consultants Endémica. This study is based on the new climate projections for Colombia known as	Assessment of resilience incorporates sensitivity analysis and project-specific hydrological modelling using recognised climate models	✓	The study on hydrological projections under climate change applied recognized climate models and statistical methods.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		the Climate Change Scenarios 2100 (Institute of Hydrology, Meteorology and Environmental Studies - IDEAM, 2024). For these watersheds, the consultants performed an assessment of precipitation and temperature changes between 2021 and 2080 using the emissions scenarios SSP2-4.5 and SSP5-8.5. The project's average, maximum and minimum streamflows were estimated, allowing a comparison with the hydrological baseline generated during the initial development of the project's studies and designs.			
The assessment:					
• incorporates an assessment of plausible climate change at the project site	✔	All scenarios developed by IDEAM were used in the assessment.			
• identifies a range of climatological and hydrological conditions at the project site	✔	Regarding peak flows, the results show that climate change will generate significant increases in the projected peak flows for both watersheds, especially for the more frequent events (26% - 32% for return periods of 2.33 and 5 years). For extreme events (≥ 100 years return period), the increases are in the range of 16% - 19%, This implies the need to consider these scenarios in the design of the Cuerquia project.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		Minimum streamflows are expected to also increase compared with the historic data, resulting in improved water availability during low-flow periods.			
• applies these conditions in a documented risk assessment or stress test	✔	This information was used in the dam break analysis.			
The risk assessment or stress test encompasses:					
• dam safety	✔	The dam safety analysis included increased extreme flows.			
• other infrastructural resilience	✔	Downstream effects on the Chorreritas HPP infrastructure were considered.			
• environmental and social risks	✔	With increased overall runoff, there should also be a trend towards increased residual flows in the bypass reach.			
• power generation availability	✔	Generation should increase under the climate change scenarios analysed, compared with the current scenario.			
An assessment of the project’s potential adaptation services and fit with national and/or regional policies and plans for adaptation has been undertaken	✔	The storage capacity of the Cuerquia project is too small to make a significant contribution to adaptation; however it is possible that the headpond will reduce the peaks and volumes of flash floods.			
MANAGEMENT					
Climate Change Mitigation					
If GHG emissions estimates assume design and management measures, there	✔	Energopro reports publicly on GHG emissions from all group operations. However, there have been no specific,	Design and management measures have been developed for	✔	Reforestation along the riparian corridor and in the biodiversity offset

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✕)		Findings and Observations	Requirement is met: yes (✓) or no (✕)		Findings and Observations
are plans to put these measures in place		comprehensive GHG emissions estimates for the Cuerquia project, and the partial estimates do not assume any specific design and management measures. Emissions from construction and from the headpond during operations will not be significant, when compared to power generated over the lifetime of the project.	implementation and operation phases of the project to respond to risks and opportunities including offsetting emissions		area will sequester some carbon and offset some GHG emissions.
			Plans have been developed to monitor parameters used in GHG emissions estimates or to monitor GHG stocks	✓	The biodiversity offset plan includes periodic monitoring of biomass and carbon stocks.
Climate Change Resilience					
The project design is based on plausible climate change scenarios	✓	The project design is based on historic flows generated from precipitation data and transposition of flows from the existing gauge on the San Andrés River. No significant trends were detected. The project design can handle a plausible range of climate change scenarios. As determined by Corantioquia, El Niño and La Niña phenomena have limited influence on the San Andrés watershed.	Resilience measures take account of a broad range of risks and inter-relationships	✕	There are no indications for other resilience measures, beyond a conservative design of the infrastructure, which is a significant gap .
			Processes are in place to respond to unanticipated climate change	✕	No such processes to respond to changes outside the projected ranges are in place, which is a significant gap .
Structural and operational measures are planned for design, implementation and operation phases to avoid or reduce the identified climate risks	✓	Project structures have been designed with enough capacity to manage climate change variability.	Plans have been developed to provide adaptation services if necessary	✓	There is no indication that adaptation services are necessary.
OUTCOMES					
Climate Change Mitigation					
The project’s GHG emissions are demonstrated to be	✓	The ESIA contains an estimate of emissions displaced by the Cuerquia project.	Project net emissions are minimised, or project	✓	The Cuerquia project has very low own emissions, and supports the integration of rapidly increasing solar

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
consistent with low carbon power generation			operations facilitate system emissions reductions		PV and wind capacity into the Colombian grid.
The fit of the project with national and regional policies and plans for mitigation can be demonstrated	✔	The Cuerquia project supports the development of a fully renewable power generation system.			
Climate Change Resilience					
Plans will deliver a project that is resilient to climate change under a range of scenarios	✔	In all assessed climate change scenarios, runoff increases to varying degrees, which could bring a positive impact for the operation of the Cuerquia project. The dam and spillway are designed for peak flows projected under climate change.	The project is resilient under a broad range of scenarios	✔	The assessment demonstrated that the project can operate in all climate change scenarios.
The fit of the project with national and regional policies and plans for adaptation can be demonstrated	✔	As stated above, the contribution of this run-of-river project to adaptation is necessarily limited, although some support to flood management can be expected.	The project will contribute to climate change adaptation at local, regional or national levels	✔	See above.

List of significant gaps against Minimum Requirements	Number of Advanced Requirements met
None	8 out of 10

Summary of findings and other notable issues
The Cuerquia project will make a significant positive impact to climate change mitigation by providing a very low-carbon source of power and displacing high-carbon energy sources, both directly and indirectly. A climate change resilience assessment was carried out, based on climate change scenarios modelled by the government research institute IDEAM, which projected moderately increased flows over the coming decades.

Relevant evidence	
Interview	1, 13-29
Document	2, 6, 8, 13
Photo	-

Appendix 1 – Interviews

Ref	Interviewee/s	Position / Organisation	Date	Location
1	José Fernando Chavarria Chavarria	Alcalde Municipal	May 12	Asomanol, San Andrés de Cuerquia
2	Alex Bernardo Monsalve Bran	Unidad de Asistencia Técnica Agropecuaria		
3	Erica Jhaneth Puerta Ruiz	Desarrollo Comunitario		
4	Luz Eleidy Chavarria Rodriguez	Concejal Luz Eleidy Chavarria Rodriguez		
5	Gilberto Antonio Marín Suarez	Presidente Loma Grande (JAC)		
6	Edilson Eliecer Arroyave Posada	Presidente Alto Seco (JAC)		
7	Fanny Soredis Gil Posso	Presidente Cañaduzales (JAC)		
8	Javier Enrique Arboleda	Proveedor de Transporte		
9	Lina María Tapias Chavarria	Presidente ASOCOMUNAL		
10	Elvia Susana Pino	Representante ASOMANOL		
11	Claudia Henao	Proveedor de Alimentación		
12	Llirle Amparo Ossa Posada	Proveedor de Ferreteria		
13	Alexandra Rey	Energo-Pro / Gerente Socio Ambiental	May 11-15	Energo-Pro Colombia, Medellín and San Andrés de Cuerquia
14	David Rave	Energo-Pro / Líder Ambiental y de Gestión de Tierras		
15	Juan Sebastián Velasquez	Energo-Pro / Gerente de Ingenieria		
16	Juan Bernardo Vallejo	Energo-Pro / Coordinador de Sostenibilidad		
17	Dilma Prada	Energo-Pro / Coordinadora Social		
18	Ricardo Fierro	Energo-Pro / Líder de Integridad Física		
19	Alvaro Muñoz	Energo-Pro / Líder de Ingeniería		
20	Camilo Benitez	Energo-Pro / Ingeniero de Proyectos		
21	Giovanni Guzmán	Energo-Pro / Director de Obra		
22	Daniela Tamayo	Energo-Pro / Supervisora Ambiental		
23	Leonardo Perez	Energo-Pro / Country Mánager		
24	Alexandra Rey	Energo-Pro / Gerente Socio Ambiental		
25	David Rave	Energo-Pro / Líder Ambiental y de Gestión de Tierras		
26	Juan Sebastián Velasquez	Energo-Pro / Gerente de Ingenieria		
27	Sergio Gómez	Director Endémica		
28	Carolina Osorio	Directora Endémica		
29	Argiro Cano	Corantioquia / Profesional evaluación de licencias	May 14	Corantioquia, Medellín
30	Carolina	Corantioquia / Representante sello de sostenibilidad		
31	Manuela	Corantioquia / Representante sello de sostenibilidad		

Cuerquia HPP, 68 MW, Colombia

32	Andres Londoño	Corantioquia / Relacionamiento empresarial		
33	Laura Salazar	Representante CEERA (Observadora)	May 11-14	San Andrés de Cuerquia
34	Javier Enrique Cano	Representante BBVA (Observador)		
35	Erika Paola Reyes	Representante BBVA (Observadora)		
36	Alberto Roa	Representante Ministerio de Minas y Energía (Observador)		

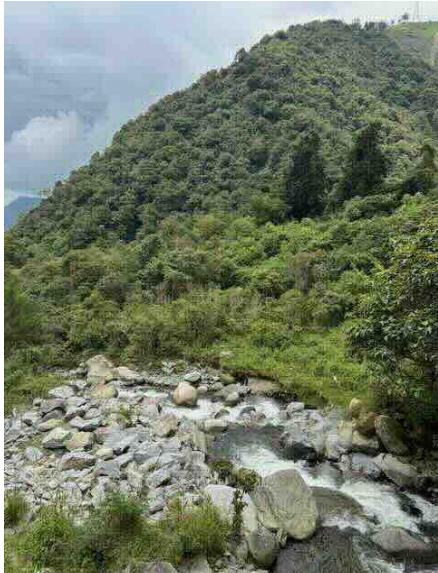
Appendix 2 – Documents

Ref	Author	Year	Title
1	Energo-Pro	2026	Política Global de Salud y Seguridad – Energo Pro (HS Policy, 04/08/2021)
2	Energo-Pro	2025	GHG Accounting Results
3	Energo-Pro	2026	Código de Conducta Global – Energo Pro (Global Code of Conduct)
4	Energo-Pro	2026	Guía de gestión y contratación de mano de obra (GUA-ESG-001-A)
5	Energo-Pro	2026	Política de Derechos Humanos – Energo Pro global (Human Rights Policy)
6	Ideam	2024	Escenarios de cambio climático de la Cuarta Comunicación de Colombia
7	Energo-Pro	2023	Procedimiento de Compras y Adquisiciones V.3 – Energo Pro Colombia (EPCO-PRC-FN-001, firmado)
8	Endémica	2026	Estudio Hidrológico CH Cuerquia con enfoque de cambio climático (188ES) – anexo del EIA para el establecimiento de medidas de adaptación
9	Endémica	2026	EIA – Capítulo 0. Resumen Ejecutivo (V1)
10	Endémica	2026	EIA – Capítulo 1. Objetivos (V1)
11	Endémica	2026	EIA – Capítulo 3. Descripción del Proyecto (V1)
12	Endémica	2026	EIA – Capítulo 4. Área de Influencia (V1)
13	Endémica	2026	EIA – Capítulo 5.1 Caracterización del Área de Influencia: medio abiótico (V1)
14	Endémica	2026	EIA – Capítulo 5.2 Caracterización del Área de Influencia: medio biótico (V1)
15	Endémica	2026	EIA – Capítulo 5.3 Caracterización del Área de Influencia: medio socioeconómico (V1) incluye anexo con solicitud y respuesta del Ministerio del Interior sobre la no presencia de comunidades indígenas, y anexo con la resolución que aprueba el Programa de Arqueología Preventiva de Cuerquia)
16	Endémica	2026	EIA – Capítulo 5.4 Servicios Ecosistémicos (V1)
17	Endémica	2026	EIA – Capítulo 6. Zonificación Ambiental (V1)
18	Endémica	2026	EIA – Capítulo 7. Demanda, uso, aprovechamiento o afectación de recursos naturales (V1)
19	Endémica	2026	EIA – Capítulo 8. Evaluación Ambiental (V1)
20	Endémica	2026	EIA – Capítulo 9. Zonificación de Manejo Ambiental del Proyecto (V1)
21	Endémica	2026	EIA – Capítulo 10.1 Planes y Programas (V1)
22	Endémica	2026	EIA – Capítulo 10.2 Planes y Programas (V1)
23	SERVICIOS AMBIENTALES Y GEOGRAFICOS S.A.	2023	Diagnóstico Ambiental de Alternativas (DAA)
24	Endémica	2025	Plano 001_176ES – Ubicación general del Proyecto Cuerquia
25	Energo-Pro	2025	Plan Ambiental Colombia – Política de reasentamiento
26	Energo-Pro	2025	Plan Ambiental Colombia – Plan de calidad del aire

27	Energo-Pro	2025	Plan Ambiental Colombia – Plan de gestión de derrames
28	Energo-Pro	2025	Plan Ambiental Colombia – Plan de gestión de ruido, vibraciones y luz ambiental
29	Energo-Pro	2025	Plan Ambiental Colombia – Plan de gestión de sedimentos
30	Energo-Pro	2025	Plan Integrado de Manejo y Monitoreo de Biodiversidad
31	Energo-Pro	2025	Plan Ambiental Colombia – Plan de gestión de tráfico y accesos
32	Energo-Pro	2025	Plan Ambiental Colombia – Plan de gestión de residuos
33	Energo-Pro	2025	Política de Gobernanza – Plan de gestión de contratistas y subcontratistas (CMP)
34	Energo-Pro	2025	Política de Gobernanza – Política Antisoborno y Anticorrupción (02.07.01 Política ABC)
35	Energo-Pro	2025	Política de Gobernanza – Política de Recursos Humanos (2106_Human Resources Policy_final_EN)
36	Energo-Pro	2025	Política de Gobernanza – Política de Canal de Denuncias (05182021_Whistle Blower Policy_Final_EN)
37	Energo-Pro	2025	Política de Gobernanza – Política ESG (05252021_ESG Policy_Final_EN)
38	Energo-Pro	2025	Política de Gobernanza – Política de Adquisiciones (06022021_Procurement Policy_Final_EN)
39	Energo-Pro	2025	Política de Gobernanza – Código de Conducta Global (Global Code of Conduct_EN)
40	Energo-Pro	2025	Política de Gobernanza – Política de Derechos Humanos (Human Rights Policy_ES)
41	Energo-Pro	2026	Guía de seguridad – Riesgo de secuestro
42	Energo-Pro	2026	Guía de seguridad – Riesgo de extorsión
43	Energo-Pro	2026	Política de Seguridad – Energo Pro
44	Energo-Pro	2023	Política social – Estándar del Mecanismo de Quejas y Reclamos, externo e interno (orp.GM.001.01)
45	Energo-Pro	2023	Política social – Políticas y beneficios a empleados (EPCO-REG-FN-02)
46	Energo-Pro	2023	Política social – Guía de gestión y contratación de mano de obra (GUA-ESG-001-A)
47	Energo-Pro	2023	Política social – Plan de Relacionamento con Grupos de Interés V01 (PLN-ESG-001-A)
48	Energo-Pro	2024	Política SST – Seguridad y Salud en el Trabajo 2024 (EPCO-PLT-ST01)
49	Energo-Pro	2024	Política SST – Prevención del consumo de alcohol y tabaco 2024 (EPCO-PLT-ST02)
50	Energo-Pro	2024	Política SST – Desconexión Laboral 2024 (EPCO-PLT-ST03)
51	Energo-Pro	2024	Política SST – Prevención del Acoso Laboral 2024 (EPCO-PLT-ST04)
52	JUNTA DE ACCIÓN COMUNAL SAN ANDRES	2025	Plan Estratégico de Desarrollo ASOCOMUNAL San Andrés
53	ALCALDIA SAN ANDRES	2024	Plan de Desarrollo Territorial San Andrés de Cuerquia 2024-2027 (aprobado, VF)
54	Energo-Pro	2026	Programa de Desarrollo Empresarial – 1. Planeación, Ver. 5: resultados en San José de la Montaña y San Andrés de Cuerquia
55	Energo-Pro	2026	Estrategia ESG Energo Pro (003) – descripción general de la estrategia
56	Energo-Pro	2026	Informe General de la Estrategia de Relacionamento con Comunidades 2024-2025
57	Energo-Pro	2025	Informe de Cumplimiento Ambiental (ICA) No. 5 – Chorreritas
58	Endémica	2026	Estudio de sedimentos – CH Cuerquia

59	HIDRASED	2024	Estudio de rompimiento de presa – CH Cuerquia
60	Energo-Pro	2025	Regla de operación – CMP (CH Cuerquia)
61	Energo-Pro	2025	Regla de operación CH Cuerquia – PCH Chorreritas
62	Corantioquia	2026	Informe técnico del Sello de Sostenibilidad – resultados de la evaluación de Corantioquia
63	Corantioquia	2026	Informe de la visita de seguimiento – Corantioquia
64	Energo-Pro	2026	Control de Peticiones, Quejas y Reclamos v1 (EPCO-RSC-BD) – registro histórico de PQR de Chorreritas
65	Energo-Pro	2026	Organigrama Energo Pro Colombia – marzo 2026 (personal actualizado)
66	Energo-Pro	2026	HSS Achievements – informe de logros destacados desde la certificación de la fase constructiva de Chorreritas
67	INGENEVO	2025	Carta de certificación – Diseño de factibilidad avanzada (preingeniería de detalle), realizada por Ingenevo
68	INGENEVO	2024	01. Informe General de Diseño – diseño de las obras de derivación y obras de conducción
69	INGENEVO	2024	02. Caracterización Geotécnica – informe de geología y exploración geotécnica
70	INGENEVO	2024	03. Parámetros Geomecánicos – caracterización de parámetros de la presa y la conducción
71	INGENEVO	2024	04. Diseño Geotécnico – diseño geotécnico de la presa y de la conducción
72	I-CONSULT	2026	Carta de certificación – Diseños de detalle, realizados por I-Consult en consorcio con Irys
73	INGENEVO	2025	01. Informe de Validación de Estudios Previos – revisión y validación de los diseños realizados por Ingenevo
74	I-CONSULT	2025	02. Diseño Geotécnico de la presa
75	I-CONSULT	2025	03. Diseño Estructural de la presa
76	I-CONSULT	2025	04. Diseño de Instrumentación – instrumentación geotécnica para el monitoreo de estabilidad de la presa
77	IEB INGENIERÍA	2023	Estudio de conexión CH Cuerquia – Subestación Guarcama como punto de conexión óptimo (requerimientos técnicos, espacio físico y relación beneficio-costos)
78	EPM	2024	Plano SE Guarcama – Bahía CH Cuerquia: disposición física de la subestación y bahías de llegada
79	Corantioquia	2018	Resolución 040-RES1812-7447 del 27 de diciembre de 2018 – “Por la cual se adopta el Plan de Ordenamiento del Recurso Hídrico del río San Andrés”
80	Energo-Pro	2024	INFORMES RECONOCIMIENTO VIVIENDAS VEREDA EL ROBLE, LOMA GRANDE, SANTA GERTRUDIS
81	CONSORCIO TECNISCAIN / Corantioquia	2018	Formulación de Planes de Ordenamiento del Recurso Hídrico (PORH) en los ríos San Andrés, Anorí y Tarazá – Fase IV: Formulación río San Andrés, Entrega 3 (Contrato CN-1705-39, archivo P113_Inf_3.1_05_2018, julio de 2018)
82	UPME	2025	Plan Indicativo de Expansión de la Generación para el horizonte 2025-2039
83	LUIS CAMILO TEJADA JIMÉNEZ	2026	Carta de certificación de seguridad de presa
84	Leonardo Pérez Álvarez	2025	Planeación de Cuencas Hidrográficas: bases para una política pública de desarrollo hidroenergético sostenible en Colombia
85	Leonardo Pérez Álvarez	2025	La energía y el territorio: la planeación de la transmisión como frontera del desarrollo
86	Leonardo Pérez Álvarez	2025	La escasez institucional y el permiso como bien escaso

Appendix 3 – Photographs

		
Photo 1: San José de la Montaña town square, upstream of the project	Photo 2: Road junction between San Andrés de Cuerquia and San José de la Montaña	Photo 3: San Andrés HPP, just upstream of Cuerquia HPP
		
Photo 4: Opening meeting with technical overview	Photo 5: View across valley at dam location, with Santa Ines creek in foreground	Photo 6: View downstream from dam location

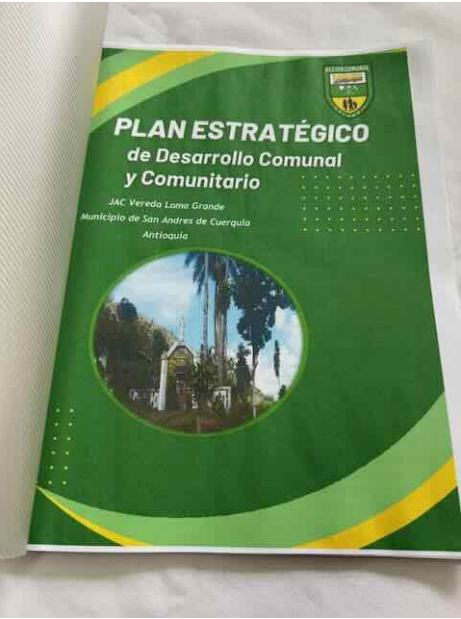
		
Photo 7: Santa Ines tributary	Photo 8: Powerhouse of Santa Ines HPP, tailrace planned to be connected to with Cuerquia HPP	Photo 9: Example for village development plans supported by Energo-Pro
		
Photo 10: Energo-Pro team explaining options for tunnel alignment and access	Photo 11: Secondary forest at one of the tunnel adits	Photo 12: Farm not acquired due to design choices



Photo 13: San Andrés de la Cuerquia town square



Photo 14: Interview with San Andrés mayor



Photo 15: Mural in San Andrés, in appreciation of the municipality's role in the catchment of EPM's Hidroituango HPP



Photo 16: Women's business and community centre in San Andrés, supported by Energo-Pro



Photo 17: Example for slope protection and fencing, at headworks of Chorreritas HPP



Photo 18: Chorreritas HPP penstock bridging the San Andrés River

		
Photo 19: Headworks of Chorreritas HPP; Cuerquia HPP will discharge into headpond	Photo 20: Site visit to Chorreritas HPP	Photo 21: Assessment team with Energo-Pro staff, contractors and observers, at Chorreritas spillway
		
Photo 22: Head office of Corantioquia in Medellín	Photo 23: Current municipal solid waste dump (photo Energo-Pro)	